

Nelson Bay Public Domain

Streetscape Design Guidelines

Prepared by Tract Consultants for Port Stephens Council

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1. Introduction

From the hinterland to the pristine coast, Nelson Bay's natural environment and scenic beauty is cherished and admired by locals and visitors.

Protecting, enhancing and strengthening the natural environment of Nelson Bay is the quintessential principle for all future improvements in the Town Centre and beyond.

1.1 Vision

Nelson Bay is a major tourism and service centre of Tomaree Peninsula within Port Stephens Local Government Area.

As the tourism industry continues to grow and place demands on the natural assets, urban facilities and transport infrastructure, Nelson Bay must rejuvenate its Town Centre and Foreshore to stay relevant for its future local community and visitors by providing well serviced, high quality streetscapes and amenities.

Nelson Bay will be a “one-of-a-kind” destination for both tourists and local residents, to live, work, play and stay.

This design guideline seeks to provide necessary information to ensure the following principles are achieved:

Embrace Our Natural Environment: Continue to strive for a sustainable future and to ensure the natural ecosystems and biodiversity are valued, cared for, improved and conserved.

Foster an Urban Forest: Implement continuous street tree planting and reinforce the green connections through the Town.

Celebrate Our Local Character: Build upon the qualities that captures Nelson Bay’s spirit and mystique. Acknowledge local heritage.

Revitalise Our Urban Fabric: Provide a town where people can lead active and healthy lifestyles, interact and feel safe through well designed public spaces. Explore new technologies.

Be Inclusive and Accessible: Ensure streetscapes and public spaces cater for all ages and abilities.

Evoke Community Pride and Ownership: Provide a safe, enjoyable town for the community to love and safeguard.

Encourage Alternate Transport: Reduce car dependency; Implement active transport infrastructure for cycling, encourage use of public transport by providing efficient and regular services. Consider a town shuttle, create safe pedestrian connections for walking

Celebrate Culture and Creativity: Include interpretive signage /art; community events and entertainment.

Be **Simple** in design, **Consistent** in material and **Economical** in construction.

Note

Images within this document are representations of a 20 year vision. Subject to further detailed design requirements that may result from consideration of;

-Underground services - tree root zones, service corridors and utilities

-Overhead services - power lines

- Topography, WSUD or sustainability principles in the design

2. Landscape Masterplan

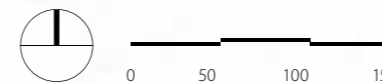
Let's live, work, play and stay here in Nelson Bay where environmental sustainable best practices, healthy living and greening the Town Centre becomes the new standard for our NEXT generation.

2.1 Landscape Masterplan



Nelson Bay Town Centre will be transformed into a vibrant, well connected network of landscape thoroughfares.

The green corridors will be distinctive, functional and appealing, with a focus on enhancement and showcasing of the local natural biodiversity.



Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals

2.2 Connecting the Hills to the Bay



Fig. 1 Existing Street Trees of Nelson Bay Town Centre



Fig. 2 Connecting the hills to the bay - Establish continuous green streets to enhance the streetscape experience, encourage walking and cycling
— Powerlines to be removed/undergrounded to enable street tree vision

Concept Only, Final design subject to technical design considerations, detailed investigation of services and relevant approvals

2.3 Streetscape Design Principles

The Streetscape Design Guideline aims to provide a clear, consistent direction for Council, developers and stakeholders regarding the design, arrangement and materiality of the public realm within Nelson Bay's Town Centre.

The intent is to make streetscapes more consistent and legible, visually pleasing, integrated and cost-effective.

Current Issues

The application of this guidelines across Nelson Bay Town Centre is intended to address the issues currently affecting the streetscape:

- Lack of street tree and other vegetation in the public realm (Refer Fig.1)
- Lack of streetscape hierarchy and urban character
- Obsolete and aging public domain furniture
- Inconsistent pathway widths and materials
- Incomplete pedestrian and cycle links.

Streetscape Design Principles

Be **Simple** in design, **Consistent** in material and **Economical** in construction.

Simple: The structure of the street should be clear, balanced and equitable.

Consistent: Patterns and colours should be visually unifying and complementary. Materials to be durable and relevant to the local character.

Economical: Be easy to construct, replaced and maintained.



“Open space should remain priority even though the demand for car parking seems limitless.”

3. Street Typology

Different street types serve different functions. Street types are not necessarily continuous along the entire length of a street; a single street may change typology as the **FUNCTION** changes.

3.1 Classification of Nelson Bay Town Centre Streets

Traditionally street design is predominately focused on the operational requirements of vehicles. Elements such as lane widths, speeds and geometry favour vehicles over pedestrian and cycle amenities. These traditional classifications should no longer continue to be the determining factors when designing an **INTEGRATED STREET**.

Street design must take into consideration local context and functionality. Different streets serve different functions based on location and the activities which occurs along it. For example, Stockton Street gateway entry will be more operational and visual compared to Stockton Street Village Precinct which will be highly integrated for pedestrian activity.

Integrated Street Design should be:

- Balanced to allow for equitable movement
- Promote healthy and active transportation modes
- Accommodate walking and cycling
- Provide generous footpaths
- Provide durable, quality and aesthetically pleasing street furniture
- Encompassing of street trees, garden beds elements and WSUD best practice.

The streets in Nelson Bay Town Centre will include:

- Special Streets (Pedestrianised for events)
- Shared Zones (Village Precinct)
- Boulevards
- Town Centre Main Streets
- Residential Local Streets.

Special Streets

Special streets focus mostly on pedestrian activities and require high quality, durable finishes. Special streets have the capacity to be closed to vehicles for events and often highlight design features such as water features, playground facilities, catenary lighting, attractive planting, natural material finishes and bespoke furniture.

Special streets are individually designed and detailed to be site specific. They are attractive, inviting, safe and often the showcase piece within the Town.

Example street: Stockton Street (north section)

Shared Zones - Village Precinct

A shared zone is a street with a single grade or surface that is shared by pedestrians, cyclist and vehicles within a slow speed environment. These streets support a variety of activities including retail, cafes and restaurants, outdoor entertainment and outdoor dining.

Shared zones are often surfaced with pavers. Traditional kerb and gutters are replaced with flush edging and combined into the paving treatment. Because these streets are at one grade, street furniture such as bollards, planters, garden beds, lights and benches assist with defining the edges.

The main design consideration for shared zones is to maintain a slow 10km/h speed environment to minimise conflict between users. Shared zones have limited short stay parking restrictions and loading zones, to ensure priority is pedestrian and cyclist focused.

Example streets: Stockton Street and Magnus Street (Village Precinct) Subject to future detailed design considerations.

Boulevards

Boulevard by definition is a broad tree lined avenue. Boulevards usually have areas along the side or centre for tree planting. Boulevards often have wide footpaths connecting important gateways, civic centres or natural features. Boulevards often feature longer block lengths and can support active transport or public transport routes.

Example streets: Stockton Street (south of Donald Street), Church Street / parts of Government Road.

Town Centre Main Streets

Main streets are primarily located within the core centre of town. They are the main service streets, providing residents and visitors the daily essentials with services ranging from local grocery stores, banking services, postal services, beauty salons, retail and support local businesses.

Main Streets are usually the meeting point for locals to gather. They prioritise cyclists and walking, support short stay parking and are serviced by public transport (bus routes).

Example streets: Donald Street and Yacaaba Street, parts of Government Road and Victoria Parade.

Residential Local Streets

Residential locals streets are those which serve the vast residential properties in the town. These streets are usually one travel lane each way and have lower vehicle and pedestrian volumes. Local streets can be well defined with footpaths and tree planting to encourage continuous and comfortable pedestrian and cycle connections. Street furniture is limited to "mid-trip" locations to provide relief.

Example street: Tomaree Street

Note:

Footpath must fall out to kerb and be a min 50mm below FFL of adjoining properties, subject to detailed design.

3.2 Stockton Street & Magnus Street: Shared Zones



STREET PERSPECTIVE: Stockton Street Shared Zone (Landscape design indicative only)

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals



STREET PERSPECTIVE: Magnus Street Shared Zone (Landscape design indicative only)

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals

3.3 Magnus Street: Shared Zone



Legend

- | | |
|--|--|
| 1 Main Paving Stretcher Pattern: Paving to necessary engineering specification. | 5 Shared Zone Slow speed 10km/h stretcher pattern Paving to necessary engineering specification. |
| 2 Outdoor Dining Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel. | 6 Pedestrian Light Paired arrangement with banners. |
| 3 Street Tree Trees to be planted into engineered root cells to ensure effective root zones. | 7 Extended Landscape Zones Kerb extensions allow for greater landscape areas with feature tree planting and passive irrigation to garden beds. |
| 4 Parallel Parking Stretcher Pattern: Paving to necessary engineering specification. | 8 Feature Palm Planting Livistonia australis |
-
- | | | | |
|----------|-------------------|---|---|
| Planting | WSUD / Bio-Swales | Footpath | Existing trees to be removed subject to professional arborists assessment |
| Parking | Carriageway | Shared Zone | |
| Cycleway | Public Transport | Existing kerb lines to be removed/relocated | |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Shared Zone (Village Precinct)
- Slow Zone 10km/h.

Location

- Magnus Street Village Precinct.

Street Geometry

- 20m road reserve
- 9m wide southern verge for outdoor dining (existing width).
- 4.5m slow one way traffic lane (heading east).
- 2.5m wide 1P short stay parallel parking and loading zones.

Footpath, Kerbs and Carriageway

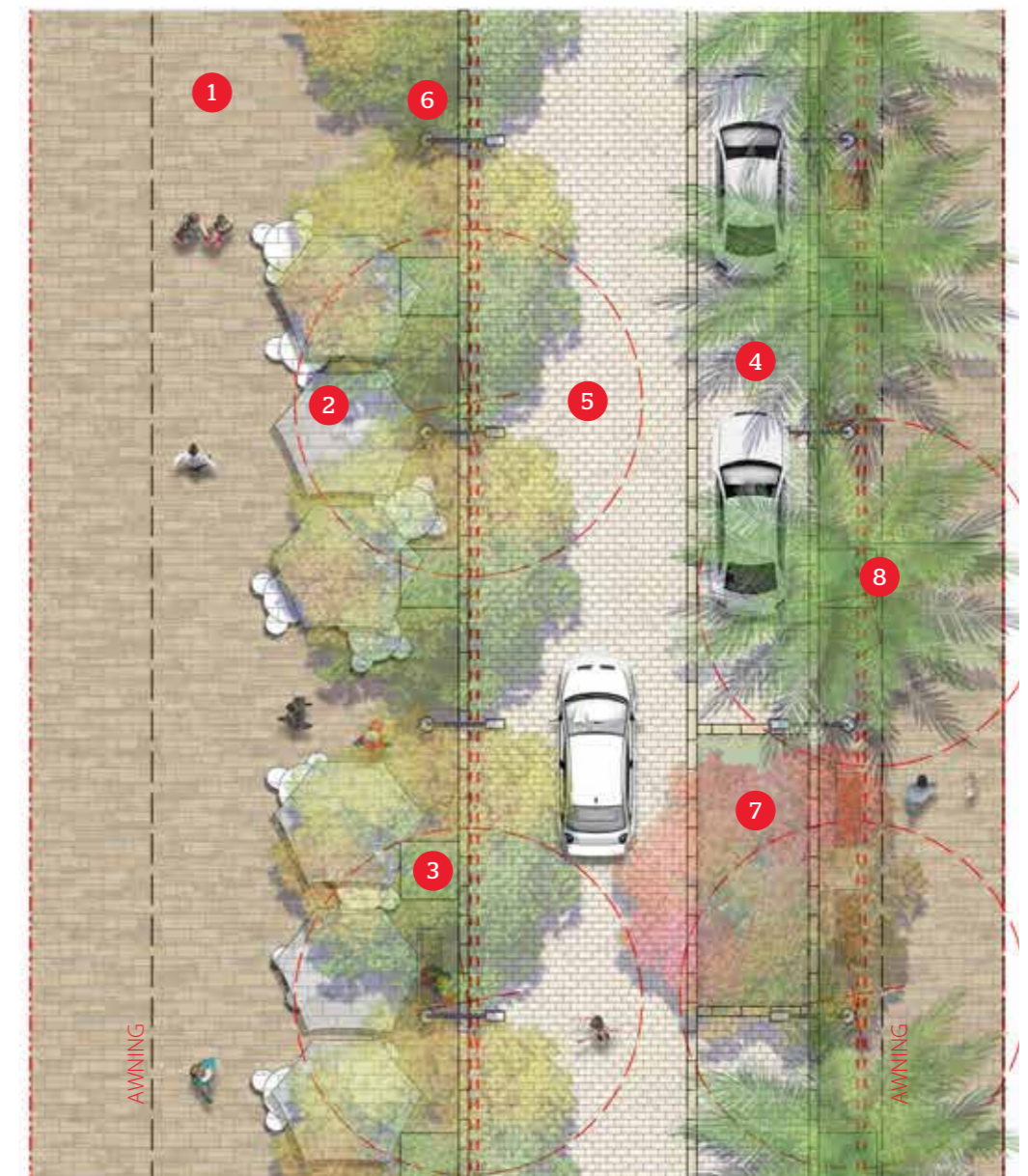
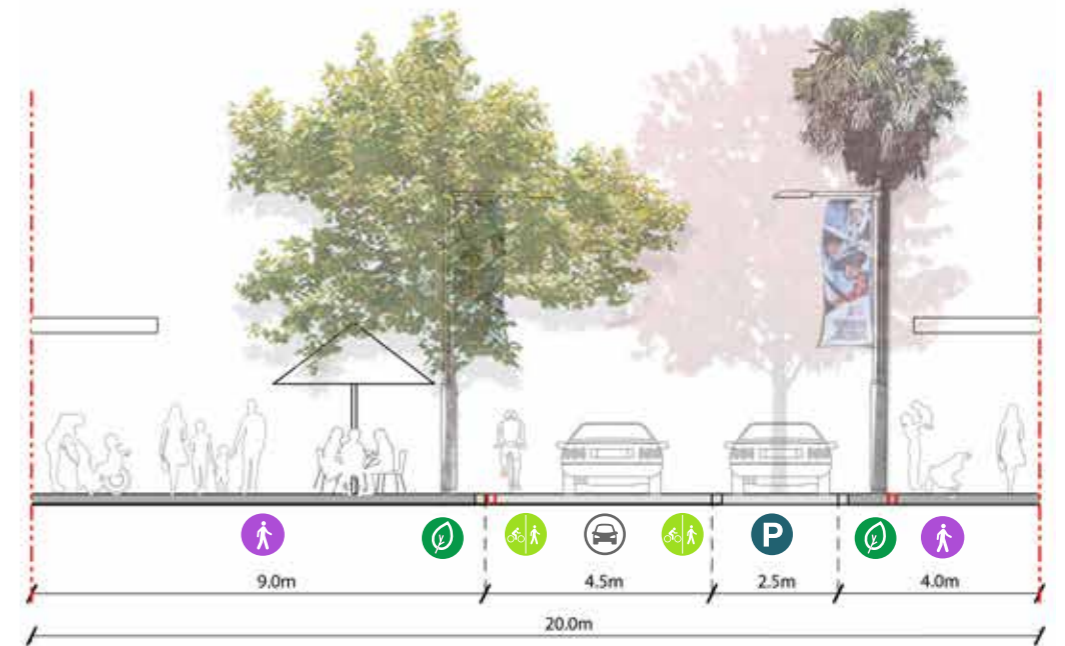
- Single grade surface.

