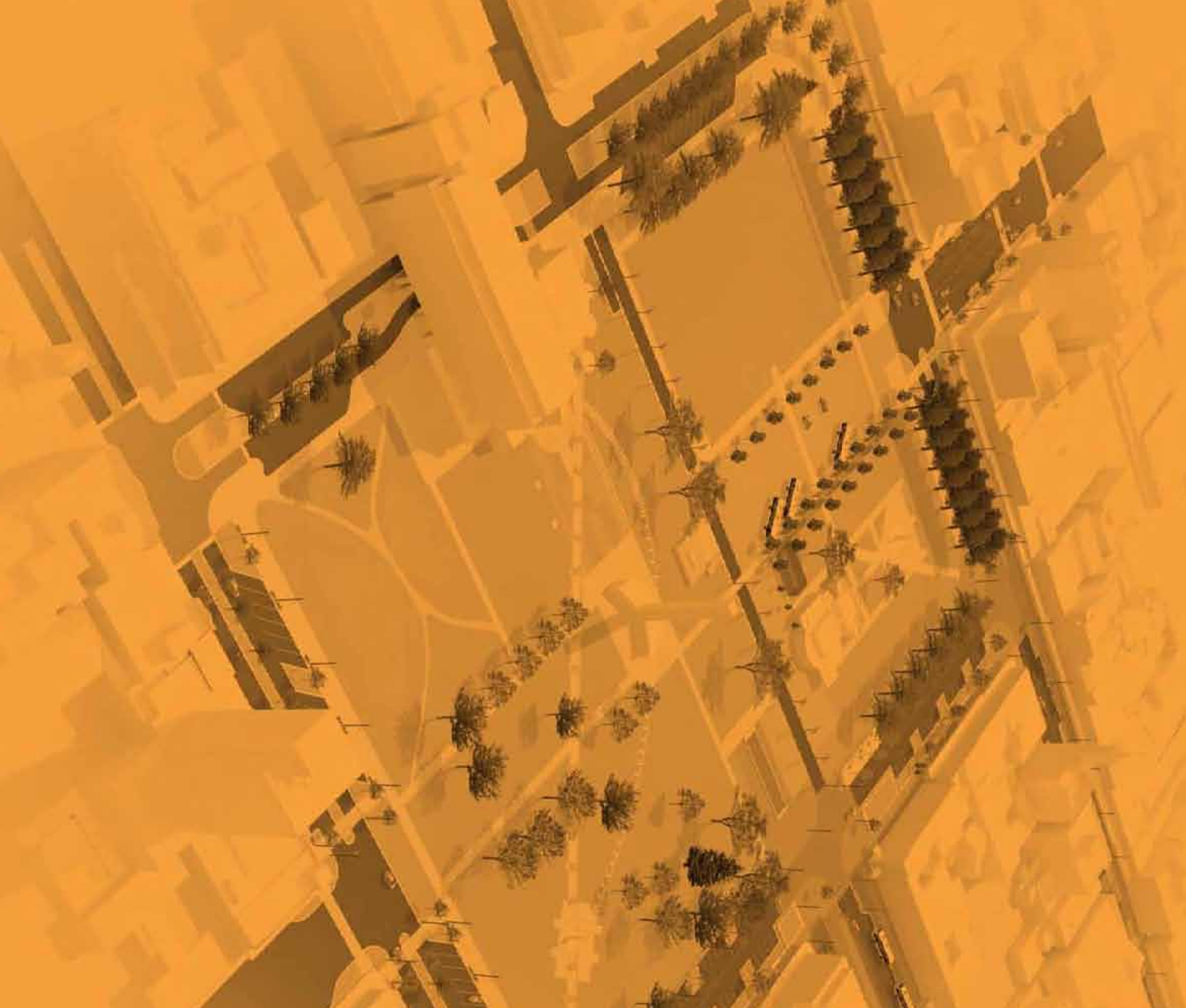

PALMERSTON NORTH

City Centre Streetscape Plan

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Document History and Status

The Palmerston North City Centre Streetscape Plan (and any subsequent revisions) will be co-ordinated by and approved by Palmerston North City Council before re-issue of this page and any changes described.

Revision	Date	Compiled By	Checked By
1	10.06.16	Isthmus / McIndoe Urban	PNCC

Contents

PART A

PART B

Part A - Technical Analysis Report

1. Introduction

1. 1 Scope of this Plan

The Streetscape Plan is a non-statutory document that sets out the future design direction for those streets and spaces defined in the study area in Section 1.4 of this report.

The range of streetscape interventions anticipated for Palmerston North's city centre are to be designed to a level of detail commensurate with a Concept Design package that includes:

- Overall masterplan describing comprehensive spatial arrangements to streets and spaces;
- Individual street typologies and specific designs;
- Street cross sections;
- Access and movement and car parking configurations;
- Landscape design and vegetation;
- Materials palette; and
- Indicative concepts for activation and placemaking initiatives.

The Plan has been developed in collaboration with Palmerston North City Council (PNCC) drawing on Council Officer expertise and ensuring alignment with the Long Term Plan (LTP) budgets for this work. The scope extends to streetscape upgrades including carriageway, parking, footpaths, hard and soft landscape as well as the Urban and Inter-Regional Bus Terminals. The interface between these street spaces and both The Square and private building edges are also addressed.

Image 1: Historic Square North and Broadway Avenue

1. 2 Purpose and Use of the Plan

The Streetscape Plan has been separated into two parts:

Part A: Analysis
Part B: Concept Design and Streetscape Plan

This report addresses Part A and forms the initial baseline stage of the project and has been developed in accordance with the terms of the project brief established by PNCC. That brief required a range of analysis to be undertaken to identify the issues affecting the study area and are set out in Section 2 of this report.

The purpose of the analysis is therefore to provide a clear picture of the quality, function and types of streets and spaces within the study area, highlighting areas of concern and to guide the design of any future intervention and investment.

The analysis findings provide a background against which design decisions have been made. Subsequent stages of the study respond directly to the issues and opportunities identified.

Image 2: Coleman Mall

1. 3 Programme and Process of Engagement

The project programme is set out in the adjacent Figure 1: Project programme. This describes the three-stage process running from September 2015 to June 2016.

Collaboration and engagement is integral throughout the three-stage work plan and includes PNCC, stakeholder and community engagement events. The distribution of engagement ensures that ideas are developed 'in the round' and fully grounded through local officer, stakeholder and community buy-in.

The findings of the engagement sessions held to date have been included as Appendices to this report. These, and subsequent engagement sessions, will support the development of the Streetscape Plan.

Acronyms within this diagram are:

- Internal Project Team (IPG); and
- Internal Reference Group (IRG).

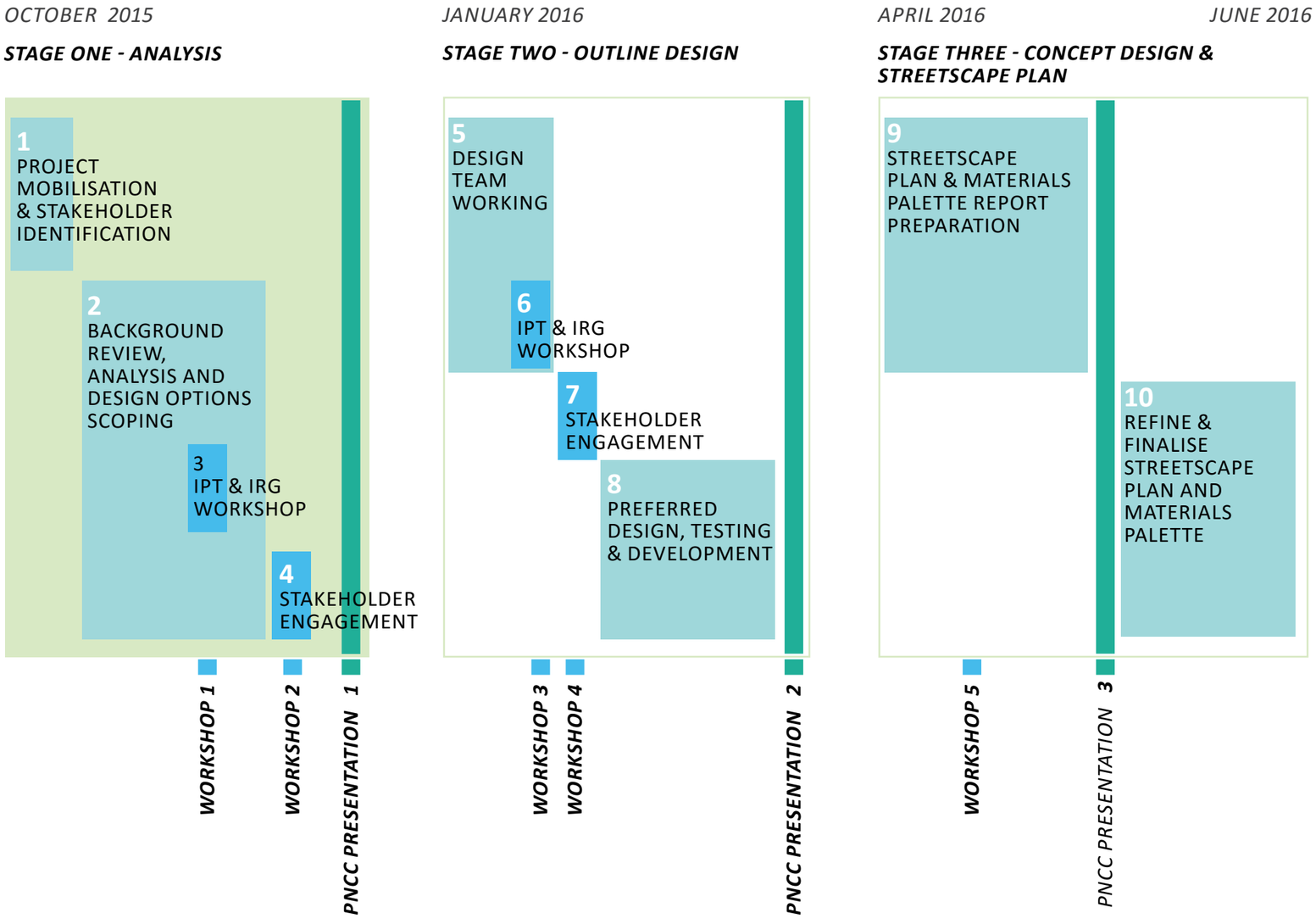


Figure 1: Project programme

1. 4 Study Area

The Streetscape Plan covers an area shown on the adjacent Figure 2: Study area. The Streetscape Plan is focused on the streets within the Palmerston North city centre, and is comprised of:

- Rangitikei Street between King Street and Square North;
- Broadway Avenue between Square North and Princess Street;
- Square North;
- Square West, north of Main Street;
- Square East, between Broadway Avenue and Church Street;
- Coleman Mall, at the interface with The Square; and
- Church Street between Square East and Square West.

The study area has been extended from the original PNCC RFP to include:

- A small portion of Main Street (west), as indicated on *Figure 2: Study area*; and
- A critical link from the Inner Square to Square East (at Main Street intersection).

The Urban Bus Terminal located on Main Street and the Inter-Regional Bus Terminal located within the Inner Square are included within the study area.

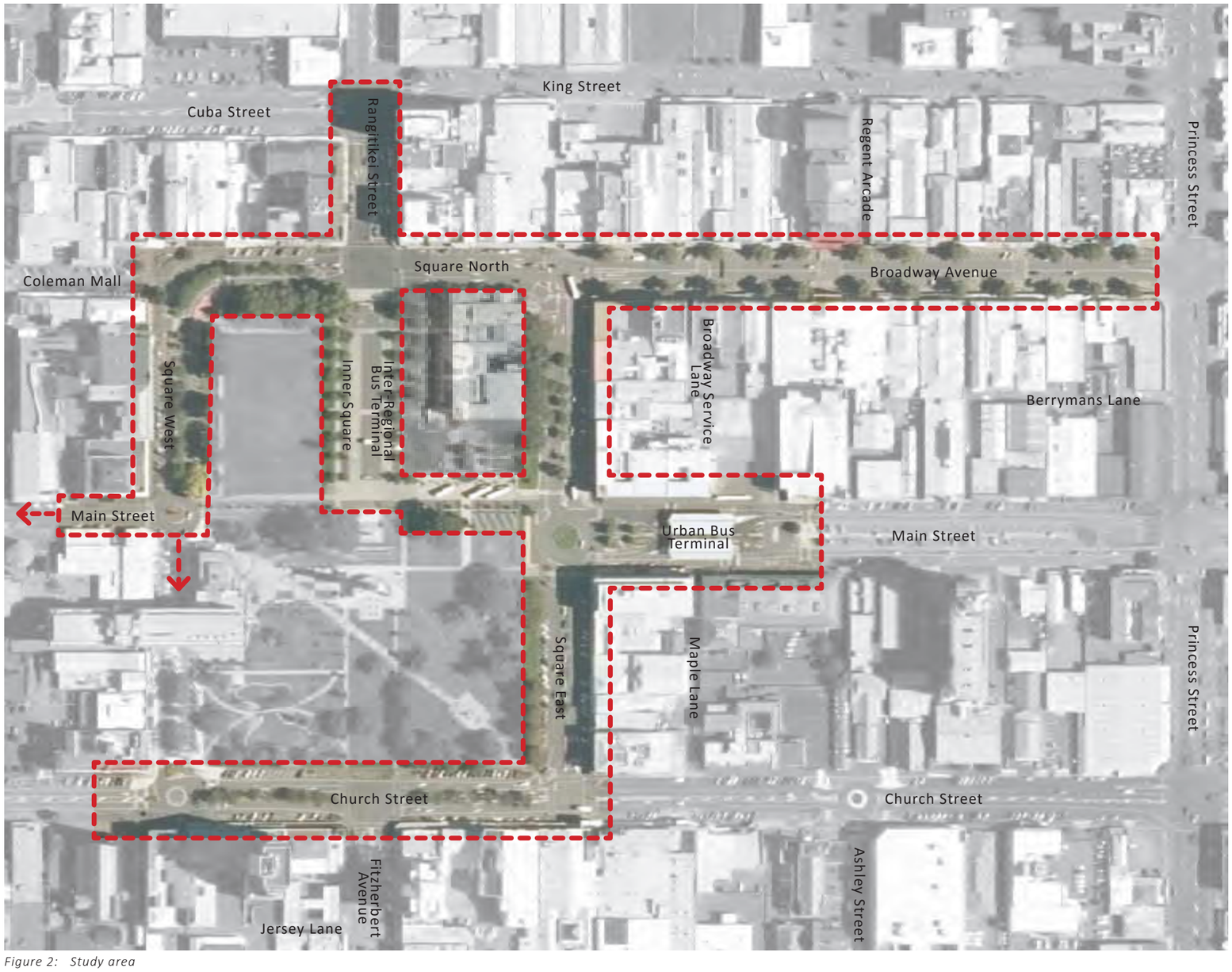
Image 3: Broadway Avenue

The size of the study area within the dashed red line is approximately 47 300m^2 and generally comprises street space, including:

- Footpaths;
- Carriageways;
- Parking areas;
- Utilities and services, including stormwater drainage infrastructure;
- Transport infrastructure, including bus shelters, seating, signage and lighting;
- Public realm amenity, including seating, waste collection points, bicycle hoops, and wayfinding; and
- Street trees and understorey planting.

The study area is heavily influence by its immediate adjacent built form, including façades, awning and signage.

The public open space of The Square itself is not included in the study area however an important interface exists along the street edges bounding The Square and necessarily form part of the project.



KEY

Study area

Figure 2: Study area

1. 5 Approach to Analysis

The Streetscape Plan adopts the following overall approach to analysis as shown on the adjacent ***Figure 3: Approach to analysis*** and discussed below. Four categories are defined with a range of detailed analysis within each category. These include:

A) Access and Movement

This category identifies the range of modes of movement across the study area, including the provision of car and cycle parking. Accommodating appropriate levels of private vehicular access, servicing and parking are key issues affecting the streets within the study area.

Public transport provision is assessed including services at both the Urban Bus Terminal and the Inter-Regional Terminal.

Also addressed are the issues surrounding wayfinding, legibility and safety.

Five sub-categories A1 to A5 are identified that map the various modes of movement, including the distribution and utilisation of parking and cycling, the provision of public transport (buses) and the overall patterns of vehicular, pedestrian and cycle movements. Also addressed is the general quality of wayfinding across the area, referring to issues of legibility and 'ease of use' for users. Finally, behavioural matters are analysed, including safety and security, and general patterns of use.

A1) On-street parking: Private vehicles
Bicycle
Motorcycle
Loading zones

A2) Public transport: Routes and infrastructure

A3) Movement: Pedestrian
Vehicular
Cycling

A4) Wayfinding and primary building entrances

A5) Behaviour and user experience: CPTED

This part of the analysis has been supported by transport and traffic advice within PNCC.

B) Built Form

This category focuses on the physical built fabric within the study area. The existing buildings (and their façades, awnings and signage) are not included within the scope of the Streetscape Plan, however have been included within the analysis as the buildings' design, detailing, setback and use can greatly affect the community's perception of the public realm and subsequent public realm experience.

Five sub-categories B1 to B5 are identified that highlight the scale of the 'built-to-open' characteristics of the area along with a range of qualitative assessments of the building edges:

B1) Figure ground study

B2) Architectural quality

B3) Building frontage ratings

B4) 3D block modelling

B5) Heritage category buildings

C) City Life and Culture

This category describes the activation of the public realm and in parallel with physical environmental factors is an important aspect to enhancing the overall quality, experience and occupation of Palmerston North's streets and spaces.

Four sub-categories C1 to C4 are identified:

C1) Building use

C2) Street occupation: Cafés (outdoor dining)
Street vendors
Retail spillout

C3) Street art, public art and events

C4) Cultural precincts

D) Environment and Spatial Quality

This final category analyses a wide range of physical environmental matters that effect the quality of streets and spaces and the users' perceptions of them.

The legibility of the study area, key views, landscape provision, and public realm quality are all assessed.

Five sub-categories D1 to D5 are identified:

D1)	Linkages and spatial mapping:	View-shafts Landmarks and landforms
D2)	Public realm quality:	Materials and furniture palette
D3)	Vegetation distribution and quality	
D4)	Climate / microclimate:	Sun/shade Wind Noise Warmth Cool edges
D5)	Services	

Figure 3: Approach to analysis

Reference Documents

International Publications

City of New York, 2013, *Active Design: Shaping the Sidewalk Experience*

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Palmerston North City Council, August 2013, *City Centre Framework For Palmerston North*

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Palmerston North District Plan, 2000, Available from <http://www.pncc.govt.nz/plans-policies-and-public-documents/plans/district-plan/>. [November 2015]

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+ engagement with local stakeholders and community members as per the report.

STREET DESIGN MANUAL FOR PALMERSTON NORTH
PALMERSTON NORTH CITY COUNCIL

Place Streets (Type 1)

Street Character	Destination for people day and night. Character, human scale and human speed. Pedestrian priority and response to the urban context takes clear precedence over vehicular movement. Opportunity to increase pedestrian amenity through provision of more pedestrian priority space.
Built Form and Activation	Active edges. Multiple building development opportunities. Fine grain built form suitable for a range of activities.
Vehicular Types, Activity, Volumes and Speed	Cycles, service vehicles, emergency vehicles, public transport and private motor vehicles. Largely destination oriented, low volumes, low speed.
Vehicular Amenity	Generally single lane movement in each direction. Whole of environment traffic calming- Utilise carefully considered design interventions to promote 'psychological' traffic calming and encourage appropriate behavioural responses from all users of the street. Parking and loading can be accommodated but does not dominate the street environment. Service / delivery vehicle and bus movements are carefully considered and accommodated if necessary. Use of space within the street may change over a 24 hour period- the same space may be used for short term parking and deliveries, outdoor dining and events at different times of the day and night. Traffic signal phasing optimised to prioritise pedestrian movement over vehicle movement at signalised intersections- adapt to AM and PM peak movement patterns.
Pedestrian Amenity	Street furniture and soft landscaping that is of a higher standard than other streets.
Minimum Circulation	Minimum 3.0 meter wide pedestrian footpath.
Street Infrastructure	Street furniture such as benches, cycle stands and lighting is positioned within a clearly defined area between traffic and footpaths.
Way-finding and Signage	Street signage is consolidated. Soft landscaping is not located on key pedestrian desire lines.
Cyclist Amenity	Cyclists share the street at a slow speed with pedestrians and vehicles. No designated cycle lanes are provided. All levels of cycling ability feel safe. Cycle parking is supplied.
Stormwater Management	On site stormwater management techniques e.g. rain-gardens, swales and permeable tree pits.
Street Trees	In conjunction with City-Wide Vegetation Framework. Large tree pits are utilised to encourage and establish good tree root growth.
Lighting	Pedestrian level lighting (P category) is achieved. Amenity street lighting may be reinforced by feature lighting to emphasise 'sense of place.'
Public Art and Activation	Integration of artworks into site-specific street furniture or structures.
Technical	Junction radii 1-3m. Kerbs are either flush or rounded to ease movements for cyclists.

Place Streets (Type 2)

Street Character	Destination for people day and night. Character, human scale and human speed. Pedestrian priority and response to the urban context takes clear precedence over vehicular movement. Opportunity to increase pedestrian amenity through provision of more pedestrian priority space.
Built Form and Activation	Active edges. Multiple building development opportunities. Fine grain built form suitable for a range of activities. Outdoor Trading Policies to ensure consistent approach taken to spatial provision of outdoor dining areas and use of appropriately designed outdoor furniture. Significant areas of open space connected to adjacent buildings through street design.
Vehicular Types, Activity, Volumes and Speed	Cycles, service vehicles, emergency vehicles, public transport and private motor vehicles. Largely destination oriented, low volumes, low speed.
Vehicular Amenity	Generally single lane movement in each direction. Whole of environment traffic calming- Utilise carefully considered design interventions to promote 'psychological' traffic calming and encourage appropriate behavioural responses from all users of the street. Parking and loading can be accommodated but does not dominate the street environment. Service / delivery vehicle and bus movements are carefully considered and accommodated if necessary. Parking bays provide flexible space for short term parking, deliveries, events and place making opportunities
Pedestrian Amenity	Streets are part of public realm and connect with adjacent open space. Street furniture and soft landscaping that is of a higher standard than other streets.
Minimum Circulation	3.0m wide pedestrian footpath
Street Infrastructure	Consistent use of street furniture and other landscape elements between street and adjacent open space to provide complementary places for public enjoyment. Street furniture such as benches, cycle stands and lighting is positioned within a clearly defined area between traffic and footpaths. Maintenance of street furniture and soft landscaping is carefully considered.
Wayfinding and Signage	Street signage is consolidated. Soft landscaping is not located on key pedestrian desire lines
Cyclist Amenity	Cyclists share the street at a slow speed with pedestrians and vehicles- no designated cycle lanes are provided. All levels of cycling ability feel safe. Cycle parking is supplied
Stormwater Management	On site stormwater management techniques e.g. rain-gardens, swales and permeable tree pits.
Street Trees	In conjunction with City-Wide Vegetation Framework. Large tree pits are utilised to encourage and establish good tree root growth.
Lighting	Pedestrian level lighting (P category) is achieved. Appropriate street lighting is integrated.
Public Art and Activation	
Technical	Junction radii 1-3m. Kerbs are either flush or rounded to ease movements for cyclists.

Movement / Place Streets

Street Character	Combination of destinations for people day and night, and key movement corridors across the city centre. Active edges and a range of uses, the majority of which are pedestrian-based (e.g. retail, offices, dining and entertainment). Key passenger transport function. High level of pedestrian priority whilst facilitating efficient vehicular movement.
Built Form and Activation	
Vehicular Types, Activity, Volumes and Speed	Cycles, service vehicles, emergency vehicles, public transport and private motor vehicles
Vehicular Amenity	Generally single lane movement in each direction. Whole of environment. Balance use of 'psychological' traffic calming techniques with appropriate use of conventional traffic calming measures, e.g. horizontal and vertical deflection. Parking and loading can be accommodated but does not dominate the street environment. Service / delivery vehicle and bus movements are carefully considered and accommodated if necessary. Demarcated parking bays may provide flexible space for other uses during different times of the day and night. Uncontrolled crossing points are used mid-block to minimise severance and maximise permeability. Private accessways across public space should be designed so that they look and feel like they are public spaces (rather than a public entrance). Vehicular carriageway tends to be narrow and not dominant of the overall street character.
Pedestrian Amenity	Street furniture and soft landscaping that is of a higher standard than other streets.
Minimum Circulation	3.0m wide pedestrian footpath next to building frontages. 3.0m wide off road shared cycle / walk way. Allocate at least half of the street to pedestrians and cyclists.
Street Infrastructure	
Wayfinding and Signage	Street and highway signage is consolidated. Soft landscaping is not located on key pedestrian desire lines.
Cyclist Amenity	Cyclists share the street at a slow speed with pedestrians and vehicles - designated lanes may be provided dependent upon spatial availability. All levels of cycling ability feel safe. Cycle parking is supplied. The majority of carriageway space is allocated and designed for pedestrian / cyclist movement and human scale behaviour.
Stormwater Management	
Street Trees	In conjunction with City-Wide Vegetation Framework.
Lighting	Pedestrian level lighting (P category) is achieved. Appropriate street lighting is integrated
Public Art and Activation	
Technical	Junction radii 1-3m. Drop kerbs are aligned with key cycle routes to ease movement for cyclists. Kerb alignments are rationalised to simplify vehicular movement where practical and increase legibility and ease of use.

2. Technical Analysis

2. 1 Access and Movement - On-Street Parking

There is a prevalence of on-street, angled parking. Most parking within the study area is a maximum of 120 minutes, paid parking. As a result, the on-street parking competes with the free 60 minute parking provided in The Plaza.

Parking typically discourages long stays in the city centre. With the exception of Downtown's free parking on Sundays, and reduced evening charges. All Council controlled parking is free on Saturday after 3.30pm and all day Sunday, as well as after 5.30pm on weekdays.

Several of the car parking spaces are designated disabled parking. This is unevenly distributed throughout the site. The Courthouse includes a disabled parking space on site, access for which must be considered with the planning of the Main Street Urban Bus Terminal.

Motorcycle parking is provided within the study area, predominantly along Broadway Avenue and Church Street. Loading zones are provided along most blocks, with 15 minute time limits allowing servicing to the various retail and commercial frontages.

Cyclist parking is distributed throughout the study area, at intersections and along shopping routes. There appears to be sufficient cyclist parking for the cycle movements within the study area, however community and stakeholder feedback suggests that it is unsafe. More cycle infrastructure should be provided to encourage greater use of active transport.

External to the study area, PNCC has incorporated short term, unpaid parking of 15 and 30 minutes. These parking spaces are on Square West between Church and Main Streets. There are also a few within the study area, on Main Street outside the Post Shop.

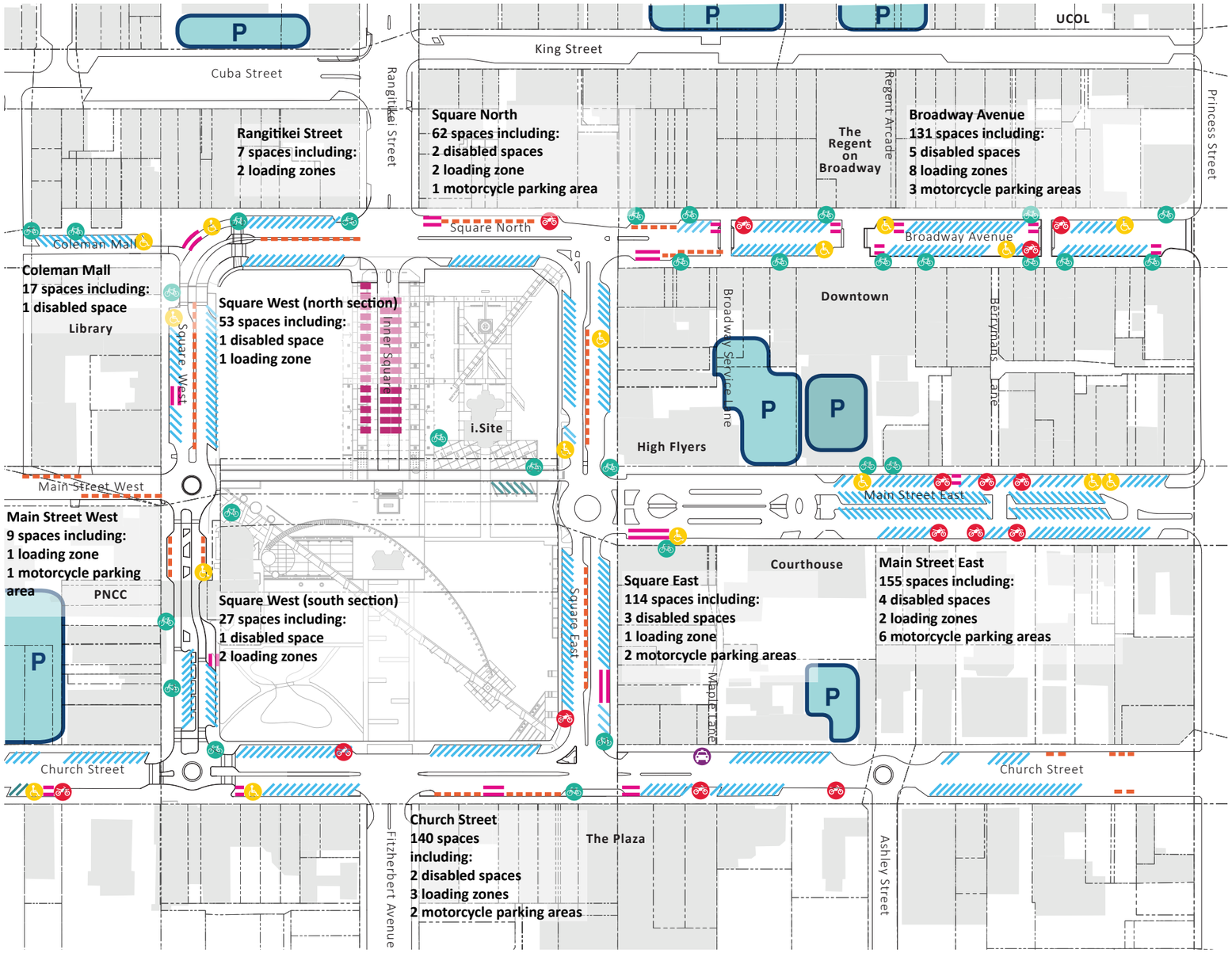
Constraints

- Palmerston North is a sprawling city that is reliant upon vehicular movement and access. There are competing demands between vehicular and pedestrian amenity, however a balance must be achieved to ensure the streetscape allows adequate parking and management to support economic sustainability and growth.
- The Streetscape Plan must be designed with consideration for the Council's Parking Management Plan.

Opportunities

- Review distribution of parking and parking types for public transport, private vehicles, motorcyclists, cyclists and pedestrians to encourage new movement throughout the city centre e.g. free parking, varied timed allowances.
- Review cycle infrastructure to encourage greater use of active transport.

Image 4: Square East



KEY

	Parallel parking
	Perpendicular parking
	Angle parking
	Loading zone
	Motorcycle parking
	Disabled parking
P	Off-Street car parking
	Bicycle parking
	Taxi stand

Figure 4: On-street parking

2. 2 Access and Movement - Public Transport - Bus Routes

There are 22 bus routes regularly servicing the study area. The Square, Church Street, Fitzherbert Avenue, Main Street and Rangitikei Street support bus movements from the Urban and Inter-Regional Bus Terminals.

Both terminals include holding/parking areas and associated infrastructure (shelter, lighting).

Buses are an integral part of the urban life of Palmerston North, seen as a public service. The services run throughout the day and into the early evening, typically between 6-7am and 6-7pm. Some additional services run on Friday evenings. The services run to/from the suburbs, and start/terminate at the Main Street Urban Bus Terminal.

Significant pedestrian traffic is created where there are bus stops. As the Urban Bus Terminal is the starting point for a number of routes, there are generally people waiting most times during the day in and around the terminal. It is important that any waiting area feels comfortable and safe for all bus patrons.

Bus terminals require hard wearing materials and surfaces to support heavy, daily use by a range of people. This often creates a need to work with a limited set of materials to minimise damage both by operational and human activity. The terminal also needs to be easily cleaned and maintained. To that end, it is important that the material selection and detailing are designed to a human scale and comfort level, even if the materials are robust and utilitarian. The end result should create a positive anchor for the urban design of the city centre, an attractive and safe public space that discourages antisocial behaviour.

Constraints

Services can be re-routed to minimise movements through the sensitive inner area. However, this will have an associated increase in vehicle km's which in turn will have increased costs over and above those contracted.

Opportunities

- Review bus movements between Rangitikei Street and Main Street to ensure prioritisation of pedestrians and active transport choices.
- There is some scope to relocate bus and coach layovers (down time between arrivals and departures) to a location where space is not at such a premium. This does introduce additional movements.
- Rationalise space dedicated to the urban terminal to allow for a higher level of pedestrian activity.
- Review the materials and surfaces for bus terminals to consider human scale and comfort as well as operational maintenance. The end result should create a positive anchor for the urban design of the city centre, an attractive and safe public space that discourages antisocial behaviour.

Image 5: Main Street - Urban Bus Terminal

KEY

- Urban Bus Terminal
- Bus stop
- Inter-Regional Bus Terminal
- Inter-regional bus route

Bus routes (as per Horizon Regional Council website)

- Ashhurst
- 1 Awapuni
- 2 Rugby
- 3 Highbury
- 4 Takaro
- 5 Cloverlea
- 6 Milson
- 7 Rhodes
- 8 Roslyn
- 9 Rangiora
- 10 Brightwater
- 31 Fernlea
- 32 Heights
- From Fldg
- To Fldg
- 12 Massey
- 12A Massey
- 12B Massey
- 12C Massey
- 14 IPC
- 15 HC

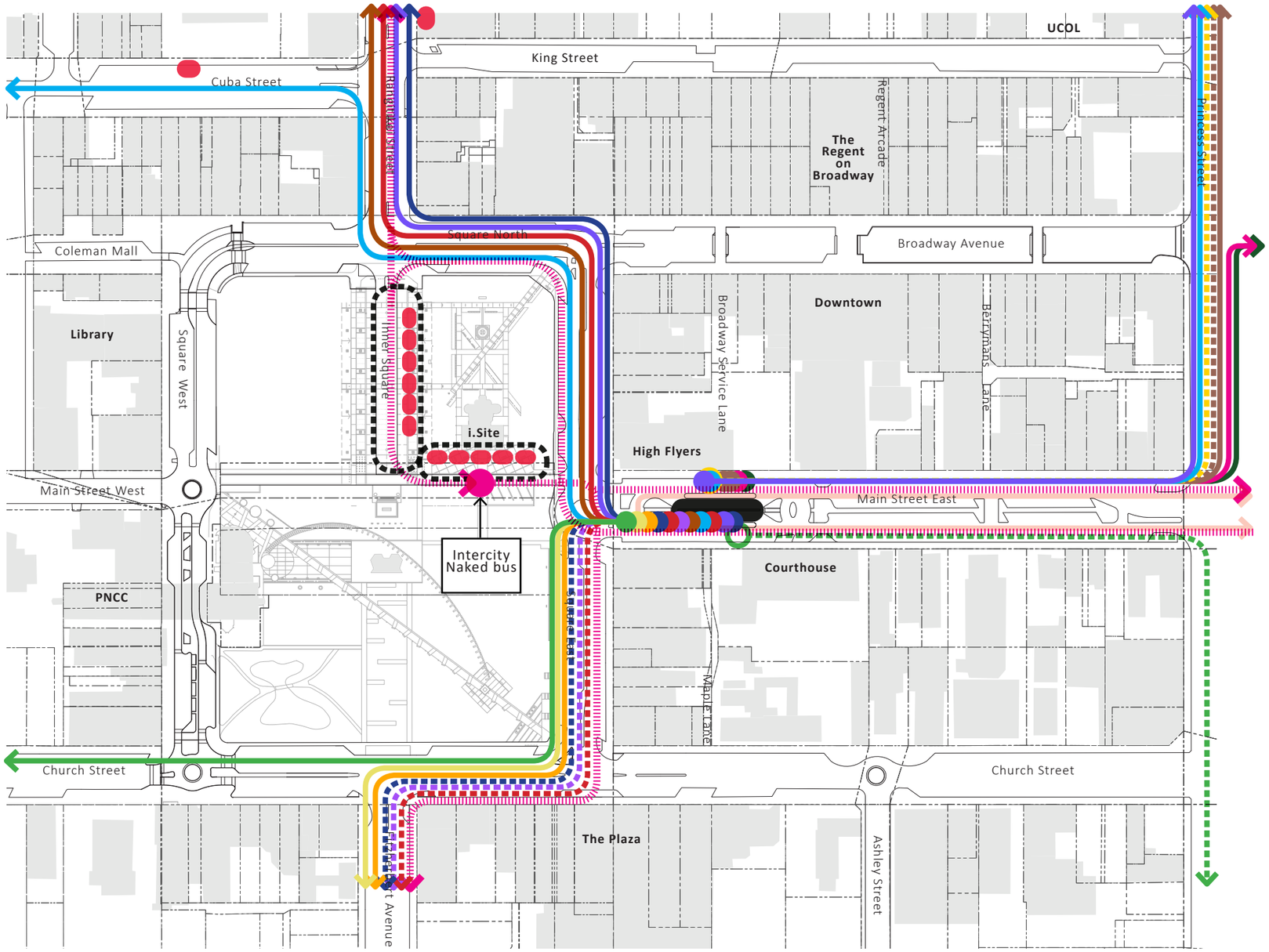


Figure 5: Bus routes

2. 3 Access and Movement - Public Transport - Facilities

Site Observations

- The Urban Bus Terminal is an industrial style structure that invokes a utilitarian environment;
- Safety concerns about pedestrians walking across bus lanes has introduced barrier fencing not conducive to pedestrians;
- A dark environment that does not enhance the user experience;
- Central location in the road blocks views of the Ruahine Ranges from The Square;
- Four lane platforms make the space feel congested;
- Pedestrian space around the structure is heavily car dominated;
- The Courthouse's relationship with road / Urban Bus Terminal is poor with blank walls, a small stepped entrance not allowing any natural activity at its edges;
- The adjacent carpark creates a 'back of house' feeling;
- Scale of the structure appears larger than is necessary;
- Lighting is utilitarian and should be more friendly at night;
- Waiting spaces feel unfriendly / unsafe and cold / windy;
- Main Street East feels like a left over space- it is car dominated, with the bus terminal positioned in the middle;
- There is a lack of connection between The Square and Main Street East, as well as from one side of Main Street to the next. This poor physical connection is exacerbated by the Urban Bus Terminal blocking visual connections; and
- The two terminals have little architectural relationship, despite being in close proximity to each other.

The part of the street bounded by High Flyers / the old library, the Courthouse and the carpark has some unfortunate urban issues including:

- Gaps in the street;
- Lack of active edges and large blank walls;
- Floor levels not at grade;
- Carparking at ground level;
- Industrial structures that do not encourage human interaction;
- Industrial lighting;
- Uncoordinated mix of landscape treatments; and
- Additions to the High Flyers building that block the views and movements of pedestrians between Square East to Broadway Avenue.

Context

Private investment to improve frontages and on-street activity is not likely without a revitalised streetscape.

Location

The current Urban Bus Terminal location is successful, however it has become the centrepiece of a low quality of streetscape. The bus station itself is unfriendly, utilitarian and industrially scaled, forming a significant blockage for connections through and around this area. The buses, once stopped, form a large wall which restricts view lines through the public domain, creating safety concerns. The concrete barriers restrict vision across the street and the building casts a great shed like shadow over the surrounding streetscape.

Streetscape Interface

Main Street historically supported the city's train infrastructure, with the main trunk line running down its centre. As a result, it is wide enough to support a building site within the road reserve and still function as a through road for vehicles.

The buildings in and around the terminal include the Courthouse, the old post office / High Flyers, and the carpark. These have been built at various times and sit as independent buildings within the streetscape. All have a relationship to the street as a result of floor level changes or road crossings. Investment to improve these frontages is unlikely unless a benefit can be provided with a revitalised streetscape.

Image 6: Urban Bus Terminal

KEY

Regional bus route

Visitor parking

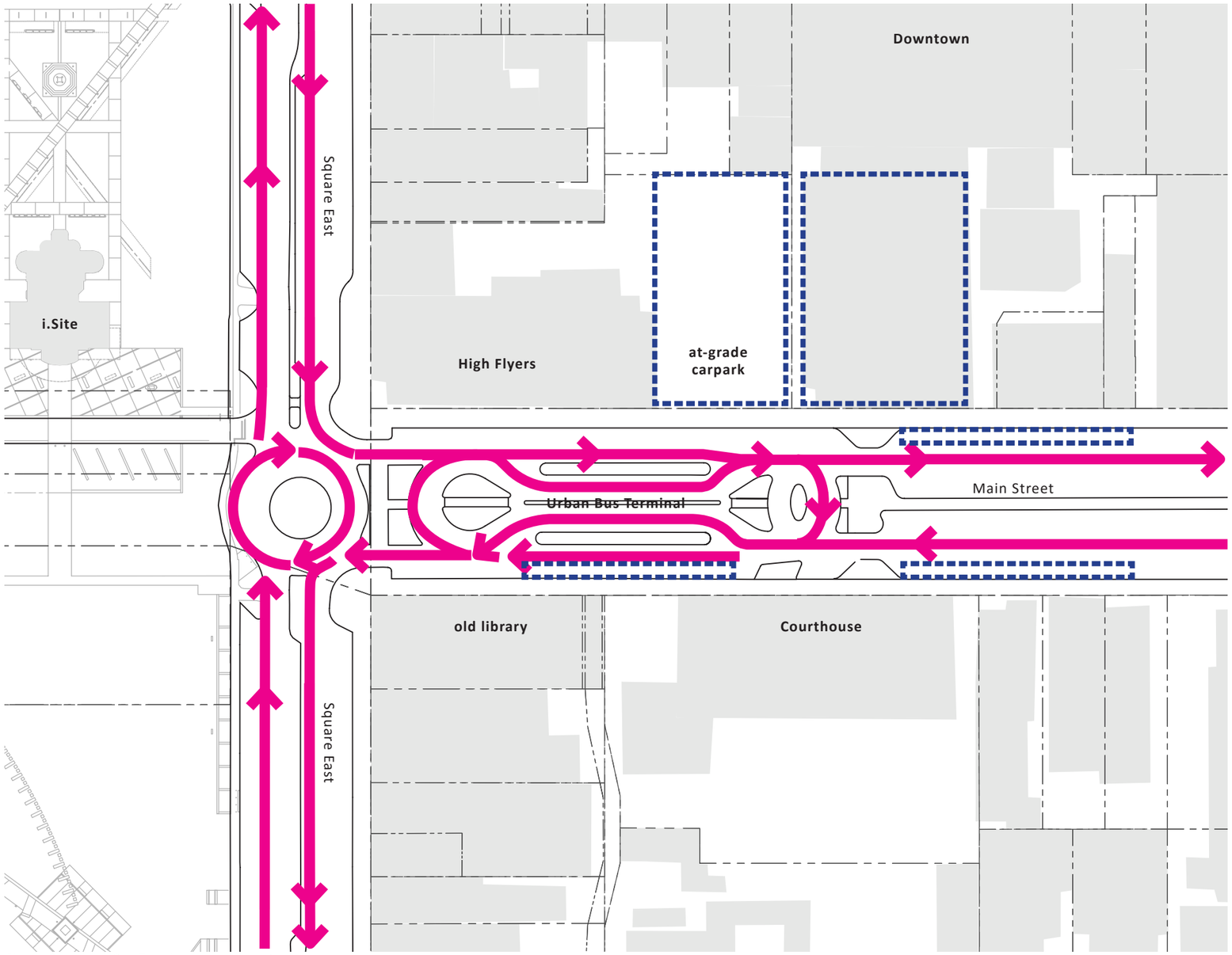


Figure 6: Urban Bus Terminal and bus routes

The Square Interface

There are two bus terminals, the Urban and Inter-Regional Bus Terminals. Presently, the two are located within walking distance, with the Inter-Regional Bus Terminal located within the Inner Square. The structure of the Inter-Regional Bus Terminal has been designed as a lightweight structure with a glazed roof, and integrated with existing concrete retaining walls. The terminal is oriented toward the car park. The terminal was designed as a temporary facility, however is recommended to be permanent. Should the terminal remain in this location, improvements could include coordinated signage and a higher quality of detailing. Ambient lighting must be included to ensure safe afterhours use.

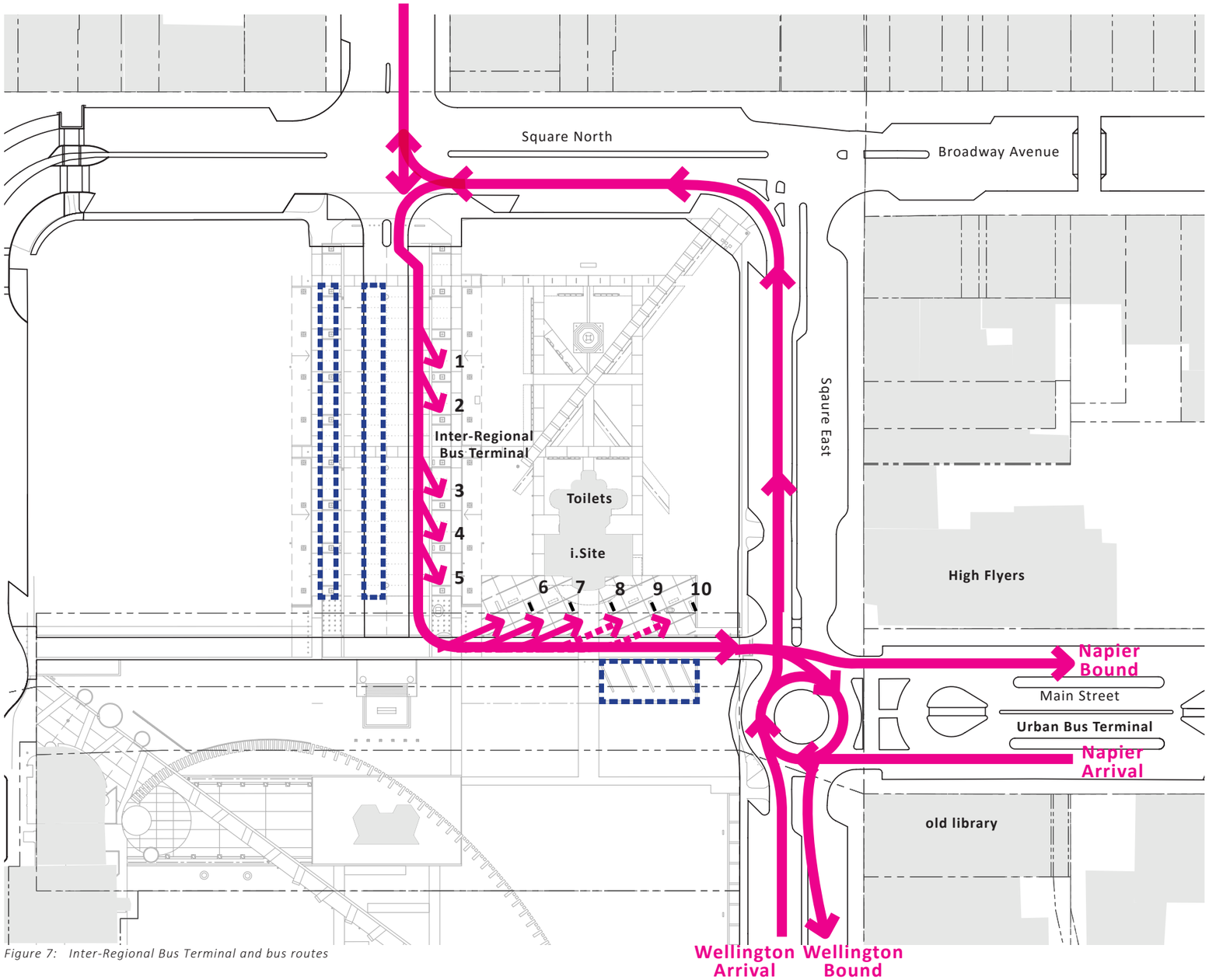
Constraints

- Operational requirements of inter-regional bus network.
- Interface sensitivities with The Square (landscape, amenity, views, heritage).
- Vehicular access and public car parking in parallel with bus access.
- Need to work with / modify the existing canopy structure;
- Harder to move the Intercity terminal because of current infrastructure already built in;
- Exposure to the weather, particularly in winter;

Opportunities

- Simplify vehicular movements and establish safe pedestrian crossing points along Main Street and The Square.

Image 7: Inter-regional Terminal



KEY

Inter-regional bus route

Visitor parking

Figure 7: Inter-Regional Bus Terminal and bus routes

2. 4 Access and Movement - Vehicular

The study area comprises part of a much larger open grid system, with a high level of route choice for vehicles. Management of movements is therefore difficult and past observations have demonstrated a high proportion of traffic entering the study area (central CBD) passing straight through. Traffic volumes in the study area are therefore higher than necessary to service the activities contained within and around it.

All of the roads within the study area are identified as 'Place Streets' in the City Centre Framework, with the exception of part of Main Street, which to the east of the Urban Bus Terminal is a 'Movement/Place Street'. These streets should therefore provide access to activities, with a high level of accessibility and priority given to pedestrians, rather than accommodating the through vehicular movements which currently occur.

The Council has created a 30km/hr city centre zone for streets that are within the inner 'Ring Road' (of which the study area is a part), creating a safer environment for pedestrians and motorists alike. It also discourages through movement, helping to define the city centre as a destination.

The high levels of on-street parking throughout the study area and short block lengths result in a low average vehicle speed, with average speeds for each section between 22kph to 32kph. There is a clear focus on facilitating vehicular movement in and around the city centre, with wide traffic lanes and parking on every city block.

Traffic lanes are provided inconsistently. All streets, with Coleman Mall and the Inner Square the exceptions, have at least a single lane of traffic in either direction. Additional vehicular lanes allow for separate turn lanes at major intersections, however in doing so prioritise the vehicular movements over usable public domain.

Main Street's vehicular configuration accommodates a variety of bus turning movements, which results in an industrially scaled public realm with large expanses of asphalt and little pedestrian amenity.

Constraints

- The size of The Square can add significant walk times for those with reduced mobility unless parking is provided on all sections of the perimeter, effectively reducing the walkability of the CBD. Vehicular access must therefore be retained to all locations;
- The open nature of the grid means that route prediction and therefore management of traffic can be difficult.
- Bus operational requirements require the transfer of vehicles from one service to another, and routing requires further manoeuvres within the immediate terminal area. Some of the manoeuvring space is duplicated at the moment and could be optimised.

Opportunities

- Establish a street hierarchy which builds on PNCC's Street Types to define character, purpose and key components of each city centre street;
- The grid system provides in-built resilience to the network and to a certain extent provides adequate choice for traffic to 'self-regulate', reducing the occurrence of significant congestion;
- The high level of accessibility and vehicular permeability provides opportunities for some links to be restricted while maintaining access to all locations;
- The ring road operates well below capacity, with efficiency gains possible with increased use (i.e. programming signals to favour the ring road over side roads; enabling 'green waves' to improve travel times and journey reliability).
- Review vehicular movements and infrastructure in line with a proposed street hierarchy, increasing connectivity and ensuring clear and logical wayfinding for vehicles and pedestrians alike.

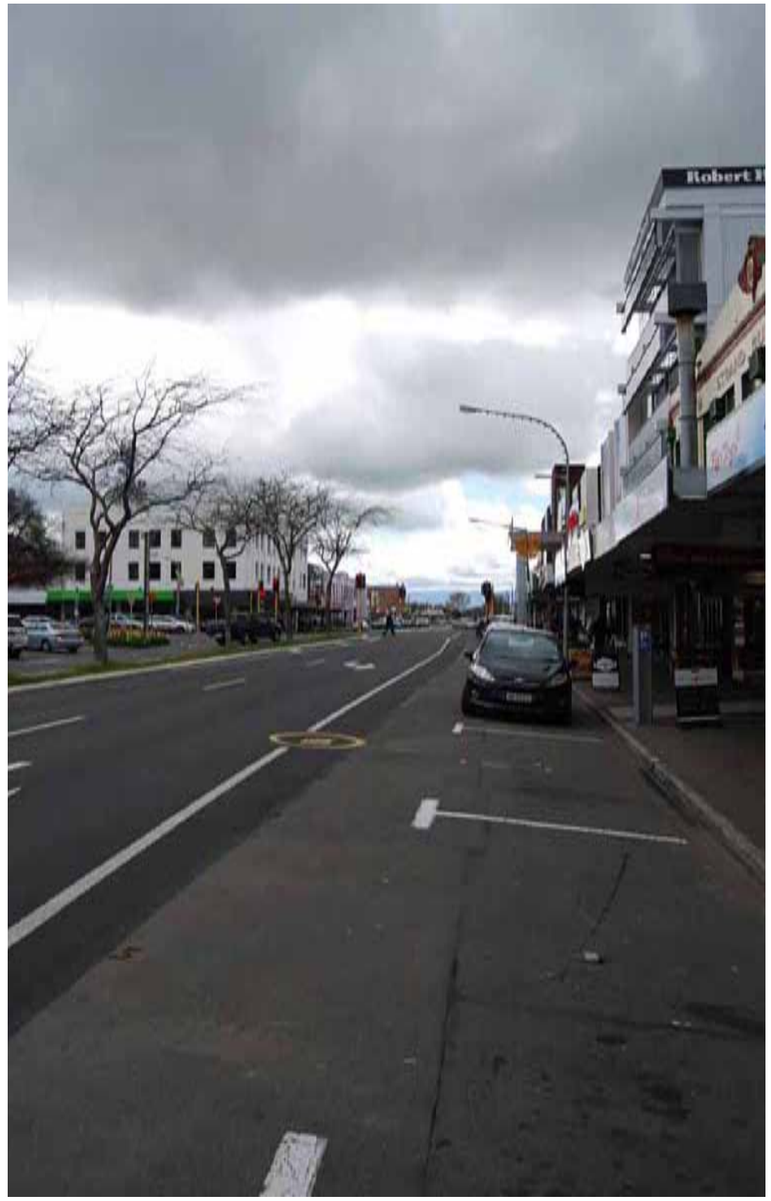
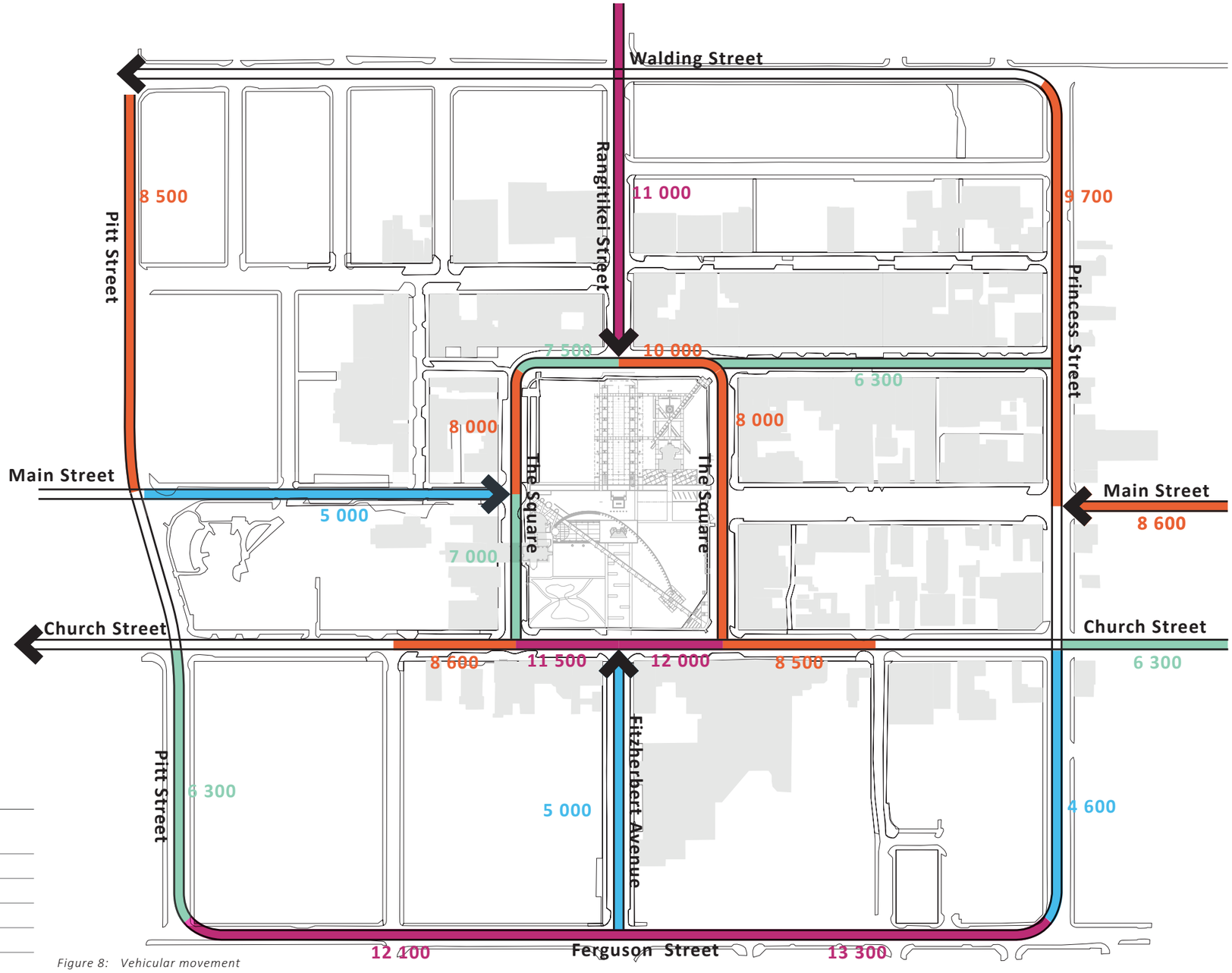


Image 8: Church Street



KEY

→	Key vehicular movement
	< 6 000 average daily movements
	6 000 - 7 999 average daily movements
	8 000 - 10 000 average daily movements
	> 10 000 average daily movements

Figure 8: Vehicular movement

2. 5 Access and Movement - Cycle

Palmerston North aspires to be the most cycle-friendly city in New Zealand.

There is presently no cycle infrastructure, with the exception of cycle parking, provided within the study area. Cyclists typically utilise the road network, with The Square providing a platform for informal cycle movements throughout.

Within Palmerston North, conventional demarcated, on-street cycle lanes are provided nearest the study area on the following streets:

- Church Street, at the intersection and west of Pitt Street;
- Church Street, at the intersection and east of Princess Street;
- Fitzherbert Avenue, south of Ferguson Street;
- Broadway Avenue, east of Princess Street;
- Rangitikei Street, north of Walding Street;
- Walding Street; and
- Main Street, at the intersection and west of Cook Street.

Opportunities

- Provide additional cycle infrastructure (e.g. clear routes, parking facilities) to encourage logical and safe cycle movements through the city centre.

Image 9: Square East

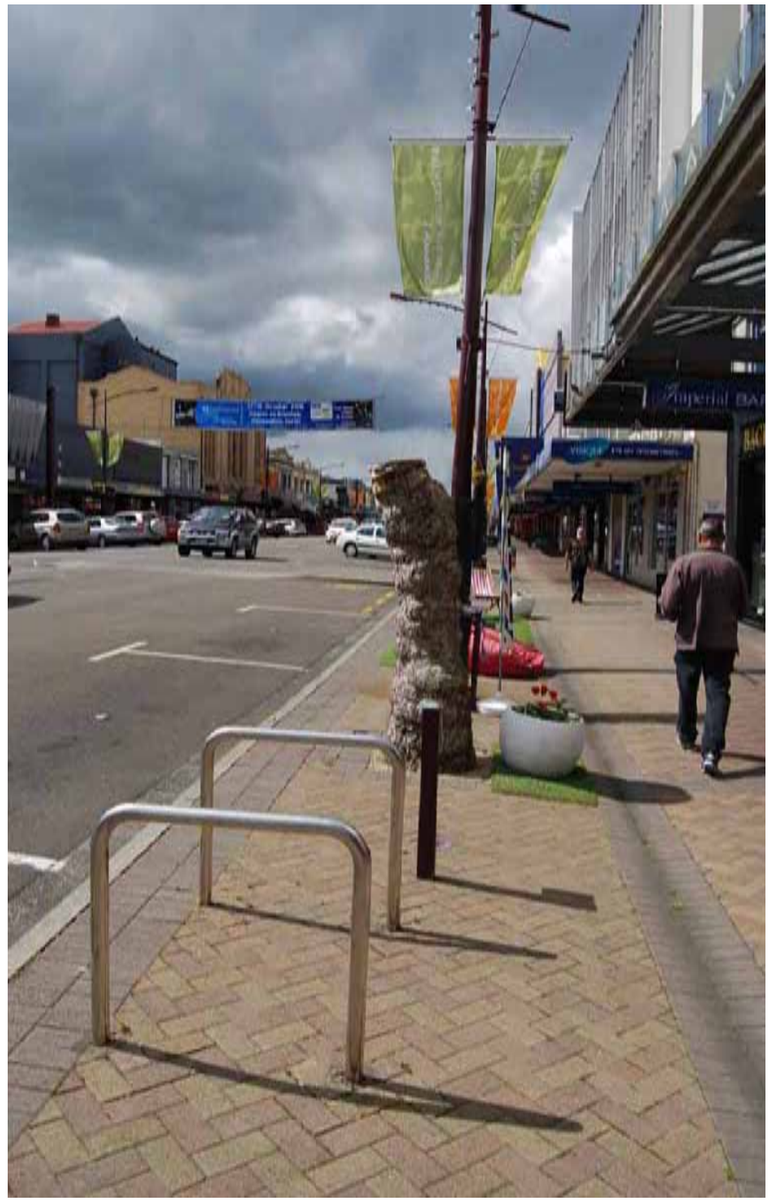
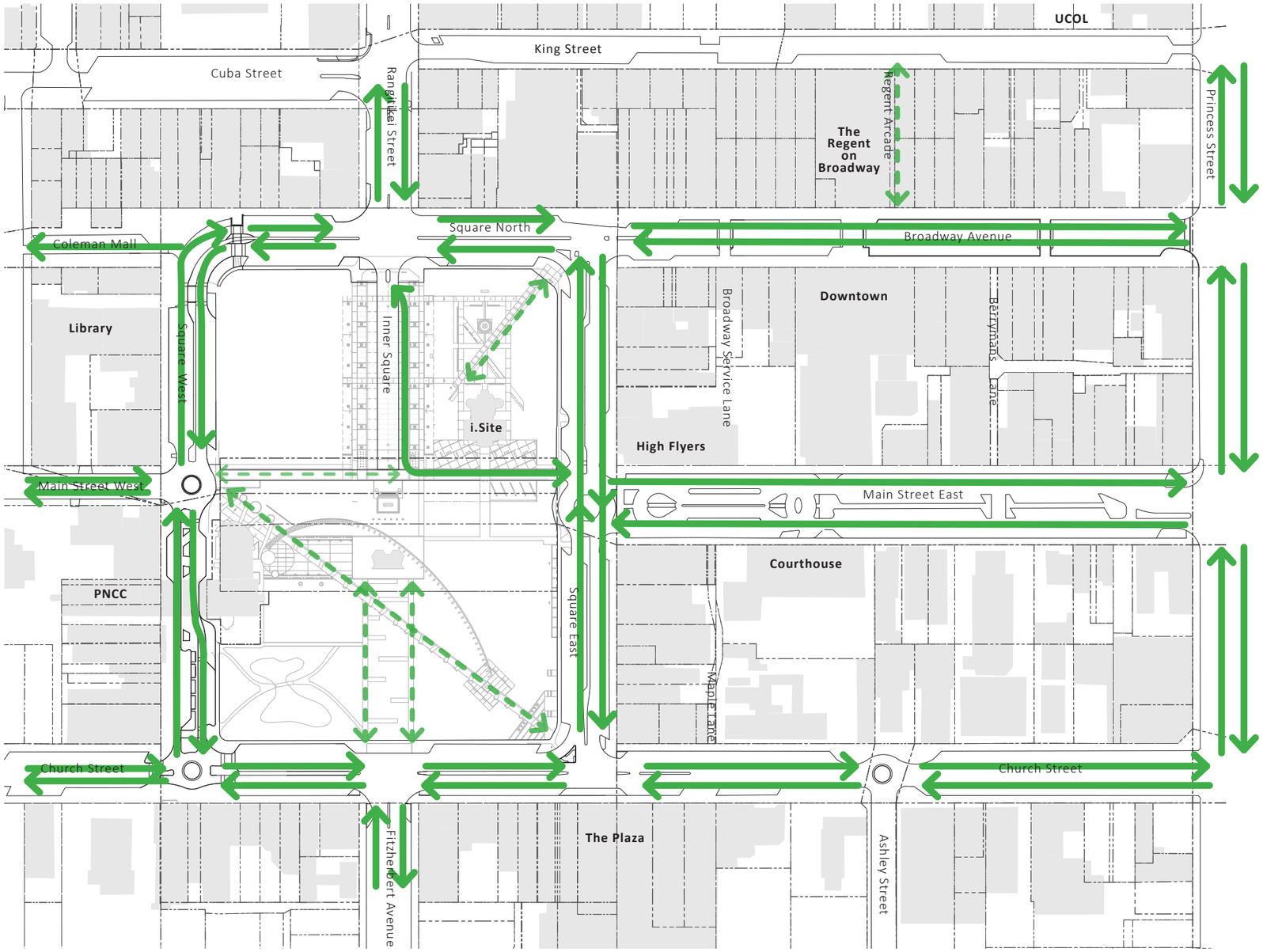


Image 10: Broadway Avenue



KEY

Cycle movement

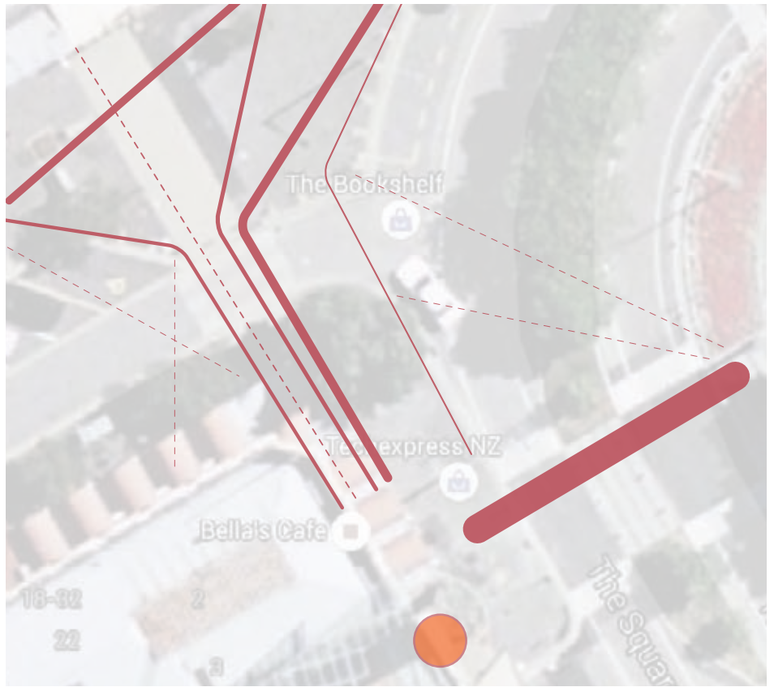
Informal cycle movement

Figure 10: Cycle movement

2. 6 Access and Movement - Pedestrian

Observational studies of stationary behaviour and pedestrian movement patterns (A3) were undertaken at locations which provide comparison between different street and intersection designs at peak day-time hours. The results of the studies provide information for prototyping public space. The direct observations of pedestrian movements and behaviour were supplemented by the NZ Property Institute's annual pedestrian survey data from November 2015. Evening use was assessed with site visits in both early evening and late night through the CPTED study.

Figure 11: Pedestrian movement at Square West: Coleman Mall



Square West: Coleman Mall

- Raised crossings and unique planted corner.
- Destination: Library.

Summary

- Movement between The Square and destination is significant.
- Generous space for pedestrians and a low speed environment allows a diversity of direct routes to be taken.
- Very little stationary behaviour was observed here.

Implications for Design Strategies

- The tree on the corner funnels pedestrians into a tight area.
- Areas of intersection of pedestrian flows may provide a focal points for social infrastructure.

Figure 12: Pedestrian movement at Square West: Council shared space

Square West: Council Shared Space

- Flush surface street, only section of The Square with two frontages.
- Parallel parking on both sides of street.
- Destination: City Council offices and service centre, café.

Summary

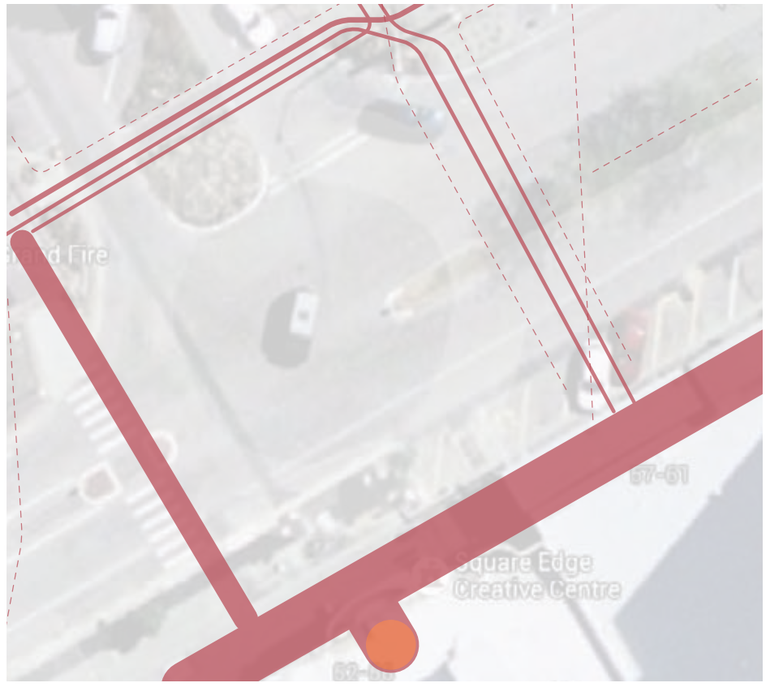
- The flush surface street and a number of clear destination points in the area creates repeated, but diverse patterns.
- Landscaping shapes the potential crossing points and funnels people into 3-4 choices of crossing in the central island.
- Pedestrians were observed giving way to traffic entering the area from the roundabout.
- Very little stationary behaviour observed.

Implications for Design Strategies

- The roundabout and landscape forces pedestrians to deviate from direct crossing points at corners into this shared space.
- Parallel parking and flush surface street allow for flexible and direct movements.

KEY	
	100 pedestrian movements
	< 10 pedestrian movements
	Destination
	Food trucks
NOTE	The samples include minor sources of error due to technology limitations and environmental factors which do not affect establishment of overall movements patterns. Sources of error: video footage, reflections in shop windows, shadows, large vehicles passing between camera location and pedestrian routes.

Figure 13: Pedestrian movement at Square West / Church Street: corner



Square West / Church Street: Corner

- Roundabout with raised pedestrian platforms.
- Destination: Square Edge Creative Centre.

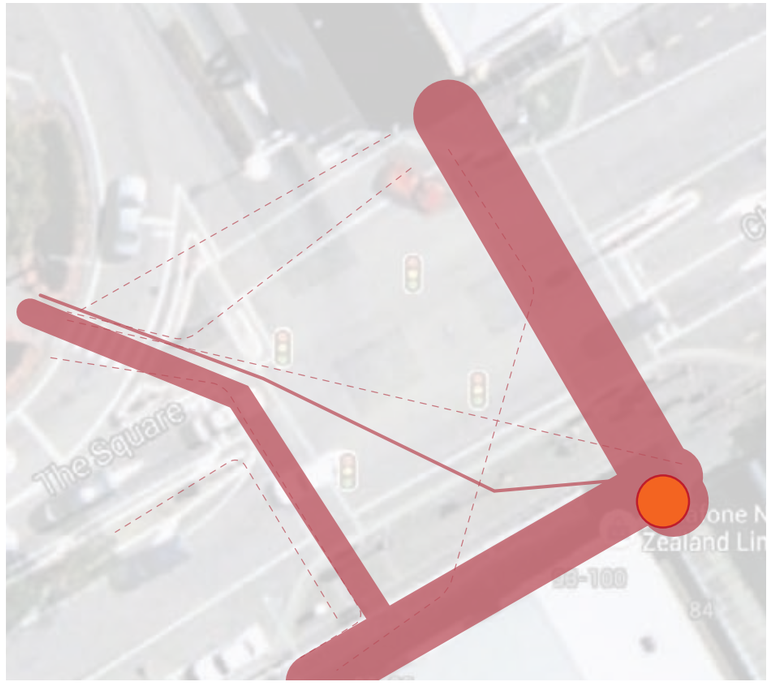
Summary

- The edges of The Square are the most heavily used, raised crossings allow people to move freely around the edge of the space.
- No observed direct routes across the roundabout. People were observed cutting the corner of The Square on the park side.
- The dimensions of the roundabout and raised crossings make people walk further than necessary.

Implications for Design Strategies

- The corners of The Square could be chamfered at entry points to facilitate cutting corners and entry. Size of intersections could be minimised to reduce the walking distance of pedestrians.

Figure 14: Pedestrian movement at Square East / Church Street: Plaza corner



Square East / Church Street: Plaza Corner

- Traffic signals and slip lane left-turn.
- Destination: The Plaza.

Summary

- The edges of The Square are the busiest, with a strong secondary path into The Square. Traffic signals caused delay and bunching for pedestrians.
- On The Square east side, the large bunches of pedestrians hit the constrained footpath at speed.
- Waiting occurs in the refuge by the slip lane with no shelter.
- A degree of cutting across the intersection was observed.

