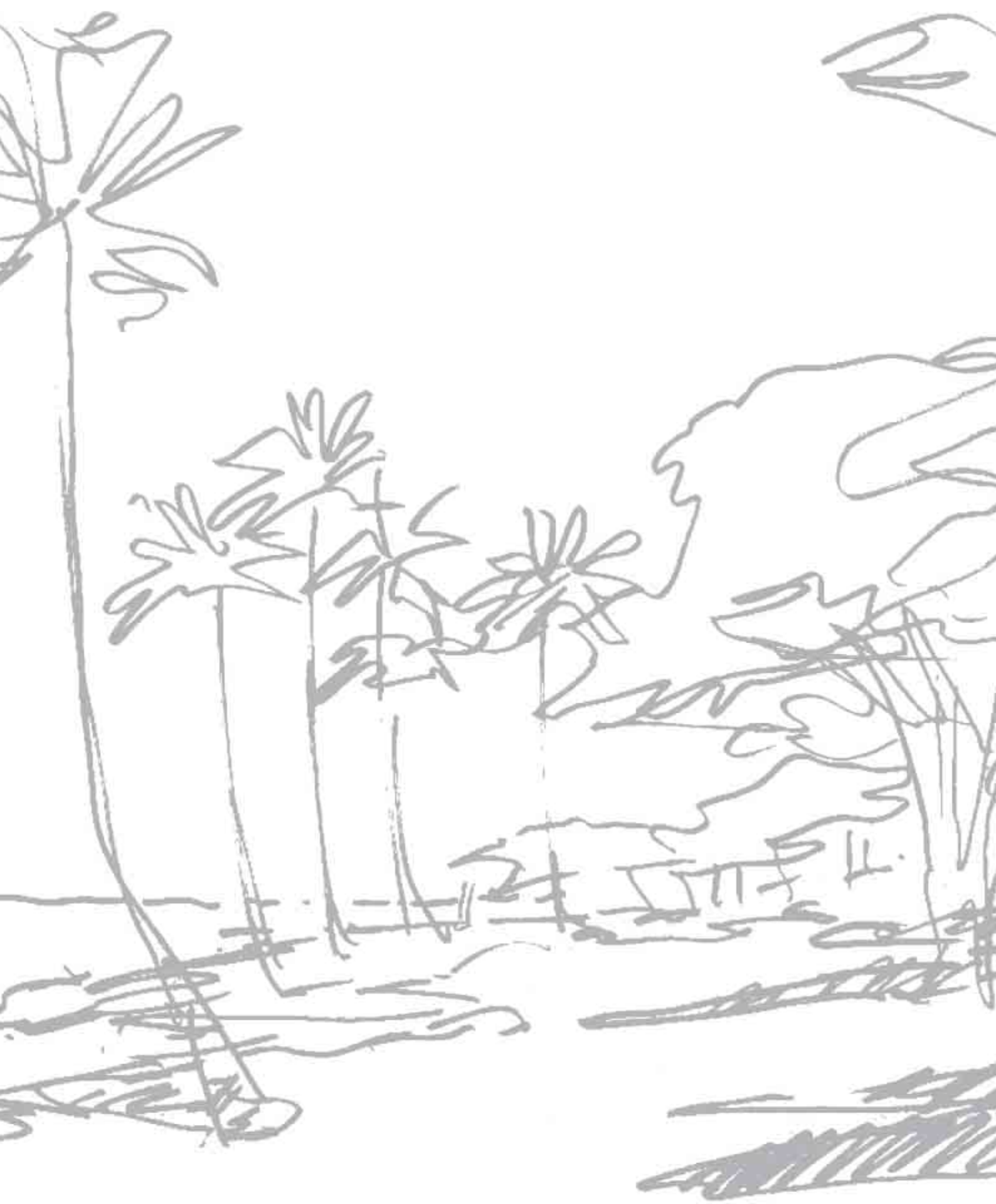


Port Douglas WATERFRONT MASTER PLAN **Landscape Design Guide**





Port Douglas Waterfront Master Plan Landscape Design Guide

April 2012 - Cairns Regional Council

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References

Port Douglas Waterfront Master Plan Indigenous Cultural Heritage Assessment - 2009 (*Australian Museum Business Services*)

