

LANDSCAPE CONCEPT REPORT

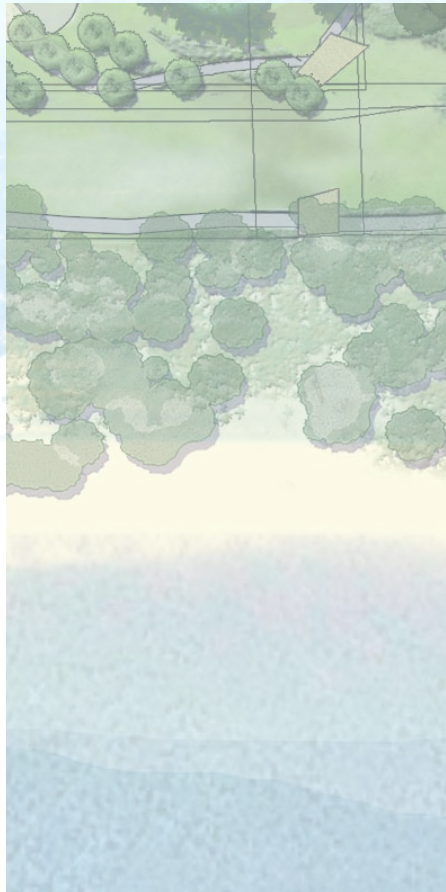
Casuarina Town Centre

DEVELOPMENT APPLICATION
2379.01 ISSUE Q



PREPARED FOR
Consolidated Properties
FEBRUARY 2010





content

introduction & context

landscape character & built form

landscape concept plan & stage 1 works

schematic plans

- *vehicular access*
- *pedestrian links*
- *cycle circulation*
- *street tree strategy*

detail plans

- *entrance statement & boulevard*
- *main street & casuarina way*
- *local roads & pedestrian links*
- *foreshore reserve management area & indicative sections*
- *civic park & indicative carpark section*
- *retail centre & indicative sections*

materials & planting character

street tree palette

location



STUDY AREA



LOCATION

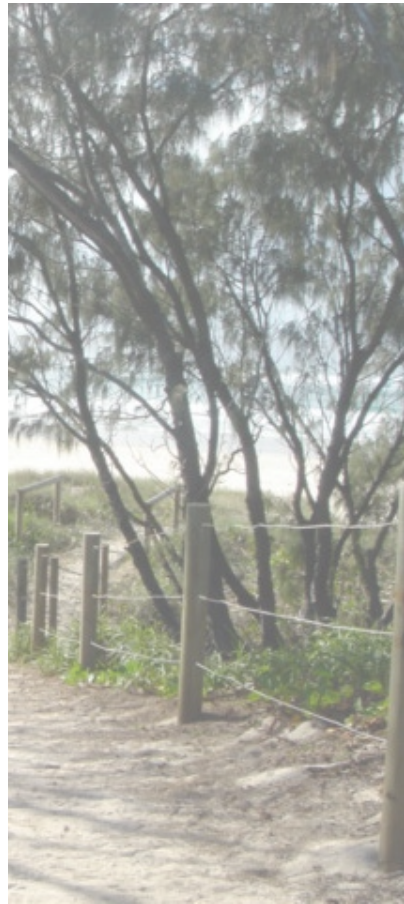
This Landscape Report is written to support the development of an overall Concept Plan for the Town Centre of Casuarina, streetscape and public open space and the retail centre, as indicated on the Casuarina Beach Town Centre Concept Plan (ML Design).

The landscape design philosophy for the site is based on integration with the natural environment of the Tweed Coast, taking advantage of the unique beachfront site and accentuating the character of this region, in keeping with the overall Casuarina Beach development. Development of the landscape treatments to streetscapes and open space of the public realm will be undertaken in a manner which promotes an integrated Australian beach community for both residents and visitors, providing a range of casual open spaces incorporating interesting and interesting use areas, with a variety of appropriate textures, colours and materials. The network of streetscapes, walkways and public open spaces will provide direct, comfortable and easy access for all between different use areas, clearly linking to the beachfront zone, linear parkland and shared path, central Civic Park and access tracks to the beach.

Critical landscape design issues include:

- / Establishment of a distinct beachfront landscape
- / Establishment of complementary but identifiable landscape character zones across the site
- / Addressing the interface between the new site development and adjoining established areas
- / Providing a legible hierarchy of circulation and access routes that promote a strong sense of community and clarity of wayfinding
- / Meeting environmental requirements and planning policies of the various government authorities
- / Providing areas of privacy and sanctuary within the site, while addressing issues of security, safety and definition of public and private areas
- / Provide a palette of plants reflecting the local character of the site and minimizing maintenance requirements
- / Developing distinctive treatments for materials and furniture that are harmonious with and reflect the local coastal character.

context



- / local coastal character
- / dune landforms
- / views and vistas to foreshore and ocean
- / drainage, soils, plants, wind and climate of coastal environment
- / surrounding existing and proposed development
- / existing and proposed vehicular and pedestrian network



landscape character

Indigenous planting, robust materials and coherent design of the detailed streetscape components (street furniture, signage, lighting, etc) will be used to create an appropriate beachside character for the Town Centre Precinct. Indigenous species are used to augment the retained vegetation of the site and surrounds, incorporating hardy coastal species which thrive in the prevailing conditions, together with a number of more spectacular feature species common to littoral rainforests, many of which can occur in the natural protected areas of the site. Hard wearing and robust materials will be used in the public realm to ensure longevity, low maintenance and appropriate character. A coordinated approach to street furniture will also be developed to ensure a consistent high quality streetscape.



foreshore reserve management area *Environmental Protection (Coastal Landscape) 7(f) zone*

Landscape works proposed in this zone will include a combination of grassing, mounding, planting and stormwater infiltration basins. A pathway network will provide access paths connecting to the shared cycle and pedestrian pathway system linking Casuarina to Kingscliff and existing access tracks to the beach through the Beach Protection / Regeneration zone. The 7f zone is integral to the proposed infiltration and stormwater management plan for the site and incorporates a number of planted infiltration basins linked to overland flow swales – refer Civil Engineers documentation.

Development of this zone will be undertaken in accordance with DIPNR and Tweed Shire Council requirements ("Landscape Guidelines Casuarina Beach 7(f) zone") and will include development of the public and private portions of the zone, with future development of the adjoining private land in conjunction with future development applications.

The works will generally be in accordance with existing development of these zones (public and private) in the current areas of Casuarina.



landscape fabric and built form

In order to activate the commercial and community uses proposed in the Town Centre Precinct, the Master Plan proposes a more dense form of development than the single family homes located elsewhere at Casuarina. Heights will range up to 2-3 storeys in this precinct, with the overall skyline of the development 'stepping up' towards the Main Street. The increased density of this area will define the precinct as the 'commercial core' and support activity along the Main Street with a variety of facilities including sheltered walkways, cafes, restaurants and speciality retail areas.

The plan will encourage space between buildings to allow for natural light, views and ventilation to all units, and to free up ground level space for outdoor living and recreation opportunities: by maximising the building height at 3 storeys and minimising building footprints.

Streetscape development and open space treatment form an integral part of the overall Concept Plan and Landscape Plan and facilitate development of a cohesive approach to provision of trees and landscape within the urban fabric. The clear definition of scales of streets relative to their intended use and capacity as well as proposed pedestrian and cycle circulation function is reinforced through landscape treatments with scale and density of street trees and pavement treatments, widths of road pavements and treatment of verges.

The retail development and associated car parking area will be visually screened from Tweed Coast Road (TCR) with tree and shrub planting within a minimum 6M wide buffer zone along the western frontage of the site and a buffer planting zone along the southern boundary to the open space area. Existing mounded and planted screening along TCR is currently incorporated within the road reserve and this will augment additional visual screening to the retail development.



landscape concept plan

--- PROJECT EXTENT



0 10.0 20.0 40.0 60.0 80.0 100m

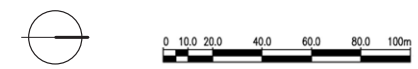
stage 1 landscape works

- PROJECT EXTENT
- FUTURE DEVELOPMENT



Landscape works Stage 1 will include:

1. Streetscape works to all public road reserves, including hard and soft landscape works.
2. Open space areas – central park and linear park to eastern frontage of site park adjacent to Retail Centre.
3. Public carparking areas, north and south of icon building and in local streets as indicated.
4. Retail Centre - surroundings and carpark areas.