Implications for Design Strategies

- Create a more relaxed behaviour pattern without traffic signals.
- Reduce the speed of pedestriansalong the street edge, and provide additional space to reduce bunching.
- Facilitate direct movements across the intersection.

Figure 15: Pedestrian movement at Square East: mid-block between Main and Church Streets

Square East: Mid-Block Between Main and Church Streets

- Angle parking and central parallel parking.

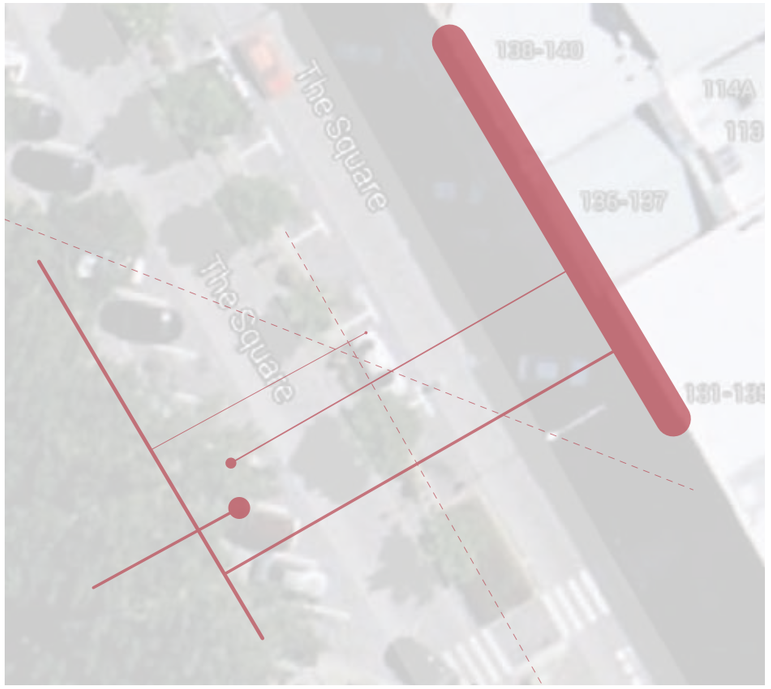
Summary

- The Square east was the busiest section sampled. Pedestrian volumes are highly asymmetric with little crossing to parking in the middle or Square side.
- Crossings are variable with some people walking along the central island.
- Parking meters are an intermediate destination.
- Large bunches of pedestrians walking at speed are present flowing from the signals near The Plaza. Some entries into The Square observed here.

Implications for Design Strategies

- Create more relaxed behaviour patterns along the building edge and provide pedestrian amenity.
- Allow for social activity to activate the public space and improve perceived vitality of city centre.

Figure 16: Pedestrian movement at Square East: between Main Street and Broadway Avenue



Square East: Mid-Block Between Main Street and Broadway Avenue

- Angle parking and central parallel parking.

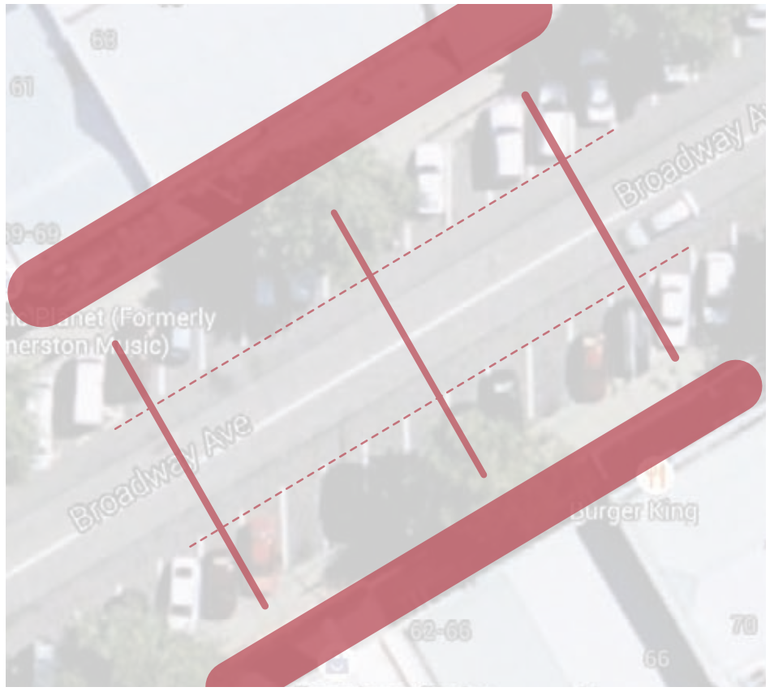
Summary

- The pedestrian volumes are reduced and the bunches on the southern part of Square East have spread out.
- More crossing observed into The Square towards the i.Site and Inter-Regional Bus Terminal. People observed with suitcases. Crossings are diverse and there is little stationary behaviour in this area.
- Some people observed walking along central island.

Implications for Design Strategies

- Connection from the i.Site and bus terminal (if long-term location).
- Potential designated crossing points associated with intermediate destinations e.g. way-finding, parking payment stations etc.
- The pedestrian volume is approximately a third of southern Square East. The presence of the large old post office (High Flyers) is obviously linked to the potential of this block. Design strategies for the building frontage and the street should be considered together.

Figure 17: Pedestrian movement at Broadway Avenue: east of The Regent on Broadway



Broadway Avenue: East of The Regent on Broadway

- Angle parking both sides.

Summary

- Fairly balanced pedestrian movements on both sides of street. The additional footpath width is used by pedestrians. Crossing the street occurs commonly and is spread evenly along the street.
- Pedestrians are observed walking along the rear of the angle parking waiting for traffic and a convenient time to cross. The zig-zag required to move through two sets of angle parking creates a diverse range of movements across the street.
- Parking meters are intermediate destinations and the parking footpath on one side of the street, is often visited before people cross the road towards their destination.
- Little stationary behaviour was observed in the additional footpath space.
- Queuing of cars in the street segment was visible and caused by the raised crossing at The Regent.

Implications for Design Strategies

- Parking arrangements are clearly an opportunity to facilitate much greater connectivity between both sides of the street, and crossing locations associated with intermediate destinations e.g. parking and way-finding, and social spaces.
- Additional footpath width requires a greater diversity of functions in addition to providing more movement spaces, and brief waiting and intermediate destination space.
- Design strategies should pay attention to the potential movements of pedestrians who walk along the carriageway.

KEY	
	100 pedestrian movements
	< 10 pedestrian movements
	Destination
	Food trucks
NOTE	The samples include minor sources of error due to technology limitations and environmental factors which do not affect establishment of overall movements patterns. Sources of error: video footage, reflections in shop windows, shadows, large vehicles passing between camera location and pedestrian routes.

Figure 18: Pedestrian movement at Square East: Main Street (morning)

Square East: Main Street (Morning)

- Roundabout and pedestrian crossings, food trucks present

Summary

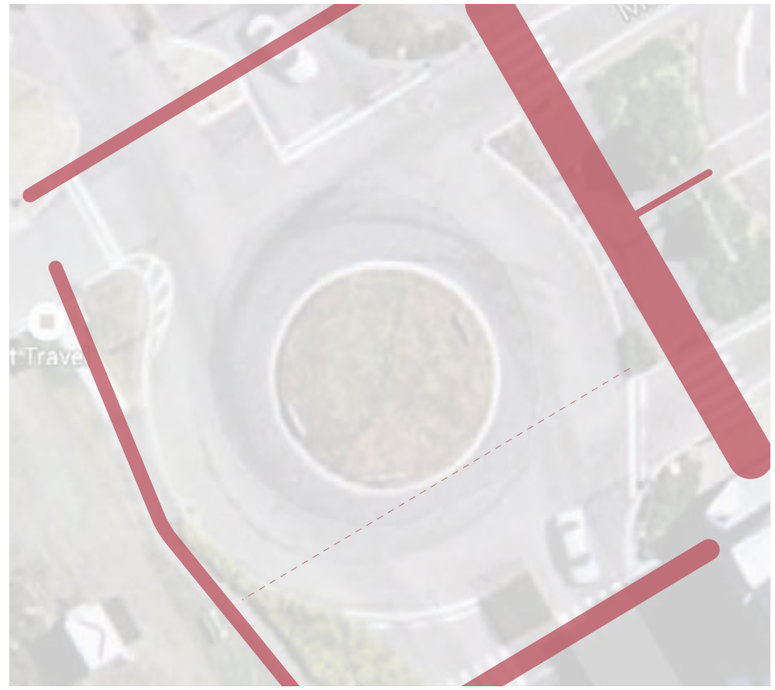
- Few pedestrian movements heading to or from the Urban Bus Terminal in the middle of Main Street - most occurred in the afternoon peak.
- The Square East crossing is the busiest side, and the others are balanced. The food trucks attracting noticeable, but not high foot traffic. People with suitcases are observed in the area.
- One person observed cutting across roundabout, there is some cutting across traffic and planting on The Square side.
- Stationary behaviour observed on the corner of Main Street and The Square, and in the centre crossing across Main Street. All stationary behaviour was short-term, and did not involve interaction with the environment.

Figure 19: Pedestrian movement at Square East: Main Street (midday)

Square East: Main Street (Midday)

- When the food trucks are absent an increase in direct movements into The Square towards the i.Site is noticeable.
- A fair amount of pedestrian movement was visible just inside The Square leading to the i.Site and other destinations.
- The presence of the bus ‘pulses’ was noticeable in the traffic, and in the pedestrian flows, especially on the northern side of Main Street in the morning peak.
- The pedestrian flow around the southern corner of Main Street and The Square was significant but not measured.

Figure 20: Pedestrian movement at Square East: Main Street (late afternoon)



The Square: Main Street (Late Afternoon)

Implications for Design Strategies

- Consider arrangement, orientation and location of the food trucks to reduce the barrier effect and increase the staying and destination potential. Provide assets in public space which support visible public life.
- Consider potential for more direct routes to reduce distances for pedestrians.
- Consider how the interior of The Square and the destinations link with the edge of The Square. In particular The South corner of Main Street and The Square.

2. 7 Access and Movement - Movement and Stationary Behaviour

Studies of actual use of public space are required to test assumptions about streetscape design and to provide evidence to support or contradict perceptions about how a place is used, and by who. Understanding the movement and stationary behaviour patterns highlights where opportunities exist to tap into the flows of people to create lively parts of a city, and where existing nodes of behaviour occur, to layer additional uses to create richer experiences.

Movement

The interaction of the design and layout of streets (i.e. parking, crossing points) with pedestrian movements was achieved by selecting sample sites with differing street and intersection designs. The amount of movement in a city contributes to how 'busy' we feel that place is.

Video footage was captured (1-hour samples) across the study area to determine use levels and patterns of movement within the streetscape. Pedestrian movement patterns are extremely variable and the maps simplify the movements into general movement patterns and volume.

The movement study provides more detailed analysis of areas when compared with the NZ Property Institute pedestrian counts (point data).

The areas with high pedestrian flows in the city do not correlate with opportunities to occupy the streetscape, and all street space in the busy areas (Square East, Main Street / Urban Bus Terminal) is designed for movement. The busiest locations were rated amongst the poorest quality streetscapes in the study area. Destination entrances attracted high flows, but often did not attract much stationary public life apart from outside of Downtown on Broadway Avenue.

Shared space created more diverse pedestrian movements across the street as all desire lines are catered to with pedestrians taking the shortest routes. Roundabouts created the greatest barrier to free pedestrian movement with most pedestrians using designated crossings or raised platforms, however waiting times for pedestrians were low. Traffic signals at intersections caused the most waiting by pedestrians, allow for a diversity of movements, yet most pedestrians use marked crossing points. The signalised intersections both have slip lanes, which forces pedestrians to wait in an exposed area with no shelter for extended periods.

Movement into and activity along the edge of The Square East was observed, with many people with suitcases entering The Square towards the Inter-Regional Bus Terminal. The edge of The Square East lacks mid-block features, or pathways which connect integrate the street with The Square's design.

Stationary Behaviour

Stationary behaviour is one of the greatest contributors to the liveliness of a city. Measuring behaviour levels across a city allows us to understand relative strengths and weaknesses of parts of the city when combined with other data such as the mapping of activity in buildings.
A one hour observation period was used to capture a variety of metrics about key activity locations in the study area between 12-2pm. The observations were undertaken on days with fine weather. These observations provide a sample of actual use as opposed to surveying the presence of assets which facilitate public life, or perceptions of how busy a place is.

The observed data includes:

- Group size: a measure of how social a space is, and also of intent, as a decision to visit the place is required to be negotiated between people;
- Gender / age: who is in the place;
- Position: measures how people site themselves in the public space;
- Activities: what people do in the public spaces;
- Duration: how long people stay in a space.

The activity observed in public space was unremarkable, with the absence of strong patterns of peak hour use or interesting anomalies. Locations where a café was present with external seating were an anchor for moderate public life. No strong patterns emerged about users of the public spaces. The centre of Broadway Avenue where a prototype space has existed since November 2014, shows a moderate amount of use and people observed playing- the only space where this was observed in the five sample sites, and the only place where explicit play opportunities are provided in the streetscape.

The stationary behaviour around the Urban Bus Terminal was the most abundant but consisted of short stays. The Urban Bus Terminal area was rated among the worst quality areas in the city. Despite the high pedestrian volume The Square East attracted little in the way of stationary behaviour, which is supported by assessment of the environmental qualities such as a lack of seating or space for public activity to occur.

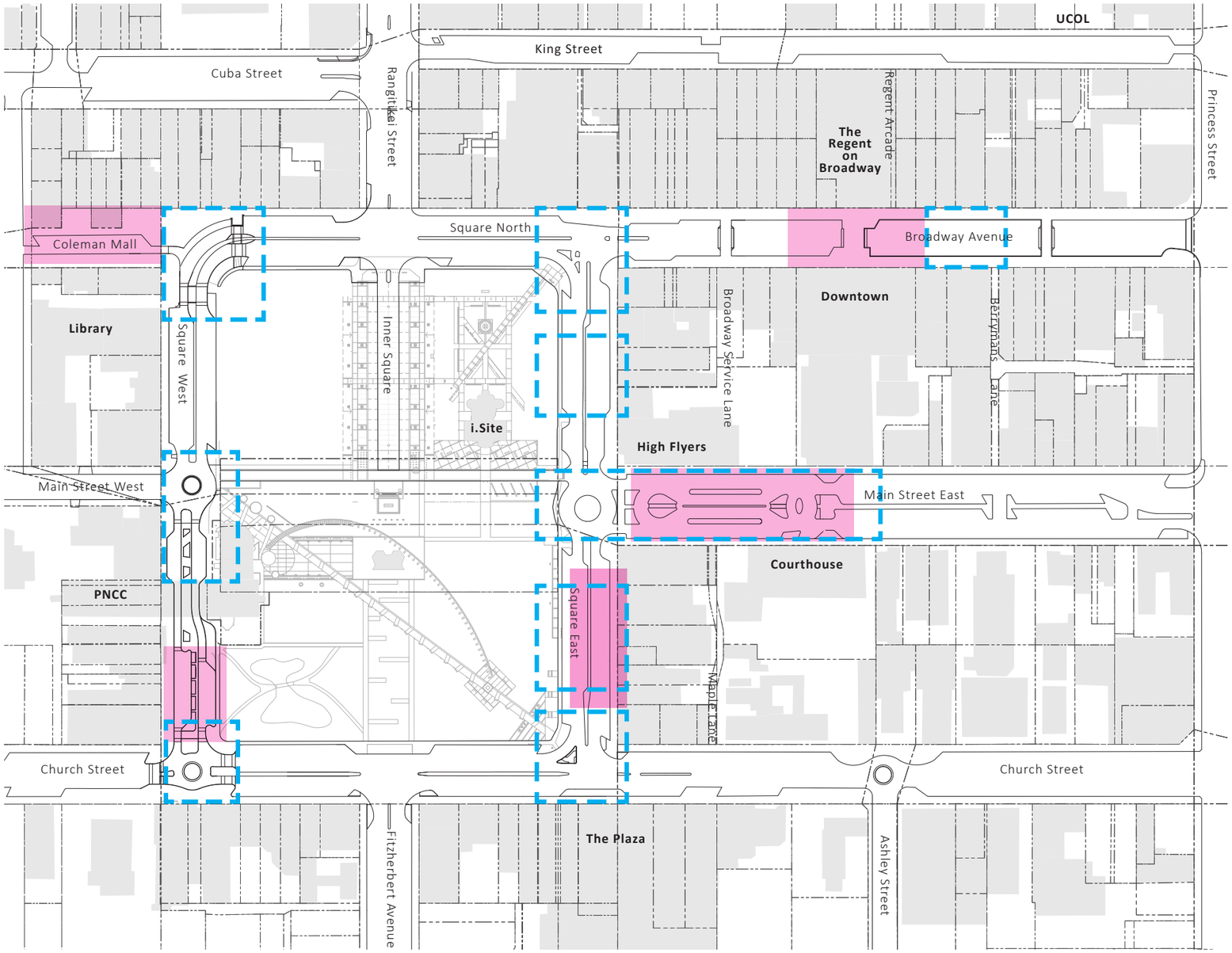
The stationary behaviour which occurs within the study area streetscapes excludes the activity in The Square.

Constraints

- Overall abundance of space- lack of space designed for city life in the streetscape;
- Areas with a lack of diversity of activity in buildings.

Opportunities

- Focusing on a few specific activity points within the City with high pedestrian flows, pleasant environmental and micro-climatic characteristics, and a built environment with quality and mix of uses for an 18-hour city experience;
- Design to support direct pedestrian movements and reduce unnecessary pedestrian walking distance and time in the city. Both mid-block and intersection designs can support this.



KEY

	Time-lapse - peak hours
	Behavior observation locations

Figure 21: Movement and stationary behaviour intercept study

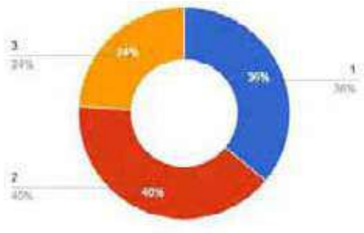
Behaviour Observation Location	Group Sizes	Gender	Ages	Position	Activities	Duration
1. The Square- Coleman Mall 1 hr observation Peak hours 12-2pm Fine weather, Spring Sample size: 25 people in 16 data points	Groups were located near the French café in the courtyard space, and outside Harvey Norman. Individuals were dotted along the south edge of Coleman Mall.	Both males and females used the place.	Diverse age groups. No pre-school children. Note: As the observations are during school hours no school age children and teenagers are likely to be present.	People standing were outside Harvey Norman, and on the south-side of Coleman Mall. The majority of people sitting were at the café, and a few individuals were using street furniture on the south side of Coleman Mall. The area surrounding the Numbers sculpture was unused.	No one was observed taking photos. Social activities and eating were associated with the café. Social activity also occurred outside Harvey Norman. Solitary people on Coleman Mall were people watching. Other activity- unloading and locking a bike outside Harvey Norman.	Short stays were observed around Harvey Norman's entrance and the corner of George Street and Coleman Mall. Medium length stays were on the south side of Coleman Mall by solitary people. Long stays were at the café.
2. Broadway Avenue (central) 1 hr observation Peak hours 12-2pm Fine weather, Spring Sample size: 41 people in 22 data points	More groups were located in the central area with a few solitary people. Only solitary people were located at the edges of the study area.	Both males and females used the place.	Younger to middle age adults. Some pre-school children.	People were standing at the entrance to The Regent Arcade, Downtown, and towards the edges of the study area. Groups were sitting together on street furniture in the central area on both sides of Broadway Avenue. Other groups were sitting outside the café at Downtown. One person was sitting/lying on the ground in the central area (artificial turf).	No one was observed taking photos. Eating and drinking was observed at the café and in the central area. Social activity mainly occurred outside downtown. Some people were playing outside Downtown. People watching mainly occurred in the central area. Smokers and people using devices were solitary. Other activity- window shopping, busking	Most people only spent a short amount of time in the area. A few medium stays were recorded at the café. No one stayed more than about 30 minutes.
3. The Square West 1 hr observation Peak hours 12-2pm Fine weather, Spring Sample size: 9 people in 7 data points	Small groups and solitary people observed. Small sample size.	Most people were female.	Mostly younger adults and teenagers. No pre-school children.	People were standing near the median crossing and in the median. No one was sitting on street furniture. All people sitting were at the café.	One person was taking photos of the sculpture and buildings. People were eating and drinking at the café. Not much social activity or people watching was observed. A few people were smoking in the central median and crossing.	Most people stayed only a short duration. People spent about 25-30 minutes at the café.
4. The Square East 1 hr observation Peak hours 12-2pm Fine weather, Spring Sample size: 24 people in 18 data points	Nearly all people on the building edge were solitary. Pairs and small groups were observed on the edge of The Square.	Most solo males were along the building edge, with a concentration near the Bendon store. Mixed groups were located on The Square side.	Younger to middle age adults. No pre-school children.	Most people were standing. One person sitting on a bike rack in the sun. People begging were sitting on the ground.	No one was observed taking photos. No one was eating or drinking. Groups on the edge of The Square were talking. Some people were begging. A few people were on devices or people watching.	People only spent short stays in the area. People begging stayed the longest- but only a medium duration.
5. Urban Bus Interchange 1 hr observation Peak hours 12-2pm Fine weather, Spring Sample size: 112 people in 54 data points	Most diversity in group size. Larger groups were observed at the café on the corner of The Square, outside the courthouse and at the Massey bus stop. Small groups and pairs were common at the main bus shelters, and along the southern edge of Main Street. Solitary people were using the main bus shelters, and along the southern edge of Main Street.	Most of the area was balanced between males and females. Females in groups were the dominant group outside the courthouse.	Most diverse area. Mostly younger adults and teenagers. Some pre-school children. Some older people.	People were mostly standing along the southern edge of Main Street and near the Massey bus stop. Most people were sitting in the main bus shelter, and groups were also sitting at the bus stops on the northern edge. Groups of people sit on the Courthouse steps. People were sitting on furniture outside the café and pie shop.	Almost no activity occurs on the inactive frontages of the Courthouse and the Old Post Office. No one was observed taking photos. Few people were eating / drinking most were at the café. Some people were socialising outside. One person was dancing. Waiting for the bus is the most common activity, unsurprisingly. Activism and public speaking at courthouse.	Most people stayed only a short time. Medium to long stays were at the café, outside the courthouse and at a bus stop on the northern side (a commuter bus stop?).

The Square - Coleman Mall

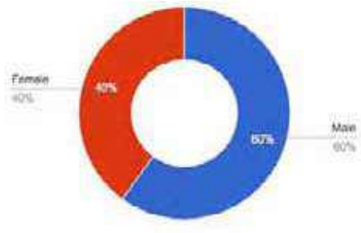
Image 11: Square North - Coleman Mall

Figure 22: Pedestrian groups

Group Size

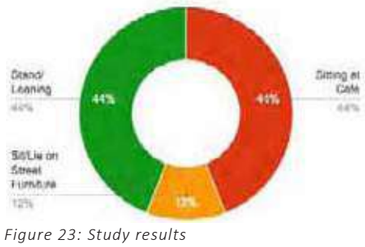


Gender

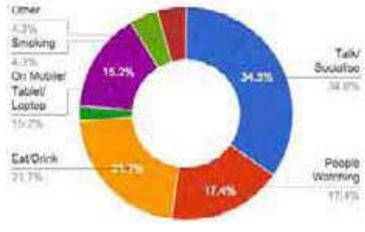


Age

Position



Activity



Duration of Stay

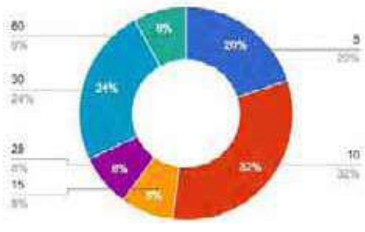


Figure 23: Study results

Build-Measure-Learn Process

1. Learn: what do we want to find out?
2. Measure: how can we measure it?
3. Build: what do we need to make to answer the question (minimum viable product/ feature)?

1. What do we want to learn?
Can we facilitate public life which is near to the higher pedestrian flows:

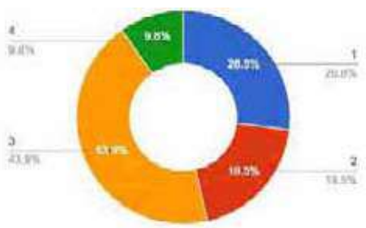
- Around the Numbers sculpture;
- Near the Library entrance and the crossing to The Square;
- Along the sunny southern edge of Coleman Mall.

Broadway Avenue (Central)

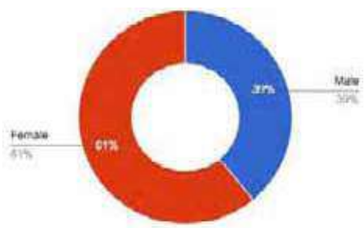
Image 12: Broadway Avenue (central)

Figure 24: Pedestrian groups

Group Size

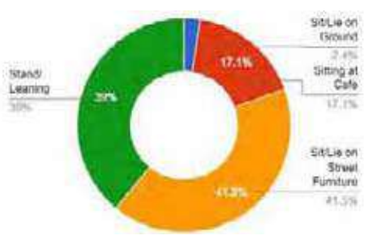


Gender

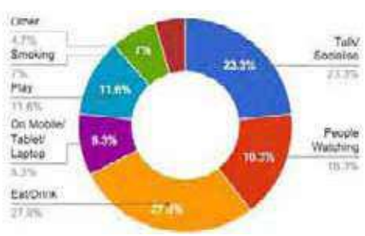


Age

Position



Activity



Duration of Stay

Figure 25: Study results

Build-Measure-Learn Process

1. Learn: what do we want to find out?
2. Measure: how can we measure it?
3. Build: what do we need to make to answer the question (minimum viable product/ feature)?

1. What do we want to learn?
This was the only location were a diversity of public life was occurring, with a range of people and the only place where play was observed.

Can we extend the duration and increase the amount of public activity in this area, by:

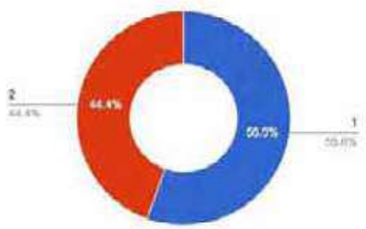
- Optimising the location of the assets that attract people- the connect 4, movable seating, seating platforms;
- Layering in additional uses;
- Can we grow the location as a place for kids / play;
- Extending activity into car parking spaces;
- Increase the presence of the café in the street;
- Increase The Regent Arcade's presence and connection at the Broadway intersection.

Square West

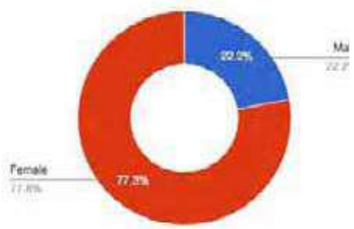
Image 13: Square West

Figure 26: Pedestrian groups

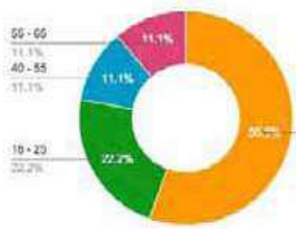
Group Size



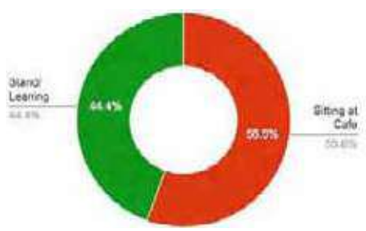
Gender



Age



Position



Activity

Duration of Stay

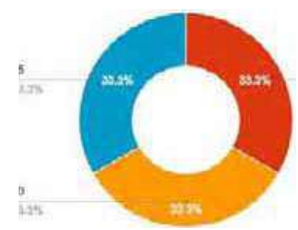


Figure 27: Study results

Build-Measure-Learn Process

1. Learn: what do we want to find out?
2. Measure: how can we measure it?
3. Build: what do we need to make to answer the question (minimum viable product/ feature)?

1. What do we want to learn?

Can we extend the duration and increase the amount of public activity in this area, by:

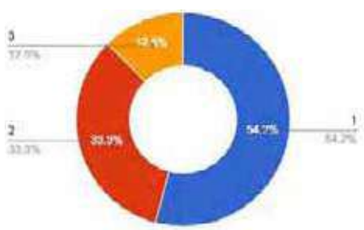
- Providing activity generators in the widened footpath areas;
- Increasing relationship of Butterfly Pond area to the street edge, e.g. provide features in the grassy area between the pond and street.

Square East

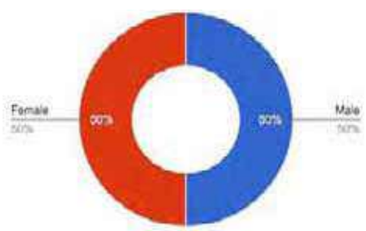
Image 14: Square East

Figure 28: Pedestrian groups

Group Size

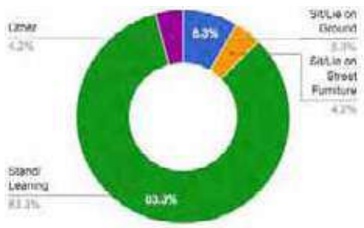


Gender

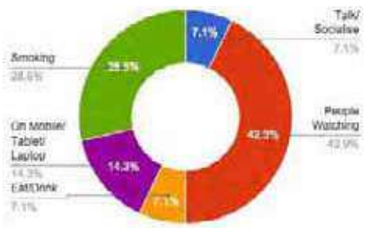


Age

Position



Activity



Duration of Stay

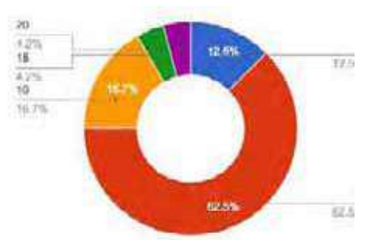


Figure 29: Study results

Build-Measure-Learn Process

1. Learn: what do we want to find out?
2. Measure: how can we measure it?
3. Build: what do we need to make to answer the question (minimum viable product/ feature)?

1. What do we want to learn?
This area has the largest pedestrian flows in the central city streetscapes:

- What kind of public life will be facilitated if space is created along the building side? What kind of groups will occupy the space?
- Will people sit along this section? If so, where will they sit?
- Will this area attract people watching behaviour if seating is provided? How can this be provided without it becoming intimidating?
- How can the public activity be guided so that it is perceived as positive and legitimate?
- How can the edge of the street which interacts with the park be adapted to facilitate the short-term behaviours which occurs along the edge e.g. organising themselves, conversations?

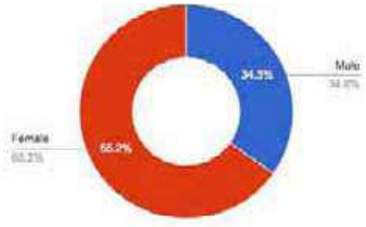
Urban Bus Terminal and Main Street

Image 15: Urban Bus Terminal and Main Street

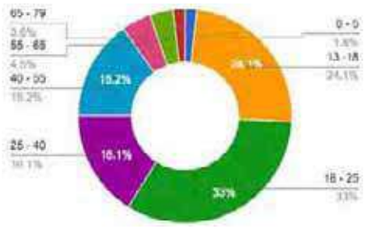
Figure 30: Pedestrian groups

Group Size

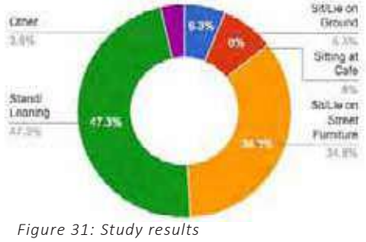
Gender



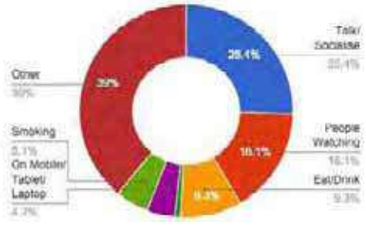
Age



Position



Activity



Duration of Stay

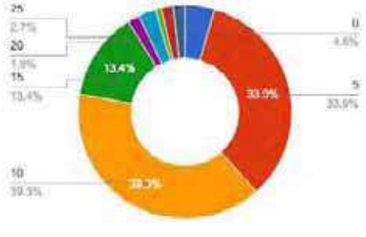


Figure 31: Study results

Build-Measure-Learn Process

1. Learn: what do we want to find out?
2. Measure: how can we measure it?
3. Build: what do we need to make to answer the question (minimum viable product/ feature)?

1. What do we want to learn?

This area has the largest amount of stationary behaviour in the central city streetscapes:

- How can the large group, and short-term nature of people's stay in this area be used as a positive generator to people's experience of the city?
- How can the sunny location by the Massey bus stop create a positive experience for bus users and the people passing through the area;
- How can we facilitate the group behaviour and vitality of the Coffee Club corner, both with patrons and the public so that the space does not become privatised, but the public activity does not impact the customer experience;
- How can the experience around the Courthouse be improved so that people waiting for the court are not forced to sit on the steps or be separated from the bus passengers, and other members of the public?

2. 8 Access and Movement - Wayfinding

The ease with which users can move around and access the study area is captured in the wayfinding diagram at Figure 32. The analysis identifies:

- A clear structure of 'nodal' points around The Square that are supported to varying degrees of success by associated landmark structures and/or key views;
- Sense of arrival into The Square could be enhanced by improving the built form, landscape quality and views, and reducing roading dominance;
- The Rangitikei and Fitzherbert Avenue nodes provide good axial view connections but have weak character dominated by roading;
- Main Street east is separated from The Square by a barrier of planting and a roundabout that weakens the function of this node;
- Church Street west is well supported by heritage quality buildings, has good view connections but parts of the nodal space are bland / unremarkable and poorly defined;
- Church Street east has good activation and has reasonable landmark structures but needs to provide better links to The Square and resolve pedestrian movement needs.
- The Broadway Avenue node is important but not well supported by adjacent building quality and has poor street space / junction definition;
- Other wayfinding features include primary entrances that should have greater coordination with streetscape treatments, providing celebration of this busier memorable locations.

Observational studies of pedestrian movement revealed that the placement of street furniture such as bins, parking meters is not associated with movement and way-finding. The placement causes intermediate locations to be visited by pedestrians before they head towards their destination (often observed on the other side of the road). Careful placement (triangulation) and design of the wayfinding, street design (crossing opportunities) street furniture and parking assets from a 'user-journey' perspective would improve the overall experience of city centre visits.

The streetscape design and edge of The Square needs greater attention mid-block with pathways and wayfinding supporting formal routes and desire lines which are currently unmet. Subsequent landscape projects may be required within The Square.

Constraints

- Need to facilitate vehicular movement as well as achieve greater placemaking and pedestrian upgrade of junctions;
- Retain a green streetscape while enhancing strategic views into and across The Square;
- Building upgrades at key nodes are reliant on private sector investment.

Opportunities

- Create a sequence of clear, memorable nodes around the edge of The Square;
- Transform the Urban Bus Terminal to create a quality landmark;
- Remove barriers and clutter from key junctions;
- Reinforce views into The Square by framing view shafts with planting and streetscape materials.

Image 16: Existing wayfinding signage

KEY

- Primary building entrances
- Key wayfinding point
- Defined nodal points
- Street feature
- Landscape feature / enclosure
- Barrier / clutter
- Good visual integration with The Square
- Strong landmark
- Basic landmark
- Weak landmark

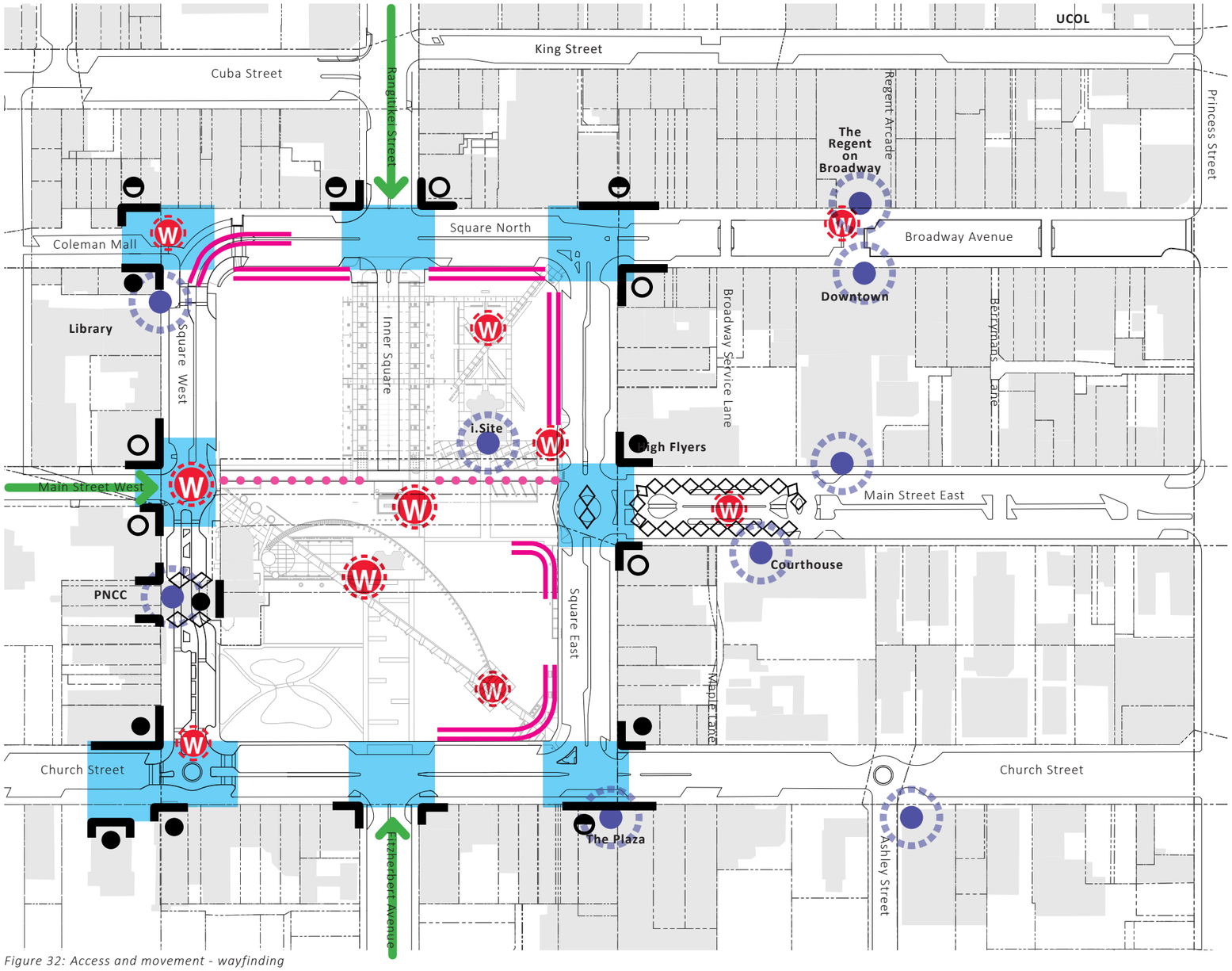


Figure 32: Access and movement - wayfinding

2. 9 Access and Movement - CPTED

Issues		Opportunities
Generally	Public consultation revealed where people feel safe and unsafe within the project area. Refer Figure 33 which relates to after dark. Tendencies to feel unsafe vary within the project area. CPTED review found some of the spaces risky considered by those surveyed are indeed so. This is due to the factors described by those surveyed along with other factors found from the review. Some of the 'red' spaces are not unsafe but can be perceived to be risky.	The spaces shown as 'red' in Figure 33 are capable of being made to feel safer and be safer. The methods for improving safety and the sense of safety are set out below.
After Hours	In some areas (shown in red) there is a lack of other people to give a sense of safety in numbers. The presence of other people, City Hosts and Police can have a marked effect on safety. City Hosts and the Police have an excellent presence in the CBD, particularly at problematic times involving alcohol fuelled disorder associated with the late night economy – Thursday night to early Sunday morning. It was noted how active and safe The Square is during the day and especially after dark. The fact it is used after hours highlights the lack of human scale spaces elsewhere in the project area.	There are opportunities to get more 'eyes on the street' by activating building edges better by day and by night. Public spaces in the CBD could also be made more enticing to encourage people to stay in pleasant spaces rather than move through. The CBD could benefit from more human scale, sheltered, pleasant spaces in the public realm without obligation to buy from the premises providing seating on the footpath (this is one reason the mall is so successful).
Lighting	There is a lack of consistent lighting in the "red areas" [survey was before the under-veranda upgrades]. Lighting levels are much improved along The Square frontages with the introduction of new under-veranda lighting. Many areas, such as the laneways have insufficient or poor quality lighting. Parts of the CBD are over lit and poorly lit. Unsophisticated and excessive use of coloured lights has created an illegible nightscape – the building edges of The Square are lost; and the effect of special lighting (such as the clock tower) and other wayfinding lighting has been significantly diminished.	There is a significant opportunity to develop a CBD Lighting Plan which: • Helps activate edges. • Showcases worthy artworks, sculptures, building façades especially along the edges of The Square. • Improves legibility and wayfinding, including signalling alleyway entrances and activity nodes therein. • Makes through-block connections safer. • Supports CCTV better.
Laneways	Laneways are important for promoting convenient mid-block access and North/South connections. For example the linkages between the CBD and the theatre, commercial premises on Queen Street and the polytechnic promote vitality, business, recreation and convenience.	Laneways could be improved by: • More legible entry thresholds. • Activating edges. • Improve safety / CPTED. • Upgrading lighting. • Control access to insecure private rear yards. • Securing rubbish holding and storage areas.
Vacant Lots	Sites awaiting development with hidden enclaves, poor lighting, rubbish and the like are used for antisocial purposes (drinking, congregation, soiling, disorder).	There is an opportunity to implement temporary security measures to make vacant sites be and seem safer. Christchurch has many examples of this.
Bus Interchange	The bus interchange conflicts with other uses and pedestrian traffic during the late night economy. It is currently used for patron and under-aged congregation, soiling, ambulance stop, police stop, and the like. It has a poor connection to The Square.	There is an opportunity to make the bus interchange a safer, more positive, better utilised, flexible space with human scale amenity, shelter, better connections to The Square and positive uses after hours when the buses stop running.
Pedestrian Crossings	Those surveyed reported that the pedestrian crossings around The Square are busy and intimidating.	A stronger and seemingly easier connection to The Square would help activate all streets in the CBD that connect with it.
Disorder	Disorderly people often instil fear in others and deter occupation by a wider range of people than bar goers after hours. Disorder is associated with the night time economy. During the day there are concerns about a small number of persistent beggars, visitors to the courthouse and loiterers at the main bus interchange. Footpath crowding and disorder affects safe movement.	Environmental improvements can have a significant effect on minimising antisocial behaviour – the thrust of CPTED. Some of this disorder is associated with tight queuing spaces outside bars, lack of space outside fast food outlets, and few choices outside of The Square to disengage into safe, supervised, quality spaces.
Toilets	Having good toilet facilities promotes the safe, hygienic and sustained use of public space. A lack of conveniently accessible toilet facilities cause people to take risks down alleys, in door recesses, and vacant lots. It creates soiling in these areas. Soiling contributes to engendering a sense of fear of crime.	There are opportunities to provide more safe, dispersed, public toilet facilities. The two in The Square after hours get overloaded on city 'party nights.'
Universal Access	Noted: • Severe cross fall (>1:10) on footpaths. • Difficulties negotiating ramps and kerbs at pedestrian crossings. • "Stony" pathways. • Fine broken glass on footpaths.	A universal access study would support CBD development.

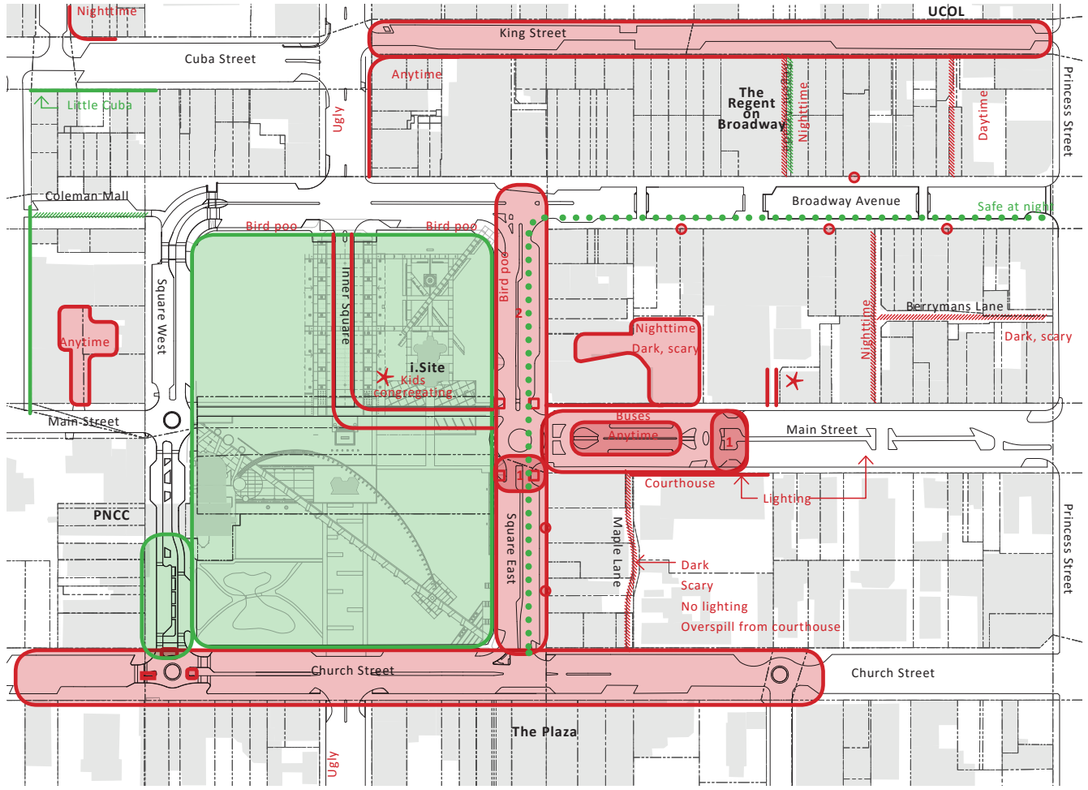


Figure 33: Access and movement - Crime Prevention Through Environmental Design (CPTED)

The figure above shows feedback received at stakeholder engagement workshops, capturing areas where the community feels safe and unsafe, and at what times.

KEY

	Safe
	Unsafe
	Dangerous pedestrian crossings
	Beggars

Image 17: General safety concerns

Image 18: Laneway

Image 19: Laneway

Image 20: Laneway

Image 21: Inconsistent lighting

Image 22: Vacant lots

Image 23: Urban Bus Terminal

Image 24: Footpath crowding and disorder

Image 25: Public toilets

Image 26: Universal access issues

2. 10 Access and Movement - Street Structure

The study area comprises part of a much larger open grid system, with a high level of route choice for vehicles. Management of movements is therefore difficult and past observations have demonstrated a high proportion of traffic entering the study area (central CBD) passing straight through. Traffic volumes in the study area are therefore higher than necessary to service the activities contained within and around it.

All of the roads within the study area are identified as 'Place Streets' in the City Centre Framework, with the exception of part of Main Street, which to the east of the Urban Bus Terminal is a 'Movement/Place Street'. These streets should therefore provide access to activities, with a high level of accessibility and priority given to pedestrians, rather than accommodating the through vehicular movements which currently occur.

The high levels of on-street parking throughout the study area and short block lengths result in a low average vehicle speed, with averages for each section falling in the 22kph to 32kph range.

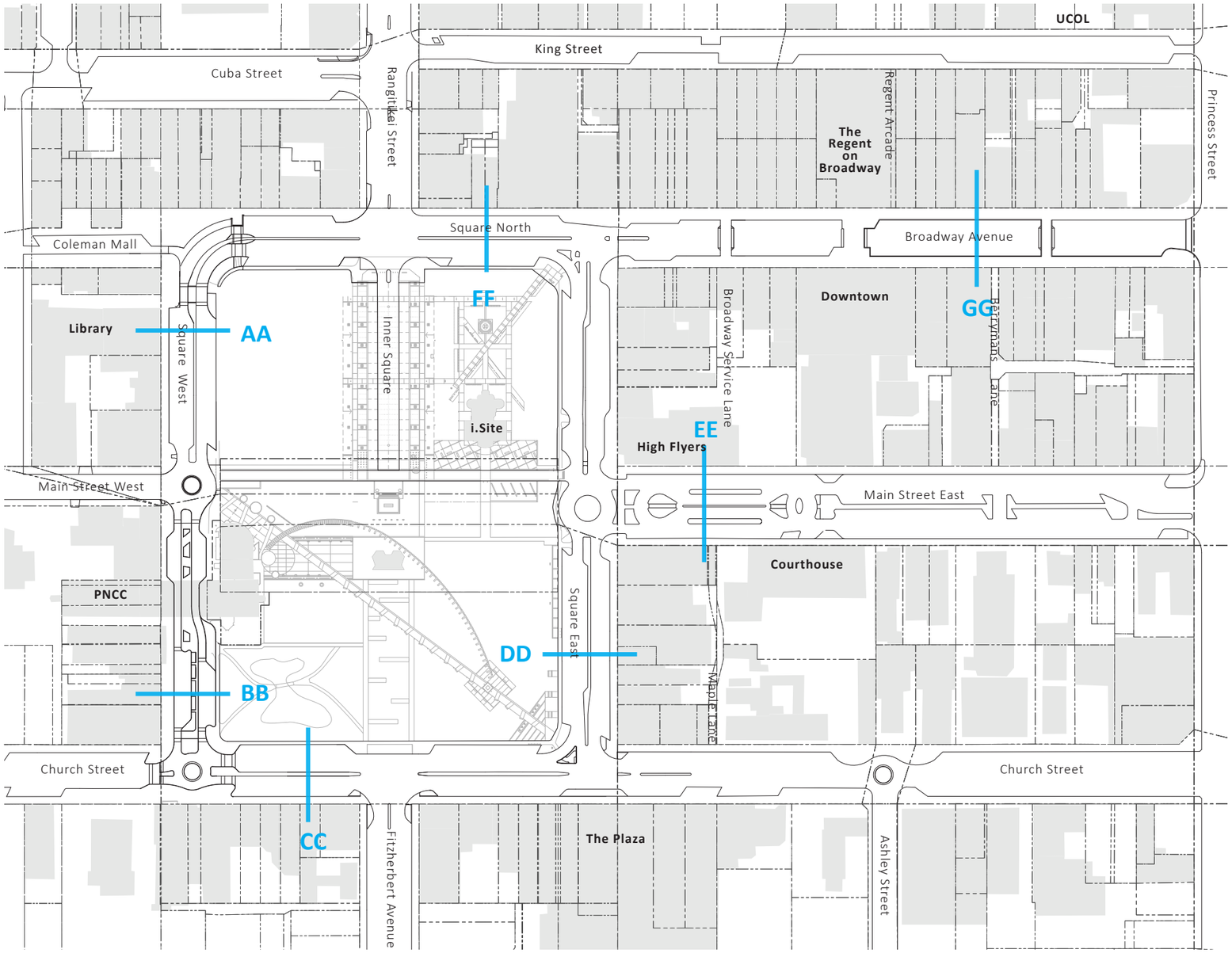
Image 27: The Square circa 1942 previously subdivided by the street network

Constraints

- The size of The Square can add significant walk times for those with reduced mobility unless parking is provided on all sections of the perimeter, effectively reducing the walkability of the CBD. Vehicular access must therefore be retained to all locations;
- The open nature of the grid means that route prediction and therefore management of traffic can be difficult.

Opportunities

- The grid system provides in-built resilience to the network and to a certain extent provides adequate choice for traffic to 'self-regulate', reducing the occurrence of significant congestion;
- The high level of accessibility and vehicular permeability provides opportunities for some links to be restricted while maintaining access to all locations;
- The ring road operates well below capacity, with efficiency gains possible with increased use (i.e. programming signals to favour the ring road over side roads; enabling 'green waves' to improve travel times and journey reliability).



KEY

Section line locations

Figure 34: Access and movement - street structure section locations

Section AA: Square West (north section)
Total Street ≈ 29.50m

Carriageway ≈ 23.70m (kerb face to kerb face)

- The carriageway supports a single vehicle lane in either direction (both exceeding 3.2m), and on-street parking.

Footpaths ≈ 5.80m (total)

- The western footpath supports street infrastructure, and allows unobstructed circulation.
- The narrow footpath width to the east may not allow for equitable access (dependent upon street infrastructure locations).
- Footpath grades are not known.
- Retail frontages typically provide built weather protection to the pavement. There is no built weather protection to the footpath adjacent The Square, however mature tree canopy provides some shelter from sunlight.

Planting

- Established trees are planted in the generous median. There are no street trees along the building edge.

Section AA: Square West (north section)

Section BB: Square West (south section)
Total Street ≈ 29.75m

Carriageway ≈ 17.50m (kerb face to kerb face)

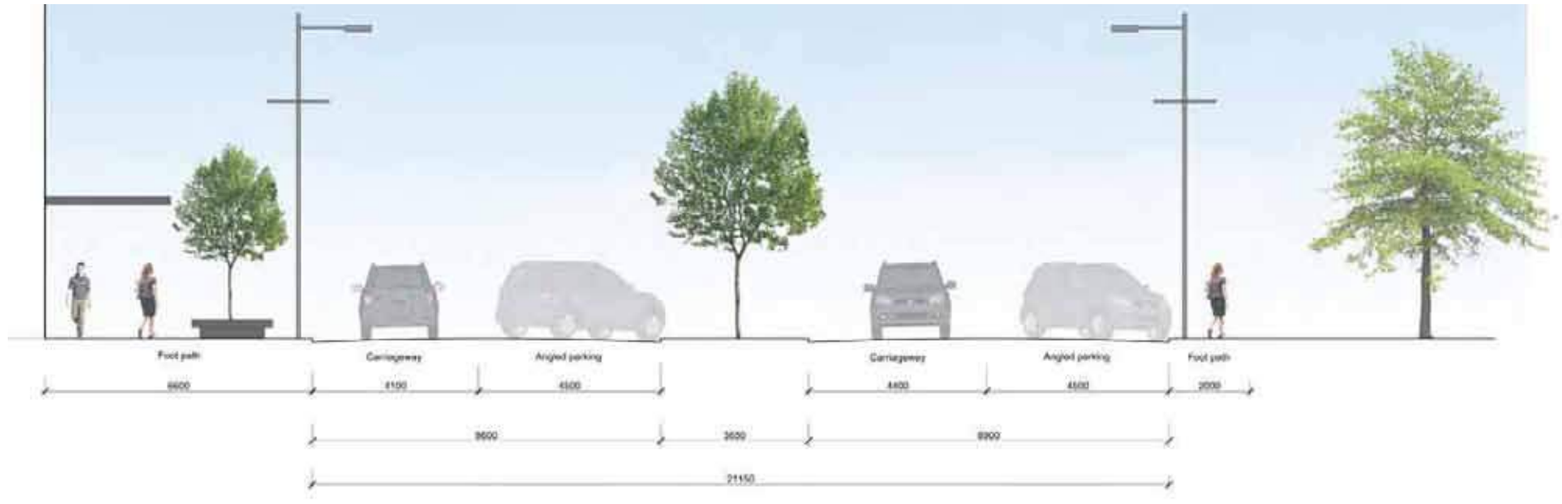
- The carriageway supports a single vehicle lane in either direction (both exceeding 3.2m), and on-street parking.

Footpaths ≈ 8.60m (total)

- The western footpath supports retail spillout, street infrastructure, and allows unobstructed circulation.
- The narrow footpath width to the east may not allow for equitable access (dependent upon street infrastructure locations).
- Footpath grades are not known.
- Retail frontages typically provide built weather protection to the pavement. There is no built weather protection to the footpath adjacent The Square, however mature tree canopy provides some shelter from sunlight.

Planting

- Established trees are planted in the generous median and there are recently planted street trees along the building edge.



Section BB: Square West (south section)

Section CC: Church Street
Total Street ≈ 31.11m

Carriageway ≈ 32.34m (kerb face to kerb face)

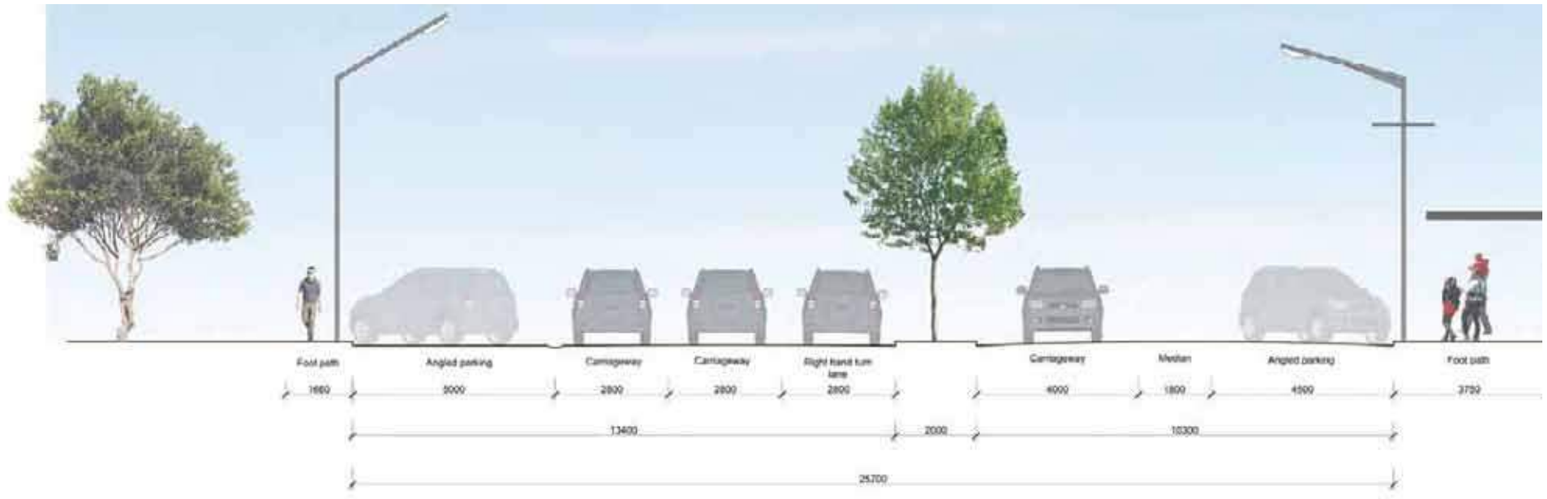
- The carriageway supports a single vehicle lane in either direction (both exceeding 3.2m), and four bus parking lanes (totalling ≈ 18.82m).

Footpaths ≈ 5.41 (total)

- The footpaths do not allow for unobstructed circulation, with street infrastructure (lighting, bins, bicycle hoops) and retail spillout included within the above measurements.
- The narrow footpath width, particularly to the south, may not allow for equitable access (dependent upon street infrastructure locations).
- Footpath grades are not known.
- Retail frontages typically provide built weather protection to the pavement. There is no built weather protection to footpath adjacent The Square, however mature tree canopy provides some shelter from sunlight.

Planting

- Established trees are planted within the median.



Section CC: Church Street

Section DD: Square East (south section)
Total Street ≈ 30.09m

Carriageway ≈ 24.19m (kerb face to kerb face)

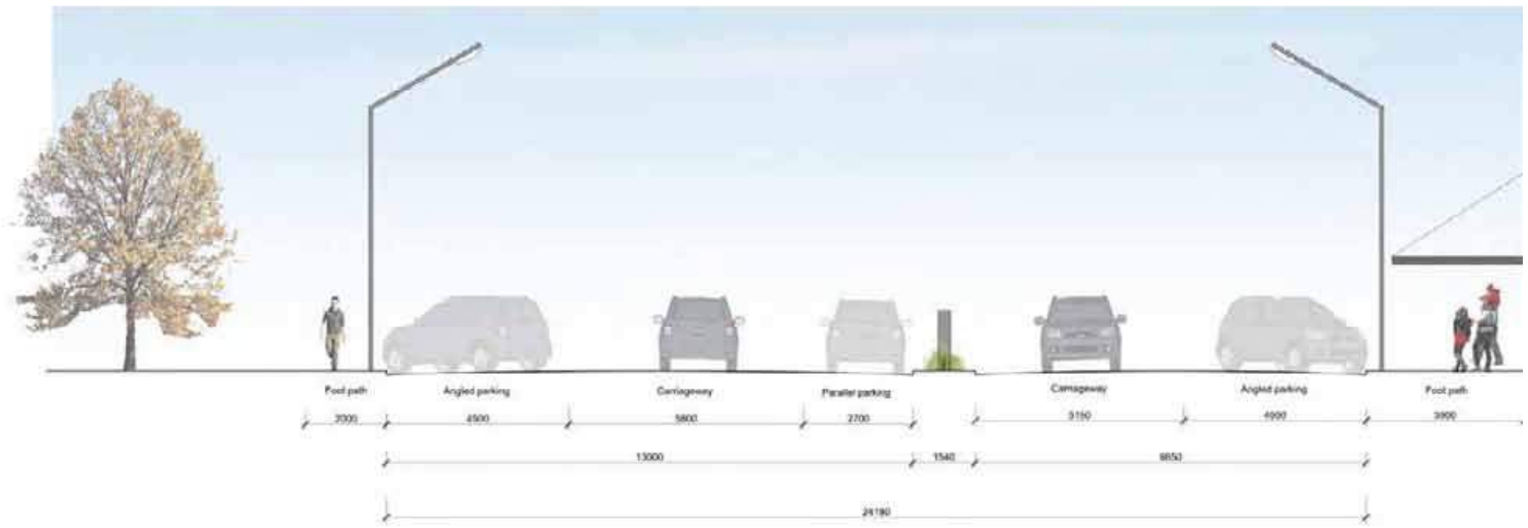
- The carriageway supports a single vehicle lane in either direction (both exceeding 3.2m), and four bus parking lanes (totalling ≈ 18.82m).

Footpaths ≈ 5.90 (total)

- The footpaths do not allow for unobstructed circulation, with street infrastructure (lighting, bins, bicycle hoops) and retail spillout included within the above measurements.
- In addition, the narrow footpath width, particularly to the west, may not allow for equitable access (dependent upon street infrastructure locations).
- Footpath grades are not known.
- Retail frontages typically provide built weather protection to the pavement. There is no built weather protection to footpath adjacent The Square.

Planting

- There are few established trees planting within the median.



Section DD: Square East (south section)

Section EE: Main Street East - Urban Bus Terminal
Total Street ≈ 39.64m

Carriageway ≈ 32.34m (kerb face to kerb face)

- The carriageway supports a single vehicle lane in either direction (both exceeding 3.2m), and four bus parking lanes (totalling ≈ 18.82m).

Urban Bus Terminal

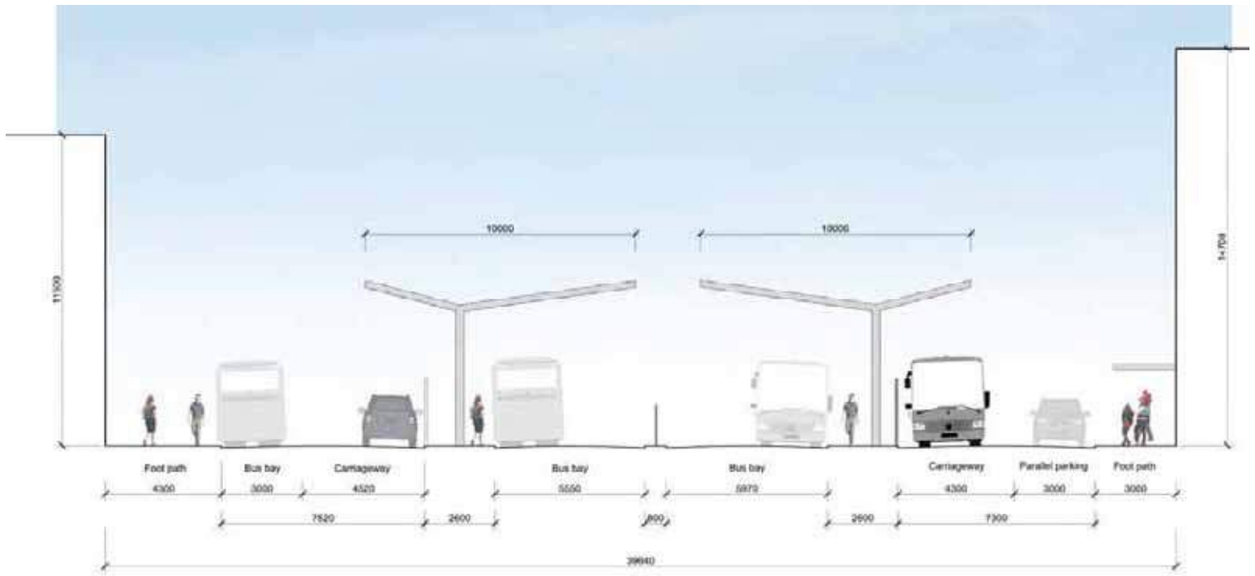
- The Urban Bus Terminal canopies are industrially scaled, visually dominating the streetscape and providing little weather protection to commuters.

Footpaths ≈ 7.30m (total)

- The footpaths are not appropriately scaled to support the pedestrian numbers along Main Street.
- Footpath grades are not known.
- There is little weather protection provided on the footpaths.

Planting

- Four established trees are planted within the median at The Square, with understorey planting.



Section EE: Main Street - Urban Bus Terminal

Section FF: Square North (east section)
Total Street ≈ 30.79m

Carriageway ≈ 25.4m

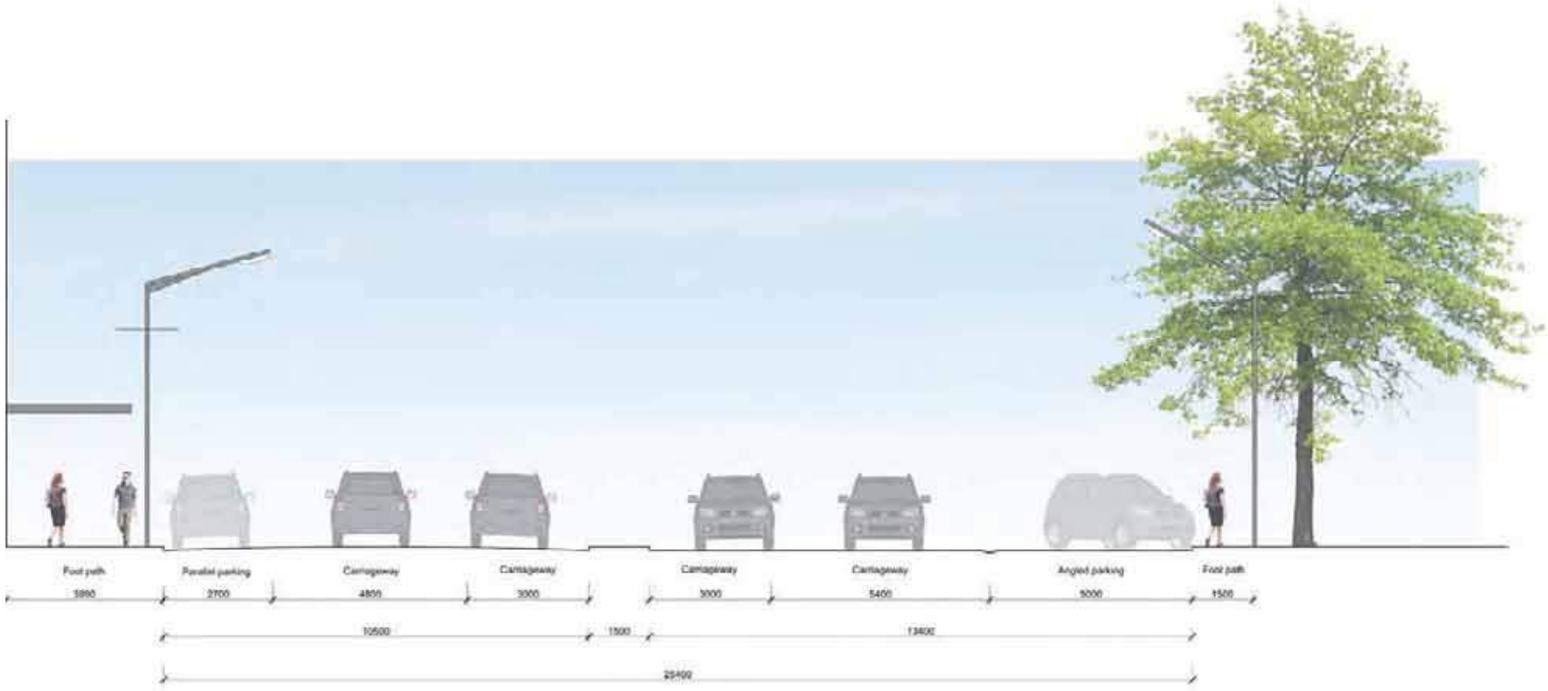
- The carriageway supports four generous vehicular lanes (two exceeding 3.2m width), two in either direction, and a range of on-street parking.

Footpaths ≈ 5.39m (total)

- The footpaths do not allow for unobstructed circulation, with street infrastructure (lighting, bins, bicycle hoops) and retail spillout included within the above measurements. In addition, the narrow footpath width, particularly to the south, may not allow for equitable access (for example, if retail premises have pavement spillout).
- Footpath grades are not known.
- Retail frontages typically provide built weather protection to the pavement. There is no built weather protection to footpath adjacent The Square.

Planting

- There is no planting to the public realm or median strip. There is mature tree planting to The Square, providing some natural canopy. There is established median planting to the City block west of this section.



Section FF: Square North (east section)

Section GG: Broadway Avenue
Total Street ≈ 30.19m

Carriageway ≈ 18.45m

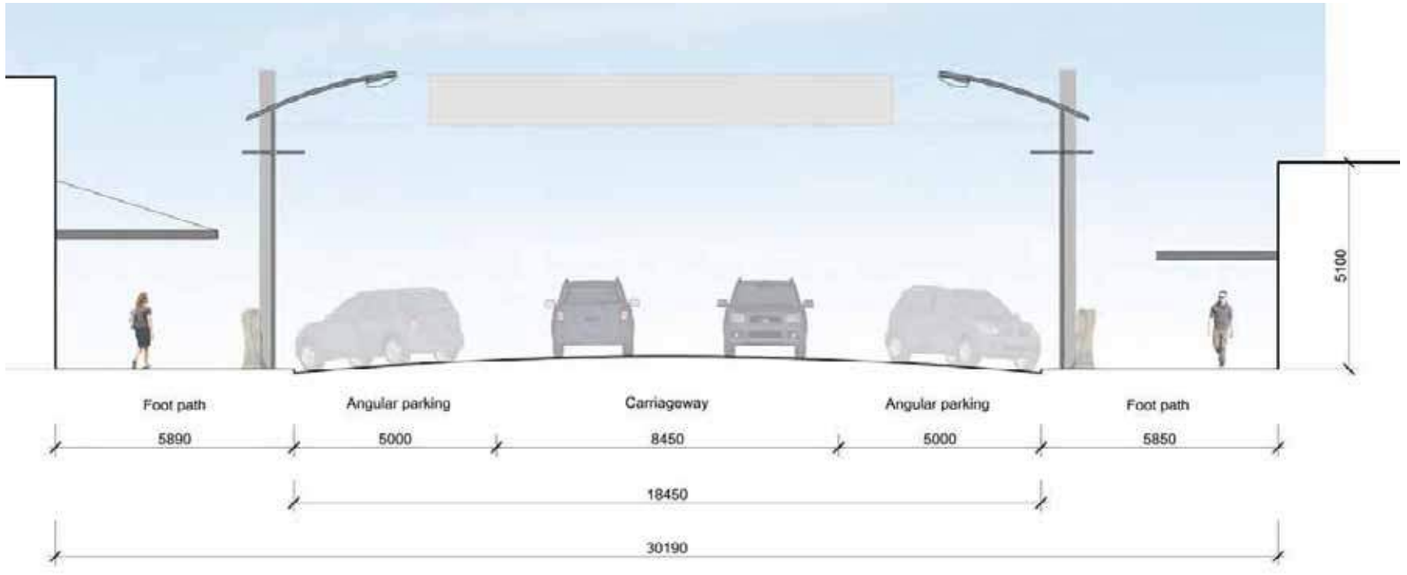
- The carriageway supports two generous vehicular lanes (both exceeding 3.2m width), one in either direction, and a range of on-street parking.

Footpaths ≈ 11.74m (total)

- The footpaths are generously scaled. Street infrastructure (lighting, bins, bicycle hoops) and retail spillout (signage) are typically located to the kerb side.
- Footpath grades are not known.
- Retail frontages typically provide built weather protection to the pavement.

Planting

- There is no planting to the public realm as mature street trees were recently removed.



Section GG: Broadway Avenue

2. 11 Built Form - Figure Ground Study

Figures 35 and 36 present a same-scale comparative exercise of The Square in Palmerston North with precedents from the UK, North America and Continental Europe.

The Square is a very large space by comparison, a fact that is accentuated by the relatively low scale of the buildings that contain and define the space. The earlier subdivision of The Square into quadrants (Image 25 on page 48) is perhaps testimony to the recognition that the scale of the space required reduction and could accommodate a street network within it.

Trafalgar Square, London's pre-eminent urban space is smaller than The Square and activated by large sculptural features, water displays and fronted by the National Gallery. Each side of Trafalgar Square has a different built character and function. The Square at Palmerston North perhaps suffers from lack of a highly visible grand feature building that activates an edge, with all bounding streets being of a similar character. The old post office building has the potential to fulfil a more vital role for The Square and should be a focus of future investment and design attention.

Bryant Park in New York could be contained within half of The Square, as could Bedford Square (London) or the Piazza Del Campo (Sienna). The implications of this large scale suggest the need for The Square to provide a variety of types of setting (i.e. not just one type of space or edge condition) and to pursue a design approach that reinforces the different functions of the edges of The Square.