Streetscape Elements

- Public domain furniture to assist with defining edges
- Stone paving surface treatments
- Feature art paving (subject to future design)
- Multi function street lights with banners and pedestrian lighting - paired arrangement.

Landscape Treatments

- Deciduous street tree planting
- Feature palm planting and flowering trees
- Kerb extensions with low mass WSUD garden beds (passive irrigation treatments)



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

3.4 Stockton Street: Shared Zone



Legend

- | | |
|--|--|
| <p>1 Main Paving Stretcher Pattern: Paving to necessary engineering specification.</p> <p>2 Outdoor Dining Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel.</p> <p>3 Street Tree Trees to be planted into engineered root cells to ensure effective root zones.</p> <p>4 Parallel Parking Stretcher Pattern: Paving to necessary engineering specification.</p> | <p>5 Shared Zone Slow speed 10km/h stretcher pattern paving to necessary engineering specification.</p> <p>6 Pedestrian Light Paired arrangement with banners and flower pots.</p> |
|--|--|
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- | | | | |
|----------|-------------------|---|---|
| Planting | WSUD / Bio-Swales | Footpath | Existing trees to be removed subject to professional arborists assessment |
| Parking | Carriageway | Shared Zone | |
| Cycleway | Public Transport | Existing kerb lines to be removed/relocated | |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Shared Zone (Village Precinct)
- Slow Zone 10km/ h

Location

- Stockton Street Village Precinct (between Magnus Street and Donald Street).

Street Geometry

- 20m road reserve
- 6.5m wide footpaths
- 4.5m slow one way traffic lane (southbound)
- 2.5m wide 1P short stay parallel parking and loading zones.

Footpath, Kerbs and Carriageway

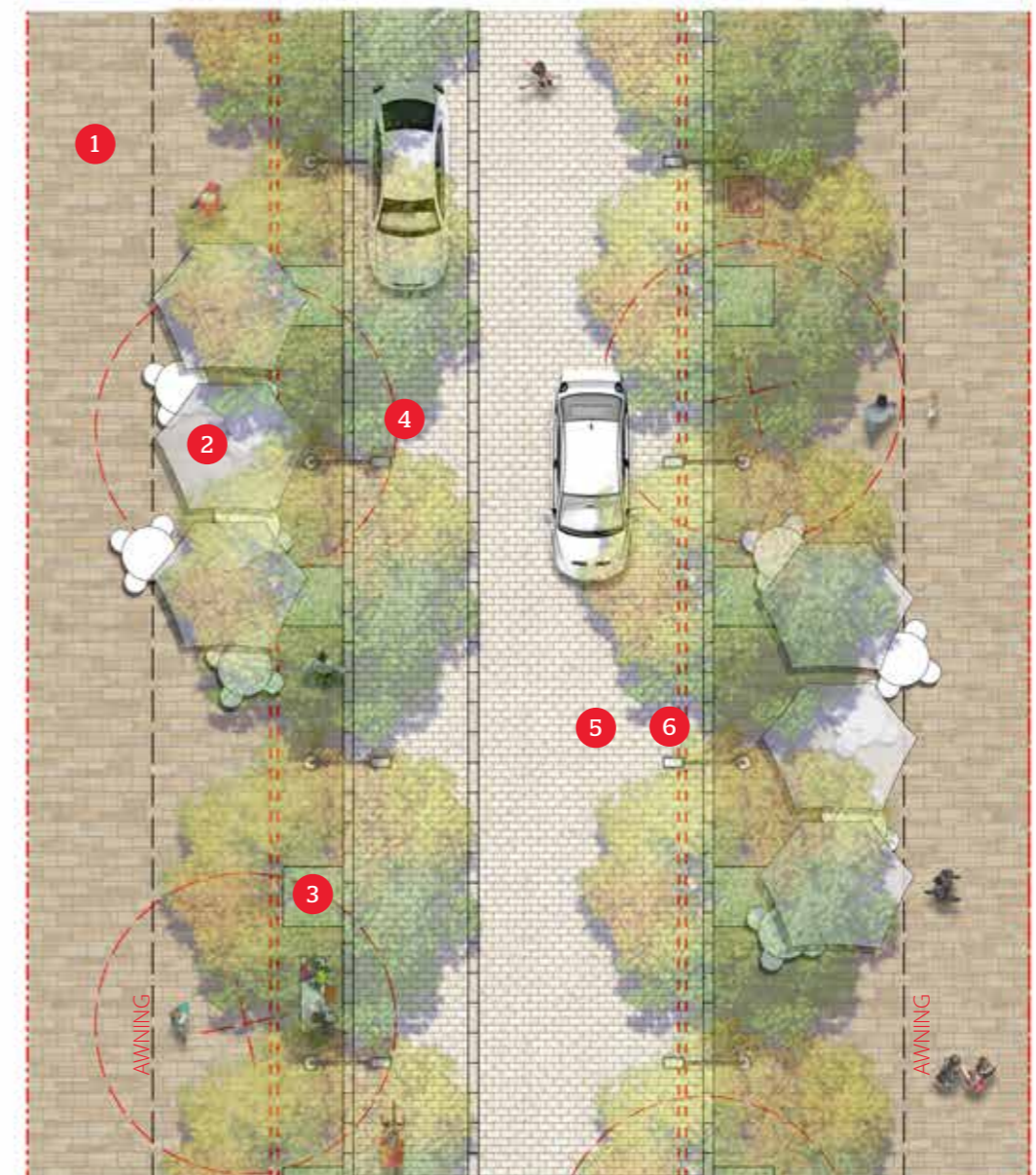
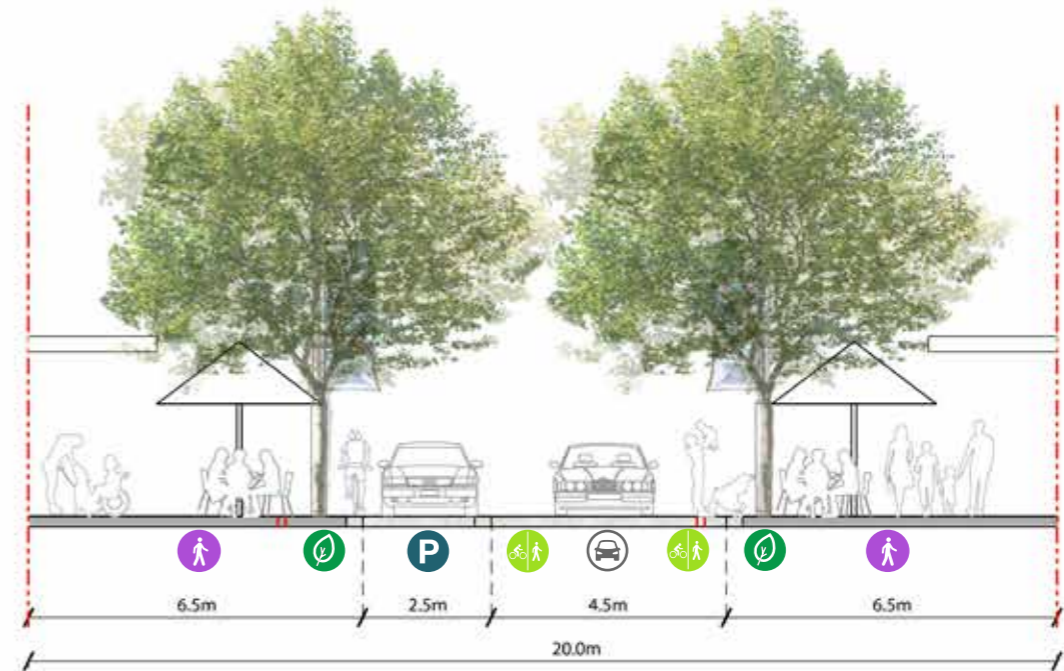
- Single grade surface

Streetscape Elements

- Public domain furniture to assist with defining edges
- Stone paving surface treatments
- Feature art paving (subject to future design)
- Multi function street lights with banners and pedestrian lighting - paired arrangement.

Landscape Treatments

- Deciduous street tree planting with garden bed
- Feature flowering trees
- Passive irrigation to tree pits and garden beds.



Concept Only, Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

3.5 Stockton Street Boulevard: Town Centre



Legend

- 1 Main Paving**
Stretcher Pattern: Paving to necessary engineering specification.
- 2 Kerb Extension**
Garden bed with feature tree planting and passive irrigation
- 3 Street Tree**
Continuous deciduous street tree planting in WSUD garden beds
- 4 Parking**
Parallel parking with occasional kerb build-outs
- 5 Street Furniture**
Amenities located along street for pedestrian comfort

| | | | |
|----------|-------------------|---|---|
| Planting | WSUD / Bio-Swales | Footpath | Overhead powerlines to be relocated underground |
| Parking | Carriageway | Shared Path | |
| Cycleway | Public Transport | Existing kerb lines to be removed/relocated | |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Boulevard (Pedestrian Priority)
- Medium zone 40km/h.

Location

- Stockton Street Boulevard. (Tomaree Street to Donald Street)

Street Geometry

- 20m road reserve
- 4m wide footpaths
- 2.5m wide 1P short stay parallel parking
- 3.5m travel lanes.

