



Redland City Council

Cleveland Centre

AN EXPLORATION OF CONCEPT DESIGNS FOR BLOOMFIELD STREET

MAY 2010

AECOM

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Prepared by Design + Planning at Aecom

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Introduction

1.1 Context of this Report

This report has been produced by the Design + Planning team at AECOM on behalf of Redland City Council. It aims to build on, and contribute to, the wider body of work being produced in the development of the Cleveland Centre Master Plan.

The master plan is represented through a series of documents which collectively set in place a vision to guide the future growth of this important regional centre over the next twenty years.

This study is part of the Cleveland Centre Master Plan which consists of the following additional documents, all of which should be read in conjunction with each other for a comprehensive appreciation of the project and development process (refer to page 4). These include:

Volume 1: Contains the Cleveland Centre Master Plan and the Implementation Plan.

Volume 2: Presents the Master Plan Report and documents the supporting information considered by Council in the development of the Cleveland Centre Master Plan.

Cleveland Centre Landscape Strategy:

Explores opportunities for the development of a comprehensive Landscape Strategy to deliver a rich mix of diverse, stimulating public realm and open space opportunities for Cleveland's residents now and into the future.

Cleveland Centre Master Plan Development - Relationships between Built Form and the street:

This document seeks to understand and explore in more detail some of the key issues and opportunities relating to the design of built form edges and the adjacent public realm. It provides high level design guidance and presents best practice examples to ensure appropriate design responses can be adopted in the future to ensure Cleveland maintains its position as a distinctive and attractive place to live, work and play.

Cleveland Centre Master Plan Visualisation: This series of visualisations seek to provide a realistic interpretation of the intent of the master plan in terms of how density, height, activities and public spaces may shape the future Cleveland Centre. Key design principles demonstrated include sustainable living, strong architectural design to define streets and spaces, subtropical character, a centre that promotes outdoor lifestyle and maintains the human scale of the public realm.



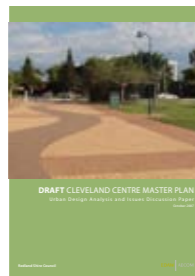
Document Map

Vision



Master Plan Visualisation

Strategies



Urban Design Analysis and Issues Discussion Paper Vol II



Cleveland Centre Master Plan volume 1: Master Plan and Implementation Plan

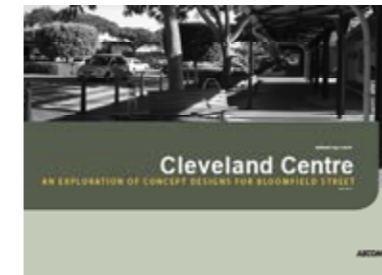


Landscape Strategy

Detailed Considerations



Master Plan Development : Built Form and Public Realm



Cleveland Centre : An exploration of concept designs for Bloomfield Street

January 2008 and updated January 2010

December 2009 - May 2010

1.2 Purpose of this Report

This document explores the development of more detail design concepts for Bloomfield Street. In particular issues currently affecting the street in terms of its use, as well as seeking to understand design opportunities to enhance the street in the context of its future city role as the focus for commercial activity and life in the centre.

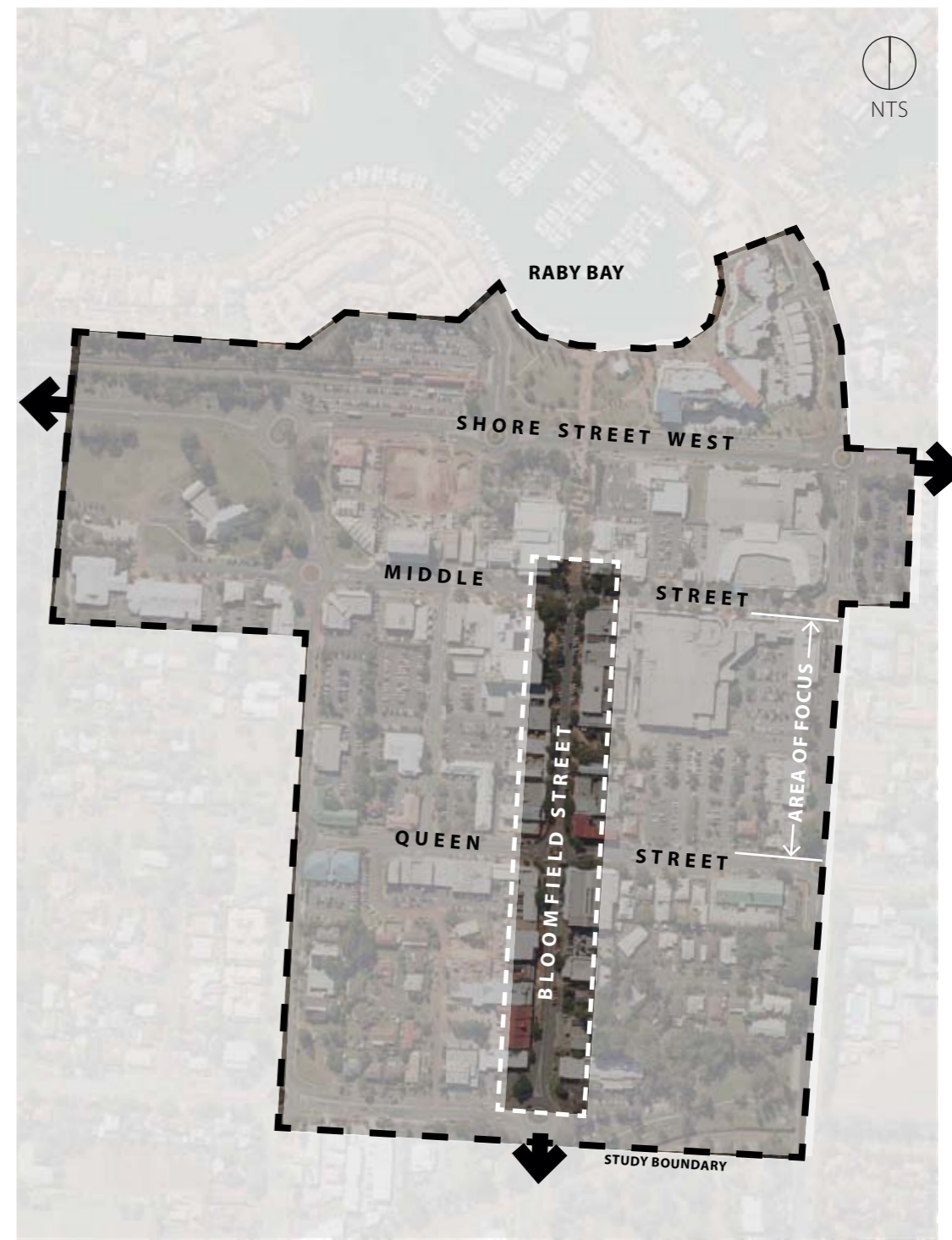
This document has been structured in two sections:

Section 2.0 Analysis and Findings

This section sets out a detail exploration of the existing street in the context of its physical conditions as well as design quality, use, key features and assets. It also draws on research into working streets to provide an appreciation of key design considerations which contribute to the establishment of great streets, exploring issues of traffic movement, one way and two options, parking provision and design.

Section 3.0 Design Opportunities

This Section seeks to establish possible design opportunities for Bloomfield Street by providing clear direction through design principles, character imagery and the development and comparison of scenarios exploring possible future configurations of this high street.



Local Context Plan

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Analysis and Findings



2.1 Current Situation

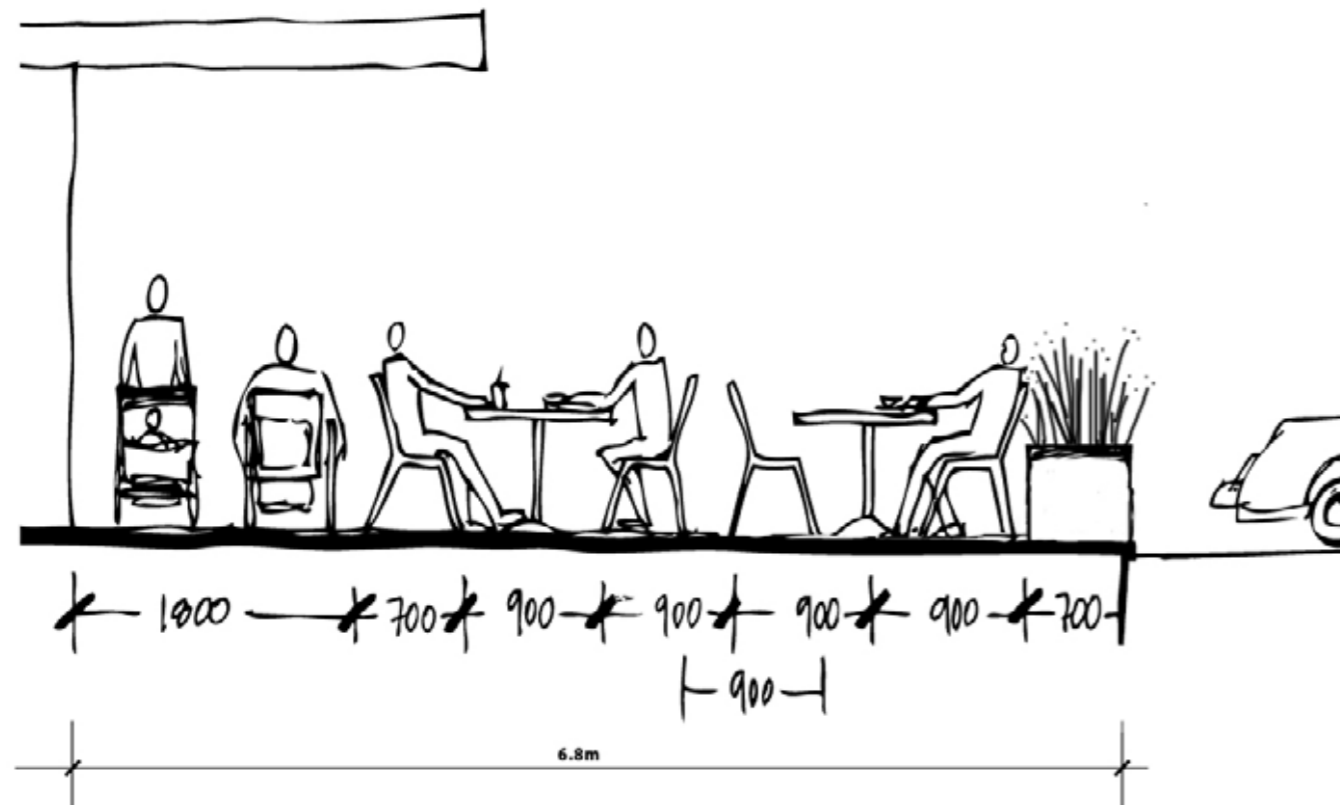
Bloomfield Street defines the central spine of the Cleveland Centre core area, as defined by the Master Plan. It is the focus of daily life for the residents providing access to shops and local government.

The street is approximately 30m wide, from building edge to building edge, and provides substantial space that accommodates both pedestrians and vehicles. Just over half of the corridor is utilised to facilitate vehicle movement with a generous central corridor off which rear in parking bays are accessed. Exhaust fumes from rear in parking adversely impact on the quality of the pedestrian environment.

Both sides of the street are currently defined by single and two story retail and commercial activity. Activity on the street is therefore directly related to business opening hours.

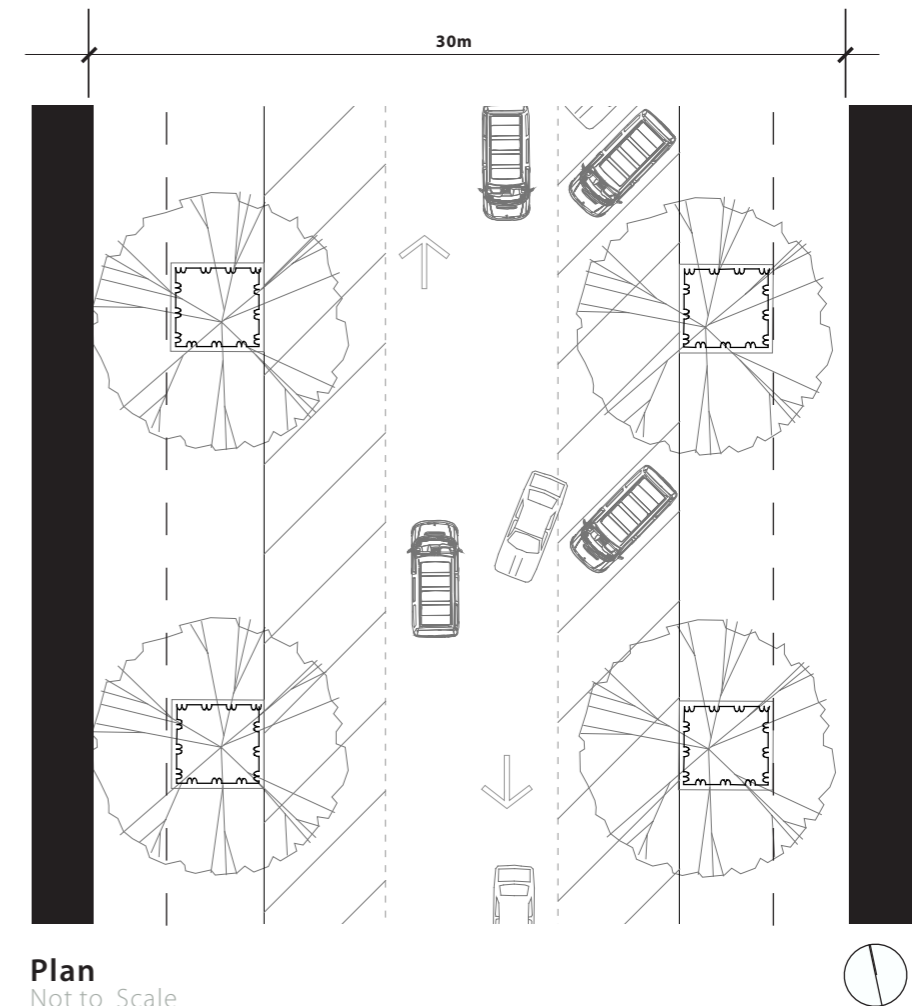
Accommodating People

Bloomfield Street has a footpath width of approximately 6.8m. The below diagram describes how the footpath could easily function in terms of ergonomic requirements and people comfort. It demonstrates that the current width is substantial, allowing cafe activity to occur while still allowing sufficient width for pedestrian through traffic. There are planters and seating walls along the length of the street providing rhythm, human scale, detail and shaded spaces enabling pedestrians to pause under the distinctive canopy of Poinciana trees.