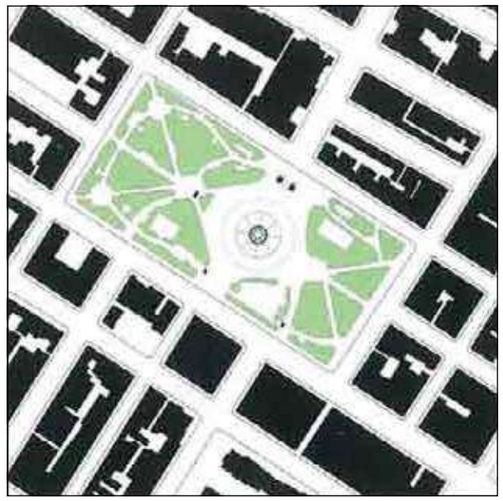
The Square
Palmerston North, New Zealand

Bryant Park
New York City, USA

Trafalgar Square
London, England

Figure 35: Figure ground studies

425m



Washington Square Park
New York City, USA

Bedford Square
London, England

Piazza Del Campo (Il Campo)
Sienna, Italy

Figure 36: Figure ground studies

2. 12 Built Form - Architectural Quality

The quality of building façades surrounding the study area has been assessed according to a rating system as shown on the adjacent *Figure 37: Built Form - Architectural Quality.*

The assessment takes into account:

- Architectural design including building scale, proportion, and width of street frontage;
- Use of vertical articulation to create ground floor detail, texture and rhythm;
- Street presence including entrance, windows, lighting, signage;
- Appropriateness of awning and contribution to streetscape scale and comfort.

A rating of 1 (low) to 5 (high) has been applied and indicates a mixed pattern of building quality across the area with notable clusters of both good and bad quality.

As expected the heritage buildings identified on *Figure 40: Built form - heritage category ratings* (refer Section 2.15) attract a high '5' (green) rating such as those around Church Street (west). Other notable quality clusters occur to the northern end of Square West and Coleman Mall. These areas have the potential to form very high quality heritage-themed nodes providing attractive destination points.

Low quality façades exist widely across the study area and are shown in red on Figure 37. Where these coincide with junctions / wayfinding nodes, such as at Rangitikei Street and Square North, mitigation through ground level activation, canopy design and streetscape design is required to enhance these key locations.

Also worth noting is the impact canopy provision and quality has on the experience of building façades. The poor quality canopy on the corner of Square West and Coleman Mall lowers the overall impression of the building while the average quality canopy on the corner of Main Street East and Square East raises the poor quality of the building façade.

Opportunities

- Introduce street tree planting along Square East from The Plaza to Broadway Avenue to raise the perceived quality of this side of The Square and to screen low quality façades;
- Specifically address Main Street east where the poor quality Urban Bus Terminal, Courthouse and Downtown buildings cumulatively have a negative impact on that area.

The below opportunities are outside the scope of the Streetscape Plan:

★ Enhance the visual impact of poor quality buildings through canopy placement and design;

★ Encourage and support regular maintenance programmes for building façades to ensure the structural integrity of awnings is maintained, cleaning is undertaken, façades and gutters maintained and light fixtures are kept in working order;

★ Remove unsightly mechanical services appendages to the front of façades and relocate these to the sides, roof or rear;

★ Consider longer term building façade upgrades to the intersections of Fitzherbert Avenue and Rangitikei Street with The Square.

Image 28: The old post office (now High Flyers)

5. High

4.

3. Average

2.

1. Low

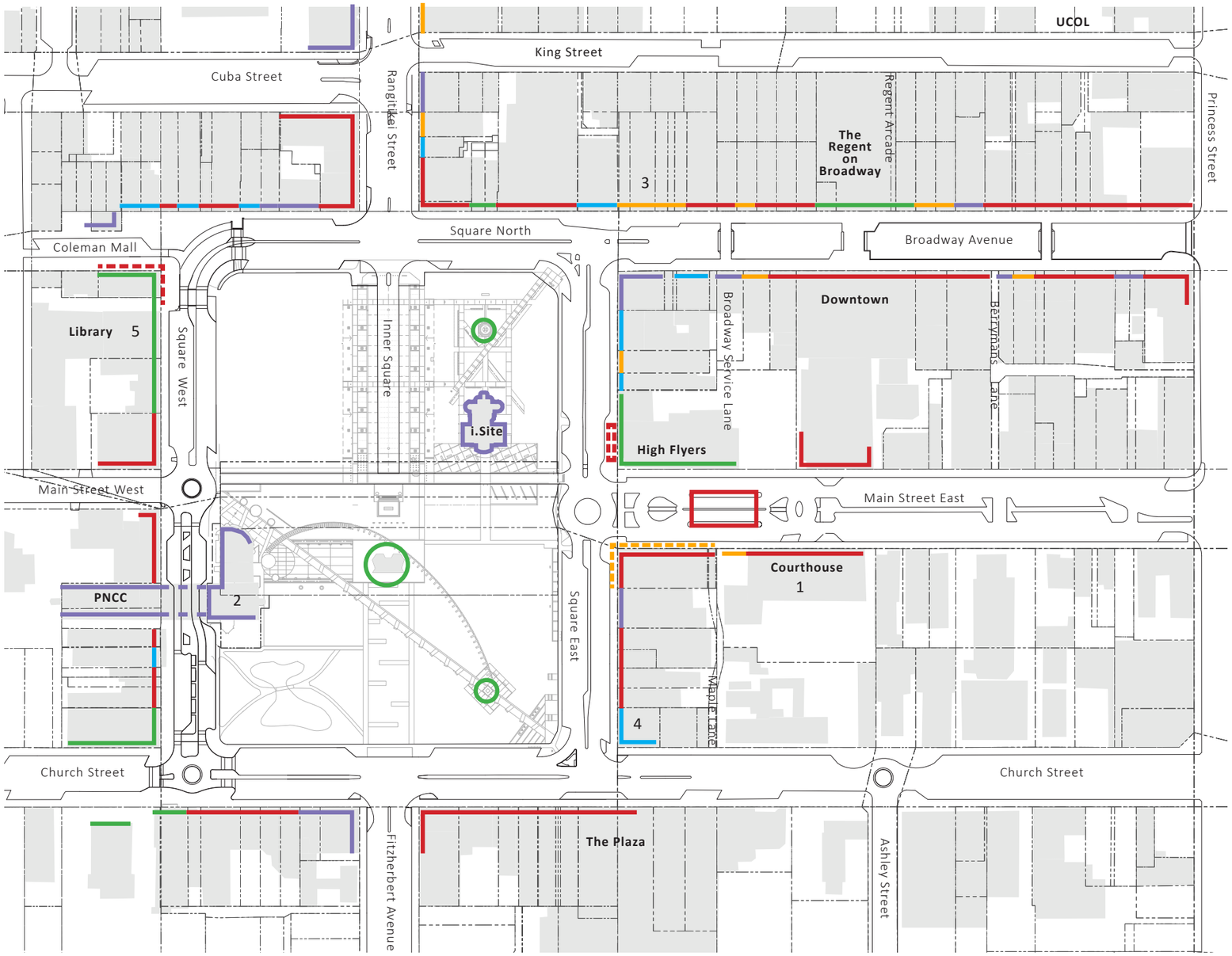


Figure 37: Built form - architectural quality

2. 13 Built Form - Ground Floor Frontage Activation

The adjacent diagram (Figure 38) describes the condition of ground floor frontages across the study area. These have been rated using a simple three-tier system of 'Active', 'Semi-active' and 'Blank'. The rating takes into account:

- Ground floor business, its function and distribution of functions throughout the study area;
- Transparency and exchange- the ability for passers-by to interact with the building and its activities, including impact of opening days and hours.

The majority of ground level frontages are active and this contributes to a general perception of vibrancy and mitigates the experience of poor quality buildings where these occur.

Semi-active frontages also provide some degree of interaction between buildings and streets as well as introducing variety of experience.

However a limited number of frontages are classed as blank and these create a negative experience for users of the public realm, particularly where there is a cluster of blank ground floor frontages. This includes the public realm around the Courthouse on Main Street, Square East, the frontage of High Flyers, part of the Downtown carpark and the rear of i.Site that opens onto The Square.

These areas should be a focus of building edge activation or streetscape design to enhance or screen where possible.

Opportunities

- Areas that should be a focus of building edge activation or streetscape design to enhance or screen where possible include those shown in red on the adjacent diagram, including the Courthouse, High Flyers' frontage onto Square East, Downtown and parts of i.Site;
- The forecourt of All Saints' Anglican Church on Church Street should be improved through more effective feature lighting and streetscape enhancements.

Image 29: Main Street East

Active frontages

Semi active frontages

Inactive / blank frontages

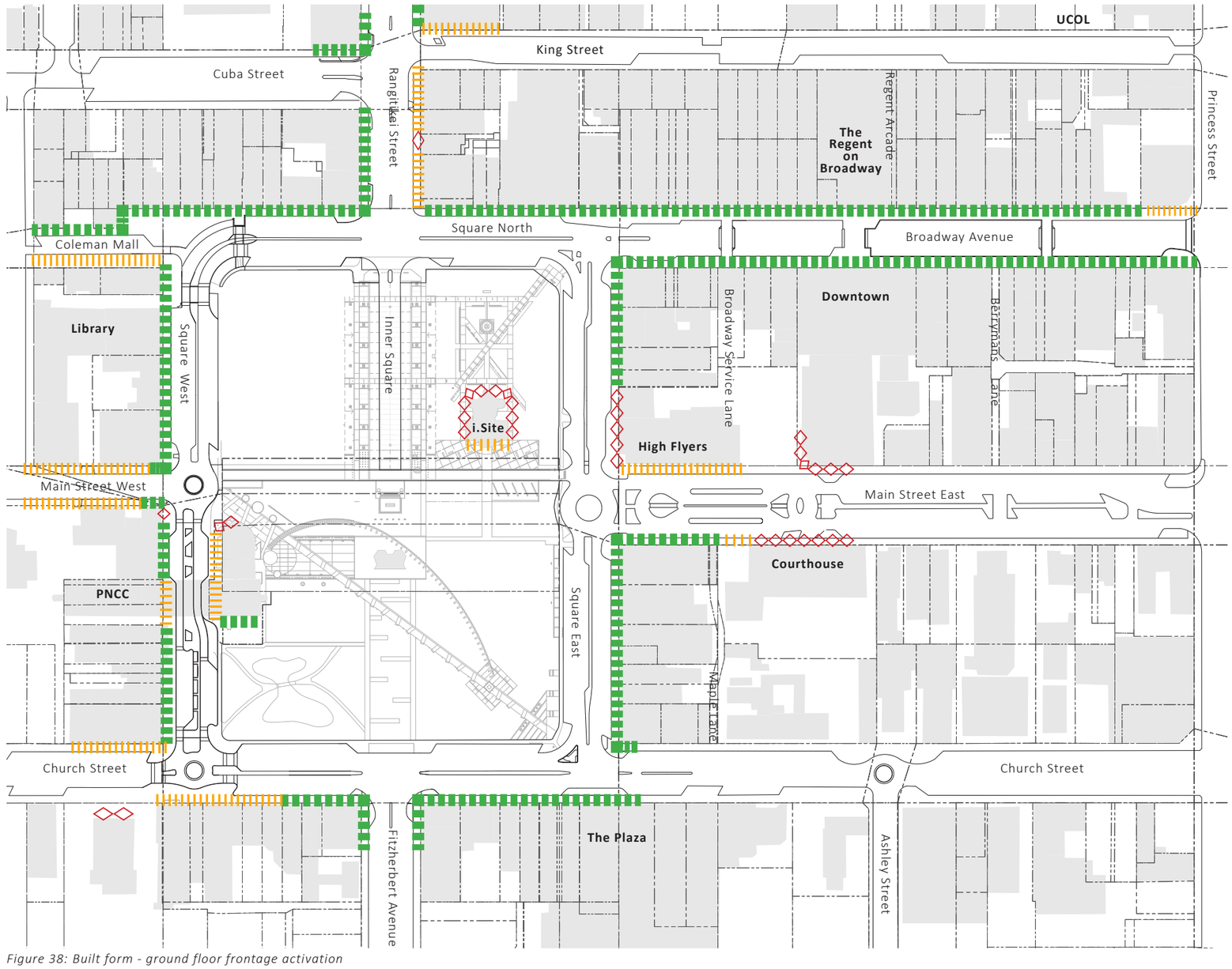


Figure 38: Built form - ground floor frontage activation

2. 14 Built Form - Frontage and Quality Rating

It is important to analyse both the architectural quality and building function together.

Reviewing both the architectural quality and building function together can better reveal their contribution to the human scale and complexity of the streetscape experience.

The high architectural quality of the High Flyers building somewhat mitigates its poor interaction with the street, and vice versa with those buildings that have a positive exchange with the street mitigating their low quality architectural presence.

Opportunities

- Utilise streetscape design to change perceptions about street function and safety;
- Encourage retail spillout through well-defined, usable streetscapes;
- Introduce active or semi-active frontages to the ground level of all streets within the study area, particularly prioritising those that coincide with poor architectural quality façades;
- Consider use of glazed canopies where high quality façades occur to increase visibility of those buildings.

The below opportunities are outside the scope of the Streetscape Plan:

★ Develop a clear retail strategy which supports existing businesses, encourages new business to invest in the city centre and, working with other PNCC strategies, creates a vibrant place for daily and permanent populations.

Image 30: The Regent on Broadway

5 - best

4

3 - average

2

1 - Poor

Active

Semi active

Inactive / blank

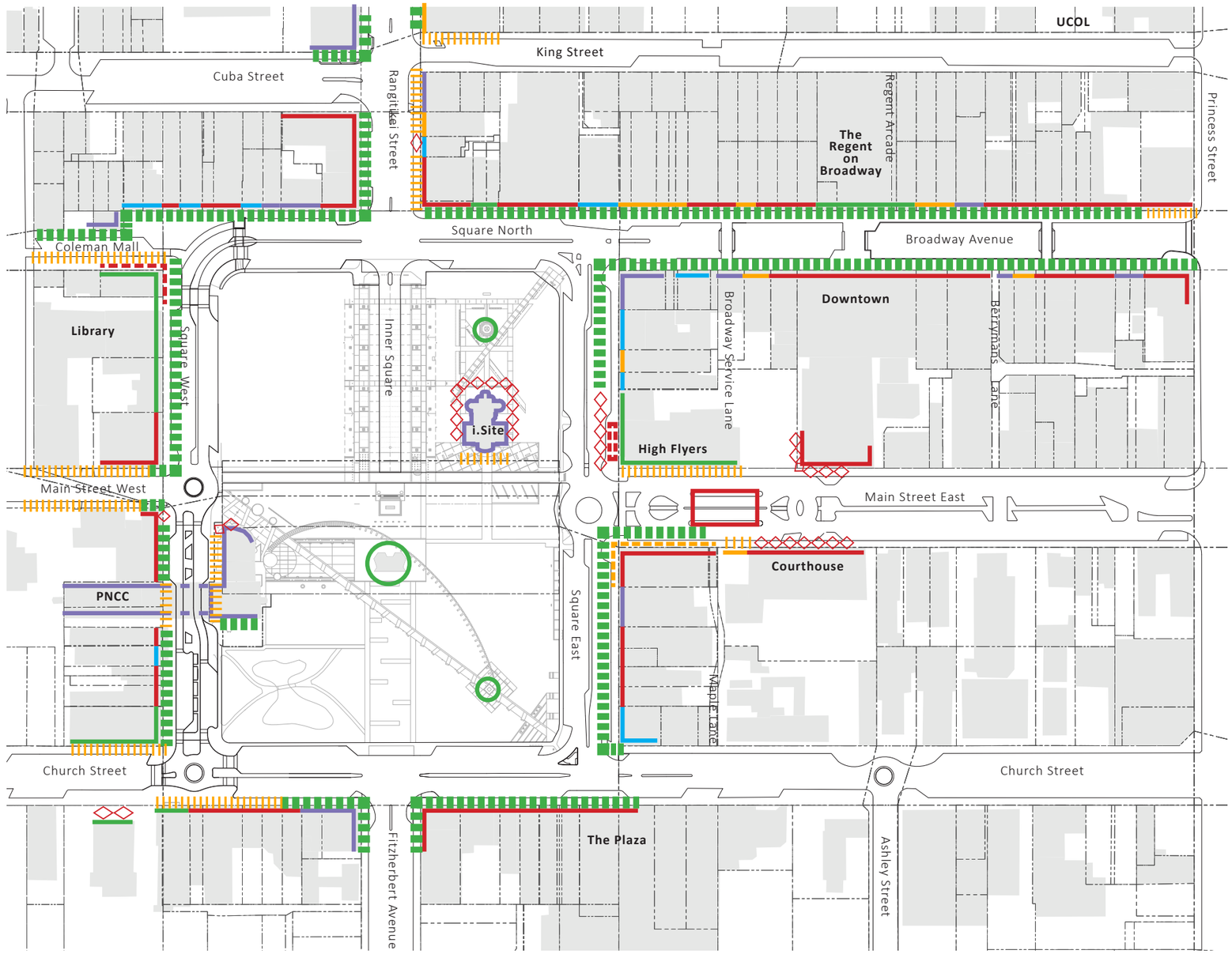


Figure 39: Built form - frontage and quality ratings

2. 15 Built Form - Heritage Category Rating

As per the PNCC District Plan, *"buildings and objects of cultural heritage value make a significant contribution to the sense of identity and continuity experienced by both residents and visitors alike."*

Figure 40 shows the heritage category ratings of buildings in the study area. These categories are:

- **Category 1:** Buildings and objects recognised by Heritage New Zealand as being of special or outstanding historical or cultural significance or value.

- **Category 2:** Buildings and objects recognised by Heritage New Zealand as being of historical or cultural significance or value.

- **Undetermined**: Those buildings which are listed on PNCC's Heritage Buildings list. These buildings are of local value but do not include Heritage NZ Category.

Constraints

- Cost of seismical upgrade;
- Reliant on private sector for initiative and investment.

Opportunities

- Utilise streetscape design to frame significant built fabric;
- Remove unsympathetic awning addition (1982) to Former ANZ Bank at Coleman Mall- replace with more appropriate awning.

Image 31: Historic Square North

KEY

Category 1

1 All Saints' Church
2 All Saints' Church Hall
3 Ansett House
4 Former C M Ross & Co Building
5 Square Edge
6 Former Hepworth Building
7 Former O'Connor & Tydeman Building
8 Grand Hotel Building
9 Hitching Post
10 Plunket Rooms
11 Regent Theatre
12 St Andrews Church
13 Statue of Te Peeti Te Awe Awe
14 World War I Memorial

Category 2

A First Church of Christ Scientist
B Former ANZ Bank
C Former Baptist Union Church
D Former Club Hotel
E Former Post Office Building
F Former NZI House
G Former RSA Building
H Former Salvation Army Junior Hall
I King Street Flats
J Manawatu Killwinning Lodge
K Manawatu Polytechnic Building
L Coronation Memorial
M Former Palmerston North Station

Figure 40: Built form - heritage category ratings

2. 16 City Life and Culture - Building Use

The diagram at Figure 41 describes the patterns of ground level building use across the study area using seven broad categories. Upper level occupation has not been identified.

The predominant land use patterns include:

- Generally a high level of retail activity at ground level, focused along Main Street West, Square North, Square East and Broadway Avenue. The Plaza forms a strong retail anchor on Church Street defining the eastern side of The Square as the predominant retail area;
- Other uses include commercial office and café / restaurant with a few clusters of drinking establishments (bars);
- The majority of café / restaurants occur along the eastern end of Broadway Avenue with others sporadically located around The Square;
- Some locations include office space to upper floors;
- Generally very low levels of residential activity in the area;
- Lack of activity in The Square itself apart from i.Site.

Constraints

- Reliant on private sector to deliver activity.
- Limited demand in Palmerston North market.
- Rates and rentals influence uptake of commercial space.
- Seismic upgrade costs may be prohibitive without added value.

Opportunities

- Retain the general commercial mix across the study area, focusing on enhancing and supporting the core retail activities;
- Consider increasing the amount of residential activity to upper floors to encourage a longer activity period and provide eyes on streets after shops have closed;
- Define a restaurant cluster along Broadway Avenue but also café activity along the sunnier sides of The Square and support this with specific streetscape design that allows for outdoor occupation and spill out;
- Target vacant properties and identify potential suitable activities and advice for owners regarding tenants;
- Consider locations within The Square where new or temporary pop-up activities could be introduced to activate appropriate locations.

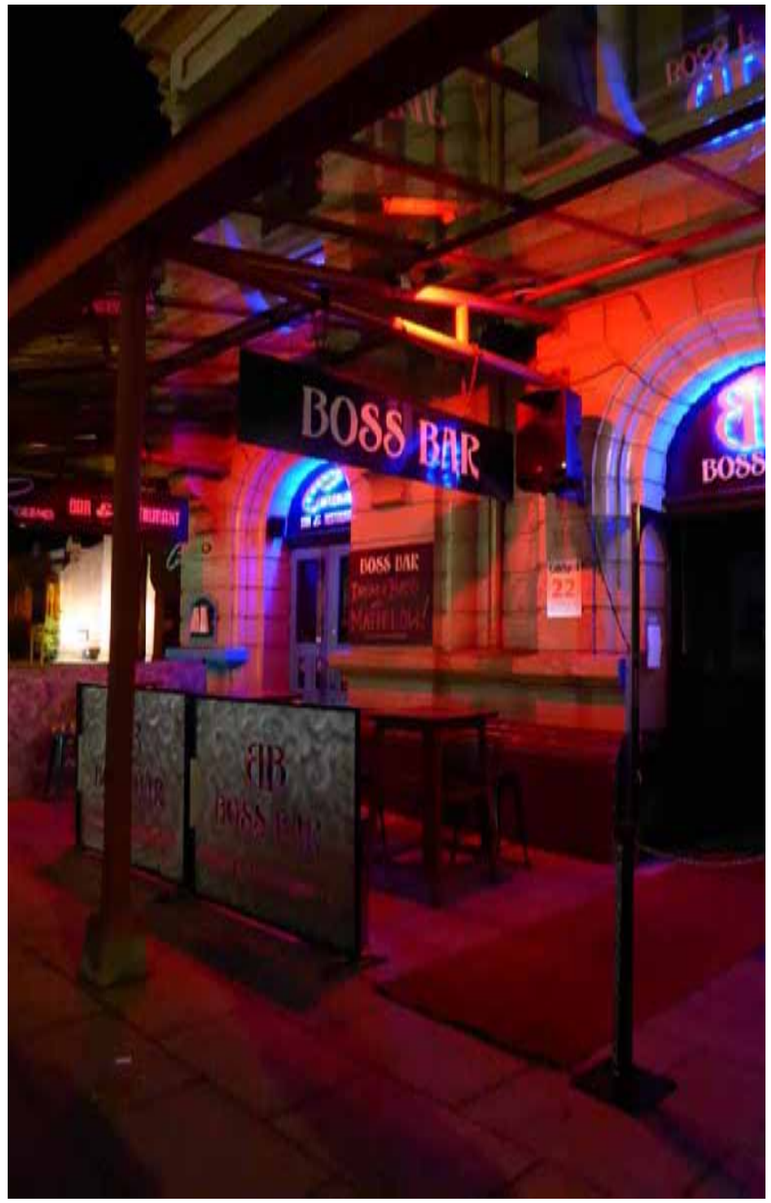


Image 32: Square West

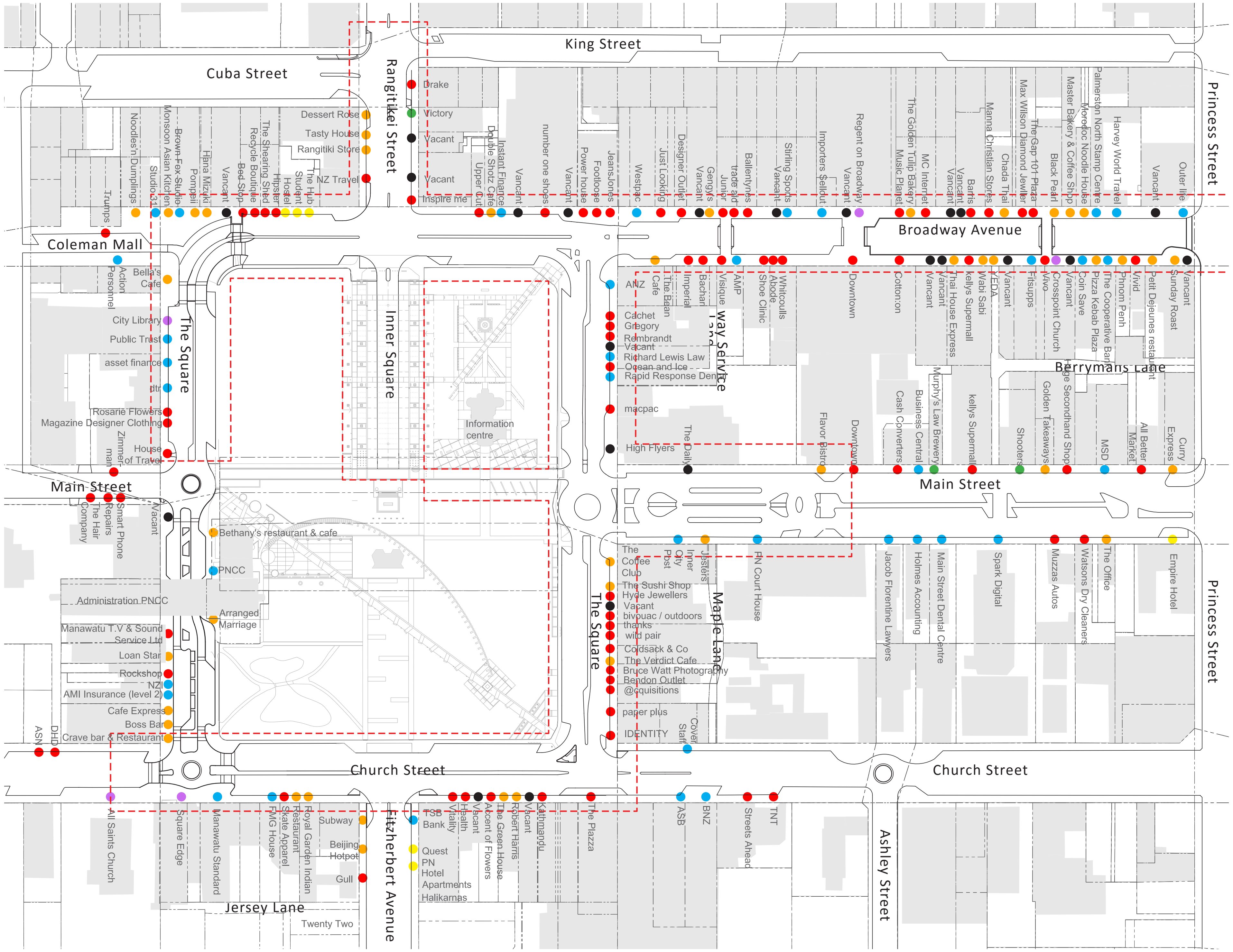


Figure 41: City life and culture - building use

KEY

●	Vacant
●	Retail
●	Leisure
●	Offices
●	Residential
●	Cafés and restaurants
●	Bars

2. 17 City Life and Culture - Street Occupation

Business settings which occupy the streetscape are basic in quality. They do not represent a level of investment in quality experiences which is often found in cities which value public life and the contribution to their business.

The lack of investment is evidenced by the lack of appropriate shade, shelter, amenity, art etc. which would normally be present in outdoor business premises.

There is a lack of a local approach to solving the problems presented by the climatic issues of Palmerston North (wind, rain, cool winters).

Existing prototype spaces have been moderately successful in demonstrating the potential for a central active point for Broadway Avenue, and for non-café businesses to contribute to the vitality of the streetscape (see Images 33-35).

Food truck street food vendors demonstrate an even lower level of investment in public space furniture than the cafés which is disappointing given the amount of space available to them at the edge of The Square.

Square West / Coleman Mall has a large amount of space dedicated to pedestrians which is poorly arranged and is unused by business during the day or evening, despite being surrounded by restaurants. The causes of the lack of use by businesses needs to be investigated.

Constraints

- The amount of area available to businesses to occupy in the street is often constrained by the old street designs. However, in areas where additional footpath width has been provided many businesses do not use the space;
- It appears the external space in the streetscape is not highly valued by businesses.

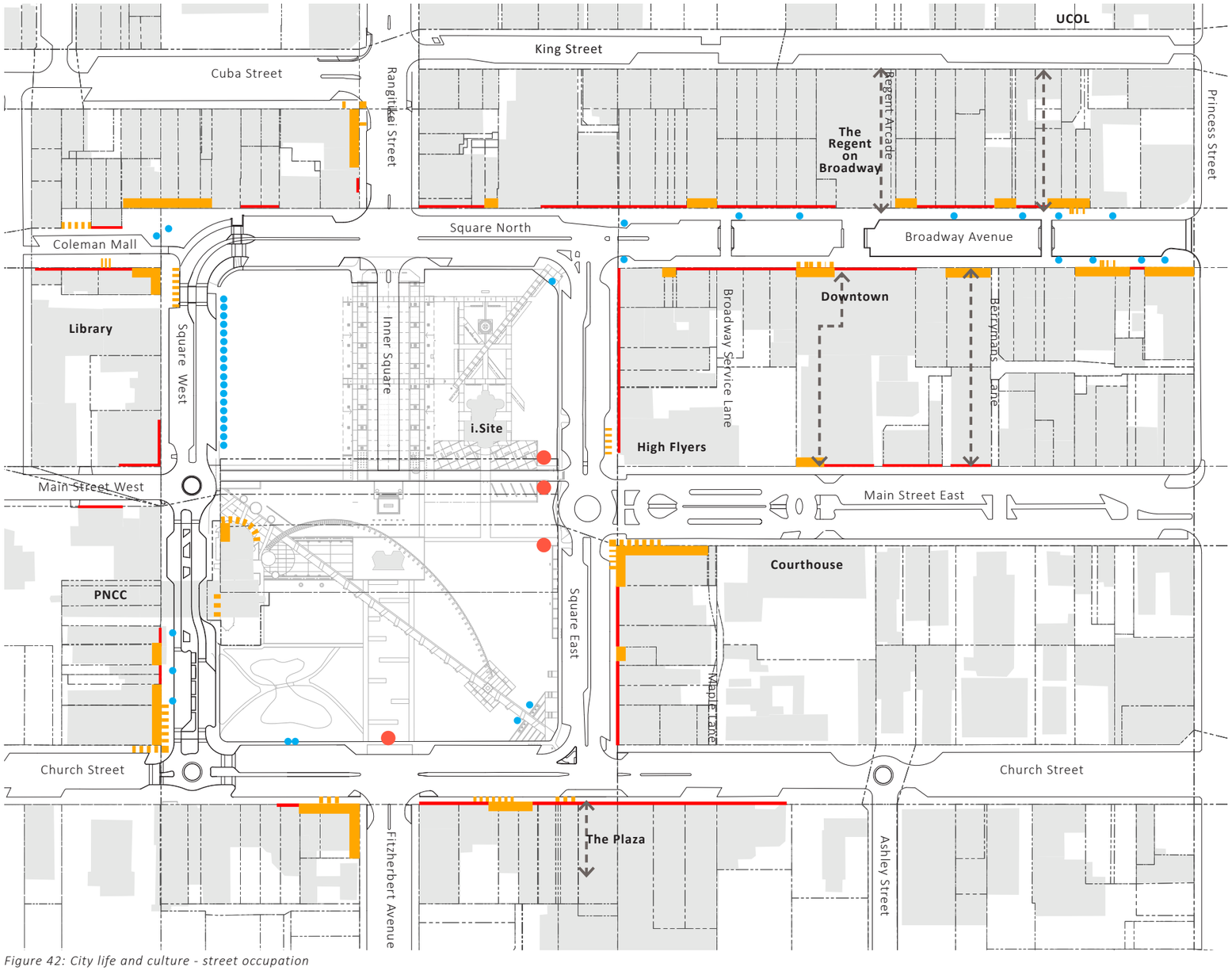
Opportunities

- Improve the relationship between building use and street infrastructure to encourage and extend streetscape activation;
- Palmerston North could become a leader in public space design which manages the unpleasant effects of climatic conditions;
- Food trucks can be grouped into a high-quality setting with shared furniture and assets to create a destination either in the streetscape or within the central axis of The Square.

Image 33: Outdoor dining on The Square

Image 34: Outdoor seating on Broadway Avenue

Image 35: Outdoor space on Broadway Avenue



KEY

- Retail frontage
- Restaurant frontage
- Outdoor dining
- Street vendor
- Seating / benches
- Thoroughfares

Figure 42: City life and culture - street occupation

2. 18 City Life and Culture - Street Art, Public Art and Events

Street art and public arts are concentrated on the western edge of The Square around the areas considered to be the civic and cultural areas within the central city. The collection of large sculptures is generally part of a single arts initiative from the last decade. The city should pursue a diversification in the style and scale of public arts in both how they are integrated with structures and used to sequence the urban experience (e.g. Little Cuba), or made more accessible and interactive at the pedestrian scale.

The strong division of formal and informal cultural expression on either side of The Square reinforces the assessment of environmental quality, and people's perceptions of safety.

The anchor events (e.g. Massey Graduation, Festival of Culture) are well established and run without issue. Since 2007 there has been ongoing experimentation with event arrangement and layout of events of many sizes within The Square. The inter-regional buses are a complication for Square events.

Many central city events do not use the streetscape. City buses which use the east side of The Square are a complication for holding events near the largest flows of people. The only large event which uses Square East is the Christmas parade.

The 3rd Pulse Festival (street arts) was held on Broadway for the second year . Attendance at this event for public consultation purposes showed that event management in the streetscape is immature. The scale of the event was too small for the large space, and the event does not appear to have grown since its inception. The impact on business is unlikely to be positive and the perception of street based events is unlikely to be improved if events continue to be managed as they have to date.

Clarity around location, size of events, and appropriate spaces is required, as are standard procedures for growing events into assets for city life. In recent years a number of events such as farmers markets (George Street), performance events (Art on Edge) have emerged and then disappeared which raises questions about overcoming the barriers to activating Palmerston North's central city.

Figure 43 illustrates the lack of weekly or monthly anchor events, and also illustrates that the streetscape does not form part of most events, apart from parades. The cultural impact of a lack of regular events on city life means there is no incentive for residents to explore their city with the anticipation of stumbling across something new. Regular programming of events in the public space must be pursued along with design processes to grapple with the collateral required to run events in Palmerston North's climate.

Constraints

- This assessment does not assess the programming of the city centre over the week or through the seasons;
- The abundance of street space and open space, and long blocks in the central city has proved to be problematic for event organisers to create the concentration of energy and people for memorable events. Streetscape designs should consider a 'street event mode' and the public space collateral required for success.

Opportunities

- Invest with confidence in city life- Figure 43 illustrates and reinforces that where the combination of investment in cultural facilities and streetscapes has occurred (Square West / George Street) that the perception of the city improves, and where there is a lack of investment the city suffers;
- The city needs to support the streetscape programme with allied investment in formal and informal culture, activation, and the built environment to remedy the long-term lack of investment in the busiest parts of the city;
- Professional management and marketing of street based events is required for these to have a positive impact going forward.

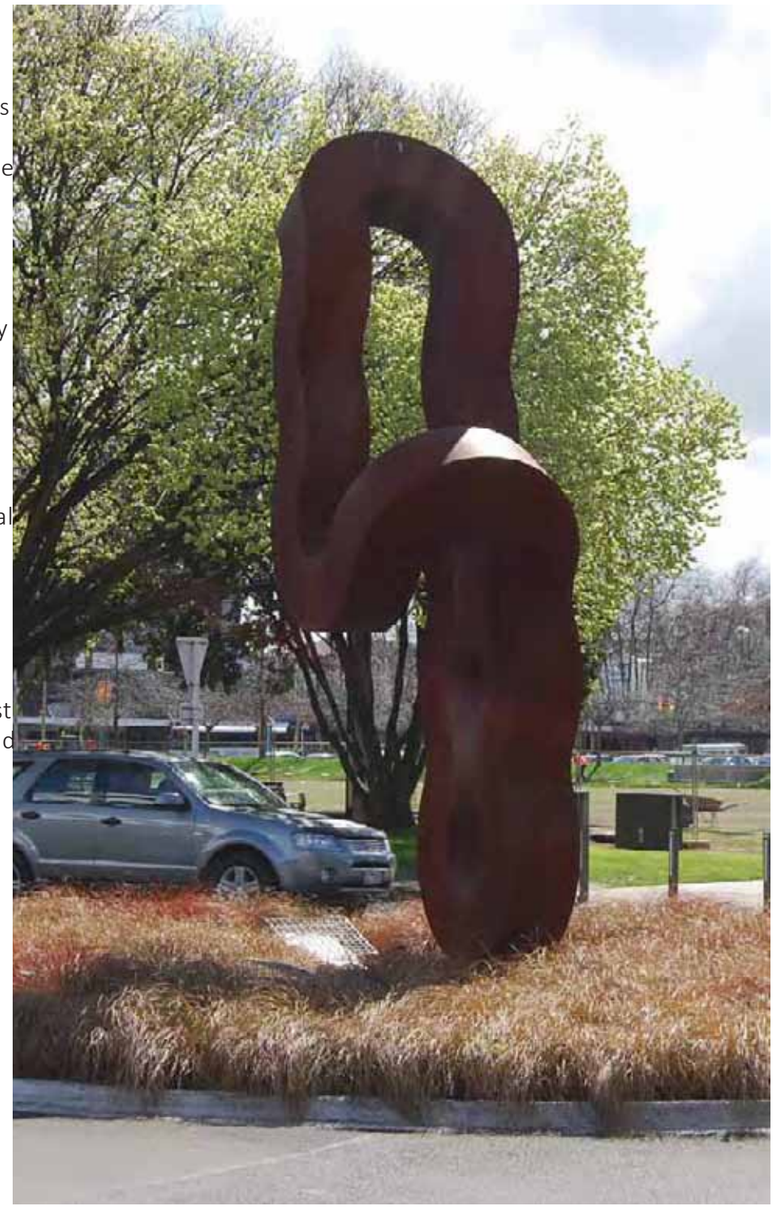


Image 36: The Returning Column sculpture

KEY

Massey University Graduation Parade

Palmerston North Christmas Parade

Festival of Cultures - Lantern Parade

Key sculptures and galleries

1	Community Arts Palmerston North	14	Private Gallery
2	Mauri-Ora Papatuanuku Me Tangoroa	15	Numbers
3	Lady Relaxing In Her Boudoir	16	City Library
4	Ghost Of The Huia	17	Who's Afraid
5	Body Language - Spirit Of Place	18	Pukeko And Raupo
6	Rose City Mural	19	The Prodigal Son
7	Returning Column	20	Te Marae O Hine Carvings
8	Untitled	21	Prime Sculptures
9	Untitled Divide	22	Cenotaph - War Memorial
10	Zimmerman Contemporary Art Gallery	23	Te Peeti Te Awe Awe
11	Barista Café Wall Mural	24	Ghost Tower
12	Cityscape	25	Giants Amongst Us
13	All Creatures Great		

Anzac Dawn Service

Event space

1	Lions Market Day	2	Festival of Cultures

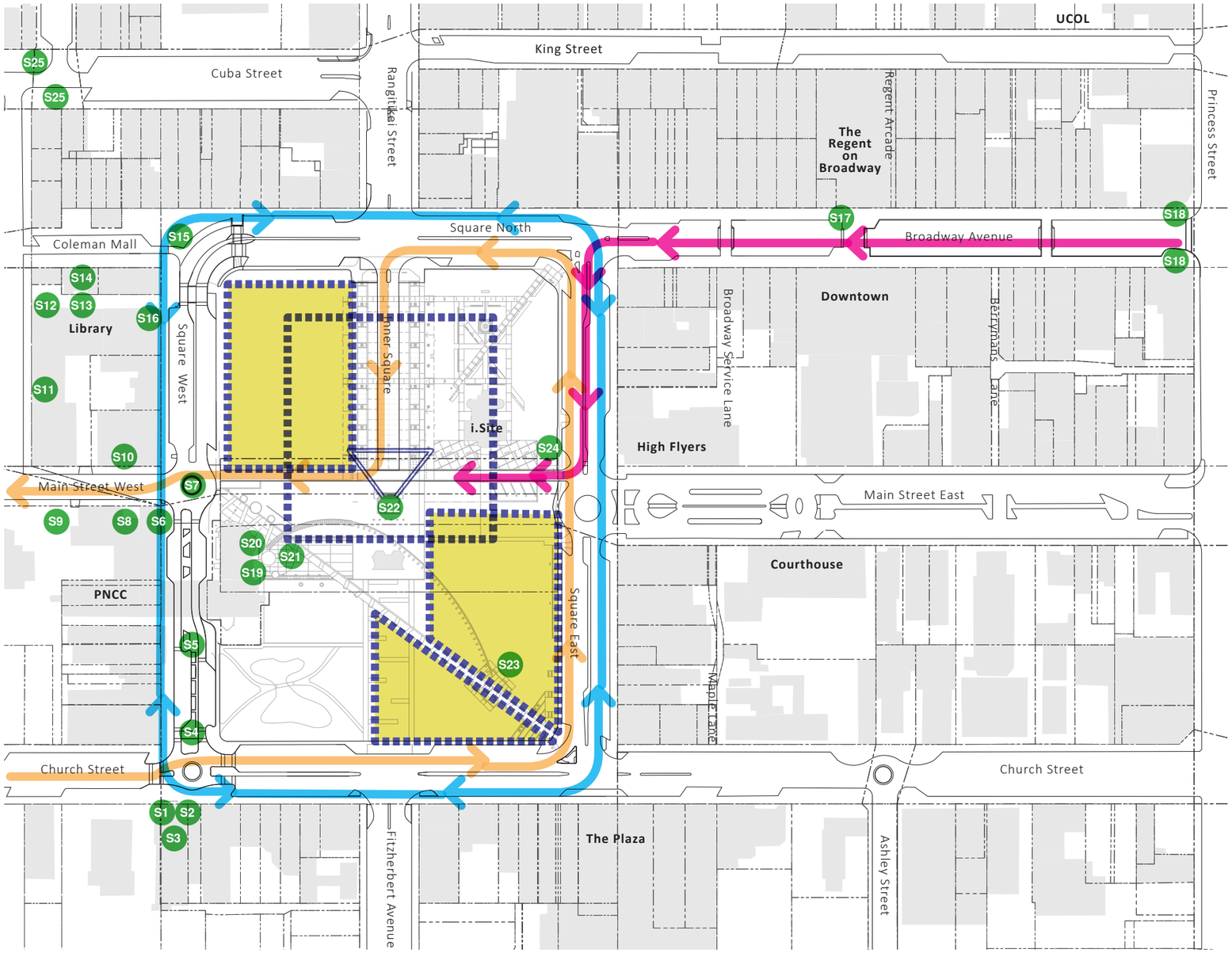


Figure 43: City life and culture - street art, public art and events

2. 19 City Life and Culture - Cultural Precincts

Palmerston North's city centre operation is informed by a pattern of 'functional clusters' or cultural precincts as described in Figure 44. These are activities of a similar nature or are compatible and mutually reinforce each other.

The precincts include a focus on cultural and civic administrative activities to the western side of The Square. These activities include the Local Authority offices, Convention Centre, Te Manawa, The Globe, the City Library and others. The George Street/Cuba Street café cluster is outside of the study area but is an important part of the city that works well to support and extend the activity period of the location.

To the north of Square West the so called 'heritage precinct' contains a cluster of high quality historically significant buildings around Coleman Mall. Activities tend to be mixed retail and the link through to George Street encourages foot traffic in this location. Public open space is of a poor quality with rather forlorn and undefined space.

At Square East and Broadway Avenue the activity pattern is more directly informed by retail functions. The Plaza establishes an anchor to the southern end of Square East while Broadway Avenue establishes a 'retail strip' to the northern end. With the west-facing street edge the opportunity for sunny outdoor seating exists though not well provided for at present. The existing Urban Bus Terminal is unsuccessful and does not integrate well with the retail street.

Broadway Avenue is a two-sided commercial 'high street' and retail activities vary along its length. A food/drink cluster at the eastern end creates a restaurant and café (sub) precinct. The Regent Arcade links to King Street and UCOL.

Beyond the study area to the north east educational activities are focused around UCOL's campus, providing a particular type of patronage supporting the retail activities of Broadway Avenue and Square East.

Constraints

- Uncoordinated retail patterns potentially undermine and provide competition for emerging clusters. There is a need for a coherent place-based retail strategy for The Square within the higher level PNCC Retail Strategy;
- Lack of demand for various commercial activities limit the establishment of precincts;
- Poor quality public realm does not adequately support precincts that need high levels of amenity;
- Success is reliant on private initiative and investment.

Opportunities

- Enhance and celebrate the character areas within the city centre through streetscape design;
- Create a clear and coherent 'precinct' approach of mutually reinforcing activity clusters;
- Theme each street to best support its parent activity cluster (e.g. retail vs civic);
- Create stronger mid-block links / lanes between major streets that offer accessibility as well as a different type of environment;
- Create bespoke public realm settings to best showcase heritage features;
- Ensure coordination across the whole Square by using a consistent palette of materials.

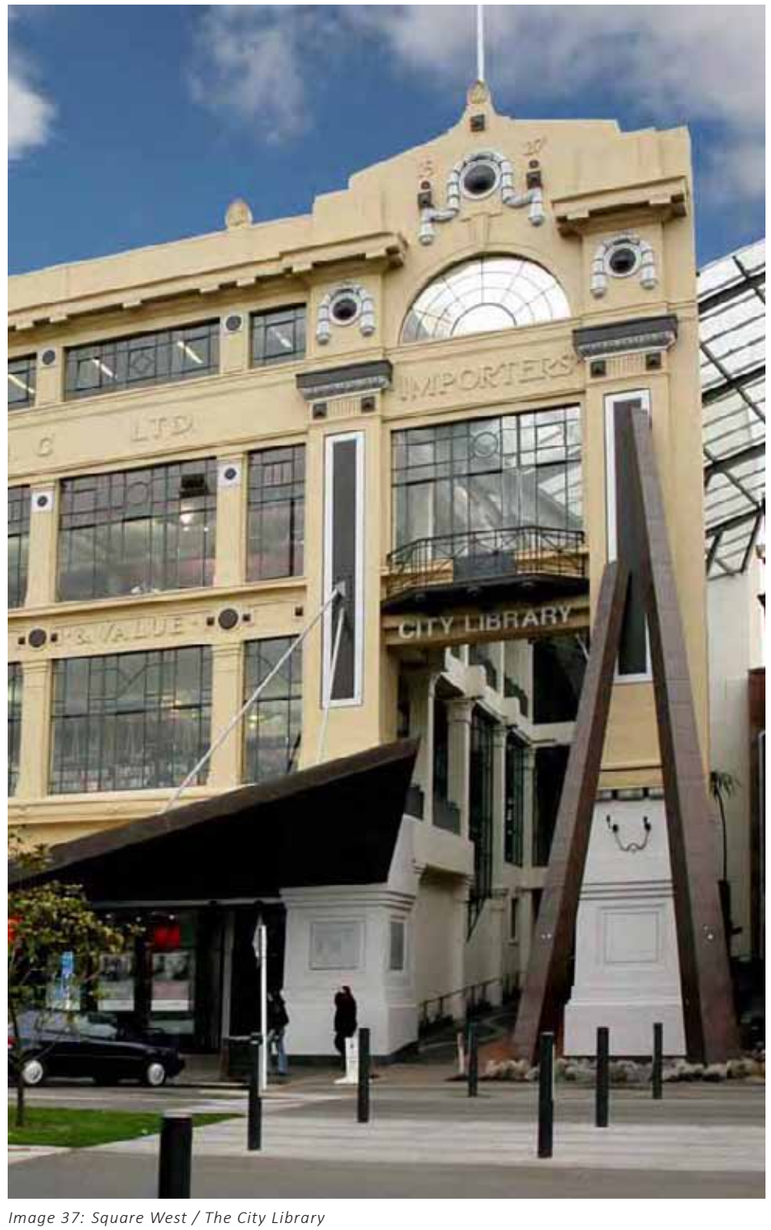


Image 37: Square West / The City Library

KEY

- Heritage Precinct
- Cultural Precinct
- Civic Precinct
- Retail Precinct
- Education Precinct
- Restaurant and Café Precinct
- Movement Precinct

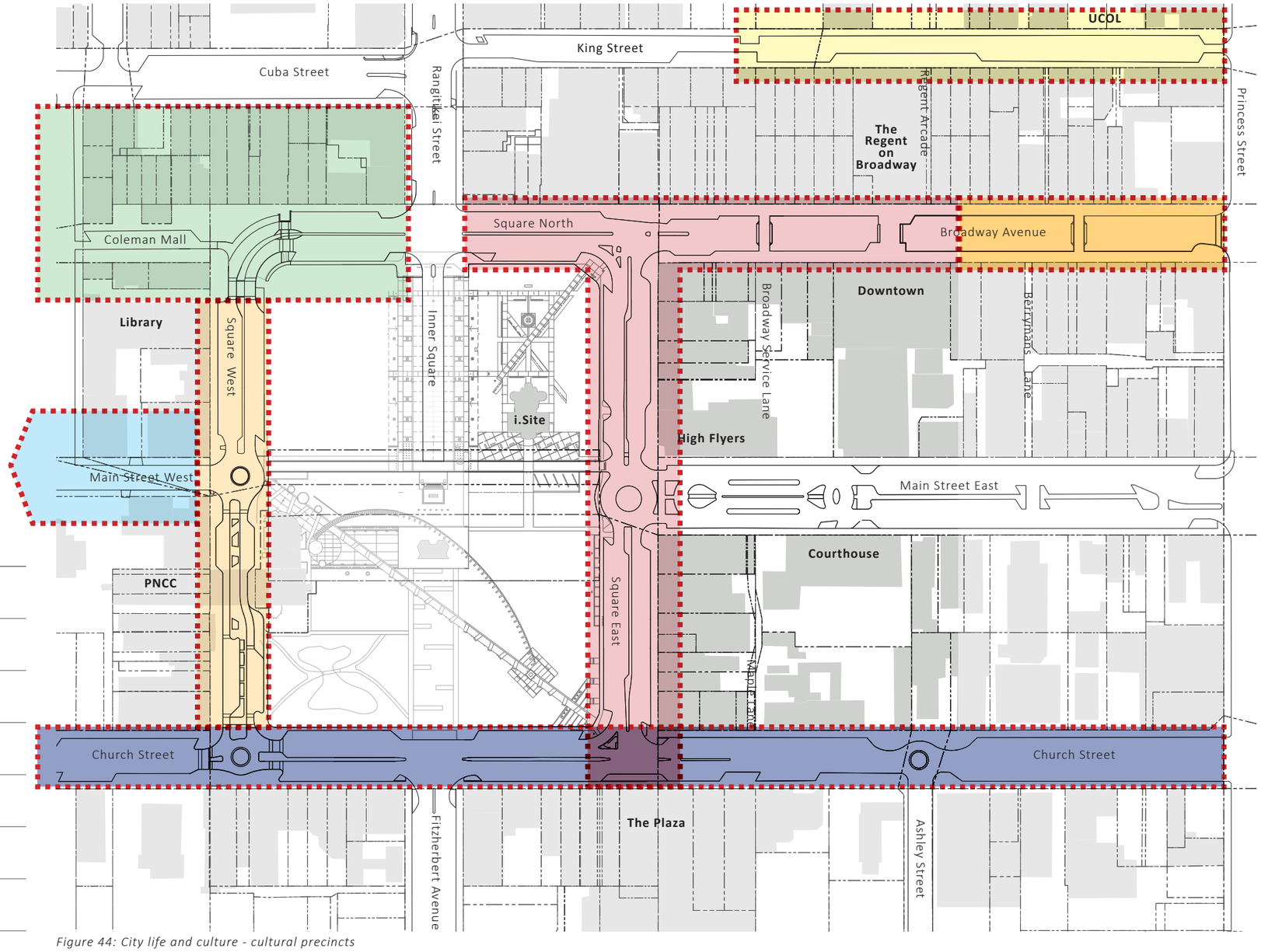


Figure 44: City life and culture - cultural precincts

2. 20 Environmental and Spatial Quality - View Structure

The adjacent Figures 45-47 describe the types of views across the study area. Three view types are identified.

Strategic Views

Strategic views are those long range views that allow strategic visual connections to be made across, into and out of The Square.

Figure 45 describes the strategic views that relate to the study area. Those arrows in green identify 'positive' views, i.e. Those that terminate on a strong and positive landmark or are well framed. The arrows in pink identify weak or unremarkable long distance views.

Of note are the strong views into The Square that terminate on the clock tower or connect into The Square from adjoining streets. Also of note are those views along Broadway Avenue (eastwards) that include the hills in the distance and church spire.

Weak views are generally to the west along Church Street, Main Street and Coleman Mall and north up Rangitikei Street. These occur because the views are poorly framed with no obvious landmark or terminate on a weak building (e.g. west along Coleman Mall onto Harvey Norman).

Figure 45: Environmental and Spatial quality - strategic views

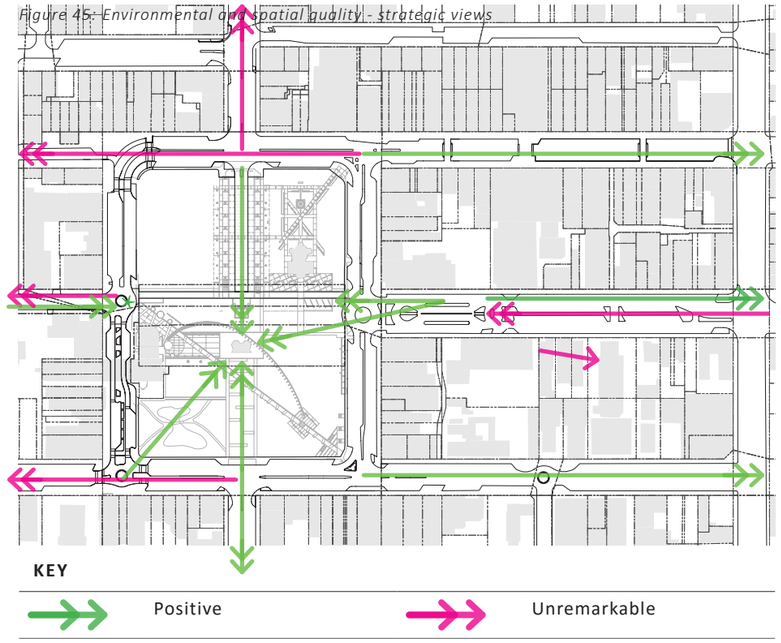


Image 38: Broadway Avenue looking east to the hills

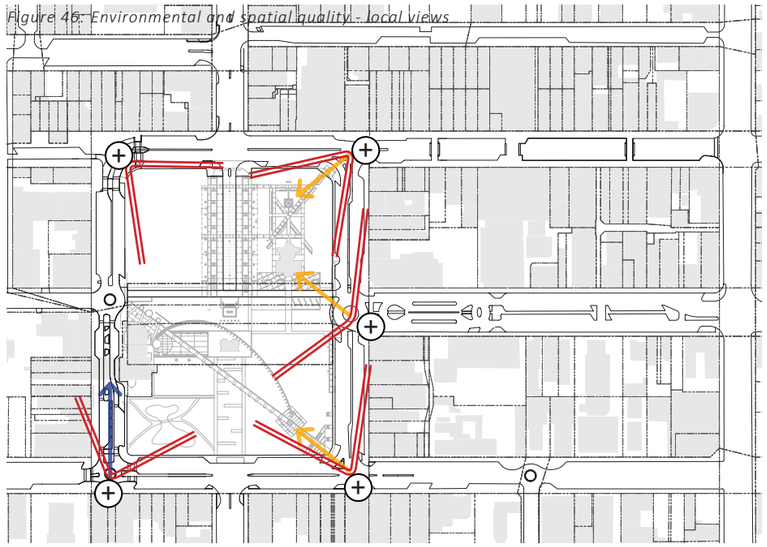
Local Views

Local views are shorter range views that are either links to features or view settings.

Figure 46 sets out the important local views within the study area and identifies a series of view settings (view cones) that generally exist from the corners of The Square.

All of these views are positive in some respect, largely because they are orientated towards The Square that is of high landscape quality. However some of these are moderated by particular views onto unremarkable features. For example, the view north from Church Street along The Square west onto the Civic Administration buildings. Also worth noting are the poor local views along Main Street East affected by the Urban Bus Terminal (of low quality).

Figure 46: Environmental and spatial quality - local views



KEY

	Well-framed		Poorly defined or unremarkable
	Positive		Unremarkable

Image 39: Corner of Church Street and The Square

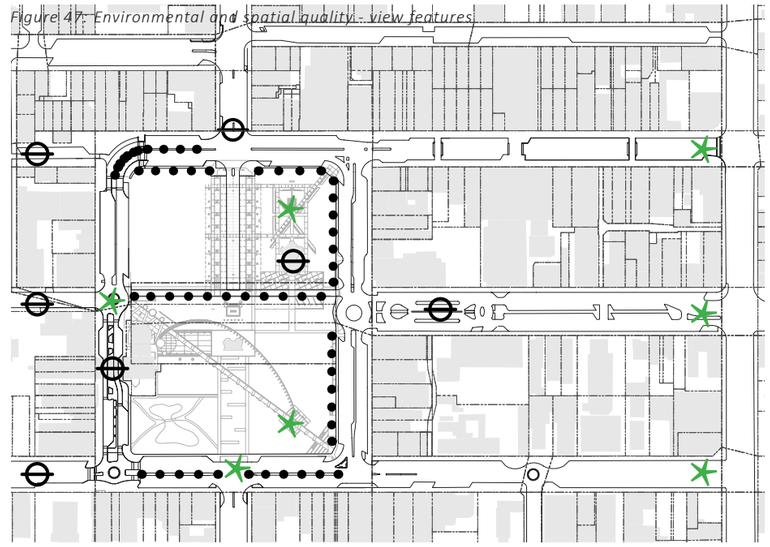
View Features

View features are key components within the study area that terminate or feature prominently in strategic or local views. Figure 47 identifies the main built elements that feature strongly in views. These are described as either positive or negative.

The tree structure around The Square clearly forms a significant positive collection of view features that are to be maintained and enhanced though it is worth noting that views through the trees are required to ensure visual permeability into The Square (e.g. at the north-east corner).

Negative view features tend to comprise built structures that are of a low quality or where no view feature exists and thus the view is uncontained or poorly defined. Where these occurs the introduction of new street trees or built elements in the streetscape including materials enhancement or improved visible presence / lighting to notable buildings could improve these conditions.

Figure 47: Environmental and spatial quality - view features



KEY

	Positive view demonstrated		Poorly defined
	Positive view features		

Image 40: Main Street Urban Bus Terminal looking west to The Square

2. 21 Environmental and Spatial Quality - Public Realm Quality

The quality of the public realm within the study area has been assessed according to a rating system as shown on the adjacent Figure 49.

The rating system of 1 (low) to 5 (high) has been applied, and takes into account:

- Street function, scale and space allocation (including proportion of space for vehicles versus pedestrians);
- Ground plane quality, including pedestrian circulation and amenity, presence of infrastructure and street tree planting;
- Reasons for inhabiting the street such as walkability, activation, events, and destinations;
- Protection and feelings of safety and security.

It is also impacted by the quality of the adjoining building design, setback, detailing and function, however this is not specifically addressed.

Constraints

- Lack of very high quality spaces across the city result in a lowered level of aspiration;
- Failure to integrate public and private investment leads to uncoordinated place making.
- Poor quality public realm does not best support adjoining retail activity and vice versa;
- Conflicts between demand for car parking / access and desire for higher quality pedestrian amenity;
- Conflicts in landscape / tree planting and user acceptance of implications (cleanliness / bird droppings / impact on building canopies).

Opportunities

- Establish a consistently high quality of public realm for The Square and its street environs;
- Better integrate the design of streets with the central green open space of The Square;
- Foster connections between building frontages and activities and the square open space;
- Use public realm upgrades to provide opportunities for outdoor activation of spaces;
- Introduce an appropriate landscape and tree planting strategy that provides amenity but minimises perceived negative outcomes.

Image 50: Square West - High quality public realm

Image 51: Square East - Low quality public realm

High Quality Public Realm

5.

?

Not identified in study area

4.

3.

2.

1.

Low Quality Public Realm

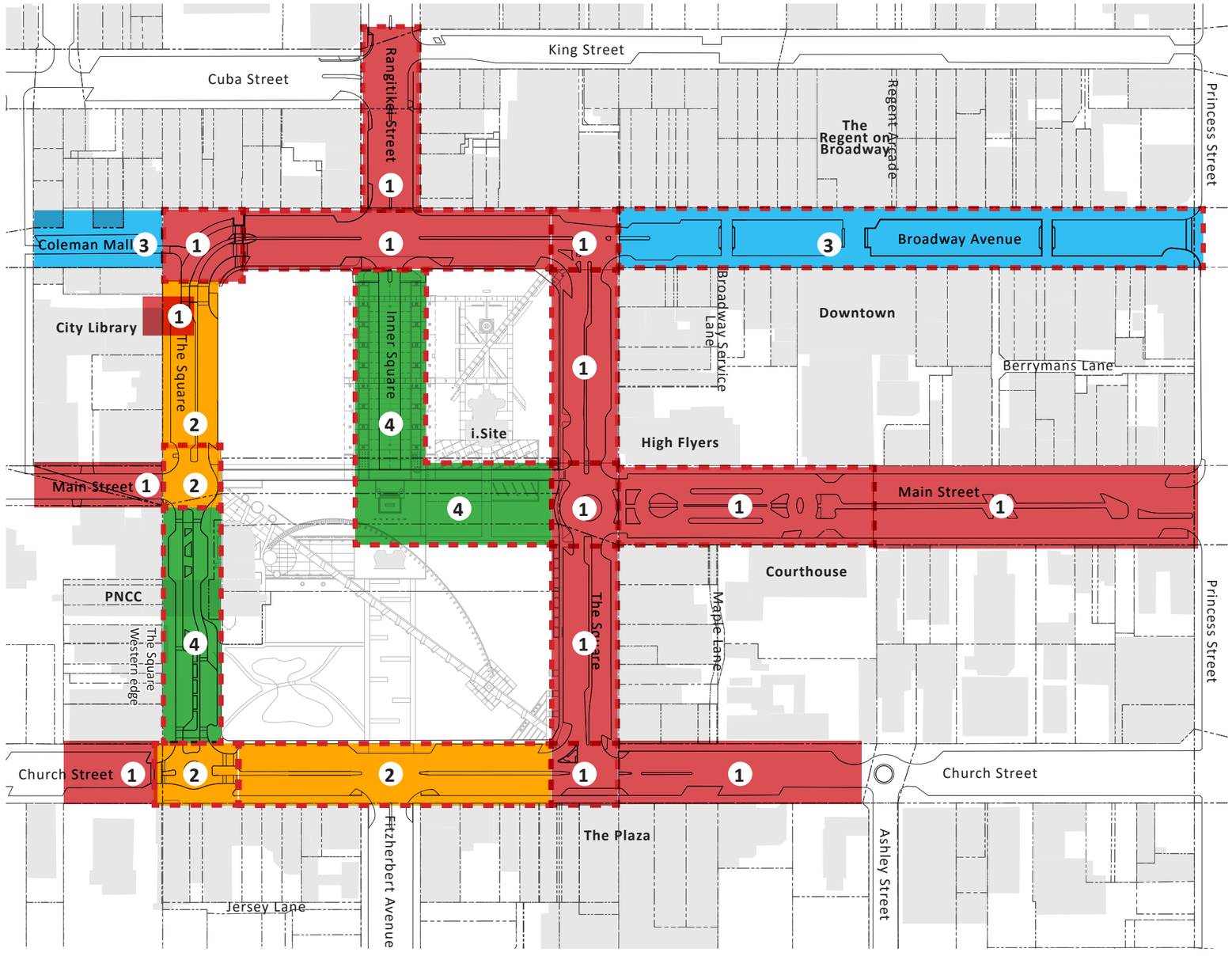


Figure 49: Environmental and spatial quality - public realm quality

2. 22 Environmental and Spatial Quality - Existing Materials and Furniture Palettes

Square West

Image 38: The Square looking north

Image 39: Tactile stud indicators (not to code)

Image 40: Granite paving

Image 41: Kerbs

Image 42: Granite paving

Image 43: Granite cobbles

Image 44: Planters

Image 45: Planters / seating

Image 46: Bin

Image 47: Light column and banners

Image 48: Bicycle racks

Church Street

Image 49: Church Street looking east

Image 50: Granite paving

Image 51: Granite paving detail

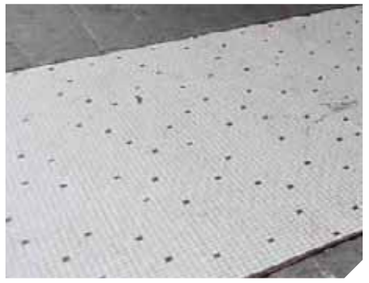


Image 52: Mosaic tiles

Image 53: Paving

Image 54: Footpath

Image 55: Garden bed

Image 56: Wayfinding

Image 57: Bin

Image 58: Bicycle racks

Image 59: Bicycle racks

Square East

Image 60: The Square looking north


Image 61: Pram ramp


Image 62: Garden bed edge detail


Image 63: Drainage


Image 64: Footpath


Image 65: Bicycle racks


Image 66: Bins


Image 67: Bins


Image 68: Bicycle racks


Image 69: Garden bed

Main Street

Image 70: Main Street Urban Bus Terminal

Image 71: Clay paving

Image 72: Asphalt

Image 73: Concrete kerbs

Image 74: Garden bed

Image 75: Bins

Image 76: Bicycle rack

Image 77: Bins

Image 78: Bus shelter

Broadway Avenue

Image 79: Broadway Avenue looking west


Image 80: Clay paving


Image 81: Clay paving / tree pit detail


Image 82: Asphalt


Image 83: Bicycle racks


Image 84: Bicycle racks


Image 85: Hanging planter


Image 86: Street bench

Square West / Coleman Mall

Image 87: View into Coleman Mall

Image 88: Concrete paving

Image 89: Concrete kerbs with clay paver

Image 90: Garden bed

Image 91: Bins

Image 92: Bicycle rack

Image 93: Street bench

2. 23 Environmental and Spatial Quality - Vegetation Distribution

The presence of vegetation (particularly mature street trees) within urban environments has many benefits, including temperature and air pollution. Mature tree canopies are highly valued within the urban environment, with trees only typically removed once they are an unacceptable safety hazard or, in rare cases, where major upgrade work require their removal.

The benefits of street trees and urban forestry are widely documented, including:

- Environmental benefits (e.g. carbon sequestration, reducing run-off and soil erosion);
- Economic benefits (e.g. reducing energy consumption, typically increasing adjacent property values);
- Social benefits;
- Psychological benefits; and
- Aesthetic benefits (e.g. improving amenity, reducing the scale of the urban environment, providing a seasonally changing natural canopy).

Most streets within the study area enjoy either tree or understorey plantings, as per the below table. However the recent removal of trees along Broadway Avenue has left the street with no green outlook. The Inner Square has the benefit of green outlook over The Square.

STREET	STREET TREES	MEDIAN TREE	UNDERSTOREY PLANTING
Broadway Avenue	×	×	×
Rangitikei Street	×	✓	×
Coleman Mall	✓	×	×
Main Street West	×	×	✓
Square West*	✓	✓	✓
Square North*	×	✓	✓
Square East*	×	✓	✓
Main Street East	×	✓	✓
Church Street*	×	✓	✓

* Borrowed views from The Square, which is bordered by mature tree planting.

Opportunities

- Introduce street tree plantings to all city centre streets, increasing opportunities for street tree and vegetation opportunities which are appropriately scaled and located, aligned with the PNCC Street Design Manual and City-wide Vegetation Framework;
- Develop tree planting, maintenance, removal and replacement programs and strategies to ensure the right tree is planted in the right place, and to appropriately manage the tree's life span;
- Install mature species (400L minimum) to create green avenues from day one, as well as to reduce impact of accidental damage or vandalism;
- Utilise tree plantings to highlight landmarks, reduce perceived width of the street and increase canopy coverage.

Image 94: Coleman Mall

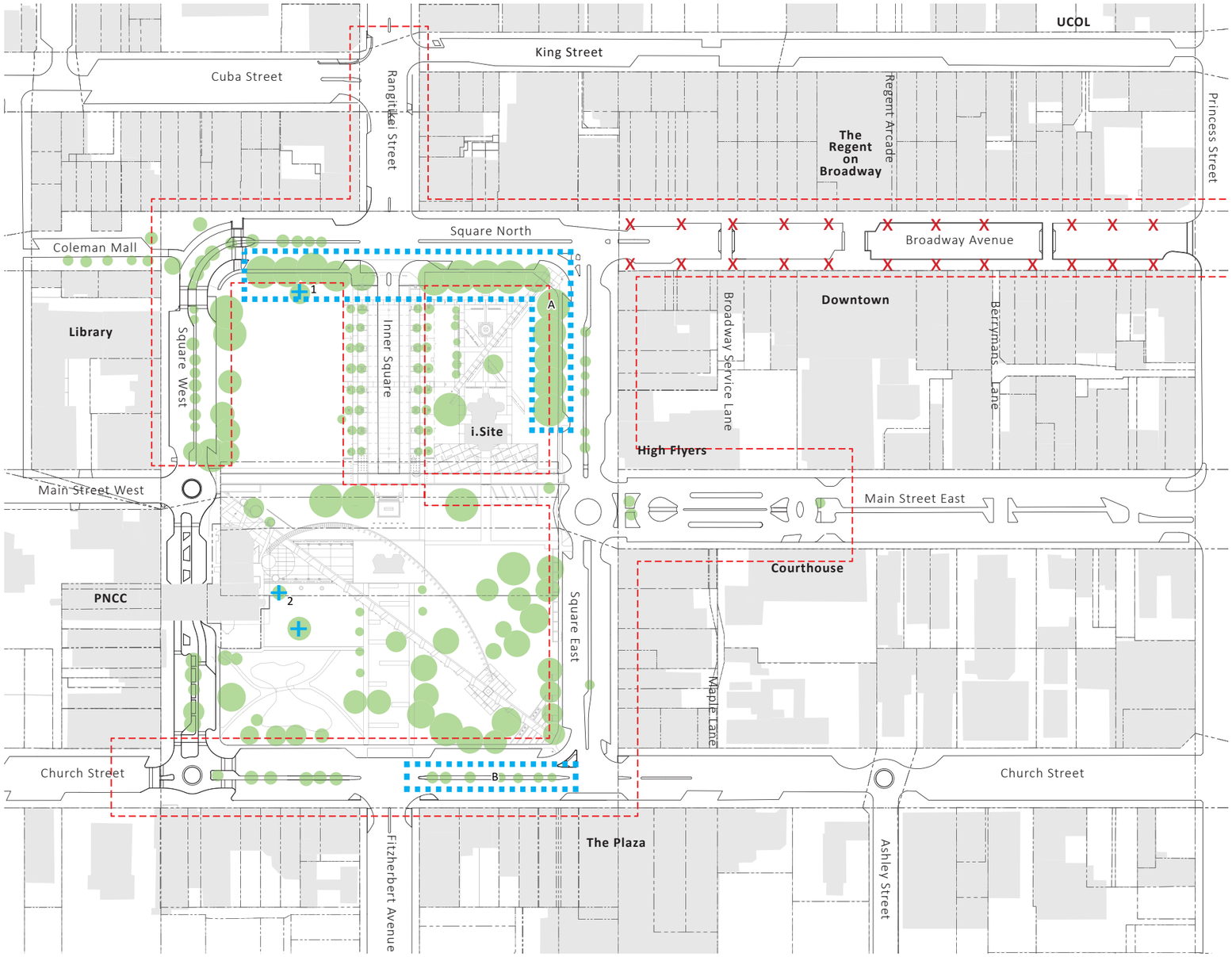


Figure 50: Environmental and spatial quality - vegetation distribution

KEY

●	Tree locations
X	Recently removed trees
+	Notable Trees
	1 *Metrosideros robusta* (Northern Rata)
	2 *Cussonia spicata* (African Cabbage Tree)
▪▪▪▪▪	Notable Group of Trees
	A *Ulmus procera* (Elm) and *Platanus orientalis* (Plane)
	B *Sophora tetraptera* (Kowhai)
Note	Information shown has been take from PNCC Operative DP, PNCC Geo-Guide, and aerial photos

2. 24 Environmental and Spatial Quality - Climate / Microclimate

Palmerston North has a prevailing westerly wind pattern that when combined with the city's orthogonal block structure results in funnelling of wind along its streets. This is especially noticeable along Church Street, Main Street with localised 'windy' corners such as Rangitikei and Cuba Streets. Addressing these characteristics through streetscape design for shelter and including around the Urban Bus Terminal are key issues for this study.

Prevailing winds and sun movement is shown on the 3D image at Figure 55, and sunlight access / shadow locations are shown at Figures 49-54. In mid-winter the sunniest edges of The Square and Broadway are those north and west-facing along Church Street and The Square east with good morning sun along The Square west. The southern edge of Broadway also receives good sun and should be reflected in the design and width of pavements and spill out / occupiable outdoor spaces.

In summer months the high degree of sunlight access indicates the need for shade along street edges through canopy design and tree planting.

Opportunities

- Develop contextually responsive streetscape design to provide appropriate levels and types of pedestrian amenity e.g. social infrastructure, weather protection;
- Design streetscape elements and new urban infrastructure (e.g. bus terminal) to provide shelter from the prevailing westerly winds;
- Design streets and spaces to provide shade from sunlight in the summer months using building canopies, temporary structures and street trees;
- Maximise sunnier / warmer building edges for outdoor occupation and spill out from cafés / restaurants;
- Provide any children's play spaces with access to both sun and shade.