vehicular Street Hierarchy

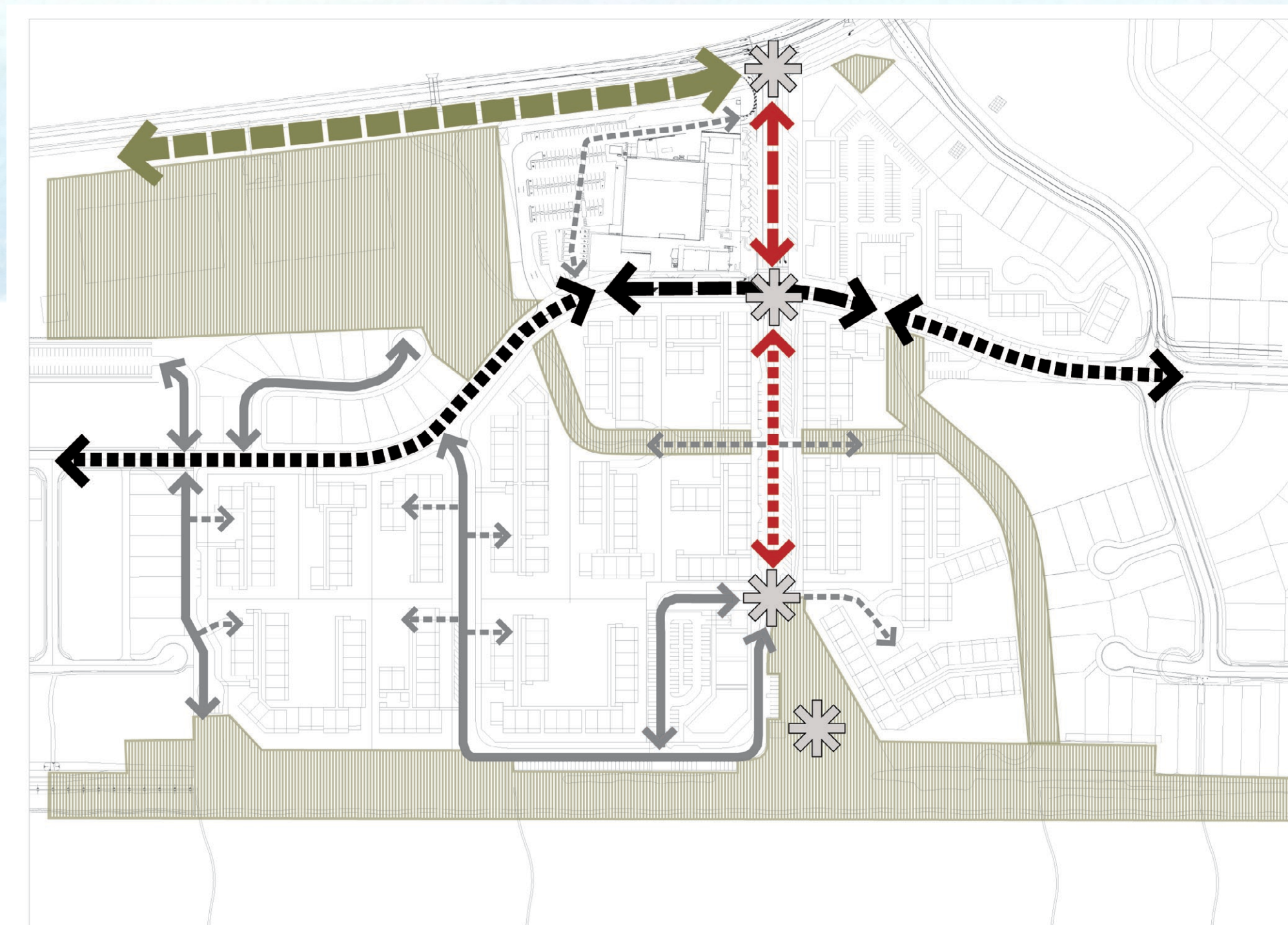
The Town Centre precinct incorporates a variety of streets and roads designed to reflect the level of activity and importance for both vehicular and pedestrian circulation, as well as their contribution to the network of open space within the precinct. The scale of the main entry Boulevard / Main Street and related trees, pathways and planting elements reflects the significant nature of this corridor, while the lesser connecting roads (Casuarina Way) and local streets are developed with a scale to pavements, planting and pedestrian facilities appropriate to their nature. As well as creating a sense of hierarchy and legibility, this approach also emphasizes the beachside nature of the centre and accessibility through a network of 'green' streets rather than an emphasis on vehicular traffic and cars.

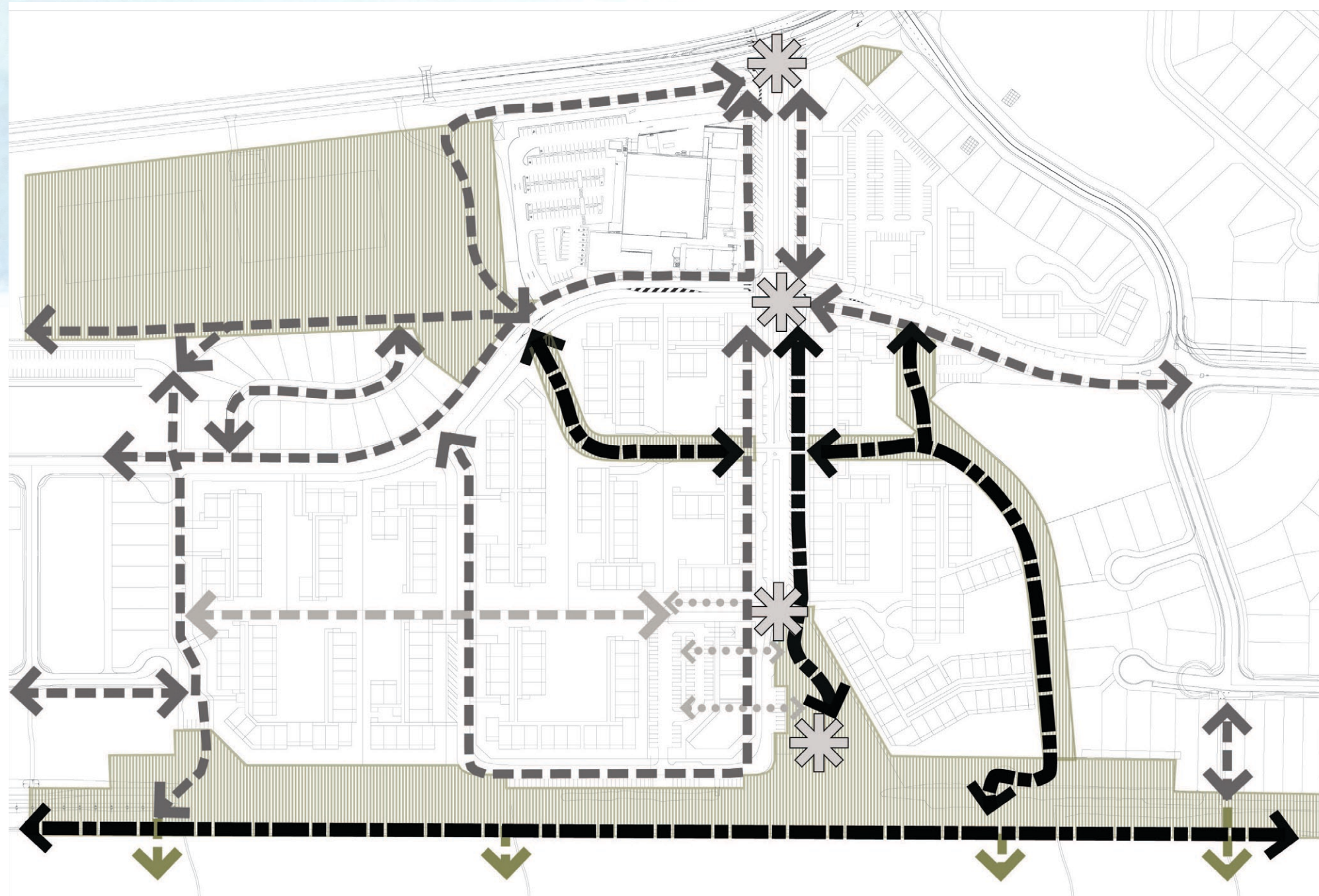
The local streets in the Master Plan are intended to also act as pedestrian and cycle corridors, and opportunities to collect and treat stormwater within the public realm and to infiltrate water back into the site. Flush kerbs to roadways and grassed or planted swales are proposed to integrate drainage into the landscape where possible, linking ultimately with the stormwater drainage system described in the Civil Engineers report, including the linear open space corridor of the 7f zone and other open space areas which incorporate stormwater infiltration basins.

public access to foreshore

An integrated open space and public access network is proposed via streets, footpaths and parks within the development to link with the existing linear park and public access way. The network will provide a more usable and functional pedestrian environment and will improve access to the beachfront zone and, through nominated links, to the beach itself. The location and treatment of public car parks and major open space areas, including the proposed Civic Park at the end of Main Street, will provide a more cohesive extension of the public circulation network and improve the integration of the foreshore to the Town Centre.

vehicular access



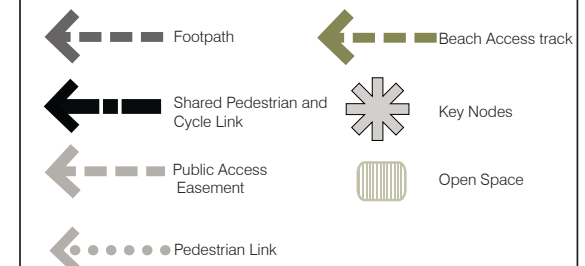


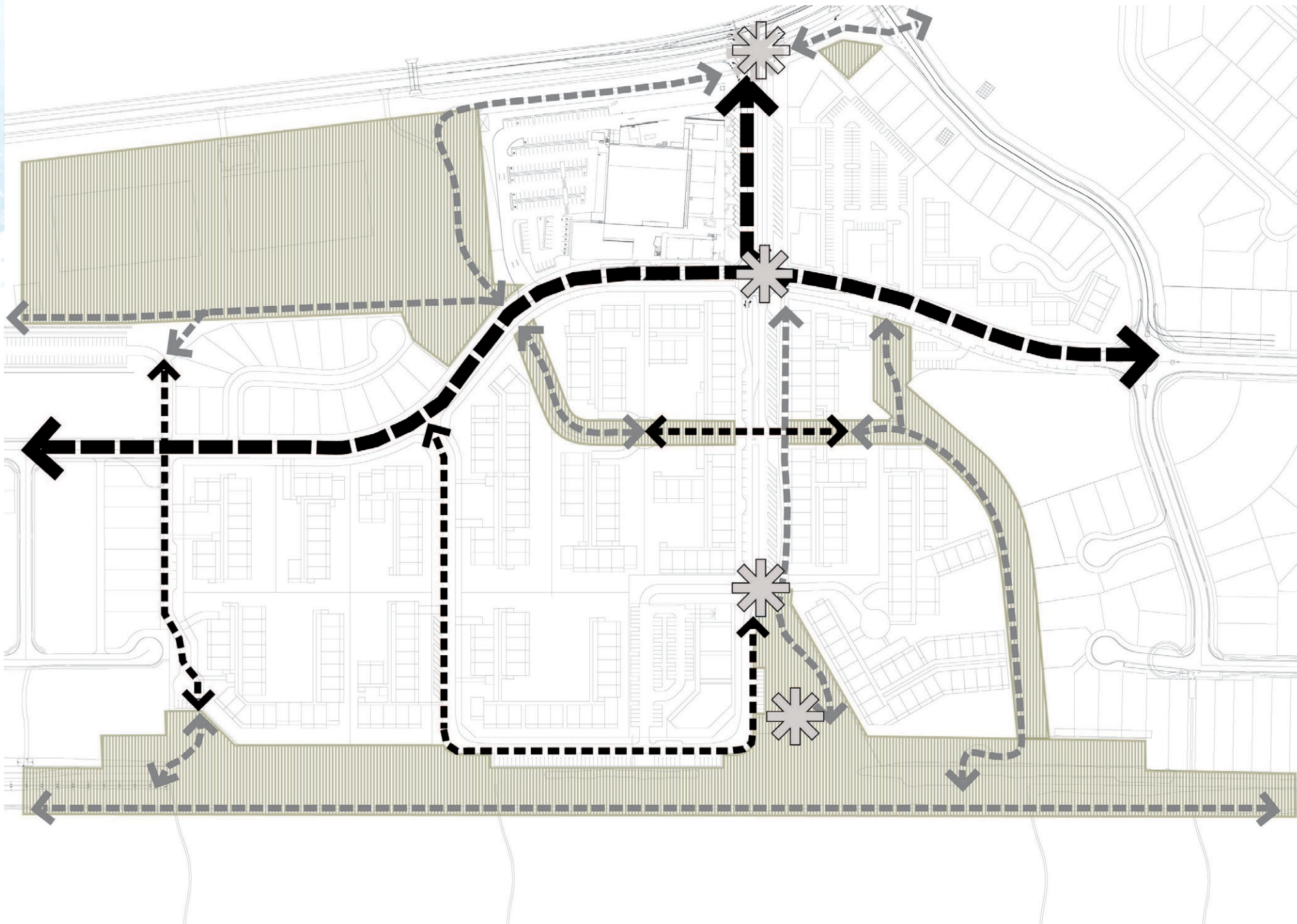
pedestrian links

Pathways are provided throughout the development, linking the street network, carparks and public areas to the beach access points and the public walkway / cycle path along the entire frontage of Casuarina. Pedestrian and cycle access is accommodated within the street and open space network in the Concept Plan as either defined footpaths, on road cycleways and as shared paths. A plan of the access and circulation network has been provided as part of the response to DGR.