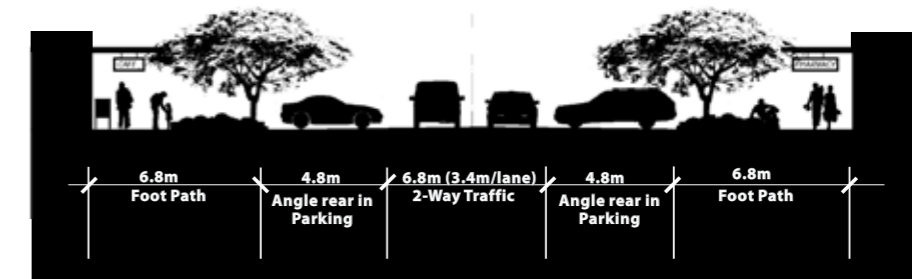


Footpath Section: Dimension considerations accommodating People

Not to Scale



Plan
Not to Scale



Typical Section

Not to Scale

2.2 Key Features of the Street

The current landscape of the street dates back to 1994, designed by Brisbane based Landscape Architect, John Mongard in close consultation and involvement with the local community.

The design creates a street of distinctive character with:

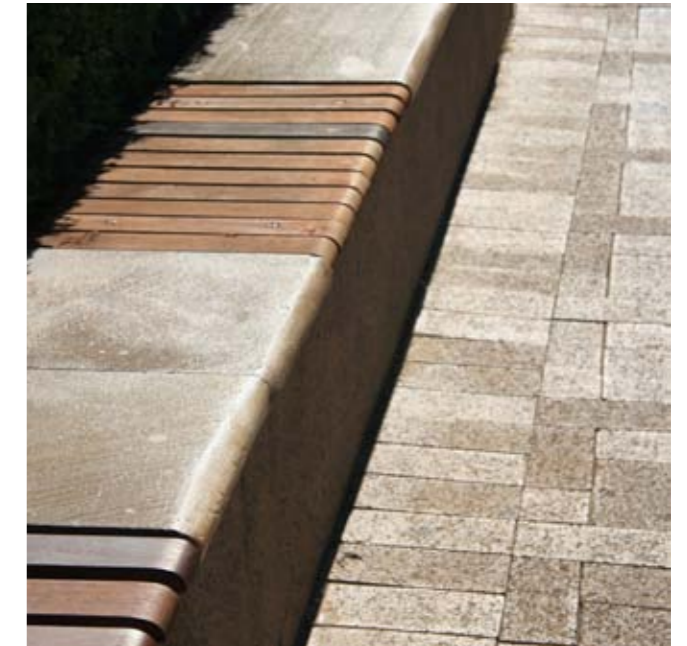
- Integrated artwork providing local distinctiveness and a platform for community identity
- Site specific furniture to accommodate pedestrian use of the footpath spaces
- Shade and character with tree planting, in particular *Delonix Regia* (Poinciana Trees) which help define the linearity of the street and provide a broad canopy, shade and colour

Distinctive Design



The streetscape design and artwork provide interest and identity.

Comfort



Seating, bins, lighting and signage highlight the streets focus on pedestrians and their comfort.

Community Ownership



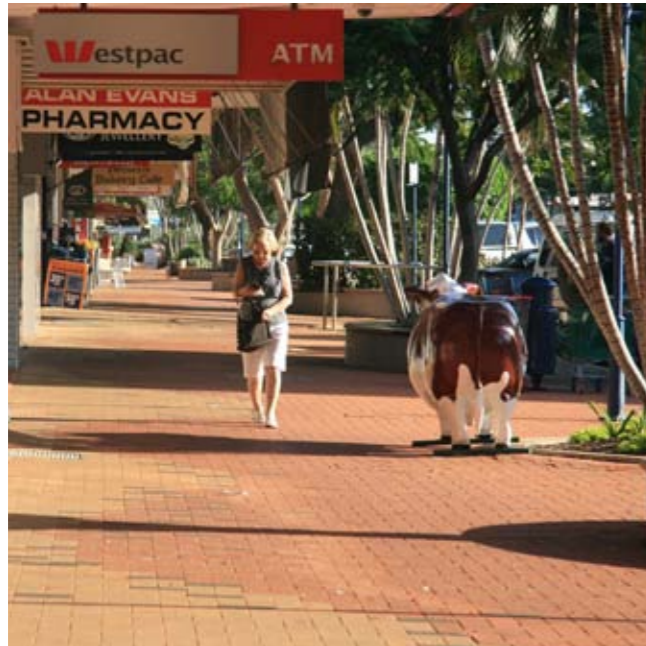
Previous streetscape design has involved community collaboration which has helped strengthen ownership and street character.

Adaptation



Bloomfield Street provides important frontage and access for business that provide for the daily needs of this growing community.

Promenade



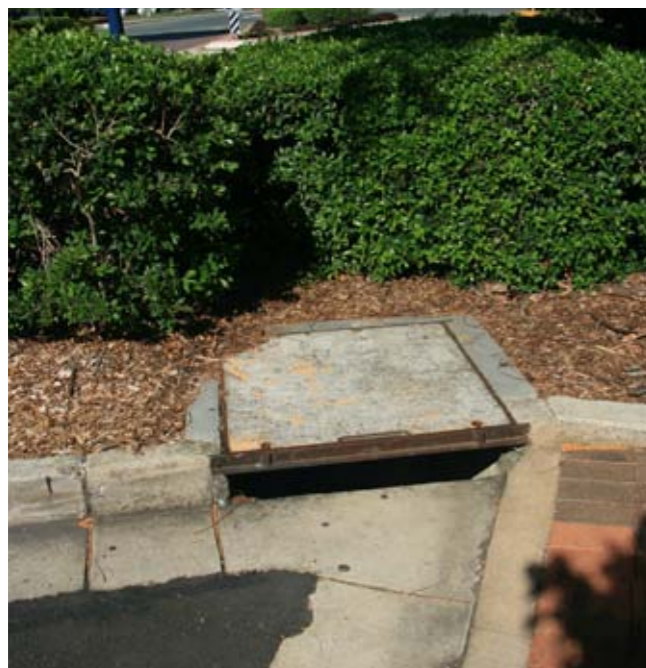
Building frontages, wide pavements and awnings provide the framework for an effective pedestrian thoroughfare.

Shade



Street tree planting and garden beds provide climate comfort with shade and contribute to the distinctive character of the street.

Infrastructure



Stormwater management in the street is handled by more traditional methods of infrastructure.

Street Vista



Poinciana Street tree planting and hoop pines focus the eye along the street both strengthening and obstructing vistas towards Raby Bay marina.

Key Considerations

- The mature Poinciana's contribute significantly to the comfort of users and the streetscape character.
- The established street has generous width with a significant proportion of the surface area used to accommodate the needs of the motor vehicle.
- Existing artwork and community involvement contribute to character and a sense of pride and place.

2.3 Future Role of Bloomfield Street

As part of the master plan development a vision for the future of the Cleveland Centre was defined:

*"Cleveland Centre is the vibrant and exciting gateway to Moreton Bay. It is a destination with unrivalled attractions and exciting **buildings and streets focused around Raby Bay**. In the Bayside Precinct **a rich mix of entertainment and shopping opportunities are easily reached by foot and it provides a great environment in which to relax with friends, either in the waterside park or in one of the many cafes or restaurants that make the most of the bay views.***

It is a centre with a village feel and is easy to make home, with a range of high quality apartments, for all ages and family size. These have been designed to enjoy spectacular views across the bay and make the most of their proximity to the services and facilities that the Centre offers, satisfying the daily needs of any family.

*It is easy to get to, and around with an excellent and convenient public transport network that services not only the Centre but also the surrounding residential neighbourhoods and local attractions. **It is admired for its safe, pedestrian and cyclist friendly streets**, as well as its integrated and diverse network of parks and plazas that connect the harbour to the Centre.*

*The variety of activities that make the Centre vibrant throughout the day provide for the needs of all citizens and visitors and make Cleveland a desirable place to live, work, relax and be educated and entertained. **Cleveland Centre is an exemplar of environmental, economic and social responsibility and is a focus for community life and civic activity.***

The statements highlighted in the vision demonstrate the clear desire for the future character and role of the streets within the centre and the importance placed on their design as pedestrian focused and capable of supporting the full range of life in this growing community.

Bloomfield Street: At the heart of a reinforced core

Building upon the existing success of Bloomfield Street, as the Centre's principal day to day shopping destination, the Street will be reinforced in the master plan with additional frontage and floor area to form Cleveland's principal 'High Street'.

This role will be augmented further with the introduction of a new public square, at a mid-point within the street, connected laterally along a new pedestrian route leading directly east/west to the residential areas surrounding the Centre.

Bloomfield Street is proposed to continue its retail focus, but with an increase in the amount of residential development available. This residential focus integrates the Centre with the surrounding area and also introduces a significant generator of on-street activity, with the potential to animate and activate the entire length of Bloomfield Street.

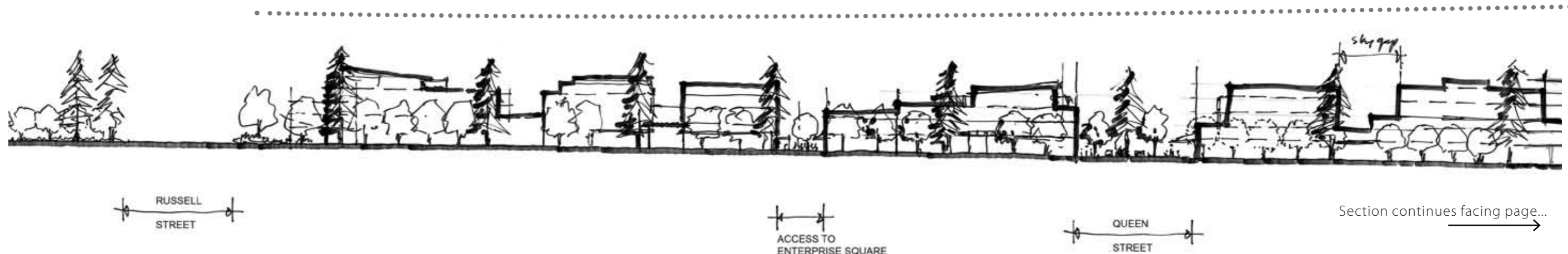
The long section illustrated on this page provides an interpretation of the building heights anticipated by the master plan along Bloomfield Street. The section demonstrates the overall intent within the master plan for variety in the key street edges where the lower floors of the blocks define the public realm.

Increased density within the centre has the potential to support sustainable economic and social activity, as well as deliver environmental improvements if carefully planned and managed.

Well considered design is required to ensure development minimises any potential unwanted impacts on the attractiveness, character and amenity of the Centre. An increase in the permitted development density generates requirements for the consideration of a number of new urban conditions; associated to changes in building heights, new building typologies, and an increase in vehicular and pedestrian activity as well as changes in the diversity and patterns of land use.

Key design considerations for the centres public realm need to be explored and understood to ensure Cleveland's streets and spaces continue to contribute to its attractiveness as a place to live work and play:

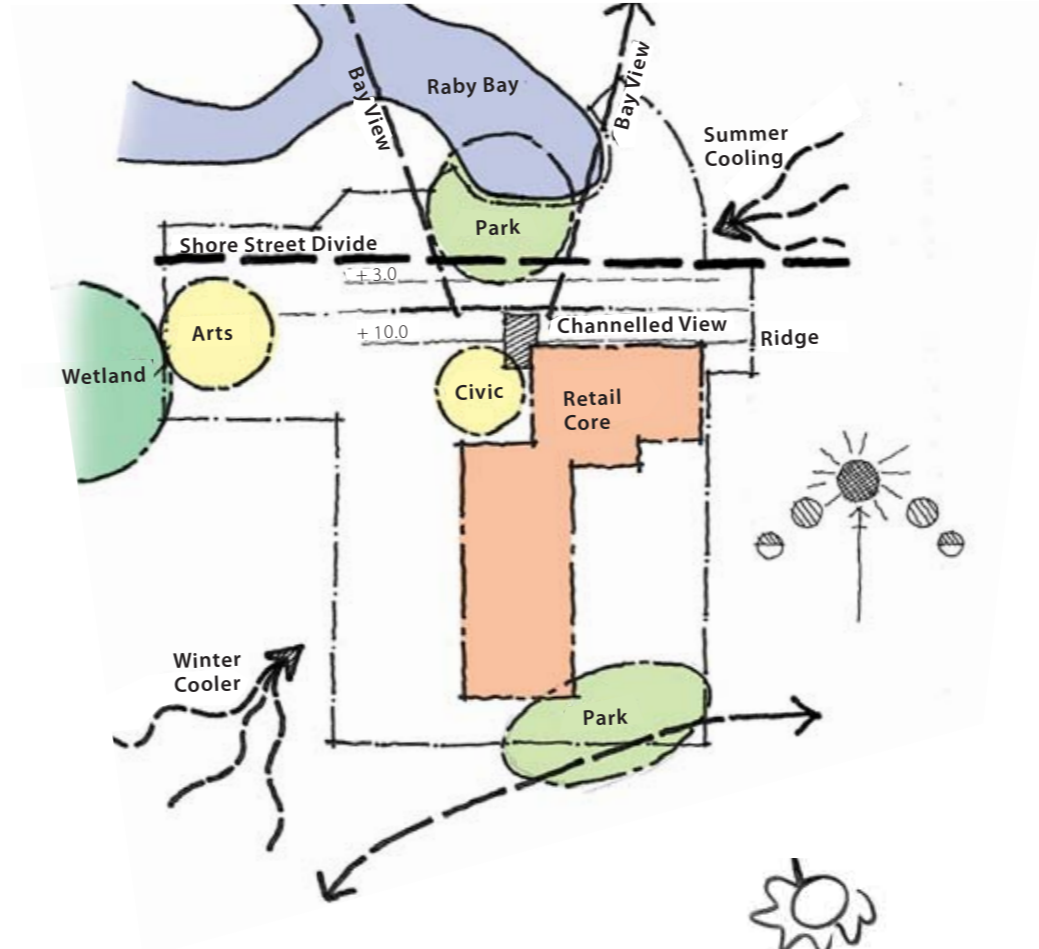
- Climatic Responsive Design
- Understanding shading
- Street Edges
- Awnings
- Design Detail
- Circulation and services
- Pedestrian amenity
- Identity
- Access for all