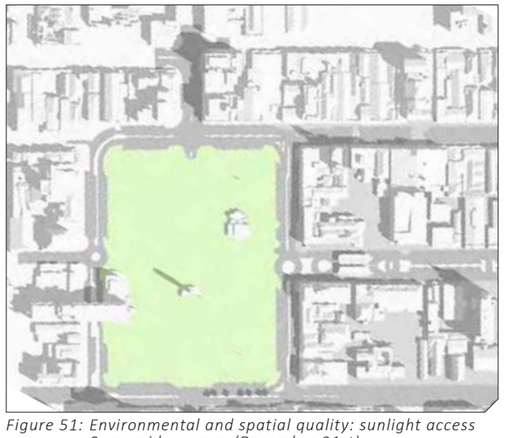


Figure 51: Environmental and spatial quality: sunlight access 9am, mid summer (December 21st)

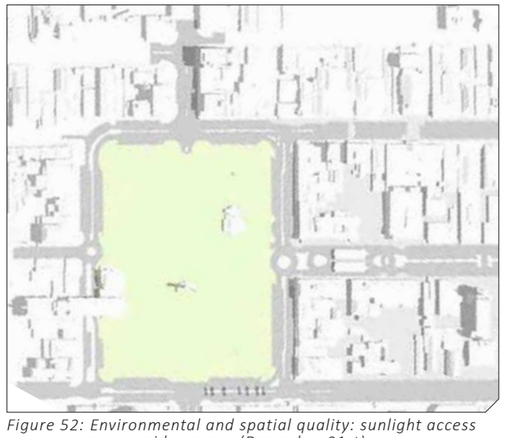


Figure 52: Environmental and spatial quality: sunlight access noon, mid summer (December 21st)

Figure 53: Environmental and spatial quality: sunlight access 3pm, mid summer (December 21st)

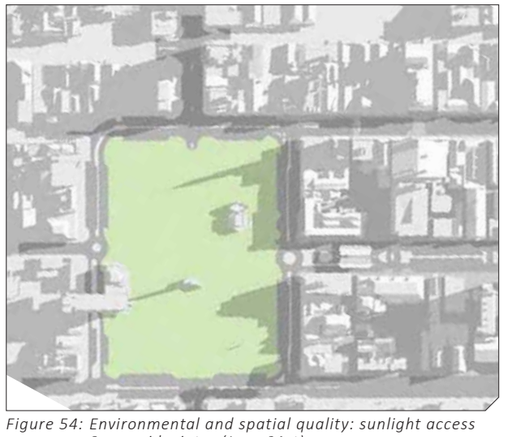


Figure 54: Environmental and spatial quality: sunlight access 9am, mid winter (June 21st)

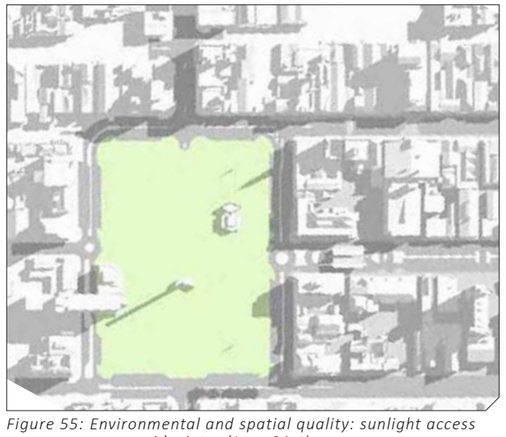


Figure 55: Environmental and spatial quality: sunlight access noon, mid winter (June 21st)

Figure 56: Environmental and spatial quality: sunlight access 3pm, mid winter (June 21st)

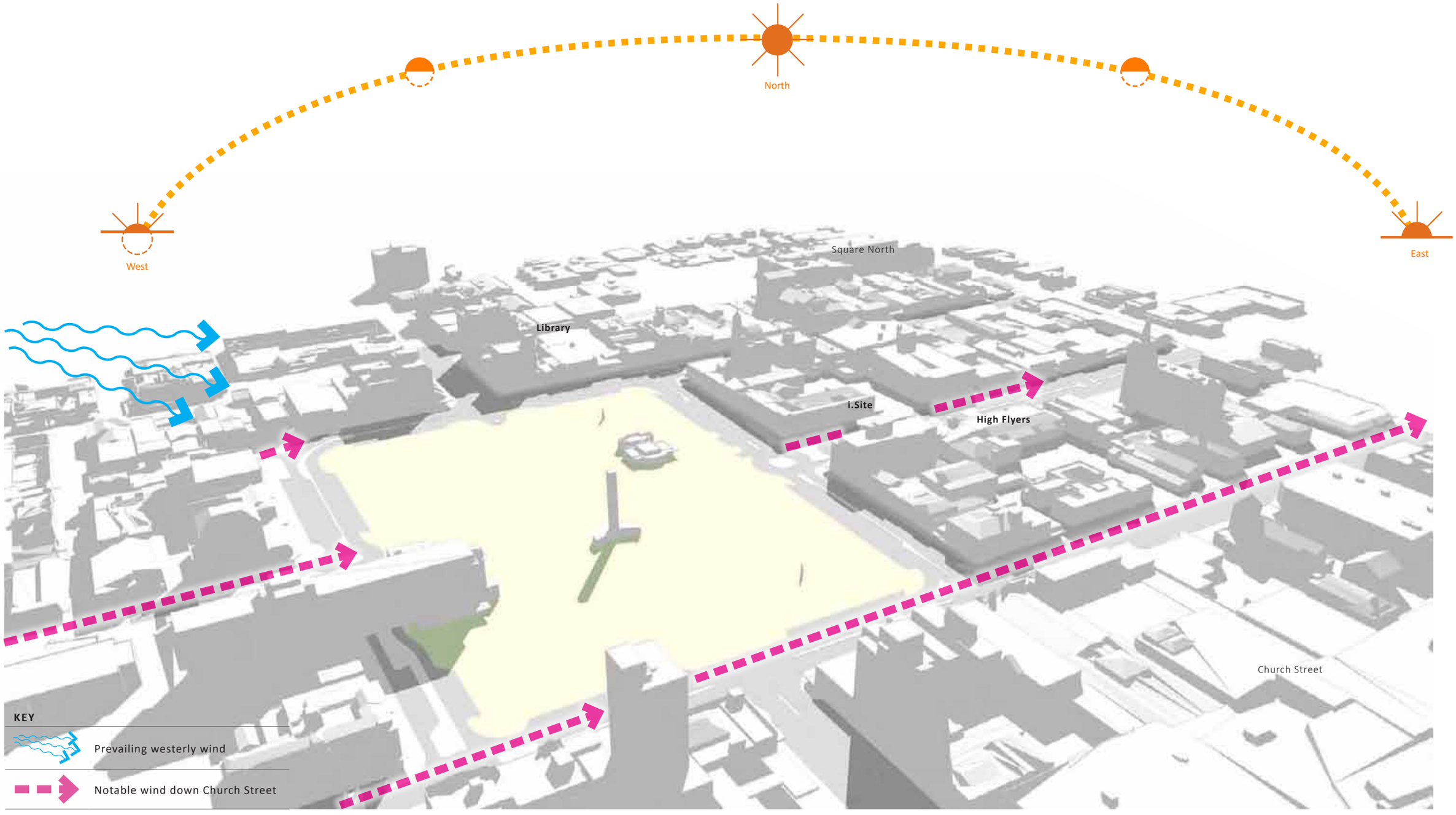


Figure 57: Environmental and spatial quality - prevailing winds and sun movement

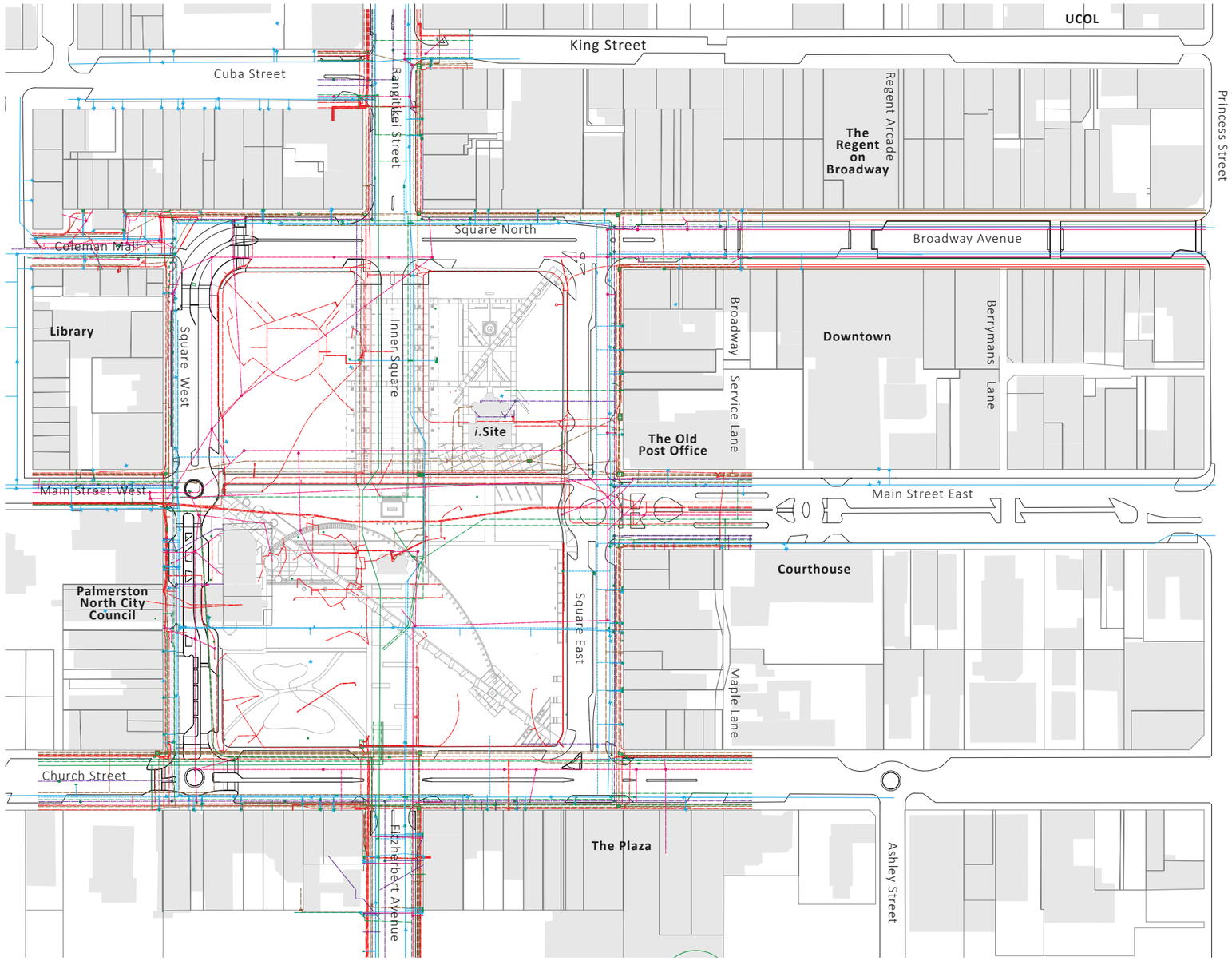
2. 25 Environmental and Spatial Quality - Services

During developed and detailed design it is important that a detailed survey of underground services is obtained to allow early consideration to be given to potential changes to services within the city and the provision of spare ducted routes.

Known services within the study area include:

- Power;
- Water;
- Gas;
- Sewer;
- Stormwater; and
- Internet and communications.

The adjacent plan identifies services locations from available GIS information. The accuracy of existing information is mixed and it is recommended that during developed and detailed design a detailed survey of underground services is obtained. This will inform more accurate detailed design and allow early consideration to be given to service renewals and the provision of spare ducted routes to be included.



KEY

- Power
- Water
- Gas
- Sewer
- Stormwater
- Internet and communications

Part B - Concept Design

3. The Streetscape Plan

3.1 Introduction

Palmerston North's city centre presents a traditional, successful approach to city planning based on the Victorian pattern of streets and squares. The centre provides a clear sense of centrality, a focal point and heart to the city reflected in PNCC's strategies and policies. Within that heart The Square forms the preeminent spatial element and is closely defined by its bounding streets on all four sides. Feeding into that system are several important routes of which Broadway Avenue, Main Street, Church Street and Rangitkei Street are part of this project.

The Streetscape Plan has been prepared to reinforce the strategic importance of the city centre, The Square and its immediate environs. Part A of this report established the critical issues facing the area and recognised the need for a coherent, high quality public realm to emerge as the backbone to drive comprehensive and positive change. Stakeholder input and wider public engagement was sought during this initial stage to confirm and explore issues and identify a range of aspirations for the area.

Part 2 of the report presents the design approach adopted for the Streetscape Plan. The overall plan is established for the study area along with concept designs for the specific street and public transport components. Materials and planting are proposed with a preferred palette that seeks to ensure coordination and consistency over time. Finally, construction costs have been assessed and budgets established on a street by street basis. Phase one of the project has been identified as Square East focusing on that section of the street connecting The Plaza to Main Street East, recognised as fundamental to supporting the growth of the retail environment.

Key Recommendations

Recommendation 1: Confirm the Streetscape Plan as the mechanism to guide future public realm investment and project prioritisation for the city centre.

Recommendation 2: Establish a phased programme to implement the specific streetscape projects, adopting a street by street based approach.

Recommendation 3: Prioritise Square East and the Main Street Urban Bus Terminal as critical components to signal significant change for the city centre.

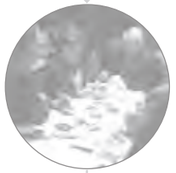
Recommendation 4: Further develop and implement a series of low-cost place-making / public realm activation initiatives.

Recommendation 5: Undertake further public consultation on project prioritisation.

Design Process

Site Analysis -

Refer to Part A

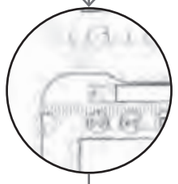


Engage with Stakeholders & the Community

Refer to Part A

Develop Principles & Project Aspirations

The project aspirations and design principles take into account the comprehensive site analysis, stakeholder and community feedback, and relevant guidelines, legislation and Council vision documents to date.



Concept Options

A series of sketch options were developed for each street, capturing not only Council's framework of street typologies but also the characteristics of each street.

Confirm Design Approach

Utilising an assessment criteria, each sketch option was reviewed by the design team.

Finalise Streetscape Plan

The sketch designs which scored highest in the assessment criteria have been developed to form the basis for the current streetscape plan design.

3.2 Aspirations

Part A of the project sought to establish stakeholder aspirations for the city centre's streets and bus terminals. This was achieved through workshops with user groups and further explored at a public half-day event held during the Pulse Festival on Broadway Avenue.

Techniques to draw out aspirations and ideas included use of precedent images organised into themes (e.g. access and movement) and by street. A wide range of images representing a variety of different types of places and levels of quality were introduced and discussed with stakeholders prioritising their most preferred approaches to design and public realm outcomes.

Some of the general findings included:

- Square East may provide opportunity for significantly widened pavements and street occupation / activation.
- Square West should exhibit consistency with the completed upgrade around the Council buildings.
- Church Street could improve the balance of movement modes with better crossings, edge definition and central median planting spaces.
- Broadway Avenue as the only double-sided retail street in the study area is about vibrancy and occupation, supporting retailers and users.
- Urban Bus Terminal design should be of high quality design, celebrating arrival and departure.
- Streets are different and should convey variety and interest, but should have consistency of core design language and materials

Theme-based aspirations:

Three themes were identified as a method for organising design aspirations for the city centre. The themes were: City Life and Culture; Environment and Spatial Quality; and, Access and Movement. A visual summary of these is provided in the adjacent images. A summary of the highest priority aspirations for each theme are describe below.

City Life and Culture

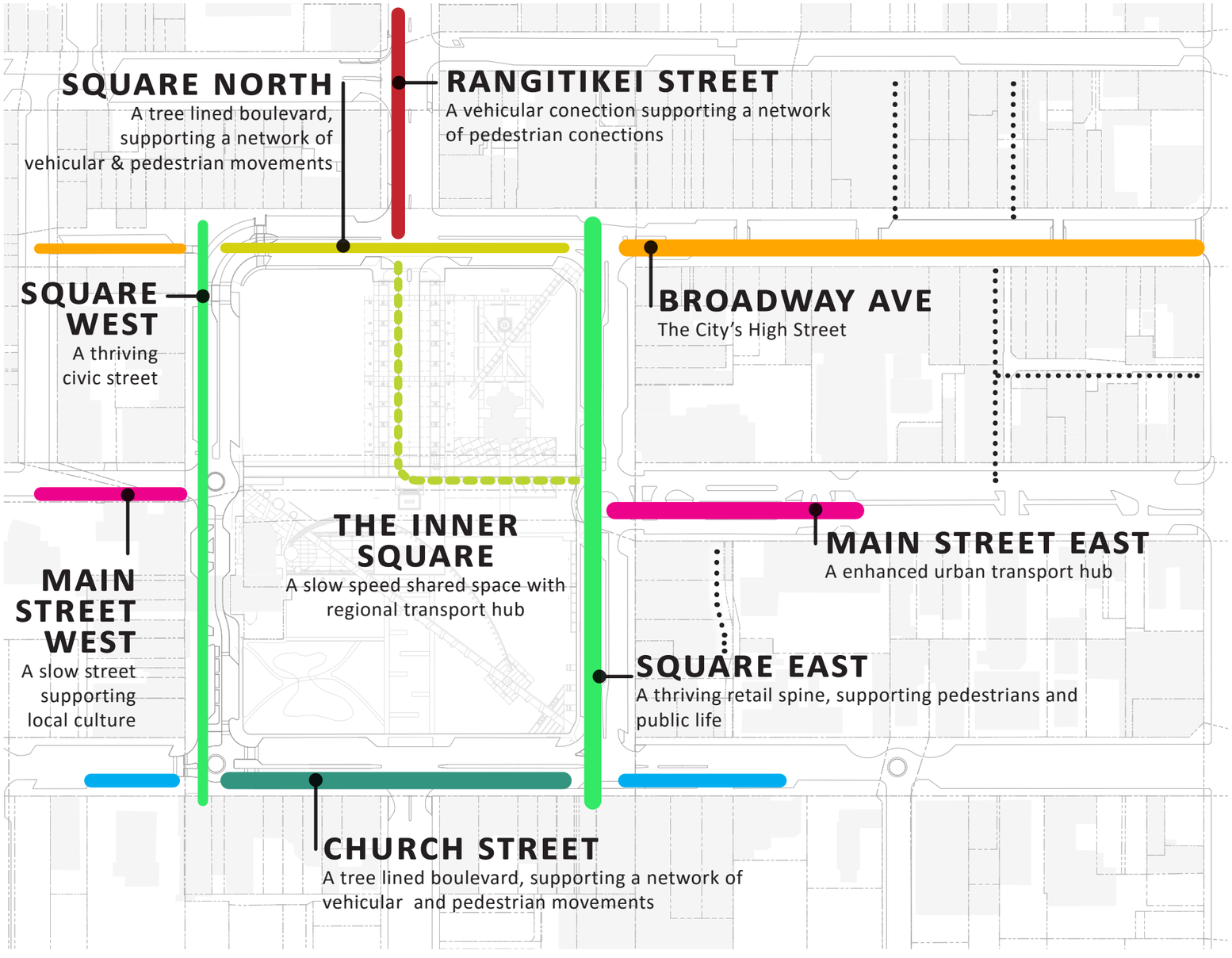
- Activate streets through markets and events with a focus on food.
- Provide equipped play spaces for all ages, including attractive, fun seating.
- Ensure outdoor café spaces in sunny locations are provided with a themed / clear identity.
- Activate spaces into the evening and include attractive lighting approaches.
- Consider including interactive features, water, and avoid single use designs.

Environment and Spatial Quality

- Design should be of the highest quality 'best in the world'.
- Create tactile, textured, interesting and green spaces.
- Ensure designs are simple, adaptable and beautiful.
- Provide opportunities to occupy and sit in spaces.
- Encourages outdoor theatre and considers public realm like a 'stage'.

Access and Movement

- Provide a 'Whole place' approach that does not simply prioritise traffic movements.
- Create spaces that look busy, vibrant with a mix of users and modes.
- Achieve safety in the public realm facilitating more social interaction.
- Generate pedestrian-focused streets that discourage car movement.
- Generate access approaches that allow street retailers to operate successfully.
- Create 'gorgeous' public transport structures, not 'second class'.



3.3 Design Principles

The development of design principles underpinning the subsequent options and final preferred plans for each street and terminal are described below. These principles emerged out the Part A baseline analysis, review of existing PNCC strategies and aspirations inputs from stakeholders.

Principle 1 Reinforce Activity Precincts

Principle 2: Establish Street Typologies That Support Activity Precincts

Principle 3: Enhance Townscape and Legibility

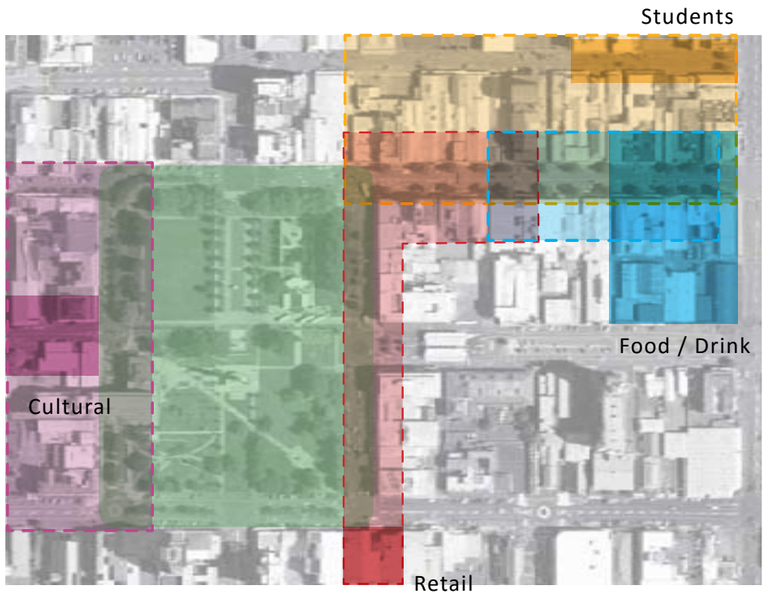
Principle 4: Deliver A Sequence of Activities and Nodes

Principle 1: Reinforce Activity Precincts

This principle ensures the underlying, predominant activity and function of an area is recognised and supported through any subsequent streetscape project.

The city centre operates in a particular way influenced by clusters of similar or mutually reinforcing activities. These include a focus on cultural and civic administrative activities to the west of The Square as shown on the below diagram. Such activities also include Te Manawa, The Globe and the City Library. The George Street/Cuba Street café cluster works well to support and extend the activity period of that location, creating a clear identity for Square West.

To the east of The Square the activity pattern is more directly informed by retail functions. The Plaza establishes an anchor to the southern end of Square East while Broadway Avenue establishes the northern end to a retail strip. With the west-facing street edge the opportunity for sunny outdoor seating exists though not well provided for at present. The existing Urban Bus Terminal is located mid-way along Square East but presents an unattractive and hostile environment that does not integrate well with the retail street.



Broadway Avenue functions as a coherent two-sided commercial 'high street'. The street is long (310m) and the type of retail activity varies along its length with a clear food/drink cluster emerging at the eastern end. The centre of the street includes The Regent on Broadway with links south to Downtown and north via Regent Arcade to King Street and UCOL. The east-west alignment of the street creates a sunny north-facing southern street edge that should be optimised for outdoor activity.

To the north east and beyond the study area, student / educational activities focused around UCOL's campus dominate, providing a particular type of patronage supporting 'cheap eats' and other support services.

Principle 2: Establish Street Typologies That Support Activity Precincts

This principle sets out the approach to street design and differentiation, informed by Principle 1 Activity Precincts and the spatial analysis and stakeholder feedback from Part A of this report.

The plan responds on a street by street basis to the different conditions across the study area and recognises that each street fulfils a different role, includes a different predominant activity mix, and has a different orientation and level of connectivity. Each street is identified in the adjacent diagram and briefly described in terms of the overall character and aspiration. The streets are:

Broadway Avenue: The city's high street. A vibrant, busy and essentially commercial street allowing for street occupation and regular events. Provision for outdoor seating and dining. Focal space and quality design to support The Regent on Broadway.

Square East: The principal north-south retail spine linking The Plaza to Broadway Avenue. A street designed to facilitate easy interaction with The Square and to support outdoor street occupation. Wider pavements, frequent crossings, reconfigured car parking and new planting enabled by removal of the central raised median. Creation of new shared/raised surfaces at the intersections to enhance the pedestrian environment.

Main Street East: To be reconfigured to support a high quality bus interchange for urban services. Removal of vehicle dominated space and redesigned to provide an attractive, balanced multi-modal environment with development of a new terminal structure to replace the existing poor quality canopy.

Church Street: A similar design language to Square North. Facilitates higher vehicle movements recognising the strategic links to the east and west. Central tree planting and median widened and enhanced. Parking rationalised and simplified and crossings at the intersection with Fitzherbert Avenue enhanced support direct links to The Square.

Square West: Continuation of the streetscape upgrade already completed outside the Council buildings. Retention and enhancement of the central planted median concept, reconfiguration of parking to allow more generous pavements, better supporting the Library. Creation of a new high quality shared surface space at the intersection with Coleman Mall to facilitate better integration of links to George Street.

Square North: To be distinguished from Broadway Avenue to ensure The Square retains its unique and special focus. Achieved by the introduction of central tree planting as partly exists to the western end of Square North. Providing a balanced movement environment that allows higher volumes of traffic than to Square East or West recognising the Rangitikei connection. Parking reconfigured along the northern edge to achieve better alignment with Broadway Avenue. Enhanced pedestrian crossings at the intersection with Rangitikei, linking more strongly with The Square.

Rangitikei Street: At present an unattractive vehicle dominated street presenting a poor arrival into The Square. Proposals to reduce lanes, introduce tree planting to edges and retain limited parallel parking. Fundamental to ensure direct visual links to The Square are achieved and to allow continuity with the wider Rangitikei Street environment to the north.

Principle 3: Enhance Townscape and Legibility

This principle covers a wide range of urban design related matters, focusing on the performance of the city centre as a 'whole place'. The diagrams below describe the approach of which the key features include:

Extend The Square edge out beyond the green space to better integrate with the built street frontages - At present the building frontages surrounding The Square do not connect well (spatially / visually) with The Square's green spaces and perceptually the roads and The Square are very different types of environment that do not mutually reinforce each other. This is in part due to the nature of the vehicle dominated roads bounding The Square but also related to the lack of outdoor occupied space for pedestrians and limited crossing opportunities.

Create special places and events that recognise heritage features and clusters - The Square environment includes a wide variety of buildings styles, types and quality. However, there are identifiable locations where notable heritage buildings co-locate and such locations should be supported through public realm design of a commensurate level of quality and potentially differentiated as 'places' within the centre. In this regard opportunities exist to enhance the setting of the heritage cluster at the corner of Square West / Coleman Mall, the corner of Square West / Church Street, The Regent on Broadway, and the old post office building on Main Street East. Other important locations include the junction outside The Plaza and the intersection between The Square and Broadway Avenue, both important 'gateway' locations.

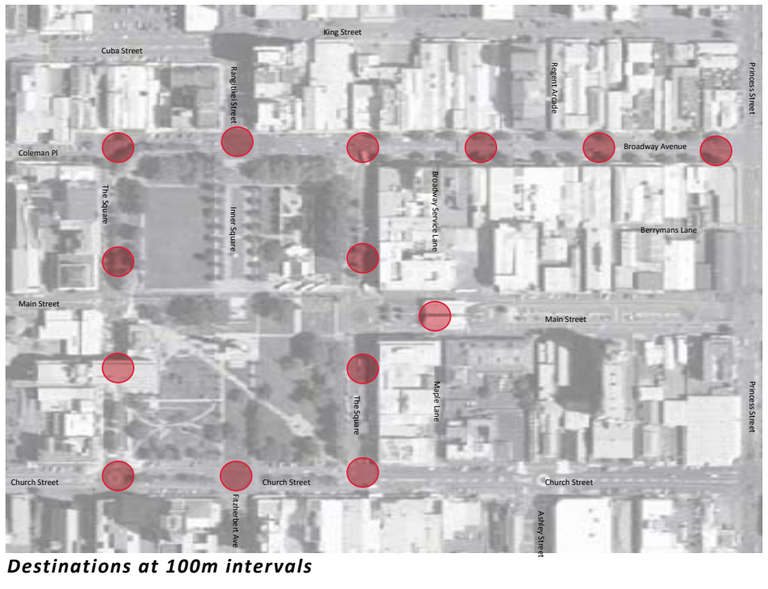
Extend Main Street east into The Square - The Urban Bus Terminal located along Main Street east is an important node in the city but provides a poor quality environment at a number of levels. The terminal is not well integrated with its street setting nor with The Square. Equally Main Street east itself, partly due to the terminal design, is dislocated from The Square both physically and visually. The principle of 'extending' Main Street east into The Square is a concept that involves reconfiguration and design of the street space as well as redevelopment of the terminal building.

Strengthen key views and links - The visibility of The Square from the bounding streets and intersections is an important consideration. Strategic views from Main Street, Rangitikei Street and Fitzherbert Avenue exist and should be enhanced by position of planting, lighting, parking and treatment of surface materials. Links across The Square and mid-block links off the main street grid are to be established or enhanced, particularly along the northern edge of The Square and north-south mid-block links connecting Church Street to Main Street to Broadway Avenue.

Principle 4: Deliver A Sequence of Activities and Nodes

Principle 4 is drawn from best practice and a review of precedents to establish an appropriate level of public realm activity and interest. The adjacent diagram proposes an event or accent / point of interest to occur at 100m intervals. Whilst general retail frontages provide a good level of interest, these need to be punctuated at intervals to ensure a sequence of destinations or memorable nodes is achieved. This approach reinforces the importance of create special places at corners, at mid-block junctions or creating positive experiences through public transport terminal infrastructure. At present this sequence of nodes is not well established across the plan area and should be delivered by the Streetscape Plan.

Increase the City's capacity for creativity and display- Supporting the principle for a sequence of activities is the need for the plan to establish spaces or 'platforms' for temporary and future permanent activation. These may include areas equipped to accommodate regular markets or the introduction of play spaces for children or simply areas for outdoor eating. Public art opportunities at appropriate locations should also be considered by the plan in consultation Palmerston North Public Sculpture Trust.



Destinations at 100m intervals

3.4 The Plan

The proposed streetscape is the culmination of design principles, opportunities and constraints, and a desire for a consistent approach to a high quality environment that creates a canvas to supports a vibrant and activity Palmerston North.

KEY

1	A new ‘plaza’ creating a focus for street activity
2	Wide footpath creating room for social space
3	Raised pedestrian crossing
4	Camber removed from street to allow for events
5	Median removed to reduce carriageway dominance
6	Potential location for demountable market structure
7	Bus interchange
8	New Structure(s)
9	Reduced traffic lanes
10	Recent upgrade retained

3.5 Traffic

The proposed concept of the Streetscape Plan area sees a significant shift in the road layout and intersections away from vehicle dominance to a more accessible, pedestrian friendly environment. While not actively discouraging vehicles, the introduction of the new layouts will result in lower speeds through reduced intersection capacity and increased side friction (the ability to access parking spaces from either side of the carriageway). This is likely to result in a displacement of those vehicles currently using CBD streets as part of a through route, rather than using them to access the area as the trip destination.

To assess the potential effects of these changes, the Palmerston North Area Traffic Model (PNATM) has been interrogated to compare the 'Do Nothing' network with the network as presented in the Streetscape Plan.

The PNATM is not a micro-simulation model, and it is therefore unable to directly model the effects of changes such as removal of median islands or introduction of perpendicular parking. The model scenario testing was undertaken by reducing vehicle free speeds along affected links and updating node (intersection) parameters to reflect the number of approach and through lanes, turn lanes and dedicated signal phases, with associated conflicting movements. The model operates under an iterative process, whereby journeys will make route choices based on the level of delay experienced on alternatives. It makes assumptions that when delays increase, drivers will choose alternative routes where available.
The Streetscape scenario modelled showed a significant displacement of vehicular trips from CBD streets to the inner ring road (Princess Street/Ferguson Street/Pitt Street/Walding Street/Grey Street) and beyond, for both the morning and afternoon network peak periods. Figures 1 and 2, below, provide a diagrammatic representation of the modelled volume changes.

All roads within the central area were predicted to have some level of volume change, but only the most significant are included for clarity.

With buses, the 'alternative route selection' is not possible and additional travel time analysis has been undertaken for the fixed routes utilised by the urban bus services. The modelling showed additional travel time for most of the routes assessed (covering the majority of approach and departure routes). This additional travel time was greatest on routes approaching the terminal from the south and west of the city. Consultation with Horizons Regional Council has indicated that these routes have an adequate level of spare capacity in their timetabling to accommodate increases of the magnitude forecast.

Modelled vehicular flow change (vehicles per hour)- AM Peak

Modelled vehicular flow change (vehicles per hour)- PM Peak

3.6 Buses

The Palmerston North City Council Project Team has worked closely with Horizons Regional Council to determine the best location(s) and design for the bus terminals to facility access and efficient routing.

The current local bus service comprises:

- A pulse system.
- Total trips per year – 1.12 million (UCOL – 98,000, Urban –500,000, Massey- 524,000)
- 3000-4000 trips around the city each weekday. Regional services bring 400 persons/day.
- Transfer system – 300- 400 transfers per day
- Some routes travel through The Square.

Improvements to the service are proposed, which will include:

- New Summerhill and Ashhurst increased frequencies from 4th July 2016
- Bike racks on buses (Summer 2016). Already running on Fielding route.
- Other services, subject to business case:
    - Increased Milson/Cloverlea Frequency (2016-17)
    - Trial direct routes for Highbury/Takaro area (2017-18)
    - Improved weekend, evening services and Fernlea services (2017-18)
    - Increased frequency across all services (2018-20)
- New electronic ticketing system- will provide tag on/off GPS data showing origin/destination ($500,000).

3.7 Cycles

The flat and accessible street grid of Palmerston North holds great potential for cycling. Provision for cyclists however could be significantly improved as noted in Part A of this report. The Streetscape Plan follows the direction of PNCC Strategies that anticipate cycle movement to be integrated on-street rather than provided with separate, defined cycle paths. This approach encourages moderation of vehicle speeds and better supports the place street approach defined in the PNCC Street Design Manual.

Cycling access has been improved and prioritised through dedicated cycle stop locations at signalised junctions and through shared/ raised surfaces that reduce vehicular dominance on streets.

Cycle parking has been considered in the plan and is recommended to be provided at visible, accessible and well-surveilled locations including adjoining shared space junctions, at public transport interchange locations (Inter-Regional and Urban Bus Terminals) and along Broadway Avenue (south side) at areas near crossing points. The detailed design of cycle parking facilities would be undertaken as part of the implementation of the plan.

3.8 Parking

Parking within the study area has been assessed as part of the streetscape project and in conjunction with the proposed Parking Management Plan.

As identified in the Parking Management Plan, Palmerston North's transport network and parking facilities need to contribute toward the identified national, regional and local outcomes. Accordingly they need to:

1. Be safe, efficient, affordable, integrated and multi-modal
2. Be managed with respect for the environment, cultural heritage and amenity values of the city
3. Provide for adequate access and supply of parking throughout the city
4. Be controlled to support District Plan outcomes and manage effects associated with land-use activities
5. Contribute to quality urban design
6. Support the economic development of the city and
7. Protect and promote public health

Utilisation of parking within the study zone is less than optimal. Areas such as Broadway Avenue do experience increased demand during certain times of the day. It is proposed that parking within CBD streets is reduced as part of the streetscape upgrade to allow for better amenity and encourage pedestrian movement throughout the streets .

3.9 Flexible Zones

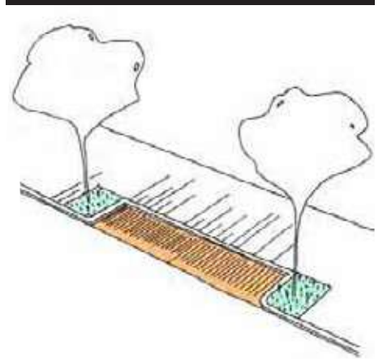
The streetscape plan is conceived from simple geometries that introduce flexibility in the future use of key areas. While the principal streetscape design aims to enhance the public realm, creating an attractive and inviting environment for living, working and recreation, the incorporation of flexible areas provide additional public space and the opportunity to have a range of temporary and permanent activities. These spaces offer the ability to enhance the usability, function and amenity of the 'street' as the city develops and changes, creating space where social engagement, pop up markets or ecological enhancement can take place as required.

These flexible zones are generally identified as parking spaces within the principal streetscape plan, but are designed to have minimal impediments to an extension of the pedestrian environment or additional green infrastructure opportunities.

Opportunities for the occupation of flexible zones include:

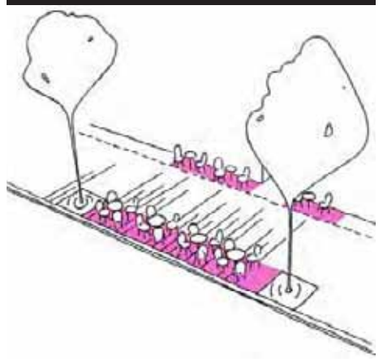
- Parking.
- Retail Spillout, i.e. kerbside dining.
- 'Pop up' retail.
- Social space, i.e. seating.
- Play space.
- Public Art.
- Green infrastructure – i.e. planting, stormwater management.

VEHICULAR AMENITY



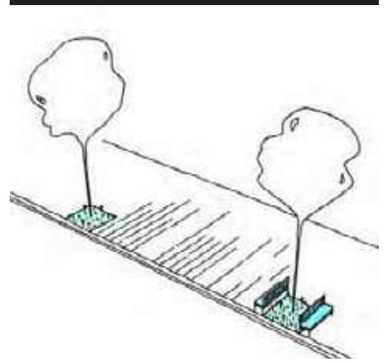
Flexible space is generally identified as parking within the principal streetscape design. This allows for the space to service the city centre and for for temporary activation to be overlaid e.g. markets, pop up activities.

RETAIL SPILLOUT



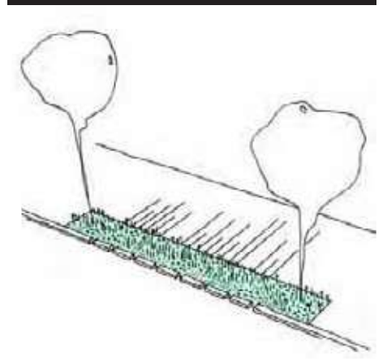
While the footpath design should generally provide for a 1.2m 'spillout' zone adjacent the building façade (allowing for a single row of tables) additional space may be required retail spillout or kerb side dining. The occupation of this space may be associated with adjacent businesses or could allow for temporary activation to be overlaid e.g. night markets, pop up activities or events.

SOCIAL INFRASTRUCTURE



More people, spending more time, in the city centre is a key aspiration for the city. The principle streetscape plan incorporates seating, public art and amenities to encourage occupation of the public realm yet it is envisioned that as the city develops and adapts the public realm needs to flexible enough to quickly change with the needs of its users. Additional social space should be quick and easy to plug into the streetscape providing amenity and interest.

GREEN INFRASTRUCTURE



Street planting is identified within the principal streetscape design at regular intervals to provide amenity, shade and uniformity to the environment. Further planting should be considered within flexible zones to further enhance the location or provide green infrastructure such as rain gardens.

3.10 The Approach to Individual Streets

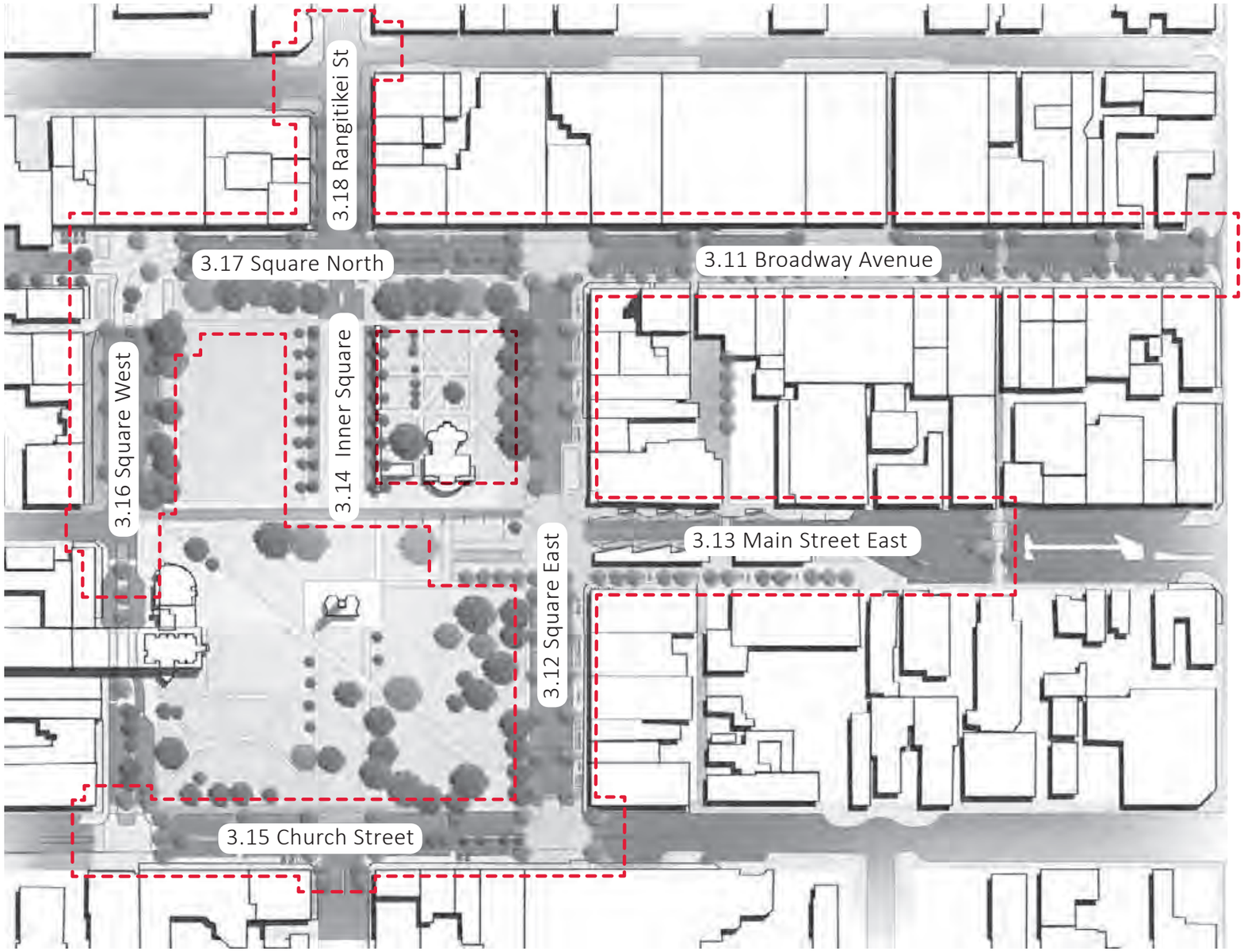
While the Streetscape Plan provides a consistent approach to the city centre it has been broken down into individual streets and spaces for the ease of explanation and implementation.

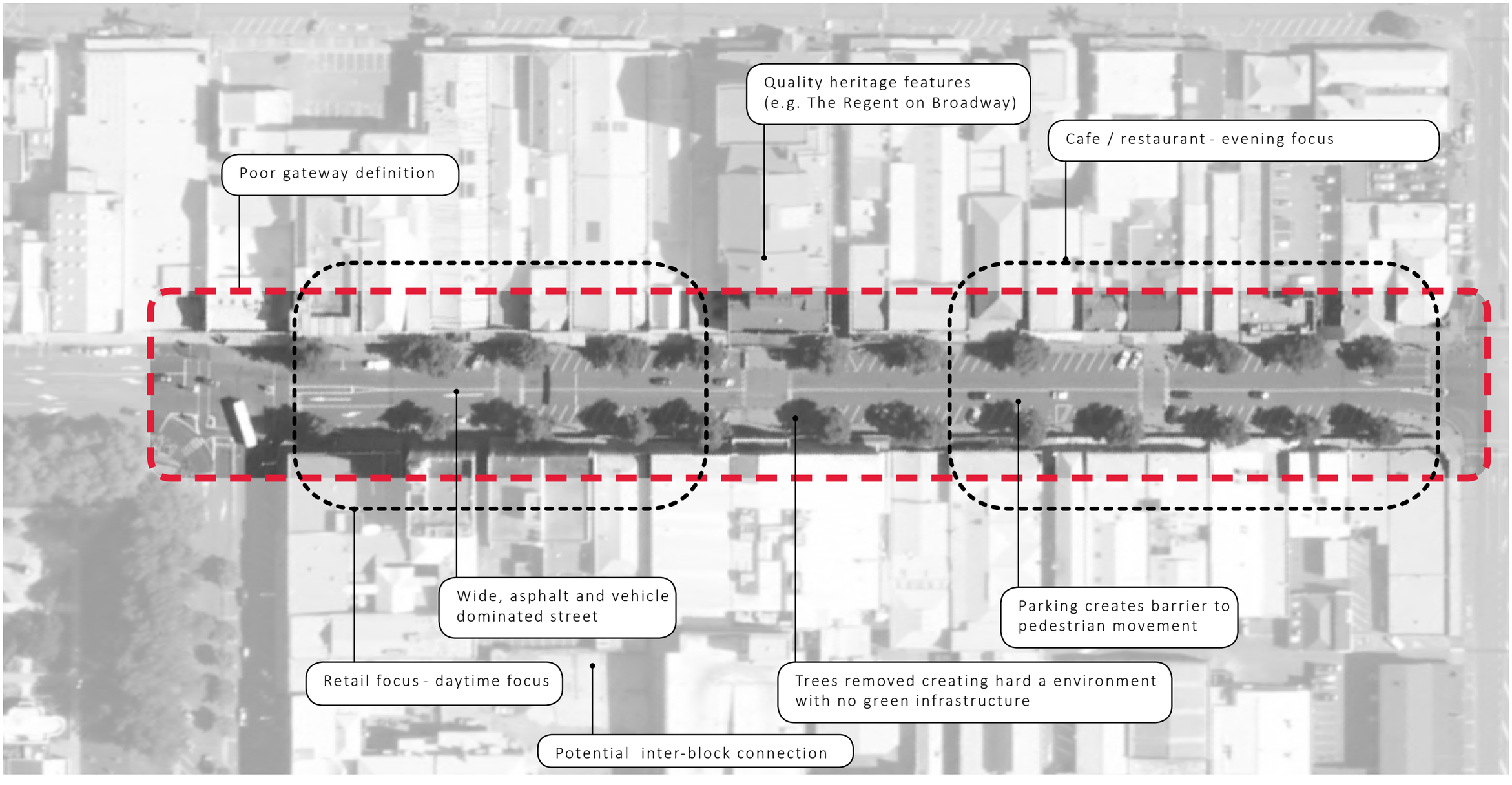
This section of the streetscape plan describe the streets individually identifying what makes them unique and outlining the opportunities, proposed changes and effects on access.

The following section then describes components and materials that unite the CBD providing a consistent environment that is identifiable as the CBD and simple to understand and maintain.

Streets and spaces identified within this plan include:

- 3.11 Broadway Avenue
- 3.12 Square East
- 3.13 Main Street East (including updated local transport hub)
- 3.14 Inner Square (including Inter-Regional Bus Terminal)
- 3.15 Church Street
- 3.16 Square West
- 3.17 Square North
- 3.18 Rangitikei Street




Quality heritage features
(e.g. The Regent on Broadway)
Cafe / restaurant - evening focus
Poor gateway definition
Wide, asphalt and vehicle
dominated street
Parking creates barrier to
pedestrian movement
Retail focus - daytime focus
Trees removed creating hard a environment
with no green infrastructure
Potential inter-block connection

3.11 Broadway Avenue

Broadway Avenue is the historic ‘High Street’ of Palmerston North with a mix of retail and food offerings with The Regent on Broadway sitting proudly as a focal centre to the street. With a change in the retail habits of CBD visitors the eastern-end of the street is developing into a destination for food. The proximity of the area to UCOL and The Regent on Broadway means students and theatre goers pack vibrant restaurants and noodle bars in the early evening. The western end of the street has changed less over the years with it’s strong retail focus diminished by the relocation of key destination stoes into The Plaza Shopping Centre.

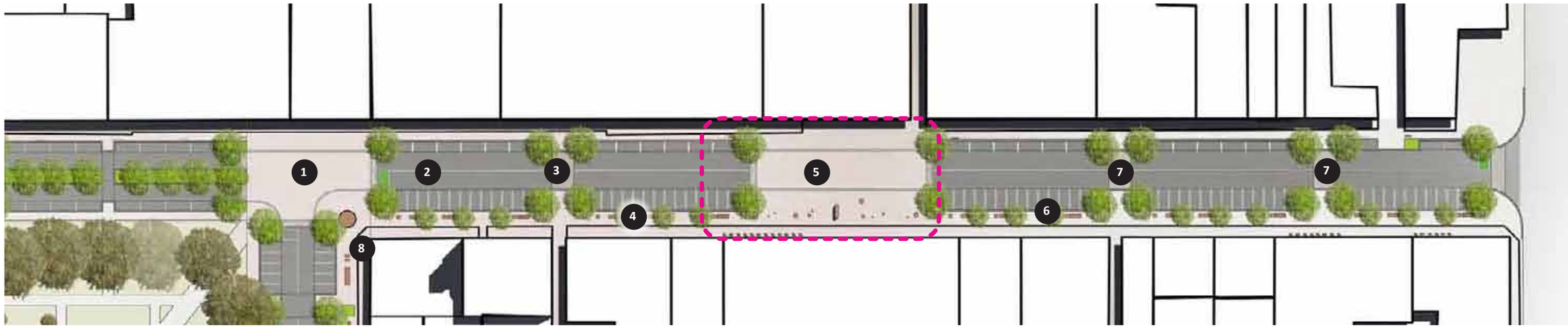
Upgraded within the 1990’s the street had a strong vegetation framework of semi mature trees which were removed in 2015, this has uncovered a number of buildings in need of refreshment and resulted in a harsh environment in need of a refresh.

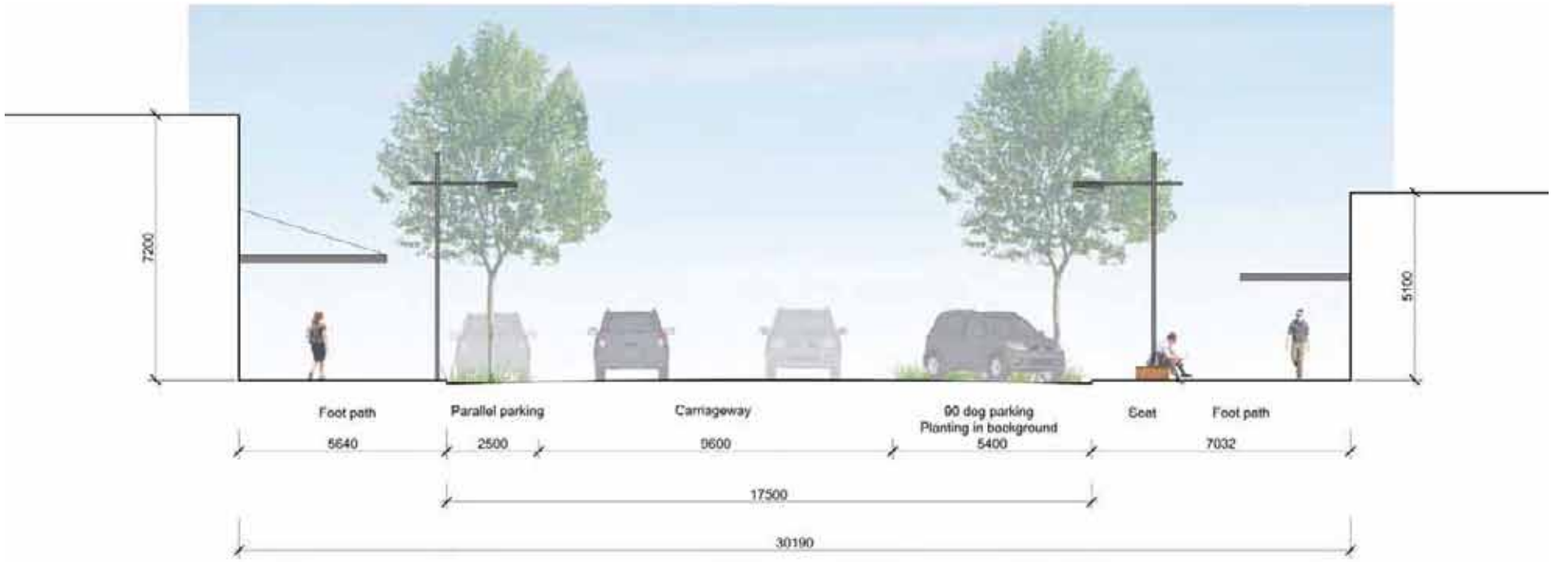
The proposed upgrade further highlights the Regent Theatre by creating central shared space dominated by the historic building and available for events and spill-out from the iconic theatre. Much like Square East the design include a generous spine of social infrastructure enhancing the amenity and aesthetics of the street. Increased footpath widths on the southern side of the road allow pedestrians more access to sun, while ample space is available for restaurants and retailers to spill out into the public realm. Traffic movements will be rationalised allowing 90 degree parking to be accessed from either direction or parallel parking to occupy the northern edge. Pedestrian crossings will be increased in number with angle parking removed to allow for easier informal crossing of the road. Multiple opportunities within the extended footpath and adjacent parking bays exist for temporary and permanent occupation of the street.

At the junction with The Square the traffic junctions will give more priority to pedestrians and cycles with The pedestrian focused Square East and Broadway Avenue treatment taking priority and extending the pedestrian environment across to The Square.

KEY

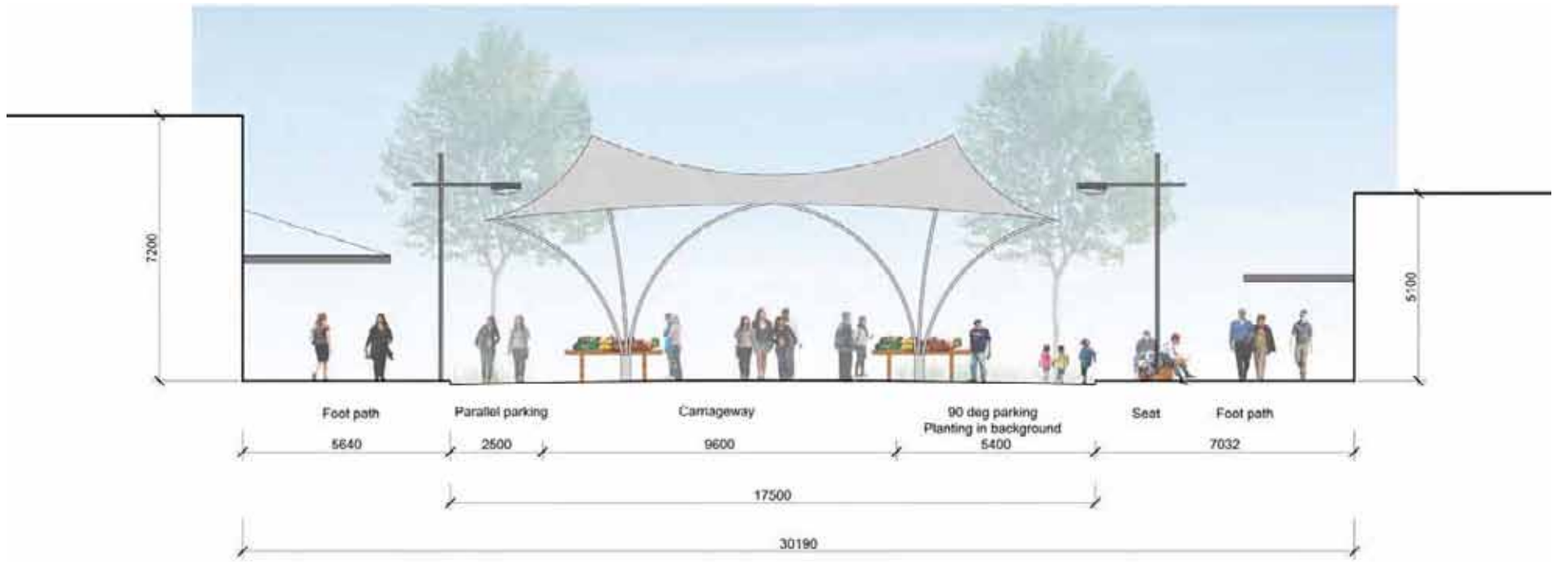
1	Raised, paved intersection.
2	Single lane of vehicular movement provided in either direction, with parallel and perpendicular on-street parking provided.
3	Existing crossing points are extended and repaved, with new tree plantings which are suited to the urban environment.
4	A spine of social amenity, incorporating fixed infrastructure and temporary overlays, is provided clear of pedestrian circulation.
5	A new plaza space is created adjacent The Regent on Broadway, framing and highlighting the building’s architectural detail. It will incorporate seating, sculpture and lighting, as well as reinstating the existing public art.
6	Opportunities for outdoor dining zones are provided along the length of the street, allowing cafes and restaurants to spill into the public realm, extending the nighttime economy and increasing passive surveillance of the street.
7	Pedestrian crossings will be relocated to improve permeability of the street
8	Opportunity for public art aiding city wayfinding
	Focal ‘Zone’





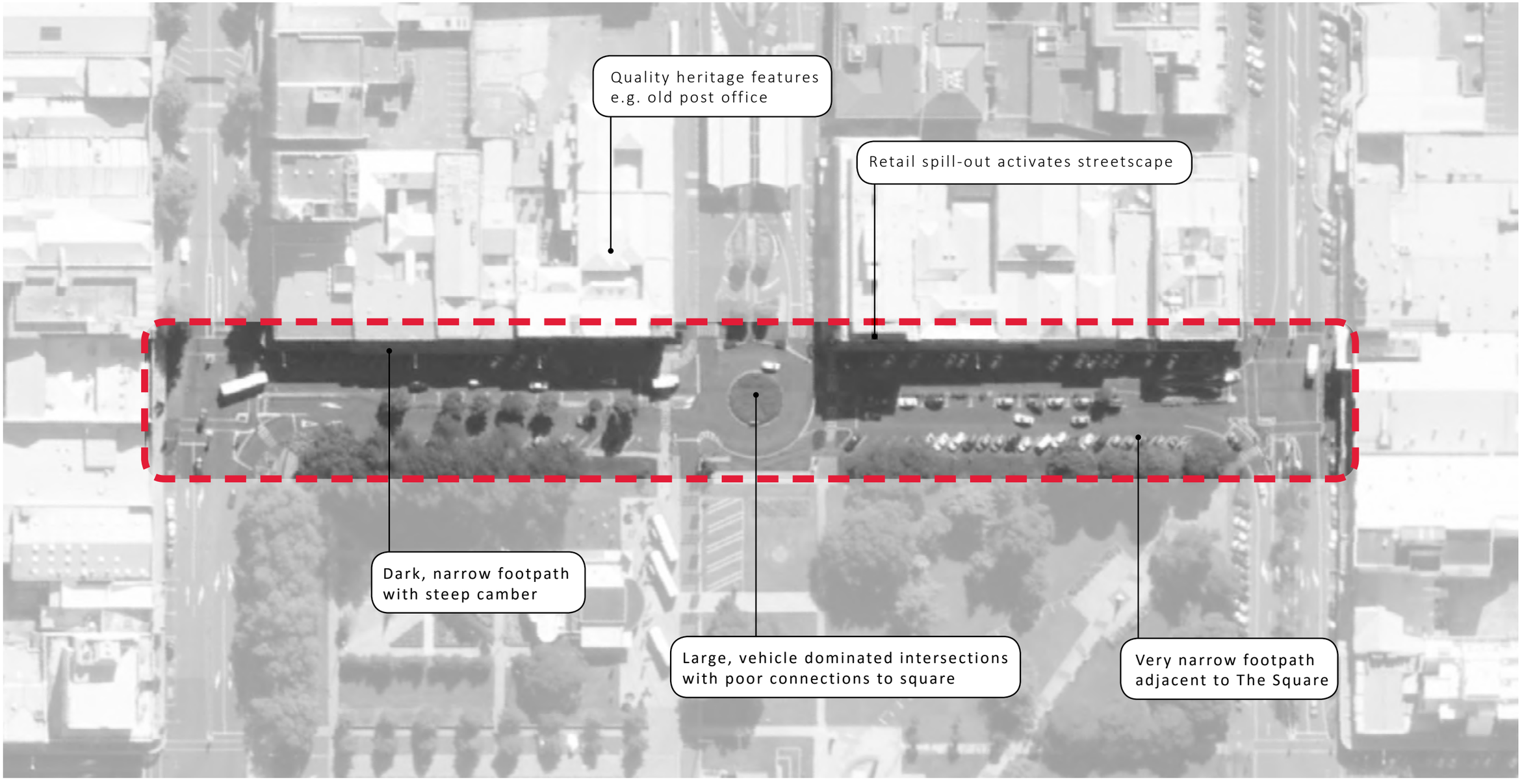
Day to day operation

Traffic movements are simplified with 90 degree parking introduced to allow vehicles to access parking bays from either direction. This together with the removal of the high camber in the road allows for easier pedestrian and vehicle movements. The reduction in carriageway widths and parking arrangement is designed to slow vehicle speeds while allows additional space to be dedicated to pedestrian activity and movement.



Event layout

By removing the street's camber and reorganisation of parking the street is configured to enable sections to be closed to vehicles providing vehicle access to part of the street while other parts remain available for access and parking. Permanent infrastructure will be positioned in multiple locations to enable a demountable 'pop up' canopy to be easily placed in the street for markets and events.


Quality heritage features
e.g. old post office
Retail spill-out activates streetscape
Dark, narrow footpath
with steep camber
Large, vehicle dominated intersections
with poor connections to square
Very narrow footpath
adjacent to The Square

3.12 Square East

Square East is a retail spine connecting the historic 'High Street' with Church Street and The Plaza Shopping Centre. Running along the edge of The Square it is currently segregated from the open space by vehicle movements and parking. The asphalt footpath, utilitarian surroundings and lack of street furniture are a stark contrast to the internal Plaza shopping environment, doing little to entice users out of the mall.

The proposed upgrades include a generous spine of social infrastructure enhancing the amenity and aesthetics of the street. Increased footpath widths will allow pedestrians to choose between walking under the covered veranda or in the afternoon sun, while seating and social space will provide room to dwell and occupy the public realm. Traffic movements will be de-prioritised with the central median strip removed allowing 90 degree parking to be accessed from either direction. Pedestrian access to The Square will be facilitated though multiple informal crossing points and the removal of the median strip of roses and chain barriers.

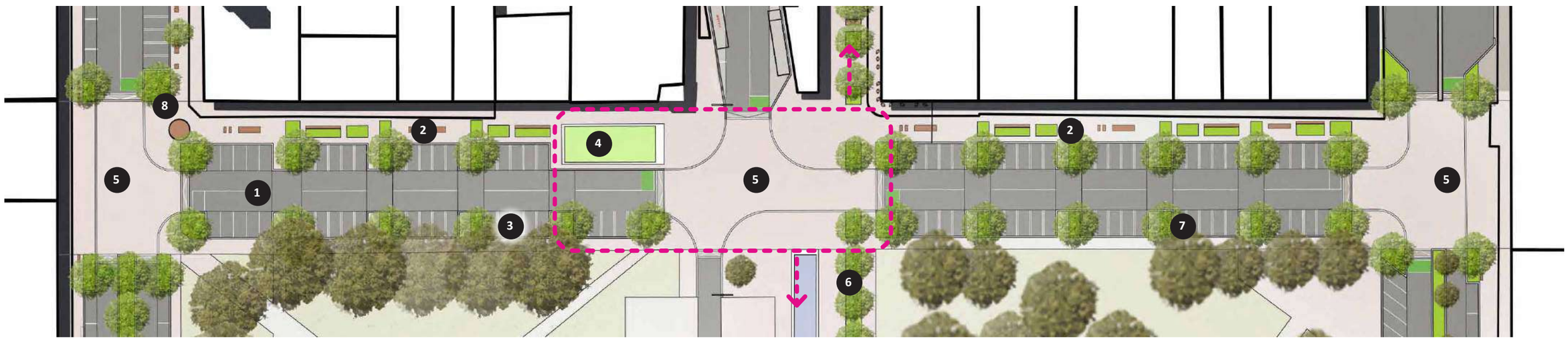
At each of the traffic junctions more priority will be given to pedestrians and cyclists with roundabouts simplified to intersections. At the intersection of Square East and Broadway Avenue a raised pedestrian crossing will be introduced.

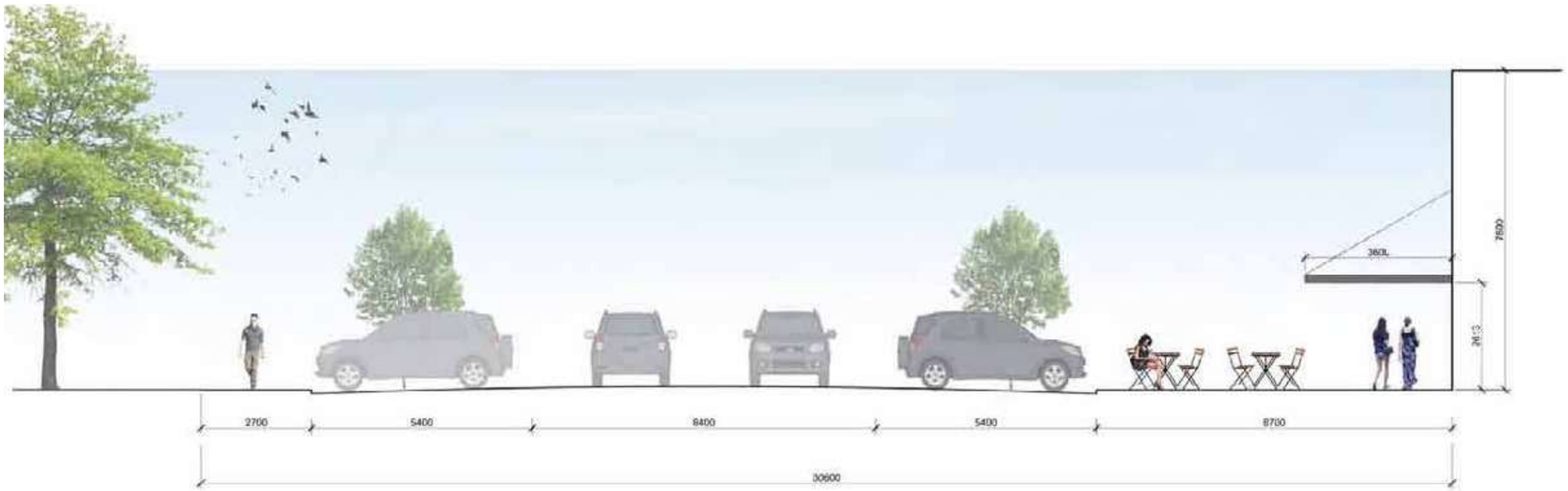
Outside of the old post office building improved links across Main Street and Square East will encourage free pedestrian movement. The removal of the existing roundabout and raised platform attached to the old post office building will rebalance movement in favour of the pedestrian, providing clear sight lines and routes. This space will be also be enlarged to perform social, ecological and leisure functions and act as a central focal point to the street. Complementary uses should be encouraged within adjacent buildings in particular within the old post office.

At the junction with Church Street, the pedestrian focused Square East treatment will take priority extending the pedestrian environment across to The Plaza entrance. This raised crossing will create an inviting pedestrian environment for those stepping out of the shopping centre encouraging shoppers to cross the road into The Square or along the improved retail spine of Square East.

KEY

1	Single lane vehicular movement in etiher direction
2	A generous spine of social infrastructure, incorporating raingardens, seating, lighting and urban play
3	90 degree parking accessed from vehicles traveling either direction
4	A new public space which frames the historic Post Office building
5	Raised, paved shared zone
6	Opportunity for new amenity, such as seating areas, water and new planting, which links The Square to the revitalised public realm
7	New street tree plantings and informal pedestrian crossing points
8	Potential location for Public Art
	Focal 'Zone'

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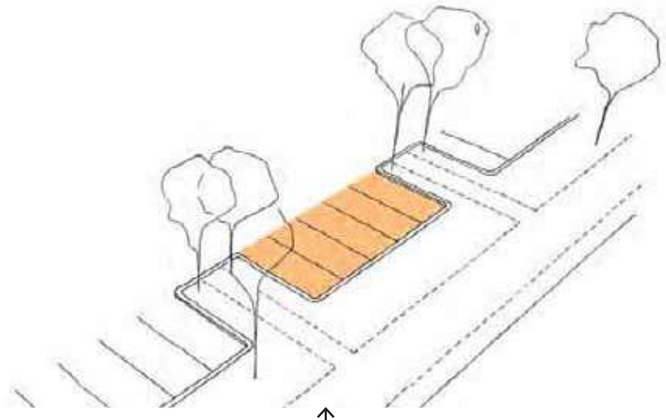
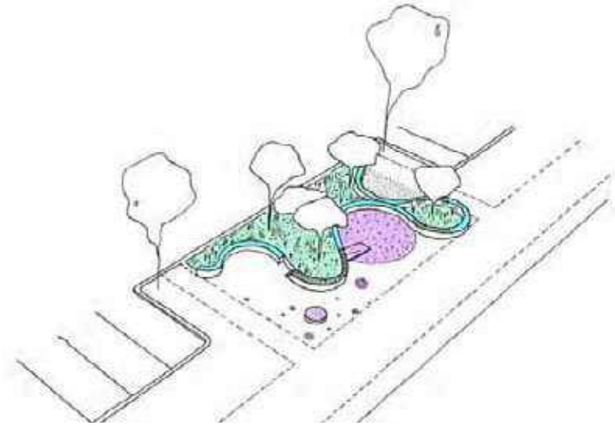
30600

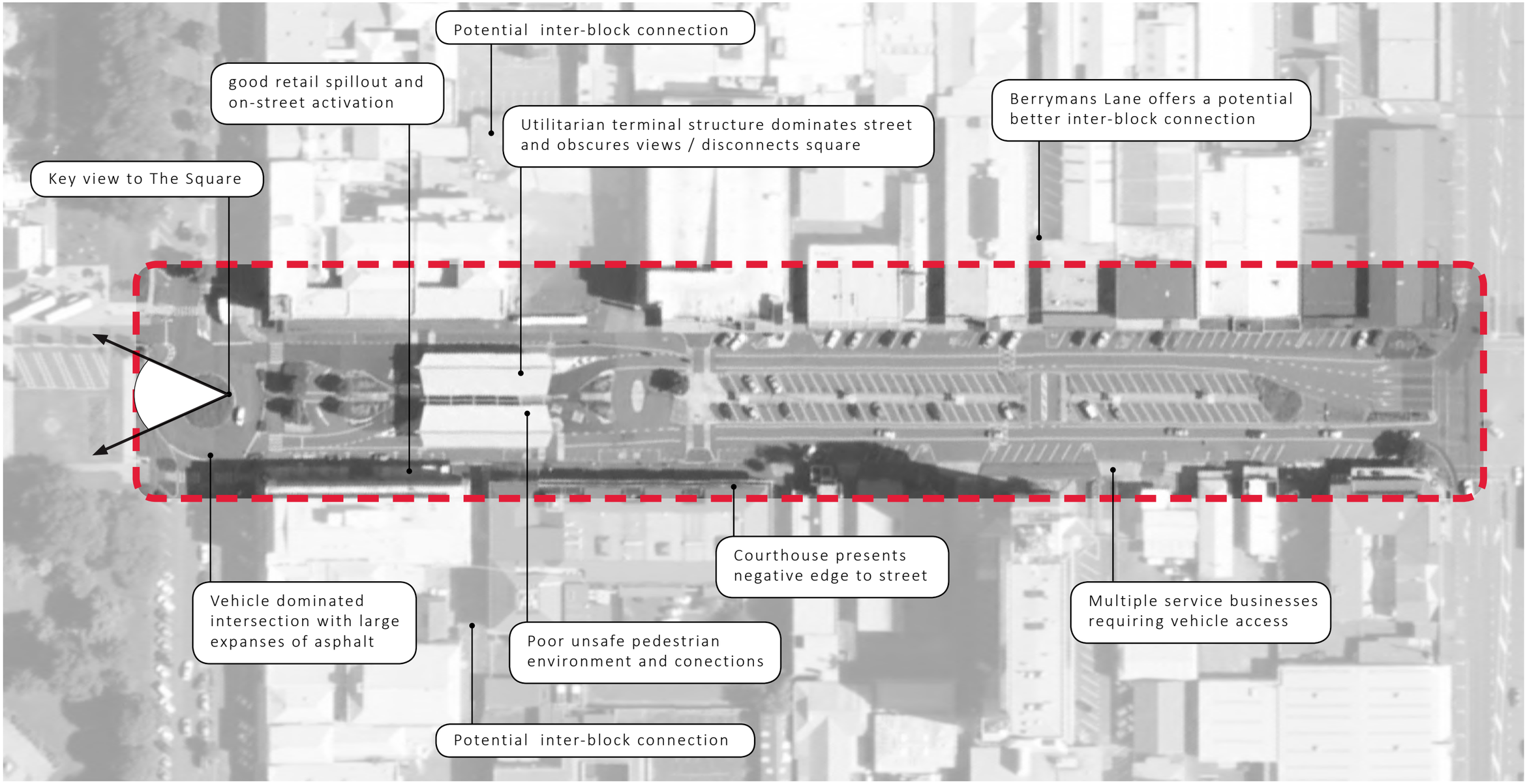
Bays of 90 degree parking are designed as flexible zones, to be easily switched from vehicle to public amenity. These space offer the ability to enhance the usability, function and amenity of the ‘street’ as the city develops and changes, creating space where social engagement, pop up markets or ecological enhancement can take place as required.