Footpath, Kerbs and Carriageway

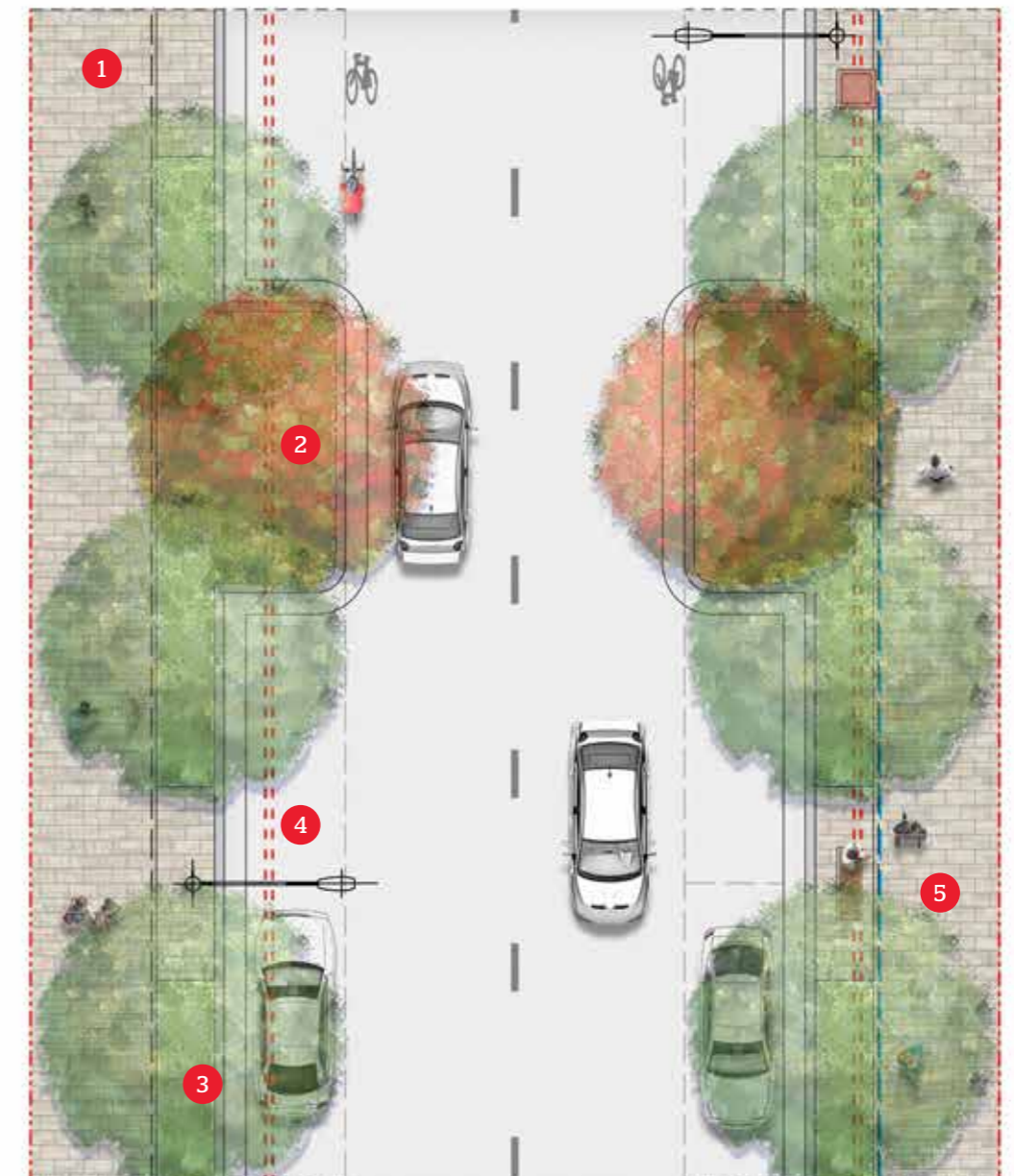
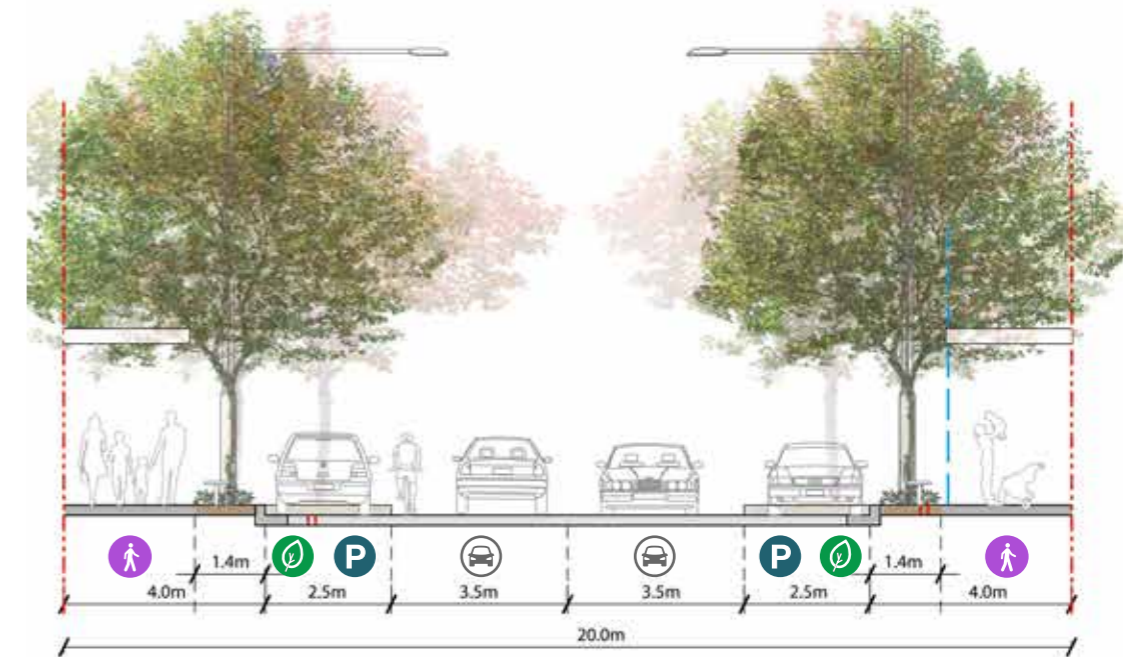
- Traditional kerb and gutter treatment
- Precast concrete paving.

Streetscape Elements

- Public domain furniture
- Multi function street lights with banners - staggered arrangement.

Landscape Treatments

- Continuous street tree planting in WSUD garden beds
- Kerb extension for feature tree planting.



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

3.6 Stockton Street Boulevard: Southern Entry



Legend

- 1 Shared Path**
Insitu concrete finish
- 2 Native Planting**
Native tree planting along boundary
- 3 Street Tree Planting**
Street tree planting in garden bed verge

- Planting
- WSUD / Bio-Swales
- Footpath
- Overhead powerlines to be relocated underground
- Parking
- Carriageway
- Shared Path
- Existing kerb lines to be removed/relocated
- Cycleway
- Public Transport

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Boulevard (Collector Road as per PDP)
- Peripheral 50km/h.

Location

- Stockton Street Southern Entry.

Street Geometry

- Road narrows from 30m to 20m road reserve
- Transition portion from Gateway Park to Town Centre
- Shared path: 3m wide insitu concrete path
- 3.5m travels lanes
- 2m wide planted verges for clearance to shared path.

Footpath, Kerbs and Carriageway

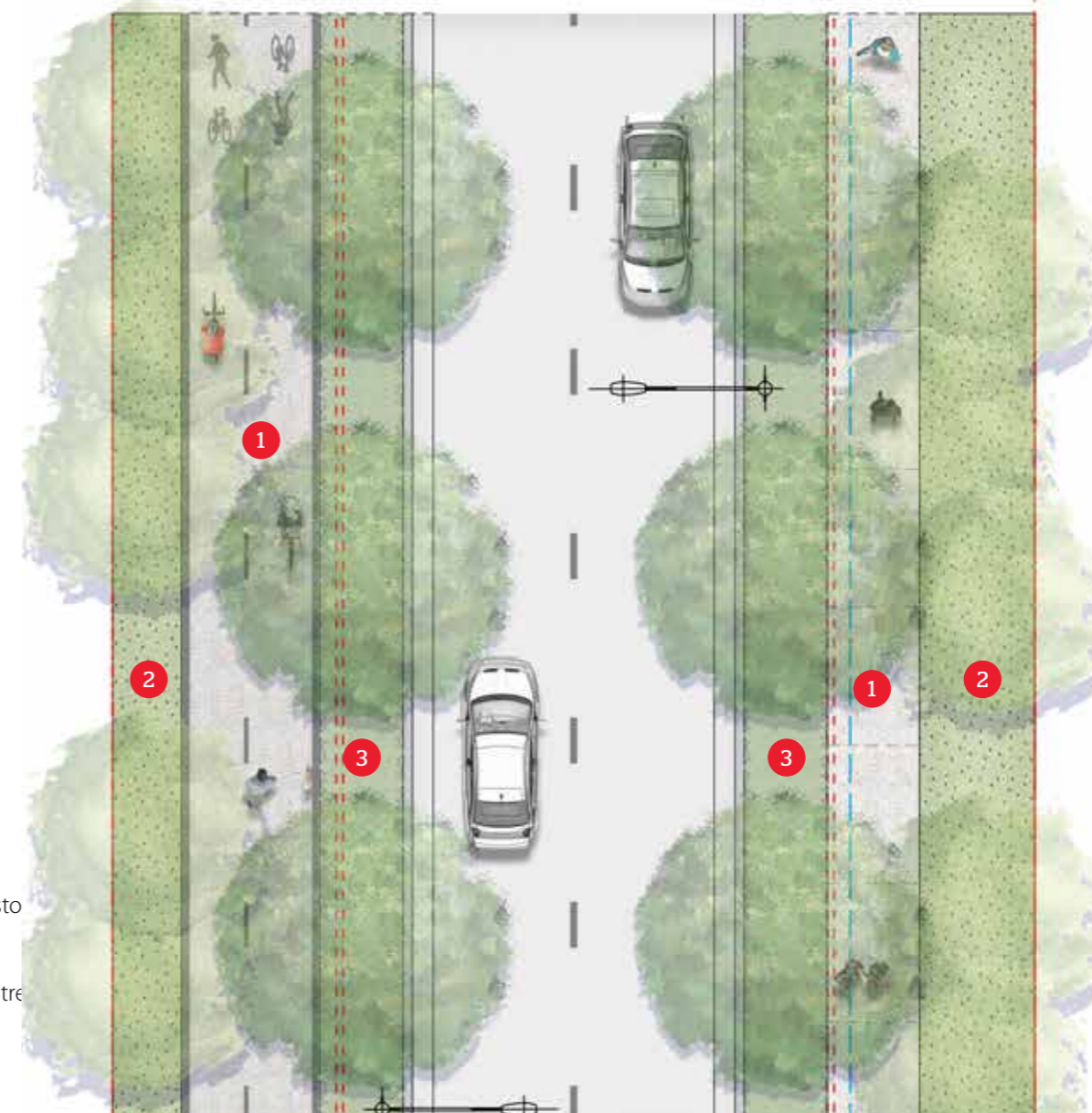
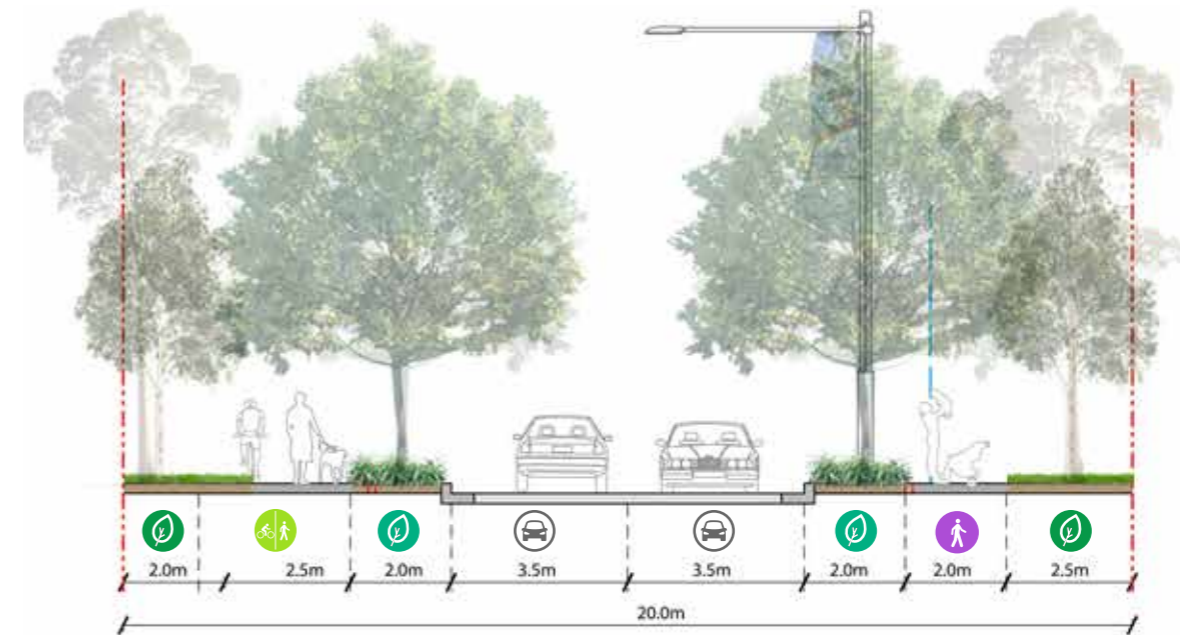
- Traditional kerb and gutter treatment
- No parking in this section.

Streetscape Elements

- Multi function street lights with banners - staggered arrangement.

Landscape Treatments

- Verge tree planting at 8-10m spacing with low understorey planting
- Grass verge along boundary lines with informal small tree planting.



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

3.7 Stockton Street Boulevard: Gateway Treatment



Legend

- 1 Shared Path**
Insitu concrete finish
- 2 Native Planting**
Native tree planting along boundary
- 3 Feature Median Planting**
Street tree planting in garden bed verge
- 4 Pedestrian Footpath**
Insitu concrete finish

- Planting
- WSUD / Bio-Swales
- Footpath
- Parking
- Carriageway
- Shared Path
- Cycleway
- Public Transport
- Existing kerb lines to be removed/relocated
- Overhead powerlines to be relocated underground

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Gateway Treatment (Sub-Arterial Road as per PDP)
- Peripheral 50km/h.

Location

- Stockton Street Gateway.

Street Geometry

- 30m road reserve
- Gateway Park and Nelson Bay Gateway Sign (Northern Verge)
- Shared Path: 3m wide insitu concrete
- Separated 4m traffic lanes.