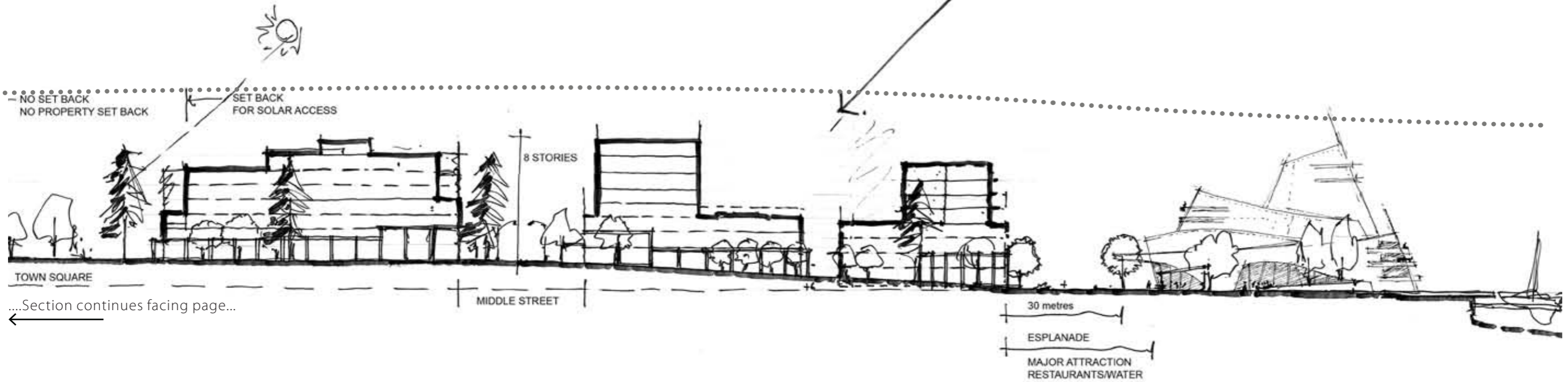
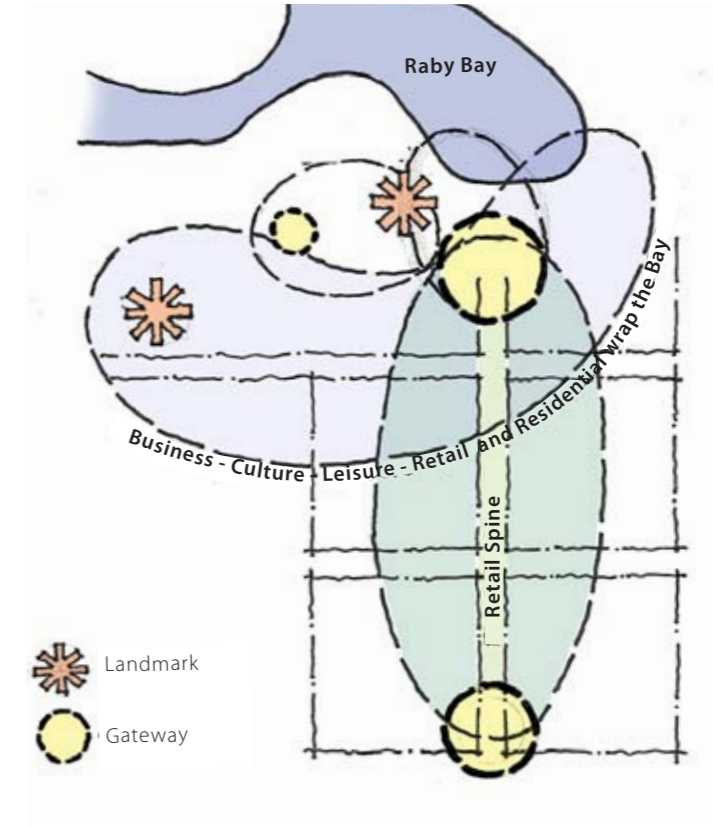
Bloomfield Street Long Section illustrating the anticipated change in building character along the street.

Images on this page have been taken from the Cleveland Master plan Document, Page 9.

Local Assets

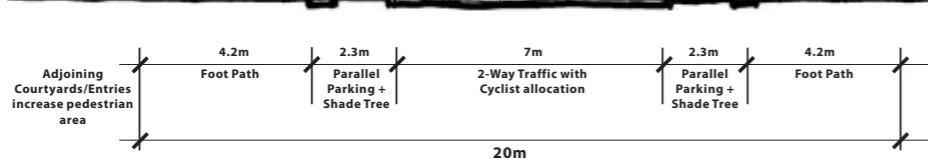


Unifying the Whole



2.4 Exploring Working Streets

a destination



Typical Section

Not to Scale

Location

Noosa, Sunshine Coast

North/South Orientation between Noosa Main Beach and Noosa River

Condition

Two-way/ two-lane high street approximately 1km long dead end. Medium to high volumes of Traffic.

General Comments

The street works well as both a destination, due to the amenities and services accommodated in buildings along its length, as well as being accessible; providing links to the beach, nearby holiday accommodation, shops, restaurants and Noosa National Park.

Use

- Footpath
- Links to beach
- Building access
- Meeting spaces
- Additional retail space for adjacent shops
- Alfresco dining opportunities

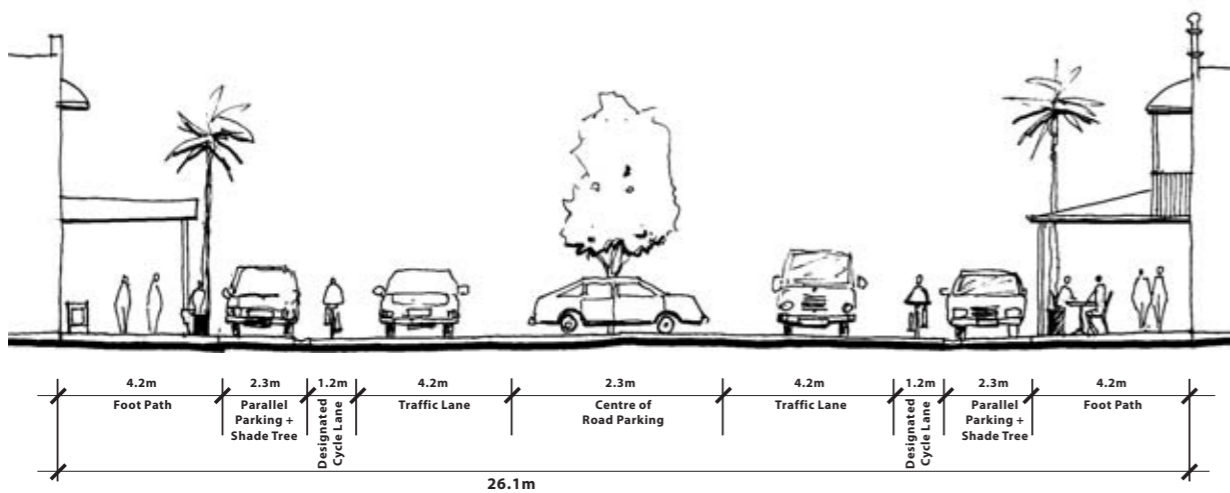
Design Details

- A consistent plant palette helps frame the street, busy pathways and casual spill-out spaces create a relaxed and well shaded environment
- Pedestrian zones are legible along the straight kerb edged pavements and support a variety of uses
- Slow moving traffic through raised shared zones and the volume of pedestrian activity in the street
- The proportion between adjacent building heights and the street corridor creates an attractive and well defined space

Key Considerations

In the context of our study Hastings Street is an example of a street which acts as a successful destination, as a resort style high street /tourist 'mecca'. The architecture, planting, road layout and highly visible and well located pedestrian crossings combine to give priority to pedestrian activity.

distinctive

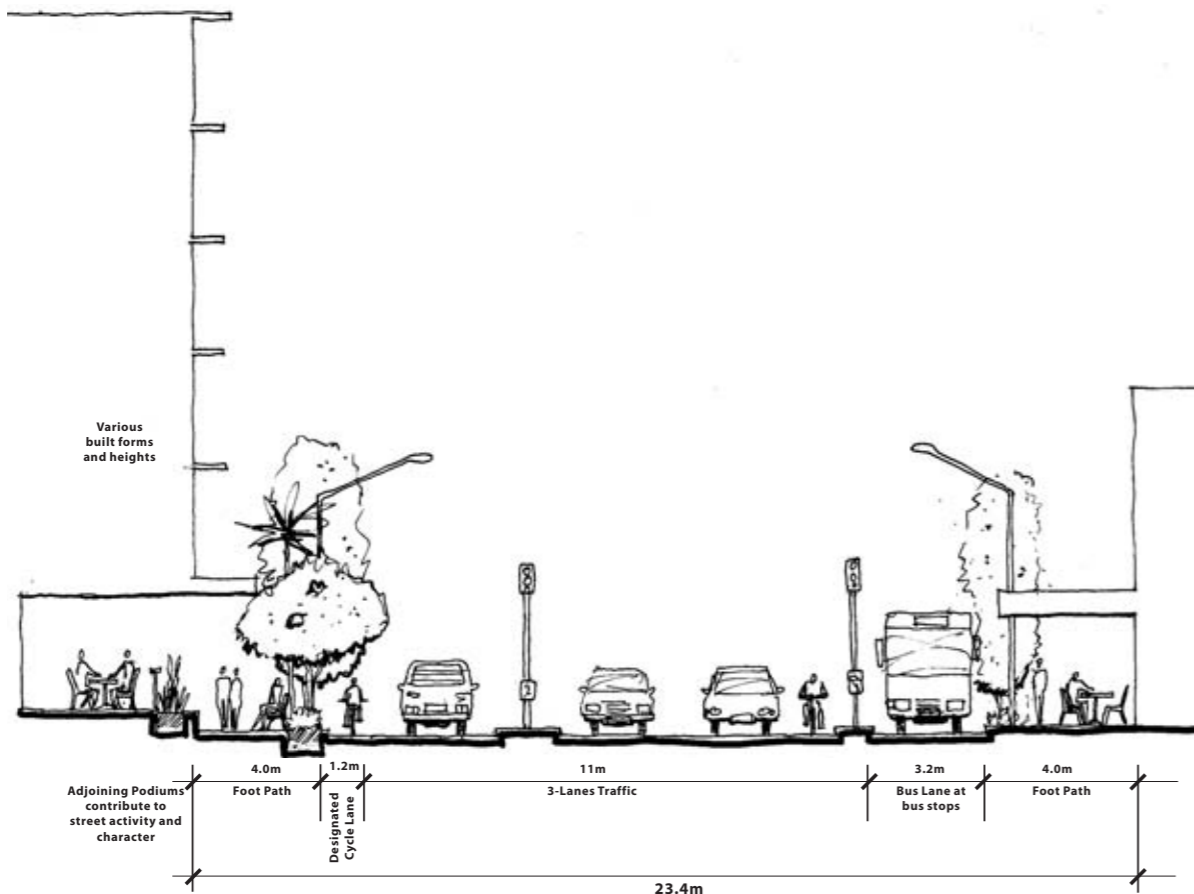


Typical Section

Not to Scale

Location	Woolloongabba, Brisbane
Condition	Two-way section of Logan Road with dead end. Low volumes of traffic.
General Comments	It is a small high street precinct located near The Gabba sports ground which focuses on speciality retail, cafes and restaurants.
Use	<ul style="list-style-type: none"> • Alfresco cafe and dining opportunities • Pedestrians • Building access • Meeting spaces • Speciality retail
Design Details	<ul style="list-style-type: none"> • Flush kerbs help create an accessible shared space between the footpath and road for all abilities and improve opportunities for effective stormwater management • Pavement edges are kerb-less but defined well by paving colour variance, bollards, line marking and designated cycleway • The linear nature of the historical facade help direct pedestrian flows underneath the awnings. • Street tree planting although juvenile is structured, helps clarify road / pedestrian threshold and complements architectural facade. • Central road parking bays allow for additional street trees down the centre of road characteristic of old country towns • Distinctive lighting and furniture • Specific people gathering spaces provided at each end
Key Considerations	This design provides a precedent for Bloomfield in terms of clear pedestrian/ vehicular thresholds and distinctive identity and character.