Vehicle Amenity



Public Amenity




Potential inter-block connection
good retail spillout and on-street activation
Utilitarian terminal structure dominates street and obscures views / disconnects square
Berrymans Lane offers a potential better inter-block connection
Key view to The Square
Courthouse presents negative edge to street
Vehicle dominated intersection with large expanses of asphalt
Poor unsafe pedestrian environment and conections
Multiple service businesses requiring vehicle access
Potential inter-block connection

3.13 Main Street East

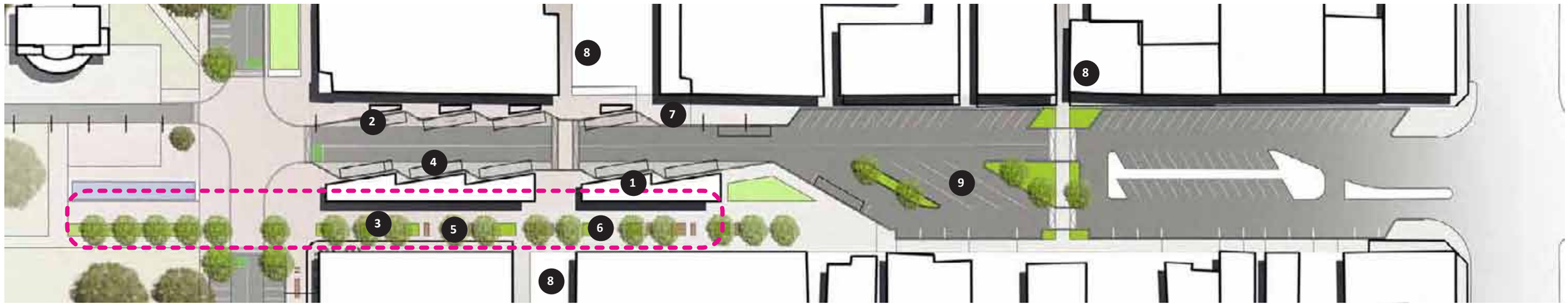
Currently home to the local bus interchange and until 1963 occupied by rail traffic Main Street is one of the widest streets in Palmerston North and has always had strong transportation links. Over 40m wide the street is currently dominated by bus movements, making it difficult to cross and providing limited pubic amenity for those waiting for buses. As outlined in the previous section on buses, it is envisioned that patronage of the Palmerston North bus service is likely to increase thus requiring additional buses and space for waiting / transferring.

A new local transport hub is therefore envisioned with a new pedestrian focused bus terminal providing better shelter and more attractive environment for bus and CBD users. This light weight timber structure will provide a permeable edge to the bus parking bays and adjacent public space allowing users to find shelter or sit in the sun depending on the weather.

The new public space will be activated by the existing businesses along the southern edge of Main Street while a spine of social infrastructure occupies the plaza, providing for optimal occupation and spill out opportunities for local business. Access to businesses will be provided over the public space creating a 'shared' pedestrian and service vehicle environment.

While parking will still be provided within the eastern section of the street additional pedestrian crossings will be introduced providing better link with Berrymans Lane and adjacent businesses.

KEY	
1	A new Urban Bus Terminal provides shelter to passengers and an attractive landmark within the public realm.
2	Lighting poles are extended from The Square into the public realm of the street, strengthening the visual connection between the two.
3	A high quality paved shared zone provides restricted (potentially timed) access to service and loading vehicles, as well as maintaining the Courthouse's disabled access.
4	Dedicated bus stops are provided with angled parking bays, reducing the need for excessive turning movements and reversing in the public realm.
5	A spine of social infrastructure is provided, with new street trees, a suite of public realm furniture, and opportunity for generous cafe spillout.
6	Courthouse access is retained, with a dedicated disabled car space.
7	Access to the public carparks is maintained, with proposed amended circulation (right hand in, left hand out).
8	Improved laneway connections
9	Bus holding bays.
	Focal 'Zone'

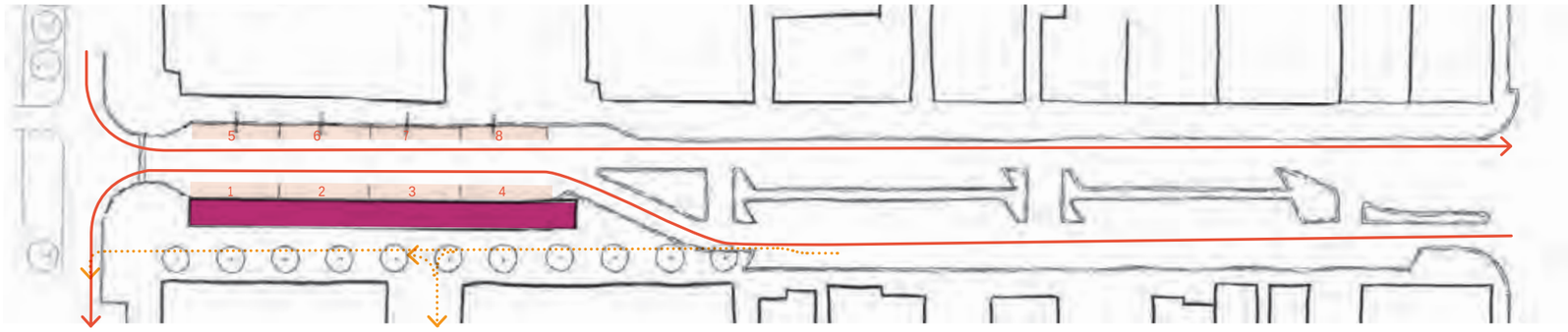


The bus shelters have been designed to provide a high quality waiting environment that fits with the overall context of The Square and surrounding streetscape. They are a free standing sculptural form that is easily identifiable as a destination for passengers providing shelter from prevailing weather whilst waiting for the buses to board. The shelters are a steel structure with timber linings and features to provide a warm street environment. The roof has discrete lighting that will enhance the area around the shelters after dark along with the opportunity to fit in signage (electronic time tables etc).

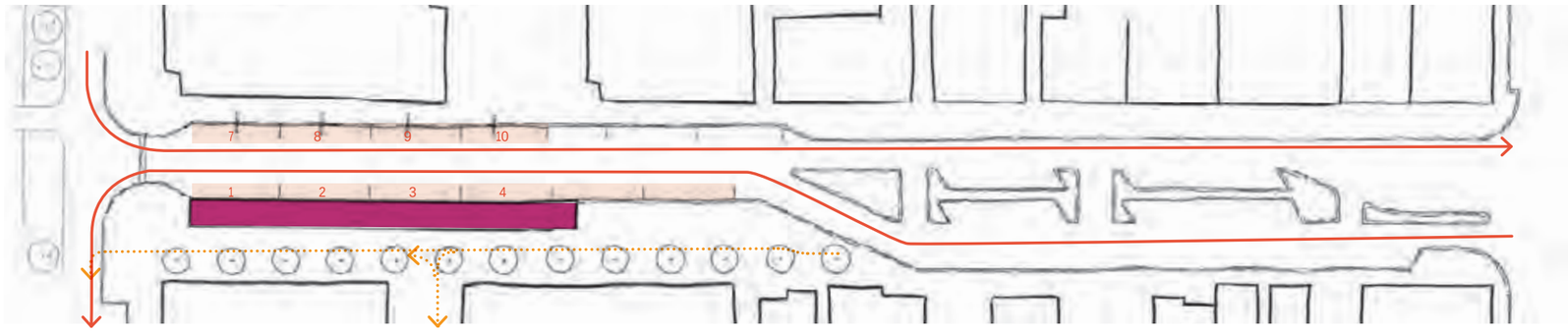
The good clear views and lighting around the shelters provide an environment where people waiting will feel safe and can wait in some comfort for their buses to arrive and depart.

Alternative Options for Main Street East

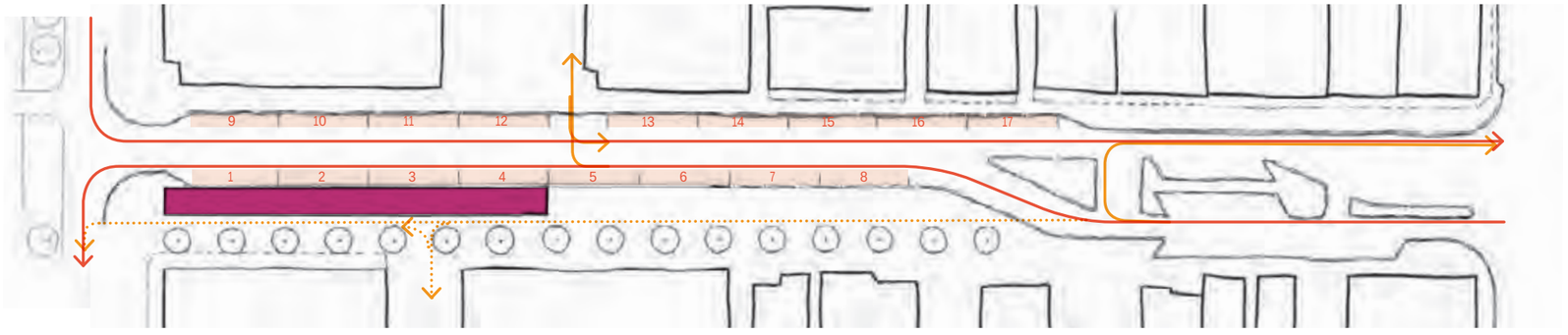
Option 1



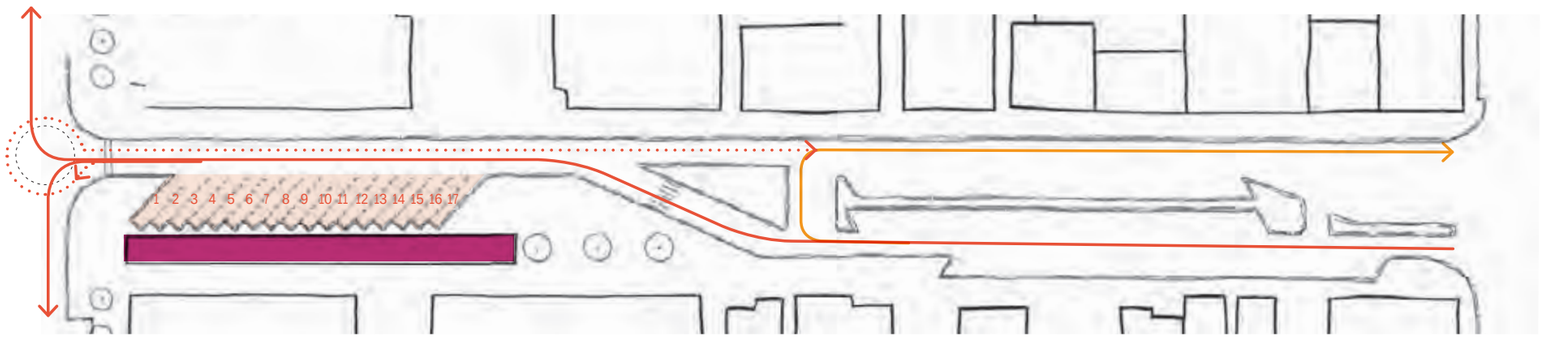
Option 2



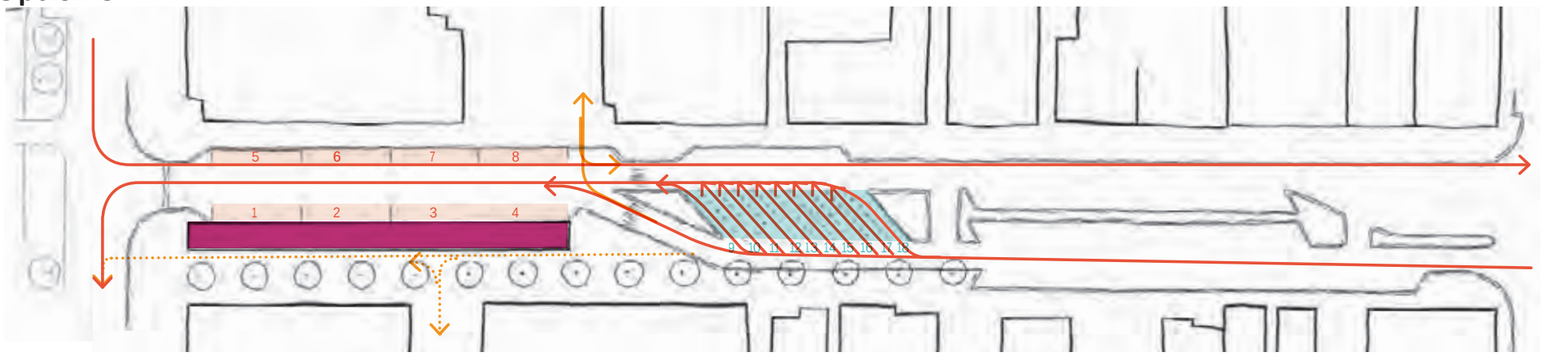
Option 3



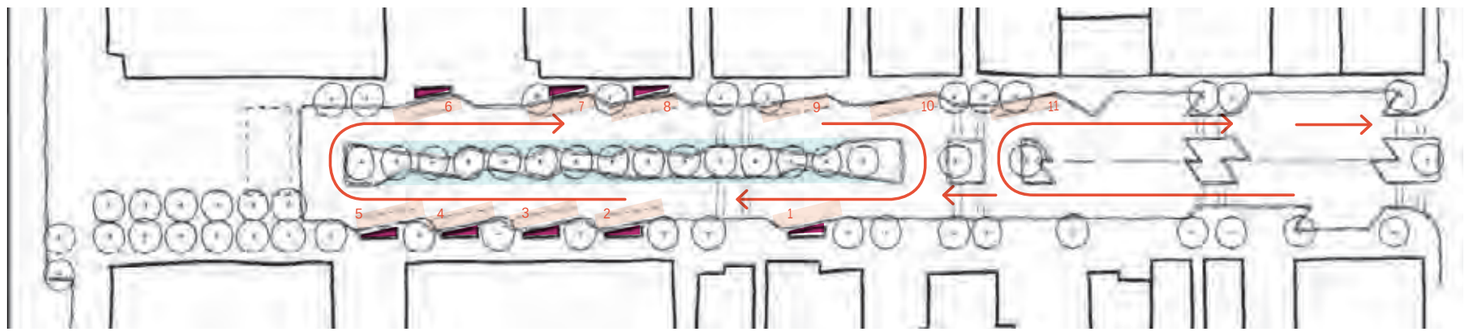
Option 4



Option 5



Option 6



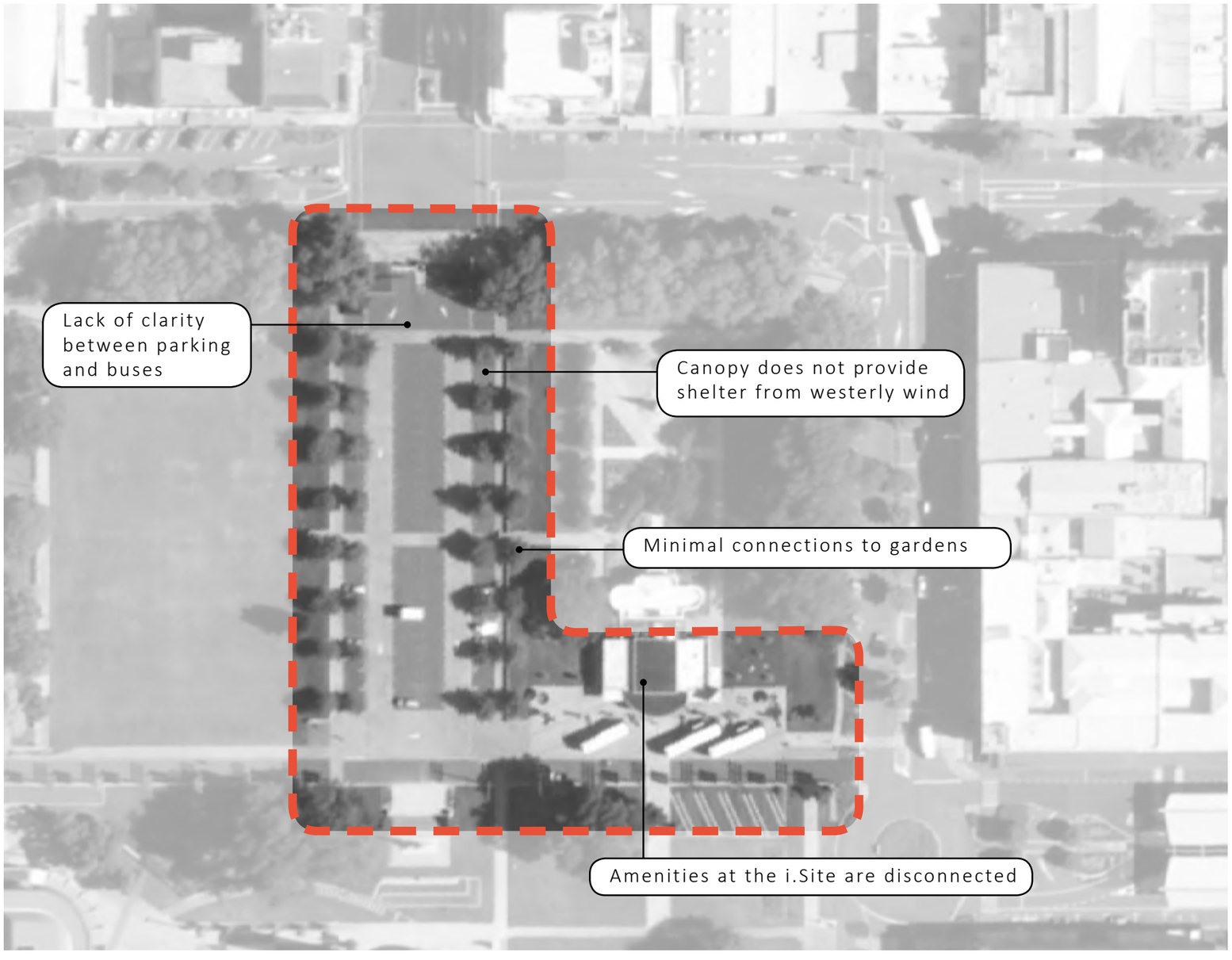
The Streetscape Plan reviewed six options for the redevelopment of the Urban Bus Terminal on Main Street East. These were evaluated using a range of assessment criteria and tested at PNCC officer and stakeholder workshops, including Council briefing sessions.

A sample of the assessment criteria is provided ain the Appendix and included the following 4 matters:

1. Operational
2. Design
3. Access, Movement and Safety
4. Viability and Policy

Of the six options prepared, option 5 was found to be the preferred layout that delivered most strongly against all of the criteria. In parallel with the spatial layout options, a number of different approaches for the design of the terminal structure and canopy were prepared. These considered the need for a high quality, 'landmark' structure that provided the necessary bus operational facilities whilst delivering a range of added value benefits for the townscape, safety and activation of the public realm. Option 5 was considered the most appropriate approach and the final plan for Main Street East developed this design further with modifications around bus access and orientation of bays. This modified final plan achieved the following:

- Maintained a clear sense of Main Street as a multi-functional street not single purpose / dominated by bus movements.
- Allowed for easier use by other modes outside of peak hours.
- Provided flexibility for future bus expansion and operation.
- Consolidated the bus interchange and limits the extent to which it 'spreads' down the street.
- Created clear views and physical connections between the terminal and The Square.


Lack of clarity between parking and buses
Canopy does not provide shelter from westerly wind
Minimal connections to gardens
Amenities at the i.Site are disconnected

3.14 Inner Square

Temporarily relocated to The Square it is proposed that the Inter-Regional Bus Terminal transport hub becomes permanent. With good links to local buses, the i.Site and other amenities within the CBD the bus interchange is ideally located.

The existing structure is simple and functional and provides good links between buses however it is proposed that addition shelter from the prevailing westerly wind and rain would be advantageous. Located between the existing shelter and the i.Site building and toilets the additional structure could provide improved links to these amenities.

Additional improvements should include; improved circulation to the existing parking, removing confusion between buses and cars, additional links to the gardens, and consideration to additional shelter adjacent to buses for loading /unloading.

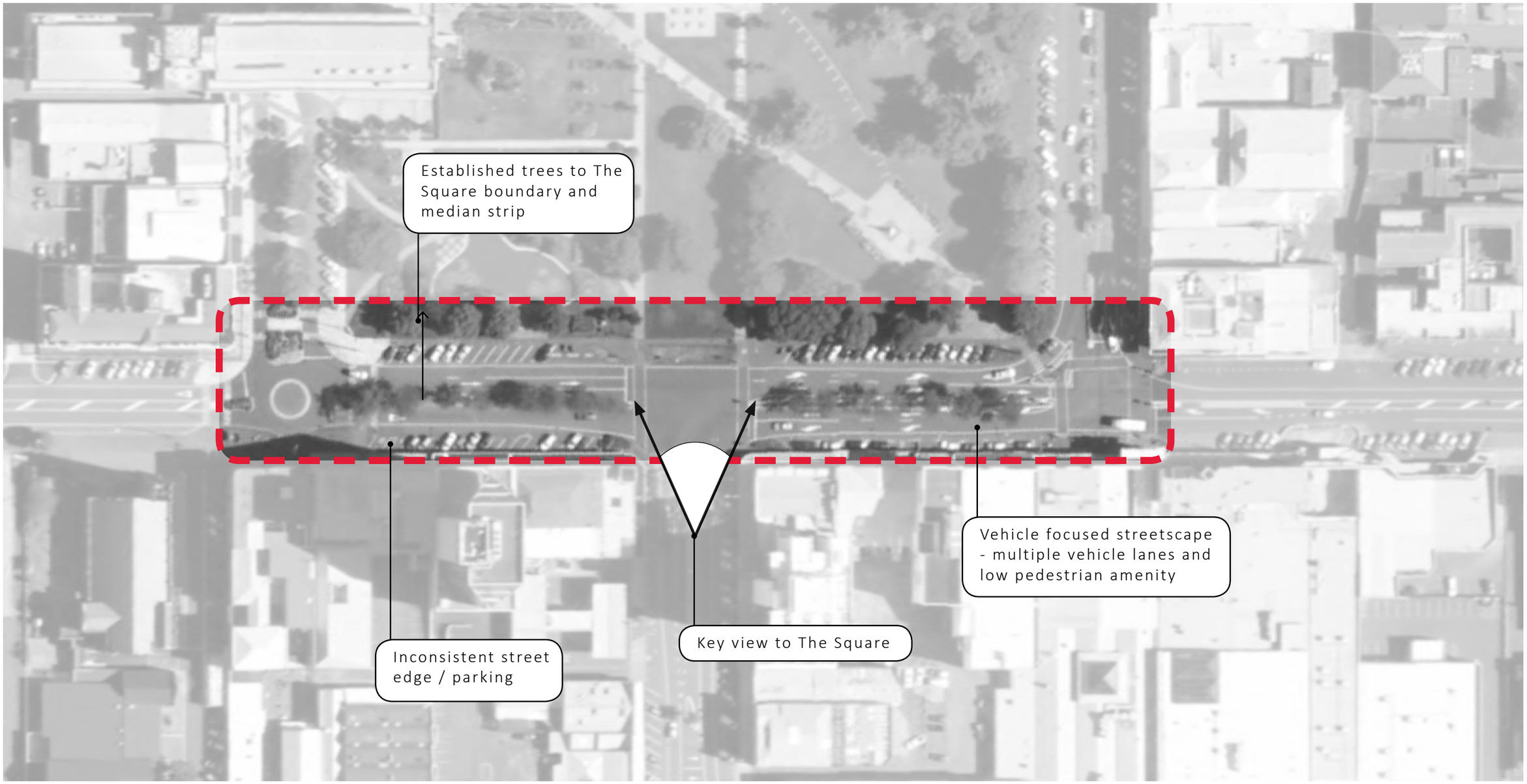
KEY

1	Existing Inter-Regional Bus Terminal transport hub and structure to be made permanent
2	Additional shelter considered to aid bus loading / unloading
3	New shelter improving the link to the i.Site
4	Additional links to gardens added
5	Road layout tweaked to provide better delineation between bus zone and parking

The Inner Square includes concepts for a new structure to enhance the quality and amenity of the Inter-Regional Bus Terminal.

The images on this page provide illustrative ideas around how a new structure might emerge to support the existing terminal and canopy. That structure could be developed to provide a new building, highly transparent and 'light weight' to provide additional covered and active space to complement i.Site. This could include new café/retail and waiting facilities or be an outreach space for the library, te manawa, The Regent on Broadway or interpretative space for the city and the iwi story of the Manawatu. Any new building would need to be designed to be sympathetic to the heritage i.Site structure and would require an agreed aesthetic approach incorporating heritage advice. A good indoor-outdoor relationship would be key to help activate The Square and glazing, lighting and clear lines of sight must be considered to ensure CPTED issues are addressed.

Alternatively the new structure might take a more simple form and provide a canopy extension / covered walkway connecting the terminal to i.Site. Again such a structure must address CPTED issues and complement both the terminal and i.Site.


Established trees to The Square boundary and median strip
Vehicle focused streetscape - multiple vehicle lanes and low pedestrian amenity
Key view to The Square
Inconsistent street edge / parking

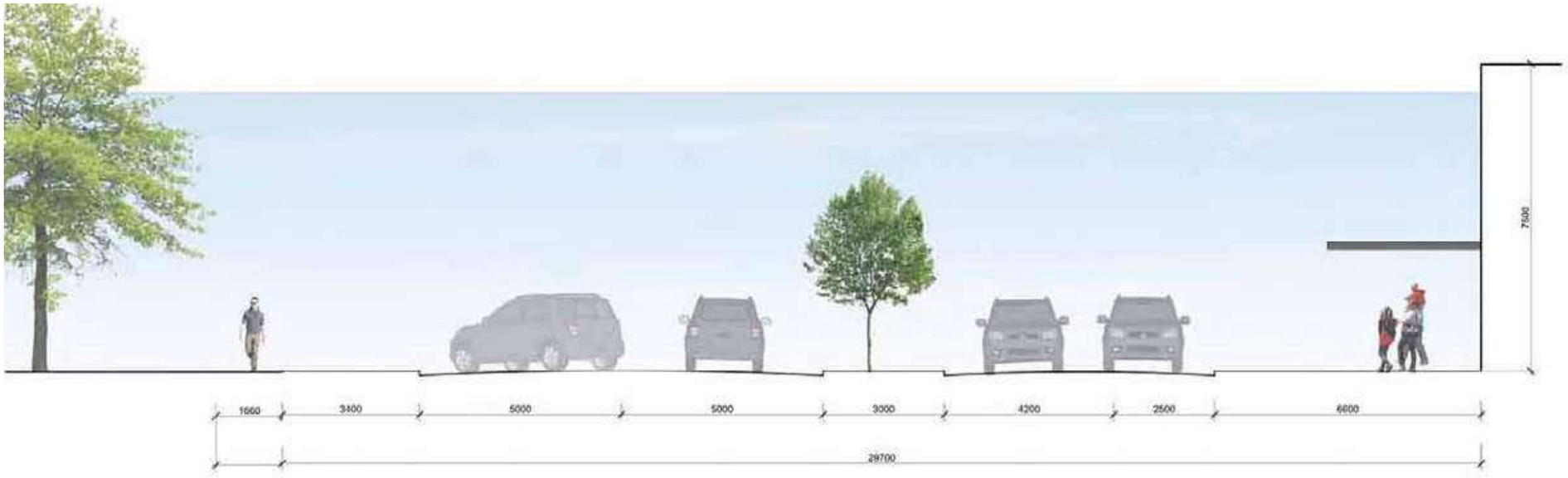
3.15 Church Street

Church Street is currently dominated by vehicle movement and a poor quality street environment. Rather than The Square having a calming influence over the vehicle environment Church Street swells to a 4 lane highway. In addition turning lanes and a differing approach to parking either side of Fitzherbert Avenue creates the perception of a busy, and potentially dangerous environment, at odds with its CBD location and adjacent retail businesses.

The proposed upgrades aim to readdress the balance between vehicles and pedestrians by removing traffic lanes and rationalising parking. Improved crossing points allow better connections from The Square to the southern footpath and businesses allowing both parking and the green space to be easily accessed. While not enlarged the footpath either side of Fitzherbert Avenue is upgraded to provide a safe and attractive environment with street furniture providing amenity.

At the junction with Square East, the pedestrian focused Square East treatment will take priority extending the pedestrian environment across to The Plaza entrance. This raised crossing will create an inviting pedestrian environment for those stepping out of the shopping centre encouraging shoppers to cross the road into The Square or along the improved retail spine of Square East. This treatment is also applied to Square West again improving the pedestrian and cycle experience.

KEY	
1	Raised, paved intersection with signalised vehicle and pedestrian phasing. The new intersection arrangement is designed to marry into the existing Square West public realm upgrades.
2	The existing median trees are reinforced with new tree plantings in a wider, planted median.
3	Single lane of vehicular movement provided in either direction, with parallel and angle on-street parking provided.
4	A central, signalised intersection is retained at Fitzherbert Avenue, helping to slow vehicular movement and increase accessibility for pedestrians.
5	The key viewline into The Square is maintained and enhanced, framed by new street trees and understorey plants within the public realm
6	Improved footpath and pedestrian amenity, incorporating fixed infrastructure located clear of pedestrian circulation.
7	Raised, paved intersection with signalised vehicle and pedestrian phasing, enhancing pedestrian movement between The Plaza and Square East.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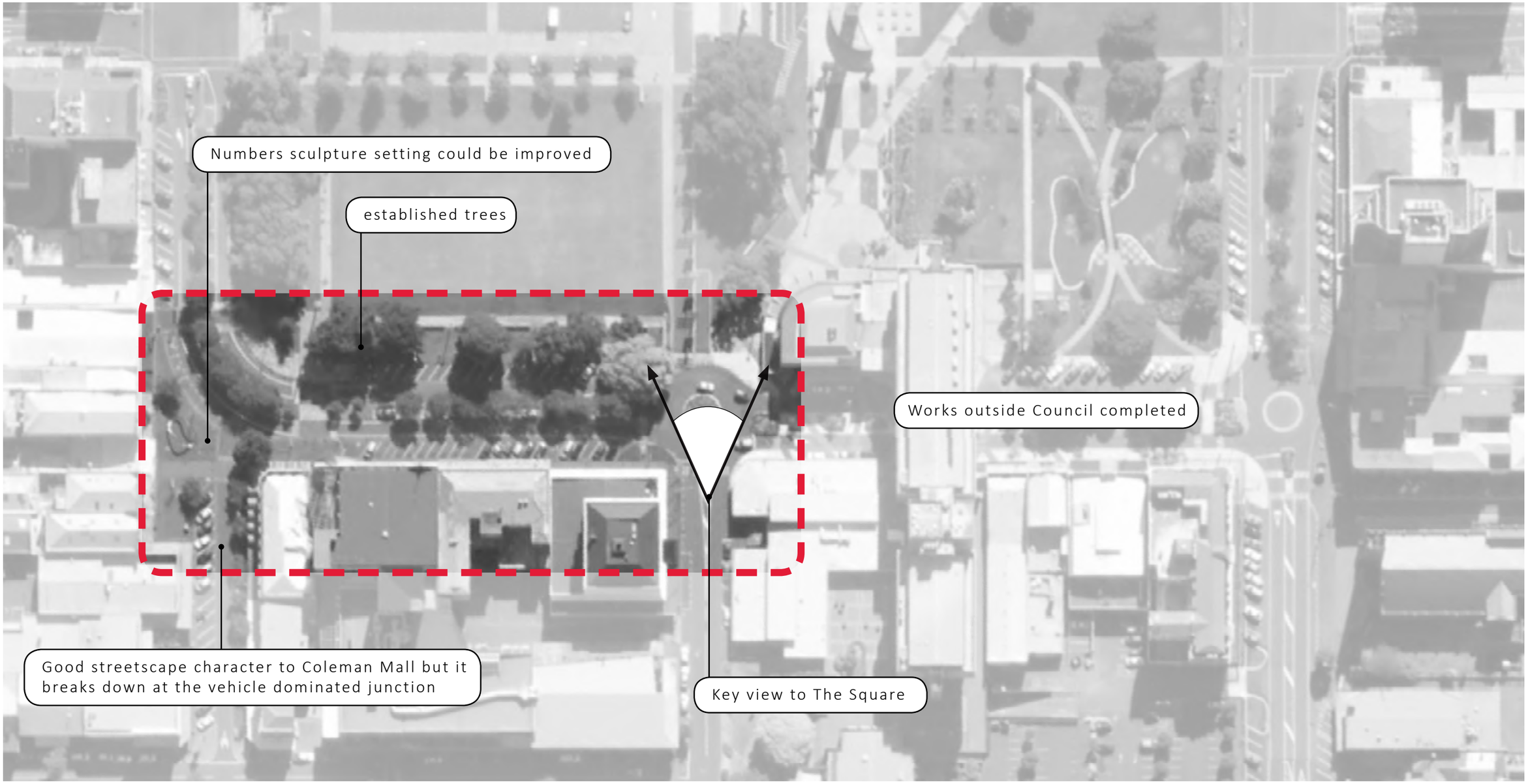

Numbers sculpture setting could be improved
established trees
Works outside Council completed
Good streetscape character to Coleman Mall but it breaks down at the vehicle dominated junction
Key view to The Square

3.16 Square West

Square West extends past the Council buildings and Library and connects the cultural precinct along Main Street West with The Square. Divided into two sections the southern portion of Square West was upgraded 8 years ago and provides wide footpaths and is activated by cafés, bars and adjacent retail activity. The northern section of the street is slightly more segregated from The Square by vehicle movements and parking. The asphalt footpath within this area is more utilitarian and the lack of street furniture contrasts with the upgraded section.

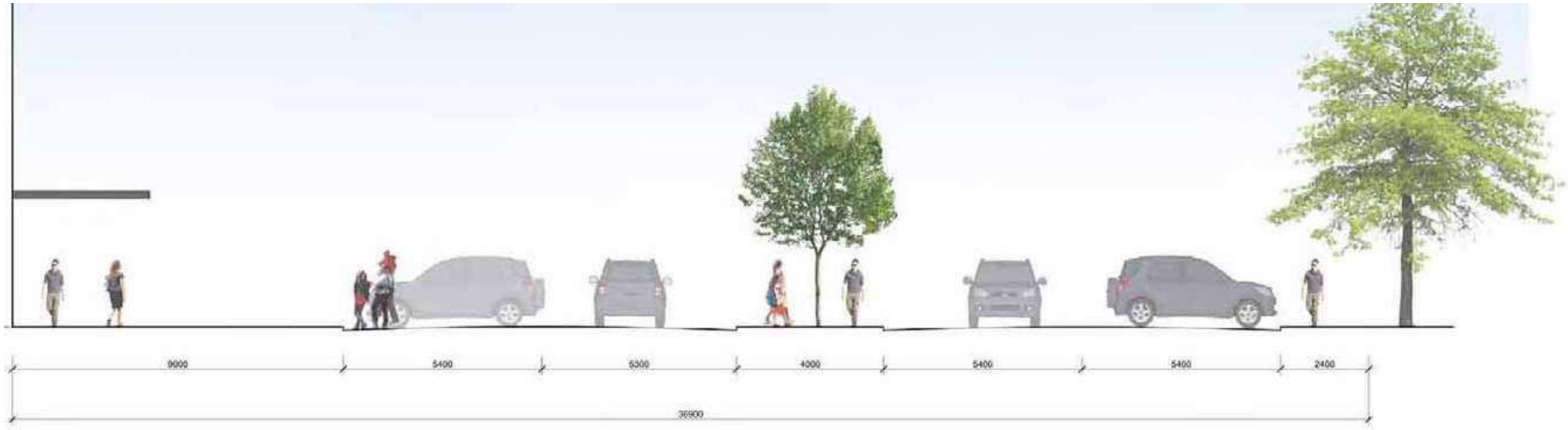
The proposed upgrade unifies the two areas creating a generous footpath and associated infrastructure enhancing the amenity and aesthetics of the street. Increased footpath widths will allow pedestrians to choose between walking under the covered veranda or in the morning sun, while seating and social space will provide room to dwell and occupy the public realm.

At the junction with Main Street more priority will be given to pedestrians and cycles with the roundabout downgraded to simple intersections. The existing Returning Column sculpture will be relocated to the edge of The Square.

At the junction with Coleman Mall the existing raised pedestrian crossings will be extended creating improved links across Square North and Square West and encouraging free pedestrian movement. Creating a new destination space, this area will provide opportunities for meeting, gathering and passive recreation. The existing Numbers sculpture will be given a new setting while removal of some of the existing median planting will providing clear sight lines and routes from Coleman Mall to The Square. This space will be also be enlarged to perform social, ecological and leisure functions and act as a central focal point to the street.

At the junction with Church Street, The roundabout will be reviewed as part of any future renewals to support a consistent approach to all junctions / crossings surrounding The Square.

KEY	
1	Raised pedestrian plaza extends from Coleman Mall to The Square. Existing median trees are retained.
2	A new destination space is proposed for Coleman Mall, providing opportunities for meeting, gathering and passive recreation.
3	Designated, high-quality outdoor dining zones, allowing cafes and restaurants to spillout into the public realm and activate it day to night.
4	New Setting to Infinity sculpture.
5	Widened median with new understorey planting and additional tree planting
6	Opportunity for a flexible streetscape adjacent key civic buildings.
7	Spines of social amenity, incorporating fixed infrastructure and temporary overlays, is provided clear of pedestrian circulation.
8	Removal of existing roundabout to decrease required vehicular movements. Returning column Sculpture relocated into The Square
9	Roundabout will be reviewed as part of any future renewals
	Focal ‘Zone’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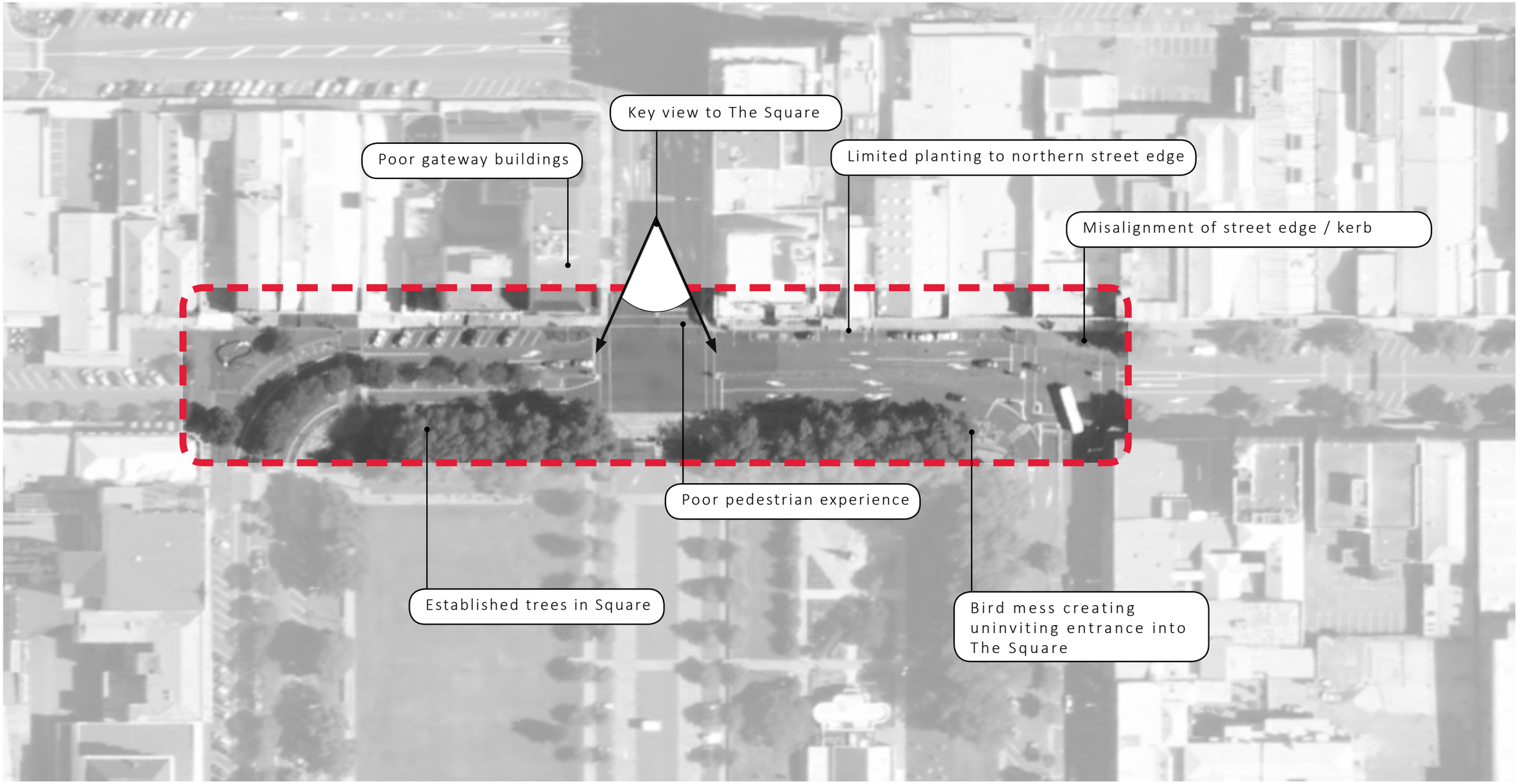

Key view to The Square
Poor gateway buildings
Limited planting to northern street edge
Misalignment of street edge / kerb
Poor pedestrian experience
Established trees in Square
Bird mess creating uninviting entrance into The Square

3.17 Square North

Square North stretches from Broadway Avenue to Coleman Mall with their retail and food offerings. Currently dominated by vehicle movement and a poor quality street environment, Square North and Rangitikei Street divide these destinations rather than unites them. Parking along the northern edge of The Square, located under mature trees, is underutilized and together with the adjacent footpath likely to be sprinkled with bird mess.

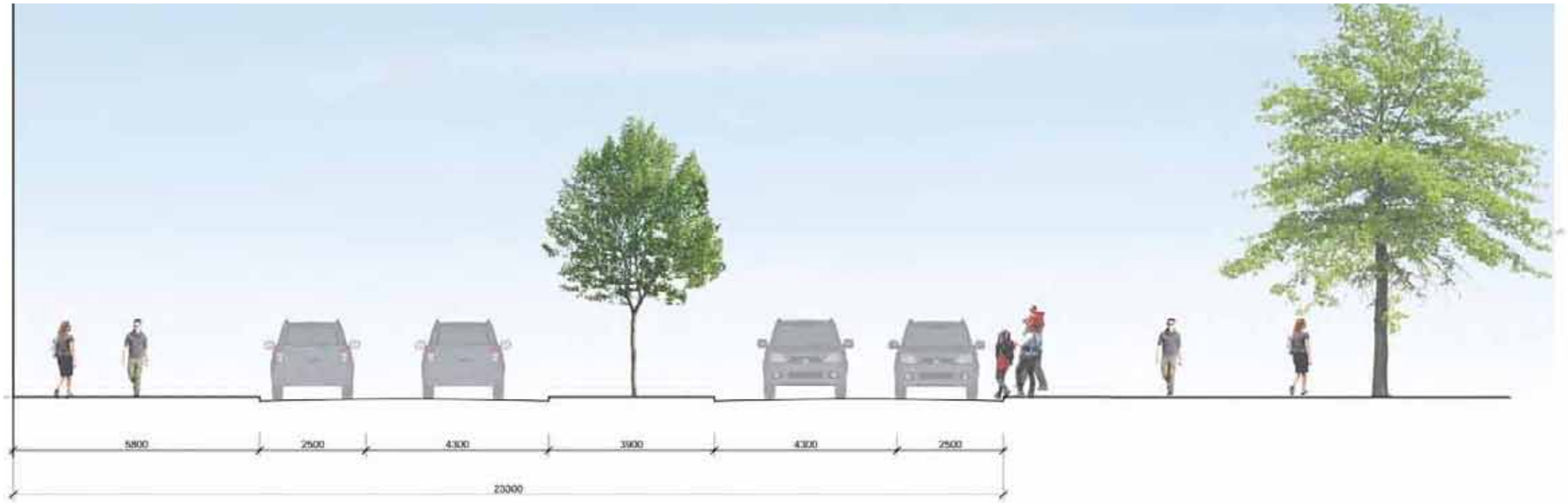
The proposed upgrades aim to create a tree-lined boulevard, supporting a network of vehicular movements and pedestrian routes. It readdresses the balance between vehicles and pedestrians by improved crossing points that allow better connections across Rangitikei Street and from The Square to the northern footpath allowing both parking and the green space to be easily accessed. By narrowing the carriageway and reorientating parking, cars and the pedestrians are removed from under The Square's trees.

The footpath on the northern edge of the street is upgraded to provide a safe and attractive environment with street furniture providing amenity.

At the junction with Square East, the Square East treatment and Broadway Avenue treatment will extend the pedestrian environment creating better pedestrian connections. At Coleman Mall a raised plaza will create an inviting pedestrian environment encouraging users to cross into The Square.

KEY

1	The existing raised crossings to Coleman Mall are retained and extended - refer to Square West for design detail.
2	The existing median trees are reinforced with new tree plantings in a wider, planted median.
3	Single lane of vehicular movement provided in either direction, with parallel on-street parking provided.
4	A central, signalised intersection is retained at Rangitikei Street, helping to slow vehicular movement and increase accessibility for pedestrians. The key viewline into The Square is maintained and enhanced, framed by new street trees and understorey plants within the public realm.
5	A generous footpath adjacent The Square is relocated from under the existing trees and allows for clear east-west pedestrian movement.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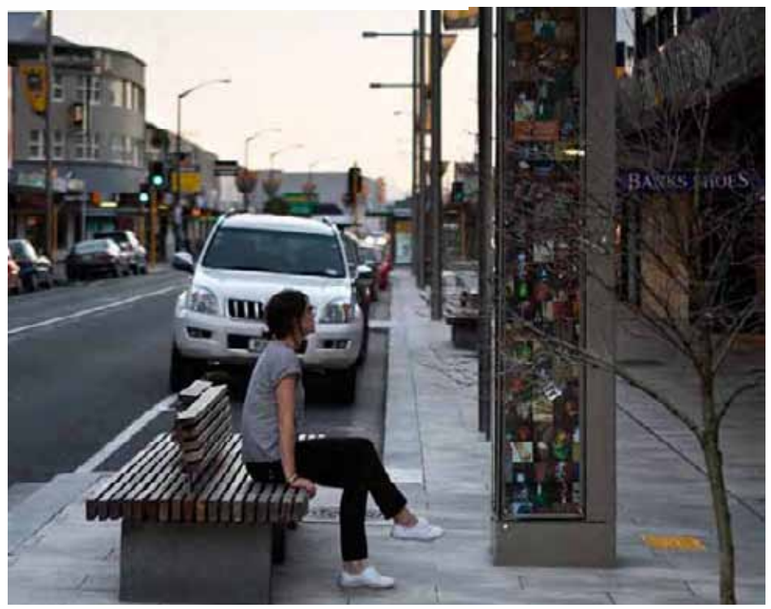
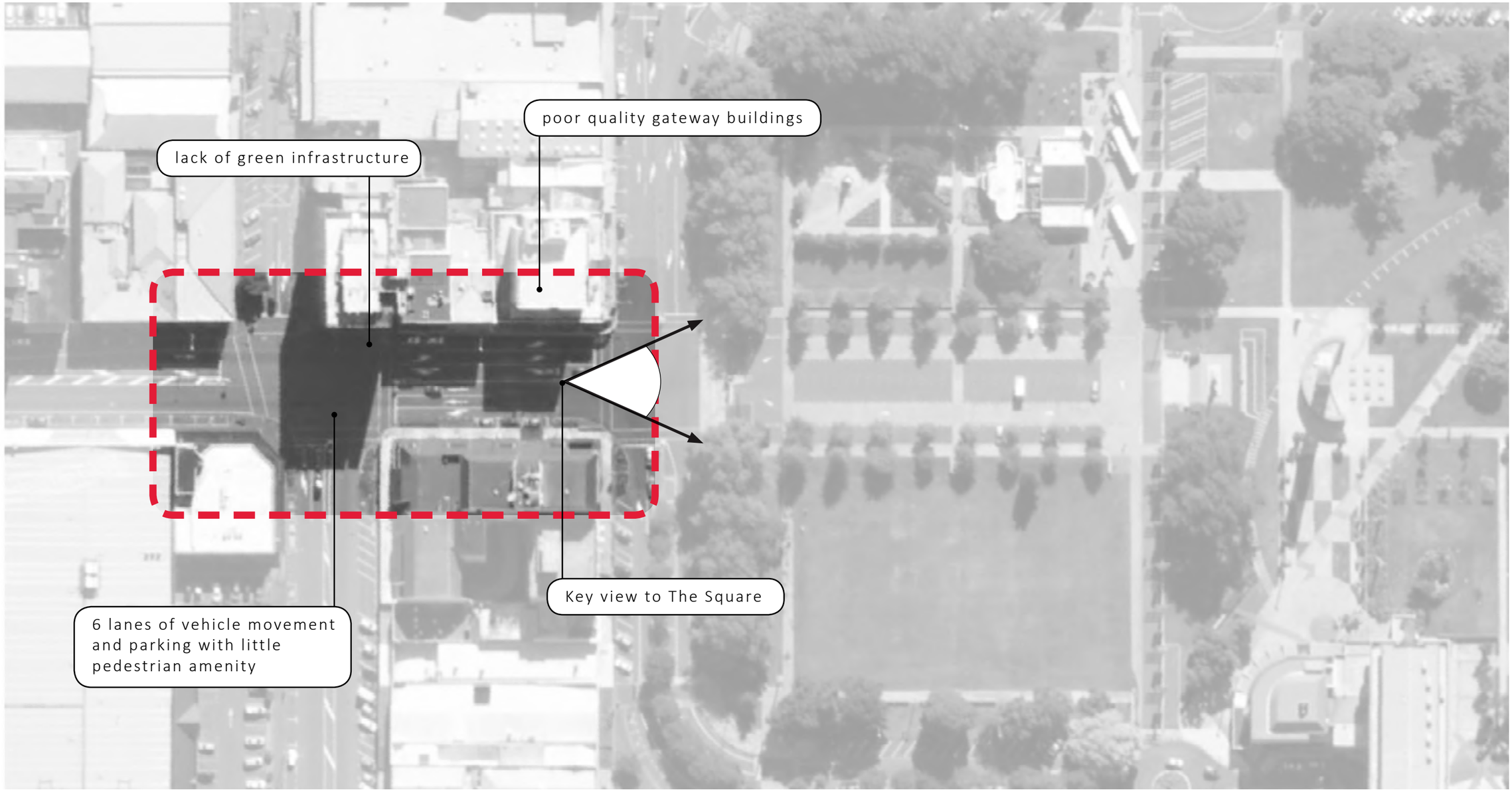



poor quality gateway buildings
lack of green infrastructure
Key view to The Square
6 lanes of vehicle movement and parking with little pedestrian amenity

3.18 Rangitikei Street

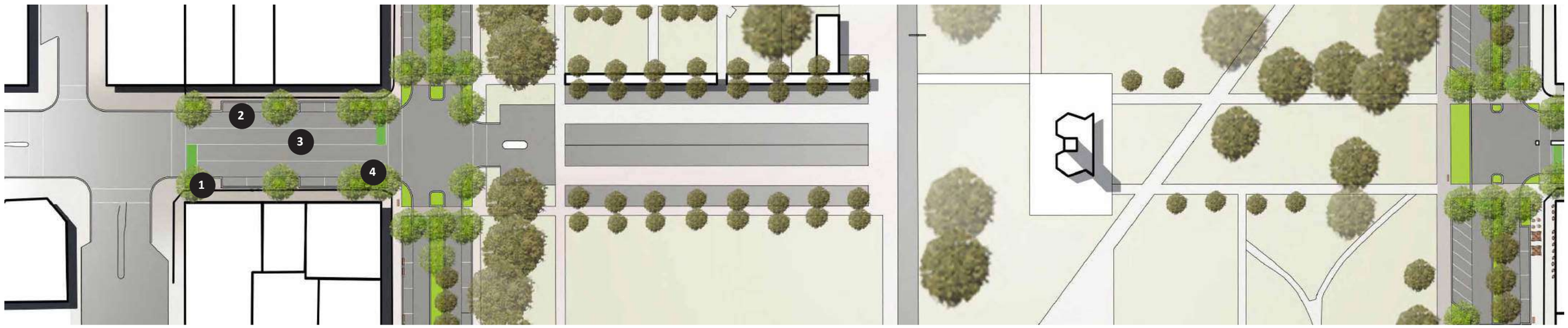
Extending out of the city as State Highway 3, the section of works on Rangitikei Street is the final block of this downgraded urban arterial route.

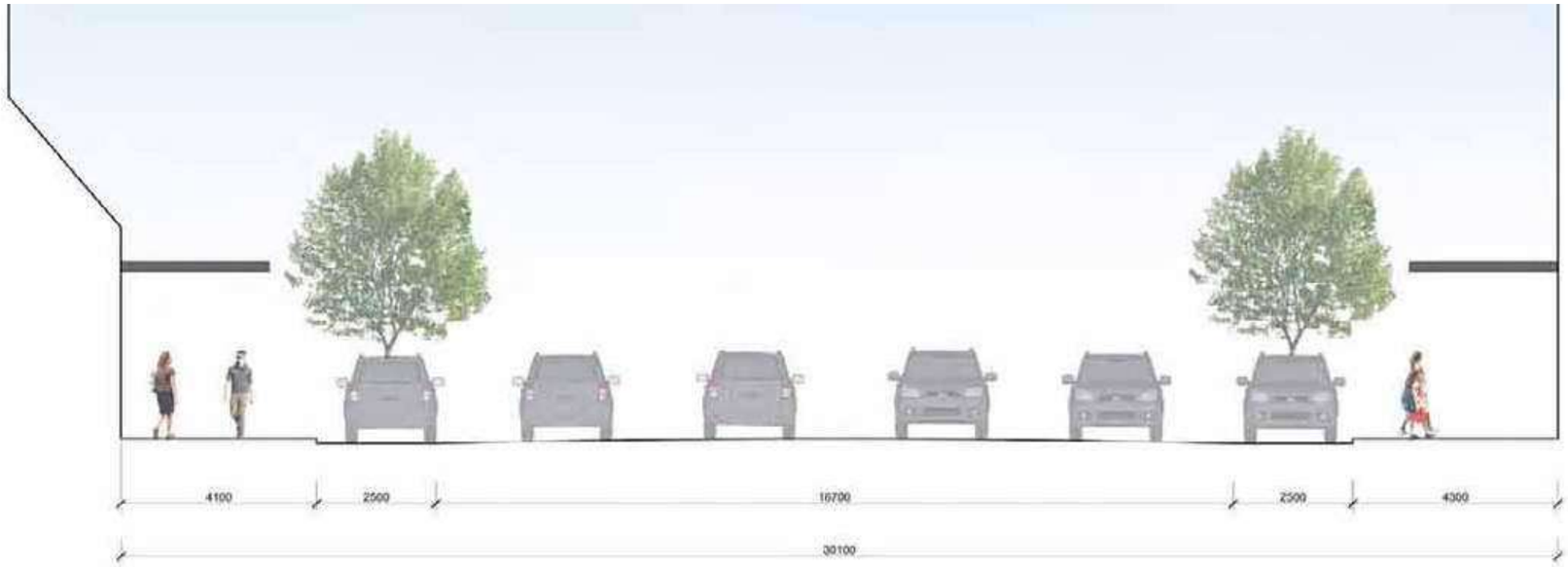
The proposed upgrades balance CBD pedestrian amenity with the requirement for a consistent approach to the length of the street. A tree-lined boulevard, supporting a network of vehicular movements and enhanced pedestrian experience reduces traffic lanes to 2 in each direction, and introducing street trees, setting up a pedestrian focused approach to the street that can be continued to Walding Street and beyond.

Parking and loading bays are retained while kerb build-outs provide space for planting, trees and reduced distances at pedestrian crossings.

KEY

1	New understorey and tree planting softens the wide streetscape.
2	Existing on-street parking and loading amenity retained.
3	Two lanes of traffic are provided in either direction, supporting existing vehicle movements along Rangitikei Street, Square North, and into The Square.
4	New street trees, framing the existing key views into The Square and clocktower.

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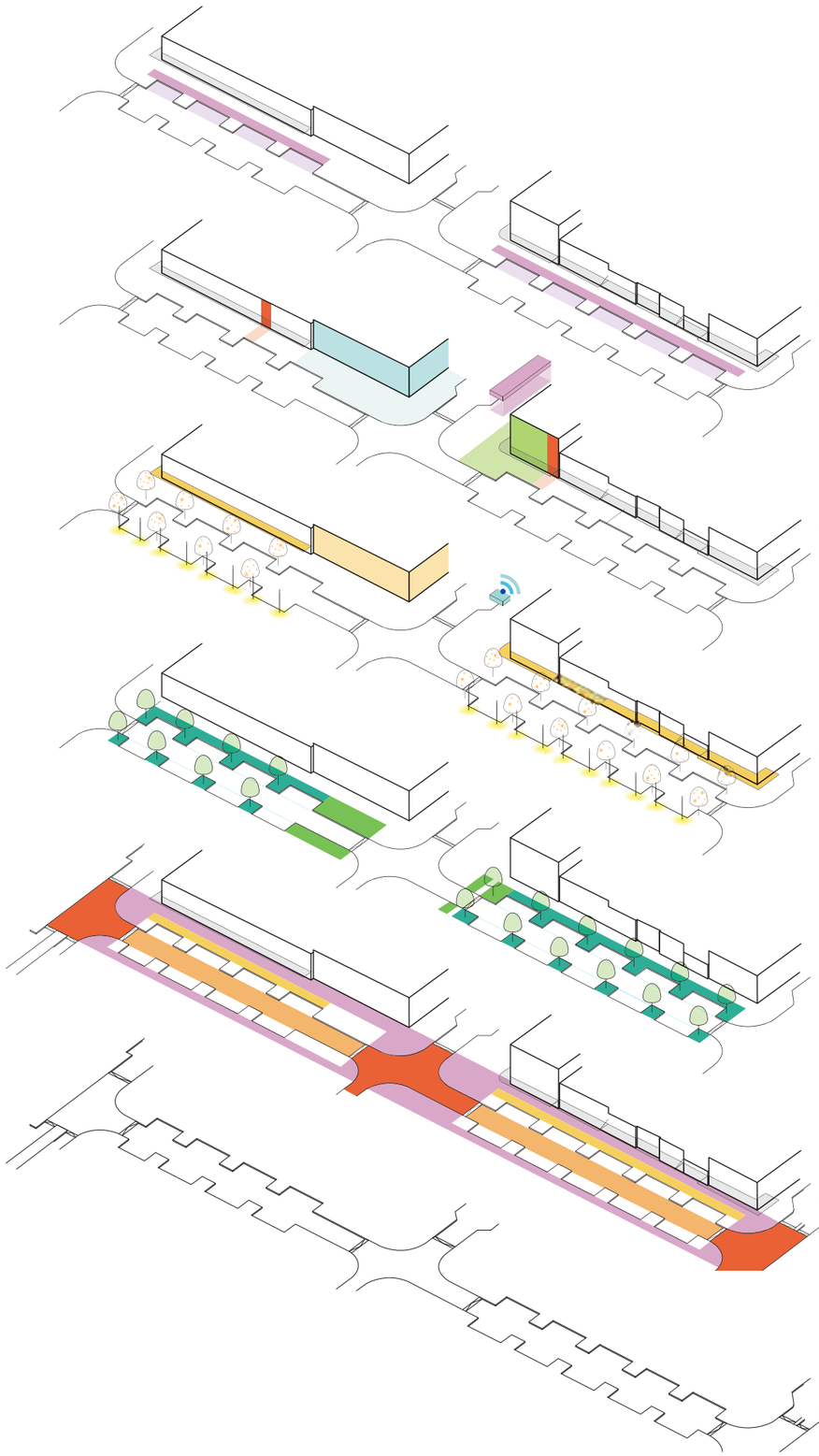
4. Streetscape Components



4.1 Principles

Flexible Streetscapes

- street infrastructure
- flex zones

Social infrastructure will be provided along all streets. In addition flexible zones are identified within parking bays and are designed to have minimal impediments to an extension of the pedestrian environment or additional green infrastructure opportunities.

Building Opportunities

- significant building
- retail spillout
- vacant tenancy
- event overlays

To enhance users' experience and perceptions of the quality of the public realm, it is recognised that the built interface with streets and spaces is an important ingredient. Whilst not a significant part of this Streetscape Plan, the study considered a range of issues facing the city centre's built fabric as identified in Part A of this report.

Lighting and Technology

- trees
- awnings
- street lights
- facade
- technical infrastructure

New lighting should aim to enhance the city centre's night-time environment, provide attractive, vibrant and stimulating spaces and to increase foot-fall and public usage at night. Consideration should also given to the health and safety of city centre users.

Green Infrastructure

- trees
- understorey planting
- lawn

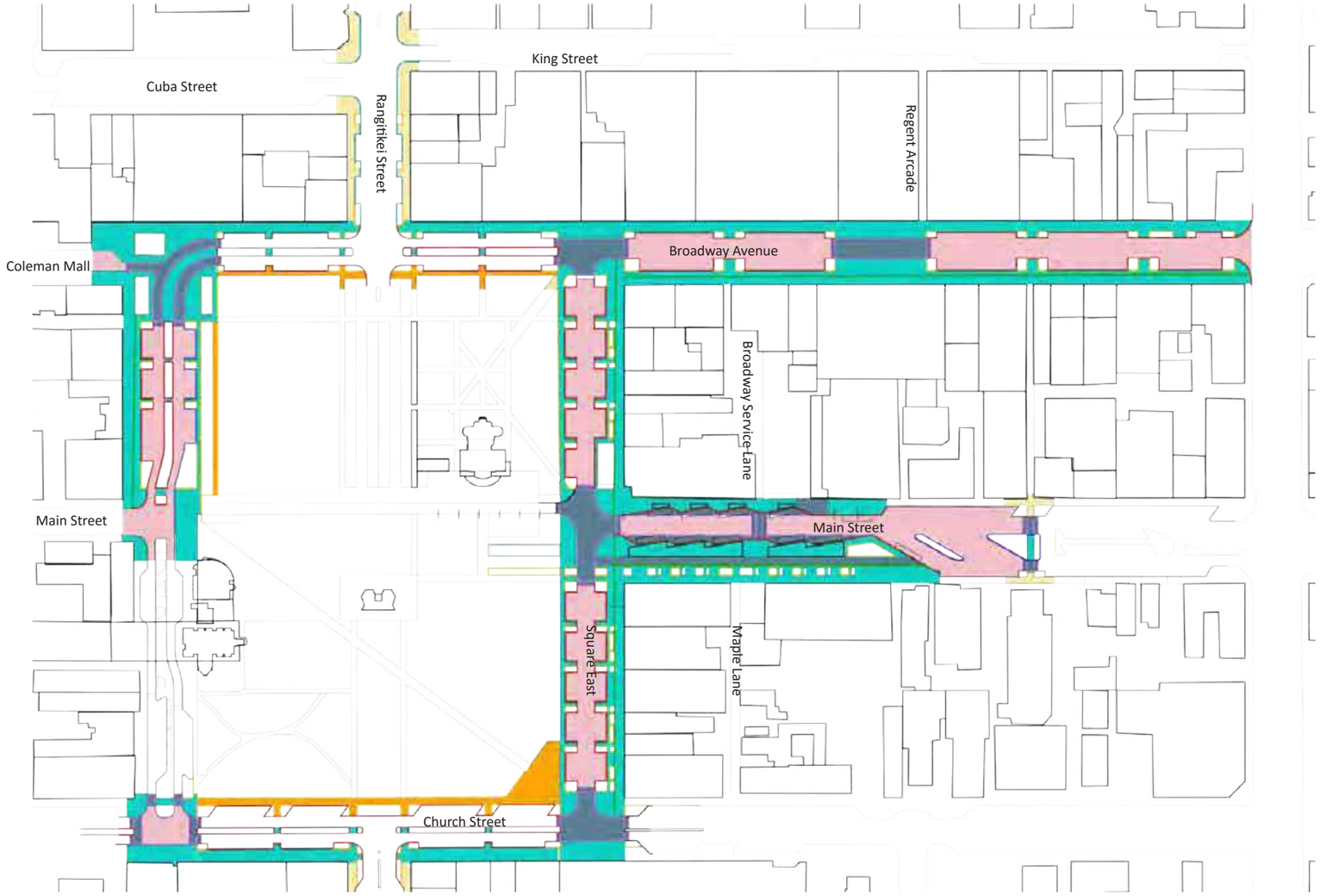
Planting provides a level of aesthetic quality and functionality to the streetscape environment. The plant palette selected will provide a legible and imaginative planting framework for the city, while extending and enhancing the city's tree heritage and garden image.

Materials

- carriageway
- pedestrian paving
- raised intersections

A simple palette of high quality materials is proposed for surfacing within Palmerston North. The selection of materials has been mindful of the area's distinctive character, life costs, durability and of the need for a cohesive design, linking streets and spaces through the use of common elements.

Ground Plane



KEY

Paving type 1 - Pedestrian Stone (P1) Granite slabs 600x400mm Granite paving on sand bed. 65mm thick stone on 30mm sand bed on 150mm compacted basecourse. Sawn sides, various surface treatment, e.g. flamed / bushhammered top and bottom

Paving type 2 - Vehicle Stone (P2) Granite 200 x 400mm Granite paving on concrete bed. 100mm thick stone on 30mm steintec tuffbed mortar on 100mm concrete base on compacted hardfill. Sawn sides, various surface treatment, e.g. flamed / bushhammered top. 3mm Stein Tec tuffgrout joints.

Paving type 3 - Pedestrian Concrete (P3) 110mm thick, reinforced, in-situ concrete, over new base course – finish tbc (E.g exposed aggregate)

Paving type 4 - Pedestrian Asphalt (P4) 25mm TNZ Mix 6 asphalt wearing course over base course, including line marking

Paving type 5 - Vehicle Asphalt (P5) 35mm TNZ Mix 15 asphalt wearing course over base course, including line marking

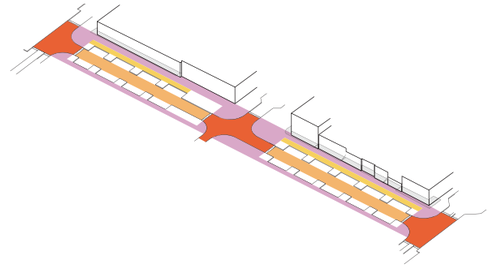
Kerb type 1 (K1) – 300x200mm granite kerbs 1m long sections (flamed / cropped finish) on concrete bed with insitu concrete channel with black oxide.

Kerb type 2 (K2) – 300x200mm flush granite kerbs 1m long sections (flamed / cropped finish) on concrete bed set flush with paving.

Kerb type 3 (K3) – 300mm wide insitu kerb and channel with black oxide. Saw cut at 2m on centre.

Edge type 1 (E1) – 70x70x6mm galvanised steel angle bolted to 100mm concrete base

Edge type 2 (E2) – 400x400mm granite wall blocks 1m long sections (honed finish) on concrete bed.



4.2 Materials Palette

A simple palette of high quality materials is proposed for surfacing within Palmerston North. The selection of materials has been mindful of the area's distinctive character, life costs, durability and of the need for a cohesive design, linking streets and spaces through the use of common elements.

Mid grey granite paving slabs have been selected as the predominant surfacing material. It is proposed that slabs be laid flexibly on sand perpendicular the street and that their bond be staggered.

A standard 65mm unit depth has been selected to ensure that the proposed surfacing is robust and to help prevent sand from being drawn out of its joints. The application of a sealant and perminent joint spaces will improve structural integrity by ensuring jointing sand retention.

Careful consideration will need to be given to module size and thickness where heavy loads such vehicles, markets, etc, are likely.

Stone setts are proposed for frequently used vehicular routes within shared use areas (e.g. the Church Street junction with Square East). Materials within vehicular areas will need to be very robust. Where stone setts are used they will need to provide a comfortable finish and consideration will need to be given to the use of flamed or bush hammered finishes.

Granite drainage channels are proposed within all pedestrian areas. These will need to be mindful of chipping, disabled access and should be laid radially where it is necessary to go around corners. Granite kerbs with concrete drainage channels are proposed to the periphery of vehicular carriageways.

Where interventions such as the application of tactile paving are required they should be of a contemporary aesthetic and material.

Asphalt will be used for the majority of vehicular streets.

PAVING TYPE 1	
Description	Granite Paving
Grade	Pedestrian Grade
Finish	Combination flamed and bush hammered
Dimensions	450 x 600 x 65mm

PAVING TYPE 2	
Description	Granite Paving
Grade	Vehicular Grade
Finish	Combination flamed and bush hammered
Dimensions	150 x x 300 x 100mm

PAVING TYPE 4	
Description	Concrete footpaths
Grade	Pedestrian Grade (110mm thick)

PAVING TYPE 4/5	
Description	Asphalt footpaths / carriageway
Grade	Pedestrian Grade / Vehicular Grade

KERB TYPE 1	
Description	Stone kerb [and concrete channel]
Dimensions	300mm width, 100mm height kerb, 300mm width gutter

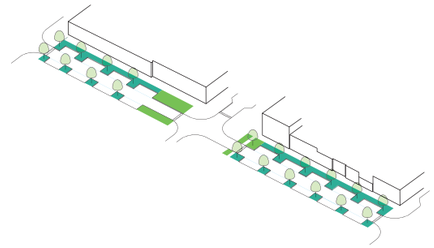
KERB TYPE 2	
Description	Stone kerb - flush
Dimensions	300mm width at surface
Notes	To define vehicular zones at thresholds

KERB TYPE 3	
Description	Stone dish drain
Dimensions	900mm width at surface
Notes	To carriageways

DRAINAGE CHANNELS	
Description	Stone dish drain
Dimensions	900mm width at surface
Notes	To carriageways

KEY

	Proposed street trees
	Proposed understory planting / Potential rain gardens



4.3 Green Infrastructure

Planting provides a level of aesthetic quality and functionality to the streetscape environment. The plant palette selected will provide a legible and imaginative planting framework for the city, while extending and enhancing the city's tree heritage and garden image. This contributes significantly to the heart and soul of the CBD and the experience while shopping, living or working within the CBD or visiting The Square, enhancing the street atmosphere and providing a memorable experience.

Seasonal variation in the selected vplant palette provides an opportunity to celebrate form, texture and colour throughout the year. The selected trees and shrubs provide a range of seasonal respones and displays in the form of leaf fall, flowering, fruiting, and seed set. Further seasonal expression is be added in the form of annual displays of bulbs.

Species selection refer Draft Palmerston North Vegetation Framework, 2106.

Trees

An important component of the constructed streetscape are the trees, they enhance recreational and visual amenity, create physical barriers, help curb noise and pollution and provide an ecological resource. Trees planted in appropriate locations can help structure spaces, reduce the effects of climate such as wind, raising the ambient temperature and introducing a level of shade.

Botanic Name	Metrosideros robusta
Common Name	Northern Rata
Pot Size	80 litre
Mature Height	5 metre (10 yr)

Botanic Name	Alectryon excelsus
Common Name	Titoki
Pot Size	80 litre
Mature Height	7 metre (10 yr)

Botanic Name	Ginkgo biloba (Male)
Common Name	Maidenhair Tree
Pot Size	60 litre
Mature Height	7 metre (10 yr)

Botanic Name	Nothofagus solandri
Common Name	Black Beech
Pot Size	80 litre
Mature Height	5 metre (10 yr)

Botanic Name	Sophora microphylla
Common Name	Kowhai
Pot Size	80 litre
Mature Height	5 metre (10 yr)

Botanic Name	Catalpa speciosa
Common Name	Catalpa
Pot Size	60 litre
Mature Height	3 metre (10 yr)

Botanic Name	Magnolia kobus
Common Name	Kobushi Magnolia
Pot Size	45 litre
Mature Height	4 metre (10 yr)

Botanic Name	Knightia excelsa
Common Name	Rewarewa
Pot Size	80 litre
Mature Height	7 metre (10 yr)

Understorey Planting

Low level planting provides opportunities to soften the edges and create spaces within the streetscape that reduce ‘thorouhgfares’, where active and passive recreation can take place.

When determining new low level planting it is important to promote a feeling of safety and security, i.e. clear sight lines should be retained between the path network and key spaces. Where shrubs are used these should be in the form of low to medium sized plants, again to maintain good visibility and to remove potential hiding places.

Position plants with drooping stems or leaves that might trip pedestrians so that the leaves of the mature plants will not hang over any footpath.

Botanic Name	*Acaena sp.*
Common Name	Bidi-Bidi

Botanic Name	*Salvia sp.*
Common Name	Blue Salvia

Botanic Name	*Carex divulsa*
Common Name	Grey Sedge

Botanic Name	*Geranium traversii var. elegans*
Common Name	Chatham Island Geranium

Botanic Name	*Salvia ‘Amistad’*
Common Name	Friendship Sage

Botanic Name	*Geranium ‘Pink Spice’*
Common Name	Pink Spice Geranium

Botanic Name	*Hebe ‘Wiri Mist’*
Common Name	Hebe

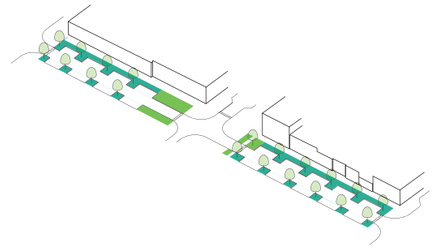
Botanic Name	*Blechnum novae-zelandiae*
Common Name	Kio Kio

Botanic Name	*Lobelia angulata*
Common Name	Panakenake

Botanic Name	*Rosemarinus officinalis*
Common Name	Prostrate Rosemary

Botanic Name	*Dianella nigra*
Common Name	Turutu

Botanic Name	*Pachysandra terminalis*
Common Name	Japanese Spurge



Rain Gardens

Water Sensitive Urban Design (WSUD) addresses both water quantity and quality issues. Rain gardens are one component of WSUD system that help reduce quantity, enhance water quality and improve amenity in the urban environment. These gardens increase the greening and biodiversity of the urban centre.