Port Douglas Waterfront Master Plan Non-indigenous Cultural Heritage Study - 2008 (*Maunsell/Aecom*)

Port Douglas Waterfront Master Plan - 2009 (*Urbis*)

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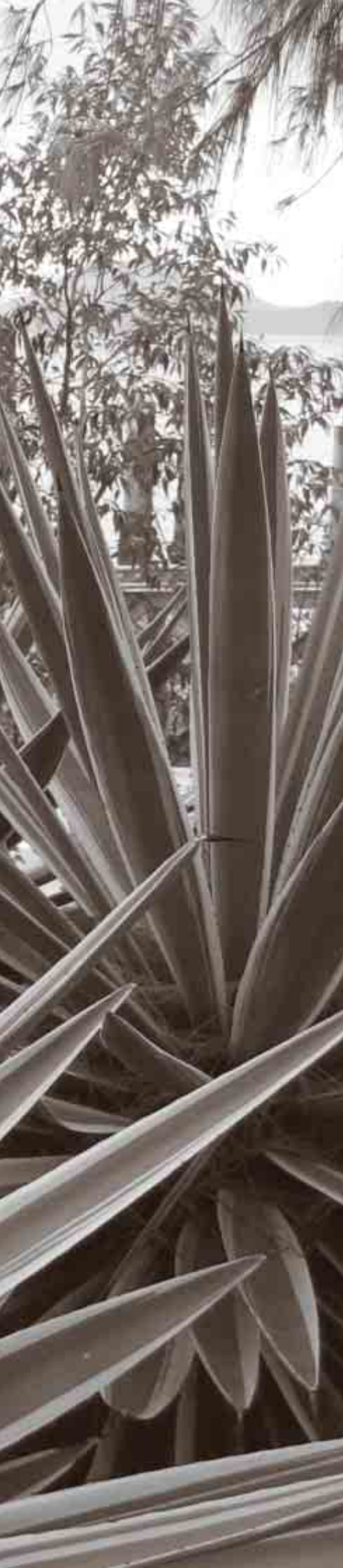




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1

INTRODUCTION



1.0 INTRODUCTION

“The attributes that comprise the character of the town are strongly reflected within the Landscape Design Guide and the guidelines set out within this document reflect the aspirations of Port Douglas to retain its’ unique identity”

1.1 What is the Port Douglas Landscape Design Guide?

The Landscape Design Guide has been prepared in response to and as a result of the Port Douglas Master Plan.

The Landscape Design Guide describes in words, pictures, diagrams and illustrations the ‘relaxed tropical style’ that is the desired design direction for Port Douglas. The character of Port Douglas is defined by its tropical latitude, waterside location, and mix of tourism and marine activity. These elements have been a defining feature of Port Douglas’ success and have combined together to create the unique character which underpins the town’s appeal. The Landscape Design Guide is a tool that has been developed as a result of the Port Douglas Waterfront Master Plan to limit and control future change. The attributes that comprise the character of the town are strongly reflected within the Landscape Design Guide and the guidelines set out within this document reflect the aspirations of Port Douglas to retain its’ “unique identity”.

1.2 What is the purpose of the Port Douglas Landscape Design Guide?

The purpose of the Port Douglas Landscape Design Guide is to ensure that future changes to Port Douglas are consistent with the Port Douglas Waterfront Master Plan and that these changes enhance the existing character of Port Douglas. The Landscape Design Guide will ensure that landscape design strengthens the experience of residents and visitors in Port Douglas and adds “authenticity” to the tropical village character. The document promotes the continuation of the “Port Douglas” style and establishes a comprehensive framework that identifies the design of, and how to carry out landscape and streetscape works;

- *Tree planting themes for streets and parks,*
- *Parkland design*
- *Public art*
- *Heritage interpretation, signage*
- *Road intersection treatments*
- *Arrival node landscaping*
- *Waterfront Park Design*
- *Access to the waterfront*
- *Formal and informal recreation facilities*
- *Park furniture*
- *Landscaping and ancillary facilities*



“Landscape design enhances the experience of residents and visitors in Port Douglas and adds authenticity to the tropical village character”.

1.3 What area does the Landscape Design Guide cover? ■ ■ ■

The Landscape Design Guide covers the area of Port Douglas as shown in the adjacent illustration.