Footpath, Kerbs and Carriageway

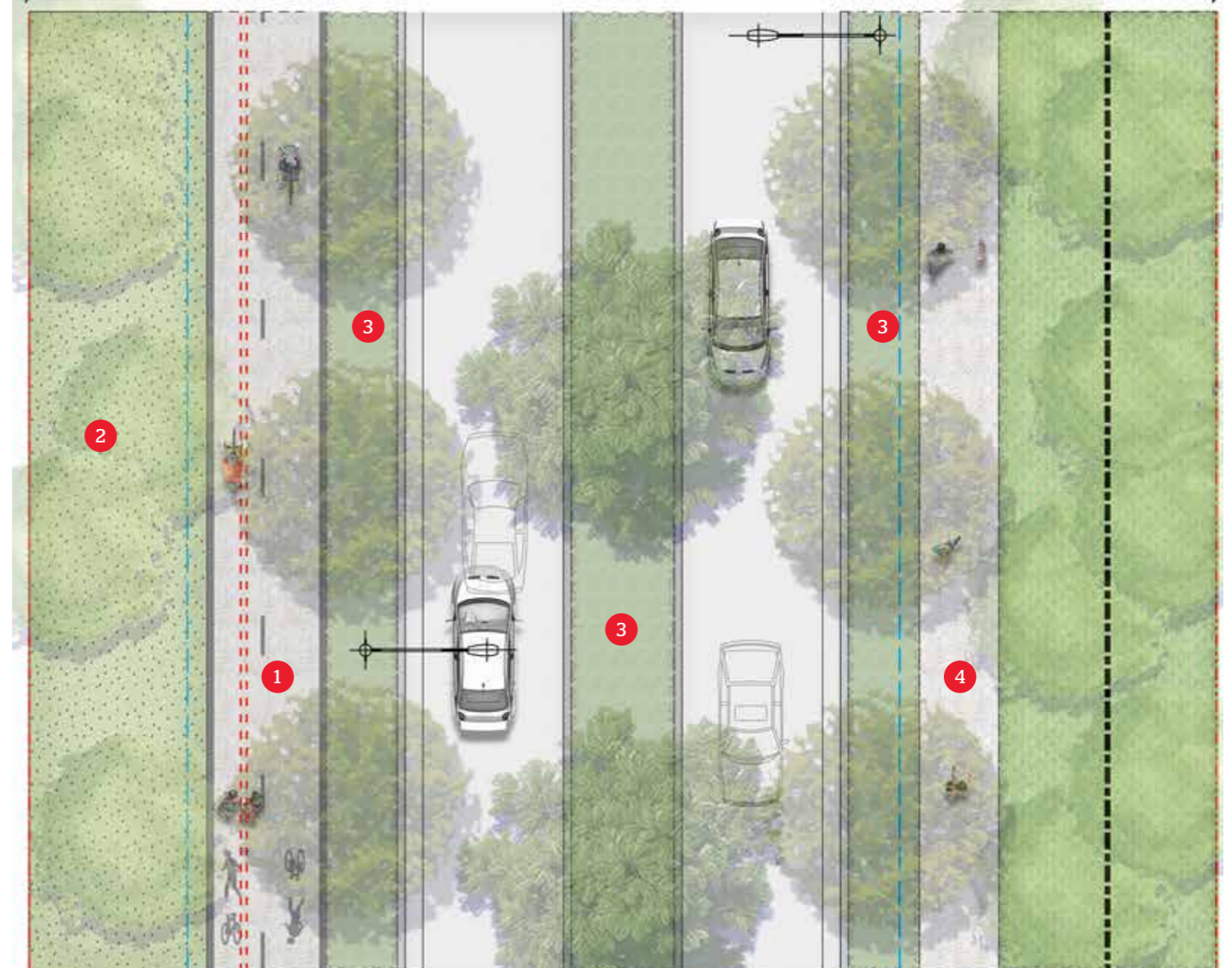
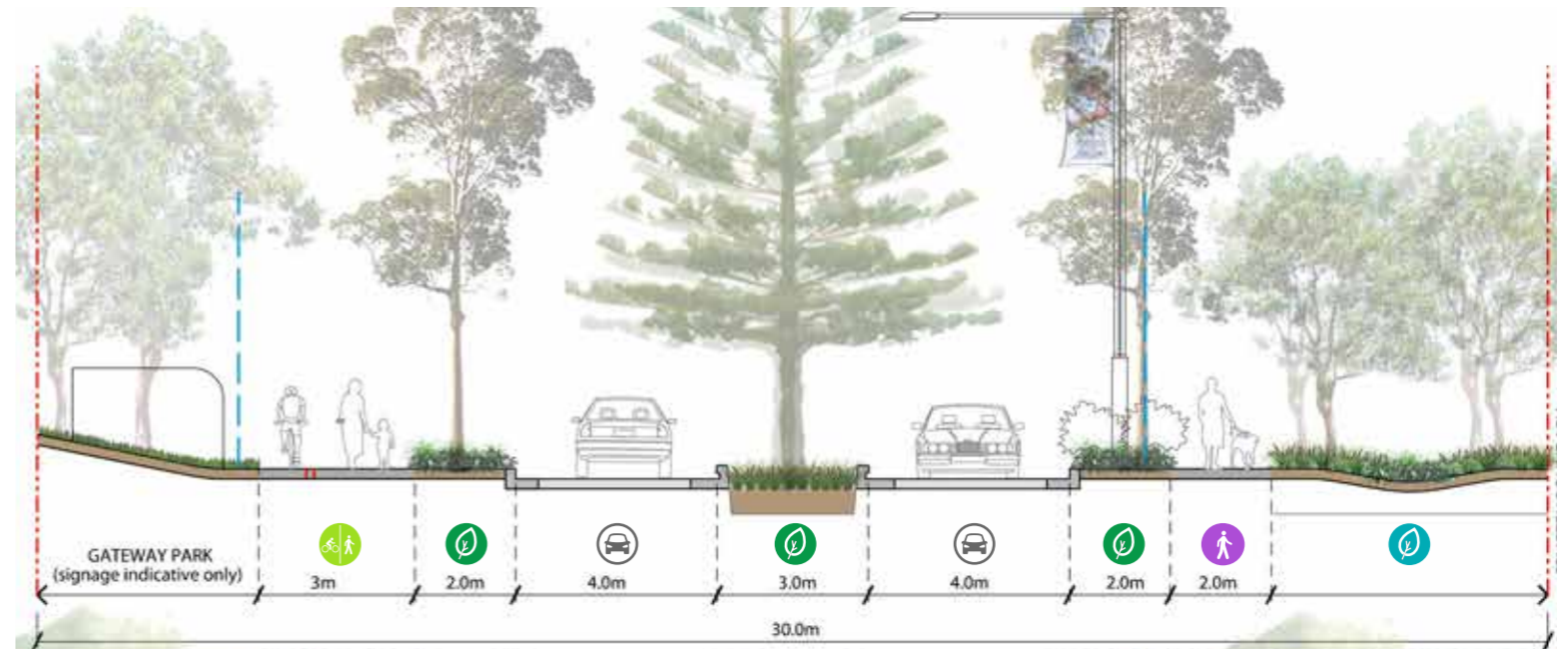
- No parking
- Traditional kerb and gutter treatment.

Streetscape Elements

- Gateway wayfinding signage and artwork
- Multi function street lights with banners - Staggered arrangement.

Landscape Treatments

- Green Gateway - Reinforce connection to adjacent vegetation reserves with native plant palette
- 2m wide planted verges
- 3m wide median with feature gateway tree planting
- Biodiversity Swale (Southern Verge).



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

3.8 Victoria Parade: Foreshore Section



Legend

- | | |
|---|--|
| 1 On Road Separated Cycleway Insitu concrete finish | 6 Street furniture Amenities located along street for pedestrian comfort |
| 2 Grass Verge With street tree planting | 7 Street Tree Planting Trees to be planted into engineered root cells to ensure effective root zones. For all new trees in paving. Tree pit under to be 4m x 2.5m min. |
| 3 Road Carriageway With parallel parking | 8 Main Paving Stretcher Pattern: Paving to necessary engineering specification. |
| 4 Street Lights Multi function poles in staggered arrangement | 9 Pedestrian Footbridge Overhead pedestrian footbridge to be structurally assessed and retained only if feasible |
| 5 Footpath Stone paving to feature areas with Precast concrete paving as main footpath material | |
-
- | | | |
|----------|-------------------|--|
| Planting | WSUD / Bio-Swales | Footpath |
| Parking | Carriageway | Shared Path |
| Cycleway | Public Transport | Existing kerb lines and median to be removed/relocated |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Boulevard (Pedestrian Priority)
- Medium Zone 40km/h.

Location

- Victoria Parade Foreshore Section.

Street Geometry

- 20m road reserve
- Separated cycleway along northern verge: 3m wide with 600mm wide separation median
- Footpath: 3.5m wide southern verge along retail strip
- 2.5m wide parallel parking
- 3.5m wide traffic lanes.

Footpath, Kerbs and Carriageway

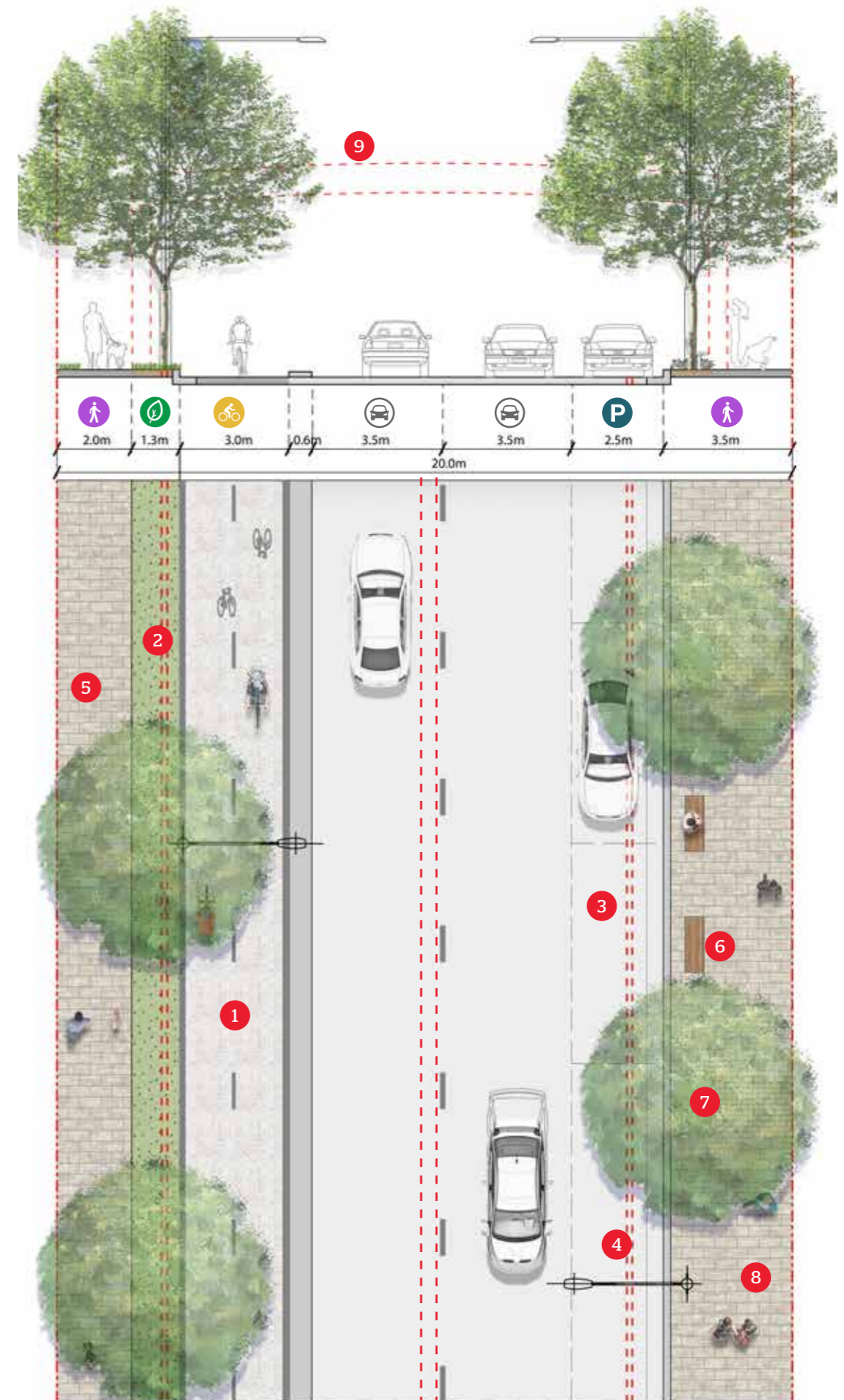
- Traditional kerb and gutter treatment.

Streetscape Elements

- Public domain furniture - seats, litter bins, bike racks and wayfinding signage
- Stone and/or precast paving footpaths with insitu concrete cycleway
- Multi function street lights with banner and pedestrian lights.

Landscape Treatments

- Grass verge with street tree planting along cycleway side.
- Street trees in paving to be planted into engineered root cells to ensure effective root zones



Concept Only.; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

Note : Overhead pedestrian footbridge to be structurally assessed and retained only if feasible

3.9 Church Street: Boulevard



Legend

- 1 Shared Path**
Insitu concrete finish
 - 2 Grass Verge**
With street tree planting
 - 3 Road Carriageway**
With parallel parking
 - 4 Street Lights**
Multi function poles in staggered arrangement
 - 5 Footpath**
Insitu concrete finish
 - 6 Kerb Extension**
Garden bed with feature tree planting and passive irrigation
-
- | | | | |
|----------|-------------------|---|---|
| Planting | WSUD / Bio-Swales | Footpath | Overhead powerlines to be relocated underground |
| Parking | Carriageway | Shared Path | |
| Cycleway | Public Transport | Existing kerb lines to be removed/relocated | |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Boulevard (Sub-Arterial Road as per PDP)
- Peripheral 50km/h.