Well designed and regularly maintained raingardens are well placed to treat stormwater, within the streetscape. They could catch stormwater runoff from the roads, parking spaces and pavements, passing it through natural filtering systems before being discharged to conventional stormwater network and the Manawatu River.

Botanic Name *Juncus sarophorus*

Common Name Fan-flowered Rush

Botanic Name *Juncus edgariae*

Common Name Wiwi

Botanic Name *Libertia peregrinis*

Common Name NZ Iris

Botanic Name *Carex flagellifera*

Common Name Tussock Grass

Botanic Name *Leptospermum scoparium*

Common Name Manuka

Botanic Name *Arthropodium cirratum*

Common Name Renga Renga Lily

Botanic Name *Hebe stricta*

Common Name Koromiko

Botanic Name *Asplenium bulbiferum*

Common Name Hen And Chicken Fern

Botanic Name *Pittosporum cornifolium*

Common Name Tawhirikaro

Botanic Name *Doodia media*

Common Name Puku Puku

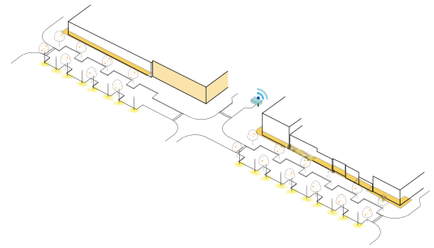
Botanic Name *Phormium 'emerald green'*

Common Name Dwarf flax

Botanic Name Apodasmia similis

Common Name Oioi


HARVEY WORLD TRAVEL
MOTEL



4.4 Lighting and Technology

The recent refurbishment of the existing veranda lighting will be complemented through new lighting within the streetscape providing the opportunity to improve the street environment and hierarchy of space.

New lighting should aim to enhance the city centre's night-time environment, provide attractive, vibrant and stimulating spaces and to increase foot-fall and public usage at night. Consideration should also given to the health and safety of city centre users.

The vibrancy of the city centre's lit effect is dependent upon the achievement of appropriate brightness and colour contrast ratios. It is important to recognise that absolute adherence to prescribed numerical standards will create a mundane scheme.

Lighting will assist in:

- the provision of an exciting and stimulating environment mindful of health, safety and welfare requirements.
- the provision of a consistent environment day and night, considering.
- efficacy, colour appearance and rendition and operating requirements.
- enhance landmark buildings, structures and landscapes elements.
- highlight and emphasise artwork (both temporary and permanent).
- create an ambiance appropriate to the use, character and form of the street and public spaces.

The recent addition of free Wi-Fi in the CBD has encouraged further occupation of the street. In adition to future upgrades of the system amenity for these users such as seating in shaded areas should also be provided.

CATENARY LIGHTING

FAIRY LIGHTS TO TREES

UPLIGHTS TO TREES

UPLIGHTS TO SIGNIFICANT FACADES

UPLIGHTS TO SIGNIFICANT FACADES

Opportunity to engage public artist to develop lighting artworks to heritage built form

LIGHTING ARTWORK

Opportunity to engage public artist to develop lighting artworks to streetscape

STREET LIGHTING

Opportunity to engage public artist to develop lighting artworks to streetscape

WIFI HOTSPOTS

4.5 Public Art + Performance

Public Art can enhance public spaces, contributing to the distinctive character of the city centre and orientation within it, and improving the experience of those who work, visit and reside there.

The existing streetscape contains evidence of a strong commitment to art in public places with a number of high quality works are sited in prominent locations. These works together with the Clock Tower and a number of sculptures within The Square contribute to the distinctive nature of Palmerston North.

While all these works should be retained during the streetscape upgrade some (Numbers by artist Anton Parsons in Coleman Mall) suffer from poor siting and a more sympathetic approach needs to be undertaken, others (Returning Column by artist Greg Johns) will require relocation due to changes in the street layout.

Future public art projects are an important strategy in revitalization and regeneration projects. They help to attract investment and encourage pride in the streetscape environment.

Public art provides an opportunity to engage with artists, local business and community to develop site specific art works that can be permanent or temporary, kinetic or static, and passive or interactive.

The success of the art project requires a setting of quality public space and careful site selection (such as at the corner of Square East and Broadway Avenue) is imperative.

SCUPLTURAL LIGHT

Opportunity to engage with artists to create permanent sculplural features

WHITTAKERS - THE BIG EGG HUNT

Opportunity to engage with artists for local fund raising opportunities

SCUPTURAL EDGE TREATMENTS

Create and define space through the placement of sculptural elements

PERFORMANCE SPACE

Opportunity to engage with public through providing for performance space

LIGHTING ARTWORK

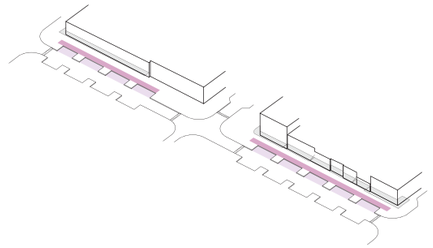
Opportunity to engage public artist to develop lighting artworks to streetscape

INFRASTRUCTURE SCUPLTURE

Opportunity to engage public artist to develop bespoke infrastructure elements

TRAVELING SCULPTURE SHOWS

Provide opportunitie for temporary art installations



4.6 Social Infrastructure

Streets require more than just paved pedestrian space, social infrastructure is required to create dynamic inviting spaces that enhance social interaction, passive observation of what's around us and enhance community wellbeing.

The proximity of elements can influence and encourage interaction among users. Seating or elements spaced far apart creates privacy and contemplation, while close arrangements encourage interaction. Orientation and hierarchy of space, stimulating environments whether they involve watching others or taking in surrounding architecture or landscapes.

Elements could be movable, relocatable, permanent or temporary, passive or provide for interactive play opportunities but above all they should add amenity and vitality to the street.

A SUITE OF SITE SPECIFIC FURNITURE

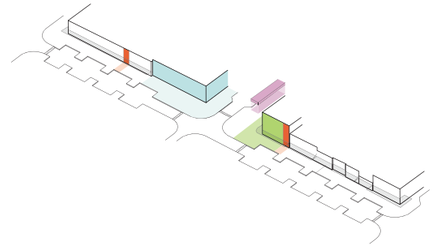
Simple modern bespoke elements unique to Palmerston North

SCULPTURAL ELEMENTS

Engaging, sculptural seating

URBAN PLAY

Incidental play and engagement opportunities throughout the city centre



4.7 Building Opportunities

To enhance users' experience and perceptions of the quality of the public realm, it is recognised that the built interface with streets and spaces is an important ingredient. Whilst not a significant part of this Streetscape Plan, the study considered a range of issues facing the city centre's built fabric as identified in Part A of this report. Key matters included the extent of unsympathetic modifications to facades, the occasional poor level of maintenance, the quality of canopies and the need to create positive settings for important heritage buildings.

The plan therefore recommends six areas of further investigation into the enhancement of buildings across the study area. Of these the formalization of quality public realm settings to heritage features/buildings is critical and it is suggested that the clusters of heritage buildings identified in Part A are used to guide this intervention. Secondly encouraging building edges to 'spill out' and activate streets would address the often low level of occupation of the central area. To achieve this the study focuses on pavement widths, sun and shelter, and provision for outdoor seating and planting. Other key areas of consideration include providing support for the evening economy to achieve a longer activity period for the city centre. The new Urban Bus Terminal should aim to provide facilities for after hours activities. Monitoring and partnering by PNCC with the private sector should occur to ensure buildings are occupied and well maintained.

HERITAGE ARCHITECTURE

Encourage the active protection and management of natural and cultural heritage in the City. Support property owners to apply to the heritage fund for financial assisstance.

RETAIL SPILLOUT

Increase and enhance the opportunities for retail spillout, lease outdoor dining spaces throughout the day and/or night

VACANT TENANCIES

Opportunity for PNCC to take over leases for short - medium - long-term creative tenancies incl. co-working studios, artists-in-residence and pop up stores, contributing to the dynamic, changing nature of the streetscape

FLEXIBLE & MULTI-USE

A calendar of after-hours events e.g. night markets, performance, concerts

UNSYMPATHETIC ADDITIONS

Support property owners to remove unsympathetic additions to significant built form

MAINTENANCE

Work with property owners to develop and enforce maintenance standards

5. Project Implementation

5.1 Cost Estimate

Maltbys have prepared a cost estimate for the proposed streetscape, area totals from this are identified on the adjacent diagram while a detailed breakdown can be found in the appendix.

This is a concept masterplan cost estimate only and is subject to a range of clarifications and exclusions that must be considered in conjunction with the estimate. Items such as inflationary provisions and other specific exclusions noted below should be allowed for separately if required.

This estimate assumes that competitive tenders will be called and that there will be no restriction on access.

The estimate has been based on area by area quantities and square metre rates and costed at rates and prices current as at April 2016. No allowance has been made for increases in labour and materials beyond that date.

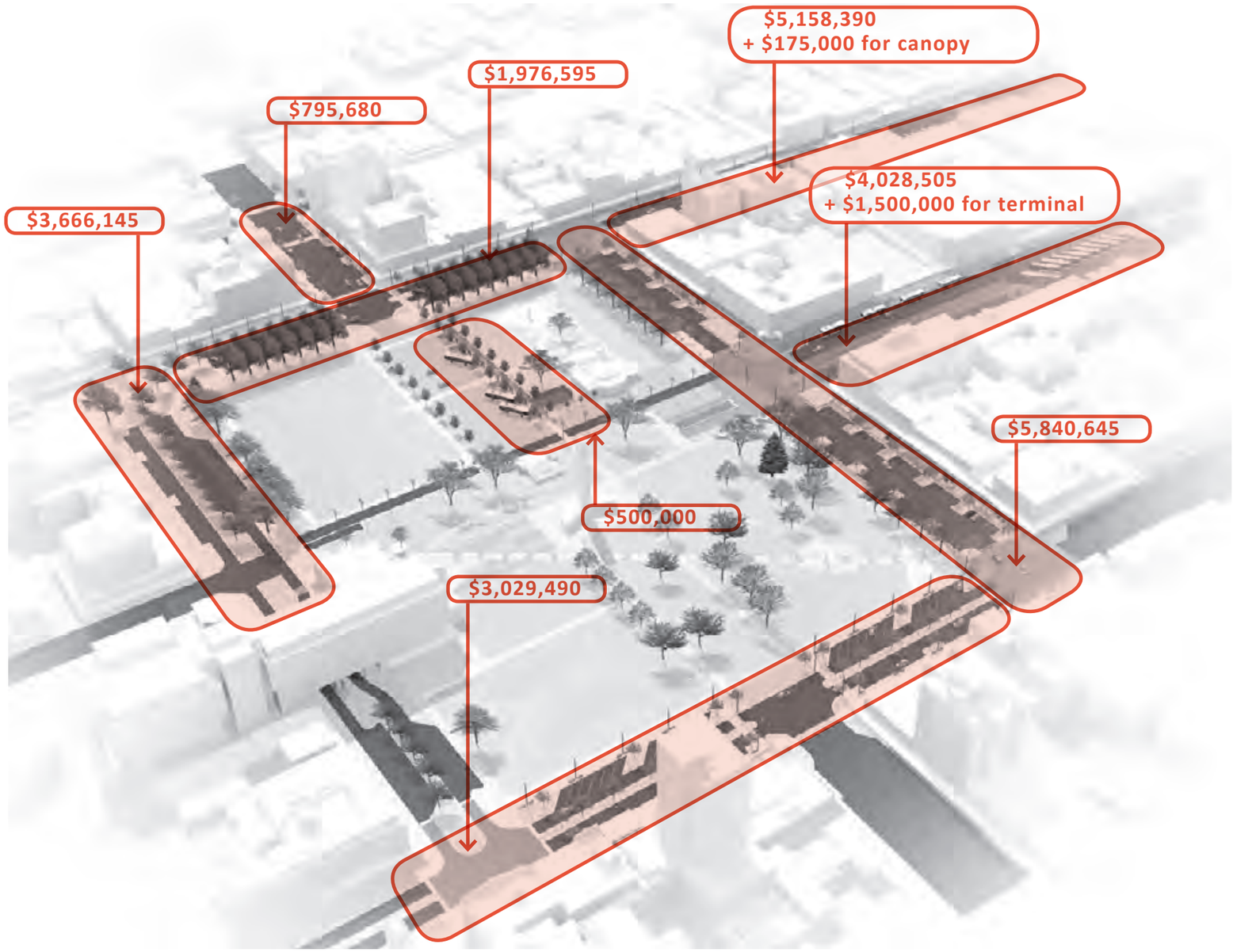
Maltbys recommend that provision be made for escalation until construction starts. A further allowance for escalation during the construction period should also be included.

Historically construction cost escalation has averaged 2.65% per annum over the last ten years with a peak of 6.06% and a low of -2.22%, the last three years have provided a more stable average of 3.3% per annum.

The following items have been specifically excluded from this estimate:

- Building Consent
- Goods & Services Tax (GST)
- Construction Cost Inflation
- Development levies:-
- Disposal of any contaminated soil / Asbestos
- Excavation in rock / significant unforeseen underground issues
- Major infrastructure upgrades

Refer to the estimate detail for additional exclusions.



5.2 Project Phasing

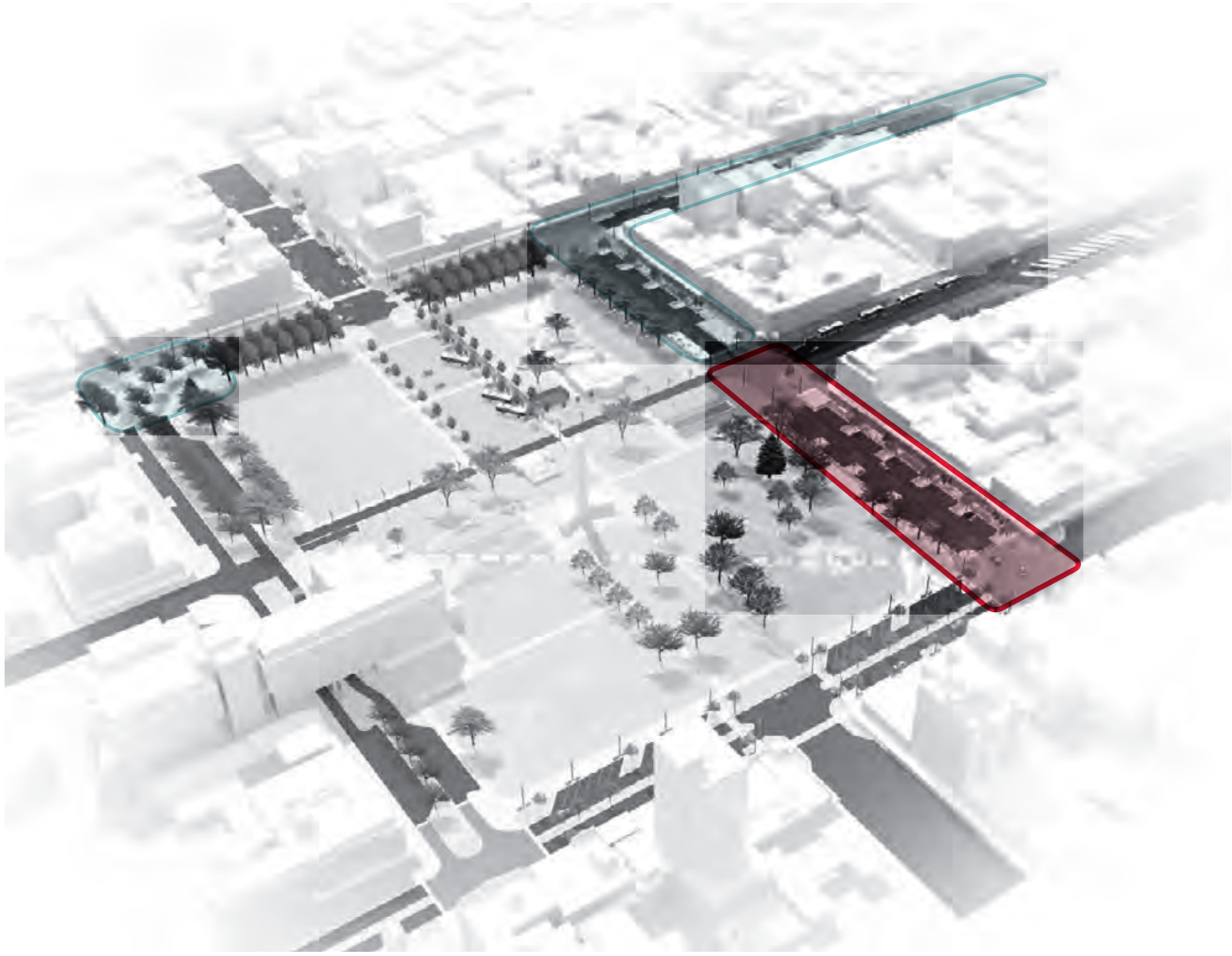
The Streetscape Plan is a large, city-scale project that will need to be implemented over time.

The sequencing of projects has been considered and consulted upon with stakeholders, resulting in a clear desire to progress Square East at an early stage. The rationale behind this first stage is to ensure the core retail focus at The Square is transformed to support retail activities for the city centre and to expand the attractiveness of the retail environment beyond The Plaza, linking north towards Main Street and the Urban Bus Terminal.

Subsequent stages would see the continuation of works along Square East to connect with Broadway Avenue and including the western portion of Broadway Avenue down to The Regent on Broadway. Coleman Mall at the northern end of Square West is a relatively discrete but important project, facilitating connection to George Street that could be delivered in parallel with Broadway Avenue.

As funding allows and priorities are determined by Council, the remaining streets would be implemented over the plan period.

The detailed design and implementation of the two bus terminal projects will be subject to further design scrutiny, costing and agreement with the regional authority and would most likely occur in the medium term.



KEY

	First Priority Projects
	Second Priority Projects

5.3 Streetscape Prototyping Plan

About prototyping

The implementation of the Streetscape Plan will occur over a number of years which allows key ideas to be tested in advance of permanent infrastructure. This prototype plan responds to a number of important issues which were identified through the plan's development. Through prototyping we can reduce uncertainty and accelerate transformation.

Cities are becoming increasingly complex with a more rapid pace of change. Because of this discovery-driven approaches are become used to manage the uncertainty of plans and to achieve more rapid implementation. The streetscape plan includes four prototype locations to test key assumptions in the plan and get the city started on the transformation journey.

The lean start-up approach

The lean start-up approach is used to manage the prototyping process. The Build Measure Learn process (see diagram right) takes the inputs from the prioritised list and follows a structured process which uses another set of questions:

1. Learn- What do we want to find out?
2. Measure- How can we measure it?
3. Build- What do we need to make to answer the question (The minimum viable product?)

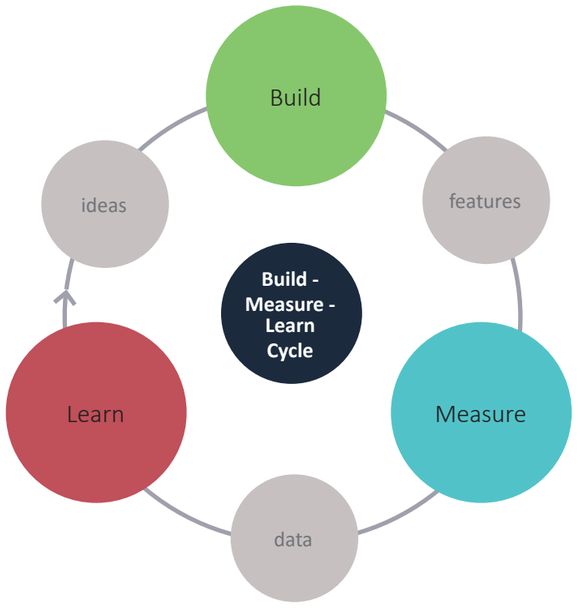
The aim of the process is to learn as quickly as possible with the minimum use of resources.

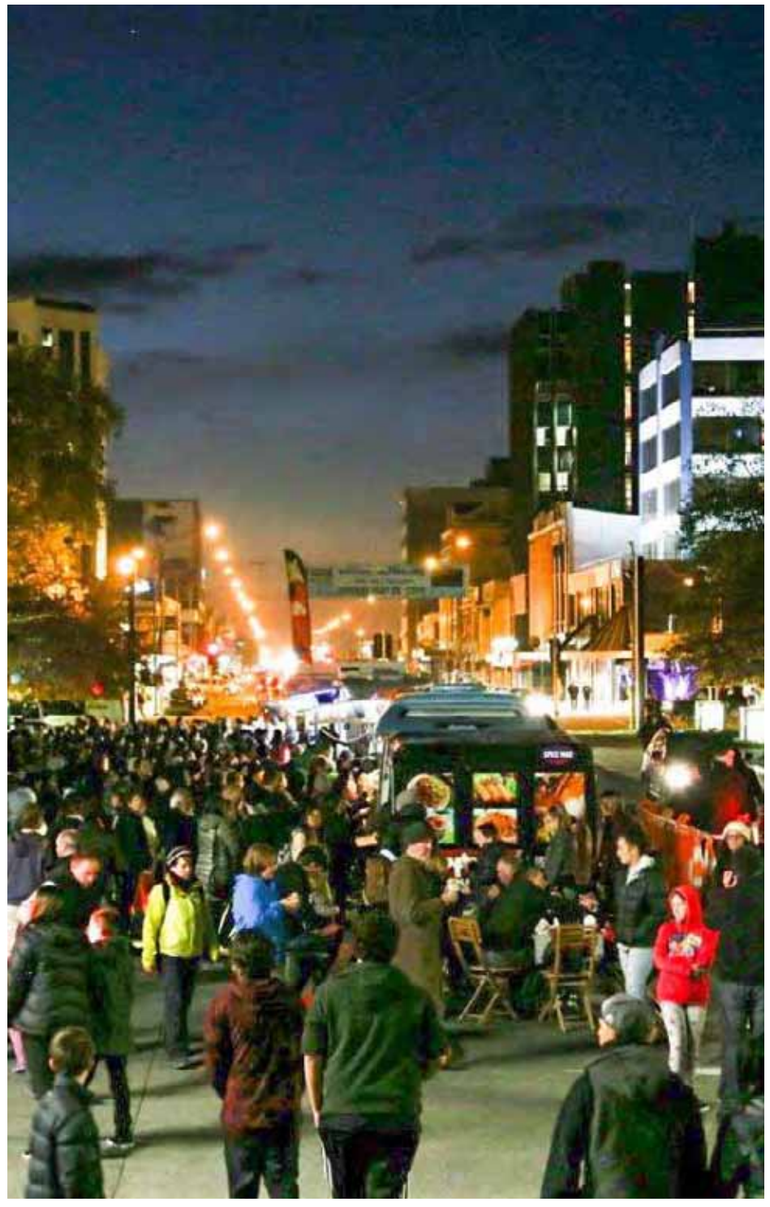
Quality of Prototypes

A judgement call on quality is required to produce the minimum viable product for experiments to ensure that the experiment will lead to learning. Matching quality is an important determinant of whether a prototype will produce the kind of information required for learning. Too low quality prototypes may be counter-productive.

Finally, a project management technique called Kamban is used to manage the process. The kanban process keeps limits the number of experiments and size so that learning is rapid. When an experiment is completed and it supports the assumption it is referred to as validated and another experiment begins. When an idea is not validated it should be changed or removed from the plan to make space for ideas which deliver value.

The lean start-up is an iterative process which reduces waste effort and resources, and sets a course to a 'winning' combination of features for a street.





From principles to prototypes

A. Establish the principles we want to test

Streetscape Principles

1. Reinforce Activity Precincts
   - Cultural and civic
   - Retail
   - Mixed (retail, dining, entertainment)
2. Establish Street Typologies That Support Activity Precincts
   - Street by street (see individual plans)
3. Enhance Townscape and Legibility
   - Extend The Square edge out beyond the green space to better integrate with the built street frontages.
   - Create special places and events that recognise heritage features and clusters.
   - Extend Main Street east into The Square.
   - Strengthen key views and links.
4. A Sequence of Activities and Nodes
   - Establish an appropriate level of public realm activity and interest.
   - Create special places at corners, at mid-block junctions or creating positive experiences through public transport terminal infrastructure.
   - Increase the City's capacity for creativity and display.

B. Establish components we want to test

Streetscape components

1. Flexible streetscapes
   - street infrastructure
   - flex zones
2. Building opportunities
   - significant building
   - event overlays
   - retail spillout
   - vacant tenancies
3. Lighting and technology
   - trees
   - facade
   - awnings street lights
   - technical infrastructure
4. Green infrastructure
   - trees
   - understorey planting
   - lawn
5. Materials
   - carriageway
   - pedestrian paving
   - raised intersections
6. Ground plane

C. Select prototype location

Prototype 1

Night-time economy & Nightscape

Prototype 2

Transport hub as a destination

Prototype 3

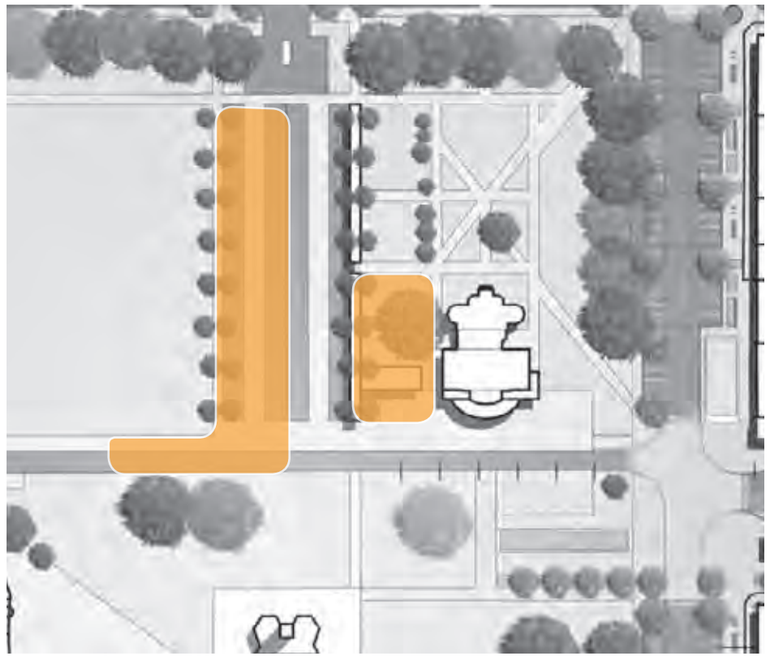
Broadway piazza and market

new Parking layouts

Prototype 4

Flexible spaces Library and Coleman Mall

Prototype 1 | The night-scape & night-time economy



CENTRAL SQUARE

REINFORCING ACTIVITY

DEFINING SPACE WITH LIGHTING

What we want to learn

How social infrastructure and lighting can support the day and night functions of The Square.

Design Principles we are testing

1. Reinforce Activity Precincts

- Reinforce day-time and night-time use of cities central place.

2. Establish Street Typologies That Support Activity Precincts

3. Enhance Townscape and Legibility

4. A Sequence of Activities and Nodes

- Establish an appropriate level of public realm activity and interest.

Streetscape components we should build

1. Flexible streetscapes

- Market layout in central Square / Inter-Regional Bus Terminal space.
- Social infrastructure- relocatable seating, shade, shelter etc.

2. Building opportunities

- Inter-Regional Bus Terminal waiting space which houses flexible streetscape elements- shared with food truck night-market & events.

3. Lighting and technology

- Tree uplighting / fairy lighting to trees. Catenary lighting for market/terminal.

4. Green infrastructure

5. Materials

6. Ground plane

Prototype 2 | Transport hub as a destination

COURTHOUSE AREA

TINY TENANCIES

GREEN INFRASTRUCTURE

What we want to learn

How the southern edge of Main St can contribute to a positive transport experience.

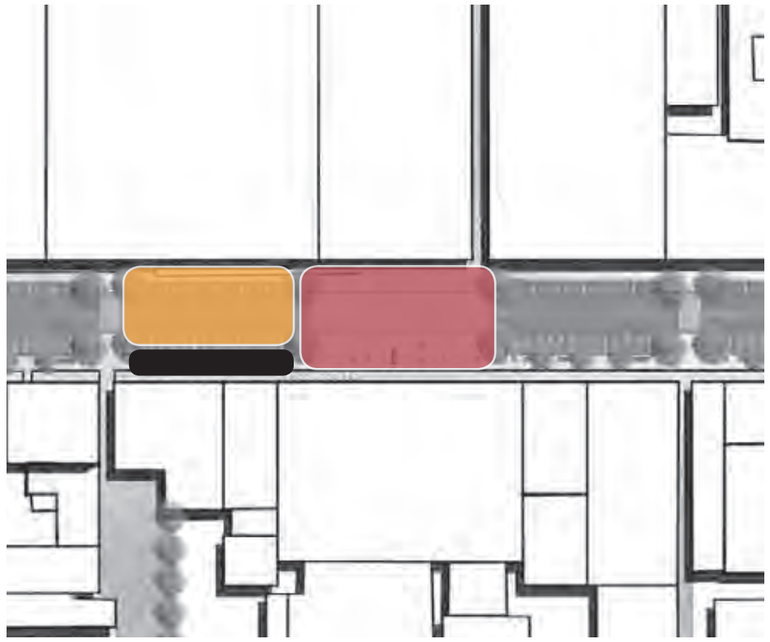
Design Principles we are testing

1. **Reinforce Activity Precincts**
2. **Establish Street Typologies**
3. **Enhance Townscape and Legibility**
4. **A Sequence of Activities and Nodes**
   - Positive transport experience.
   - Activity node for Courthouse and transport
   - Street art to post office wall / Downtown walls.

Streetscape components we should build

1. **Flexible streetscapes**
2. **Building opportunities**
   - Activation of blank Courthouse frontage with tiny tenancies.
   - Removal of unsympathetic additions- old post office
3. **Lighting and technology**
   - Lighting to significant buildings- old post office, Courthouse.
   - Smart city infrastructure- sensors, info.
   - Laneways- safety and creativity.
4. **Green infrastructure**
   - Humanise the space at key points.
5. **Materials**
6. **Ground plane**

Prototype 3 | Broadway piazza / market & parking layouts



BROADWAY AVENUE

MARKET & EVENT SET-UP FOR BROADWAY AVENUE

TEST BROADWAY CENTRAL PIAZZA & ACTIVITY

What we want to learn

How the piazza will work, how Broadway Avenue can support market/ event days, and the footpath and parking reconfiguration for the CBD.

Design Principles we are testing

1. **Reinforce Activity Precincts**
    - Retail spill-out
    - On-street dining
2. **Establish Street Typologies**
3. **Enhance Townscape and Legibility**
4. **A Sequence of Activities and Nodes**
    - Activity node- Piazza activation and programming.

Streetscape components we should build

1. **Flexible streetscapes**
    - Retail spill-out for flex space.
    - Demountable market set-up, access, and street closure.
    - Widened mid-block crossing points
2. **Building opportunities**
3. **Lighting and technology**
    - Lighting to façades
4. **Green infrastructure**
    - Use to define the piazza
5. **Materials**
6. **Ground plane**
    - Parking layout of 90-degree parking
    - Broadway Piazza dimensions

Prototype 4 | Flexible spaces play & social streetscape

COLEMAN MALL & LIBRARY LANE

SOCIAL INFRASTRUCTURE

ACTIVITY NODE

What we want to learn

How flexible spaces can work for play and locations for activity nodes and outdoor dining in Square West/Coleman Mall.

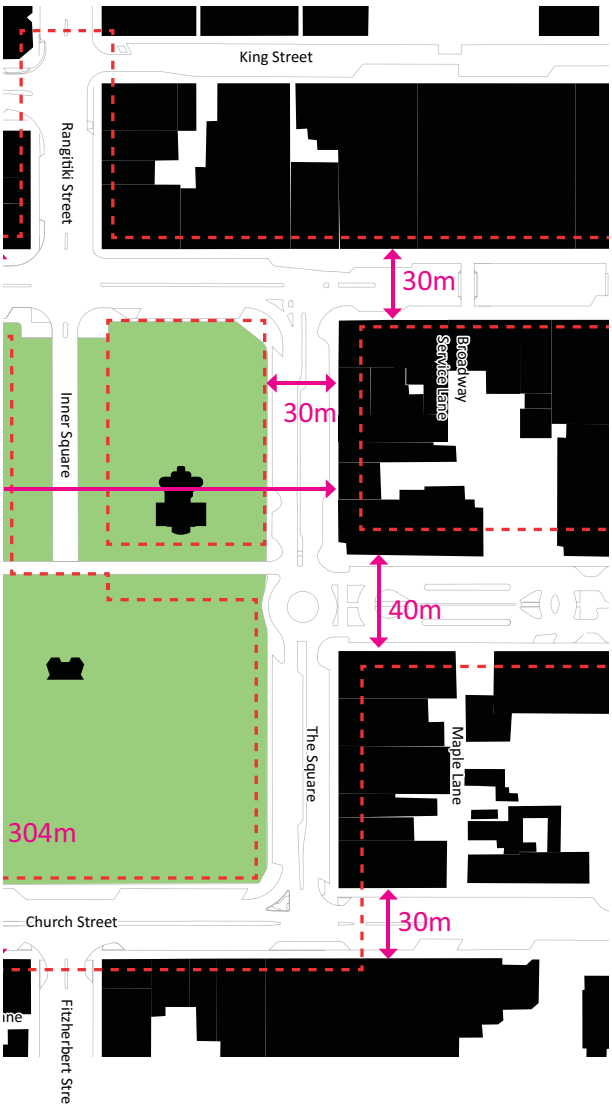
Design Principles we are testing

1. **Reinforce Activity Precincts**
2. **Establish Street Typologies**
3. **Enhance Townscape and Legibility**
4. **A Sequence of Activities and Nodes**
    - Activity node

Streetscape components we should build

1. **Flexible streetscapes**
    - Flexible space- play
    - Flexible space- social infrastructure
2. **Building opportunities**
3. **Lighting and technology**
    - Catenary lighting to outdoor dining areas.
    - Uplighting/Fairy lighting to street and park trees.
4. **Green infrastructure**
    - Use to define flexible spaces and build ‘place’ identity
5. **Materials**
6. **Ground plane**
    - Layout and definition of place

6. Apendix



City Centre Streetscape Plan
Palmerston North

Workshop 1
Summary Report

prepared by

McIndoeUrban/Isthmus/Wilkinson/CCM

prepared for

Palmerston North City Council

22nd October 2015

PALMERSTON NORTH CITY COUNCIL

Palmerston North City Council

City Centre Streetscape Plan

Stakeholder Workshop_16.11.2015

McIndoe Urban/Isthmus/CCM/Wilkinson

Agenda

Arrival and Lunch: 12noon
Start 12.30pm

1	**INTRODUCTION** Welcome, introductions, overview of PNCC context The Streetscape project scope & programme Workshop purpose, process and outcomes	(10 mins)
2	**WARM-UP – 'Questions, Key Intelligence & Bright Ideas'**	(5-10 mins)
3	**ANALYSIS, ISSUES & OPEN DISCUSSION** – Presentation of analysis work to date (by theme) – CPTED (stakeholder input, 5mins) – Key findings discussed with stakeholders throughout	(70 mins)

Afternoon tea (2.00pm)

4	**FEEDBACK ON QUESTIONS, INTELLIGENCE, IDEAS** Identification of common themes Any additional matters or gaps?	(5 mins)
4	**DESIGN BRIEFING – GROUP WORKING** Focus on the 3 categories - movement, culture/life, space quality Stakeholders define key concerns and issues (15mins) Image cards design briefing (15mins per category) What do you want the area to look like?	(60 mins)
5	**FEEDBACK AND WRAP-UP** Groups feedback (3mins per table) Summary observations Next steps	(25 mins)

3:30pm Close

PALMERSTON NORTH WORKSHOP FEEDBACK

QUESTIONS	BRIGHT IDEAS	KEY INTELLIGENCE
• How do we attract people back to the City Centre? • How do we build surprise into the design? • How do we build in sensory experience? • Is there any engagement with the general public about the proposed place-making? (If not, why?) • What is the hierarchy/priorities in terms of development? • How is this hierarchy decided on? • Is $10 million enough to achieve anything significant? • How long will the temporary bus terminal be in the Square? How will planning work with/around this? • How will the interface between people and buses be managed (especially with events)? • Conflict of space outside the courthouse and bus area [feel/public perception]?	• **Process** - Provide clear stakeholder analysis and rationale (without which how can effective decision making occur?) - Urban design must reflect what we want our city to be • **Concentration and Scale** - Require new development to [be in] the CBD (currently new seems to be down Broadway, away from CBD) - Scale: size is important • **Space and Urban Landscape** - Urban gardens, cycling spaces, pedestrian only areas and more pedestrian areas - Improve storefront cosmetics - 'Weather related' outside spaces, comfortable, touching the senses - Broadway: wind breaks, sun shelter, sails • **Activity** - Encourage 'pop up' business, particularly food, for empty spaces - "Broadway on Broadway" – shows, entertaining, buskers, etc - Going to the CBD must provide a unique experience - Carousel in the Square (x2) - Thoughts on ongoing community events, e.g. a permanent screen for films and imaging - Integrating art/adult playgrounds (public sculpture) - Late shopping • **Access and Connections** - Car-less days in central city!! - Use parking intelligently – keep workers out of customer car spaces - Local bus terminal not in Main Street – only stop and pick up (like Intercity bus location) - Improve public transport perception - Safe and consistent transportation in and out of city - Improve people flow between blocks - Improve connections – Boys High, UCOL, through to Square, buses, shops	• Cosmopolitan culture focuses on food rather than alcohol • Carparking and access - Carparking is critical – do not reduce. - Can change, but do not reduce. • Parking made easy and affordable • Speed between Broadway and Church Street • Bring back roundabout at bottom of George Street • Car-less for half of Broadway • People need to feel safe

CPTED

UNSAFE

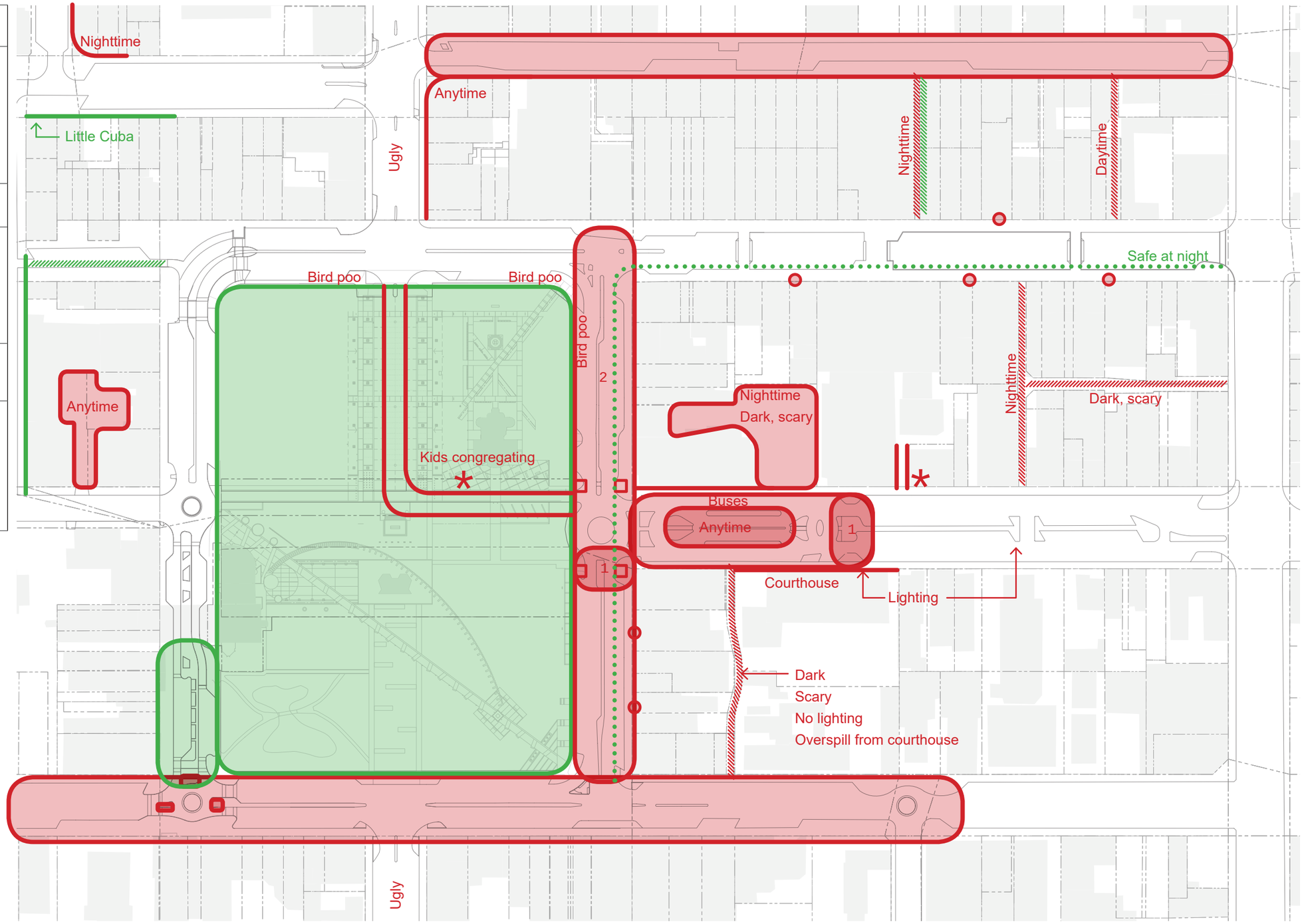
SAFE

ISSUES

1. Pedestrian crossing. Cars don't stop
2. Buses (especially when events taking place)

- Redirection of buses
- Wheelchair access - stony pathways
- Separate consultation

- Beggars
- Dangerous Pedestrian Crossings



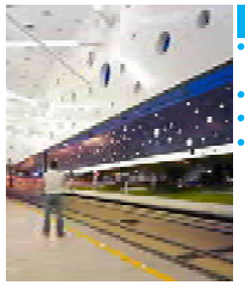
ACCESS AND MOVEMENT

Table 1

1
- *Incorporates heritage and modern life*
- *Conservation and growth together*

2
- *George Street*
- *Coleman*
- *Scale, Warm, Eclectic*
- *Little bit of magic*
- *Someone's art installation*
- *Surprising*
- *Purpose*
- *Street retailers taking ownership*

3
- *Like the level of lighting*
- *The whole street has a consistent theme*
- *Pedestrian*



4
- *Like scale of artwork + dynamic lighting*
- *Railway Station*
- *Building is the artwork*
- *Art/junction combined*

5
- *Like the human scale*
- *Inviting, welcoming, restful, cosmopolitan*
- *It's going places*

Table 2

1
- *Safe space to interact*
- *Encourage positive social interaction*

2
- *Social*
- *Strategic view points*
- *Visible social interaction*

3
- *Sustainable*
- *Active lifestyle*

4
- *Public transportation*
- *Functional and sexy*

5
- *Creative*
- *Point of interest*
- *Vibrant*

Table 3

1
- *Looks busy and vibrant*
- *Good mix of people*

2
- *Spaces in and around Square*
- *Great use of space*

3
- *Excellent to have large pedestrian numbers*

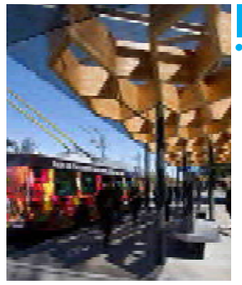
4
- *Colour is great in our grey city*

5
- *Car parks are important*
- *Retail and hospitality do most of their business during limited parts of the week and day, so can't take average car park occupancy and say we have too many as during busy times we don't have enough*

Table 4

1
- *Pretty*
- *Safe*
- *Active*
- *Trees*
- *Profitable*

2



3
- *PT not second class*

4
- *Creative*
- *Individual*
- *Let's copy it*

5

Table 5

1
- *Gorgeous, narrow roads to discourage cars*

2
- *Gorgeous, clever shelter*

3
- *Pedestrians*
- *Gorgeous*

4
- *Entrance way, makes it a location, visual*

5
- *Flowers and umbrellas*

CITY LIFE AND CULTURE

Table 1

1
- *Invites play for all ages*
- *Sculptural*

2
- *Interactive art*
- *Celebrates climate, does not fight it*

3
- *Mysterious/evocative*
- *Inviting*
- *Surprising*

4
- *Like a street park*

5
- *In the middle of car-less Broadway*
- *Small, clear, safe, interactive for children making new friends*

6
- *Cannot be too small*
- *Has to be big to work*

7
- *A tall fountain that captures people from afar*

Table 2

1
- *Market*
- *Increase social life*
- *Healthy eating*
- *Shop/produce locally*
- *Sustainable*
- *Eatery*

2
- *Regular event*
- *Vibrancy*
- *Entertain*

3
- *Family friendly*

4
- *Attraction to the Square*
- *Libraries*
- *Te Manawa*
- *Sport Manawatu*

5
- *Safety*
- *Beauty*
- *Light Sculpture*

Table 3

1
- *Relaxation*
- *People meeting*
- *Socialising*

2
- *Activities in open spaces*
- *Nice lighting*

3
- *Farmers market in the square on a Sunday morning*
- *Anchor activity*

4
- *Night and evening eating*

5
- *Public art*

Table 4

1
- *Identity*

2
- *Options for use*
- *Interact*
- *Water attracts*

3
- *Integrated playfulness*

4
- *Flexibility*
- *Not single use*

5
- *Approachable*
- *Open*
- *Flexible level of interaction / committal*

Table 5

1
- *Typography*
- *Light "Broadway Ave" (like Bakery Lane)*
- *Community and Connectivity*
- *Broadway*

2
- *Everyday use lunch spot you could see being used daily*
- *Add vibrancy*
- *Meeting place between friends*

3
- *Need seating furniture*
- *Greenery*
- *Sophisticated*
- *Colour*
- *Sculpture*
- *Also like banana for interactive sculpture*

4
- *Colour*
- *Art*
- *Changing spaces between day and night*

5
- *Gorgeous, interactive art*

ENVIRONMENT AND SPATIAL QUALITY

Table 1

1
- *Tactile*
- *Create a sense of texture*
- *Asymmetric*

2
- *Looks architectural, like a cathedral*
- *Beautiful*

3
- *Like the lighting*
- *Would sit on that more than grass flush to the ground*

4

5
- *Looks comfortable*
- *Versatile*
- *Nice curvature*

Table 2

1
- *Green space*
- *Bike lane*
- *Beauty*

2
- *Safety*
- *Beauty*

3
- *Options*
- *Flexible*
- *Multi-use*

4
- *Enjoying the sun*
- *Relaxing*

5
- *Art*
- *Green*

Table 3

1
- *Sunshine!*

2
- *Fun*

3
- *People*

4
- *Colour*

5
- *Creating a river*

Table 4

1
- *Versatile*
- *Simple, interactive*
- *^ adaptable*

2
- *Pretty*
- *Appears to be best street in the world*

3
- *Cute*
- *Original*
- *Well-executed*

4
- *Lighting*
- *Safe without being utilitarian*

5
- *Fun looking*

Table 5

1
- *Also like lights in the windows from other images*
- *Colour, lighting, vibrancy, night hot spot*
- *Wander-ability*

2
- *Something people will interact with*
- *Attraction*
- *Like #minions*

3
- *Joint third*
- *Love the different texture and shapes*
- *Joint third*
- *Seating and potential for theatre, singing, etc. (like a stage)*

4
- *Stands for small quirky things over the city*
- *Hidden discoveries*

5
- *Art in the floor*
- *Pretty*
- *Lighting/reflections*
- *Dress the pavement*

NOTES

NOTES

- Consider sheltered rate between the Plaza and Broadway
- Why is the urban bus terminal a terminal and not simply a bus stop - pickup and drop off?
  - Short layover stops for drivers
  - Removing layover would reduce congestion
- Why do buses need to move around the Square if they do not pick up passengers there
- View that best to support cafes around the Square rather than to establish more within the Square
- What is the purpose of the CBD? What is its identity?
  - Personable
  - PN and not somewhere else
  - Welcoming to students
  - Liveable space
  - Space that is actively inhabited on a daily basis
- Why are people not coming into the City Centre? City is bigger but people aren't visiting. Problem is businesses moving out? Why are they leaving?
- Perceptions of safety in the CBD influence some decisions to locate there

PALMERSTON NORTH CITY CENTRE STREETSCAPE PLAN

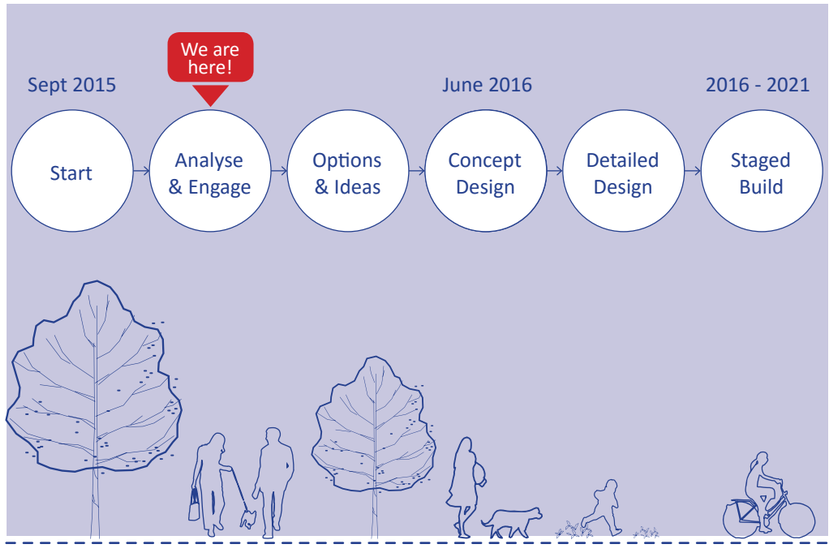
THE PROJECT

The Palmerston North City Centre Streetscape Plan aims to **reinforce the City Centre as a key destination**. It will **celebrate the character of the area**, be easily accessible and **increase connectivity,** with the aim of **creating vibrant and distinctive places for people**.

The Plan is guided by a number of PNCC strategies, including the Urban Design Strategy, the City Centre Framework and the Street Design Manual and, together with a number of other PNCC initiatives, will **contribute toward positive change in the City**.

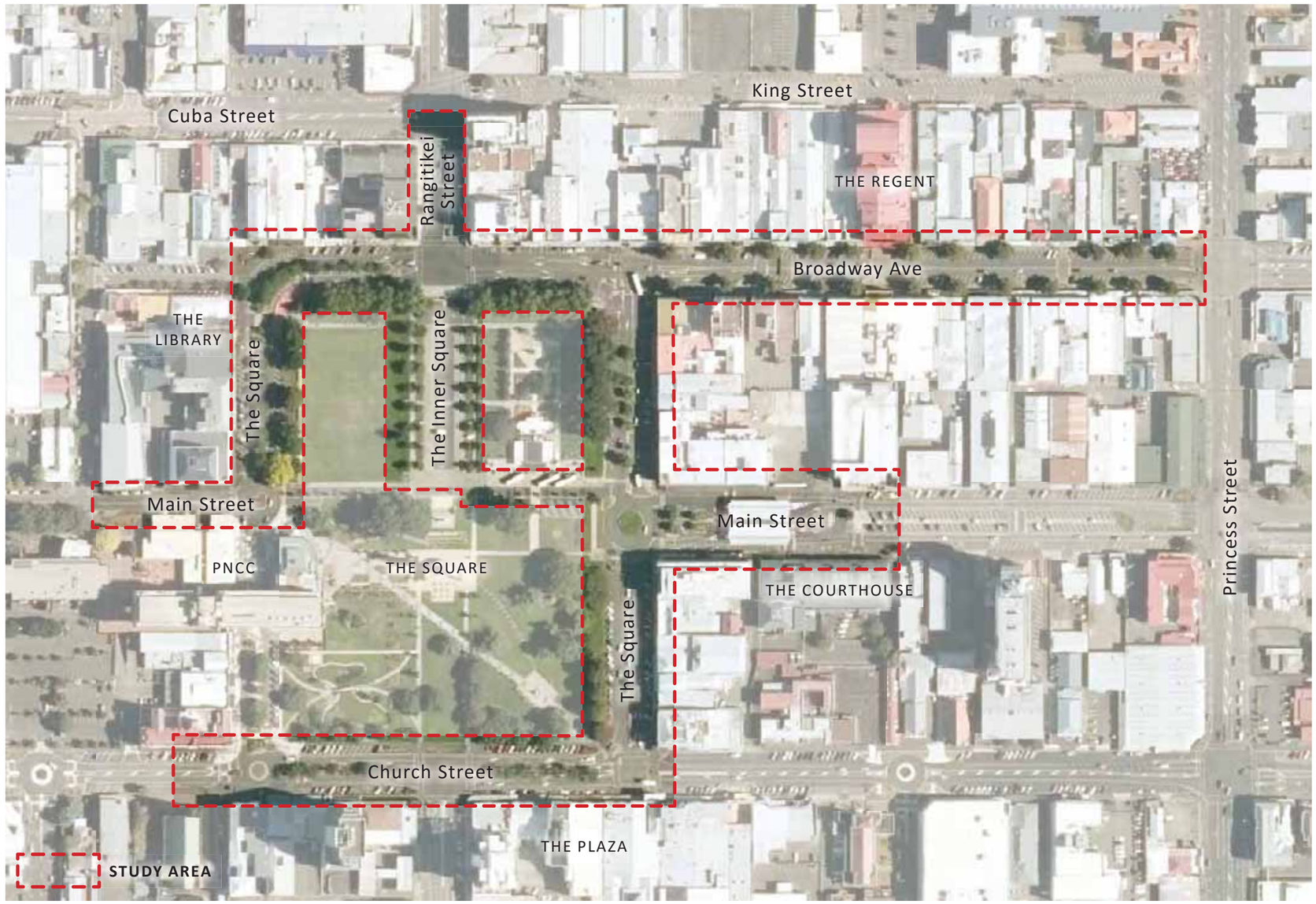
In addition to the PNCC strategies, stakeholder and **community engagement forms an integral part of the design process**, providing critical insight and **opportunities for the City Centre to be shaped by those who live, work and play in it**.

THE PROCESS



THE SITE

The Palmerston North City Centre Streetscape Plan is centred around The Square, addressing the streetscapes of The Square, The Inner Square, Broadway Avenue, Rangitikei Street, Church Street and Main Street. It also includes the Inter-regional Bus Terminal and the Main Street Urban Bus Terminal.



BRIGHT IDEAS!

DON'T CLOSE OFF

BROADWAY PERMANENT

Do you have some great insights or a vision for Palmerston North's City Centre? Feel free to write them down on a post-it note, and stick them to this board, or have a chat with us. We'd love to know your thoughts.

WHAT MAKES THE CITY CENTRE A GREAT PLACE?

- *THE SHOPS ARE DIVERSE E.G. MOVES, FOOD, JEWELLERY, CRAFTS, ETC*
- *ESPLANADE QUALITIES - FOOD, FAMILY ACTIVITY, GREEN SPACE*
- *EVENTS IN THE SQUARE BRING LOTS OF PEOPLE*
- *THE SQUARE IS GOOD - GARDENS ETC*
- *THE SQUARE, TREES, FLOWERS, PEOPLE SPACE*
- *WALKING, BIKE LANES, PUBLIC ART*
- *WHAT HAPPENED TO THE FRESH FLOWERS IN THE WC/ WAS A NICE CHEAP TOUCH*
- *CENTRAL PEDESTRIANISED AREA ON BROADWAY*

IS THERE ANYTHING STOPPING THE CITY CENTRE FROM BEING THE VERY BEST IT COULD BE?

- *FREE LEFT TURNS DIFFICULT FOR VISUALLY IMPAIRED*
- *1. THE PLAZA, 2. PARKING IS A CLAUSTER OF BAD DESIGN, HIGH PRICES, RIP OFF SYSTEM*
- *DO THEIR JOB PROPERLY FIRST TIME*
- *ENCOURAGE INNER CITY HOUSING, APARTMENTS TOO!*
- *THE PRICE OF PARKING. THE EMPTY STORES ON BROADWAY*
- *NEED A TRAM.*
- *DISABLED ACCESS AND JUNCTIONS IS POOR*
- *TACTILE STRIPS HARD FOR BLIND PEOPLE. TACTILE STUDS BETTER.*
- *SLOPED FOOTPATH BY PLAZA - DIFFICULT FOR DISABLED, PRAMS, ET*
- *UNCONTROLLED CROSSINGS - HARD FOR BLIND PEOPLE*
- *NO SHOPS ON BROADWAY THEREFORE NO ONE CARES*
- *FOOTPATH CROSSFALL EXCESSIVE FOR WHEELCHAIRS*
- *CLEANLINESS*
- *FREE PARKING - WHY PAY WHEN CAN GET IT FOR FREE*
- *BROADWAY - PARKING MAKES CYCLING UNSAFE*
- *FEELS 'OVER SHOPPED' FOR POPULATION*
- *BRING MORE PEOPLE TO SQUARE AND ... ... PARKING*
- *POST OFFICE - FACILITATE*
- *REMOVE PED ...*

WHAT WOULD MAKE THE CITY CENTRE BETTER?

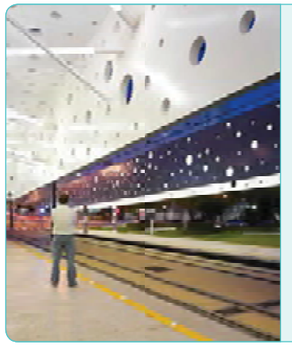
- *RE PLANT THE TREES ON BROADWAY, GET RIDE OF THE FAKE GRASSES, FLOWERS*
- *2 HOURS FREE PARKING ON BROADWAY. PEOPLE WILL WALK TO PLAZA BUT PAST BROADWAY AND SQUARE. THERE'S NOTHING TO LOST - 6 MONTH TRIAL*
- *PARKING SHOULD BE FREE SAT MORN (2 HOURS)*
- *PARKING SHOULD [BE] FREE FOR FIRST HOUR TO COMPETE WITH THE PLAZA*
- *WATER FEATURES, CAFES AND TREES*
- *TAKE BUSES OUT OF SQUARE!!*
- *MAKE BROADWAY A FOOT TRAFFIC STREET ONLY. BRING IN STALLS AND FOOD VENUES. BUSKERS AND PERFORMERS. SEATS AND LEAISURE ACTIVITIES.*
- *CLEAN UP GLASS WHICH GETS STUCK IN WHEELCHAIR TYRES. CUTS.*
- *POP UP SHOPS!*
- *COOKING LESSONS. YADA / NEROS ABERDEEN. > QUALITY ATTRACTS.*
- *MOVE CARS OUT OF SQUARE. LEAVE BUSES.*
- *CREATE A LOVELY 'BOULEVARD' ON BROADWAY*
- *USE THE SUNNY SIDE OF BROADWAY.*
- *OPEN OUR SQUARE FOR PERFORMANCES 'THEATRE' FOR THE STREET*
- *LEVEL-OFF CAMBER OF FOOTPATH FOR DISABLED*
- *MORE RIGHT-ANGLED CORNERS TO MAKE CROSSINGS EASIER FOR WHEELED USERS*
- *CAP THE RENTS FOR THE SHOPS TO ENCOURAGE NEW BUSINESS*
- *POP-UP SHOPS AND STALLS*
- *REMOVE PARKING FEES OR REMOVE PARKING ALL TOGETHER*
- *CROSSINGS FLUSH WITH THE FOOTPATH*
- *CROSSINGS WITH A CLEAR PEDESTRIAN ROW*
- *OUTDOOR PIANO*
- *MORE ... ?*

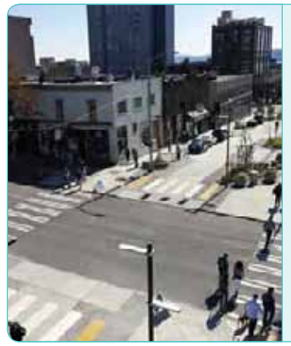
ACCESS AND MOVEMENT

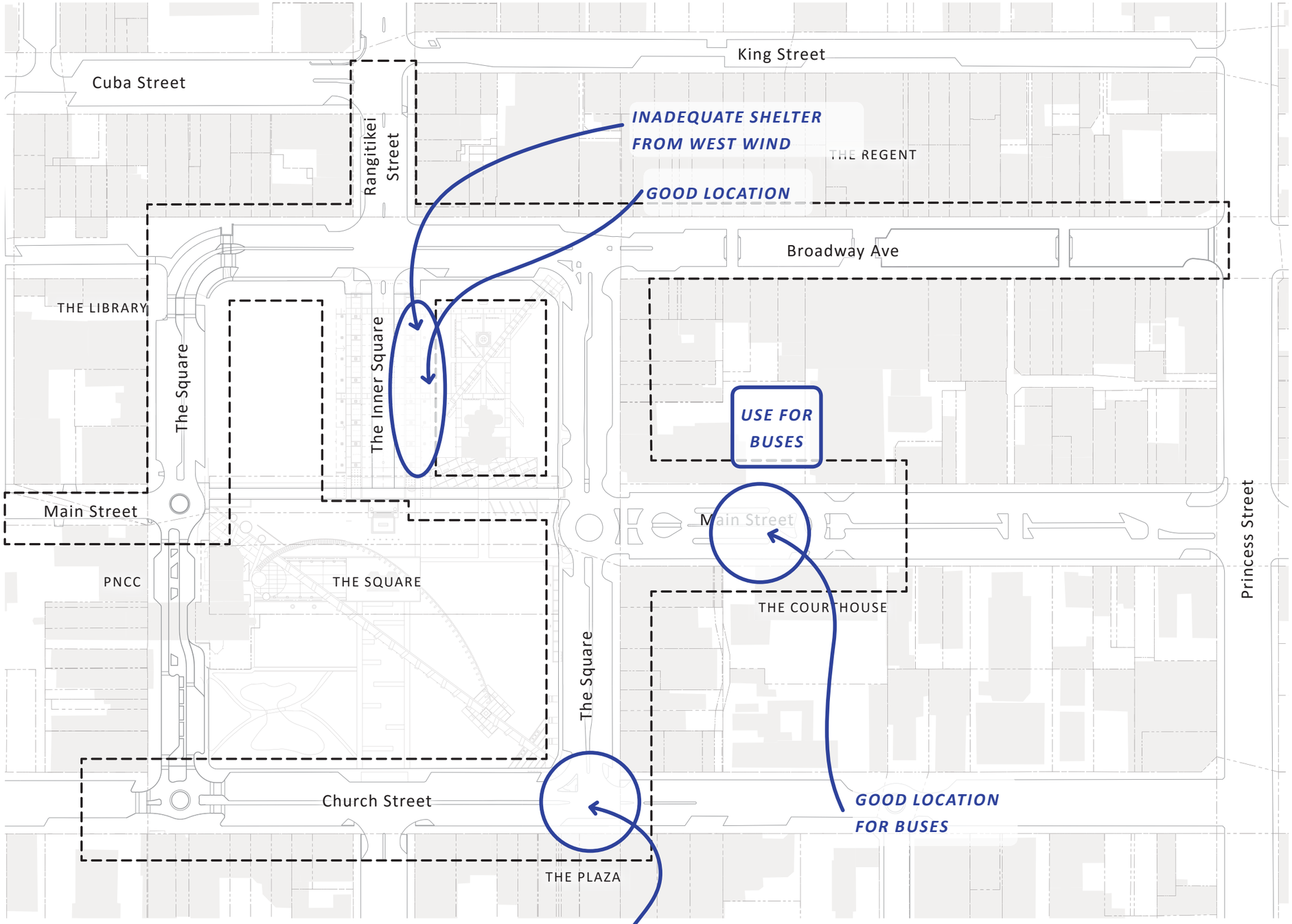
Using the sticky dots provided, please choose two images which best reflect **your vision for access and movement** in the City Centre.

Use this dot for your favourite image and this dot for your second favourite.

If you've any other ideas, please have a chat to us, or make sure to add them to the plan below.







Do you feel safe moving around the City Centre?

Tell us your favourite **safe** spots by marking it with a **green** sticky dot or pen, and if there are any that you think are **unsafe**, show these in **red**.

Types of safety can include actual safety (injury and risk due to physical elements such as trip hazards, vehicular movements or lack of public infrastructure), perceived safety (how you feel) and social safety (such as lighting, cleanliness).

Don't forget to let us know why, so that we can work to make your City a more inviting and safe place for everybody.

NOTES

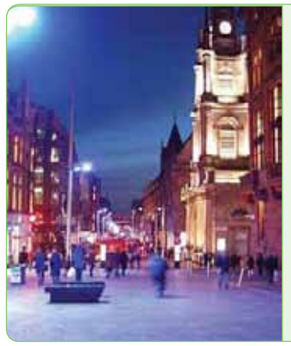
- ***PEDESTRIANS ONLY, NO CARS***
- ***FLEXIBILITY REALLY GOOD AS IS WITH EVENTS ON AT NIGHT***
- ***MOVE ALL BUSES TO MAIN STREET OUT OF SQUARE!***
- ***GREATER PEDESTRIAN PRIORITY ON CROSSINGS FROM PLAZA TO BROADWAY***
- ***TURN BROADWAY INTO A PEDESTRIAN BOULEVARD WITH POP UP OUTDOOR EATERIES AND STALLS***
- ***FIRST HOUR OF PARKING FREE***
- ***HATE THE BUSES IN THE SQUARE***
- ***SOCIAL SAFETY ISSUES IN BROADWAY. PROFESSIONAL BEGGAR NUMBERS INCREASING***

ENVIRONMENT AND SPATIAL QUALITY

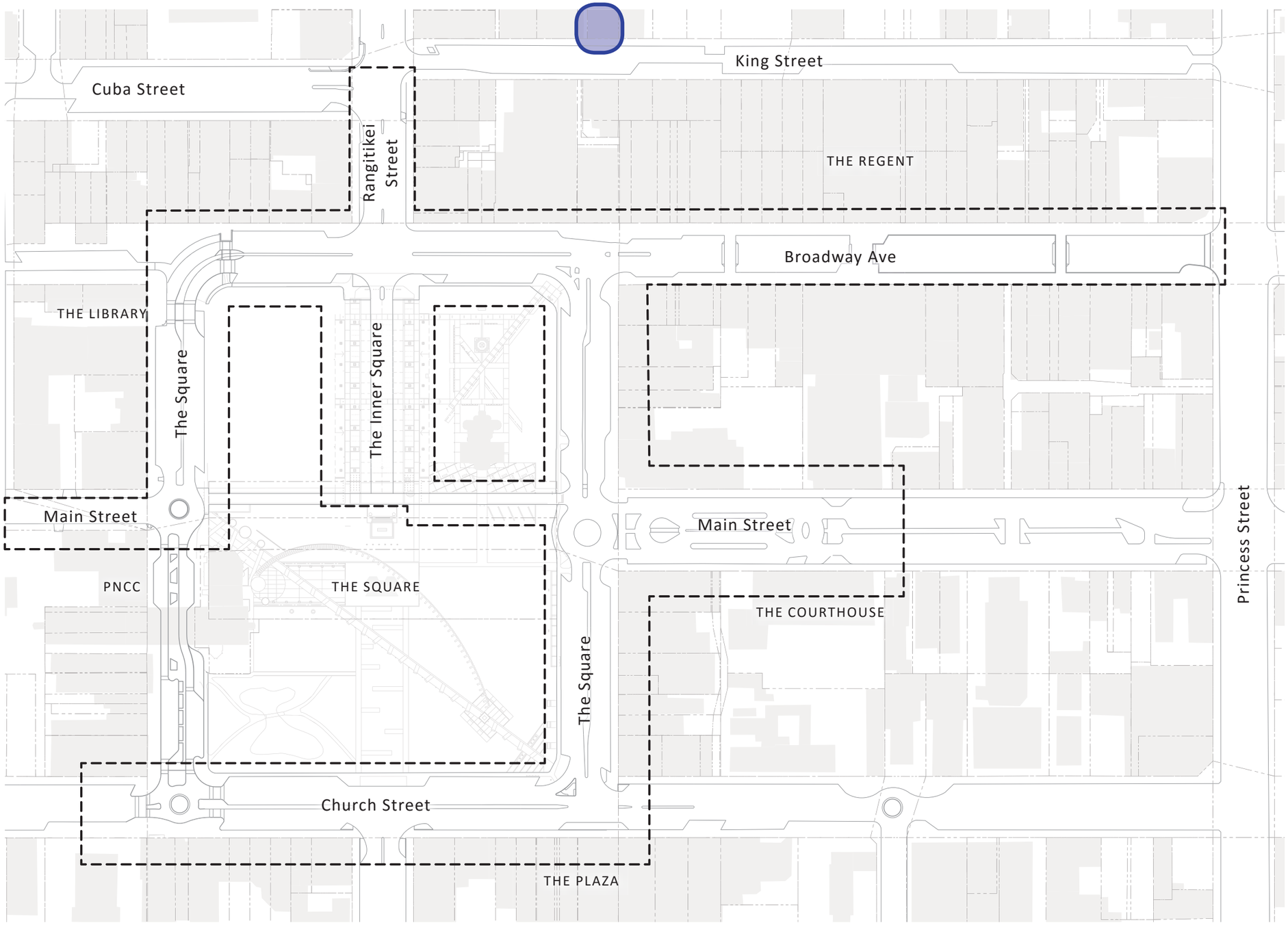
Using the sticky dots provided, please choose two images which best reflect **your vision for the environment and spatial quality** of the City Centre.

Use this dot ● for your favourite image and this dot ● for your second favourite.

If you've any other ideas, please have a chat to us, or make sure to add them to the plan below.



NEED SUN



NOTES

FAKE GRASS > NO SOUL

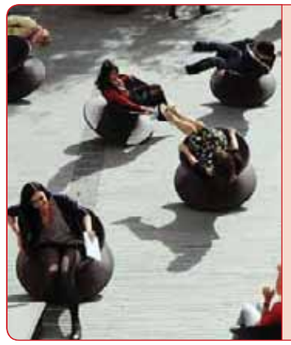
SHEPHERD'S REST LOCATION > BEGGARS TO BROADWAY

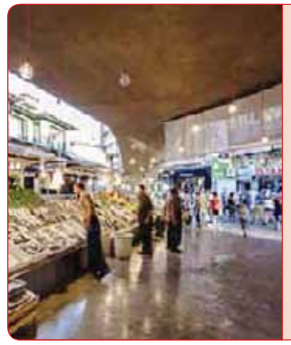
CITY LIFE AND CULTURE

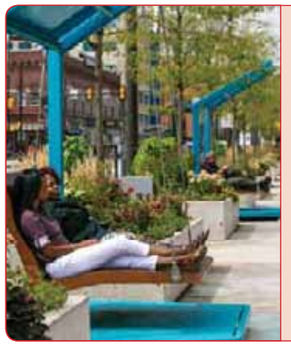
Using the sticky dots provided, please choose two images which best reflect **your vision for life and culture** in the City Centre.

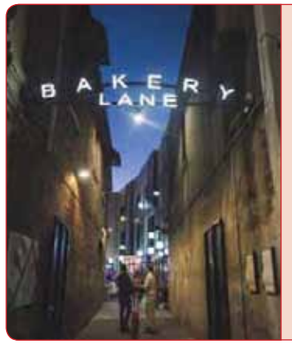
Use this dot ● for your favourite image and this dot ● for your second favourite.

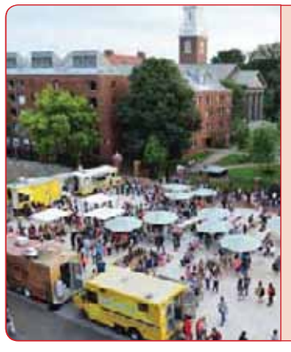
If you've any other ideas, please have a chat to us, or make sure to add them to the plan below.