Opportunities for mid-block pedestrian links are also envisaged under the Concept Plan to enhance the permeability of the Town Centre Precinct and these will provide increased access to facilities, eg retail centre and parks as each lot is developed over time.

pedestrian links





cycle circulation

-  On Road-Marked Lanes
-  On Road
-  Off Road-Shared Pathway
-  Key Nodes
-  Open Space



street tree strategy



Legend | Plant List

<div></div> Feature Trees	<div></div> Informal Shade Trees & Palms
Aracauria heterophylla	Pandanus tectorius
Ficus macrophylla	Livistona decipiens
Ficus platypoda	Casuarina equisetifolia
Ficus rugubinos	Melaleuca quinquenervia
Pandanus tectorius	Plumeria obtusa
Livistona decipiens	Acmena hemilampra
	Banksia integrifolia
	Archontophoenix cunninghamii
<div></div> Signature street trees	
Cupaniopsis anacardioides	
Harpullia pendula	
Lophostemon confertus	
	<div></div> Buffer Planting
<div></div> Local Street trees	Casuarina equisetifolia
Casuarina equisetifolia	Commersonia bartramiana
Melaleuca quinquenervia	Melaleuca quinquenervia
Banksia integrifolia	Metrosideros excelsa
Cupaniopsis anacardioides	Backhousia citriodora
Glochidion ferdinandii	Syzygium oleosum
	Acmena hemilampra
	Glochidion ferdinandii
	Banksia integrifolia

Street tree planting and treatment within the road reserve enhances the theme of native shade trees and understorey planting flanking the road and pedestrian access paths within the road reserve. Each public road is contained within a vegetated zone which relates to individual lot landscape treatment and extends the native beachside landscape through the site. Landmark species (eg, Norfolk Pines) are to be used in specific locations to reinforce gateways or landmarks within the site. Endemic feature plants such as Pandanus are also proposed to be used as highlights or features within public and private landscapes.

Native plant species (eg, Banksia and Casuarina) are used generally through the streetscape and open space development to blend with and extend the established beachfront landscape throughout the Town Centre. (Refer to Proposed Plant Schedule for comprehensive list of plant species)

entrance statement

Key Plan



EXISTING SCREEN PLANTING TO
TWEED COAST ROAD

SCREEN PLANTING AND
MOUNDING TO TWEED COAST
ROAD FRONTAGE

STREET TREE PLANTING
WITH SIGNATURE
TREES TO CENTRAL MEDIAN
AND SHADE TREES TO EXTEND
FROM ENTRY GATEWAY TO
CIVIC PARK

the entrance

Landscape treatment to the Boulevard and adjacent screen planting within the Retail Centre site will contribute to the definition of the entry to the Town Centre and establish the character of the development.



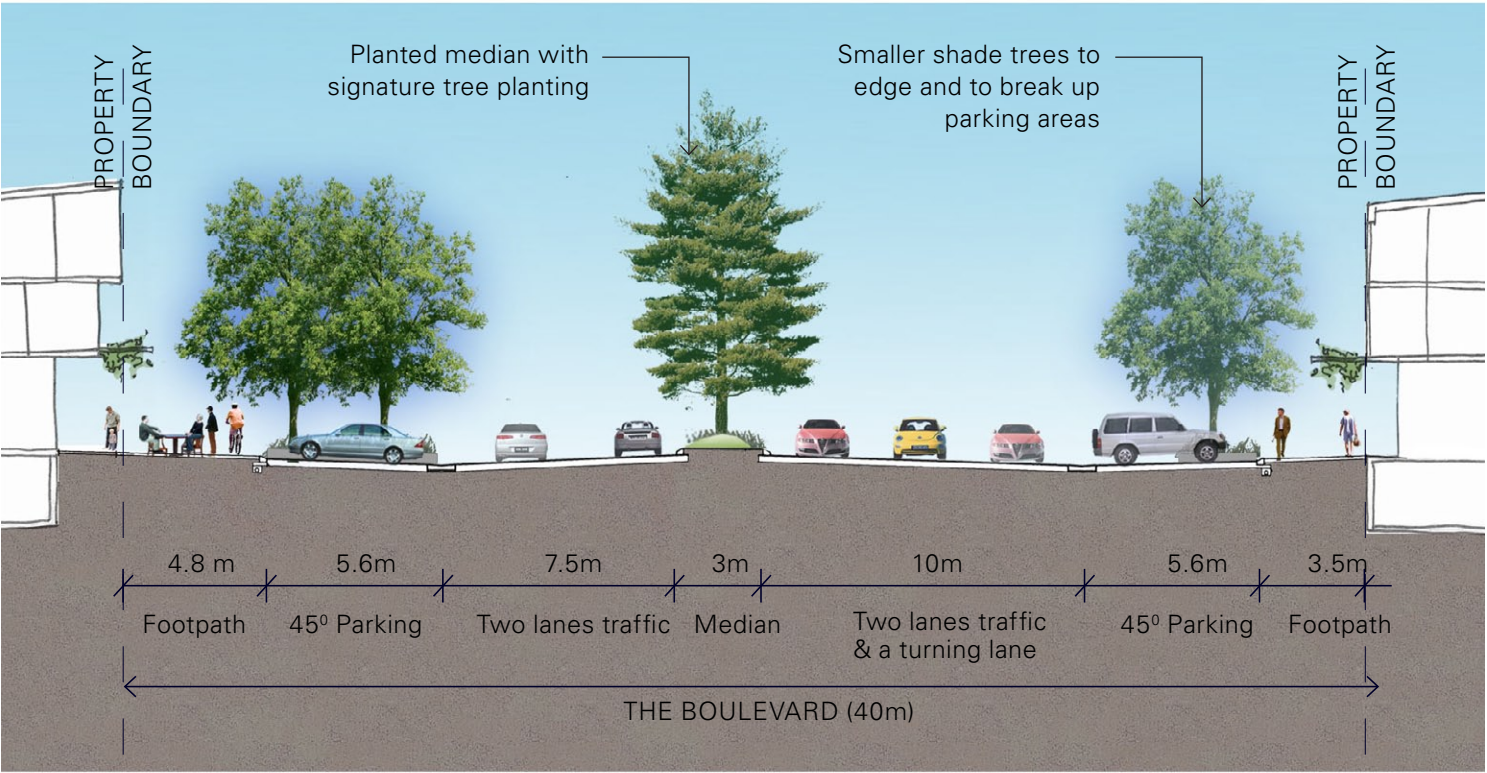
the boulevard

Key Plan



- ON STREET ANGLE PARKING
- MEDIAN PLANTING WITH SIGNATURE TREES *Araucaria heterophylla*
- SHADE TREES TO PARKING BAYS *Cupaniopsis anacardioides*