subtropical boulevard



Typical Section

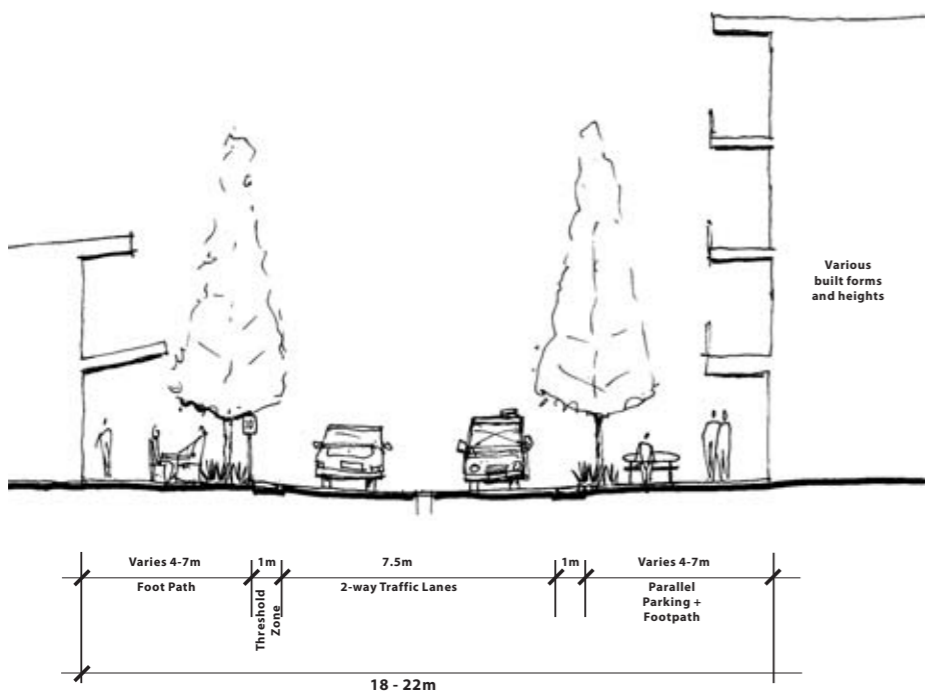
Not to Scale

Location	South Brisbane/ West End
Condition	Two-way/ three-lane street Under 1km in length linking Brisbane's CBD with the South Brisbane and West End precincts. High volumes of traffic.
General Comments	The street works well as both a destination, due to the amenities and services accommodated in buildings along its length and providing access to speciality retailers, eating precinct and commercial buildings and the wider suburb.
Use	<ul style="list-style-type: none"> • Commuter and pedestrian footpath • Vehicular and pedestrian link to city and cultural precinct • Building access • Meeting spaces • Mixture of retail, business and dining • Alfresco dining opportunities
Design Details	<ul style="list-style-type: none"> • Pedestrians are able to maintain visual connection between the street, footpath and building entrances • Diverse range of architecture, scale, facade entries and pedestrian podium levels are tied together by consistent streetscape theme and materials palette • Street trees with various layers of canopy and understory planting soften the road/ footpath interface and reflect the sub tropical location • Updates to the design have maintained path width and kerb alignments • The street environment includes sub tropical planting, site specific furniture and public art
Key Considerations	In the context of our report, Melbourne Street is a good example of how a busy urban street can be people focused yet not inhibit vehicular movement. Dining and retail precincts exist as destinations activating the street and providing passive surveillance. It is a street which has adapted to and benefits from increased population and activity.

controlled speed



Location	Maroochydore, Sunshine Coast
Condition	Two-way street approximately 800m long with sections of shared pedestrian crossing zones. Medium to high volumes of traffic.
General Comments	The accommodation, retail and business focused section of Duporth Avenue has been designed with priority given to pedestrians by creating a shared zone of 10km speed limit. A uniform material finish and colour has been applied from built edge to built edge and a lack of kerbs emphasises the shared nature of this part of Duporth Avenue. Cross paver banding, edge planting beds and bollards to narrow vehicular passage act as slowing mechanisms. The road edge is defined by a wide band of tactile indicators of contrasting colour which effectively acts as threshold zone between the pedestrian and shared zone.
Use	<ul style="list-style-type: none"> • Footpath • Links to businesses/ retail • Building access • Meeting spaces • Access to accommodation / serviced apartments • Alfresco dining opportunities
Design Details	<ul style="list-style-type: none"> • Continuous material from building edge to building edge to emphasis shared zone • Tall columnar trees provide street scale while not inhibiting views from apartments and offices above • Diverse range of architecture, facade entries and pedestrian podium levels are tied together by consistent streetscape theme and materials palette • Trees, site specific furniture and material selection contribute to the street character • Speed controlled through bends and narrowing of the road corridor
Key Considerations	Duporth Avenue provides an example of a shared zone street with a strong pedestrian priority through the control of vehicle speeds.



Typical Section

Not to Scale

2.5 Movement

The Street Debate

Redland City Council are currently exploring and testing a number of traffic and transport options in order to improve the pedestrian experience of Cleveland's Streets and plan for the future growth of the centre in accordance with the Cleveland Centre Master Plan.

As part of this initiative both one-way and two-way traffic options have been explored.

The primary objectives of the one-way street are to improve pedestrian environments by calming vehicle movement. There has been robust debate around the world regarding the pros and cons of one-way vehicular movement versus two-way.

Recently within Australia, both Hobart and Perth City Councils have reassessed their traffic management options within their business centres. Both have queried whether retention or change to their Central Business District (CBD) one-way streets is necessary. The key catalyst for these discussions has been the requirement to reassess urban centres, at a time of international focus on making CBD's more successful pedestrian focused destinations.

A key figure in the Hobart discussion has been the Danish Architect Professor Jan Gehl, who has been commissioned to produce a new city plan for Hobart by the end of 2010. This plan proposes to convert Hobart's one way streets to two-way to make them more pedestrian friendly. An assessment of Professor Gehl's plan indicates a desire to make the streets more pedestrian friendly by reducing on street parking, and introducing two-way street conditions.

An American report that comprehensively covers the issues informing street options is 'Downtown Streets: Are We Strangling Ourselves on One-Way Networks (G. Wade Walker, Walter Kulash and Brian McHugh 1998)' by the Transport Research Board, Florida. This report attempts to summarise the two movement scenarios from the perspective of key stakeholders - namely motorists, traffic engineers, pedestrians and businesses.

The following is a summary of the key relevant points from this report.

One Way Streets

Opportunities

- Locals who are familiar with navigating the one way street network tend to fare better than visitors in understanding the legibility of an area.
- A one way system delivers simplified crossings for pedestrians.
- One way systems accommodate increased vehicular flows and reduced congestion due to a reduction in conflict and stalled traffic.
- Kerb side activity can be arguably less disruptive as there is usually more room either side of the one-way lane.

Challenges

- Visitors to an area tend to struggle with one way street navigation and may be deterred or delayed navigating an area.
- One way systems often result in an increase in the number of required detours to reach a destination. This has a flow on effect in terms of petrol use and carbon emission, as well as possible increase in traffic congestion in another location within the city grid, such as at major intersections.
- An increase in the variety of intersection variables within the city and therefore increased difficulty in legibility. For example a one way street intersecting with a one way street, a two way street and two way streets intersecting with two way streets.
- Increased vehicular speeds. This may prompt a requirement for speed reduction devices such as speed humps, signage, road narrowing, and/or chicanes (horizontal speed deflections) which all have a cost implication, life span and impact on the overall character and clarity of the street.

Two Way Streets

Opportunities

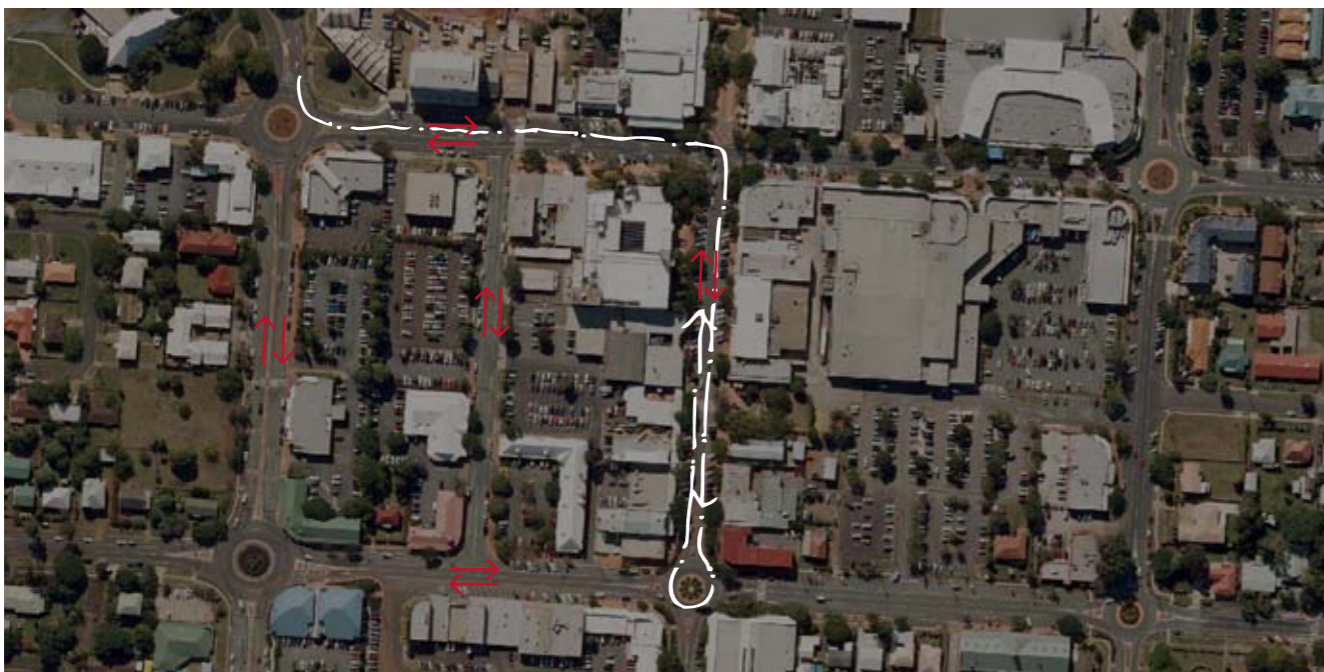
- Reduced traffic speed due to perceived increase in navigational and steering skills.
- Legible for both visitors and locals.
- Visibility between vehicles and adjacent pedestrians maximised.
- Visibility between vehicles and shop fronts maximised at intersections.
- Pedestrians can choose to walk against or with the traffic flow for comfort reasons, safety perception or glare minimisation at night.
- More options for entries and exits to the precinct and flexibility for short term street closure for roadworks or events.

Challenges

- Reduced vehicular traffic speeds along the street.
- Reduced on street parking opportunities in comparison with one-way street options within the same corridor width.



Bloomfield one-way circulation: The white line demonstrates the anticipated route of a vehicle accessing Bloomfield Street. Should the driver miss out on an on-street car park on their first attempt, they are then forced to go around the block again.



Bloomfield two-way circulation: The white line demonstrates the anticipated route of a vehicles accessing Bloomfield Street. Should the driver miss out on an on-street car park on their first attempt, they can turn around at the roundabout a return up the Street.

Summary of Traffic Modelling

In addition, in order to test the robustness of the proposed master plan Redland City Council have had Traffic Modelling undertaken, to test the proposed street network using a traffic simulation package to understand network operation in the design years 2021 and 2031, with 2009 as the base year.

A number of scenarios including Bloomfield Street as a one-way system, were tested in order to establish a network that would cater for the needs of the vehicular traffic of Cleveland's future community, whilst allowing adequate provision for pedestrians and cyclists.

Bloomfield Street (between Middle Street and Queen Street) was tested under one way scenarios (both north to south and south to north) – both these scenarios operated satisfactorily under 2021 design volumes.

Bloomfield St (between Middle Street and Queen Street) was also tested under one way scenarios for 2031 (both north to south and south to north) – both these scenarios operated satisfactorily in 2031.

Note the 2021 and 2031 results discussed above were obtained with retaining the on street reverse angle parking – this parking did not have significant adverse impact on the modelling results.

Traffic circulation throughout the centre would be further enhanced through the proposed restriction of bus movements from Middle Street. This, in addition to the concentrated parking areas proposed from the centre ring road will further assist circulation of the road network.

In conclusion, and based on the modeling undertaken, the growth scenario anticipated by the Cleveland Centre Master Plan has no implication on the efficiency and success of Bloomfield Street from a Traffic circulation perspective should it be altered into a one way system.

Moving forward

The debate regarding the relative appropriateness of one way versus two way vehicle movement, particularly in high streets, is a very complex one. Needing to take into account many factors including pedestrian safety and attractiveness, economic vibrancy of adjacent businesses as well as the efficient movement of vehicles. To explore these issues exhaustively, requires a multidisciplinary team to conduct a detail study of the physical conditions and use of the relevant street and its associated network.

The extent of study required is beyond the scope of this project currently. The scope and focus for this piece of work is therefore the exploration and development of a vision for Bloomfield Street, one that is built on strong urban design principles that seek to deliver a strong, vibrant, distinctive and pedestrian friendly subtropical street.

Through the course of developing the vision options to change the vehicular use of the street have been explored to understand the benefits and impacts on the public realm.

Key principles have informed the design discussion:

- Ease of vehicle movement and short stay parking access to facilitate a range of user needs in the centre
- Improved visual and physical access to businesses for pedestrians
- Improvements in the physical relationship between businesses and an attractive public realm
- Reduced vehicle speeds without engineered calming solutions
- Legibility of the street
- The provision of an attractive public realm
- The introduction of larger volumes of vegetation within the street to assist in balancing microclimate conditions and increase bio-diversity



S03

Design Opportunities

3.0 Introduction

This section of the study seeks to explore design opportunities for Bloomfield Street, ones which take into consideration the vision of the Cleveland Centre Master plan and combine these with the aspirations for the future role of Bloomfield Street within its local and regional context.

A series of design tools have been developed to provide the Council with the relevant material to effectively canvas opinion on design opportunities for the street, and guide the detail development of its future design.