Location

- Church Street entire length.

Street Geometry

- 20m road reserve
- Allow southern gateway treatment at Nelson Bay Road and western gateway at Government Road
- Shared path: 3m wide insitu concrete paving (eastern verge)
- Footpath: 1.5m wide insitu concrete paving (western verge)
- 2.5m wide parallel parking (where turning lanes required, remove parking lane)
- 3.5m travel lanes.

Footpath, Kerbs and Carriageway

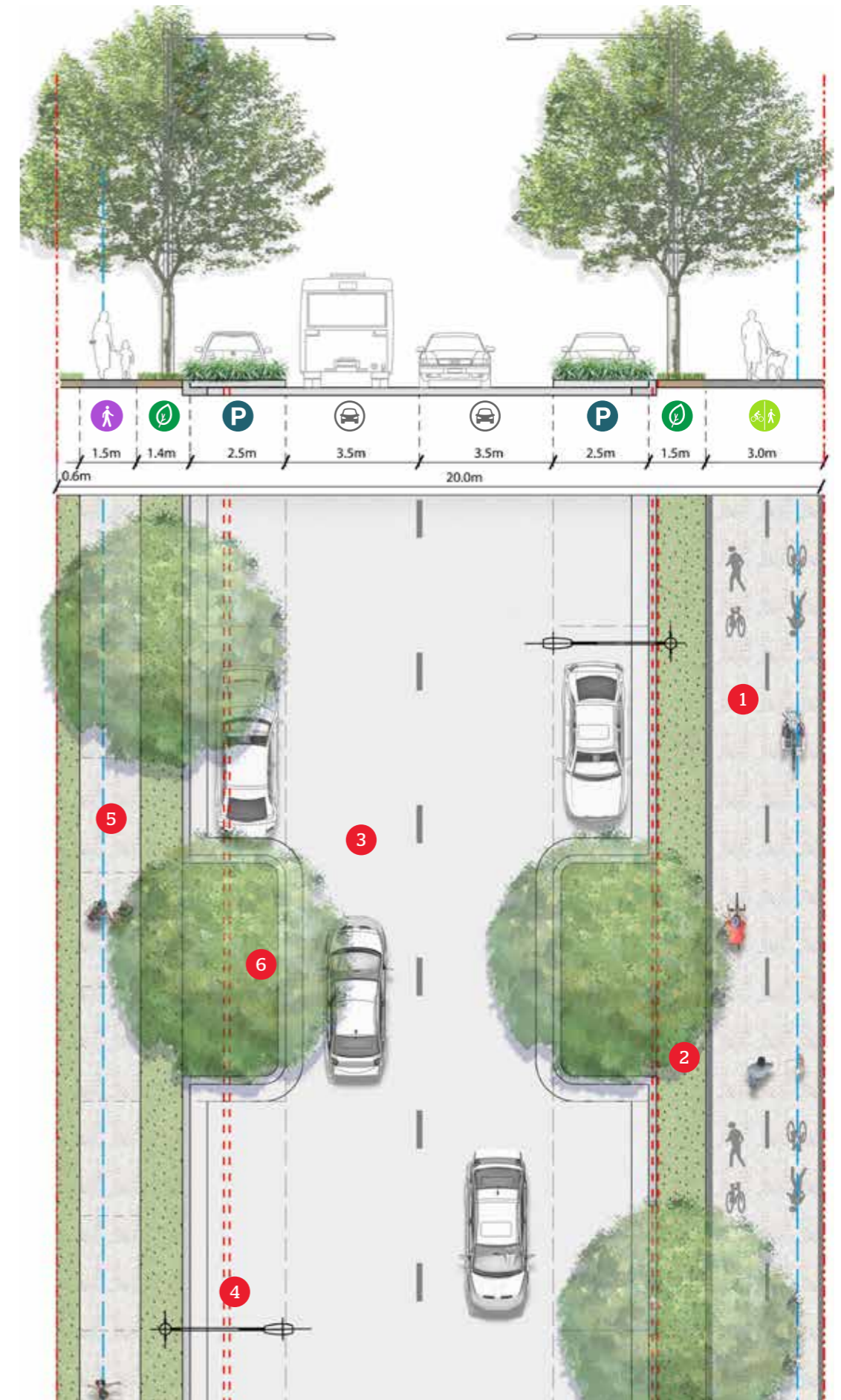
- Traditional kerb and gutter treatment.

Streetscape Elements

- Public domain furniture - limited to 'mid-trip' locations
- Multi function street lights with banner, flower pots and pedestrian lights.

Landscape Treatments

- 1.5m Grass verge with continuous street tree planting
- 600mm wide grass clearance strip along boundary.



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3.10 Donald Street: Town Centre Main Street



Legend

- 1 Main Paving**
Stretcher Pattern: Paving to necessary engineering specification.
 - 2 Highlight Paving**
Stretcher Pattern: Paving to necessary engineering specification.
 - 3 Vehicle Crossovers**
Stretcher Pattern: Paving to necessary engineering specification.
 - 4 Street Tree Planting**
Trees to be planted into engineered root cells to ensure effective root zones. For all new trees in paving. Tree pit under to be 4m x 2.5m min.
 - 5 Streetlights**
Multi-Function Poles (HUB) in staggered configuration
- Planting
 - WSUD / Bio-Swales
 - Footpath
 - Overhead powerlines to be relocated underground
 - Parking
 - Carriageway
 - Shared Path
 - Existing kerb lines to be removed/relocated
 - Cycleway
 - Public Transport

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Town Centre Main Street (Collector Road as per PDP)
- Medium Zone 40km/h.

Location

- Donald Street - Main Street.

Street Geometry

- 20m road reserve
- Commercial activity streets
- 4m wide footpaths with vehicle crossovers, outdoor dining and bus stops (refer to individual treatments)
- 2.5m parallel parking
- 3.5m wide traffic lanes.

Footpath, Kerbs and Carriageway

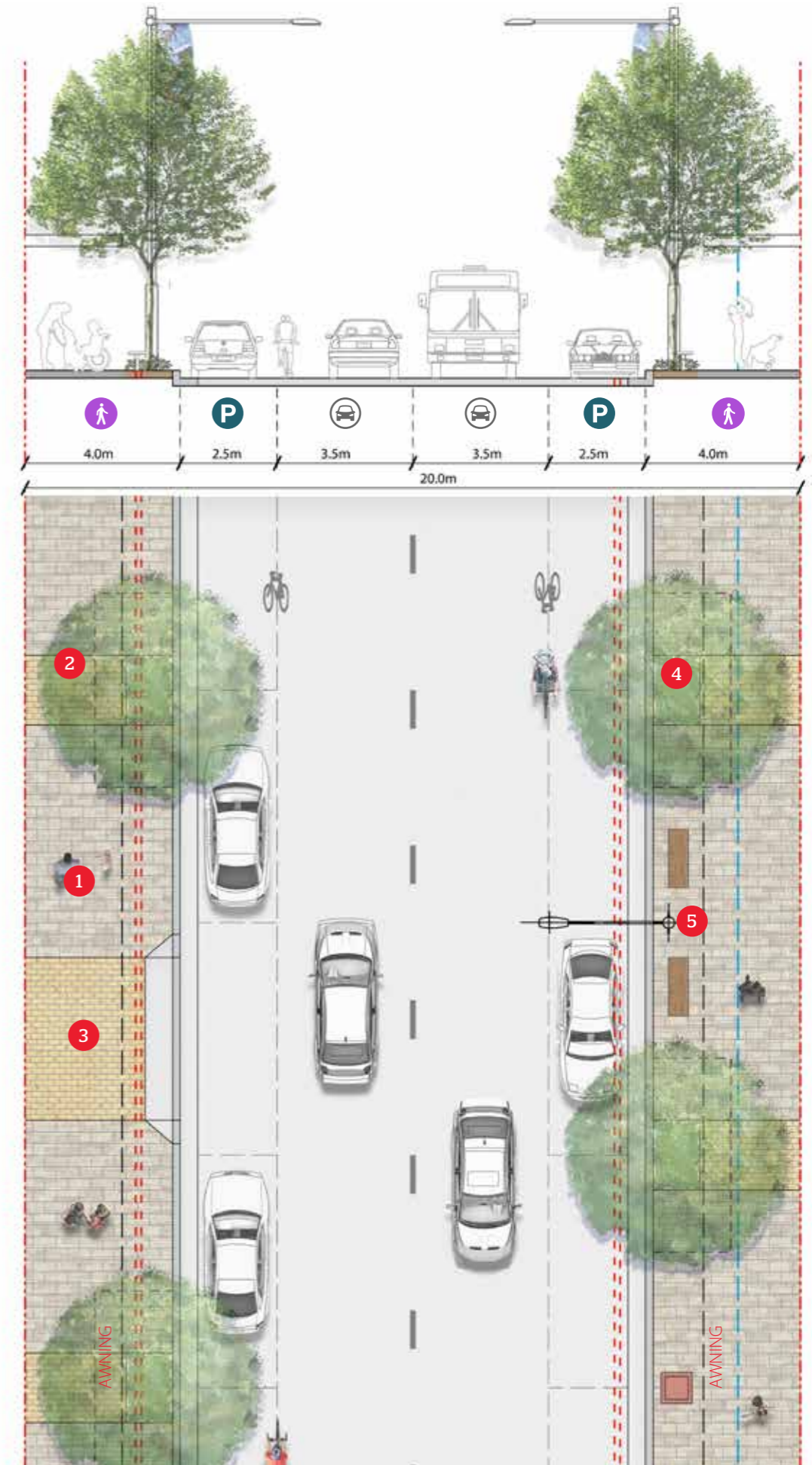
- Traditional kerb and gutter treatment

Streetscape Elements

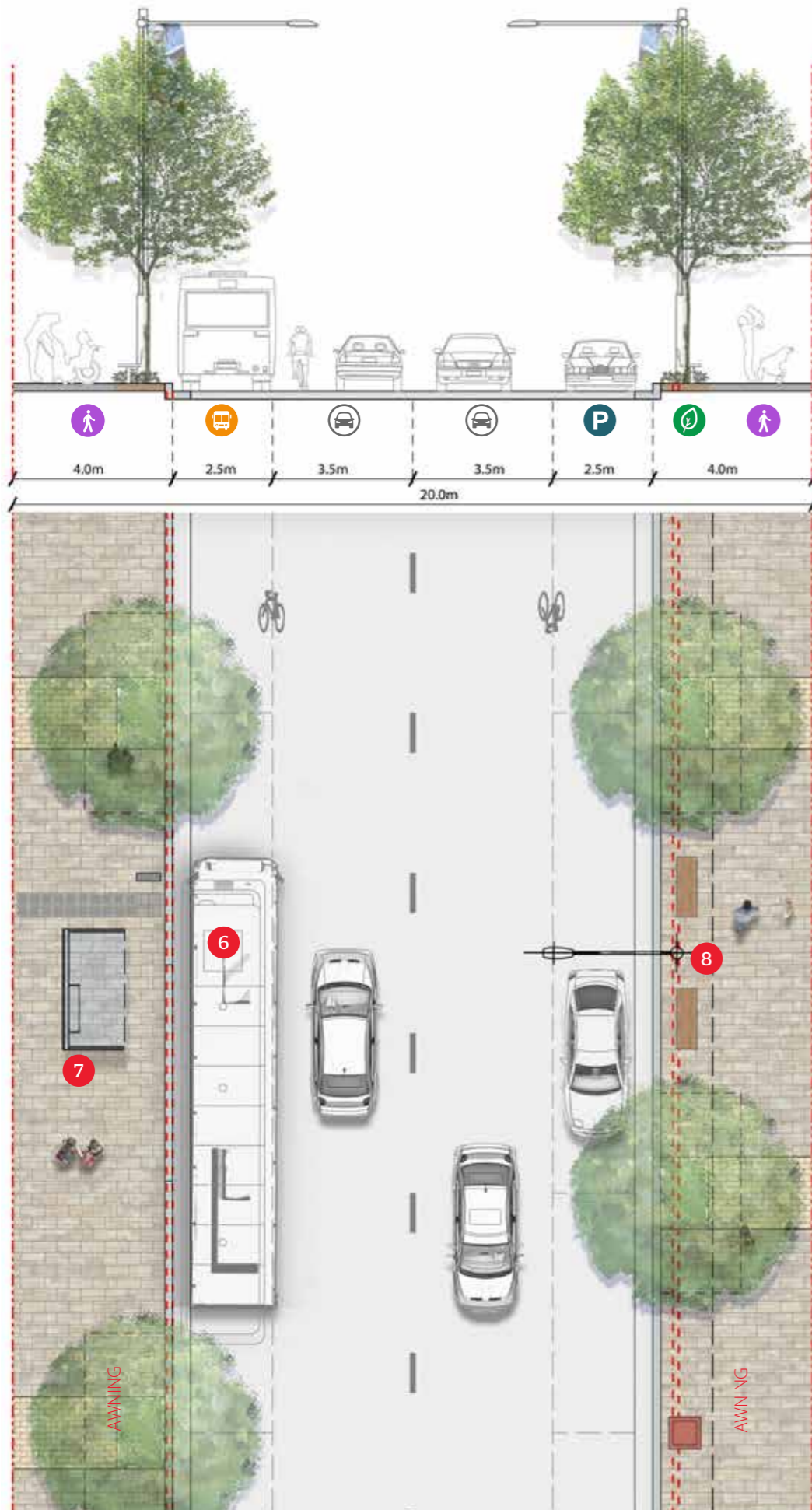
- Public domain furniture - seats, litter bins, bike racks and wayfinding signage
- Precast concrete paving with highlight sections
- Multi function street lights with banner, flower pots and pedestrian lights.
- Continuous awning along shop fronts