plan



section 1:250 @ A3

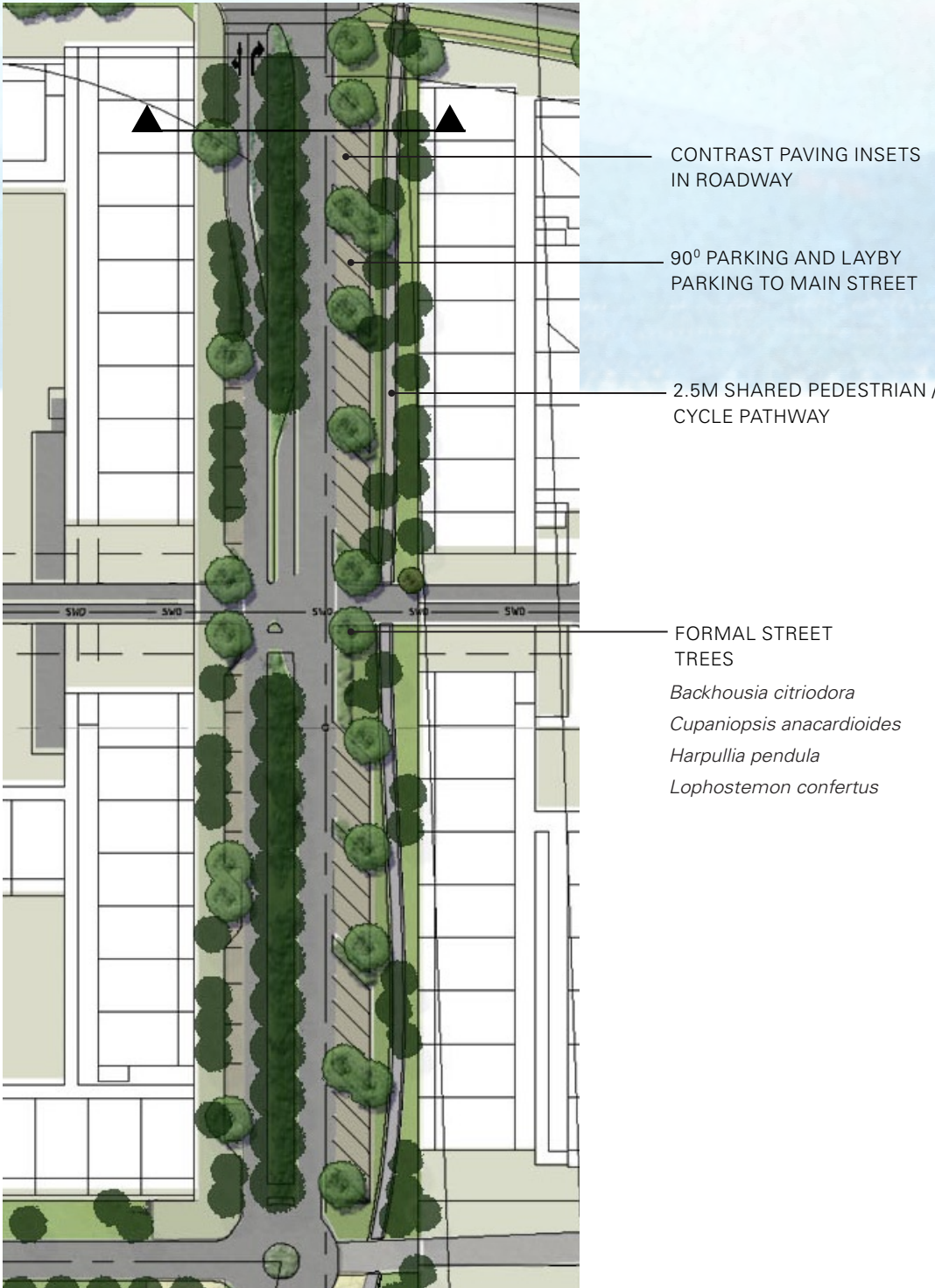
The Boulevard and Main Street

The Concept Plan introduces an east-west boulevard that links the Tweed Coast Road across Casuarina Way to the eastern edge of the site, creating a “Main Street” boulevard that links the commercial core directly to the beachside open space. This “main street” corridor will be wider than other Casuarina Beach streets, to allow for on street car parking in the commercial core. The boulevard also includes extensive planting along the length of the street including a generous median with signature shade trees and wide footpaths for pedestrian access and activities associated with retail and commercila uses. The character of pedestrian zones vary with the concentration of activities and solar access, with outdoor dining and a more generous pedestrian zone on the southern (north facing) side. This area is proposed to incorporate shaded arcades associated with future built form facing the street. A lower key pedestrian path and cycle way is proposed on the northern side, meandering within the generous verge.

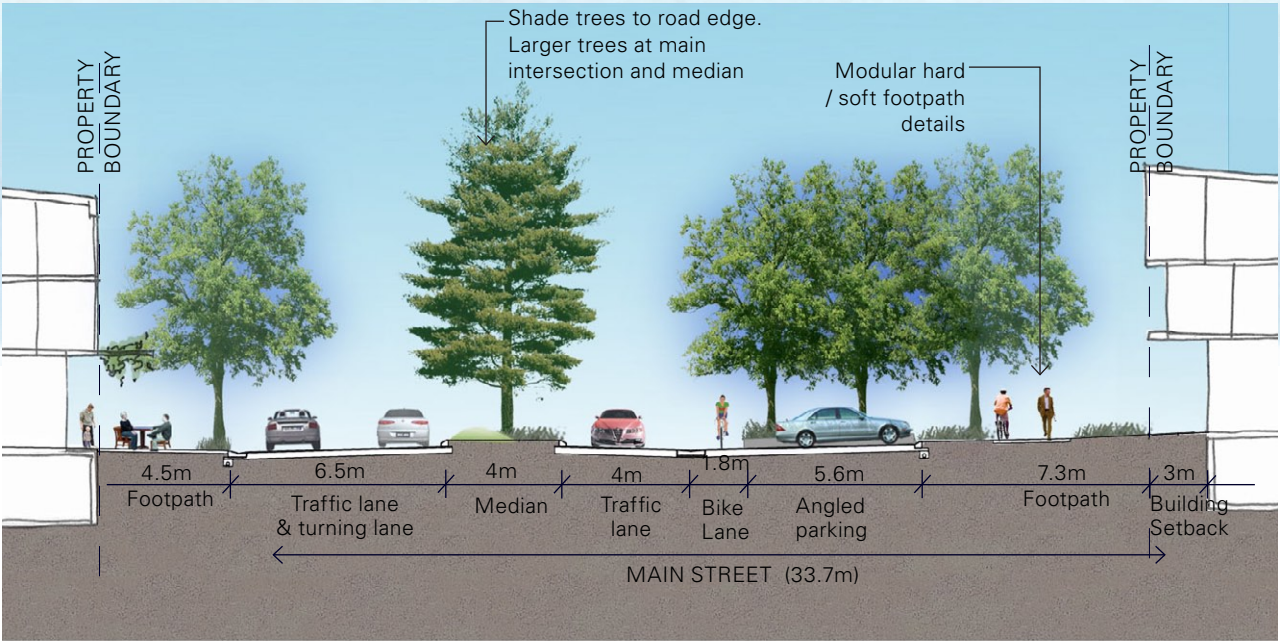
(Refer Architectural report for built form and elevational treatments)