Guiding Design Principles

In order to provide clear direction for any potential future configuration and detail design development, a set of guiding design principles have been developed.

Illustrating the opportunities

The emerging ideas have been illustrated using simple artists perspectives to help demonstrate the potential life of the street. In addition, character imagery has been included to provide guidance on possible future textures, materiality, character and detail design solutions.

Testing cross sectional compositions

Three different configurations for the street cross section have been tested, to understand the opportunities presented within the 30m corridor dependant on the preferred design focus for the ultimate street design.

Next Steps

Finally the section concludes by providing a few key bullet point recommendations on moving forward with the project to ensure that the vision for the street is achieved; to deliver an attractive civic street that supports a vibrant and vital residential and business community into the future-

3.1 Design Principles

The Design Principles seek to provide Redland City Council with a clear direction and coordinated approach to the conservation, enhancement, renewal and growth of Bloomfield Street and define mechanisms and design direction to inform the renewal process.

The principles have been developed and informed by the:

- the direction set by the Cleveland Centre Master Plan
- Lessons learnt from Section 2.4 of this study: Exploring Working Streets
- Lessons learnt from Section 2.5 of this study: Movement.

Identity + Destination

Create a sense of identity and distinct destination for the Cleveland Centre and region.



Design Principles

- Create a sense of destination through improved visual, physical and referenced connection to the Bay.
- Promote a sense of place and community identity through site specific design and local relevance in terms of plants and materials selection.
- Retain and build on a sense of heritage and village character by retaining or recycling existing elements of high visual, cultural or community value including mature trees, art work and heritage building and structures.
- Encourage visitor activity by providing an inviting, adaptable and stimulating public realm which supports shopping and dining.

People Focused

Provide a people focused high street.



Design Principles

- Encourage pedestrian interaction and activity through well scaled design, detailing, visual containment and continuity.
- Provide a comfortable environment for people through the provision of shade, street furniture and art elements.
- Provide opportunities for people to meet and interact in the street

Environment

Respect environmental values and reduce the impact on the natural environment.



Design Principles

- Promote understanding of local fauna and reduce conflicts with human activity.
- Maximise the opportunity to build social capital by engaging, informing and developing knowledge and appreciation of the water cycle by using stormwater in the landscape to maximise visual amenity and promote an understanding of water in the urban environment.
- Improving health and resilience of downstream aquatic environments such as Moreton Bay through the inclusion of at-source streetscape bioretention and passive irrigation of garden beds.
- Maintain / increase tree cover providing microclimate and shade benefits to achieve improved landscape and ecological outcomes.
- Ensure efficient management regimes that allow for cost effective maintenance measures

Movement

Promote pedestrian activity to reduce the need for vehicle trips, while providing flexibility to accommodate evolving, alternative transportation modes.



Design Principles

- Encourage pedestrian movement by providing legible connections, clear routes and a clear hierarchy of materials.
- Provide a safe people environment by prioritising pedestrians and cyclist over vehicular traffic.
- Provide clear routes with legible connections to public transport.
- Provide cyclist facilities.
- Incorporation of weather protection measures to ensure a comfortable movement route

Adaptability

Create an adaptable environment.



Design Principles

- Create an environment that has the capacity to accommodate a diversity of activity and uses.
- Provide a streetscape that has the capacity to evolve to future changes of Cleveland.
- Promote succession planting to continuously retain a comfortable microclimate.
- Expansion of community and civic spaces to meet the demands of larger events and celebrations in the city

3.2 The Life of the Street

Bloomfield Street has potential to provide its local and regional community with a high street of strong identity, character and usability, one that is well connected and easily accessible.

Future planned increases in residential, retail and commercial activity will bring increased vitality and activity to the street. As part of this Bloomfield Street needs to tap into the opportunities that would come from much stronger connections to the activities and aesthetics associated with Raby Bay and the adjacent Cleveland transport hub.

The adjacent conceptual diagram illustrates this connection and how it can be strengthened through the delivery of a series of public spaces, plazas, shared zones which when combined with sculptural elements that reference the bay, lead to and reference the water edge .



Bloomfield: Concept - Connections to the bay

3.2 The Life of the Street

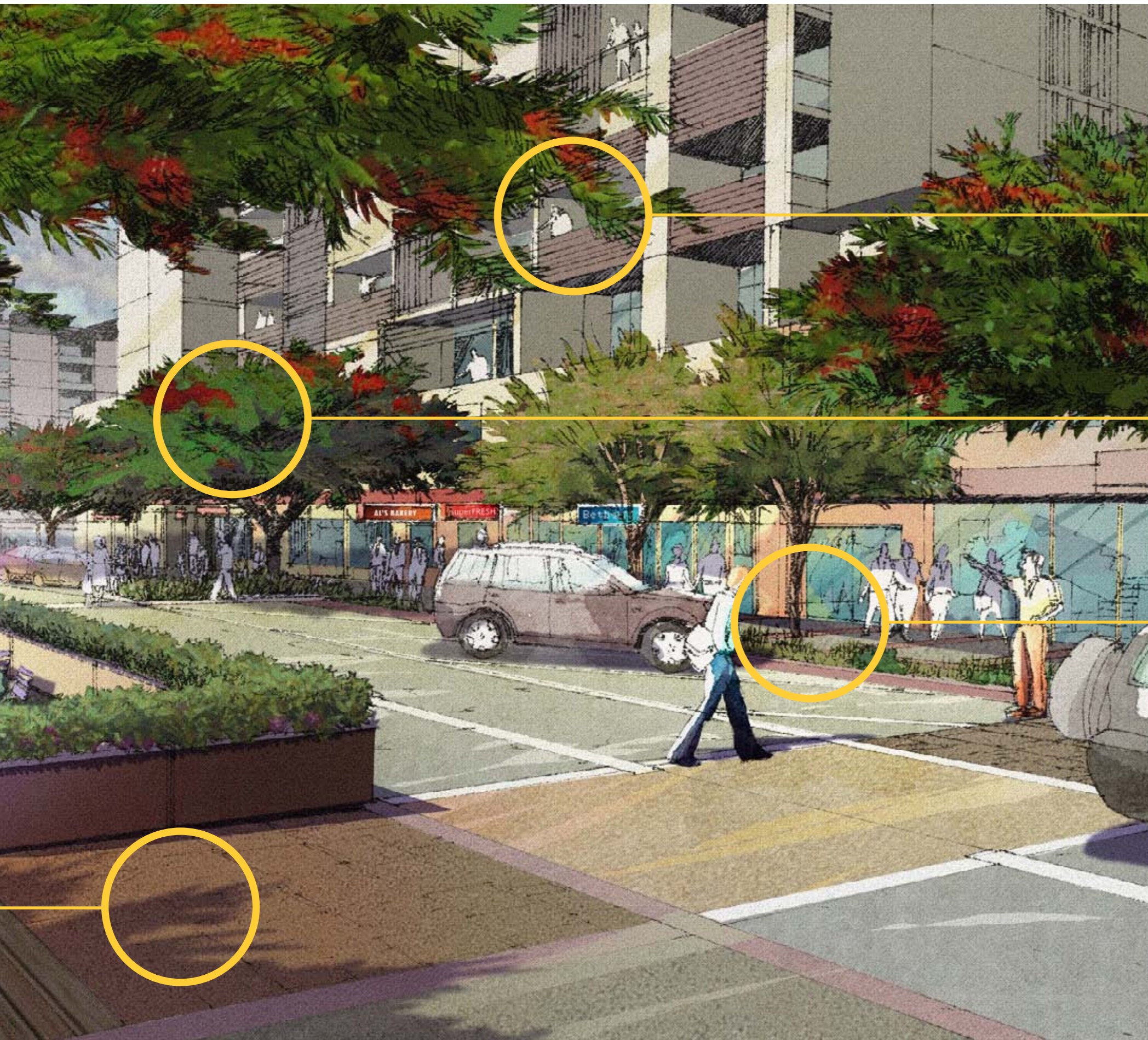
Bay vista

Increased pedestrian area for Cafe spill out space

Design and material finishes promote pedestrian priority



Illustrated perspective of view north along Bloomfield Street towards the bay.



Residential levels above provide passive surveillance of the street offering safety and activity outside of retail hours

Existing mature Poinciana's provide shade, distinctive character and visual containment for the street, supplemented by additional native tree planting

Increased vegetation and ecological diversity contribute to the realisation of a successful subtropical street