Landscape Treatments

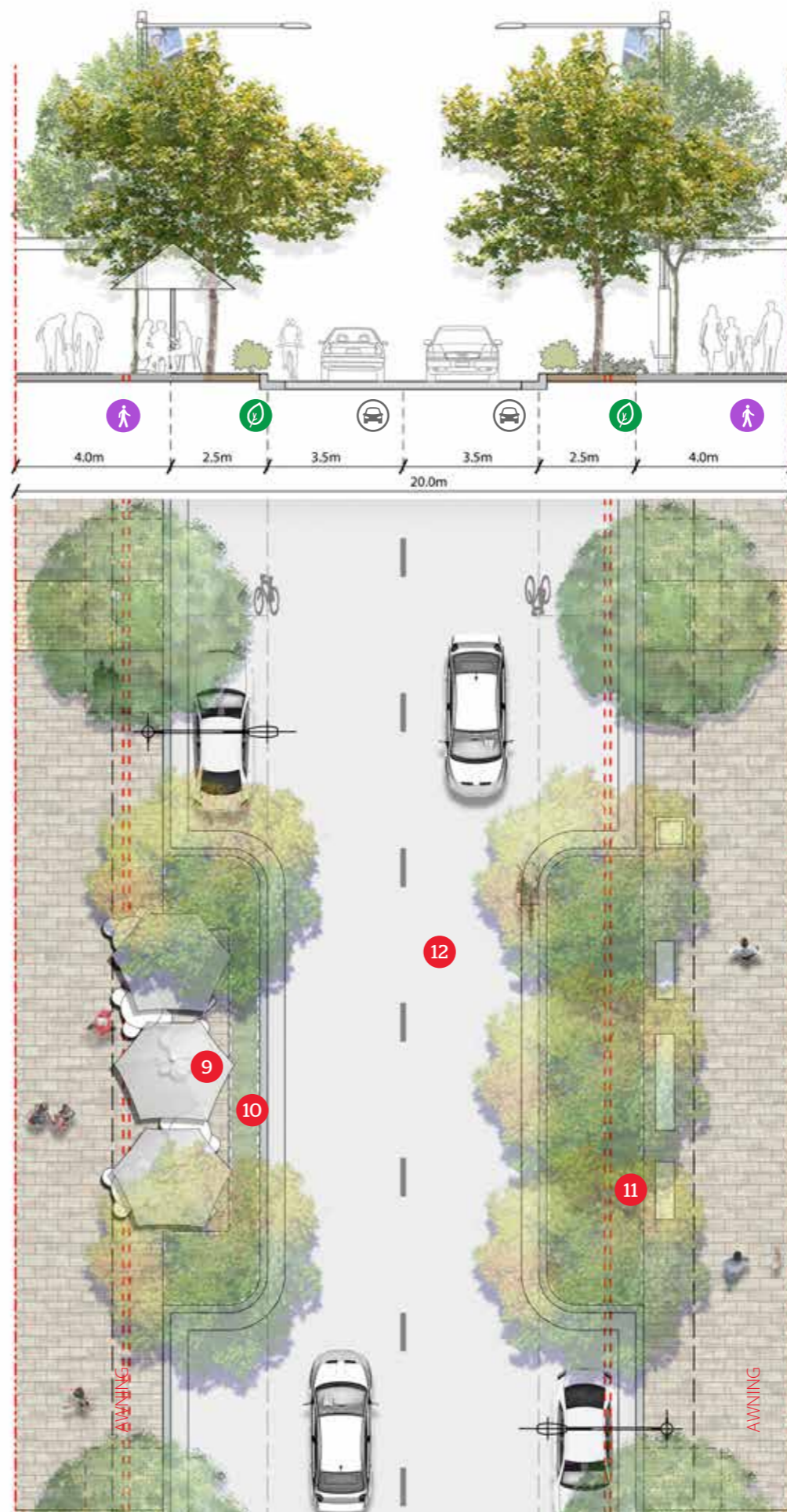
- Deciduous street trees in paving Trees to be planted into engineered root cells to ensure effective root zones.
- Donal Street / Stockton Street Intersection subject to future design (Signalised intersection with kerb extensions)
- Extended landscape zones for greater landscape planting and feature tree planting.



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

Legend

- 6 Bus Zone**
Kerb side bus stop
- 7 Bus Shelter**
Bus shelter, TGSIs and signage (Smart Streets Connections)
- 8 Street furniture**
Amenities located along street for pedestrian comfort
- 9 Outdoor Dining**
Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel
- 10 Hedge Planting**
Planting along outdoor dining to ensure safety and comfort for diners.
- 11 Extended Landscape Zones**
Kerb extensions allow for greater landscape areas with feature tree planting and passive irrigation to garden beds
- 12 Slow Vehicle Traffic**
Reduce lane widths to slow traffic for pedestrian safety

3.11 Local Street: Residential Streets



Legend

- 1 Grass Verge**
With street tree planting
- 2 Road Carriageway**
With parallel parking
- 3 Street Lights**
Multi function poles in staggered arrangement
- 4 Footpath**
Insitu concrete finish

- | | | |
|----------|-------------------|---|
| Planting | WSUD / Bio-Swales | Footpath |
| Parking | Carriageway | Shared Path |
| Cycleway | Public Transport | Existing kerb lines to be removed/relocated |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Residential Local Street
- Medium Zone 40km/h.

Location

- Residential streets.

Street Geometry

- 20m road reserve
- Residential streets (low volumes) with vehicle crossovers
- Footpath: 1.5m wide insitu concrete paving
- 2.5m wide informal parallel parking.

Footpath, Kerbs and Carriageway

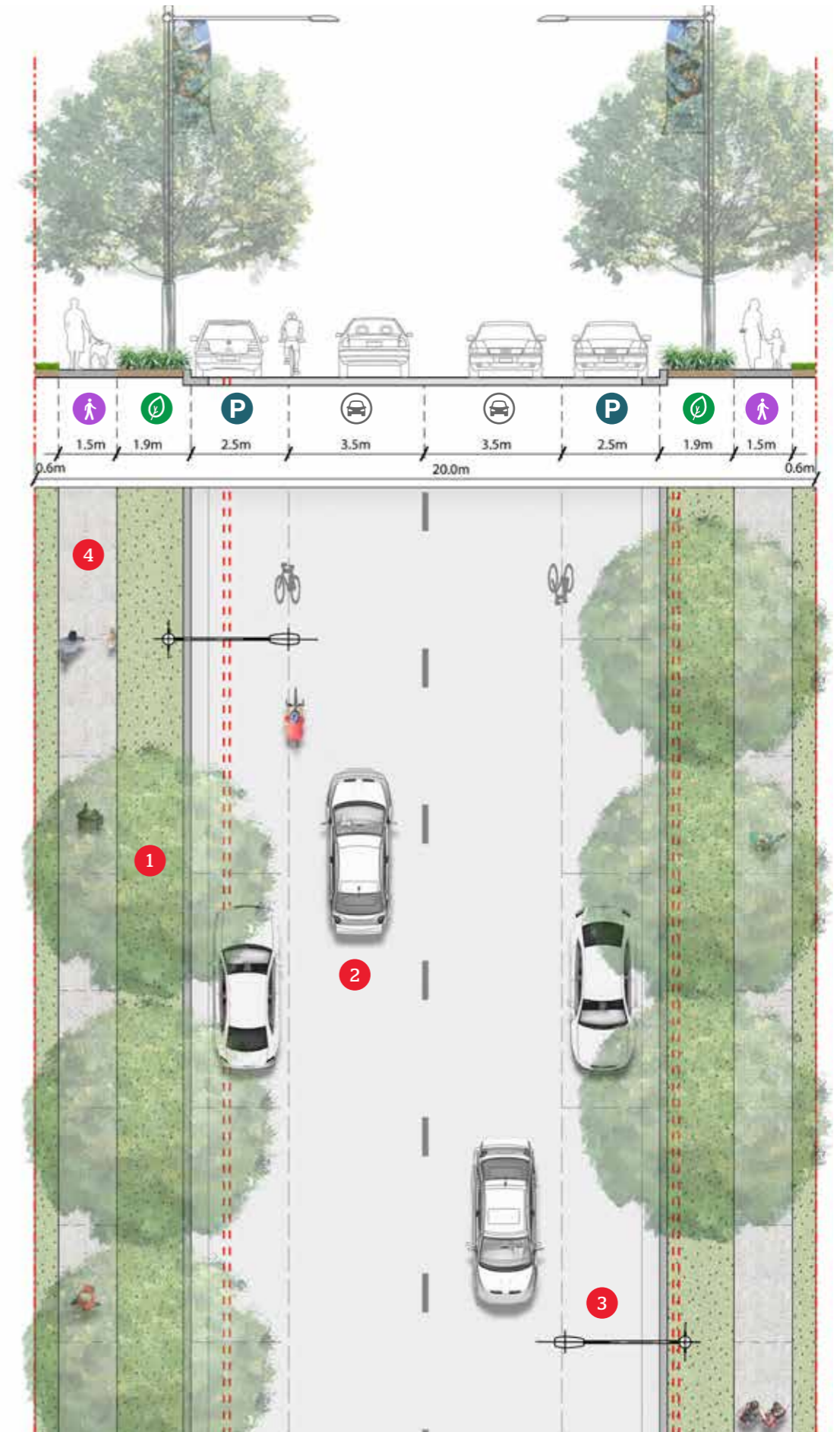
- Traditional kerb and gutter treatment.

Streetscape Elements

- Public domain furniture - limited to 'mid-trip' locations
- Standard streets lights.

Landscape Treatments

- 1.5m Grass verge with continuous street tree planting where possible, avoiding vehicle crossovers
- 600mm wide grass clearance strip along boundary.



Concept Only, Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

3.12 Stockton Street: Shared Zone [Balanced Concept]



Legend

- 1 Main Paving**
Stretcher Pattern: Paving to necessary engineering specification.
 - 2 Outdoor Dining**
Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel.
 - 3 Street Tree**
Trees to be planted into engineered root cells to ensure effective root zones.
 - 4 Shared Zone**
Slow speed 10km/h stretcher pattern to necessary engineering specification.
 - 5 Pedestrian Light**
Paired arrangement with banners
 - 6 Street Furniture**
Custom seating along mall for pedestrian comfort

Note: Street can be closed for market and event days.
- Existing kerb lines to be removed/relocated ○ Existing trees to be removed subject to professional arborists assessment

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Shared Zone
- Slow Zone 10km/ h

Location

- Stockton Street Village Precinct

Street Geometry

- 20m road reserve
- 6.5m wide footpaths
- 4.5m slow one way traffic lane
- 2.5m wide 1P short stay parallel parking on western side of Stockton Street

Footpath, Kerbs and Carriageway

- Single grade surface

Streetscape Elements

- Public domain furniture to assist with defining edges
- Stone paving surface treatments
- Feature art paving (subject to future design)
- Multi function street lights with banners and pedestrian lighting - paired arrangement
- Continuous awnings to shop fronts

Landscape Treatments

- Deciduous street tree planting with garden bed planting at base of trees



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



STREET PERSPECTIVE: Stockton Street Shared Zone (Landscape design indicative only)

Concept Only, Final design subject to technical design considerations, detailed investigation of services and relevant approvals

3.13 Stockton Street: Shared Zone [Pedestrianised for Events]



Legend

- 1 Main Paving**
Stretcher Pattern: Paving to necessary engineering specification.
 - 2 Outdoor dining areas**
Activation of cafes, restaurants and bars within the plaza during the day and evening. Allow for continuous awning along shop fronts.
 - 3 Street Tree**
Trees to be planted into engineered root cells to ensure effective root zones.
 - 4 Shared Zone**
Slow speed 10km/h stretcher pattern 150 x 300 x 60mm stone paving with stone flush kerbs.
 - 5 Pedestrian Light**
Paired arrangement with banners
 - 6 Variety of seating with integrated planting**
Bespoke furniture and planters with feature planting.
 - 7 Market Stall**
Street can be closed and become a fully pedestrianised mall where markets and events may be held
 - 8 Intersection Threshold**
Formalise the intersection of Magnus and Stockton Streets to form "Town Square". Vehicle movement to be slowed with strategically placed bollards and street furniture elements to delineate between pedestrian only areas and vehicle access areas
 - 9 Deciduous Street Planting**
Continuous deciduous street tree planting to ensure solar access to streets in winter.
- Existing kerb lines to be removed/relocated ○ Existing trees to be removed subject to professional arborists assessment



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4. Paving Typologies

4.1 Paving Material

PAVEMENT DESIGN CONSIDERATIONS

Street pavements are a significant part of the public realm and their quality has a direct effect on the pedestrian experience of a place.