main street

Key Plan



plan

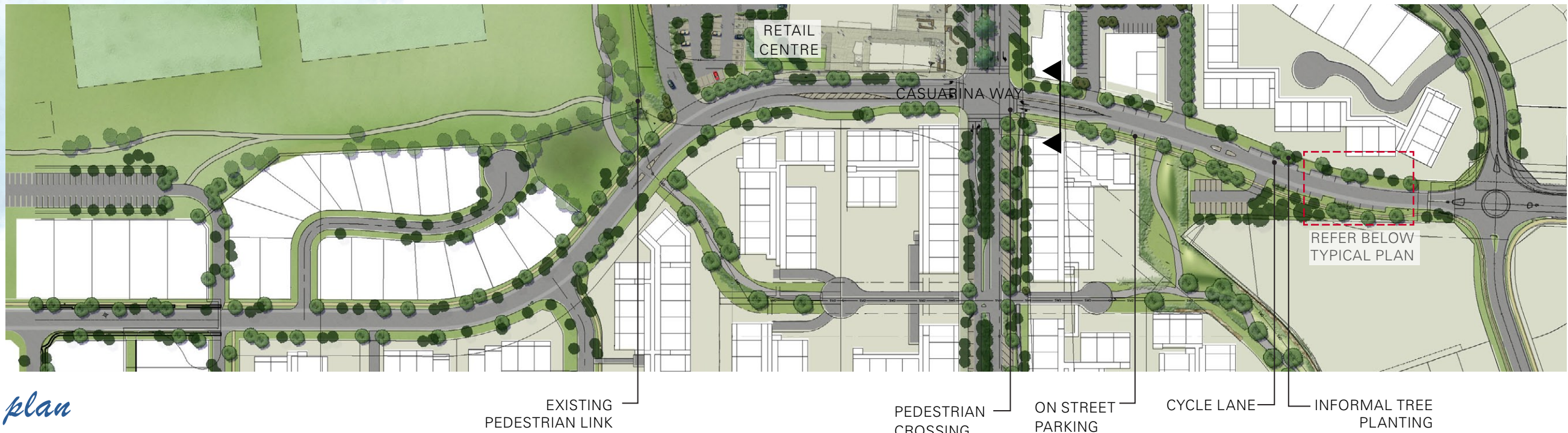


section 1:250@ A3

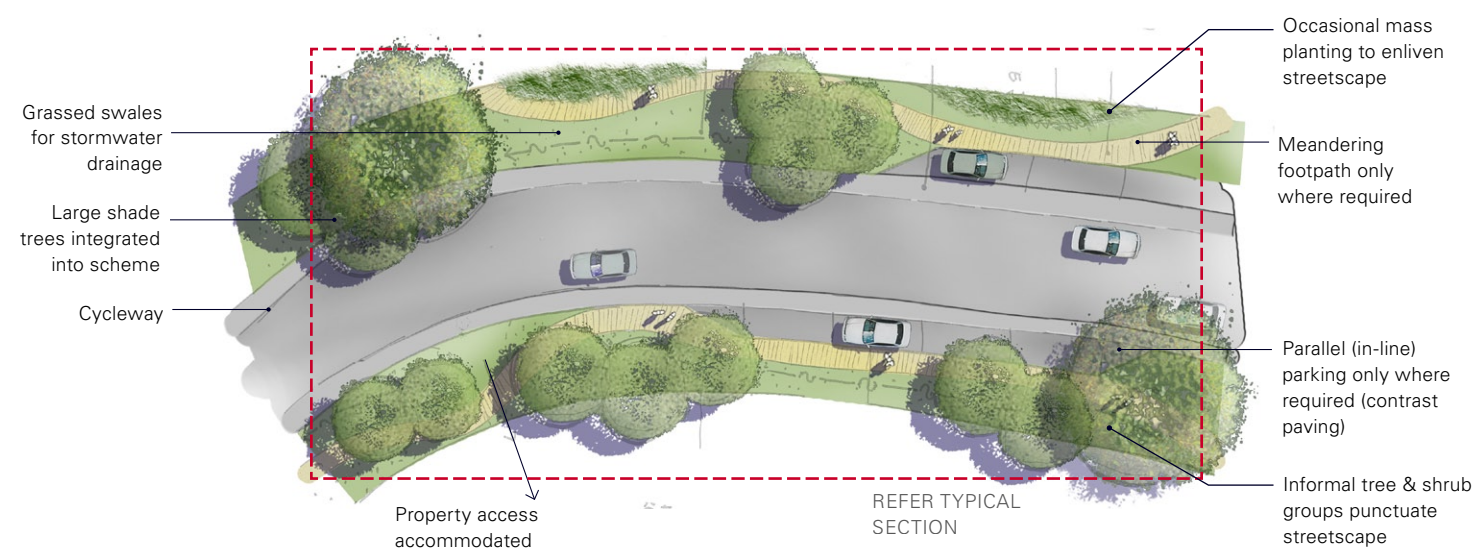


casuarina way

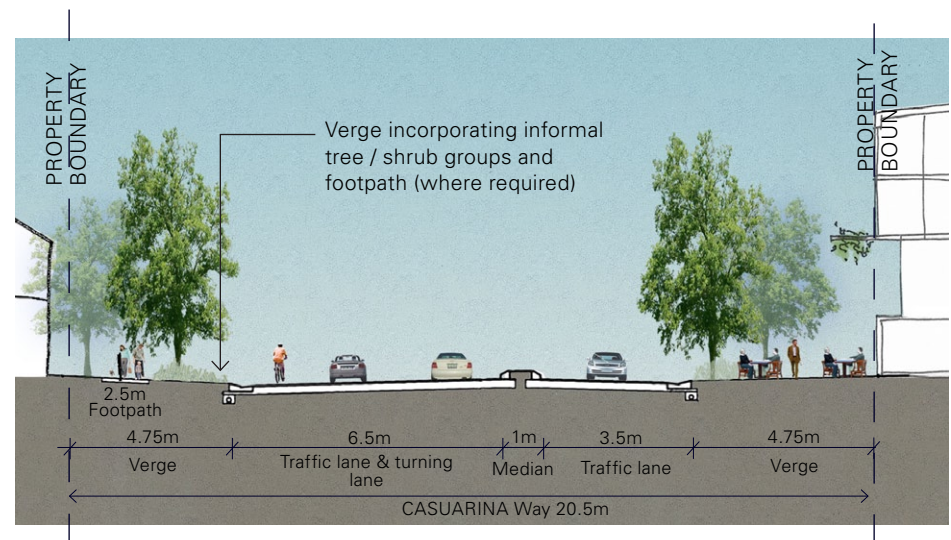
Key Plan



plan



typical plan



section 1:250 @ A3

local roads

Key Plan

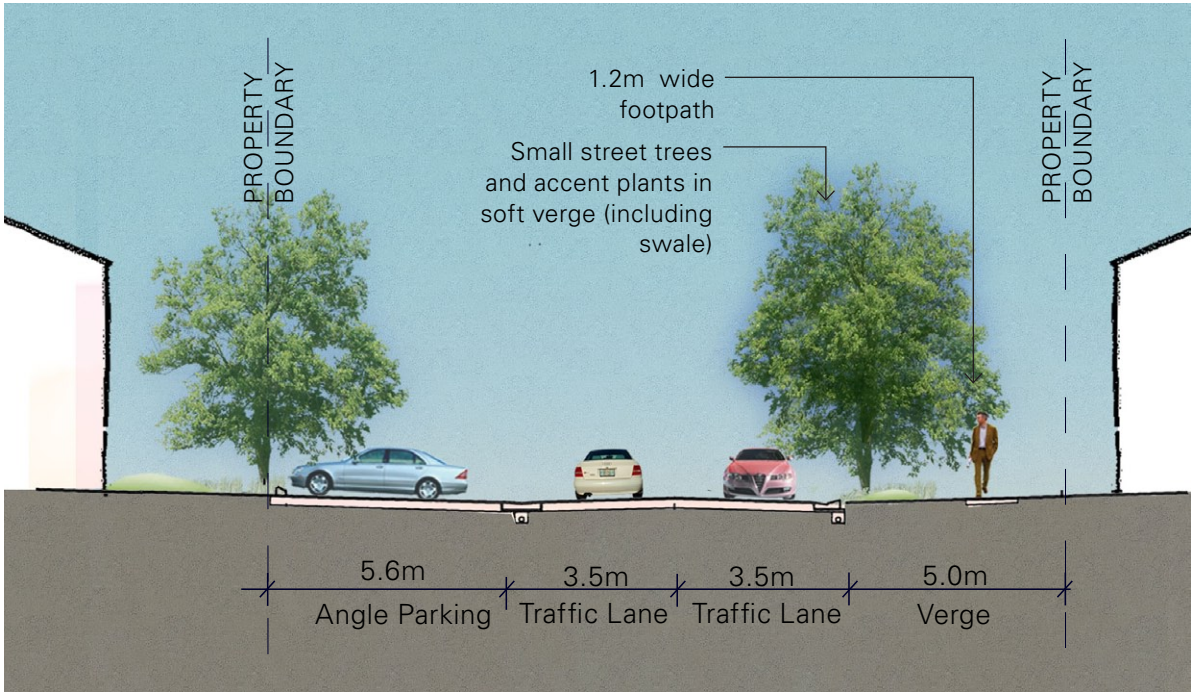


INFORMAL TREE PLANTING

- Pandanus tectorius*
- Livistona decipiens*
- Casuarina equisetifolia*
- Melaleuca quinquenervia*
- Eucalyptus intermedia*
- Eucalyptus tessellaris*
- Plumeria obtusa*



plan

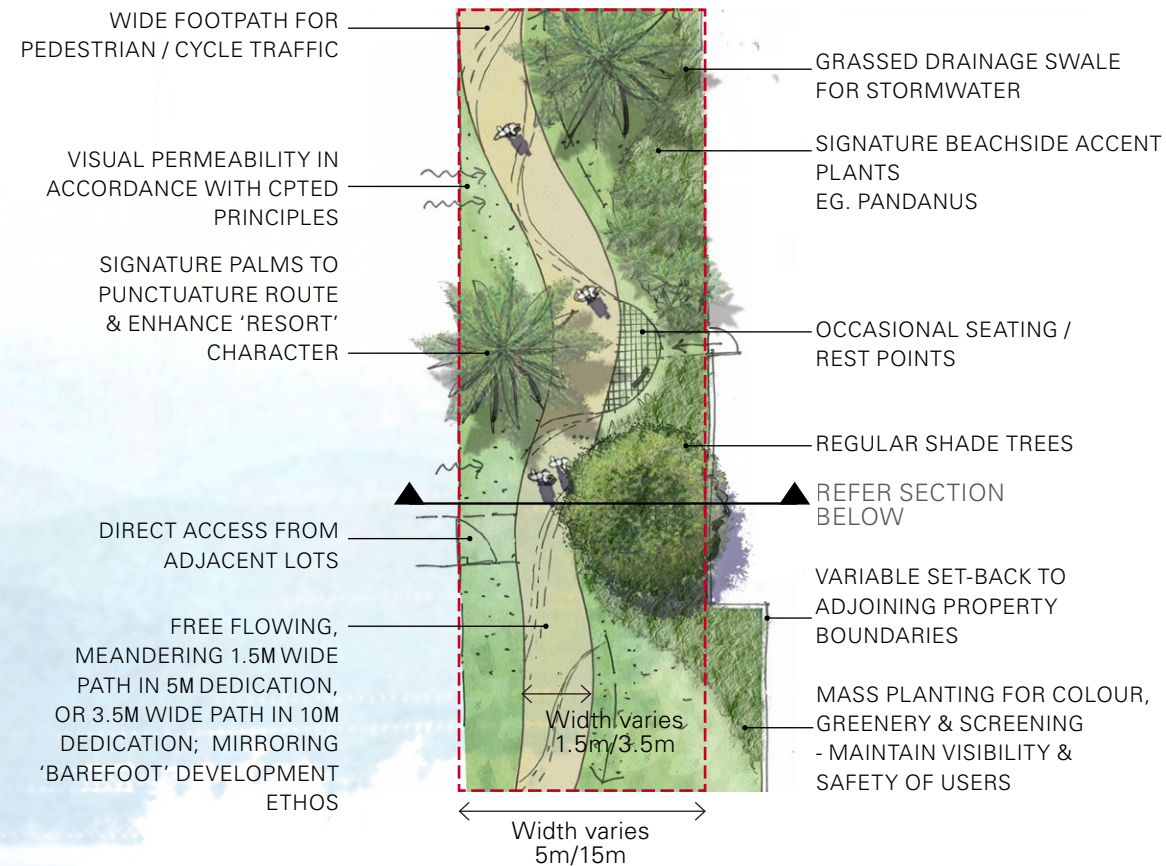


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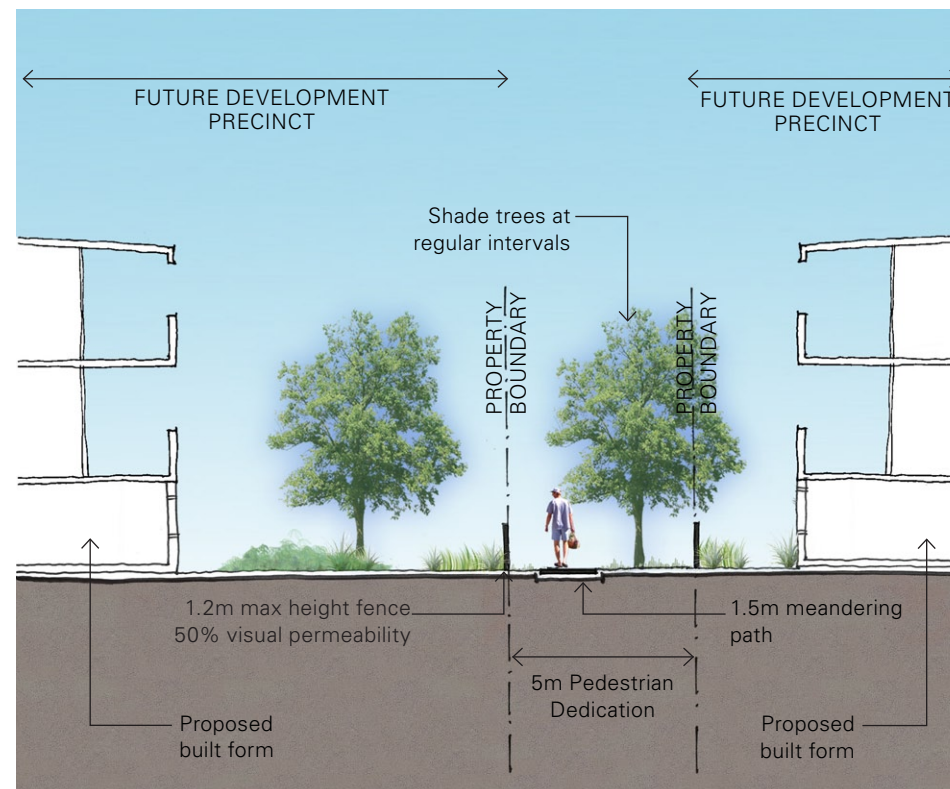
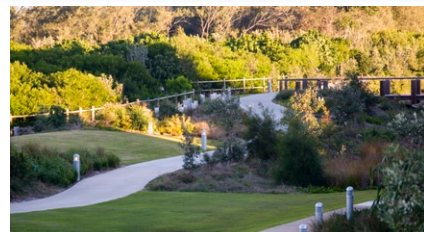