Location Map

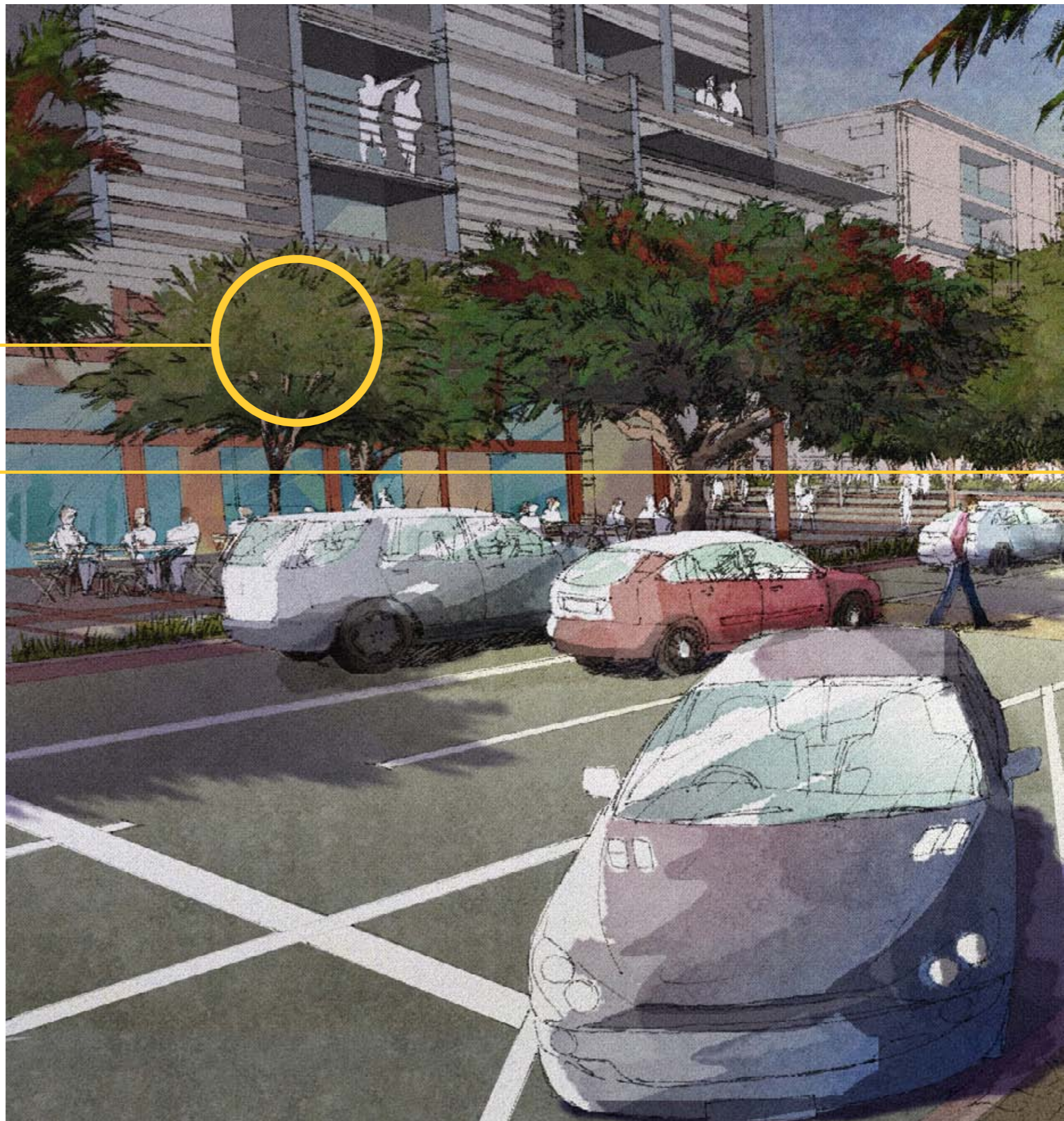
3.2 The Life of the Street

Additional tree cover providing more shade and improved ecological diversity

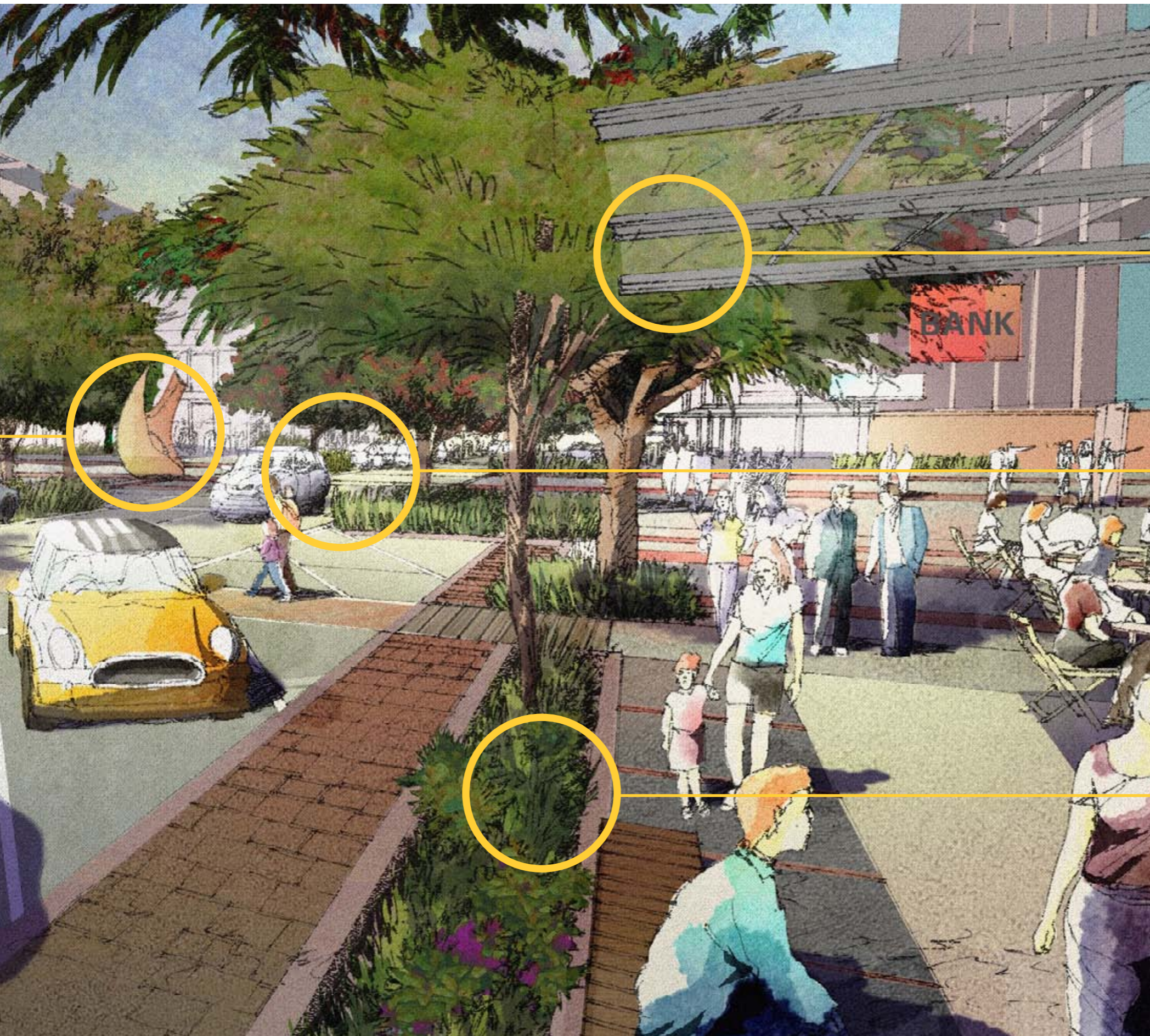
Sculptural/ Art Elements reference the waterfront context and provide focal points within the street to aid legibility and create a dynamic and interesting streetscape



Location Map



Illustrated perspective of view north along Bloomfield Street towards the future shared zone and town square.



Overhead canopies providing shade and architectural definition

Strategically aligned shared zone intersects with a new Civic plaza

Integrated bio filtration providing sustainable stormwater management and opportunities for public education of waterway health, as well as providing strong definition to the street edge

3.3 Street Configuration Options

Introduction

This section of the document seeks to explore and compare possible future configurations for the street.

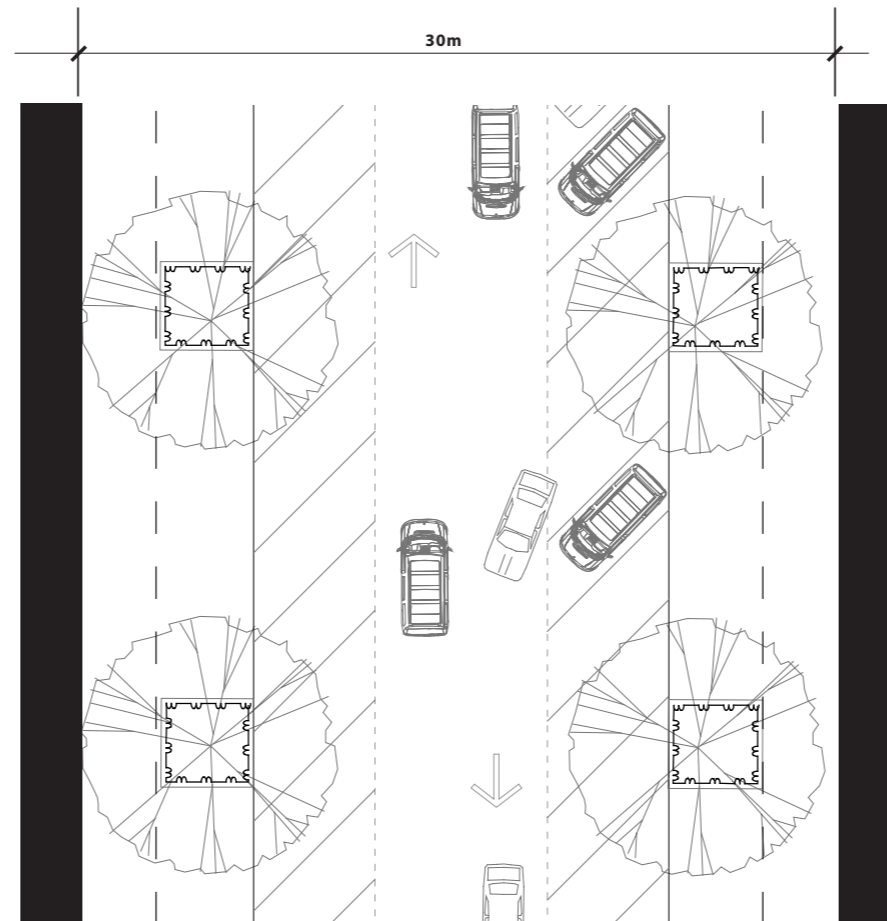
Based on the vision for the street and the findings of the research gathered in the preceding section we have developed a series of preferred design scenarios for Bloomfield Street with a strong emphasis on delivering exceptional urban design outcomes.

Four scenarios have been developed.

Options 1 and 4 retain a two-way system but explore alternate options for parking in particular. Options 2 and 3 explore one-way configurations to test alternative outcomes and potential opportunities.

Each scenario has been illustrated using simple cross section profiles and plans providing information of the physical configuration of the street.

A table of statistics of the physical elements that would be contained within the focus area of Bloomfield, between Middle and Queens Streets allows for comparison.



Plan - Current Situation
Not to Scale

Current Statistics

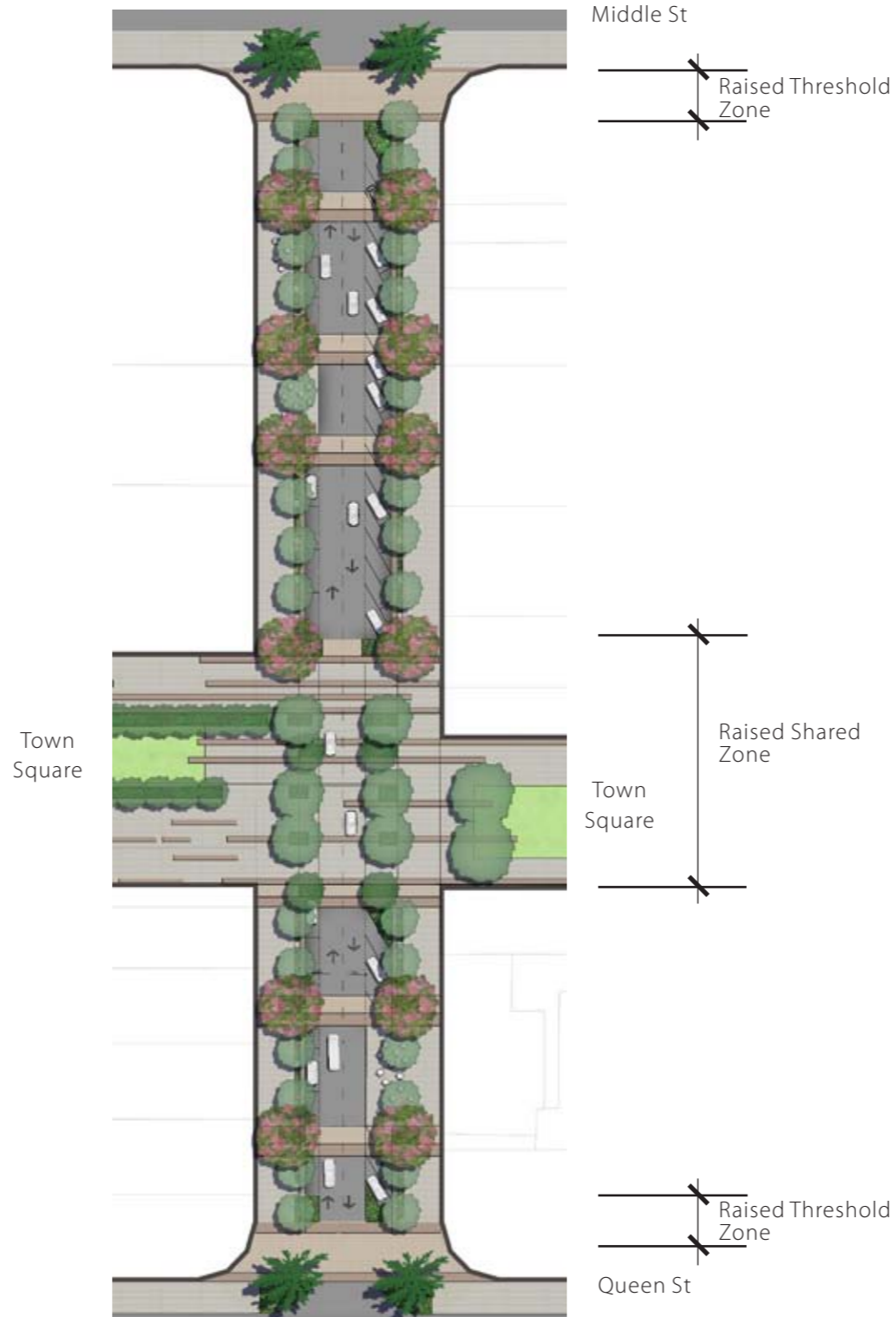
Area of Pedestrian Zone	2555m ²
Area of Shared Zone	0m ²
Area of Road and Parking	3200m ²
Number of Car Parks	78
Area of Planting	245m ²
Number of Trees	32



Option 1: Two Way, 30 Degree Angle Parking + Parallel Parking

Value Add:

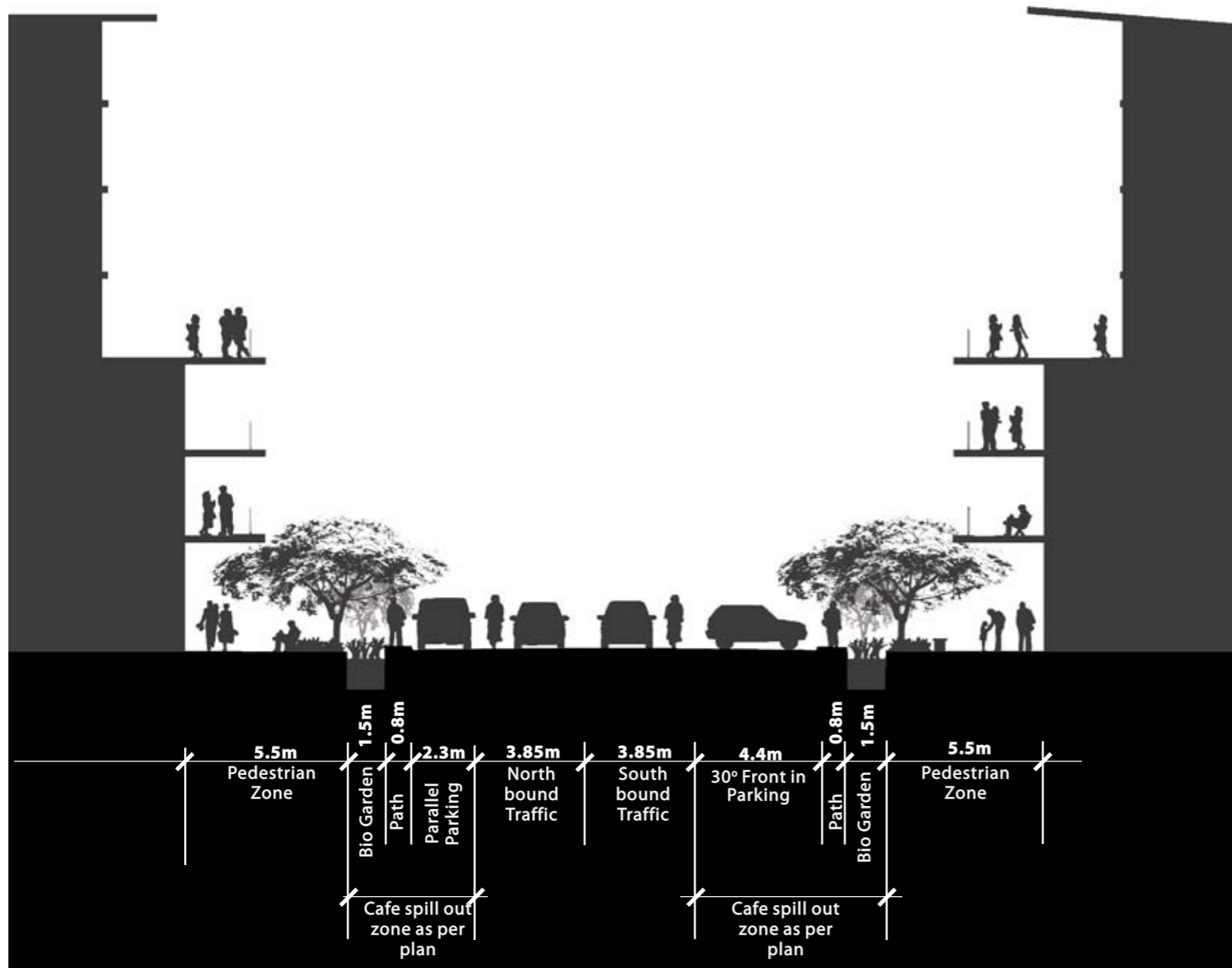
- Reduced traffic speed along Bloomfield Street due to perceived increase in navigation.
- Legible and familiar configuration for both visitors and locals.
- Street configuration enables pedestrians to choose to walk against or with the traffic flow for comfort reasons, safety perception or glare minimisation at night.
- Greater options for entries and exits into the precinct reducing congestion points.
- Flexibility with traffic flow in the event of short term street closures for road works or events.
- Increased access and movement along Bloomfield Street which helps promote commercial traffic and business
- Decrease in "Vehicle Miles Travelled" by eliminating indirect routes (driving around the block to get to your destination).
- Greater activity at the street level with two-way flow of traffic and pedestrians.
- Angle parking in conjunction with parallel parking can enable more parking spaces than just parallel alone.
- Angle parking provides a greater area for street planting and landscaping along the street.
- Angle parking on just one side of the street and parallel parking on the other enables a greater area for footpaths, footpath dining and landscaping treatments