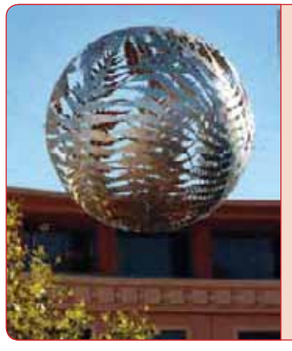


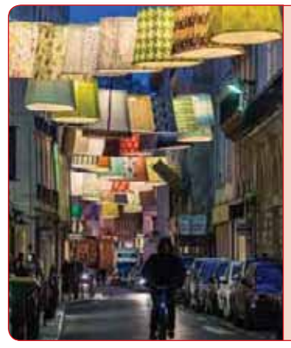


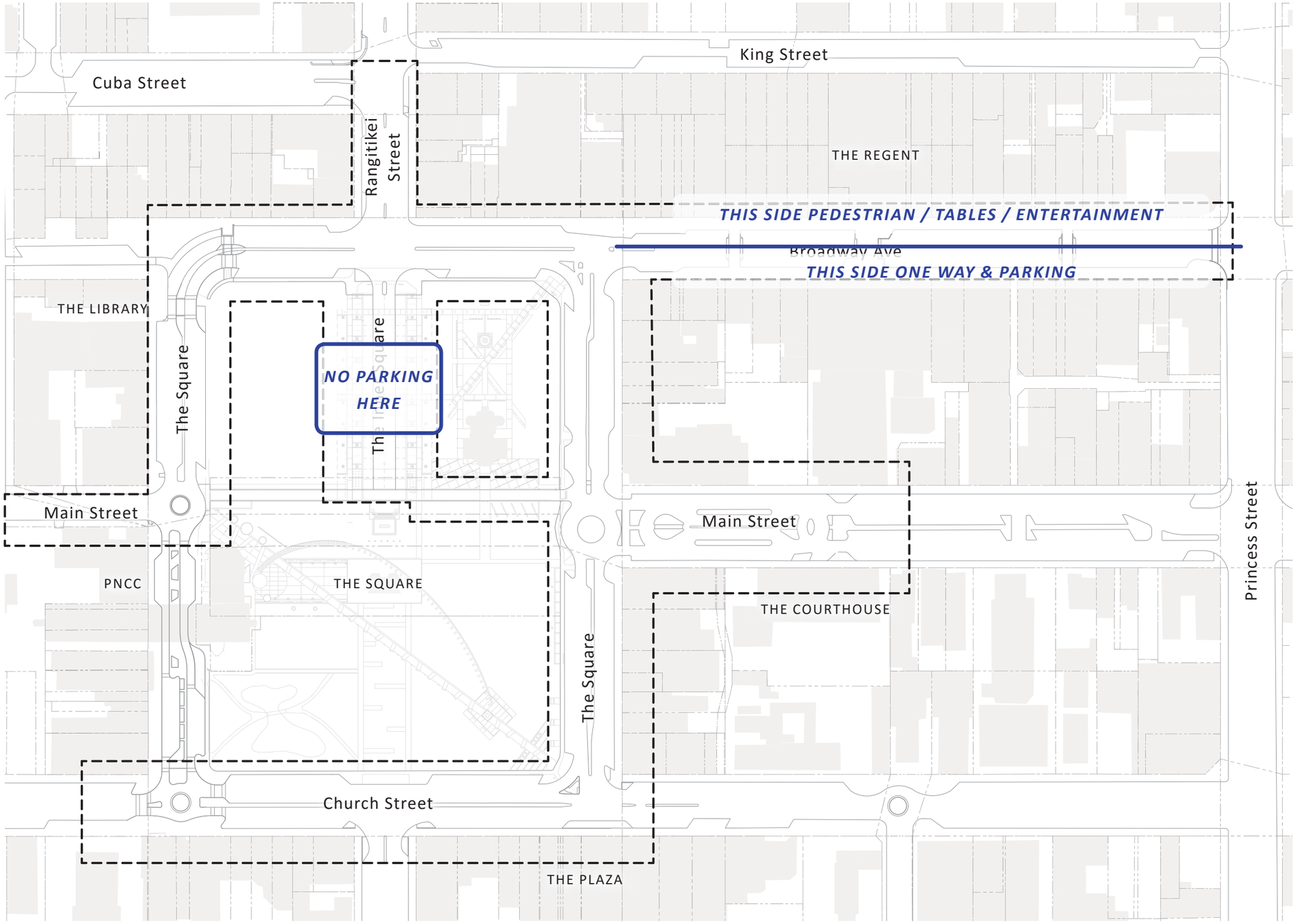






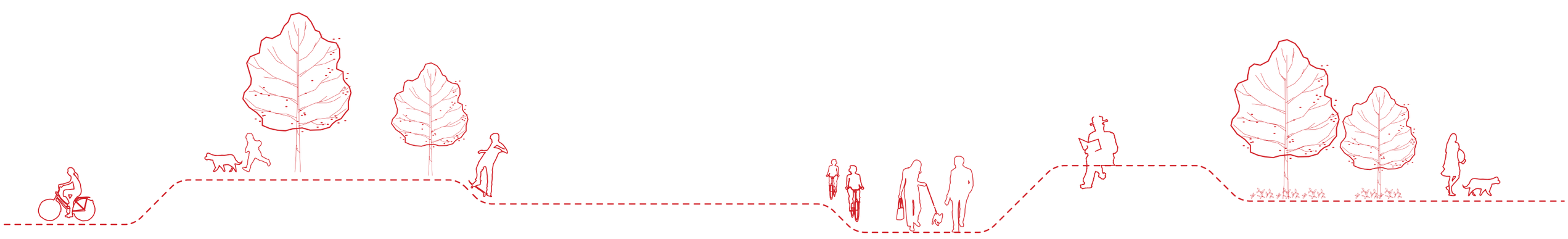






NOTES

- *LIKE WELLY WATERFRONT*
- *- KIDS WITH FAMILIES*
- *- PLAYSPACES*
- *MORE LIKE WELLINGTON*
- *- VIBE TOGETHER*
- *- COMMUNITY - CULTURE*
- *- MIXING SPACES*
- *PLAYGROUND OUTSIDE I-SITE*
- *- INFORMAL E.G. LOGS*
- *ADOLESCENT / YOUTH PLAY SPACES IN THE SQUARE*
- *EVENTS NEED TO START ON TIME!*
- *CHAINSAW CARVING OFF TREE STUMPS LEFT IN CORONATION PARK*
- *VIBRANT HANGING BASKETS - BIG ONES - HANDING FROM ALL THE SHOPS*
- *MORE MUSIC IN CBD*
- *REDUCE RATES FOR BROADWAY BUSINESSES*
- *PEOPLE RESPECT PED. ON BROADWAY REALLY IMPROVED.*



PALMERSTON NORTH

CITY CENTRE STREETSCAPE PLAN

Workshop with PNCC IPT / IRG – Summary Notes

26 February 2016

McIndoe Urban

The following records the issues raised by attendees at the workshop in response to the material presented but does not repeat the presentation content.

1.0 Introduction – Questions and Comments

- How busy is the town at night?
    - Very. Especially young people. Mostly well behaved.
- Are the "red" (unsafe) areas just those areas which people frequent at night?
    - Just a few homeless people are enough to make people feel uncomfortable.
    - Circulating traffic maroons activity in the Square

2.0 Updates

Public Transport (Phil Hindrup)

- 14 buses present during lay over (growth to 17 spaces)
- Operating on a Pulse system – based on transfers
- Pulse system is a "legacy thing" – "we're stuck with it" – "can't be jeopardised"
- What can be done to reduce the number of buses present?
    - Move some buses into Square with long-distance coaches
    - Move Massey services around (i.e. re-think the Massey services)
- Difficult to reduce the "footprint" (of the buses)
- Why does PN have the Pulse system?
    - Legacy
    - Routes are loops
    - Not enough frequency/demand for "off-set" system e.g. half services depart together
    - Would need twice the frequency to support an off-set system
    - Based on 20 min services
    - Partly result of urban form – four quadrants rather than spines
    - Even with a 10 min service (which is not viable) there would be problems with an "off set" system if services arrive late
    - People will not wait 20 min for a transfer when travel times/distances are short and the cost of petrol/private transport is low
    - Reduction in petrol cost means public transport is under pressure
    - Transfers are important because Massey is located on outskirts of city
- Could the city use a larger number of smaller buses?
    - Average number of passengers per service is 15
    - Bus capacity is 40
    - Not efficient re number of drivers
- Can some regional urban bus services come into Square with long-distance coaches?
    - Transfer based service so distance between buses is an issue
    - 3 new services starting July-October (hence the need for 17 spaces)
    - Regional service is just drop-off so not much space occupied
    - Not much spare capacity in long-distance terminal especially in evenings
    - Horizon has recently invested in a plan to improve services (i.e. current system cannot easily change)
    - Likely to be more flexibility in medium term future
    - Currently, may be able to reduce bus numbers to 12 (but not 7 or 8)

Iwi Engagement (Keagan)

- Things to include in the CCSP:

    - Maori iconography
    - References to water
    - References to treatment of storm water/better storm water management
    - Space reserved for large piece of indigenous art
    - View shafts:
        - SW wind
        - NW wind
        - Tararuas/Ruahines
    - Links to river
- Any particular treatment of storm water?
    - Particular elements signalling river
    - Treating water before it is released into the river
    - Signage etc. advertising Iwi's/City's role in River Accord

Broadway Place Plan (Keegan Aplin-Thane)
- Baseline report being prepared (1 year away)
- Broadway character/vitality split at Regent Theatre and Downtown Complex
- Food & beverage (at the eastern end) is increasing
- Retailing (at the western end)
    - Vacancies up 40% (24% allowing for Downtown complex refurbishment)
- Night economy – Berryman's Lane critical for access from Main Street parking
- Emerging food/beverage at Princess St end
- Lower buildings, less enclosure at this (eastern) end of Broadway
- Better visual character (but declining retail activity) at western end
- What does Broadway Place project look like?
    - "Softer" parts of plan (events, management complementing streetscape)
    - Precinct group set up
- Will parties to Broadway Place be involved in CCSP?
    - Precinct group will – they are the most representative body and have a "whole-of-street" perspective
    - There will also be follow-up with other participants

Parklette Programme (GW)
- City Centre-wide programme
- Unsure what output will be
- Some "prototyping"
- Starts 14 March
- Will take direction from CCSP

3.0 Options

Main Street East – General
- Should private vehicles be allowed to use the street as a thoroughfare? Needs testing by PNCC traffic/transport team
- Are pedestrian cross-street connections possible? Yes, they're necessary.
- Has there been any conversation regarding CCTV and the impact of streetscape (on visibility)? Detail like this will come later.
- Buses along narrow footpath on north side of street might detract from business opportunities here, i.e.is there too much emphasis on the south side? Needs new streetscape both sides. More breathing space for the old Post Office would be good.
- Could the northern side of the street accommodate queues for the High Fliers bar? Yes, the footpath is 7m wide here so there is plenty of room adjacent to the building.
- Footpaths need to remain flexible, because the buses will not always be present. Likewise, the High Fliers bar will not always be there.
- There is need to minimise conflict between buses and pedestrians – attempts have been made to close Main Street to private vehicles
    - Degree of conflict depends on time of day
    - What happens when the buses are not there?
    - How does the street accommodate a large number of taxis at night?

    - People rush across the road to get a taxi when it arrives
    - Buses may run till 8.00 pm on the weekends – but still no conflict with taxis
- There is no shortage of public space in the Central City so don't get rid of cars unnecessarily – this would remove desirable activity and make the street seem less like a "piece of town"
- Making the street look like a slower shared environment is preferable to removing vehicles
- Pedestrians and vehicles are not incompatible, it's all a question of emphasis
- Good pedestrian connection between Main Street East and the Square is critical
    - Shared zone would work well at this intersection

Main Street East – Option 1A (no specific comments). Insufficient No. of bus spaces. Not supported.

Main Street East – Option 1B (no specific comments) Insufficient No. of bus spaces. Not supported.

Main Street East – Option 2 (no specific comments) Very poor streetscape outcomes. Not supported.

Main Street East – Option 3
- Where do passengers exit a stacked/waiting bus, given that the timing of transfers is critical?
- How do transfers occur with stacked buses? Maybe transfers could be accommodated with a short delay between departures i.e. a variation on the "Pulse" system
- Deals well with off-peak situation when only 8 buses need to be accommodated.
- This is the preferred option for further development
    - Assessment looks about right
    - Improvement on current situation but not perfect
    - Must be developed with operators

Main Street East – Option 4 (saw-tooth)
- Operators don't like reversing.
- Low score, not worth pursuing

Assessment of current layout in Main Street East
- Operations 10/15
- Design 6/15
- Access 6/15
- Viability 10/15
- TOTAL 31/60 or 50%

Inner Square
- Bring both (bus) companies into one space
- Space around iSite is not used efficiently at present
- Something exciting to liven it up?
- Support for general approach to open up connections to the park (east); reconfigure parking area to better define bus area; and, insert a new structure to provide supporting amenity at the southern end of the terminal.

Broadway Avenue – General Points
- How long should streetscape last? Concrete pavers last approximately 15 years. CCSP needs to build in flexibility so that structure (e.g. curbs, falls) doesn't need to change.
- Northern frontage to Broadway and Square North is quite seamless. We don't want to obscure these facades with large trees.
- Do any of the options favour events like markets? All options need to articulate the length of the street – the (differentiated) central space could be the focus of a market or other event.
- Has there been any thought given to removing vehicles completely from the central portion of the street (i.e. opposite the Regent)? Answer: This would require U-turns at either end and reduce pedestrian amenity. Also, there is a limit to the length of street that could be closed owing to servicing requirements.
- Retailers will protest at the loss of parking.
- Is there a risk of an "empty" central space when there are no organised events? Answer:
    - Prototyping and binging in activities will be important.
    - Managed events are key to the success of the space.
    - The central area is already popular as a lunch space.

    - Downtown Centre will improve their frontage – central space activities will leverage off this

Broadway – Option 1 (no specific comments)

Broadway – Option 2 (no specific comments)

Broadway – Option 3
- Is anything a struggle to resolve?
- Is there a more modest approach, e.g. refreshing/replacing street furniture only, which would get almost the same level of performance? Answer: We need to standardise street furniture (and paving) and must work from a high-quality, contemporary suite of designs. However, priority might be given to the area in front of the Regent, i.e. a smaller area, but done very well.
- What about portable furniture and movable lighting?
- Lost revenue will be an issue if parking spaces are reduced in number (by almost 50%). However, the loss of income from this source must be looked at in terms of wider strategic objectives.
- What will happen with sub-nodes?
    - Significant footpath widening on sunny side of street.
    - Significantly wider crossings
    - Easier informal crossing between right-angle parking
    - 'Place creating' in the centre; other nodes are crossings or gateways
    - Don't want to dilute activity
- Will secondary planting be Council initiated or a community project (or local business initiative)?

Broadway – Option 4
- Leave the street as it is. By comparison with the existing conditions, Option 3 requires a lot of money to be spent without very great improvement.
-

Church Street – Option 1 (sole option)
- Only one through lane – other lanes are for turning
- Wider footpaths would reduce obstruction for mobility scooters etc.
- What form of intersection should there be?
    - Full pedestrian movement including diagonal? No. There is no need for this.
    - Intersection would be specifically designed to maximise service (taking into account that some pedestrians don't wait for green time)
    - Some motorists miss their green time because of the delay in getting traffic through
    - Will need to be modelled together with neighbouring intersection(s)
    - Single lane on Church Street will push traffic out to ring road. This is good, but it will reduce the amount of passing traffic in the Central City (this is bad for retailers?).
    - When cars are stopped on Fitzherbert Avenue the whole two-block section of Church Street can be crossed by pedestrians because there is no moving traffic here
    - Can already do barns-dance crossing – though curb ramps don't cater for this

Square North – General Points
- Southern side with trees is not a pleasant place to park because of birds – is there a way to combat this? Response: Could the parking be removed and replaced (beneath the trees) with vegetation? Maybe the footpath could be relocated further into the Square. Parallel parking would move cars out from under the trees. Improved paving might reduce the need for maintenance and cleaning.
- South side of street needs rethinking. There is scope to look at parallel parking here – unlikely to be any push-back from local retailers. Also, the footpath could be relocated on the same alignment as the footpath on Broadway.

Square East – General Points
- Shared zone at Main Street intersection will assist pedestrians to walk diagonally between Main Street and Fitzherbert

Square West – General Points

- Can cycle lanes be added given that parking is being removed?
- Bird issue with Square-side parking is not as acute here because there is more room between trees.
- Layout is all straight lines, but there is a more curvy layout to the south which helps to slow cars down (i.e. could the curvy layout be extended north?). Response: People cut corners which causes more problems in the curvy layout. Also the city is laid out on a grid and it makes sense to keep to this.

Rangitikei Street – General Points

- Location of cycle lanes is important. Response: Don't need cycle lanes in the Central City because it is a slow zone. Also, 1.8 m wide cycle lane will not accommodate groups of cyclists i.e. school children. Also, needs to be consistent with the wider Rangitikei Street.
- There is an argument for having two lanes into the Square, but is it necessary to also have two lanes out of the Square? Response: This is a necessary contingency.

Concluding Points

- Sculpture Trust needs to be involved with the placement of public art
- Cost:
    - More accurate estimate of costs puts officers in better position re discussion with Councillors
    - How could work be prioritised? By area? By quality? Could there be three different palettes of materials with high, medium and low costs associated? Also, how will capital cost be compared with maintenance costs?
- Outcome of meeting:
    - Directions for developing options
    - More work requested on prioritisation
- Closing comments: "Good job" fantastic" "huge challenges"

END.

Palmerston North City Council

City Centre Streetscape Plan

Stakeholder Workshop_04.03.2016

McIndoe Urban/Isthmus/CCM/GW/Stoks/Maltbys

Agenda

Start 10am

1	**OVERVIEW** Introduction (DM) Workshop programme Overall project programme and steps to finalisation CCSP update – Baseline report, consultation outcomes ***Questions***	(30 mins)
2	**UPDATES** Public Transport (Robin Malley) Iwi engagement update (KAT) Broadway Place Plan update (KAT) ***Questions***	(20-30 mins)

Tea

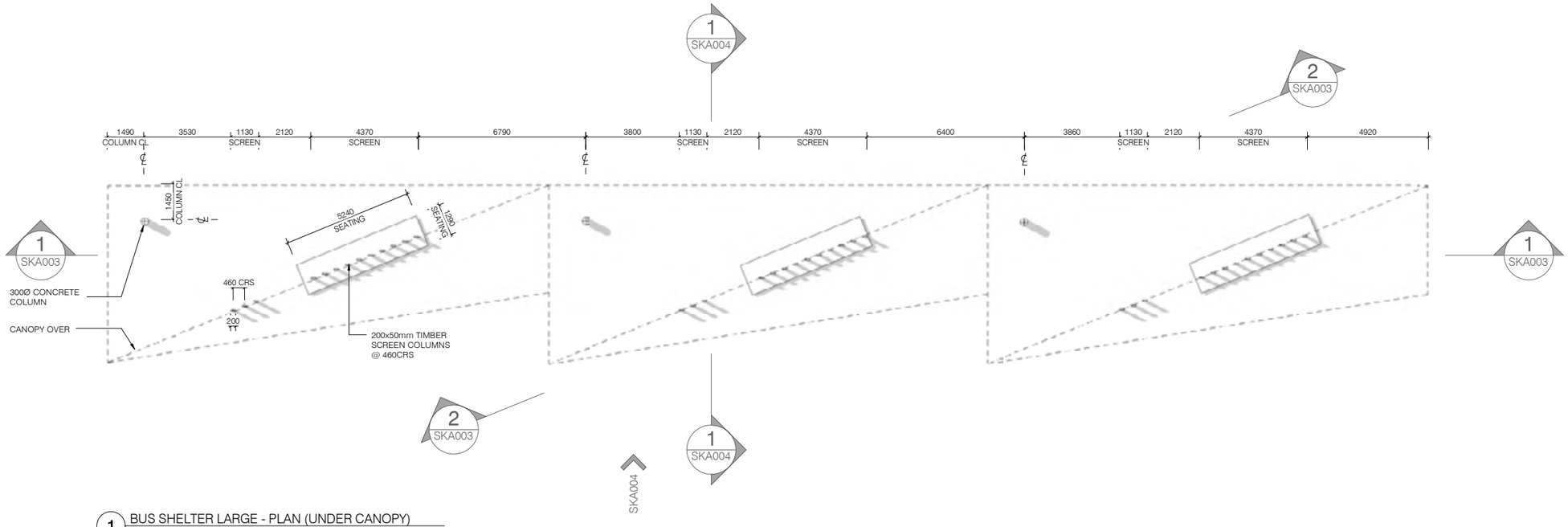
3	**GROUP WORKING** Presentation of design development (overall plan) *Concepts presented on a street-by-street basis incl. bus terminals* *Each street concept to be discussed by groups (15mins ea)* *Using the 3 categories (Access, Activity, Environmental quality)*	(100 mins)
4	**FINAL DISCUSSION & WRAP-UP** Overall observations from facilitators / per table Agree preferred way forward or any further actions Identify and agree prioritisation for implementation Next steps	(20 mins)

1pm Close

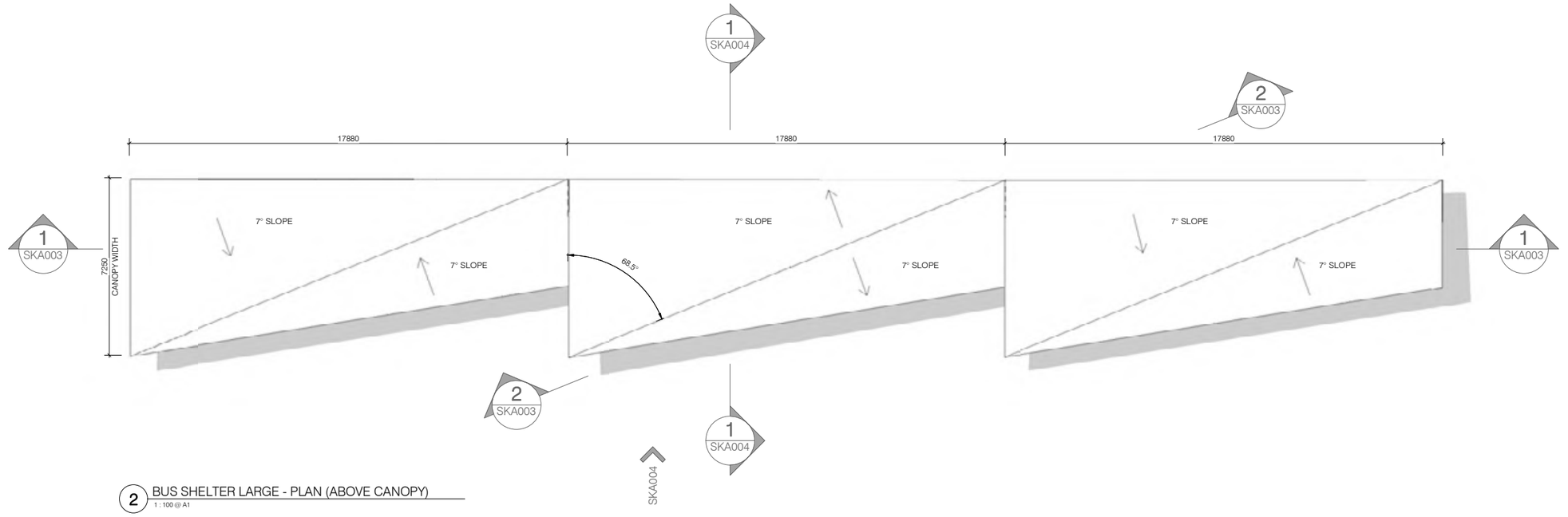
Urban Bus Terminal - Assessment Criteria

		Option 1 - 8 /12 Bays		Option 2 - 17 Bays Linear		Option 3 - 8 Bays + layby area		Option 4 - 17 Bay Sawtooth layout	
1	**Operational**								
	The extent to which:								
1.1	Operational efficiencies for bus services are achieved	2	*Only provides 8 bus bays (17 req'd.). No turning within bus terminal. 2-way mvmnt through achieved. Dedicated bays for independent access*	4	*Achieves full 17 bus bays. No turning within bus terminal. 2-way mvmnt. Dedicated bays for independent access*	2	*Provides 8 bays plus layby/waiting for a further 10 buses. Does not provide 17 bus stops and relies on alternative to pulse timetabling*	4	*Full 17 bays in compact arrnagement allows efficiencybut reversing manouevre is less efficient*
1.2	Flexibility for bus timetabling is provided	1	*Insufficient bays to provide for full pulse timetabling*	5	*Full 17 bays provides for pulse timetabling*	3	*As above, provides for 17 buses but lack of stops reduces flexibility. Layby offers alternative approach*	5	*Full 17 bays provided with full timetable flexibility*
1.3	Ability to easily extend / expand / contract the bus terminal	2	*Terminal could contract to allow one-side only. Cannot easily expand*	5	*Terminal can easily expand/ contract along Main Street*	3	*Model allows for expansion/reduction of layby areas but limited bus stops/terminal expansion*	5	*Easily repeated / reduced bus stop arrangement*
	Sub Total:	**5**		**14**		**8**		**14**	
	Note a minimum score of (3) across each criteria is req'd.	*(Does not meet minimum score)*				*(Does not meet minimum score)*			
2	**Design**								
	The extent to which:								
2.1	Identified streetscape and townscape issues are addressed and a quality and conected streetscape achieved (links to square)	5	*Consolidates bus operational area, reduces impact on street space, creates a compact node, enables views through etc.*	2	*Bus occupation of street width addressed but spreading of terminal for 200m is poor - overly long/poorly integrated for peds.*	3	*Partly consolidates bus activity but requires integration of a potentially low-grade bus waiting area. However this could be well designed.*	1	*Some upgrade with new terminal but generally a poor streetscape achieved through sawtooth occupation of the majority of the street space*
2.2	A notable shift in local area character is achieved	5	*Major shift in character achieved. Delivers combinatoin of place and Movement Street (KD1) as per CCF.*	3	*Major shift in character achieved but not all positive traits*	4	*Major shift in character achieved but layby influences streetscape as vehicle dominated*	2	*Buses still dominate streetspace, vehicle dominated not balanced environ.*
2.3	A high quality, legible terminal structure is achieved that ensures the street space remains active after bus hours	5	*Single landmark structure, uncompromised, legible. Provides pedestrian shelter and defines extent of bus terminal area.*	2	*Terminal length (200m) reduces ease of use / legibility*	5	*Single landmark structure, uncompromised, legible. Provides pedestrian shelter and defines extent of bus terminal area.*	3	*Terminal design will be landmark / notable etc. but not best supported to equivalent bus stop layout*
	Sub Total:	**15**		**7**		**12**		**6**	
3	**Access, Movement and Safety**								
	The extent to which:								
3.1	Accessibility for pedestrians is provided and a pedestrian priority setting achieved that supports laneway conections.	4	*Enhanced ped. environment overall. Terminal bldg. length (80m) may appear daunting and relies on good design of the structure. Shared surface mvmnt separates ped from bus shelter*	2	*Good peds accessibility, terminal broken into 2 creates better human scale. But overall length reduces ped quality / accessibility. Shared surface mvmnt separates ped from bus shelter*	3	*Enhanced ped. environment overall. Terminal bldg. length (80m) may appear daunting. Layby area compromises ped crossing environ.*	1	*Ped environ and access is poor. Prevent cross movement. Vehciles dominate space.Reduced pavement widths*
3.2	Minimal off-site vehicle access or other non CCSP area roading alterations are required to deliver the proposals	5	*Only requires reconfig. of areas within CCSP.*	2	*Extends terminal eastwards beyond CCSP boundary*	3	*Partly extends beyond CCSP boundary*	2	*Requires access off Church Street for plot parking/servicing. However terminal is within CCSP boundary*
3.3	CPTED is addressed	4	*Safety, visibility created / concealment removed / shelter provided / relies on lighting, activation to fully achieve safety over longer period*	3	*Safety, visibility created / concealment removed / shelter provid but 200m length may reduce mgmnt/safety/escape*	3	*Layby turning area may compormise ped safety / perception of*	2	*Ped safety compromised. Visibilty along street reduced.*
	Sub Total:	**13**		**7**		**9**		**5**	
4	**Viability and Policy**								
	The extent to which:								
4.1	Development feasibility is optimised (construction & management costs and bus network costs)	4	*Concentrates development impact,reduces costs etc.*	2	*Greater cost impact through 200m roading alterations*	4	*Concentrates development impact,reduces costs provides lower cost layby area wrto terminal design costs*	4	*Compact bus layout cost efficient…?*
4.2	Consistency with PNCC policy and strategy is achieved	5	*Delivers combinatoin of place and Movement Street (KD1) as per CCF.*	4	*Reduces defnition between place and mvmnt streets due to linearity of terminal/bus mvmnt space*	5	*Delivers combinatoin of place and Movement Street (KD1) as per CCF.*	0	*Place street objective not achieved.*
4.3	Local retail activity is supported and benefits to adjacent buildings/uses achieved	4	*Creates high level of amenity to support quality place making, clear benefits for adjoining retail. Supports High Flyers refurb.*	4	*Extends area of terminal interface with shop frontages but reduces parking outside shop which may impact on businesses*	3	*Supports retail but bus layby area may negatively affect shop front footfall and activity*	1	*Poor public realm amenity result, separation of both sides of the street however some benefit through terminal upgrade. Overall opportunity not optimised*
	Sub Total:	**13**		**10**		**12**		**5**	
	Total Score:	**46**	**77%**	**38**	**63%**	**41**	**68%**	**30**	**50%**

Scoring	
(0)	Does not meet the criteria
Low (1)	Barely meets the criteria /very minor alignment
(2)	Meets the criteria in part
Med (3)	On balance generally meets the criteria (50/50)
(4)	Meets the criteria in most areas
High (5)	Completely satisfies the criteria in every regard



1 BUS SHELTER LARGE - PLAN (UNDER CANOPY)
1 : 100 @ A1



2 BUS SHELTER LARGE - PLAN (ABOVE CANOPY)
1 : 100 @ A1

16/03/2016 2:04:03 p.m.

*(enter the model's file name).rvt

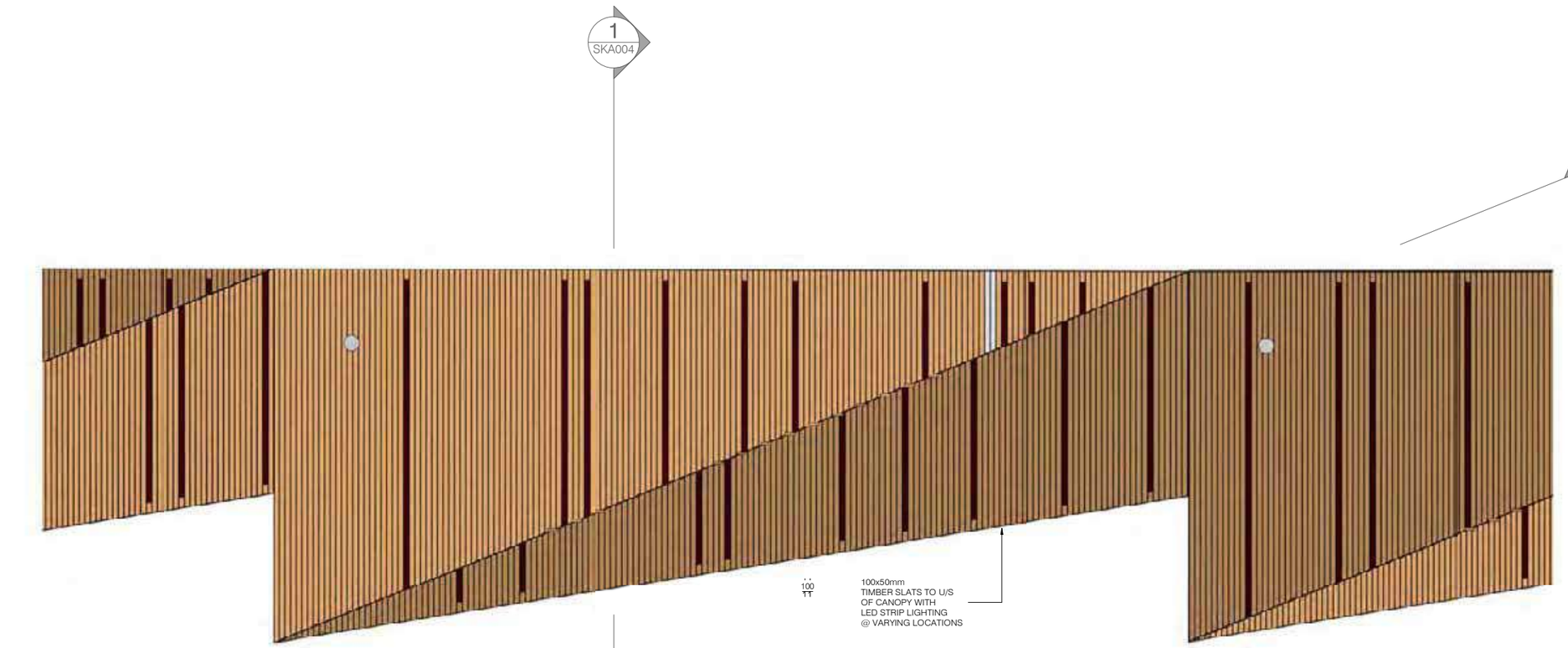
PNCC - BUS TERMINAL

0 m 10 m 20 m 40 m 60 m 80 m 100 m

BUS SHELTER_LARGE - PLANS

1 : 100	Scale at A1
13.05.2016	Date
SKA001	Drawing Number
A	Revision
15035-00	Job Number

CCM ARCHITECTS



1 BUS SHELTER - TYPICAL RCP
1 : 50 @ A1

16/05/2016 2:04:03 p.m.

*(enter the model's file name).rvt

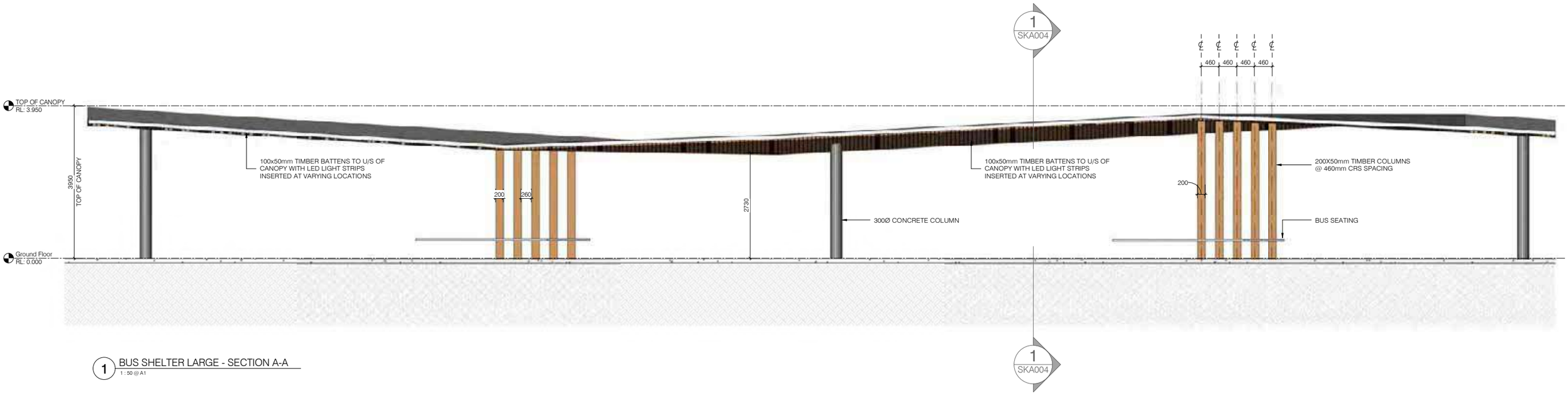
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

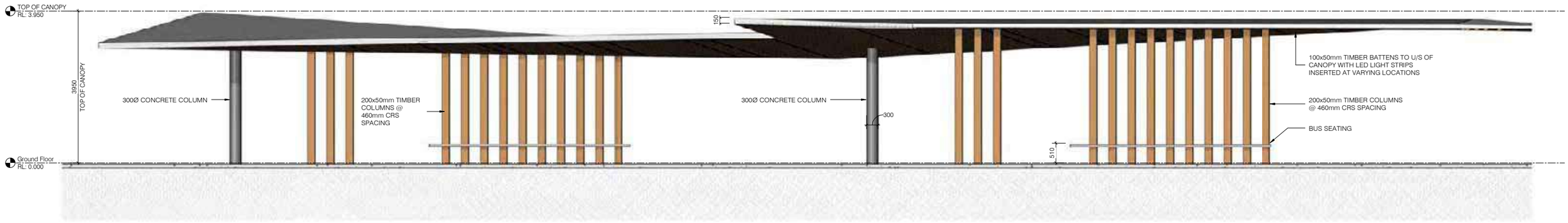
BUS SHELTER_LARGE - PLANS

1 : 50	Scale at A1
13.05.2016	Date
SKA002	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 BUS SHELTER LARGE - SECTION A-A
1 : 50 @ A1



2 BUS SHELTER LARGE - SECTION B-B
1 : 50 @ A1

16/05/2016 2:04:04 p.m.

*(enter the model's file name).rvt

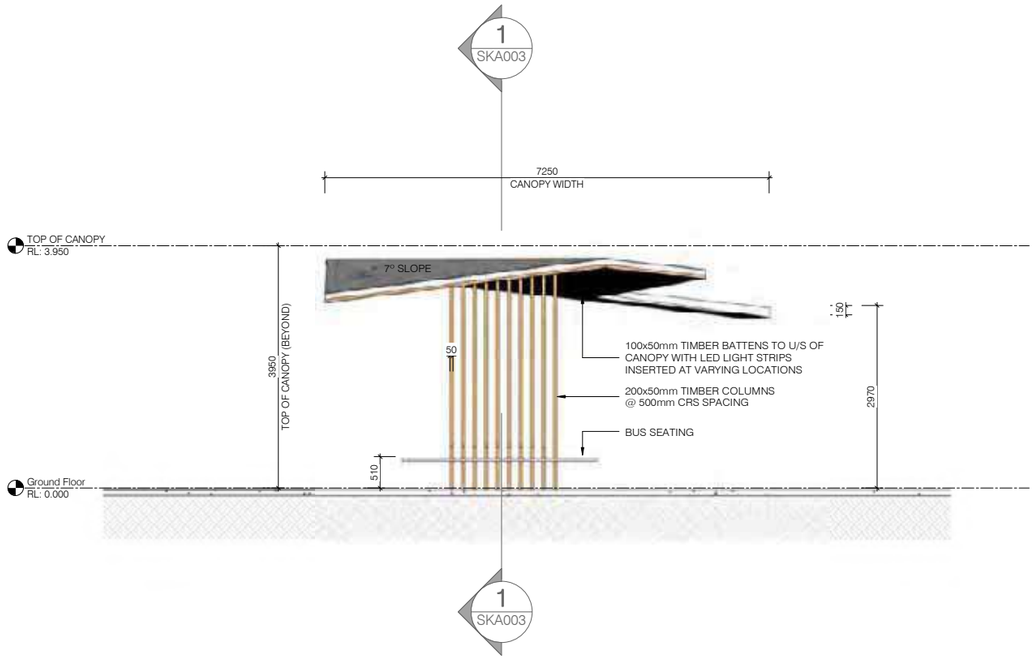
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

BUS SHELTER_LARGE - SECTIONS

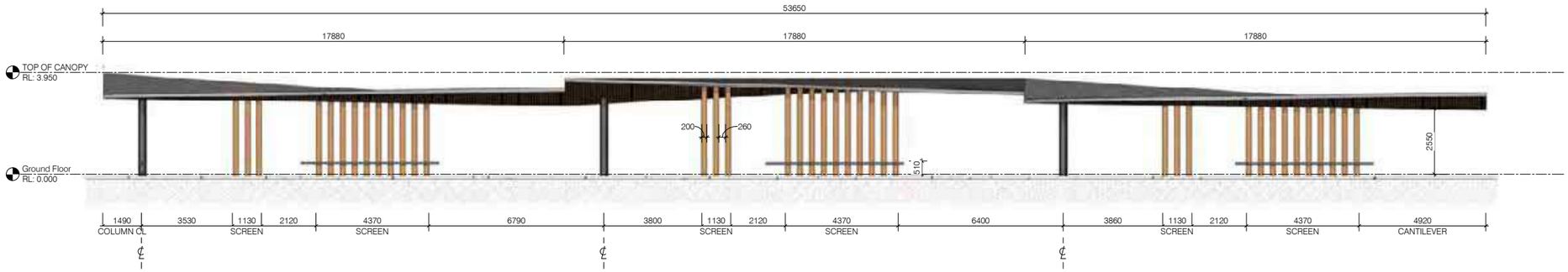
1 : 50	Scale at A1
13.05.2016	Date
SKA003	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 BUS SHELTER LARGE - SECTION C-C

1 : 50 @ A1



2 ELEVATION A - LARGE SHELTER

1 : 100 @ A1

16/05/2016 2:04:05 p.m.

*(enter the model's file name).rvt

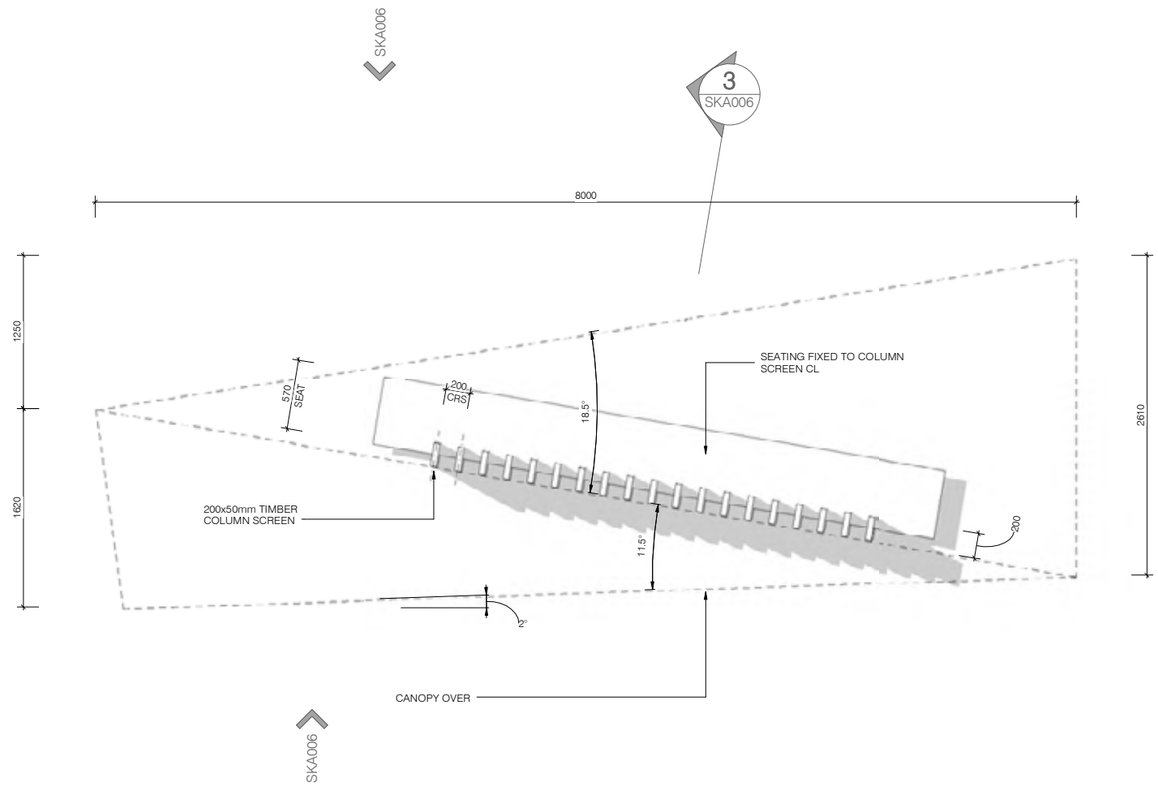
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

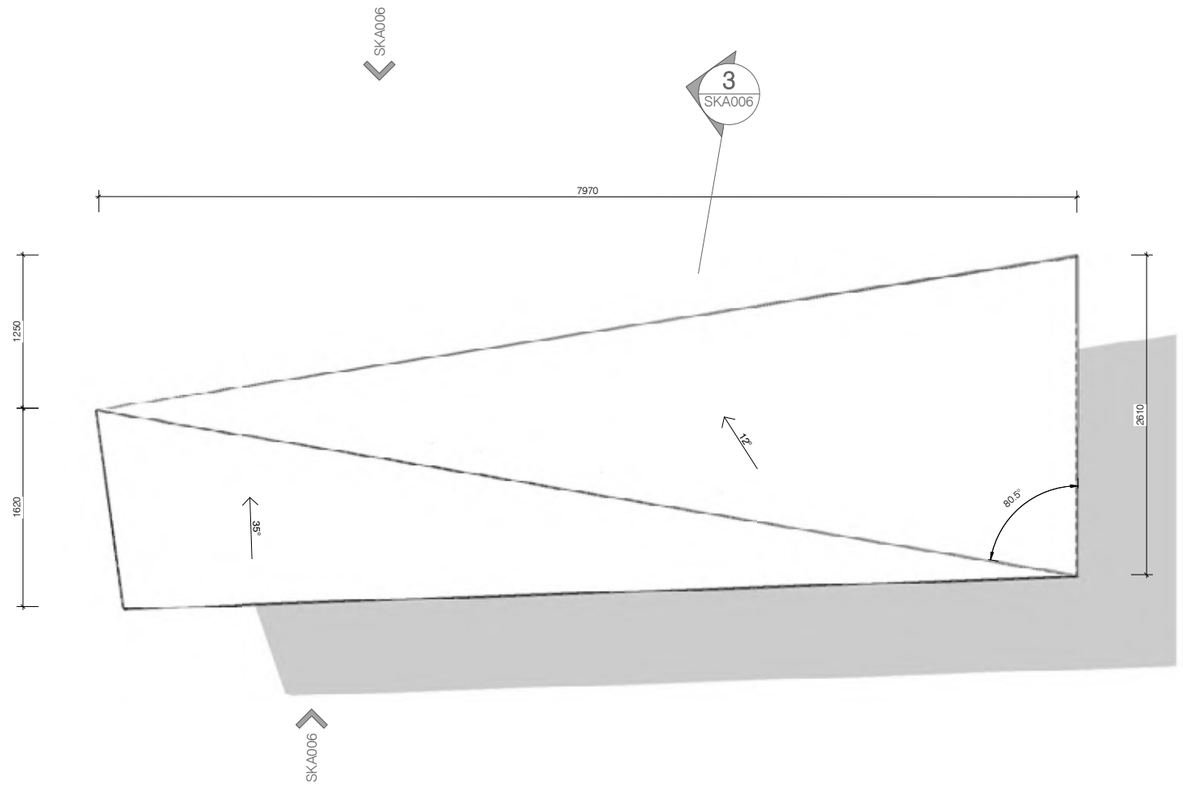
BUS SHELTER_LARGE - SECTION & ELEVATION

As indicated	Scale at A1
13.05.2016	Date
SKA004	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 BUS SHELTER SMALL - PLAN (UNDER CANOPY)
1 : 25 @ A1



2 BUS SHELTER SMALL - PLAN (ABOVE CANOPY)
1 : 25 @ A1

16/05/2016 2:04:06 p.m.

*(enter the model's file name).rvt

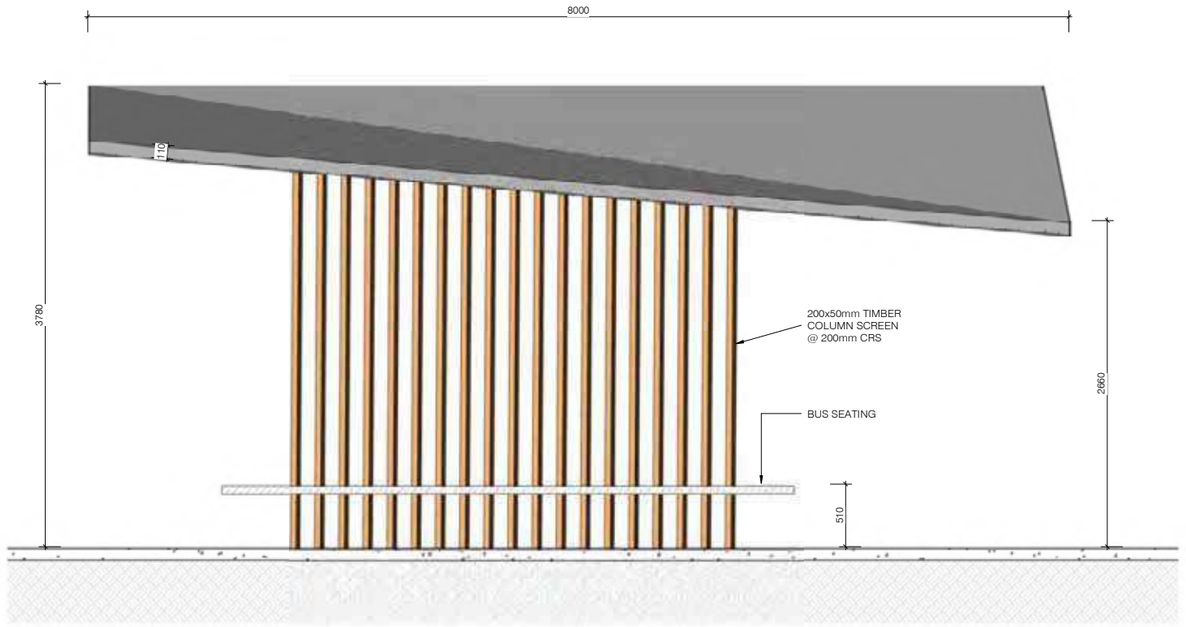
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

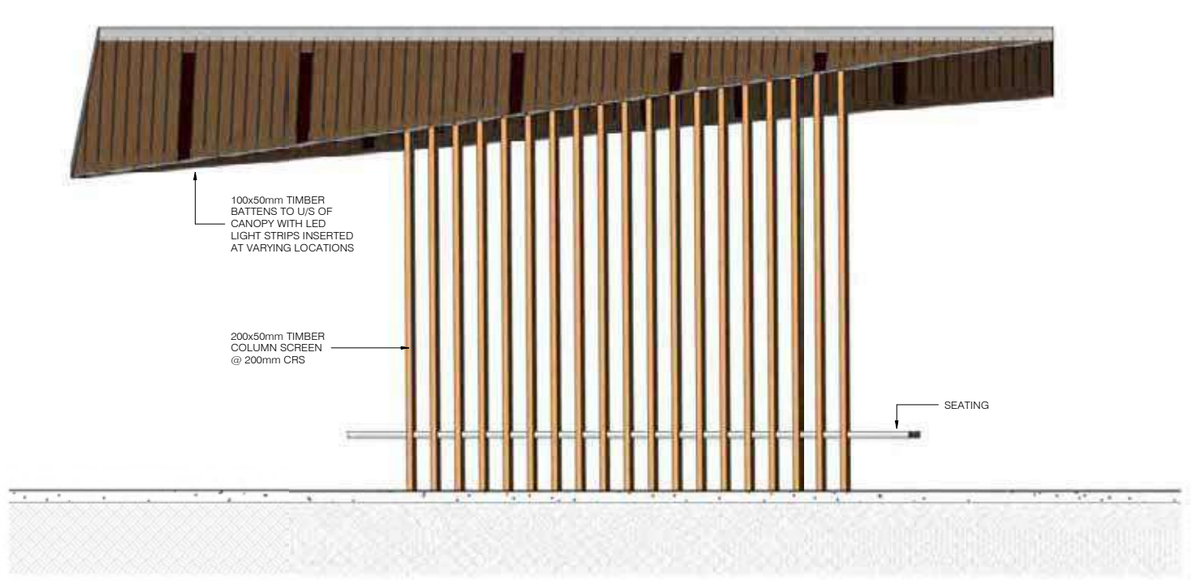
BUS SHELTER_SMALL - PLANS

1 : 25	Scale at A1
13.05.2016	Date
SKA005	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 ELEVATION A - SMALL SHELTER
1 : 25 @ A1



2 ELEVATION B - SMALL SHELTER
1 : 25 @ A1

3 BUS SHELTER SMALL - SECTION A-A
1 : 25 @ A1

16/05/2016 2:04:06 p.m.

*(enter the model's file name).rvt

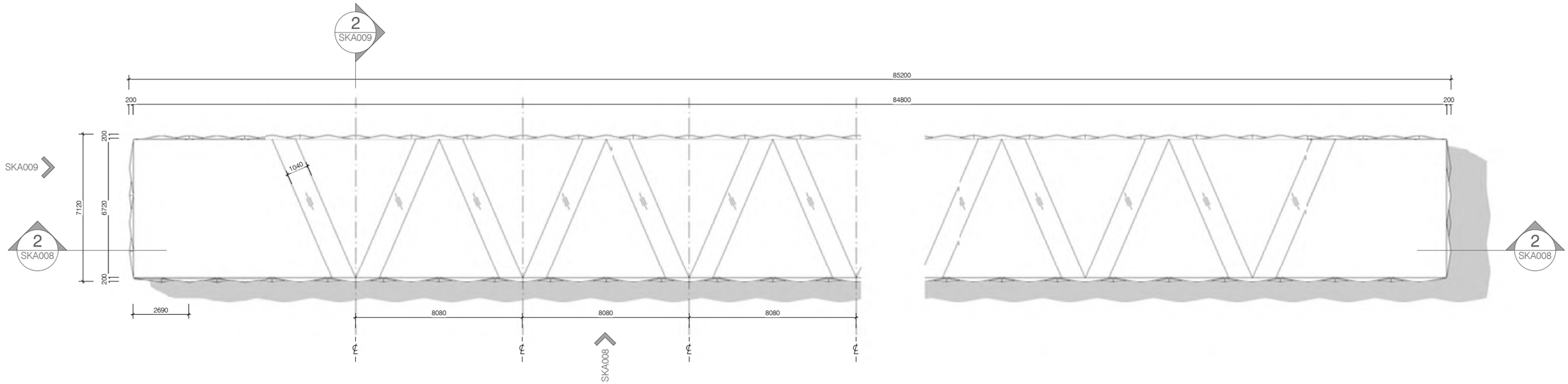
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

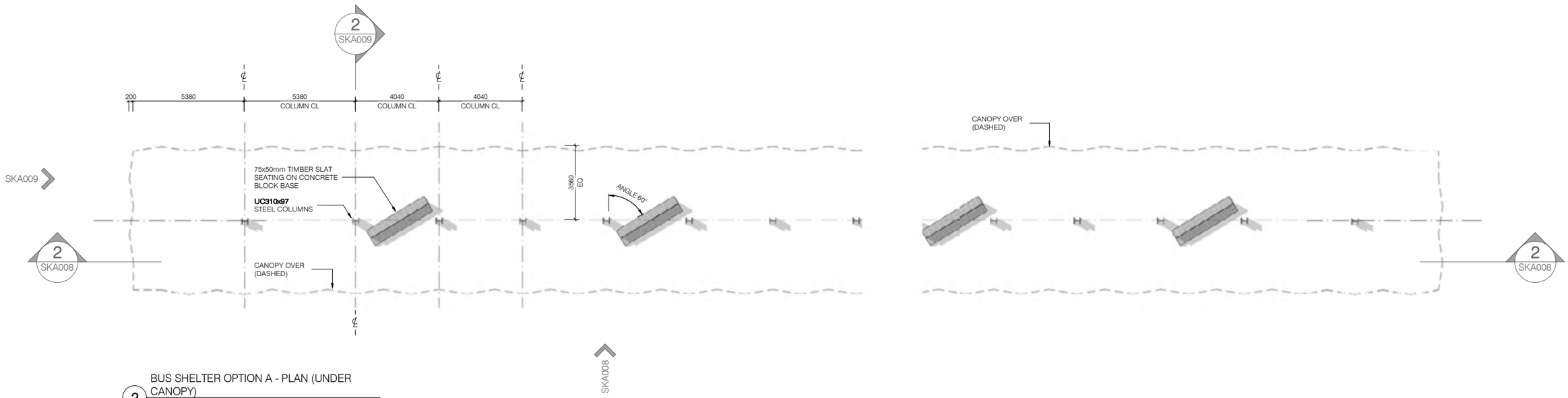
BUS SHELTER_SMALL - ELEVATIONS & SECTION

1 : 25	Scale at A1
13.05.2016	Date
SKA006	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 BUS SHELTER OPTION A - PLAN (ABOVE CANOPY)
1 : 100 @ A1



2 BUS SHELTER OPTION A - PLAN (UNDER CANOPY)
1 : 100 @ A1

16/05/2016 2:04:07 p.m.

*(enter the model's file name).rvt

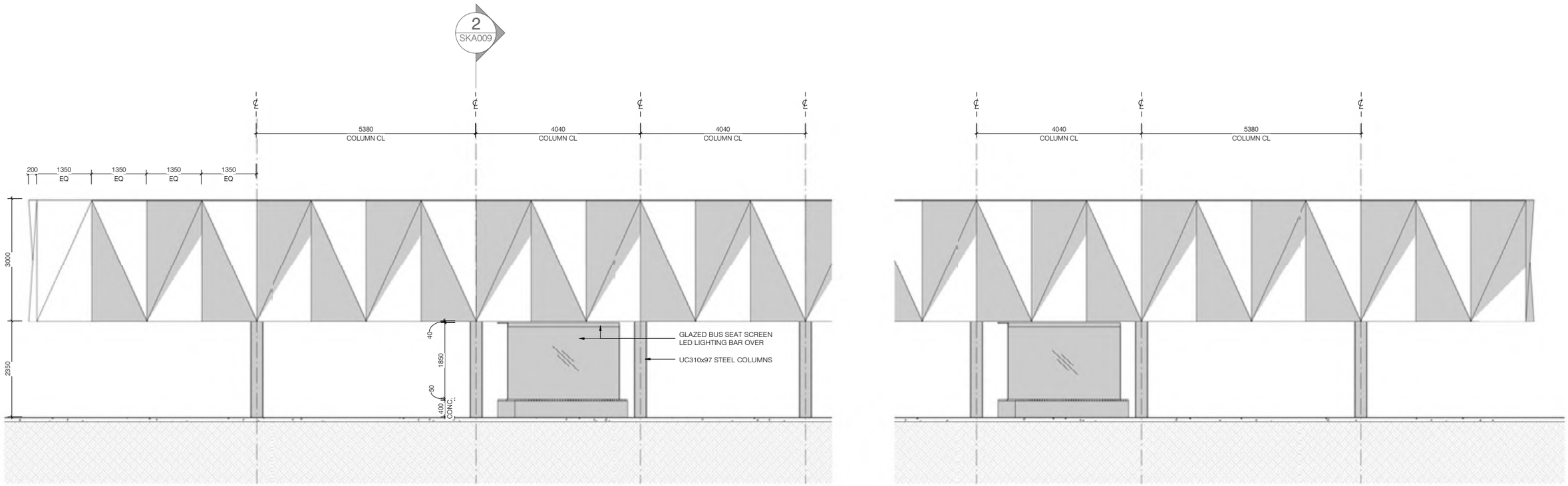
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

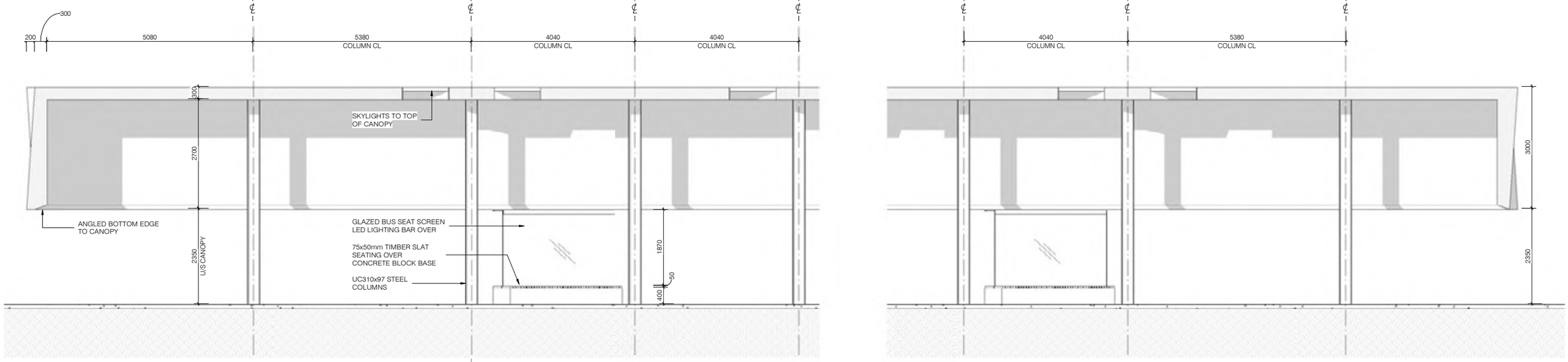
BUS SHELTER_OPTION A - PLANS

1 : 100	Scale at A1
16.05.2016	Date
SKA007	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 ELEVATION A - OPTION A SHELTER
1 : 50 @ A1



2 SECTION A-A - OPTION A SHELTER
1 : 50 @ A1

16/05/2016 2:04:08 p.m.

*(enter the model's file name).rvt

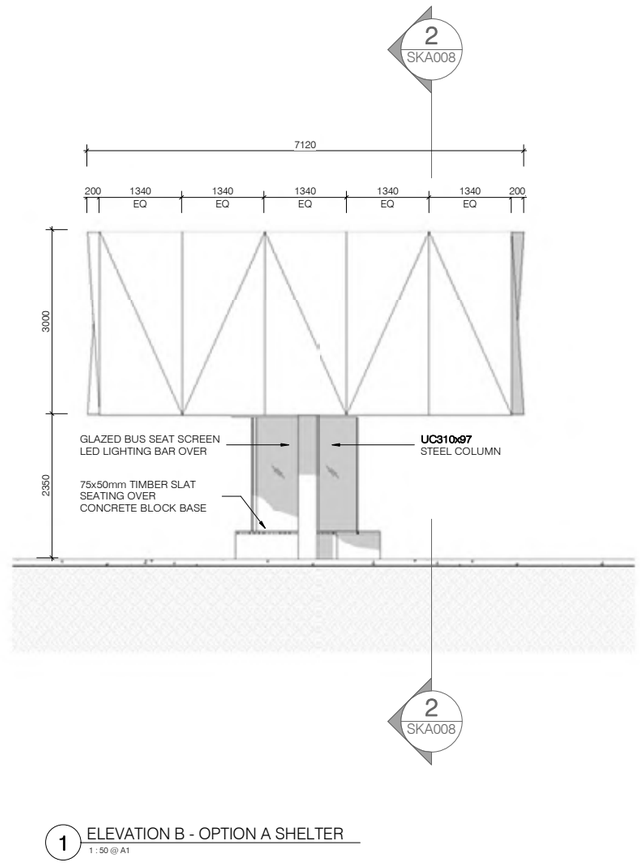
PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

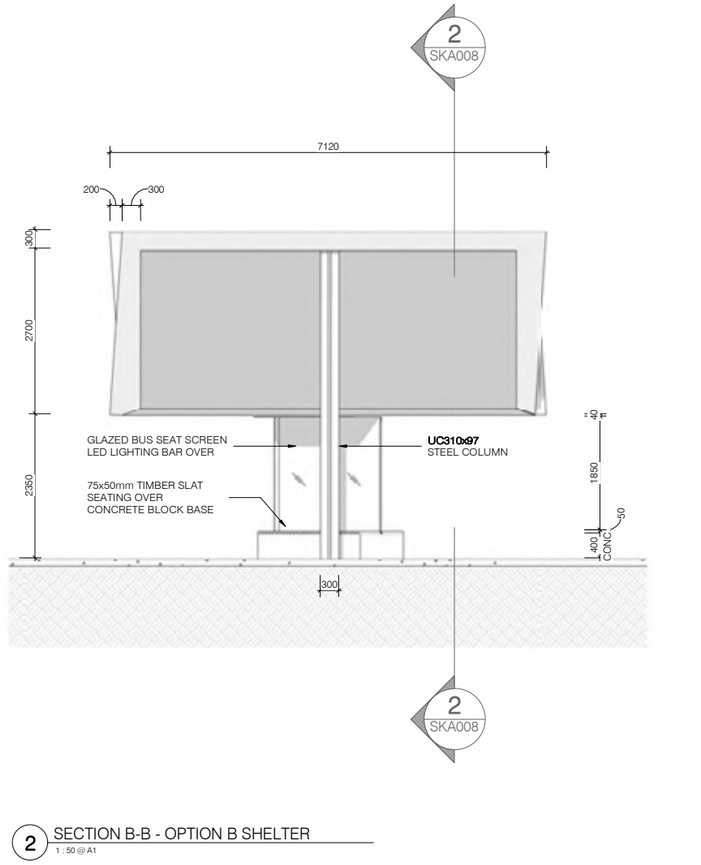
BUS SHELTER_OPTION A - ELEVATION & SECTION

1 : 50	Scale at A1
16.05.2016	Date
SKA008	Drawing Number
-	Revision
15035-00	Job Number

CCM ARCHITECTS



1 ELEVATION B - OPTION A SHELTER
1 : 50 @ A1



2 SECTION B-B - OPTION B SHELTER
1 : 50 @ A1

16/05/2016 2:04:09 p.m.

*(enter the model's file name).rvt

PNCC - BUS TERMINAL

0 m 5 m 10 m 20 m 30 m 40 m 50 m

BUS SHELTER_OPTION A - ELEVATION & SECTION

1 : 50	Scale at A1
16.05.2016	Date
SKA009	Drawing Number
-	Revision
15035-00	Job Number

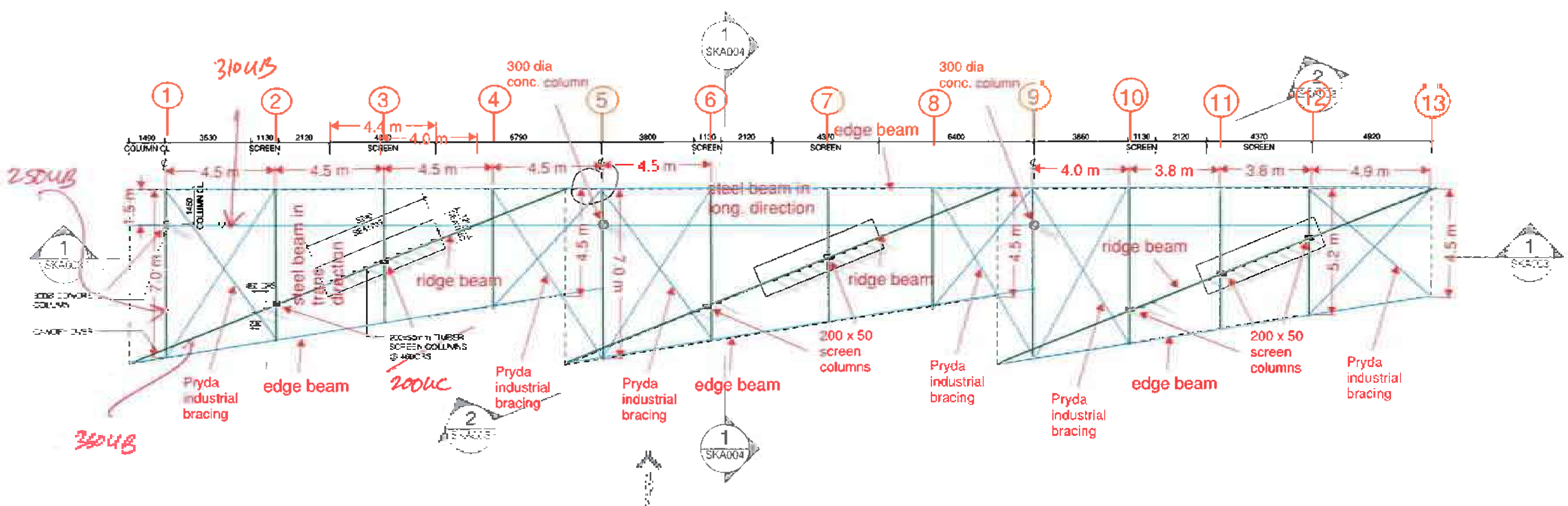
CCM ARCHITECTS

PNCC BUS TERMINAL

OPTION A - BUS TERMINAL PERSPECTIVES

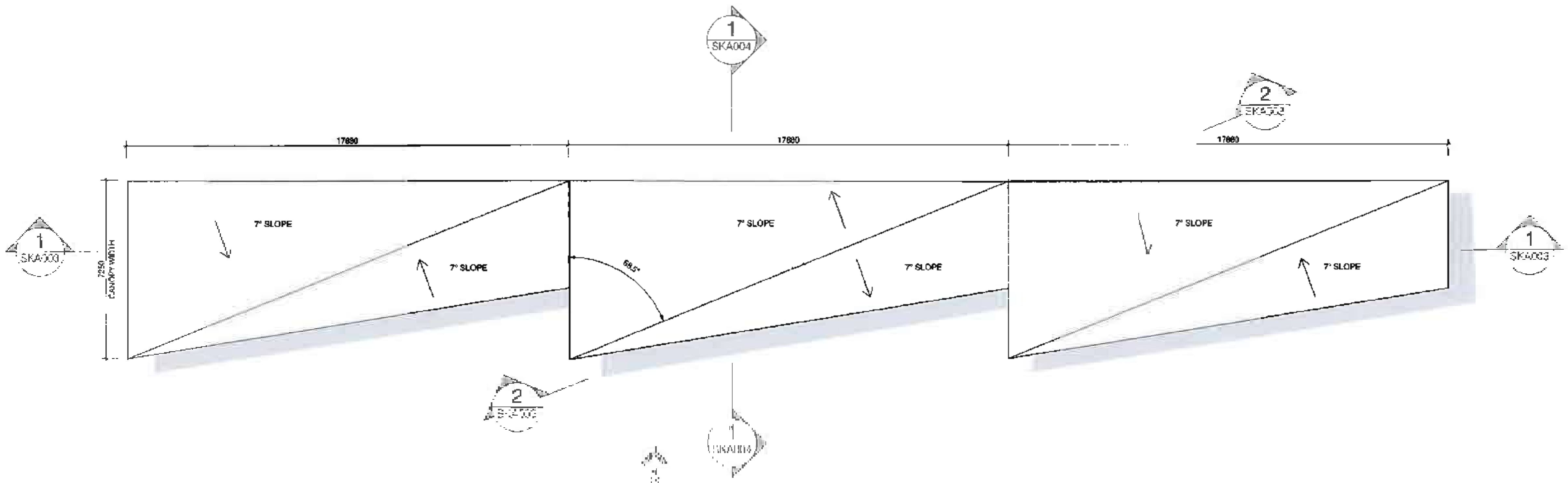
SKA001
07 APRIL 2016

CCM
ARCHITECTS



1 BUS SHELTER LARGE - PLAN (UNDER CANOPY)

Concept design_option 2



2 BUS SHELTER LARGE - PLAN (ABOVE CANOPY)

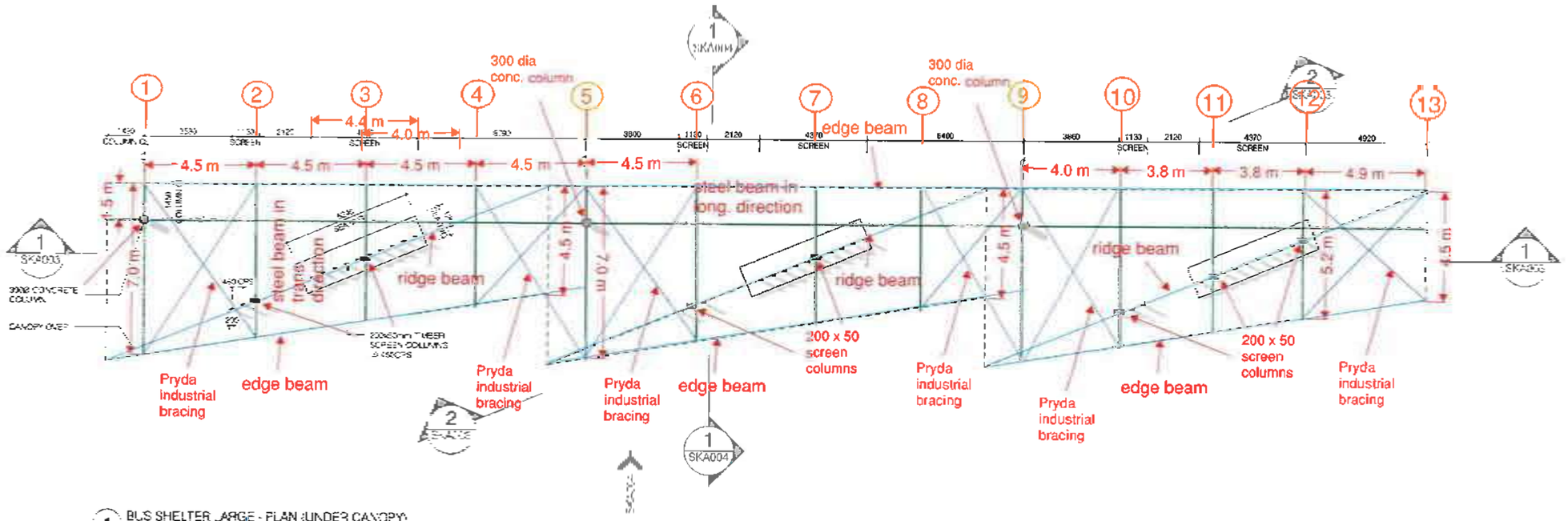
PNCC • BUS TERMINAL

BUS SHELTER_LARGE • PLANS

0 m 10 m 20 m 40 m 60 m 80 m 100 m

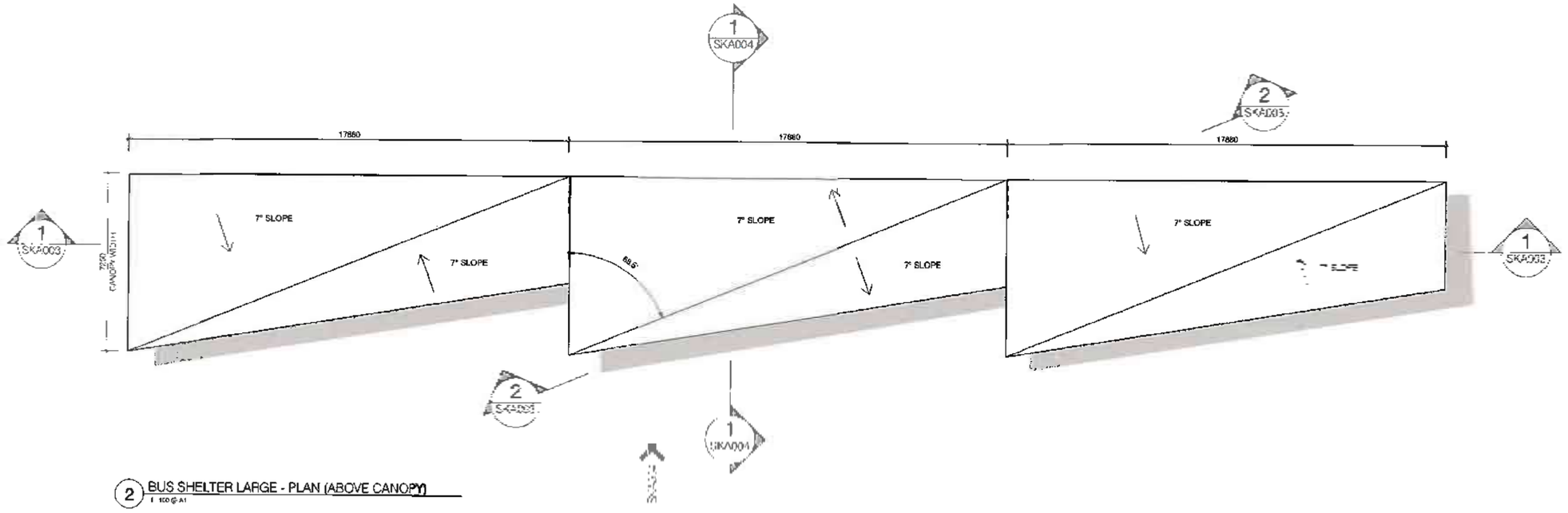
1 : 100	Scale at A1
13.05.2016	Date
SKA001	Drawing Number
A	Revision
15035-00	Job Number

CCM ARCHITECTS



1 BUS SHELTER LARGE - PLAN (UNDER CANOPY)

Concept design 1 OPTION 1



2 BUS SHELTER LARGE - PLAN (ABOVE CANOPY)

15/05/2016 2:04:03 p.m.