pedestrian links

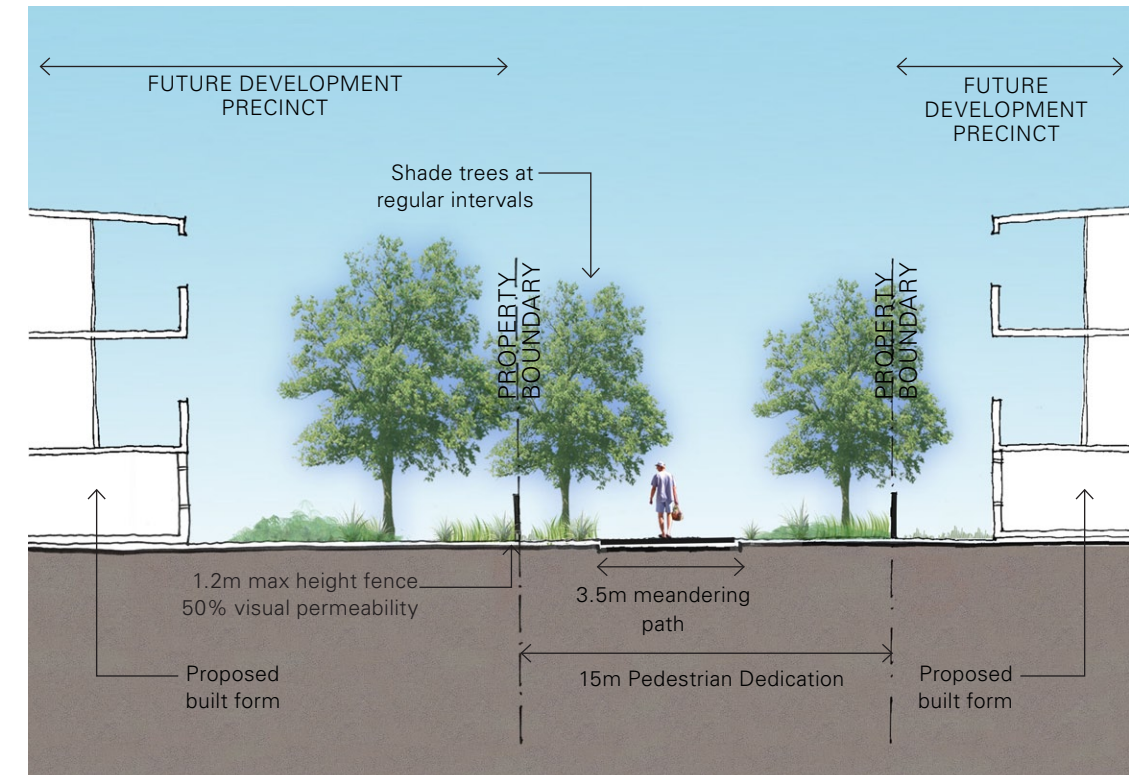
Key Plan



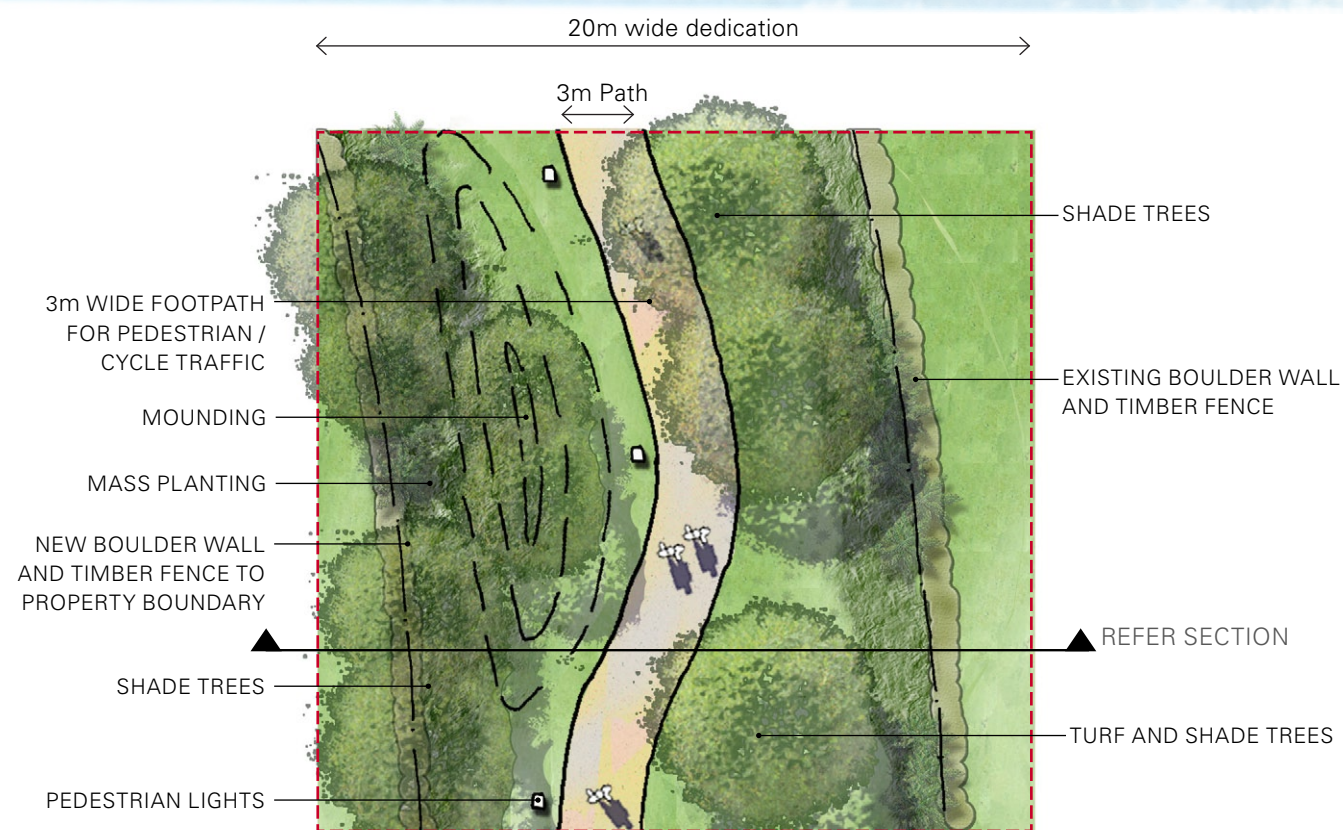
typical plan 5m/15m dedication



section: pedestrian access path (5m width)



section: shared access path (15m width)



Proposed built form

20m wide dedication

PROPERTY BOUNDARY

Proposed RL 8.6

Retaining wall with 1.2m fence to top

RL 7.6

9.0 Proposed RL

Existing boulder wall

Planted batter, including trees and groundcovers suitable for coastal landscape.

Shared Path. Curvilinear layout as shown on adjacent plan

typical section: 20m wide dedication

site frontage to foreshore reserve

77 30ME STAGE 1

Key Plan



CIVIC PARK AND FORESHORE PARK FURNITURE		TOTAL NUMBERS
01	BENCH SEAT	16
02	RUBBISH BIN	6
03	BIKE RACK	3
04	DRINKING FOUNTAIN	2



foreshore reserve management area

The site has a direct relationship to the beach and adjoins the Environmental Protection (7F) zone, which incorporates the continuous pedestrian and cycle access path along the 3.5 kms of beach frontage. Plant species used adjoining this zone will reflect the predominantly native theme throughout the development, and developed in accordance with the guidelines established by Tweed Shire Council. Park facilities will be provided in conjunction with public access from carparks to increase public ownership and ease of access to the beach and foreshore zone, and degree of connectivity for residents and visitors to the public open space and beachfront.



Overlooking stormwater catchment



Foreshore path and beach access



Foreshore boardwalk

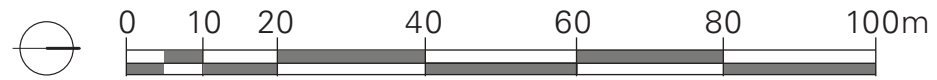


civic park

Key Plan



CIVIC PARK AND FORESHORE PARK FURNITURE		
	TOTAL NUMBERS	
01	BENCH SEAT	16
02	RUBBISH BIN	6
03	BIKE RACK	3
04	DRINKING FOUNTAIN	2



- 01 SHARED ROAD PAVEMENT TO DEFINE ENTRY AND PEDESTRIAN CROSSING
- 02 FORMAL TREE PLANTING
- 03 SIGNATURE TREE TO FRAME CIVIC PARK AND PROVIDE SHADE
- 04 MOUND TO CREATE AMPHI-THEATRE SEATING & TO DEFINE THE PARK
- 05 BUFFER PLANTING BETWEEN BUILDING AND PUBLIC OPEN SPACE
- 06 INFORMAL RECREATION OPEN SPACE
- 07 INTERSECTION NODE
- 08 EXISTING PEDESTRIAN / CYCLE SHARED PATH
- 09 MOUNDED LANDFORMS, TURF & BEACH VEGETATION TO 7F ZONE
- 10 EXISTING BEACH ACCESS TRACK
- 11 SHADE SHELTER WITH BBQ AND PICNIC TABLE
- 12 PUBLIC PARKING WITH FEATURE SWALE AND SHADE TREES TO PARKING MEDIAN
- 13 ICON BUILDING
- 14 SURF LIFE SAVING BUILDING
- 15 SHARED ZONE (PEDESTRIAN AND VEHICULAR) AS INTERFACE BETWEEN ACTIVITY ZONES IN ICON BUILDING AND OPEN SPACE CONNECTIONS
- 16 FUTURE LANDMARK SCULPTURAL ELEMENT
- 17 PROPOSED ACCESS TRACK TO BEACH
- 18 GRAVEL AND PLANTED SWALE TO CENTRE OF PARKING BAYS

Civic Park

The “main street” corridor is terminated by a large Civic Park, which links the streetscape of the Town Centre to the linear open space (7f zone) containing the shared walkway that forms a major north-south pedestrian/cycle spine for the whole Tweed Coast.

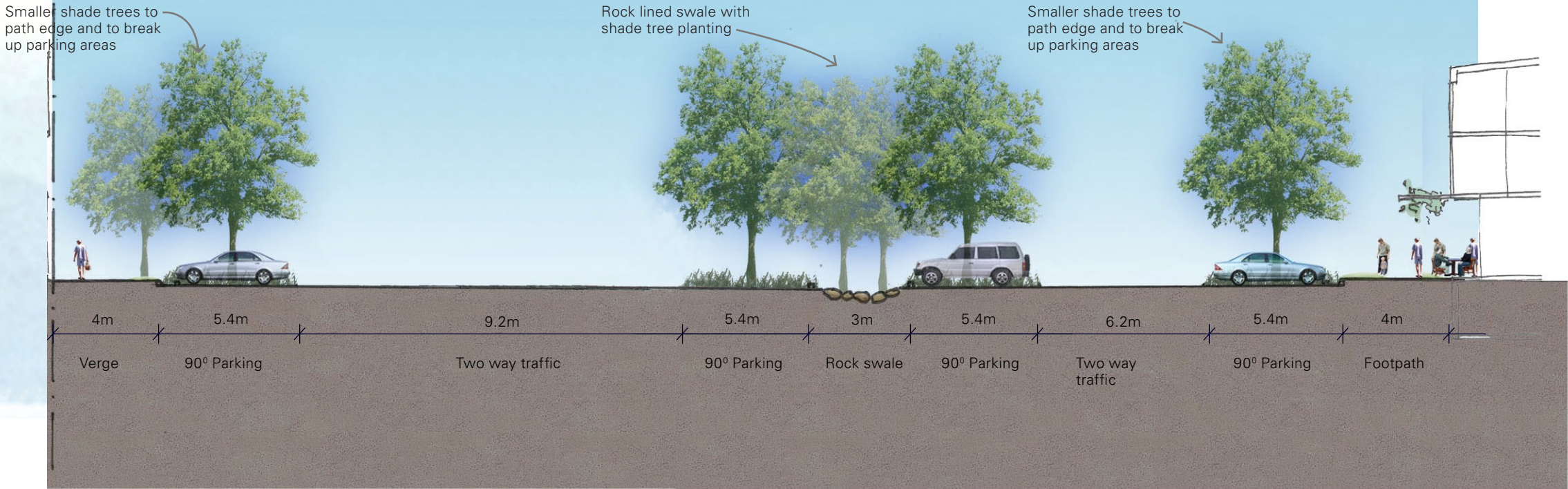
Site earthworks and drainage strategy provides a strong visual link between a high point in the centre of the site, falling towards the beach and Tweed Coast Way.