Plan
Not to Scale

Option 1 Statistics

Area of Pedestrian Zone	2316m ²
Area of Shared Zone	716m ²
Area of Road and Parking	1923m ²
Number of Car Parks	37
Area of Planting	969m ²
Number of Trees	40



Section
Not to Scale

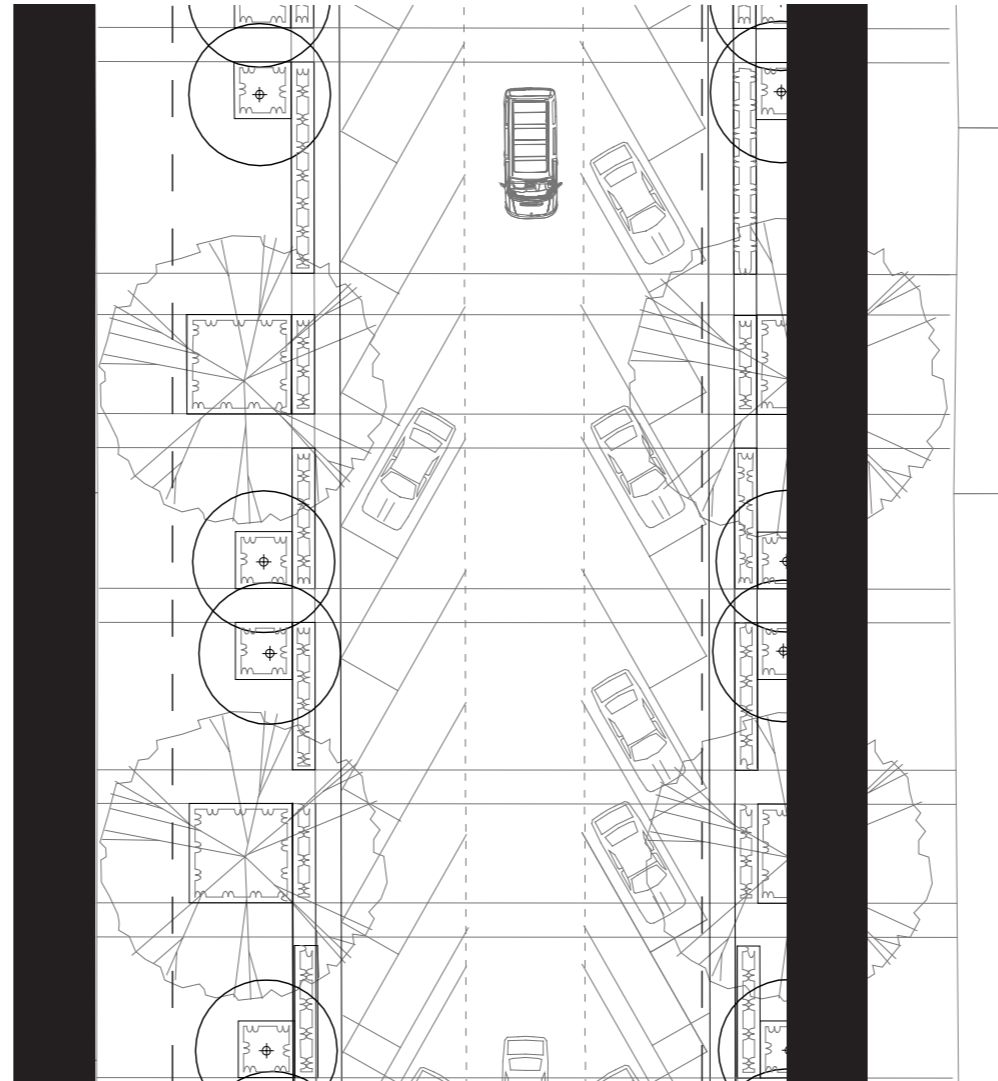
Preferred Option Rationale:
Option 1 presents a preferred strategy for the street. The concept delivers a vibrant and attractive streetscape for pedestrians, and encourages active transport, whilst maintaining easy access for vehicles to support commercial activity along the street.

The integrated design also promotes sustainable water management and increases biodiversity within the centre.

Option 2: One-way + 30 Degree Parking

Value Add:

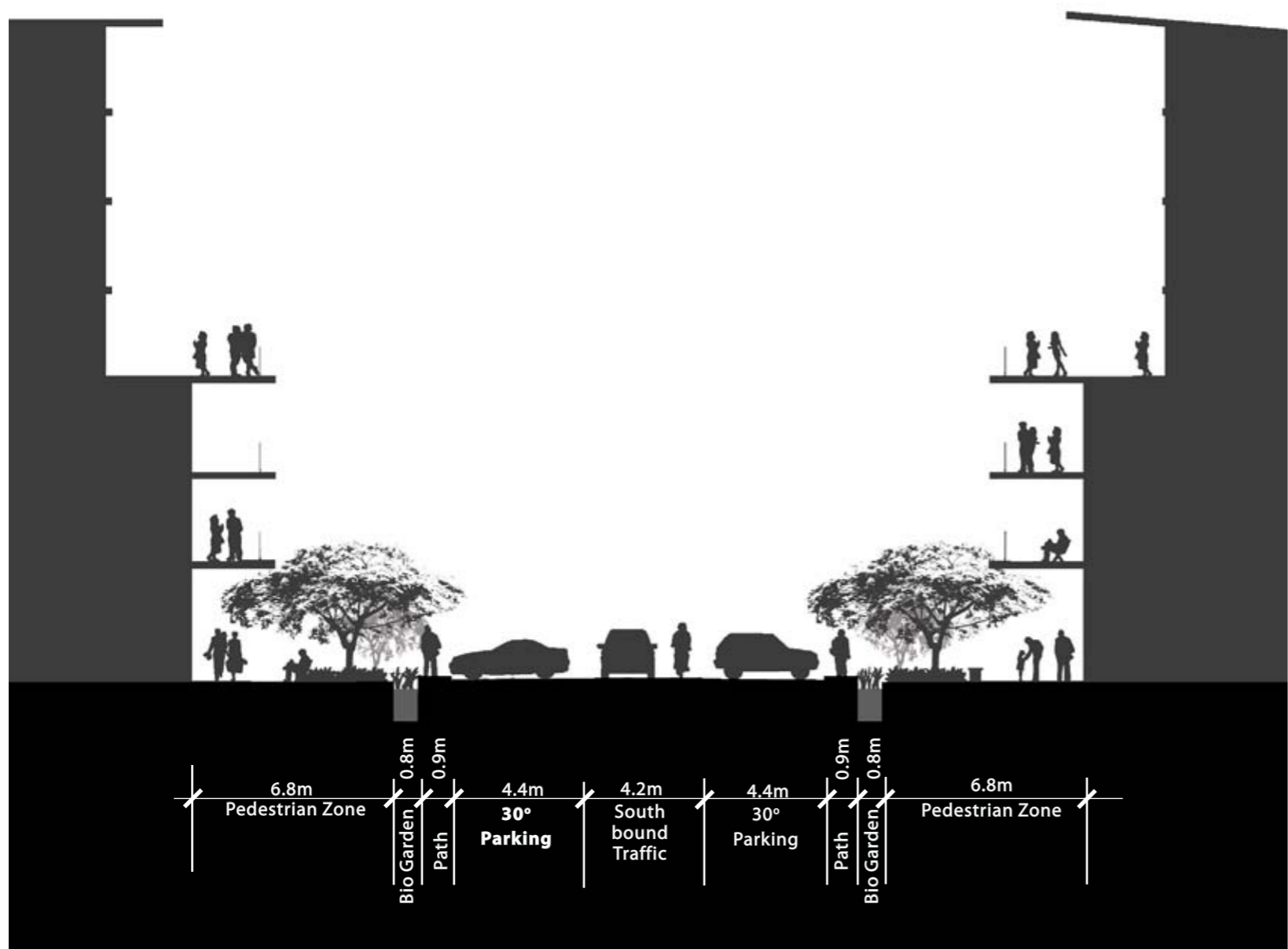
- Locals who are familiar with navigating the one way street network tend to fare better than visitors with the legibility of the area.
- A one way system delivers simplified crossings for pedestrians.
- One way street configuration can accommodate increased vehicular flows and reduced congestion due to a reduction in conflict and stalled traffic through improved signal coordination.
- Kerb side activity can be arguably less disruptive as there is usually more room either side of the one-way lane.
- One way street configuration eliminates vehicles crossing in front of oncoming traffic.
- Pedestrian safety is improved as the pedestrian has fewer directions to be concerned about at intersections. Drivers have fewer potential conflicts to handle as well so can give more attention to pedestrian safety.
- Angle parking and one lane of traffic provides a greater area for street planting, landscaping and wider footpaths along Bloomfield street.
- Angle parking enables greater number of car parking spaces



Option 2 Statistics

Area of Pedestrian Zone	2695m ²
Area of Shared Zone	715m ²
Area of Road and Parking	1885m ²
Number of Car Parks	42
Area of Planting	705m ²
Number of Trees	50

Plan
Not to Scale



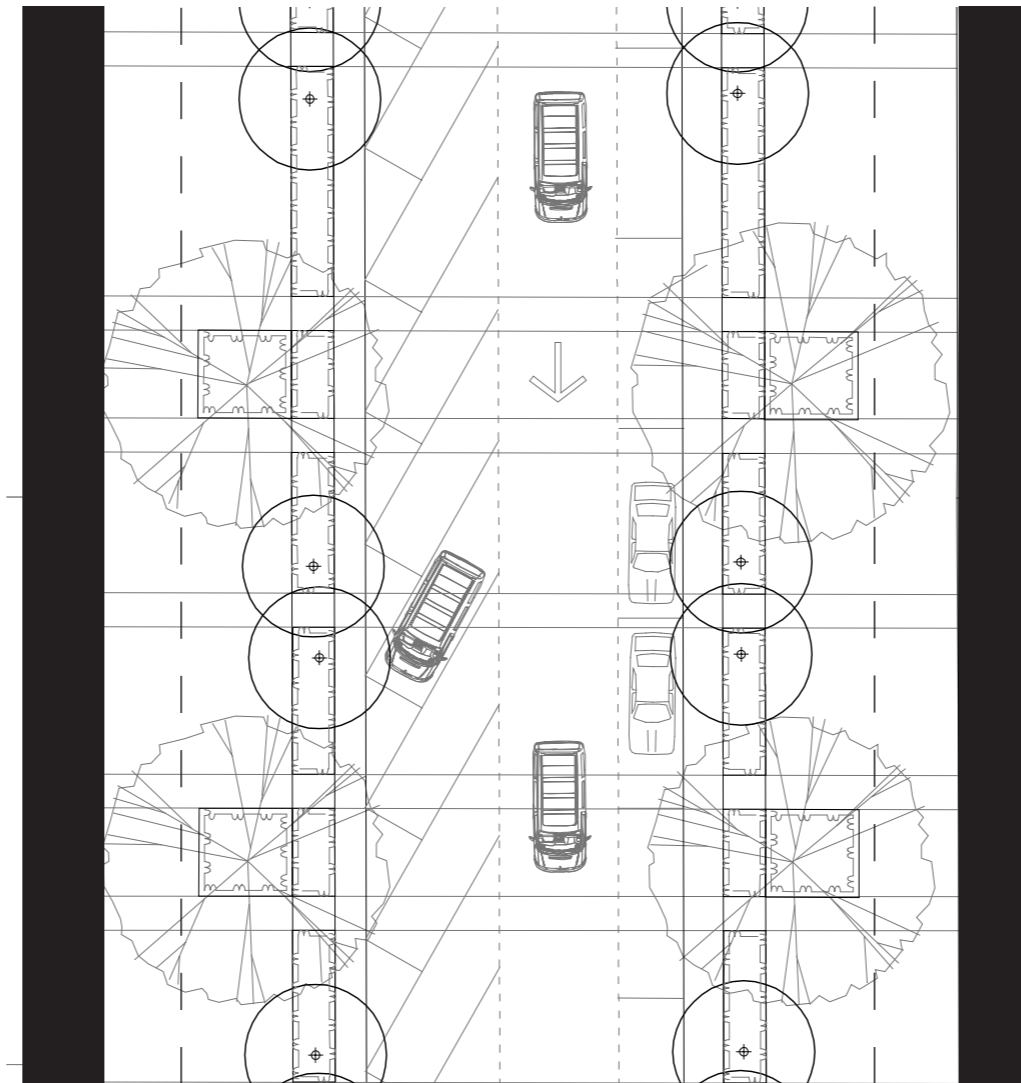
Section
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Consideration:
Option 2 (one-way) is not the preferred strategy for Bloomfield Street, however it would still work well from a traffic perspective.