- Pavements should be the unifying element in the streetscape, setting a clear canvas for other streetscape elements which may provide contrast, movement and texture.
- Pavements should provide clear distinction between pedestrian priority footpaths and vehicle use areas.
- Pavements should be comfortable and allow ease of movement for all users including people with different degrees of abilities.
- Pavements should be a consistent pattern with occasional textural, size and colour variations to alert users of change of conditions or hazards.
- Pavements should reinforce streetscape hierarchy.
- Pavement material should be high quality, durable, robust, easy to maintain and are easy to install, remove and relay.

Three main pavement materials have been identified for Nelson Bay Town Centre:

- Type 1 - Natural Stone Paving
- Type 2 - Precast Concrete Paving Units
- Type 3 - Insitu Concrete.

MATERIAL

Type 1 - Natural Stone Paving

Natural Stone Paving to be reserved for public places of special significance. The main 'heart' of Nelson Bay (lower Stockton Street, Magnus Street, Apex Park) should be considered for a high percentage of natural stone paving.

Stone can be incorporated with other materials to reinforce the identity and character of the town centre.

Type 1 paving will require specific bespoke design.

Type 2 - Precast Concrete Paving

Precast concrete paving is currently being used in Nelson Bay Town Centre. The existing pavers are perceived as being "outdated", however they have withstood years of wear and high traffic volumes.

High quality concrete unit pavers continue to be suitable for use within the central commercial streets of Nelson Bay's Town Centre. Recommendation is to continue with existing colour palettes with the paving pattern updated to reflect current contemporary applications.

Type 3 - Insitu Concrete Paving

Insitu concrete paving to be used on the residential and peripheral streets around the city centre.

Type 4 - Public Art Paving Feature

Public Art Paving Feature to be an overlay within the Village Precinct and Apex Park. Design subject to future detailed design. Opportunity to engage local artist.

PEDESTRIAN RAMPS

Pedestrian ramps to be paved with the same material as the surrounding footpath.

KERB AND GUTTER

All kerb and gutters to be insitu concrete.

Flush stone kerblines to be applied in Stockton and Magnus Street shared zones.

VEHICULAR CROSSOVERS

All vehicular crossovers to maintain adjacent pavement type to reinforce pedestrian priority.

PARKING BAYS

All streets to be asphalt to match roadway.

Stone setts or small stone paving units to delineate parking bays in Stockton and Magnus Street Shared Zones.

4.2 Paving Material Palette

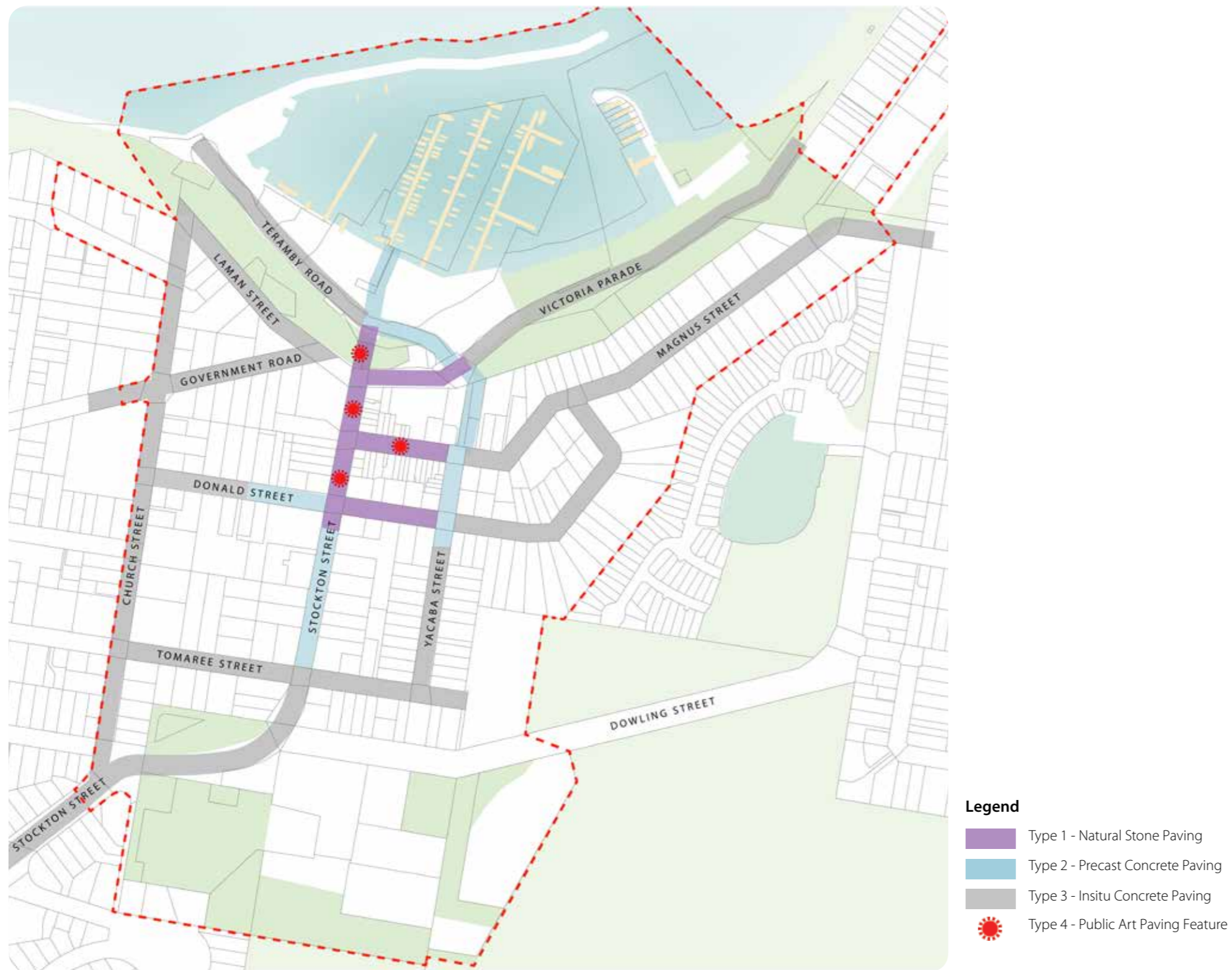


Fig. 3 Pavement Typology

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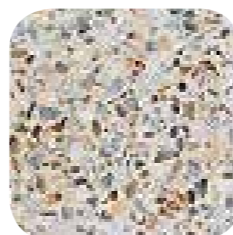
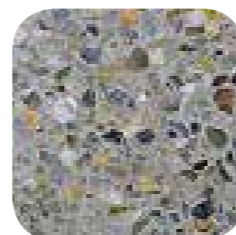
Type 1
Natural Stone Paving



PREFERRED STONE PAVING

- Selected stone varieties with warm tones and a variety of textures and finishes: Preferred – Granite
- Selected granite stones and setts with a variety of warm sandy tones and a variety of warm and cool grey: Preferred - Porphyry
- Selected stones and setts with rusty and blue grey tones

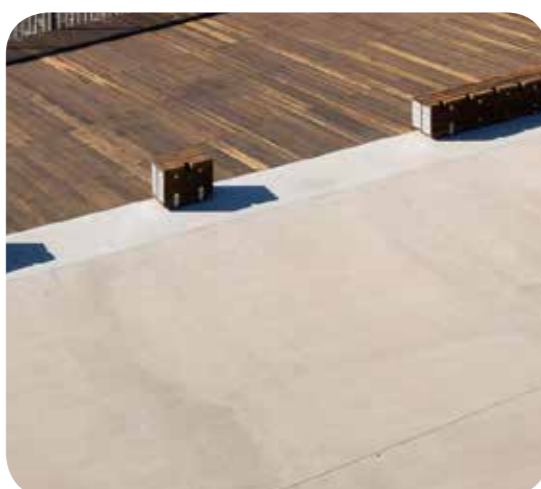
Type 2
Precast Concrete Paving



PREFERRED PRECAST CONCRETE UNITS

- Standard sized pavers with a variety of warm and grey tones
- Warm colour mixes with brown / red aggregates
- Urbanstone Golden Gunmetal, Albany Beige, River Topaz or approved equivalent

Type 3
Insitu Concrete Paving



Type 4
Feature Public Art Paving
(subject to future design)

PREFERRED INSITU CONCRETE PAVING

- Site poured concrete with colours, finishes and aggregates to be selected depending on the setting and location

5. Street Furniture

5.1 Street Furniture

STREET FURNITURE CONSIDERATIONS

Streetscape furniture creates settings for resting, sitting, dining and social gatherings with friends and family. These settings are important for the elderly, less mobile and young families as they provide relief and comfort. Properly selected and placed furniture can encourage people to venture outside and enjoy/activate the public domain.

The furniture palette should be consistent across the town centre, with feature bespoke items dedicated to special streets and special places. The main objective is to create easily maintained, convenient and publicly accessible amenities that do not interrupt the pedestrian or traffic flow.

The placement of street furniture should be based on the street function and relate to the patterns and design of the hard landscape elements on site. Street furniture should not give an appearance of being cluttered, where possible amenities should be grouped and arranged in a linear sequence along a street.

Furniture should be selected to meet the different needs of different users and be constructed from safe materials to prevent injury, without sharp edges or entrapment gaps. Furniture shall be securely mounted onto the sub-surface blinding slab to conceal fasteners.

The choice of material should depend on the context and be suitable for the local character. The designs should be simple in form.

The following furniture palette should be considered for use in Nelson Bay Town Centre and surrounds.



5.2 Street Furniture Palette

Bench Seats

Foreshore/ Streets



Customised Seating (Subject to future design)



Bike Racks & Bollards

Foreshore/ Streets



Bus Stops

Foreshore/ Streets



Drinking Fountain and Re-fill stations
Multi Function Poles

Foreshore/ Streets



Foreshore Lighting

Foreshore/ Streets



Litter Bins and Recycling Centres

Foreshore/ Streets











6. Street Tree Masterplan

Street trees are a vital urban element that can transform streets and provide numerous environmental, aesthetic, cultural and economic benefits.

6.1 Street Tree Masterplan



Legend

| | | | |
|---|--------------------|---|-------------------------|
|  | Gateway Treatment |  | Church Street Boulevard |
|  | Southern Entry |  | Town Centre Trees |
|  | Stockton Boulevard |  | Local Streets |
|  | Village Precinct |  | Native Planting |

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals

Street Trees

Street trees are a significant component of the urban fabric. Street trees have the ability to transform the physical appearance of the street, provide environmental, aesthetic and economical benefits.

Priority should be given to implementing street trees as they create a sense of place and enhance the public domain.

The environmental benefits of street tree planting include:

- Carbon storage and release oxygen
- Provide shade relief to footpaths, cars and buildings
- Remove gas pollutants
- Are natural pollution filters for the air and water system
- Captures and slow runoff to reduce erosion of soils
- Provide habitat and food source for fauna
- Reduction of urban heat island effects

The social benefits of street tree planting include:

- Improving attractiveness of streets
- Provide shade for pedestrian and creating feelings of relaxation and well being
- Calm and slow traffic by providing a barrier between pedestrians

Establishing a green city should be the main driver for Nelson Bay Town Centre. Connecting the Hills to the Bay through street tree planting will improve the overall appeal of the town for residents and visitors.

Note

Street tree species and other planting will be selected from the plant palettes by Council's technical staff taking into account a range of matters including aesthetics and streetscape character, environmental tolerances, and maintenance and other functional requirements.

6.2 Plant Schedule - Trees

The right tree for the right location

Gateway Treatment

Araucaria cunninghamii - Hoop Pine
Araucaria heterophylla - Norfolk Island Pine
Corymbia maculata - Spotted Gum
Corymbia ficifolia - Red Flowering Gum
Eucalyptus pilularis - Blackbutt
Eucalyptus piperita - Sydney Peppermint Gum
Eucalyptus tereticornis - Forest Red Gum
Livistonia australis - Cabbage Tree Palm
Ulmus parvifolia - Chinese Elm

- Median: Tall landmark trees providing link to Apex Park
- Verge: Species selection reflects existing vegetation character.
- Evergreen trees providing shade to pathway

Southern Entry

Ulmus parvifolia - Chinese Elm
Corymbia maculata - Spotted Gum
Corymbia ficifolia - Red Flowering Gum
Eucalyptus pilularis - Blackbutt
Eucalyptus piperita - Sydney Peppermint Gum
Eucalyptus tereticornis - Forest Red Gum
Livistonia australis - Cabbage Tree Palm

- Road Edge: Tall spreading deciduous trees to form a consistent canopy cover.
- Back of Verge: Predominately native species reflecting existing vegetation character with a smaller tree for solar access

Village Precinct

Delonix regia - Poinciana
Nyssa sylvatica 'NXSXF' Forum - Nyssa
Zelkova serrata 'Green Vase' - Green Vase
Livistonia australis - Cabbage Tree Palm
Pandanus tectorius - Pandanus Palm

- Mixture of deciduous and evergreen trees to provide solar access, visual interest and seasonal colour.
- Sculptural form that characterise the village precinct.