The configuration of the Civic Park allows the space to flare out towards the beach, enhancing visitors' perception of the foreshore zone and increasing access to the north-south walkway. This open space will be contained by shade trees enclosing the edge of the park, providing a strong frontage and shaded zone to the Icon Building and a massed screen planting zone to the north-west edge, providing a buffer to the future residential accommodation site and additional infiltration basin. At the western fulcrum, intersecting with the Boulevard from Tweed Coast Way, it is proposed to have a bosque of shade trees to form a deeply shaded plaza framing views and access into the Civic Park proper. This group of trees will form a strong termination and frame views towards the beachside zone and a natural focus of green spaces within the Town Centre precinct.

The detailed design of the Civic Park will reflect the unique beach setting by incorporating natural mounded landforms and indigenous planting to emulate the beachside topography, dunes and broad swathes of coastal planting. This park extends into the 7f zone which incorporates linear infiltration basins, informal swathes of planting and grassed areas and curvilinear sheltering landforms with a shared cycle / pedestrian path and controlled links to the beach through the revegetation zone.



public Carpark section



It is proposed to demolish the existing temporary shared path link through the site and replace with a curvilinear path which relates to the proposed connections into the town centre, incorporates revised infiltration basins and creates a more interesting and integrated series of outdoor spaces in keeping with the shared path through the remained of Casuarina.

The park will provide an aesthetic landscape, allowing for passive recreation and a venue for multi-purpose events. Subtle ground forming within the park will provide a variety of spaces for various uses and facilitate capture and infiltration of stormwater as a major catchment point within the centre precinct. Mounding and filling will provide viewing points for improved view of the beach front zone and contain viewing areas for activities and events.



The beachfront mixed use building directly to the south of the park will incorporate a surf lifesaving post, providing an operations base and public amenities. The north-facing outdoor dining terraces are sheltered from the south-easterly winds, shaded by a line of major trees as the southern edge to the Civic Park, creating a promenade space to this edge of the public open space.

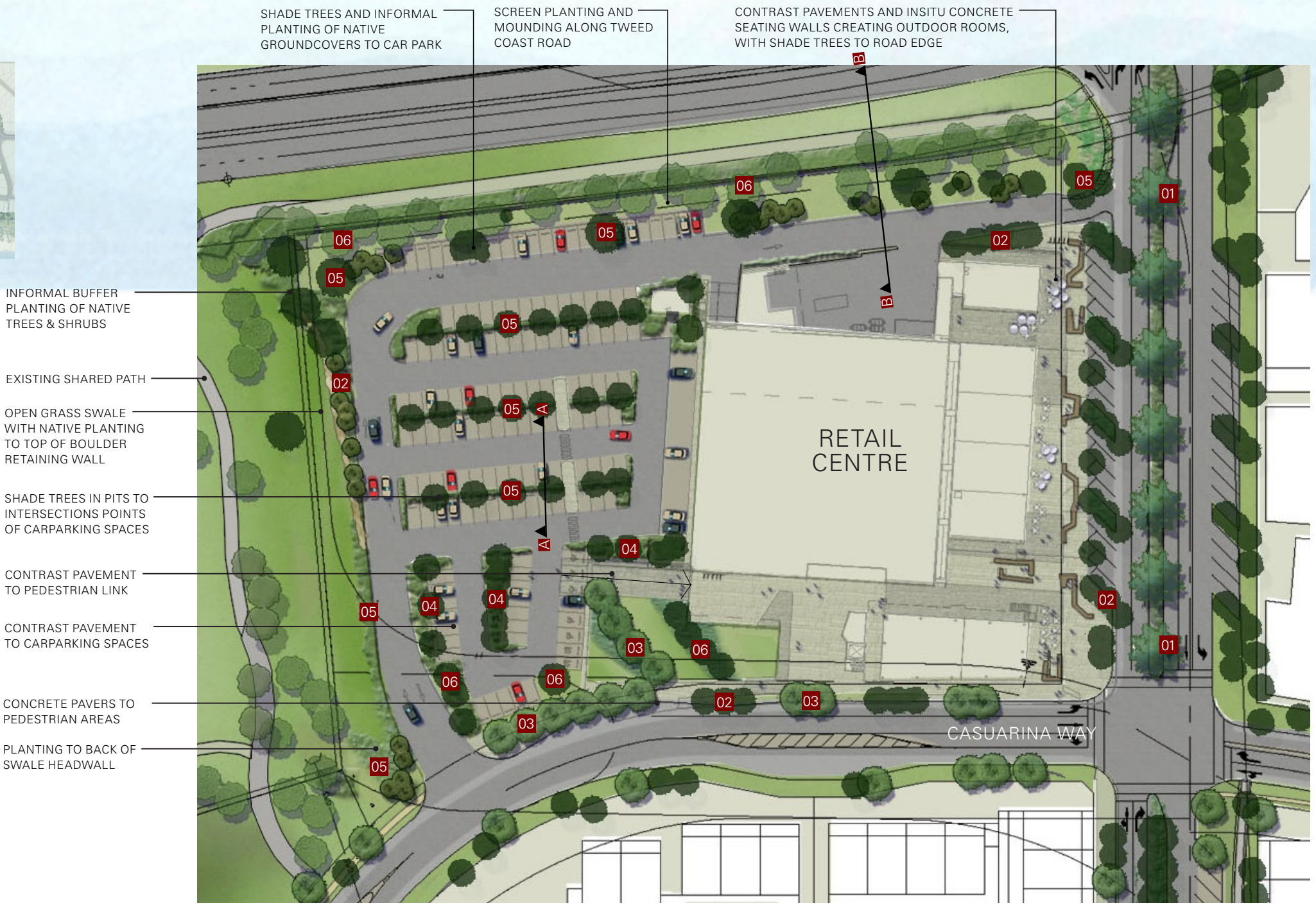
A landmark feature or sculptural element is proposed as termination of The Boulevard vista, providing a focal point and way finding landmark as well as a sculptural feature in the landmark.

A smaller public park off Casuarina Way terminates the visual axis of the local road, providing an open space opportunity to overlook the sports activities on the ovals, and a physical and visual link between open space areas. This area also functions as an infiltration basin for stormwater management - refer Civil Engineering report.



retail centre

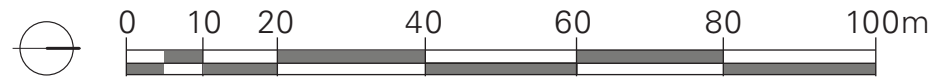
Key Plan



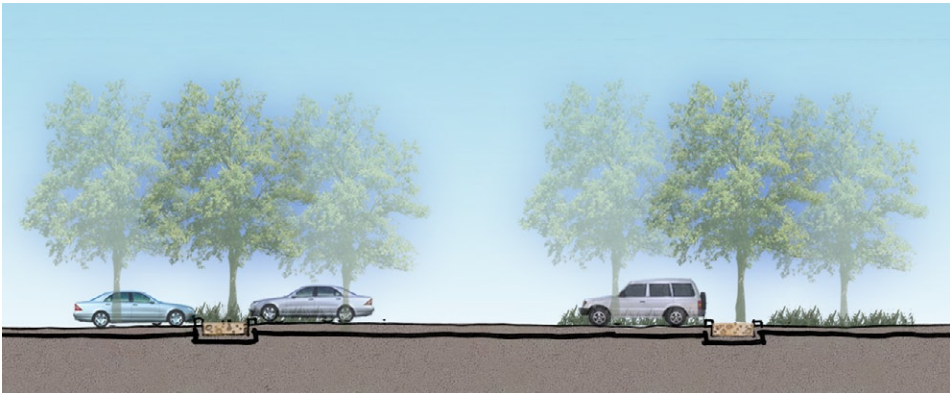
Proposed Planting

- 01 Aracauria heterophylla
Dianella caerulea
- 02 Cupaniopsis anacardioides
Pandanus tectorius
Dianella caerulea
Lomandra longifolia
Juniperus confertus
Gardenia radicans
Carpobrotus glaucescens
- 03 Lophostemon confertus
Callistemon 'Little John'
Dianella caerulea
Westringia fruticosa
Gahnia rigens
- 04 Harpullia pendula
Leptospermum laevigatum
Lomandra longifolia
- 05 Syzygium oleosum
Harpullia pendula
Cupaniopsis anacardioides
Lophostemon confertus
Dietes bicolor
Grevillea 'Bronze Rambler'
- 06 Melaleuca quinquenervia
Casuarina glauca
Syzygium oleosum
Hibiscus tiliaceus
Westringia fruticosa
Grevillea 'Honey Gem'
Acmena hemilampra
Lomandra longifolia
Junipens confertus