*Update the models file name(s).rvt

PNCC • BUS TERMINAL

0 m 10 m 20 m 60 m 80 m 100 m

BUS SHELTER_LARGE - PLANS

1 : 100 Scale at A1

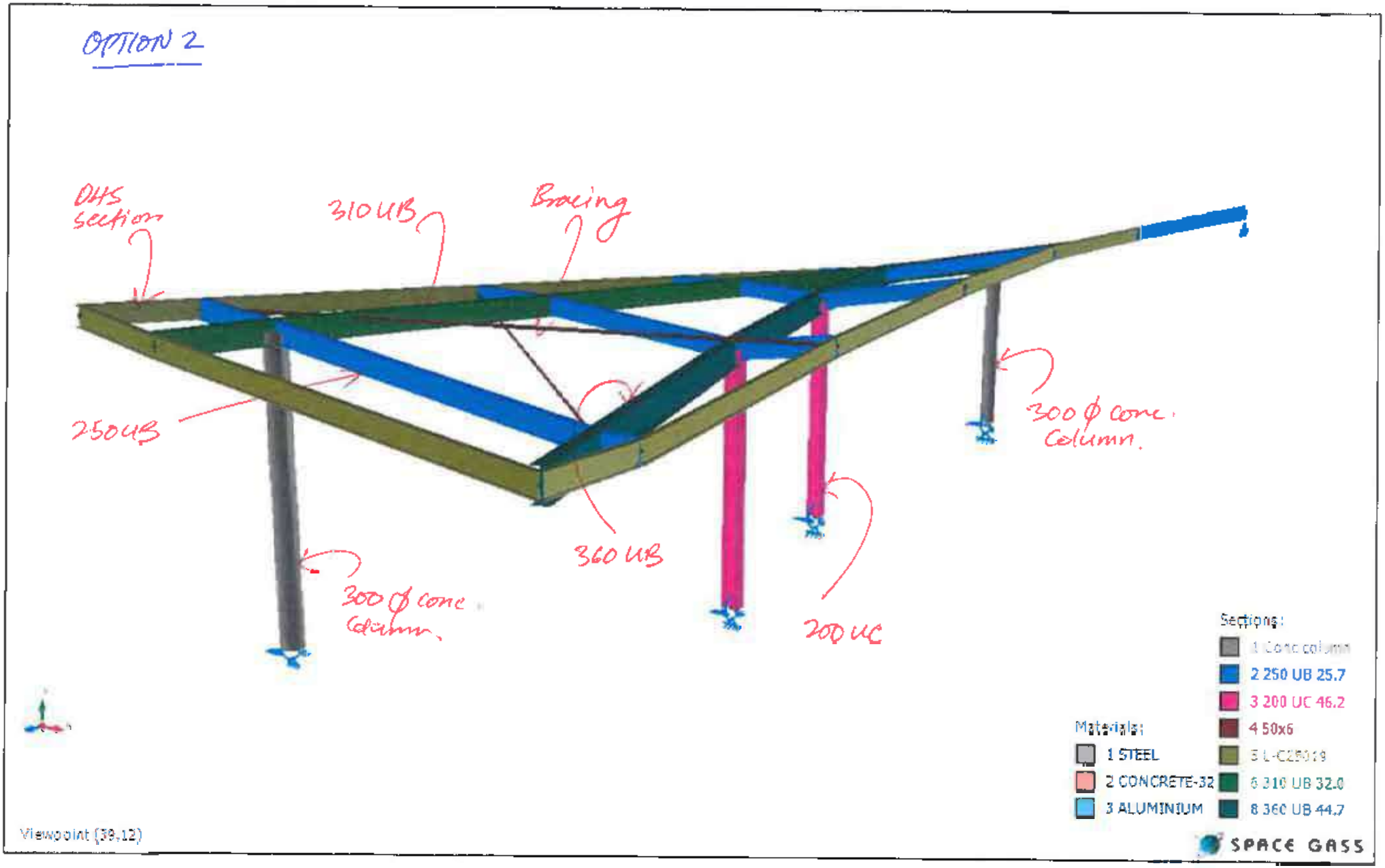
15.05.2016 Date

SKA001 Drawing Number

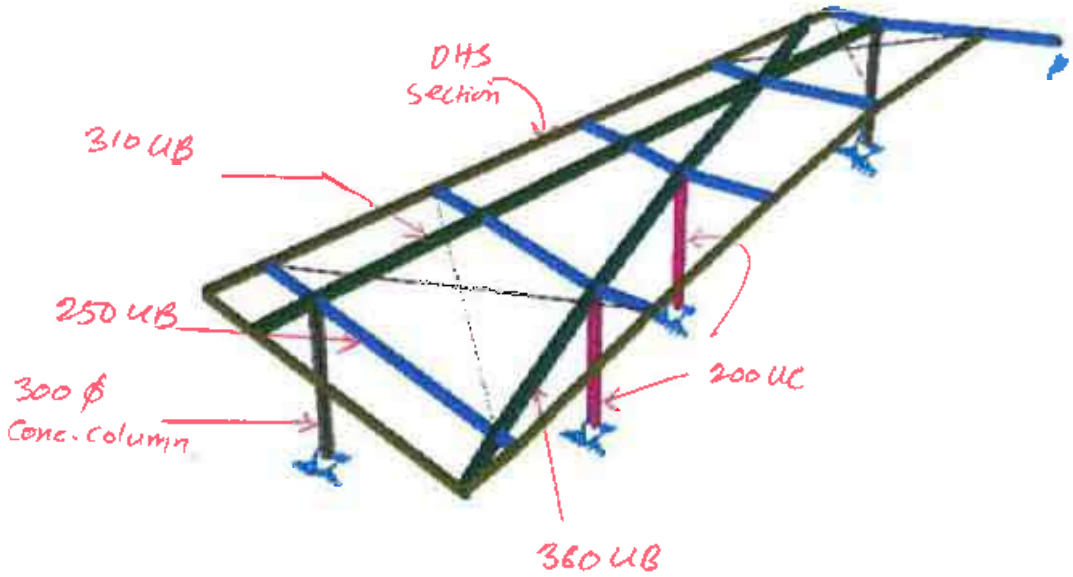
4 Revision

15-05-01 Job Number

CCM ARCHITECTS


OPTION 2
OHS section
310 UB
Bracing
250 UB
360 UB
300 ϕ conc. Column
300 ϕ conc Column
200 UC
Sections:
1 Conc column
2 250 UB 25.7
3 200 UC 46.2
4 50x6
5 L-C250x19
6 310 UB 32.0
8 360 UB 44.7
Materials:
1 STEEL
2 CONCRETE-32
3 ALUMINIUM
Viewpoint (39,12)
SPACE GASS

OPTION 2



Sections:
1 Conc column
2 250 UB 25.7
3 200 UC 46.2
4 50x6
5 L-C250x9
6 310 UB 32.0
8 360 UB 44.7

Materials:
1 STEEL
2 CONCRETE-32
3 ALUMINIUM

SPACE GASS

Viewpoint (42,34)

Disclaimer: This spreadsheet has been formally verified prior to uploading on Aurecon Intranet, however, the person using this spreadsheet is responsible for its use.

Client	Palmerston North City Council	Date	25-May-16
Project	Bus terminal_Bus shelter large	Job No	
Subject	Concept design	Sheet No 1	By HN

AS1170.2 Design Wind Speed V$_{des,\theta}$

AS Standard Reference

Region Data

Region	A7		AS 1170.2 Figure 3.1
Design Working Life	50 Years	[Input 50 Years to conform with BCA]	AS 1170.0 Table F2
Importance Level	1		AS 1170.0 Table F1

Average Recurrence Intervals - R

AS 1170.0 Section 3.4

Retrieved From	AS1170.0		
$R_{Service}$	25	Years	
$R_{Ultimate}$	100	Years	AS 1170.0 Table F2

Region Wind Speed - V$_r$

$V_{r,Serv}$	37.0	ms^{-1}	AS 1170.2 Section 3.2
$V_{r,Ult}$	41.0	ms^{-1}	AS 1170.2 Section 3.2

Wind Direction Multiplier - M$_d$

AS 1170.2 Section 3.3

	North	North-East	East	South-East	South	South-West	West	North-West	Any	
M_d	0.90	0.90	0.80	0.90	0.90	0.90	1.00	1.00	1.00	AS 1170.2 Table 3.2

Terrain/Height Multiplier M$_{z,cat}$

AS 1170.2 Section 4

Building Height - (z)	Simple		AS 1170.2 Section 4.2.1
	4.5	m	
Terrain Category	2.0		AS 1170.2 Table 4.1
$M_{z,cat,Serv}$	0.91		
$M_{z,cat,Ult}$	0.91		

Shielding Multiplier - M$_s$

AS 1170.2 Section 4.3

M_s	Simple	AS 1170.2 Section 4.3
	1.00	

Topographical Multiplier - M$_t$

AS 1170.2 Section 4.4

M_t	Simple	AS 1170.2 Section 4.4
	1.00	

Site Wind Speed - V$_{sit,\beta}$

$$V_{sit,\beta} = V_R M_d \left(M_{z,cat} M_s M_t\right)$$

AS 1170.2 Section 2.2

ms^{-1}	North	North-East	East	South-East	South	South-West	West	North-West	Any
$V_{sit,\beta,Serv}$	30.30	30.30	26.94	30.30	30.30	30.30	33.67	33.67	33.67
$V_{sit,\beta,Ult}$	33.58	33.58	29.85	33.58	33.58	33.58	37.31	37.31	37.31

Design Wind Speed - V$_{des,\theta}$

AS 1170.2 Section 2.3

Building Bearing (Angle from North): 45 Degrees [Input range of 0° to 360°] — AS 1170.2 Figure 2.2

ms^{-1}	Wall 1	Wall 2	Wall 3	Wall 4	Any
$V_{des,\theta,Serv}$	30.3	30.3	33.7	33.7	33.7
$V_{des,\theta,Ult}$	33.6	33.6	37.3	37.3	37.3

INPUTS VALID

Basic Wind Pressure - p$_{basic}$

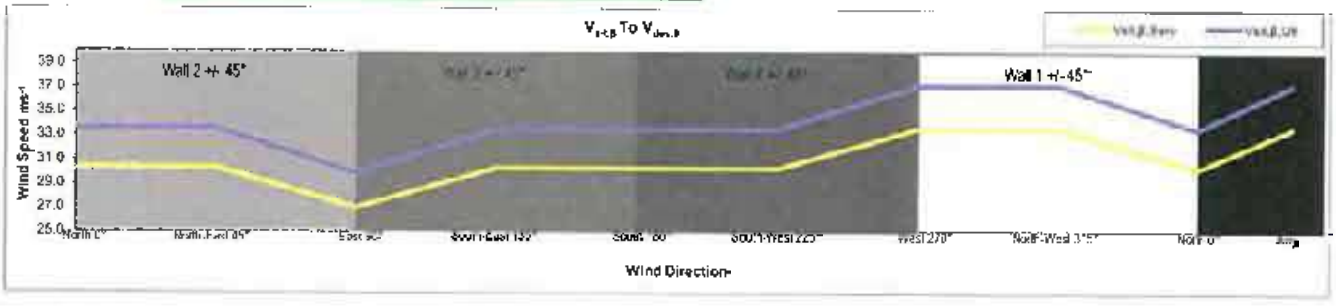
$$p = \left(0.5 \rho_{air}\right)\left[V_{des,\theta}\right]^2$$

Multiply by C_{fig} and C_{dyn} to obtain Design Wind Pressures

AS 1170.2 Section 2.4

kPa	Wall 1	Wall 2	Wall 3	Wall 4	Any
$p_{serv,basic}$	0.55	0.55	0.68	0.68	0.68
$p_{ult,basic}$	0.68	0.68	0.84	0.84	0.84

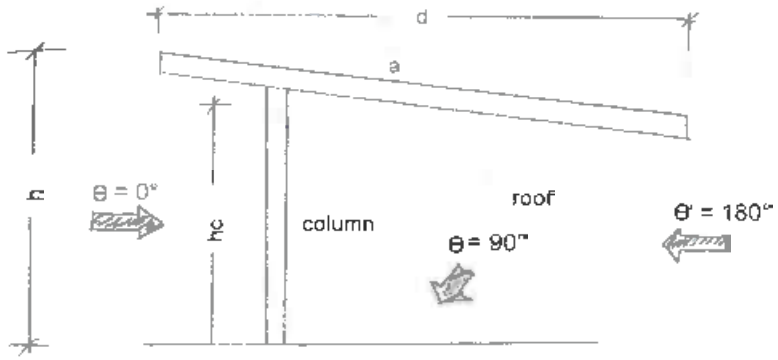
AS 1170.2 Figure 2.3



aurecon

Client:	Palmerston North City Council	Date:	25/5/16
Project / Job:	Bus shelter _large	Job No:	
Subject:	Concept design_ wind	Sheet No:	2
		By:	H.Nashid

Case 1: Monoslope free roofs Frame 1



Note: the 'd' value will change in the case of wind direction when θ = 90° (b = d)

Building description:

Depth d (m) = 7
Breadth b (m) = 18
Height h (m) = 4
Average height hc (m) = 3.3

b = d when θ = 90°

Basic wind pressure:

P_{ULS}. *Basic (kPa)* = 0.84
P_{SLS}. *Basic (kPa)* = 0.68

From the design wind speed calc.

Factors and constants:

Ka = 1
Kl = 1

NZS 1170.2, D3.1

Net pressure coeff. (C_{pn}):

C_{pw} = Follow the table below
C_{pl} = Follow the table below

hc / d = 0.5 | 0.25 ≤ hc /d ≤ 1 | when θ = 0 and 180 — NZS 1170.2, T D4 (A)
hc / d = 0.2 | 0.05 ≤ hc /d ≤ 0.25 | when θ = 90 — NZS 1170.2, T D4 (B)

Roof pitch α°	θ = 0°		θ = 90°				θ = 180°		
	C_{pw} (windward)	C_{pl} (leeward)	C_{pw} (windward)		C_{pl} (leeward)		C_{pw} (windward)	C_{pl} (leeward)	
	Empty under	Empty under	Empty under (x ≤ 1h)		Empty under (1h < x ≤ 2h)		Empty under	Empty under	
7	-0.65	-0.5					0.25	0	NZS 1170.2, T D4 (A)
0			-0.3	0.4	-0.4	0			NZS 1170.2, T D4 (B)

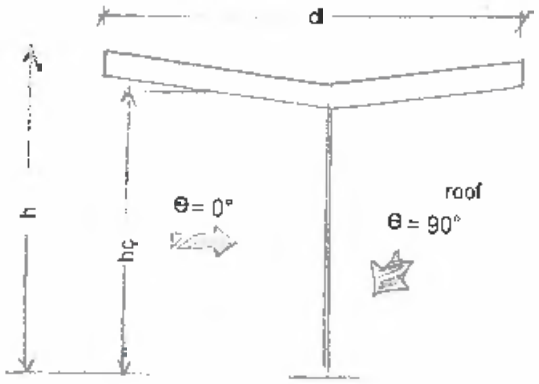
(A) &

P_{ULS} (kPa)	-0.55	-0.42	-0.25	0.34	-0.34	0.00	0.21	0.00
P_{SLS} (kPa)	-0.44	-0.34	-0.20	0.27	-0.27	0.00	0.17	0.00

aurecon

Client:	Palmerston North City Council	Date:	25/5/16
Project / Job:	Bus shelter _large	Job No:	
Subject:	Concept design_ wind	Sheet No:	3
		By:	H.Nashid

Case 2: Troughed free roofs _ Frame 3



Note: the 'd' value will change in the case of wind direction when Θ = 90° (b = d)

Building description:

Depth d (m) = 5.5
Breadth b (m) = 18
Height h (m) = 4
Average height hc (m) = 3.5

b = d when Θ = 90°

Basic wind pressure:

P_{ULS}. Basic (kPa) = 0.84
P_{SLS}. Basic (kPa) = 0.68

From the design wind speed calc.

Factors and constants:

Ka = 1
Kl = 1

NZS 1170.2, D3.1

Net pressure coeff. (C_{pn}):

C_{pw} = Follow the table below
C_{pl} = Follow the table below

hc / d = 0.6 | 0.25 ≤ hc /d ≤ 1 | when Θ = 0 and 180
hc / d = 0.2 | 0.05 ≤ hc /d ≤ 0.25 | when Θ = 90

NZS 1170.2, T 06)
NZS 1170.2, T 04(B)

Roof pitch α°	Θ = 0°			Θ = 90°			
	C_{pw} (windward)		C_{pl} (leeward)	C_{pw} (windward)		C_{pl} (leeward)	
	Empty under		Empty under	Empty under (x ≤ 1h)		Empty under (1h < x ≤ 2h)	
7	-0.6	0.4	0.3				
0				-0.3	0.4	-0.4	0

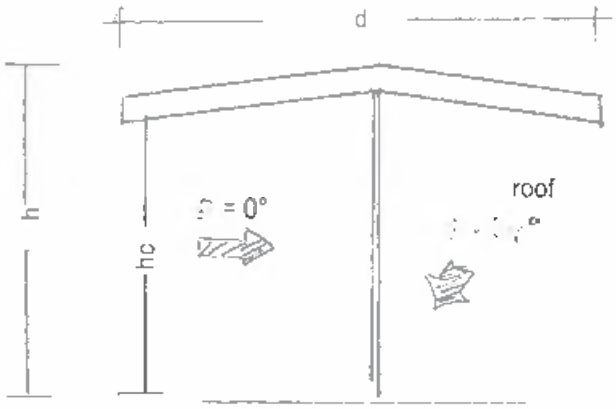
NZS 1170.2, T D6
NZS 1170.2, T D4 (A & B)

P_{ULS} (kPa)	-0.50	0.34	0.25	-0.25	0.34	-0.34	0.00
P_{SLS} (kPa)	-0.41	0.27	0.20	-0.20	0.27	-0.27	0.00

aurecon

Client:	Palmerston North City Council	Date:	25/5/16
Project / Job:	Bus shelter _large	Job No:	
Subject:	Concept design_ wind	Sheet No:	4
		By:	H.Nashid

Case 3: Pitched free roof_frame 7



Note: the 'd' value will change in the case of wind direction when Θ = 90° (b = d)

Building description:

Depth d (m) = 5.5
Breadth b (m) = 18
Height h (m) = 4
Average height hc (m) = 3.5

b = d when Θ = 90°

Basic wind pressure:

P_{ULS}. *Basic (kPa)* = 0.84
P_{SLS}. *Basic (kPa)* = 0.68

From the design wind speed calc.

Factors and constants:

Ka = 1
Kl = 1

NZS 1170.2, D3.1

Net pressure coeff. (C_{pn}):

C_{pw} = Follow the table below
C_{pl} = Follow the table below

hc / d = 0.6 | 0.25 ≤ hc /d ≤ 1 | when Θ = 0 and 180 — NZS 1170.2, T D5
hc / d = 0.2 | 0.05 ≤ hc /d ≤ 0.25 | when Θ = 90 — NZS 1170.2, T D4 (A & B)

Roof pitch α°	Θ = 0°				Θ = 90°			
	C_{pw} (windward)		C_{pl} (leeward)		C_{pw} (windward)		C_{pl} (leeward)	
	Empty under		Empty under		Empty under (x ≤ 1h)		Empty under (1h < x ≤ 2h)	
7	-0.3	0.4	-0.4	0				
0					-0.3	0.4	-0.4	0

NZS 1170.2, T D6
NZS 1170.2, T D4 (A & B)

P_{ULS} (kPa)	-0.25	0.34	-0.34	0.00	-0.25	0.34	-0.34	0.00
P_{SLS} (kPa)	-0.20	0.27	-0.27	0.00	-0.20	0.27	-0.27	0.00

aurecon

Client: PNCC			Date: 25/05/16
Project/Job: Bus shelter - Large		Job No:	
Subject: Concept design - wind		Sheet No: 5	By: HJN

(T.W)

Wind load = W_n = $-0.55\ kPa \times 4.5m = -2.5\ kN/m$.

↑ = W_s = $-0.44\ kPa \times 4.5m = -2\ kN/m$.

↓ = W_n = $+0.34\ kPa \times 4.5m = 1.53\ kN/m$

= W_n = $+0.27\ kPa \times 4.5m = 1.22\ kN/m$

aurecon

Client:	Palmerston North City Council	Date:	25/5/16
Project / Job:	Bus shelter _large	Job No:	
Subject:	Concept design_ seismic weight	Sheet No:	6
		By:	H.Nashid

Loading parameters:

Roof:	Corrugated iron	=	0.08	kPa
	DHS purlins	=	0.05	kPa
	Steel frames	=	0.09	kPa
	Ceiling	=	0.15	kPa
	Roof finishes	=	0.03	kPa
	Total	=	**0.40**	kPa

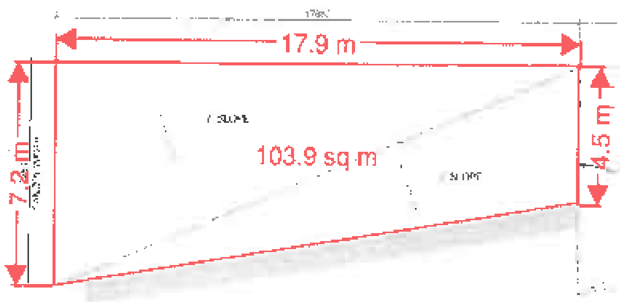
Upper roof dimension:

Roof length (m) = 18

Roof area (m^2) = 104

Portal length (m) = 7 max

Height (m) = 4



Roof plan

Dead load G (kN):

	Location / components	Area (m^2)	Length or height (m)	Vol. (m^3)	Unit weight	Weight (kN)
1.0	Roof	104			0.40	42
2.0	Colum wt					
2.1	Conc (half) x 2col		3.4	0.24	24	42
2.2	Steel					5.1
						1

Live load Q (kN):

Ψ_E = Roofs	0	NZS1170.0, T 4.1	Σ 49 kN
Ψ_a = 0.5 < 1	0.6	NZS1170.1, Cl 3.4.2	

Total $(G + \Psi_E \Psi_a Q)$ kN = 49

Hor. design action coeff. $C_d(T)$ (g) = 0.36

Hor. design EQ action F_x (kN) = 18 kN

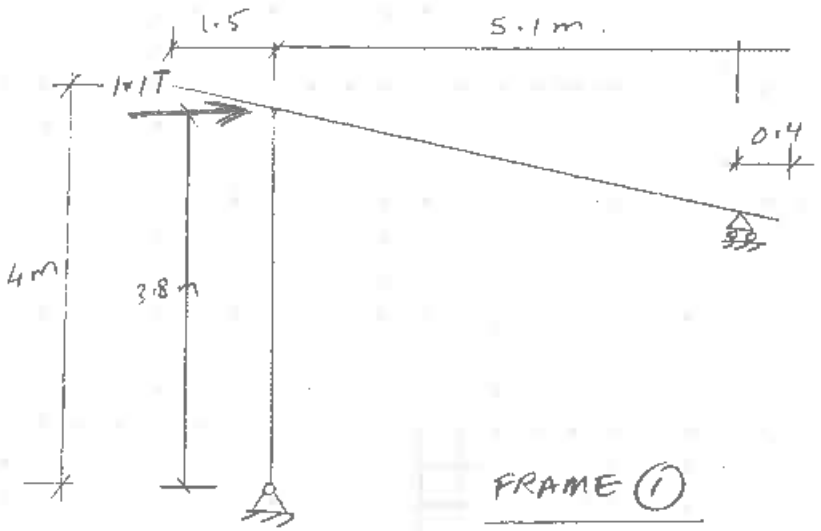
Page 8

$\mu = 1.25$

$T = 0.4sec$

aurecon

Client: PNCC			Date: 25/05/16
Project/Job: Bus shelter - large		Job No:	
Subject: Concept - EQ load		Sheet No: 7	By: HN



FRAME (1)

Seismic weight = 42 kN for the whole roof from P-6.

Seismic weight on FR (1) = $0.4 \frac{kN}{m^2} \times 27 m^2 = 11 kN$

Lumped mass in Tons = $\frac{11 kN}{9.8} = 1.1 T$.

Structural ductility factor $\mu = 1.25$

$Sp = 0.9$

From the space gass model, Period (T) is 0.3 sec.

∴ adopt period (T) = 4.0

Client:	PNCC	Date:	25/05/2016
Job No:		Designer:	HN
Project:	Bus shelter large		
Subject:	Determine Seismic Coefficient		

1.0 Seismic design action coefficient ($C_d(T)$) Horizontal

Importance level (part 3, table 3.1)

1 — Minor structures

Design working life

50 years

Required annual probablities of exceedance (part 3, table 3.3)

Limit state	ULS	SLS1	SLS2
1 / P	100	-	-

Limit state for this analysis

	ULS
1 / P	100

Natural periods

T_n^x =	0.4000	sec
T_n^y =	0.4000	sec

Ductility factors

Along X	1.25
Along Y	1.25

Site subsoil class (part 5, clause 3.1.3)

Shallow soil — Category: C

Site location (Tables 3.3 and 3.4)

60

Hazard factor and distance to nearest fault (Clause 3.1.4)

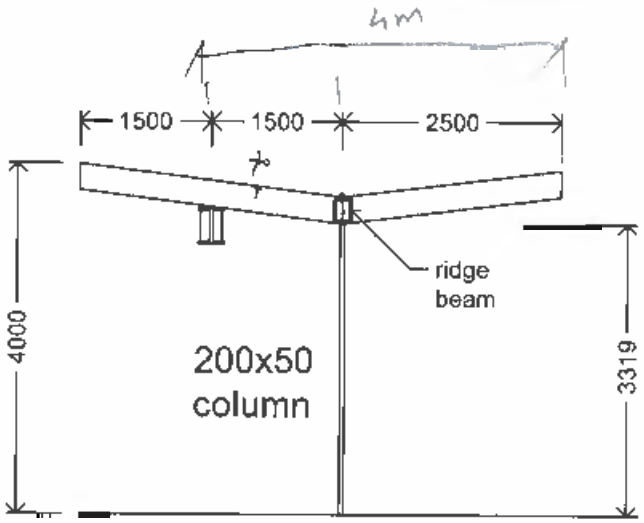
Hazard factor Z		0.38
Shortest distance D	Min.	8
	Max.	16

Return period factor (clause 3.1.5)

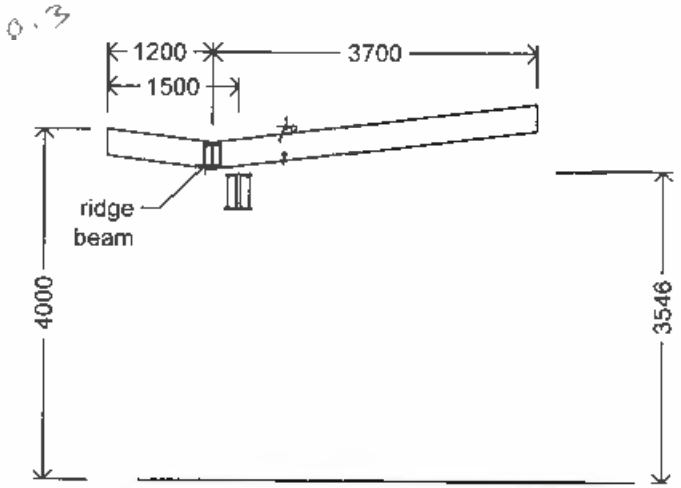
R	0.5

Horizontal design action coefficient (part 5, clause 5.2)

Direction	Analysis method	$C_h(T)$	ZR	N(T,D)	C(T)	S_p	k_μ	$C_d(T)$
X	ESM	2.3600	0.2	1.0	0.4484	0.925	1.143	0.3629
	MRSM	2.3644			0.4492			0.3636
Y	ESM	2.3600	0.2	1.0	0.4484	0.925	1.143	0.3629
	MRSM	2.3644			0.4492			0.3636



frame 3



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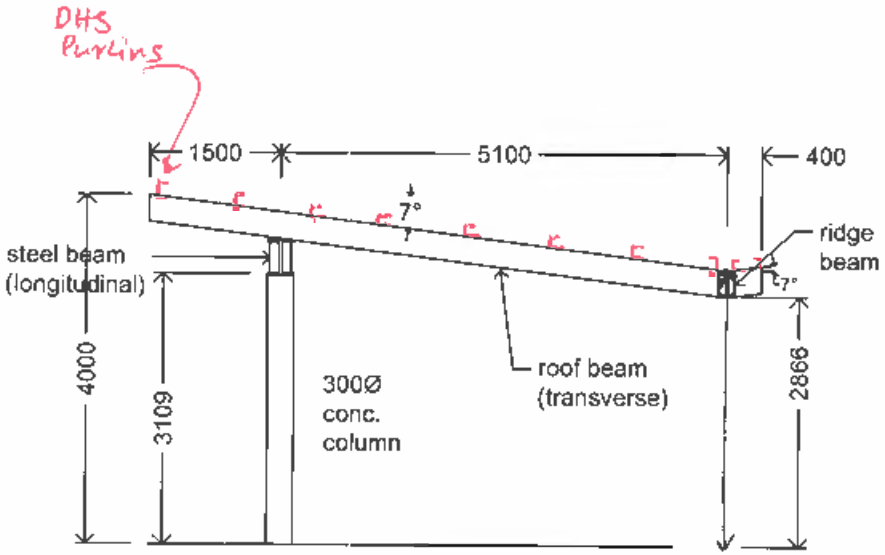
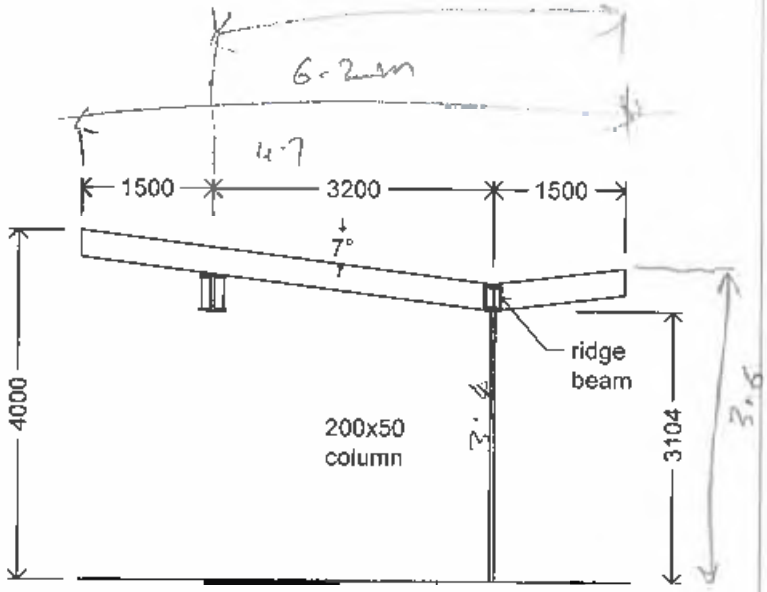
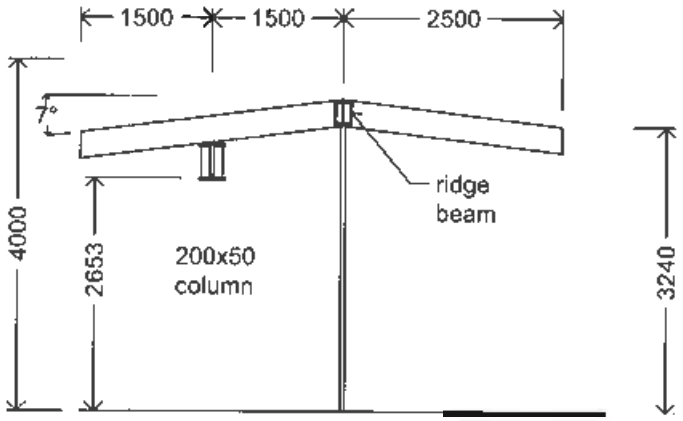


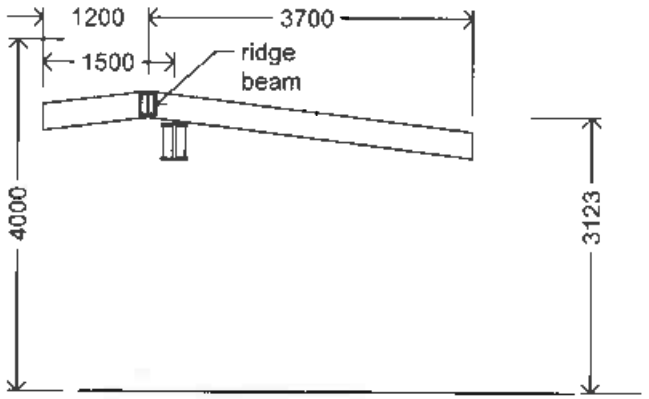
frame 1



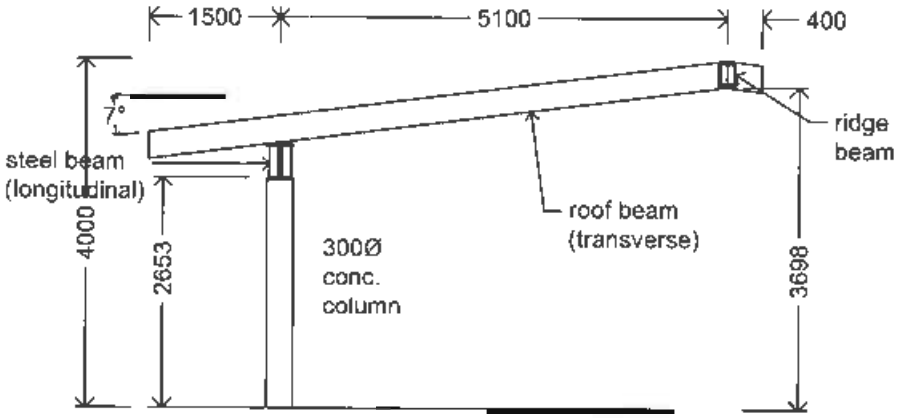
frame 2



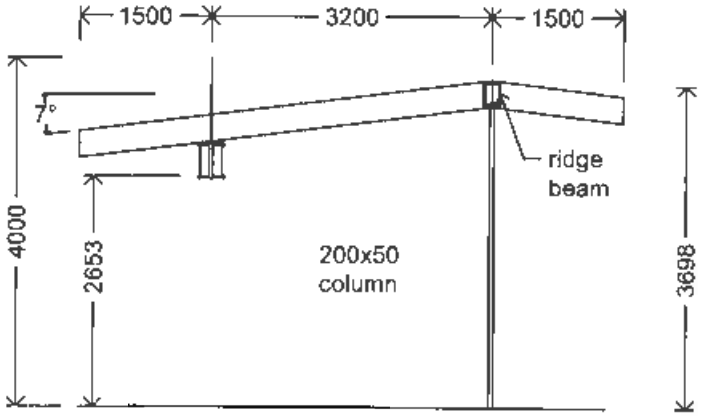
frame 7



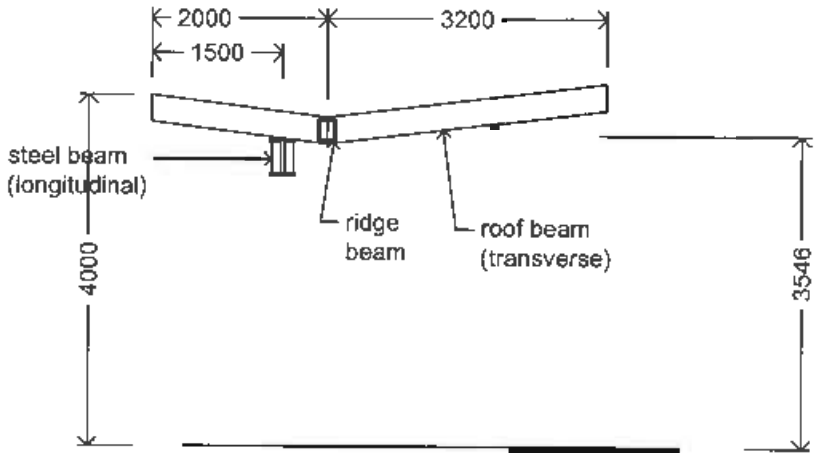
frame 8



frame 5



frame 6


2000
3200
1500
steel beam
(longitudinal)
ridge
beam
roof beam
(transverse)
4000
3546

frame 12

MALTBYS

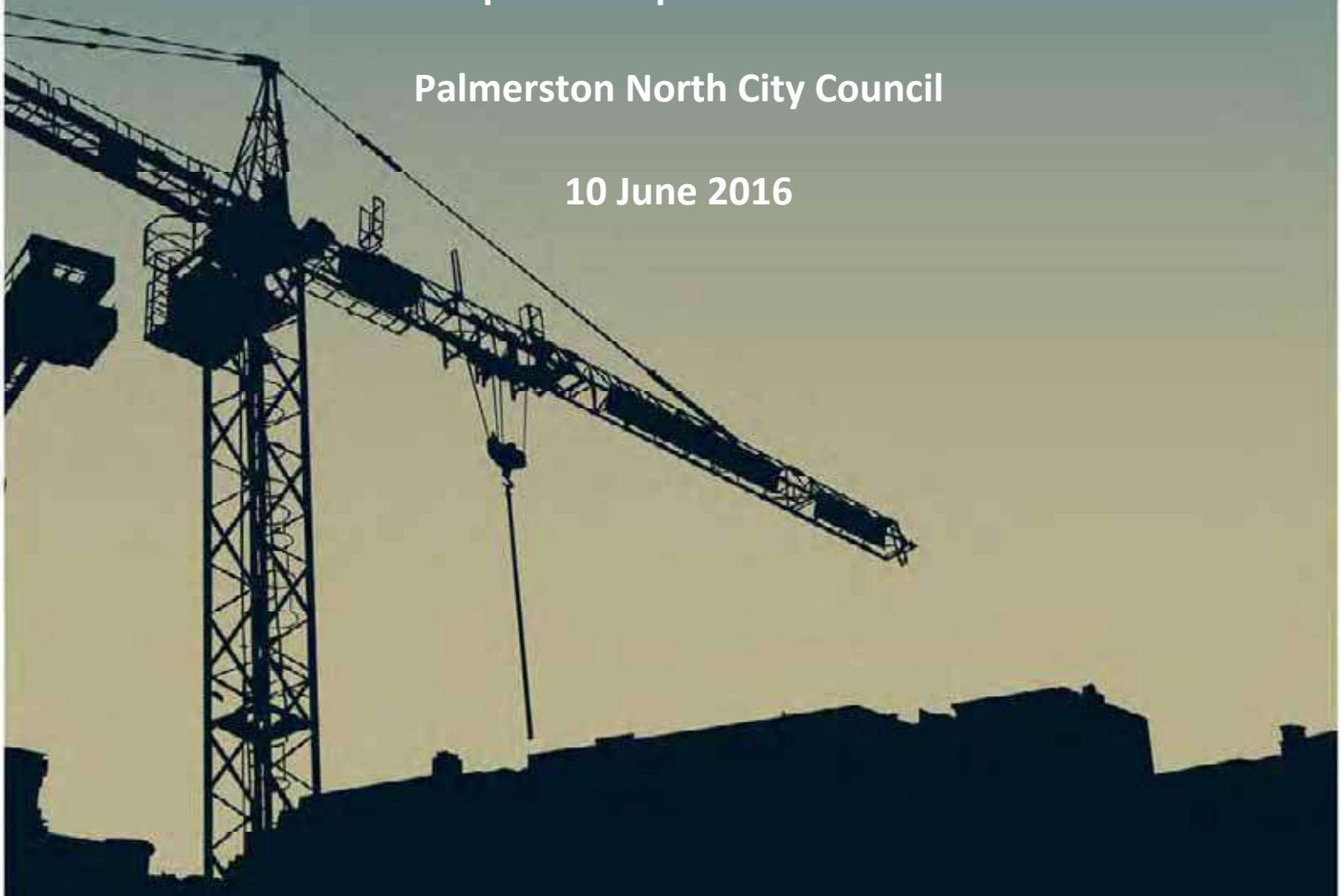
DEFINING COSTS · MANAGING RISK · DELIVERING RESULTS

Palmerston North Streetscape

Concept Masterplan Cost Estimate

Palmerston North City Council

10 June 2016



DEFINING COSTS, MANAGING RISK AND DELIVERING RESULTS THAT ADD VALUE FOR OUR CLIENTS

WELLINGTON Maltbys House, Level 2, 9 Tory Street, PO Box 1034, Wellington 6140. Ph: 04 499 1468 Fax: 04 499 4648 www.maltbys.co.nz

Table of Contents

Introduction

Maltbys Limited (Maltbys) have been commissioned by Isthmus on behalf of Palmerston North City Council to prepare a concept masterplan cost estimate for the proposed streetscape works proposed at The Square, Palmerston North.

This is a concept masterplan cost estimate only and is subject to a range of clarifications and exclusions that must be considered in conjunction with the estimate. Items such as inflationary provisions and other specific exclusions noted herein should be allowed for separately if required.

This report has been prepared for the sole use of Isthmus and Palmerston North City Council only for the purpose set out in our Letter of Appointment. We neither acknowledge nor accept any other duty of care in respect of the report or the contents thereof, and any person other than Isthmus or Palmerston North City Council who rely upon the report or any part thereof without direct reference to a written authorisation by a Director of Maltbys Ltd does so in all respects at that person's risk.

Executive Summary

The concept cost estimate has been estimated at current rates and prices as set out below:

Palmerston North Streetscape, The Square, Palmerston North:

Rangitikei Street	**$795,680.00**
The Square North	**$1,976,595.00**
Broadway Avenue	**$5,158,390.00**
The Square East	**$5,840,645.00**
Main Street East	**$4,028,505.00**
Main Street East Bus Terminal Canopies	**$1,500,000.00**
Church Street	**$3,029,490.00**
The Square West	**$3,666,145.00**
The Square Café/Pavilion and Canopy works	**$500,000.00**
Total (Excluding GST)	**$26,495,450.00**

Note this estimate has been prepared on an elemental basis. A definitive list of clarifications and exclusions is contained within the Methodology section of this report.

Full details of the cost estimates are included within the appendix attached.

Methodology

Basis of Estimate

Maltbys have prepared a concept masterplan cost estimate based on the following information:

Isthmus Masterplan Palmerston North City Materials Plan 5 April 2016 Revision 1, correspondence between Maltbys and Isthmus, CCM's Option B Bus Terminal Perspectives and Option A Cafe/Pavilion Perspectives

This concept estimate is interpretive of the outline drawings and discussions with Isthmus and the scope contained herein may differ slightly from that presented in the final drawings.

This estimate assumes that competitive tenders will be called and that there will be no restriction on access.

Our estimate has been based on area by area quantities and square metre rates and costed at rates and prices current as at June 2016. No allowance has been made for increases in labour and materials beyond that date.

We would recommend that provision be made for escalation until construction starts. A further allowance for escalation during the construction period should also be included.

Historically construction cost escalation has averaged 2.65% per annum over the last ten years with a peak of 6.06% and a low of -2.22%, the last three years have provided a more stable average of 3.3% per annum.

Items Specifically Excluded

The following items have been specifically excluded from this estimate:

Building Consent
Goods & Services Tax (GST)
Construction Cost Inflation
Development levies:-
Council Financial, Reserves and Development Contributions
Disposal of any contaminated soil
Disposal of Asbestos
Excavation in rock and significant unforeseen underground issues
Major infrastructure upgrades
Refer to the estimate detail for additional exclusions

Appendices

ESTIMATE ELEMENTAL SUMMARY

	Unit	Qty	Rate	Cost
Exclusions and Clarifications				
Rangitikei Street (3,200 m2)				795,680
The Square North (5,000 m2)				1,976,595
Broadway Avenue (9,000 m2)				5,158,390
The Square East (10,200 m2)				5,840,645
Main Street East (8,300 m2)				4,028,505
Main Street East Bus Terminal Canopies (Option B)				1,500,000
Church Street (6,700 m2)				3,029,490
The Square West (7,200 m2)				3,666,145
The Square new building (90 m2) and canopy alterations				500,000
TOTAL CONCEPT ESTIMATE FINAL $				**26,495,450**

	Unit	Qty	Rate	Cost
Exclusions and Clarifications				
EXCLUSIONS				
1 The following items are excluded from the estimate:- - Building Consent - Goods & Services Tax (GST) - Construction cost inflation - Development levies:- Council Financial, Reserves and Development Contributions - Disposal of any contaminated soil - Disposal of Asbestos - Excavation in rock and significant unforeseen underground issues - Major infrastructure upgrades - Refer to the estimate detail for additional exclusions	Note			
CLARIFICATIONS & ASSUMPTIONS				
2 With regard to the information provided we wish to clarify the following:- - Estimate is based on current market prices and will be subject to construction cost inflation	Note			
BASIS OF ESTIMATE				
3 This concept estimate is based on Isthmus Masterplan Palmerston North City Materials Plan 5 April 2016 Revision 1, correspondence between Maltbys and Isthmus, CCM's Option B Bus terminal Perspectives and Option A Cafe/Pavilion Perspectives	Note			
4 This concept estimate is interpretive of the outline drawings and discussions with Isthmus and the scope contained herein may differ slightly from that presented in the final drawings	Note			
TOTAL EXCLUSIONS AND CLARIFICATIONS $				**0.00**

		Unit	Qty	Rate	Cost
	Rangitikei Street (3,200 m2)				
	Site Clearance and Preparation				
5	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	3,232	20.00	64,640.00
	Pavings				
6	Paving type P4 - Pedestrian Asphalt, 25 TNZ Mix 6 asphalt wearing course on 150 compacted basecourse	m2	1,149	75.00	86,175.00
7	Paving - allowance to make good existing paving	m2	2,032	20.00	40,640.00
8	Kerb type 3 - 300 wide insitu black oxide concrete kerb with saw cuts at 2m cts	m	243	150.00	36,450.00
9	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	56	75.00	4,200.00
10	Road line markings	m	319	5.00	1,595.00
	Landscaping				
11	Street Trees	No	13	1,500.00	19,500.00
12	Understorey planting	m2	164	120.00	19,680.00
	Street Furniture				
13	Bench seats	No	2	2,500.00	5,000.00
14	Waste collection bins	No	4	1,500.00	6,000.00
15	Bicycle hoops	No	2	1,000.00	2,000.00
16	Tactile ground surface indicators 600 wide	No	8	3,000.00	24,000.00
	Street Lighting				
17	Street lighting - poles	No	4	7,500.00	30,000.00
	Stormwater Drainage				
18	Connect new gutters and channel drains into existing stormwater system	m	243	100.00	24,300.00

		Unit	Qty	Rate	Cost
	Sewer Drainage				
19	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	5,000.00	5,000.00
20	Allowance to replace existing manhole covers	PSum	1	5,000.00	5,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
21	Gas	PSum	1	10,000.00	10,000.00
22	Power	PSum	1	10,000.00	10,000.00
23	Telecoms	PSum	1	10,000.00	10,000.00
24	Fibre Optic	PSum	1	15,000.00	15,000.00
25	Water - mains	PSum	1	10,000.00	10,000.00
26	Water - fire	PSum	1	10,000.00	10,000.00
27	CCTV	PSum	1	7,500.00	7,500.00
	Traffic Control				
28	Signalised intersection	No	1	50,000.00	50,000.00
29	Road signage	PSum	1	5,000.00	5,000.00
	Parking Control				
30	Relocate parking meters	No	4	500.00	2,000.00
31	Parking space identification	No	8	250.00	2,000.00
	Preliminaries & General				
32	Main Contractor's preliminaries and general costs	Item	1	51,000.00	51,000.00
33	Temporary hoardings, road/pedestrian barriers etc	Item	1	20,000.00	20,000.00
34	Traffic management	PSum	1	30,000.00	30,000.00
35	Temporary road closures, permits, and fees	PSum	1	20,000.00	20,000.00
36	Main Contractor's margin	Item	1	31,000.00	31,000.00

		Unit	Qty	Rate	Cost
	Project On-Costs				
37	Professional fees/consents	Item	1	66,000.00	66,000.00
38	Project Contingency	Item	1	72,000.00	72,000.00
	TOTAL RANGITIKEI STREET (3,200 M2) $				**795,680.00**

		Unit	Qty	Rate	Cost
	The Square North (5,000 m2)				
	Site Clearance and Preparation				
39	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	5,082	20.00	101,640.00
	Pavings				
40	Paving type P1 - Pedestrian Stone, 600 x 400 x 65 granite pavers on sand bed and 150 compacted basecourse, flamed/bush hammered finish	m2	855	250.00	213,750.00
41	Paving type P3 - Pedestrian Concrete, 110 reinforced concrete on 150 compacted basecourse, exposed aggregate finish	m2	444	175.00	77,700.00
42	Paving - allowance to make good existing paving	m2	2,215	20.00	44,300.00
43	Extra value forming pram ramp	No	6	900.00	5,400.00
44	Kerb type 1 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed and 450 wide black oxide concrete gutter with troweled finish	m	640	340.00	217,600.00
45	Kerb type 2 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed, set flush with paving	m	40	250.00	10,000.00
46	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	234	75.00	17,550.00
47	Road line markings	m	149	5.00	745.00
	Landscaping				
48	Street Trees	No	11	1,500.00	16,500.00
49	Understorey planting	m2	718	120.00	86,160.00
50	Turf	m2	1,800	40.00	72,000.00
	Street Furniture				
51	Bench seats	No	6	2,500.00	15,000.00
52	Waste collection bins	No	6	1,500.00	9,000.00
53	Bicycle hoops	No	4	1,000.00	4,000.00
54	Tactile ground surface indicators 600 wide	No	6	3,000.00	18,000.00
	Street Lighting				

		Unit	Qty	Rate	Cost
55	Street lighting - poles	No	20	7,500.00	150,000.00
	Stormwater Drainage				
56	Connect new gutters and channel drains into existing stormwater system	m	640	100.00	64,000.00
	Sewer Drainage				
57	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	5,000.00	5,000.00
58	Allowance to replace existing manhole covers	PSum	1	10,000.00	10,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
59	Gas	PSum	1	15,000.00	15,000.00
60	Power	PSum	1	15,000.00	15,000.00
61	Telecoms	PSum	1	15,000.00	15,000.00
62	Fibre Optic	PSum	1	20,000.00	20,000.00
63	Water - mains	PSum	1	15,000.00	15,000.00
64	Water - fire	PSum	1	15,000.00	15,000.00
65	CCTV	PSum	1	12,500.00	12,500.00
	Traffic Control				
66	Signalised intersection	No	1	50,000.00	50,000.00
67	Road signage	PSum	1	5,000.00	5,000.00
	Parking Control				
68	Relocate parking meters	No	8	500.00	4,000.00
69	Parking space identification	No	39	250.00	9,750.00
	Preliminaries & General				

		Unit	Qty	Rate	Cost
70	Main Contractor's preliminaries and general costs	Item	1	131,000.00	131,000.00
71	Temporary hoardings, road/pedestrian barriers etc	Item	1	30,000.00	30,000.00
72	Traffic management	PSum	1	50,000.00	50,000.00
73	Temporary road closures, permits, and fees	PSum	1	30,000.00	30,000.00
74	Main Contractor's margin	Item	1	78,000.00	78,000.00
	Project On-Costs				
75	Professional fees/consents	Item	1	163,000.00	163,000.00
76	Project Contingency	Item	1	180,000.00	180,000.00
	TOTAL THE SQUARE NORTH (5,000 M2) $				**1,976,595.00**

		Unit	Qty	Rate	Cost
	Broadway Avenue (9,000 m2)				
	Site Clearance and Preparation				
77	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	8,987	20.00	179,740.00
78	Allowance for adjusting levels to remove steep road camber	m2	8,501	35.00	297,535.00
	Pavings				
79	Paving type P1 - Pedestrian Stone, 600 x 400 x 65 granite pavers on sand bed and 150 compacted basecourse, flamed/bush hammered finish	m2	4,266	250.00	1,066,500.00
80	Paving type P2 - Vehicle Stone, 200 x 400 x 100 granite pavers on 30 steintec tuffbed mortar, 100 concrete base and 150 compacted basecourse, flamed/bush hammered finish	m2	453	600.00	271,800.00
81	Paving type P5 - Vehicle Asphalt, 35 TNZ Mix 15 asphalt wearing course on 150 compacted basecourse	m2	3,782	100.00	378,200.00
82	Kerb type 1 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed and 450 wide black oxide concrete gutter with troweled finish	m	603	340.00	205,020.00
83	Kerb type 2 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed, set flush with paving	m	135	250.00	33,750.00
84	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	184	75.00	13,800.00
85	Road line markings	m	1,049	5.00	5,245.00
	Landscaping				
86	Street Trees	No	26	1,500.00	39,000.00
87	Understorey planting	m2	1,075	120.00	129,000.00
	Street Furniture				
88	Bench seats	No	22	2,500.00	55,000.00
89	Plaza custom furniture seating	No	3	20,000.00	60,000.00
90	Waste collection bins	No	22	1,500.00	33,000.00
91	Recycle collection bins	No	8	1,500.00	12,000.00
92	Drinking fountains	No	1	3,000.00	3,000.00
93	Bollards	No	18	2,500.00	45,000.00

		Unit	Qty	Rate	Cost
94	Bicycle hoops	No	10	1,000.00	10,000.00
95	Tactile ground surface indicators 600 wide	No	10	3,000.00	30,000.00
	Street Lighting				
96	Street lighting - poles	No	28	7,500.00	210,000.00
97	Pedestrian lighting - bollard/low level	No	10	2,500.00	25,000.00
98	Plaza feature lighting	No	3	25,000.00	75,000.00
	Stormwater Drainage				
99	Connect new gutters and channel drains into existing stormwater system	m	603	100.00	60,300.00
100	Slot Drain	m	305	350.00	106,750.00
	Sewer Drainage				
101	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	10,000.00	10,000.00
102	Allowance to replace existing manhole covers	PSum	1	25,000.00	25,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
103	Gas	PSum	1	17,500.00	17,500.00
104	Power	PSum	1	17,500.00	17,500.00
105	Telecoms	PSum	1	17,500.00	17,500.00
106	Fibre Optic	PSum	1	22,500.00	22,500.00
107	Water - mains	PSum	1	17,500.00	17,500.00
108	Water - fire	PSum	1	17,500.00	17,500.00
109	CCTV	PSum	1	15,000.00	15,000.00
	Traffic Control				
110	Road signage	PSum	1	5,000.00	5,000.00

		Unit	Qty	Rate	Cost
	Parking Control				
111	Relocate parking meters	No	8	500.00	4,000.00
112	Parking space identification	No	75	250.00	18,750.00
	Preliminaries & General				
113	Main Contractor's preliminaries and general costs	Item	1	353,000.00	353,000.00
114	Temporary hoardings, road/pedestrian barriers etc	Item	1	50,000.00	50,000.00
115	Traffic management	PSum	1	75,000.00	75,000.00
116	Temporary road closures, permits, and fees	PSum	1	50,000.00	50,000.00
117	Main Contractor's margin	Item	1	203,000.00	203,000.00
	Project On-Costs				
118	Professional fees/consents	Item	1	426,000.00	426,000.00
119	Project Contingency	Item	1	469,000.00	469,000.00
	TOTAL BROADWAY AVENUE (9,000 M2) $				**5,158,390.00**

		Unit	Qty	Rate	Cost
	The Square East (10,200 m2)				
	Site Clearance and Preparation				
120	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	10,164	20.00	203,280.00
	Pavings				
121	Paving type P1 - Pedestrian Stone, 600 x 400 x 65 granite pavers on sand bed and 150 compacted basecourse, flamed/bush hammered finish	m2	3,992	250.00	998,000.00
122	Paving type P2 - Vehicle Stone, 200 x 400 x 100 granite pavers on 30 steintec tuffbed mortar, 100 concrete base and 150 compacted basecourse, flamed/bush hammered finish	m2	1,633	600.00	979,800.00
123	Paving type P3 - Pedestrian Concrete, 110 reinforced concrete on 150 compacted basecourse, exposed aggregate finish	m2	521	175.00	91,175.00
124	Paving type P5 - Vehicle Asphalt, 35 TNZ Mix 15 asphalt wearing course on 150 compacted basecourse	m2	2,999	100.00	299,900.00
125	Kerb type 1 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed and 450 wide black oxide concrete gutter with troweled finish	m	671	340.00	228,140.00
126	Kerb type 2 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed, set flush with paving	m	327	250.00	81,750.00
127	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	677	75.00	50,775.00
128	Edge type 2 - 400 x 400 x 1000 long granite wall blocks, honed finish, including concrete bed	m	60	1,200.00	72,000.00
129	Road line markings	m	1,067	5.00	5,335.00
	Landscaping				
130	Street Trees	No	32	1,500.00	48,000.00
131	Understorey planting	m2	847	120.00	101,640.00
132	Turf	m2	130	40.00	5,200.00
	Street Furniture				
133	Bench seats	No	14	2,500.00	35,000.00
134	Plaza custom furniture seating	No	2	20,000.00	40,000.00
135	Concrete seating	m	66	500.00	33,000.00

		Unit	Qty	Rate	Cost
136	Waste collection bins	No	14	1,500.00	21,000.00
137	Recycle collection bins	No	4	1,500.00	6,000.00
138	Drinking fountains	No	1	3,000.00	3,000.00
139	Bollards	No	10	2,500.00	25,000.00
140	Bicycle hoops	No	10	1,000.00	10,000.00
141	Tactile ground surface indicators 600 wide	No	18	3,000.00	54,000.00
	Street Lighting				
142	Street lighting - poles	No	18	7,500.00	135,000.00
143	Pedestrian lighting - bollard/low level	No	8	2,500.00	20,000.00
144	Plaza feature lighting	No	1	25,000.00	25,000.00
	Stormwater Drainage				
145	Connect new gutters and channel drains into existing stormwater system	m	671	100.00	67,100.00
146	Slot Drain	m	253	350.00	88,550.00
	Sewer Drainage				
147	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	10,000.00	10,000.00
148	Allowance to replace existing manhole covers	PSum	1	25,000.00	25,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
149	Gas	PSum	1	17,500.00	17,500.00
150	Power	PSum	1	17,500.00	17,500.00
151	Telecoms	PSum	1	17,500.00	17,500.00
152	Fibre Optic	PSum	1	22,500.00	22,500.00
153	Water - mains	PSum	1	17,500.00	17,500.00
154	Water - fire	PSum	1	17,500.00	17,500.00

		Unit	Qty	Rate	Cost
155	CCTV	PSum	1	15,000.00	15,000.00
	Traffic Control				
156	Signalised intersection	No	2	50,000.00	100,000.00
157	Road signage	PSum	1	5,000.00	5,000.00
	Parking Control				
158	Relocate parking meters	No	10	500.00	5,000.00
159	Parking space identification	No	88	250.00	22,000.00
	Preliminaries & General				
160	Main Contractor's preliminaries and general costs	Item	1	402,000.00	402,000.00
161	Temporary hoardings, road/pedestrian barriers etc	Item	1	50,000.00	50,000.00
162	Traffic management	PSum	1	75,000.00	75,000.00
163	Temporary road closures, permits, and fees	PSum	1	50,000.00	50,000.00
164	Main Contractor's margin	Item	1	230,000.00	230,000.00
	Project On-Costs				
165	Professional fees/consents	Item	1	483,000.00	483,000.00
166	Project Contingency	Item	1	531,000.00	531,000.00
	TOTAL THE SQUARE EAST (10,200 M2) $				**5,840,645.00**

		Unit	Qty	Rate	Cost
	Main Street East (8,300 m2)				
	Site Clearance and Preparation				
167	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	8,181	20.00	163,620.00
	Pavings				
168	Paving type P1 - Pedestrian Stone, 600 x 400 x 65 granite pavers on sand bed and 150 compacted basecourse, flamed/bush hammered finish	m2	2,878	250.00	719,500.00
169	Paving type P2 - Vehicle Stone, 200 x 400 x 100 granite pavers on 30 steintec tuffbed mortar, 100 concrete base and 150 compacted basecourse, flamed/bush hammered finish	m2	1,283	600.00	769,800.00
170	Paving type P4 - Pedestrian Asphalt, 25 TNZ Mix 6 asphalt wearing course on 150 compacted basecourse	m2	173	75.00	12,975.00
171	Paving type P5 - Vehicle Asphalt, 35 TNZ Mix 15 asphalt wearing course on 150 compacted basecourse	m2	2,818	100.00	281,800.00
172	Kerb type 1 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed and 450 wide black oxide concrete gutter with troweled finish	m	446	340.00	151,640.00
173	Kerb type 2 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed, set flush with paving	m	309	250.00	77,250.00
174	Kerb type 3 - 300 wide insitu black oxide concrete kerb with saw cuts at 2m cts	m	115	150.00	17,250.00
175	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	126	75.00	9,450.00
176	Road line markings	m	392	5.00	1,960.00
	Landscaping				
177	Street Trees	No	10	1,500.00	15,000.00
178	Turf	m2	54	40.00	2,160.00
	Street Furniture				
179	Tree grates	No	10	2,500.00	25,000.00
180	Bench seats	No	10	2,500.00	25,000.00
181	Concrete seating	m	36	500.00	18,000.00
182	Waste collection bins	No	10	1,500.00	15,000.00

		Unit	Qty	Rate	Cost
183	Recycle collection bins	No	4	1,500.00	6,000.00
184	Drinking fountains	No	1	3,000.00	3,000.00
185	Bollards	No	10	2,500.00	25,000.00
186	Bicycle hoops	No	10	1,000.00	10,000.00
187	Tactile ground surface indicators 600 wide	No	4	3,000.00	12,000.00
	Street Lighting				
188	Street lighting - poles	No	12	7,500.00	90,000.00
189	Feature lighting - poles	No	3	15,000.00	45,000.00
190	Pedestrian lighting - bollard/low level	No	8	2,500.00	20,000.00
	Stormwater Drainage				
191	Connect new gutters and channel drains into existing stormwater system	m	561	100.00	56,100.00
192	Slot Drain	m	150	350.00	52,500.00
	Sewer Drainage				
193	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	7,500.00	7,500.00
194	Allowance to replace existing manhole covers	PSum	1	20,000.00	20,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
195	Gas	PSum	1	17,500.00	17,500.00
196	Power	PSum	1	17,500.00	17,500.00
197	Telecoms	PSum	1	17,500.00	17,500.00
198	Fibre Optic	PSum	1	22,500.00	22,500.00
199	Water - mains	PSum	1	17,500.00	17,500.00
200	Water - fire	PSum	1	17,500.00	17,500.00
201	CCTV	PSum	1	15,000.00	15,000.00

		Unit	Qty	Rate	Cost
	Traffic Control				
202	Road signage	PSum	1	5,000.00	5,000.00
	Preliminaries & General				
203	Main Contractor's preliminaries and general costs	Item	1	278,000.00	278,000.00
204	Temporary hoardings, road/pedestrian barriers etc	Item	1	30,000.00	30,000.00
205	Traffic management	PSum	1	50,000.00	50,000.00
206	Temporary road closures, permits, and fees	PSum	1	30,000.00	30,000.00
207	Main Contractor's margin	Item	1	159,000.00	159,000.00
	Project On-Costs				
208	Professional fees/consents	Item	1	333,000.00	333,000.00
209	Project Contingency	Item	1	366,000.00	366,000.00
	TOTAL MAIN STREET EAST (8,300 M2) $				**4,028,505.00**

	Unit	Qty	Rate	Cost
Main Street East Bus Terminal Canopies (Option B)				
Large Shelter (3 + 2 Bays)				
Substructure				48,000.00
Frame				246,710.00
Roof				345,775.00
Fittings and Fixtures				20,000.00
Electrical Services				95,750.00
Allowance for design developement				114,451.00
Preliminaries (10%)				75,624.00
Margin (5%)				47,316.00
Professional Fees/Consents (10%)				99,363.00
Project Contingency (10%)				109,299.00
Small Shelters (4 Bays)				
Substructure				22,400.00
Frame				73,620.00
Roof				48,800.00
Fittings and Fixtures				8,000.00
Electrical Services				14,750.00
Allowance for design developement				50,000.00
Preliminaries (10%)				16,757.00
Margin (5%)				11,716.00
Professional Fees/Consents (10%)				24,604.00
Project Contingency (10%)				27,065.00
TOTAL MAIN STREET EAST BUS TERMINAL CANOPIES (OPTION B) $				**1,500,000.00**

		Unit	Qty	Rate	Cost
	Church Street (6,700 m2)				
	Site Clearance and Preparation				
210	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	6,704	20.00	134,080.00
	Pavings				
211	Paving type P1 - Pedestrian Stone, 600 x 400 x 65 granite pavers on sand bed and 150 compacted basecourse, flamed/bush hammered finish	m2	1,654	250.00	413,500.00
212	Paving type P2 - Vehicle Stone, 200 x 400 x 100 granite pavers on 30 steintec tuffbed mortar, 100 concrete base and 150 compacted basecourse, flamed/bush hammered finish	m2	176	600.00	105,600.00
213	Paving type P3 - Pedestrian Concrete, 110 reinforced concrete on 150 compacted basecourse, exposed aggregate finish	m2	609	175.00	106,575.00
214	Paving type P4 - Pedestrian Asphalt, 25 TNZ Mix 6 asphalt wearing course on 150 compacted basecourse	m2	112	75.00	8,400.00
215	Paving type P5 - Vehicle Asphalt, 35 TNZ Mix 15 asphalt wearing course on 150 compacted basecourse	m2	335	100.00	33,500.00
216	Extra value forming pram ramp	No	4	900.00	3,600.00
217	Kerb type 1 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed and 450 wide black oxide concrete gutter with troweled finish	m	1,038	340.00	352,920.00
218	Kerb type 2 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed, set flush with paving	m	206	250.00	51,500.00
219	Kerb type 3 - 300 wide insitu black oxide concrete kerb with saw cuts at 2m cts	m	14	150.00	2,100.00
220	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	318	75.00	23,850.00
221	Road line markings	m	389	5.00	1,945.00
	Landscaping				
222	Street Trees	No	21	1,500.00	31,500.00
223	Understorey planting	m2	931	120.00	111,720.00
	Street Furniture				
224	Bench seats	No	6	2,500.00	15,000.00

		Unit	Qty	Rate	Cost
225	Waste collection bins	No	12	1,500.00	18,000.00
226	Recycle collection bins	No	4	1,500.00	6,000.00
227	Drinking fountains	No	1	3,000.00	3,000.00
228	Bollards	No	10	2,500.00	25,000.00
229	Bicycle hoops	No	10	1,000.00	10,000.00
230	Tactile ground surface indicators 600 wide	m	14	3,000.00	42,000.00
	Street Lighting				
231	Street lighting - poles	No	24	7,500.00	180,000.00
232	Pedestrian lighting - bollard/low level	No	8	2,500.00	20,000.00
	Stormwater Drainage				
233	Connect new gutters and channel drains into existing stormwater system	m	1,052	100.00	105,200.00
	Sewer Drainage				
234	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	7,500.00	7,500.00
235	Allowance to replace existing manhole covers	PSum	1	20,000.00	20,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
236	Gas	PSum	1	17,500.00	17,500.00
237	Power	PSum	1	17,500.00	17,500.00
238	Telecoms	PSum	1	17,500.00	17,500.00
239	Fibre Optic	PSum	1	22,500.00	22,500.00
240	Water - mains	PSum	1	17,500.00	17,500.00
241	Water - fire	PSum	1	17,500.00	17,500.00
242	CCTV	PSum	1	15,000.00	15,000.00

		Unit	Qty	Rate	Cost
	Traffic Control				
243	Signalised intersection	No	2	50,000.00	100,000.00
244	Road signage	PSum	1	5,000.00	5,000.00
	Parking Control				
245	Relocate parking meters	No	4	500.00	2,000.00
246	Parking space identification	No	16	250.00	4,000.00
	Preliminaries & General				
247	Main Contractor's preliminaries and general costs	Item	1	207,000.00	207,000.00
248	Temporary hoardings, road/pedestrian barriers etc	Item	1	30,000.00	30,000.00
249	Traffic management	PSum	1	50,000.00	50,000.00
250	Temporary road closures, permits, and fees	PSum	1	30,000.00	30,000.00
251	Main Contractor's margin	Item	1	119,000.00	119,000.00
	Project On-Costs				
252	Professional fees/consents	Item	1	250,000.00	250,000.00
253	Project Contingency	Item	1	275,000.00	275,000.00
	TOTAL CHURCH STREET (6,700 M2) $				**3,029,490.00**

		Unit	Qty	Rate	Cost
	The Square West (7,200 m2)				
	Site Clearance and Preparation				
254	Allowance for general site clearance, breaking up surfaces, removing kerbs, street furniture and the like	m2	7,171	20.00	143,420.00
	Pavings				
255	Paving type P1 - Pedestrian Stone, 600 x 400 x 65 granite pavers on sand bed and 150 compacted basecourse, flamed/bush hammered finish	m2	3,117	250.00	779,250.00
256	Paving type P2 - Vehicle Stone, 200 x 400 x 100 granite pavers on 30 steintec tuffbed mortar, 100 concrete base and 150 compacted basecourse, flamed/bush hammered finish	m2	499	600.00	299,400.00
257	Paving type P3 - Pedestrian Concrete, 110 reinforced concrete on 150 compacted basecourse, exposed aggregate finish	m2	197	175.00	34,475.00
258	Paving type P5 - Vehicle Asphalt, 35 TNZ Mix 15 asphalt wearing course on 150 compacted basecourse	m2	1,897	100.00	189,700.00
259	Kerb type 1 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed and 450 wide black oxide concrete gutter with troweled finish	m	319	340.00	108,460.00
260	Kerb type 2 - 300 x 200 x 1000 long granite kerb, flamed finish, including concrete bed, set flush with paving	m	259	250.00	64,750.00
261	Edge type 1 - 70 x 70 x 6 galvanised steel angle, including 100 concrete bed	m	379	75.00	28,425.00
262	Edge type 2 - 400 x 400 x 1000 long granite wall blocks, honed finish, including concrete bed	m	148	1,200.00	177,600.00
263	Road line markings	m	333	5.00	1,665.00
	Landscaping				
264	Street Trees	No	4	1,500.00	6,000.00
265	Understorey planting	m2	1,505	120.00	180,600.00
	Street Furniture				
266	Bench seats	No	8	2,500.00	20,000.00
267	Waste collection bins	No	8	1,500.00	12,000.00
268	Recycle collection bins	No	2	1,500.00	3,000.00
269	Drinking fountains	No	1	3,000.00	3,000.00

		Unit	Qty	Rate	Cost
270	Bollards	No	10	2,500.00	25,000.00
271	Bicycle hoops	No	10	1,000.00	10,000.00
272	Tactile ground surface indicators 600 wide	m	12	3,000.00	36,000.00
	Artwork				
273	Re-position Infinity artwork	Item	1	15,000.00	15,000.00
274	Allowance for sculptural, custom furniture	Item	1	40,000.00	40,000.00
	Street Lighting				
275	Street lighting - poles	No	10	7,500.00	75,000.00
276	Pedestrian lighting - bollard/low level	No	4	2,500.00	10,000.00
277	Catenary/special pedestrian lighting	Item	1	50,000.00	50,000.00
	Stormwater Drainage				
278	Connect new gutters and channel drains into existing stormwater system	m	319	100.00	31,900.00
	Sewer Drainage				
279	Allowance to raise/adjust existing manhole covers to suit new levels	Item	1	7,500.00	7,500.00
280	Allowance to replace existing manhole covers	PSum	1	20,000.00	20,000.00
	Utilities				
	Allowance for minor works to the following utilities:				
281	Gas	PSum	1	17,500.00	17,500.00
282	Power	PSum	1	17,500.00	17,500.00
283	Telecoms	PSum	1	17,500.00	17,500.00
284	Fibre Optic	PSum	1	22,500.00	22,500.00
285	Water - mains	PSum	1	17,500.00	17,500.00
286	Water - fire	PSum	1	17,500.00	17,500.00

		Unit	Qty	Rate	Cost
287	CCTV	PSum	1	15,000.00	15,000.00
	Traffic Control				
288	Signalised intersection	No	1	50,000.00	50,000.00
289	Road signage	PSum	1	5,000.00	5,000.00
	Parking Control				
290	Relocate parking meters	No	3	500.00	1,500.00
291	Parking space identification	No	26	250.00	6,500.00
	Preliminaries & General				
292	Main Contractor's preliminaries and general costs	Item	1	256,000.00	256,000.00
293	Temporary hoardings, road/pedestrian barriers etc	Item	1	20,000.00	20,000.00
294	Traffic management	PSum	1	30,000.00	30,000.00
295	Temporary road closures, permits, and fees	PSum	1	20,000.00	20,000.00
296	Main Contractor's margin	Item	1	144,000.00	144,000.00
	Project On-Costs				
297	Professional fees/consents	Item	1	303,000.00	303,000.00
298	Project Contingency	Item	1	333,000.00	333,000.00
	TOTAL THE SQUARE WEST (7,200 M2) $				**3,666,145.00**