Town Centre, Stockton & Church Street Boulevards

Ulmus parvifolia - Chinese Elm
Zelkova serrata 'Green Vase' - Green Vase

- Medium sized trees, in proportion to buildings
- Deciduous trees to allow for solar access,
- V-shaped or domed consistent canopy cover

Local Streets

Lophostemon confertus - Queensland Box Brush
Tristaniopsis laurina - Watergum

- Evergreen trees providing shade to pathway
- Medium sized tree where no constraints, smaller tree in association with services and views.
- Spreading canopy to ensure consistent canopy cover.
- Non invasive root system.

Promenade

Ficus rubiginosa - Port Jackson Fig
Magnolia grandiflora - Magnolia
Melaleuca leucadendra - Weeping Paperbark
Pandanus tectorius - Pandanus Palm
Phoenix canariensis - Canary Island Date Palm

- Parkland species of varying size and shape
- Species selection reflects existing vegetation character of the Promenade.

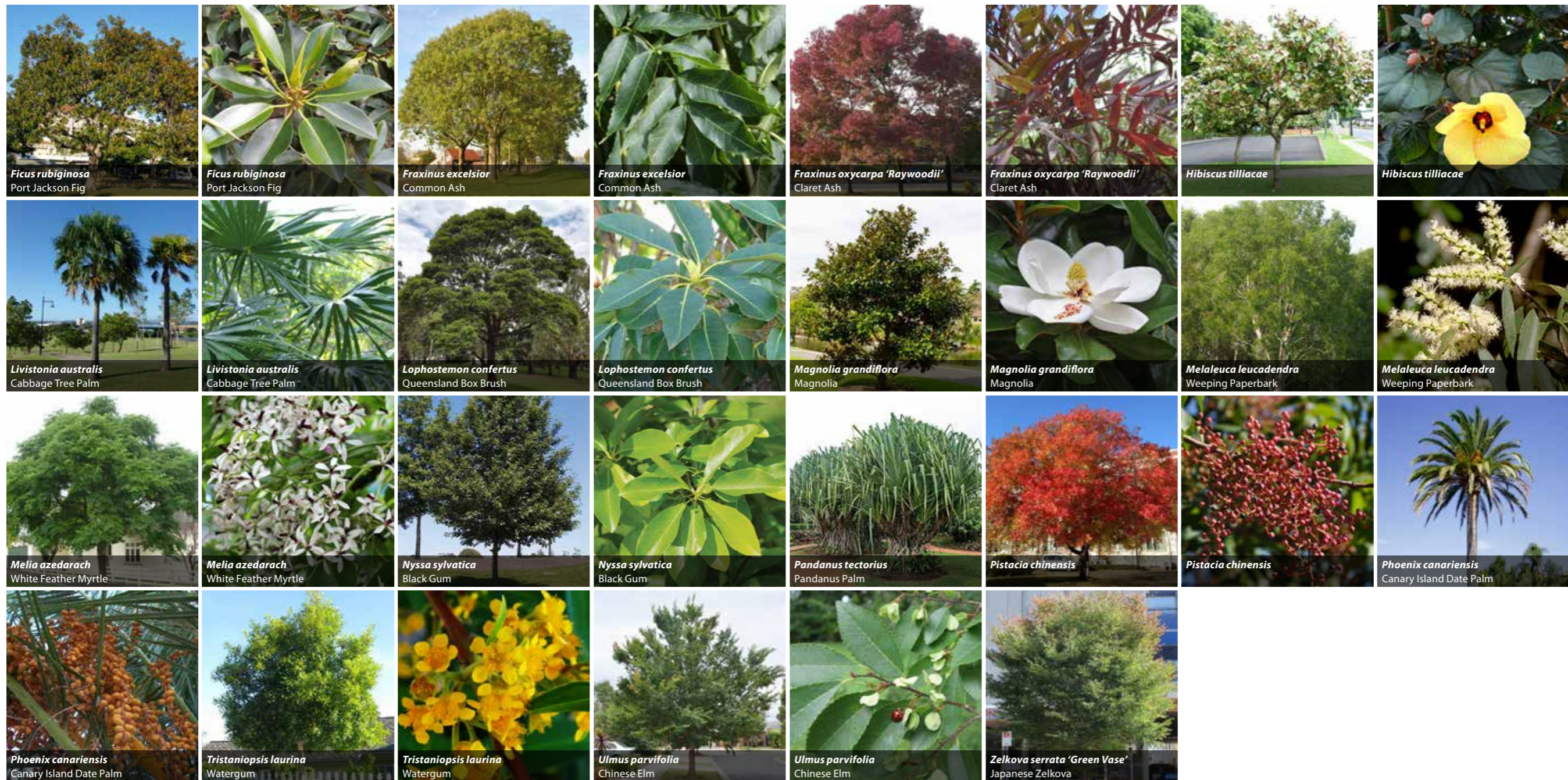
(Tree list subject to review)

| BOTANICAL NAME | COMMON NAME | SIZE Height + Spread (m) | FORM | DECIDUOUS OR EVERGREEN |
|--|-------------------------|--------------------------------|---------------------------------|---------------------------|
| <i>Angophora costata</i> | Smooth Bark Apple | 15-25 x 5-15m | Large, spreading to broad-domed | Evergreen |
| <i>Araucaria cunninghamii</i> | Hoop Pine | 40 x 12m | Symmetrical, cone-shaped tree | Evergreen |
| <i>Araucaria heterophylla</i> | Norfolk Island Pine | 20-35 x 10-15m | Symmetrical, cone-shaped tree | Evergreen |
| <i>Backhousia citridora</i> | Lemon Scented Myrtle | 3-20 x 1-5m | Rounded crown, Dense canopy | Evergreen |
| <i>Banksia serrata</i> | Old Man Banksia | 3-15 x 2-4m | Irregular | Evergreen |
| <i>Buckhamia celsissima</i> | Ivory Curl Flower | 8-25 x 1-4m | Rounded crown, Dense canopy | Evergreen |
| <i>Corymbia citriodora</i> 'Scentuous' | Dwarf Lemon Scented Gum | 7 x 3m | Oval | Evergreen |
| <i>Corymbia ficifolia</i> | Red Flowering Gum | 10 x 5m | Spreading | Evergreen |
| <i>Corymbia maculata</i> | Spotted Gum | 10-35 x 10-20m | Irregular | Evergreen |
| <i>Cupaniopsis anacardioides</i> | Tuckeroo | 10 x 5m | Spreading, dense canopy | Evergreen |
| <i>Cupaniopsis pavifolia</i> | Small Leaf Tuckeroo | 8 x 4m | Spreading, dense canopy | Evergreen |
| <i>Delonix regia</i> | Poinciana | 5-12 x 5m | Spreading, vase | Deciduous |
| <i>Eucalyptus pilularis</i> | Blackbutt | 30-70 x 10m | Tall, spreading | Evergreen |
| <i>Eucalyptus piperita</i> | Sydney Peppermint Gum | 20 x 9m | Tall, spreading | Evergreen |
| <i>Eucalyptus tereticornis</i> | Forest Red Gum | 20 x 10m | Tall, spreading | Evergreen |
| <i>Ficus obliqua</i> | Small Leaf Fig | 60 x 30m | Domed, large trunk | Evergreen |
| <i>Ficus rubiginosa</i> | Port Jackson Fig | 30 x 10m | Buttressed | Evergreen |
| <i>Fraxinus excelsior</i> | Common Ash | 15 x 5m | Medium dome | Deciduous |
| <i>Fraxinus oxycarpa</i> 'Raywoodii' | Claret Ash | 12 x 7m | Oval | Deciduous |
| <i>Hibiscus tilliaceus</i> | Sea Hibiscus | 4-8 x 4m | | Evergreen |
| <i>Livistonia australis</i> | Cabbage Tree Palm | 20 x 6m | Straight, Tall | Evergreen |
| <i>Lophostemon confertus</i> | Queensland Box Brush | 10-25m x 5-15m | Spreading | Evergreen |
| <i>Magnolia grandiflora</i> | Magnolia | 25 x 10m | Oval | Evergreen |
| <i>Melaleuca leucadendra</i> | Weeping Paperbark | 10 x 8m | Weeping | Evergreen |
| <i>Melia azedarach</i> | White Feather Myrtle | 15 x 6m | Rounded crown, Dense canopy | Deciduous |
| <i>Nyssa sylvatica</i> | Black Tupello | 11 x 6m | Round | Deciduous |
| <i>Pandanus tectorius</i> | Pandanus Palm | 8 x 4m | Spreading | Evergreen |
| <i>Pistacia chinensis</i> | Chinese Pistachio | 8 x 6m | Round | Deciduous |
| <i>Phoenix canariensis</i> | Canary Island Date Palm | 16 x 10m | Large spreading palm | Evergreen |
| <i>Tristaniopsis laurina</i> | Water Gum | 10 x 6m | Spreading | Evergreen |
| <i>Ulmus parvifolia</i> | Chinese Elm | 12 x 7m | Broad, Domed | Deciduous |
| <i>Zelkova serrata</i> 'Green Vase' | Japanese Zelkova | 14 x 10m | V-shaped | Deciduous |

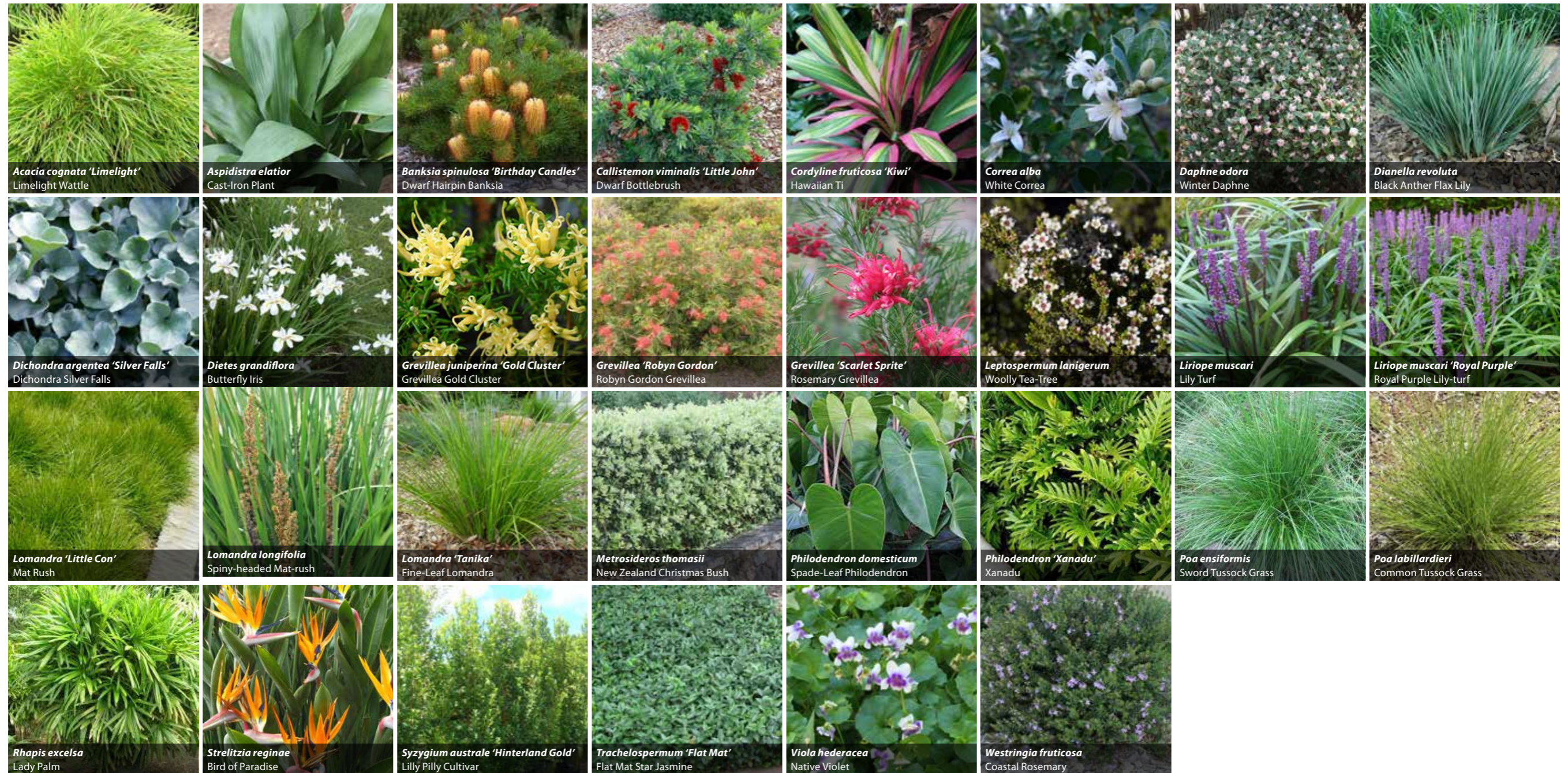
6.3 Plant Palette - Trees



6.4 Plant Palette - Trees



6.5 Plant Palette - Hedges, Shrubs, Grasses & Groundcovers





STREET PERSPECTIVE: Magnus Street Shared Zone (Landscape design indicative only)

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals

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