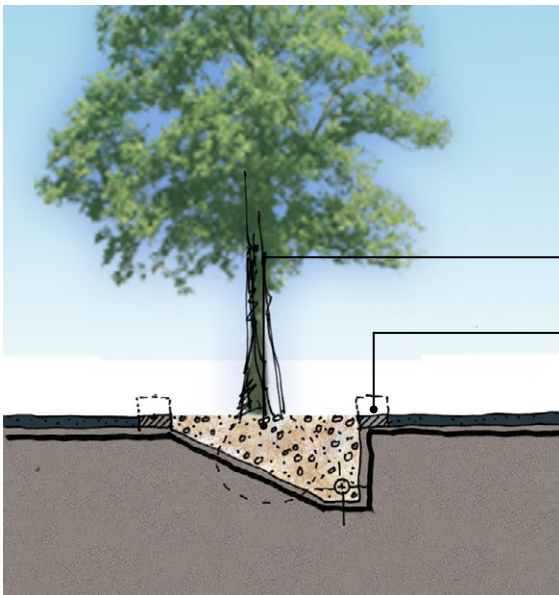
NOTE:
FOR DETAIL,
REFER ARCHITECTURAL REPORT



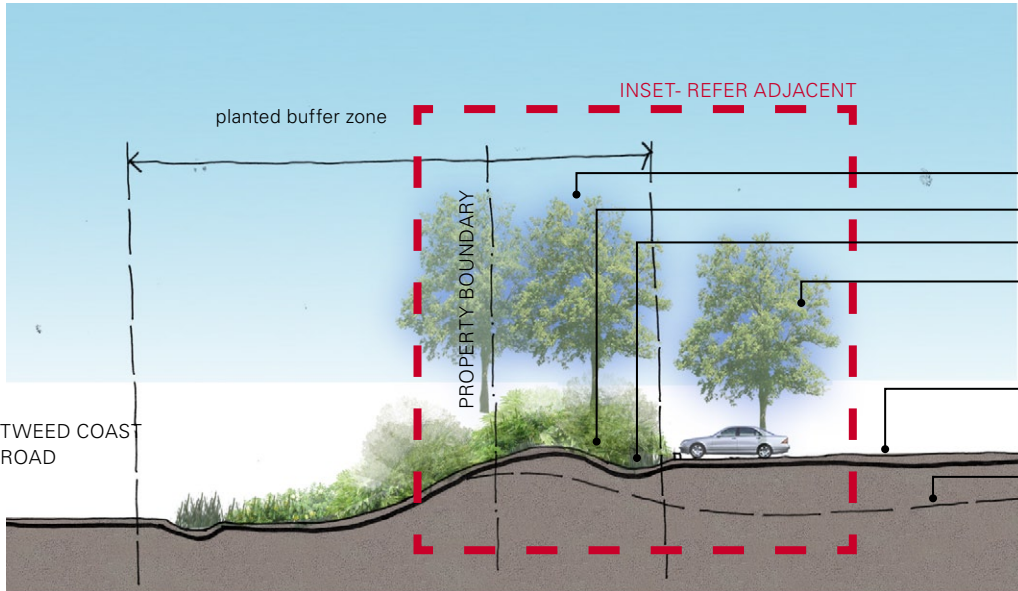
indicative sections - retail centre and carpark



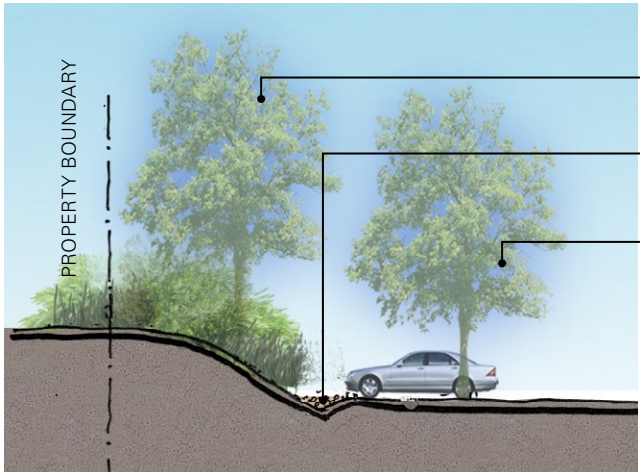
section AA retail parking



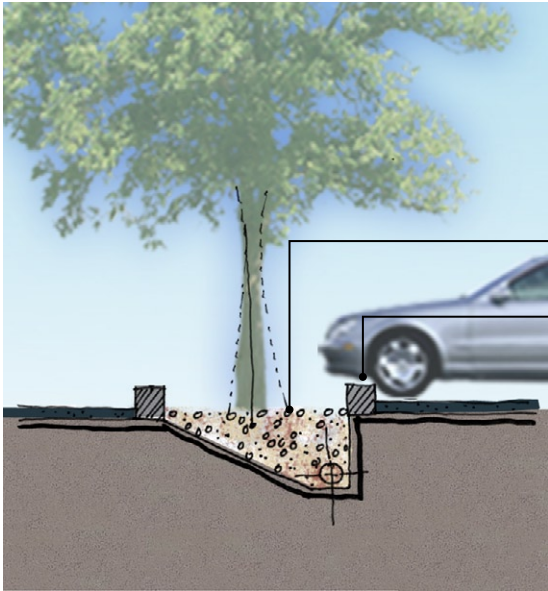
typical section: carpark treatment



section BB swale treatment to boundary



INSET: section BB swale treatment to boundary



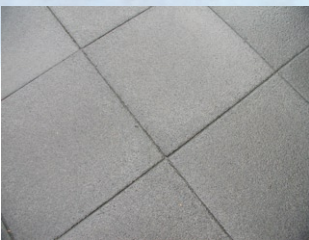
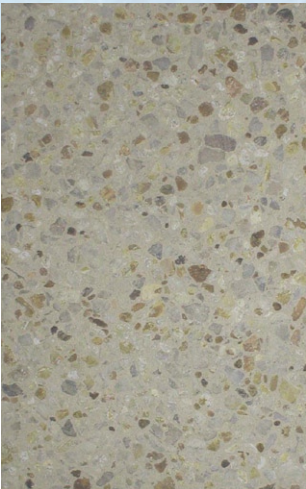
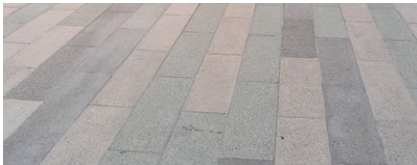
typical section: carpark treatment

materials

The materials and forms selected for the Retail Centre landscape strategy are centred on strong simple forms and hard wearing materials capable of maintaining a clean utilitarian appearance. Detailed patterning and subtle theming is proposed to highlight the key focal areas and distinguish prominent pedestrian connections, improving visitor legibility and way-finding.

Pre-cast concrete seat elements, coloured concrete and stone paving are strong materials with contemporary simplicity that will ensure the forms and patterns will endure the test of time.

The strategy for materials and textures is to provide an integrated dialogue between the built form and its coastal surrounds. These materials are selected as an extension of built elements focusing on pavements, street furniture and shade devices.



planting character

Proposed Planting

Within the proposed planting themes, the palette of plants is utilized to develop a distinctive range of species that responds to the environmental, functional and aesthetic design criteria. Specifically, planting design will respond to the following:

- / Reflection and integration with the distinctive coastal character
- / Selection of vegetation species that will be robust and survive the local conditions
- / Minimise weed generation and nutrient loading potential
- / Seasonal variation and changes
- / Effective micro-climatic control
- / Provision of and reinforcement of wildlife habitats
- / Protection and enhancement of strategic views.

Plants to be used within the development, streets and parkland areas will be predominantly endemic native species, suited to this location and reinforcing the prevailing character of the natural environment. Some exotic species may be used where a particular effect or function cannot be achieved with native species, however these will also be appropriate for the location and intent of the design and will not include any plants likely to cause environmental harm.

In key commercial areas and the main entry to the site, the intent will be to “bring the beach to the town centre” (as opposed to bringing the town centre to the beach) by using plants and materials that reflect the character of the foreshore dunal landscape in a bold and contemporary manner.



Callistemon spp.



Grevillea 'Honey Gem'



Hibiscus tiliaceus



Anigozanthos spp.



Melastoma affine



Hibbertia scandens



Casuarina equisetifolia



Dianella caerulea



Westringia 'Wynyabbie Gem'



Carpobrotus glaucescens

Shrubs

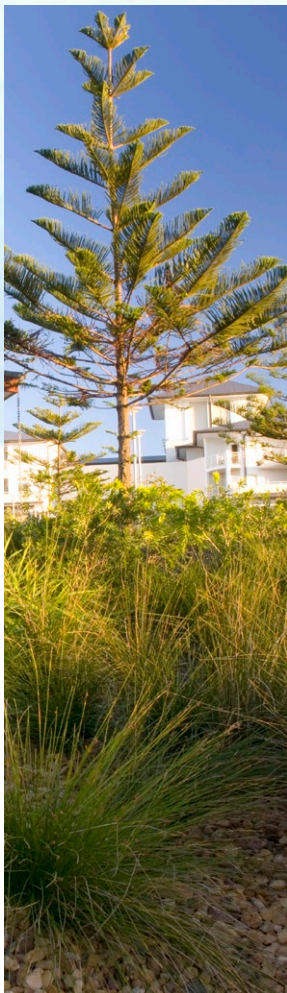
Acacia longifolia 'sophorae'
 Acronychia imperforata
 Banksia robur
 Callistemon pachyphyllus
 Callistemon salignus
 Cordyline rubra
 Cordyline stricta
 Dampiera diversifolia
 Grevillea 'Coastal Glow'
 Grevillea 'Honey Gem'
 Grevillea banksii alba
 Hakea florulenta
 Hakea gibbosa
 Leptospermum petersonii
 Melastoma affine
 Metrosideros excelsa / thomasi
 Westringia Wynyabbie Gem
 Westringia fruticosa

Groundcovers

Austromyrtus dulcis
 Alpinia caerulea
 Anigozanthos spp.
 Brachycome multifida
 Carpobrotus glaucescens
 Dianella caerulea
 Dianella congesta
 Doodia aspera
 Gahnia aspera
 Gazania rigens
 Grevillea Poorinda Royal Mantle
 Helichrysum bracteatum
 Hibbertia scandens
 Isolepis nodosa
 Juncus usitatus
 Leptospermum 'Pink Cascade'
 Liriope "Evergreen Giant"
 Lomandra longifolia
 Lomandra hystrix
 Myoporum ellipticum
 Ophiopogon japonicus
 Themeda triandra

street tree palette

- Acmena hemilampra
- Aracuria heterophylla
- Backhousia citriodora
- Casuarina equisetifolia
- Commersonia bartramiana
- Cupaniopsis anacardioides
- Eucalyptus intermedia
- Eucalyptus tessellaris
- Ficus macrophylla
- Ficus platypoda
- Ficus rugubiosa
- Glochidion ferdinandii
- Harpullia pendula
- Livistona decipiens
- Lophostemon confertus
- Melaleuca quinquenervia
- Metrosideros excelsa
- Pandanus tectorius
- Plumeria obtusa
- Syzygium oleosum



Harpullia pendula



Livistona australis



Banksia integrifolia



Lophostemon confertus



Cupaniopsis anacardioides



Backhousia citriodora



Casuarina equisetifolia



Hibiscus tiliaceus



Araucaria heterophylla



Pandanus tectorius



Melaleuca quinquenervia



Syzygium oleosum