Option 3: One-way + 30 Degree Parking + Parallel Parking

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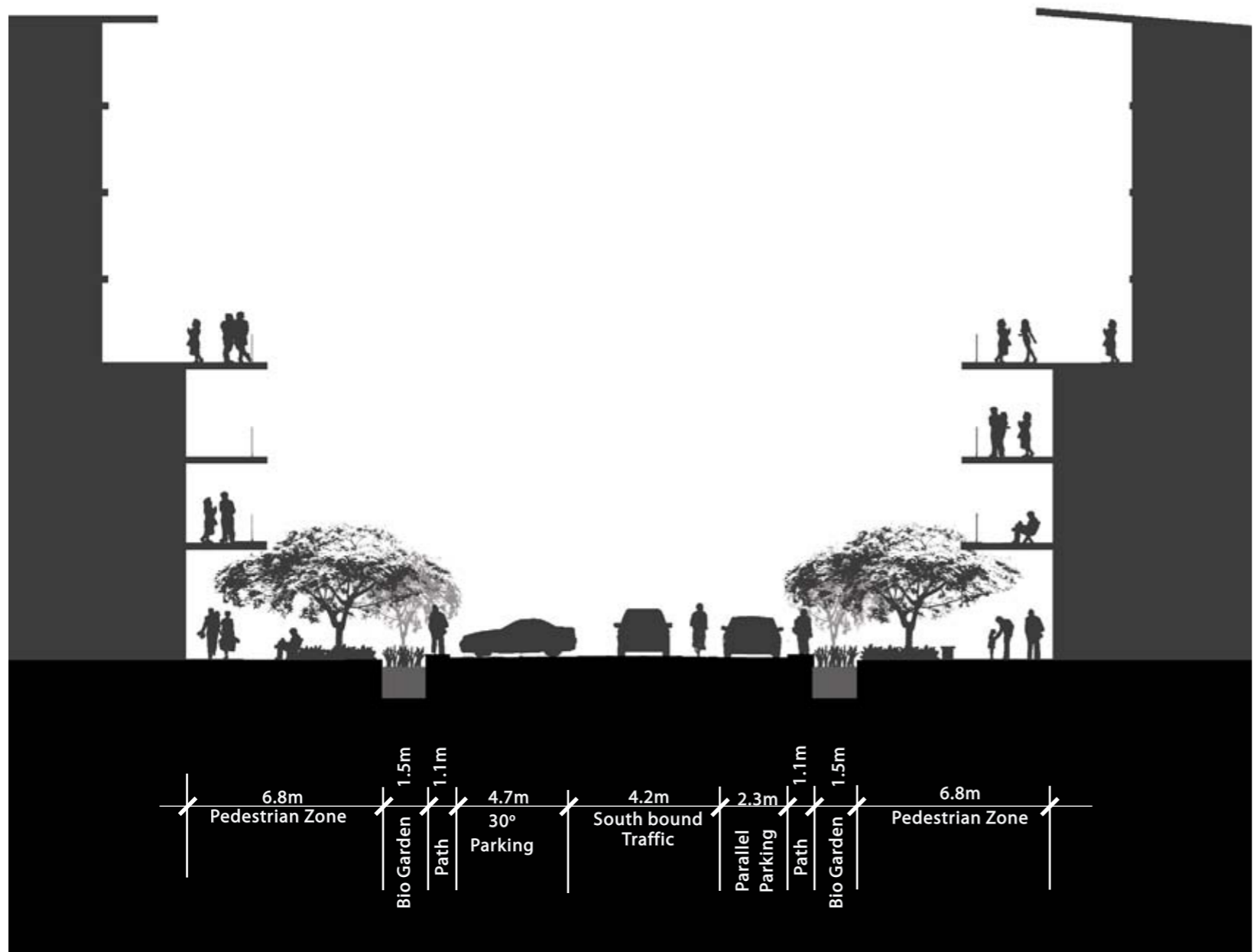
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- Kerb side activity can be arguably less disruptive as there is usually more room either side of the one-way lane.
- One way street configuration eliminates vehicles crossing in front of oncoming traffic.
- Pedestrian safety is improved as the pedestrian has fewer directions to be concerned about at intersections. Drivers have fewer potential conflicts to handle as well so can give more attention to pedestrian safety.



Plan
Not to Scale

Option 3 Statistics

Area of Pedestrian Zone	2739m ²
Area of Shared Zone	616m ²
Area of Road and Parking	1624m ²
Number of Car Parks	38
Area of Planting	1021m ²
Number of Trees	40

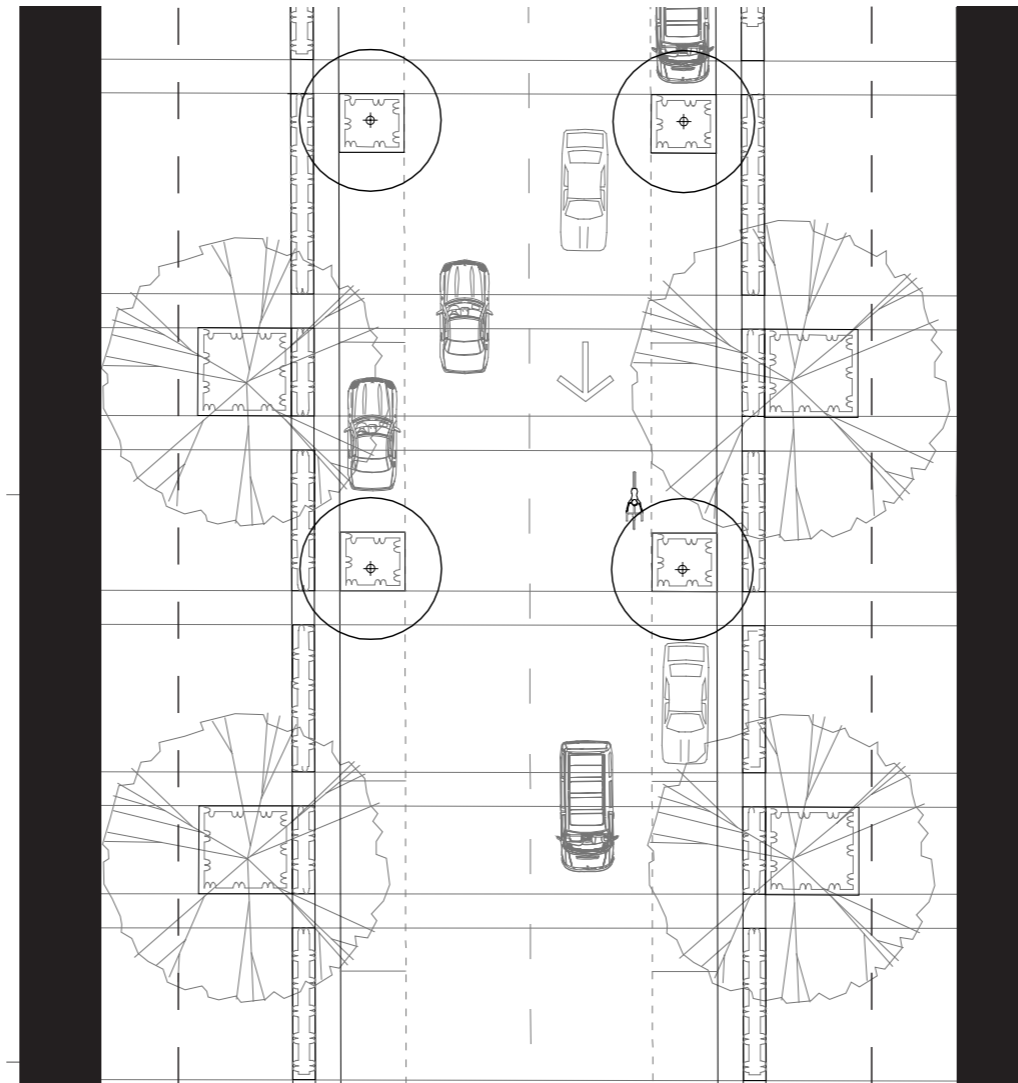


Section
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Option 4: Two-way + Parallel Parking

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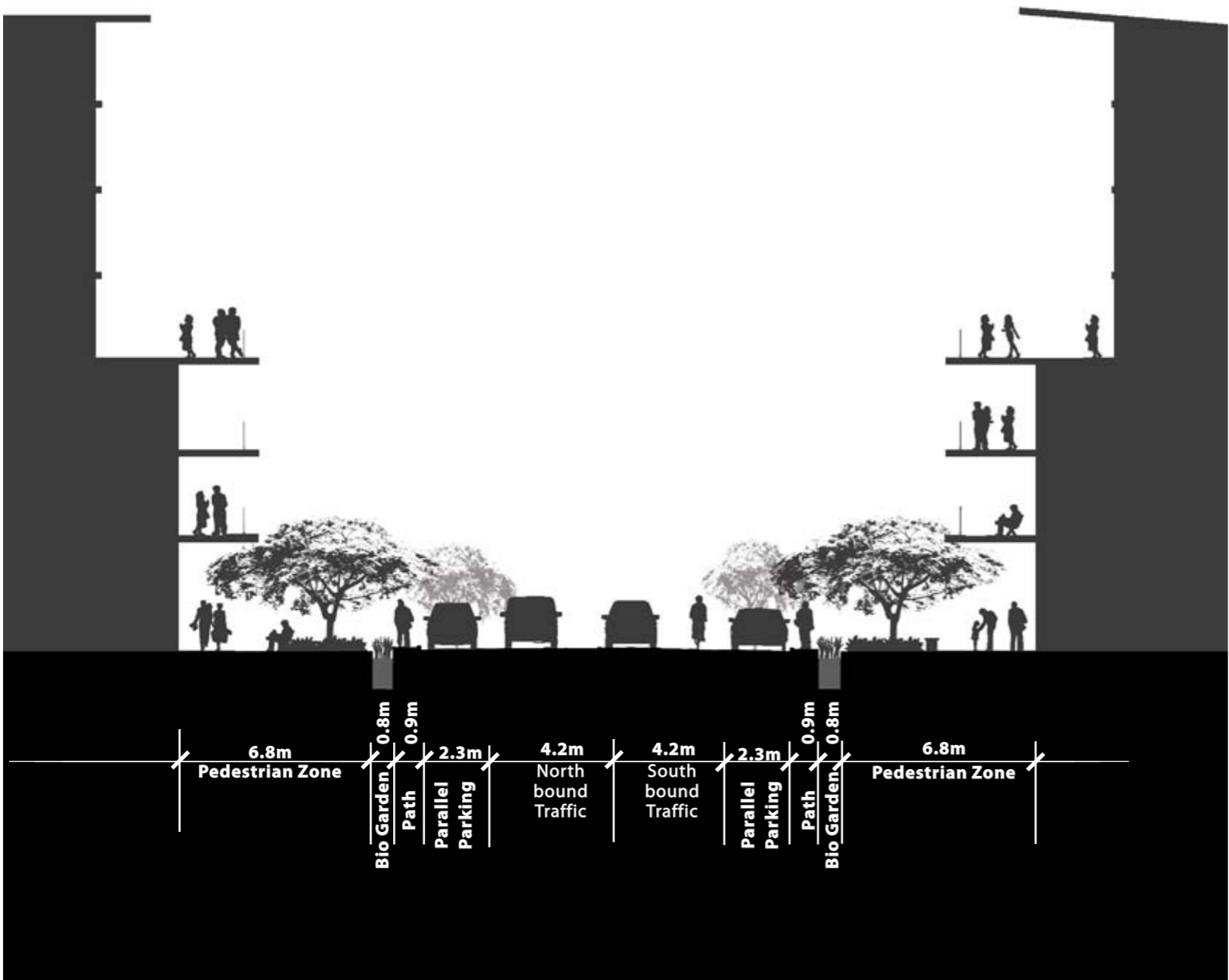
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- Legible and familiar configuration for both visitors and locals.
- Street configuration enables pedestrians to choose to walk against or with the traffic flow for comfort reasons, safety perception or glare minimisation at night.
- Greater options for entries and exits into the precinct reducing congestion points.
- Flexibility with traffic flow in the event of short term street closures for road works or events.
- Increased access and movement along Bloomfield Street which helps promote commercial traffic and business
- Decrease in "Vehicle Miles Travelled" by eliminating indirect routes (driving around the block to get to your destination).
- Greater activity at the street level with two-way flow of traffic and pedestrians.



Plan
Not to Scale

Option 4 Statistics

Area of Pedestrian Zone	2697m ²
Area of Shared Zone	715m ²
Area of Road and Parking	1745m ²
Number of Car Parks	22
Area of Planting	843m ²
Number of Trees	30



Section
Not to Scale

3.4 Indicative Palette

Finally, an indicative palette of design materials, textures and street furniture elements, has been selected to reinforce the previously described design principles and give an impression of the kind of qualities the preferred design options would seek to deliver (Refer Section 3.1) of:

- Identity + Destination
- People Focused
- Environment
- Movement
- Adaptability

Physical and visual reference to the Bay A people focused high street



Promote an understanding of **water** in the **urban environment** + **sustainable principles**



Accessibility + Legible connections, clear routes, clear **hierarchy of materials**



Adaptability to accommodate a **diversity of activity** at a variety of scales



3.5 Next Steps

The design opportunities and strategies developed in this study set the direction for more detail consultation and exploration of design options, to inform the preferred future character of Bloomfield Street.

The document provides the Council with the visual collateral and design direction to consult and test further what the primary drivers for the future design of the street should be.

Recommended next steps:

- Determine the preferred hierarchy of needs for the street in terms of design principles. As has been demonstrated in this study the corridor is wide enough to accommodate a range of alternate configurations whilst still maintaining effective vehicle movements. A first step in determining how the corridor might be re configured is to understand the priority being placed on various uses. For example, is the loss of 30% of the existing parking provision preferable in order to substantially increase volumes of planting within the corridor
- Conduct more detail survey work to thoroughly determine where existing services etc. are located and help inform decisions about the appropriateness and opportunities for kerb realignments and more sustainable methods of surface water management.
- Determine a strategy that looks at phased changes in parking within corridor so that the street is able to consider an option to evolve over time as land use patterns in the centre change.
- Undertake more detail design development of options for the street to further test scenarios and inform more comprehensive response with regards to materials.