Illustration showing the area covered by the Port Douglas Landscape Design Guide

1.4 Who will use this document?

The Landscape Design Guide is intended for use by:

- **Cairns Regional Council** – *to clearly define the character of future works and to allow for the preparation of distinct projects which make up the Port Douglas Waterfront Master Plan.*
- **Development Proponents and Design Professionals** – *to give a clear direction for future works and the development of detailed design for the various projects to be delivered.*
- **The General Public** - *to foster a better understanding of future changes to Port Douglas.*

1.5 How to use this document

The Landscape Design Guide is divided into two key sections which will allow the user to find information relevant to the design element or particular precinct within the project area.

The two key sections are:

- **Section 2.0 Design Guidelines**
- **Section 3.0 Precincts**

The Design Guidelines section examines the key principles which will govern future design and deals with the general elements which make up the town streetscapes and open spaces

- *Planting Design*
- *Pathways*
- *Furniture*
- *Signage*
- *Intersections*
- *Streets*
- *Water Sensitive Urban Design (WSUD)*



Each element is discussed in terms of their relevance to the delivery of the Port Douglas Waterfront Master Plan, detailing “WHY” the element is important and “WHAT” guiding principles lay behind the use of each element. This is followed by a further discussion of “COMMON ISSUES” which answers some of the more common questions on the application of these design elements.

Images depicting desirable design outcomes or good examples of what has been discussed are included. In some instances, a poor outcome may be included to clearly demonstrate what is considered inconsistent with the character of Port Douglas.

The Precinct Guidelines section examines specific areas within the project area, which have a unique distinguishable character (previously established by the Port Douglas Waterfront Master Plan 2009).

The Precincts are divided in to five main sections;

1. Village Centre

- » *Mowbray Street*
- » *Macrossan Street*
- » *Grant Street*
- » *Warner Street*
- » *Wharf Street*
- » *Davidson Street*

2. Waterfront Parkland

- » *Rex Smeal Park*
- » *Anzac Park*
- » *St Mary's by the sea*
- » *Sugar Wharf*
- » *Waterfront*
- » *Island Point*

3. Esplanade

- » *Between Macrossan Street and Mowbray Street*

4. Sporting and Recreation Precinct

- » *Sports grounds*
- » *Wharf Street*

5. Town Gateway

- » *Davidson Street*

Precincts within the village centre are defined by street name while those within the existing waterfront have been selected based upon historic usage and are already familiar to the residents of Port Douglas.



1.6 Glossary

Port Douglas Planning Scheme

The planning scheme applies to particular land uses, such as residential, tourism, industrial and commercial developments and subdivisions. It identifies where different land uses such as shops, houses, units or industrial activities can occur in the Shire, and what performance criteria and specific outcomes are required to be satisfied.

There are 11 different policies included in the planning scheme. These relate to a variety of subject matters such as building design & architectural elements, water supply & sewerage headworks, landscaping, open space contributions and cultural and heritage values.

<http://www.cairns.qld.gov.au/building-planning-and-infrastructure/planning-schemes>

CPTED (Crime Prevention through Environmental Design)

The fundamental concept of Crime Prevention through Environmental Design is that it is possible to use knowledge and creativity to design our built environments in ways that lessen or prevent the incidence of crime. For more detailed information on CPTED issues please refer to the latest Queensland Government CPTED Guidelines for Queensland at the following address:

<http://www.police.qld.gov.au/programs/cscp/safetyPublic/default.htm>

WSUD (Water Sensitive Urban Design)

WSUD offers an alternative to the traditional conveyance approach to stormwater management. WSUD is a philosophy which aims to mitigate environmental impacts particularly on water quantity, water quality and receiving waterways, conventionally associated with urbanisation.

<http://www.brisbane.qld.gov.au/planning-building/planning-guidelines-and-tools/subdivision-development-guidelines/water-sensitive-urban-design/index.htm>

FNQROC (Far North Queensland Regional Organisation of Councils)

The Far North Queensland Regional Organisation of Councils is made up of a membership of councils from Ingham to Cooktown and offers comprehensive and practical guidelines to assist development across the region.

<http://www.fnqroc.qld.gov.au>

Cairns Regional Council Carbon Emissions Reduction Policy

**Corporate Sustainability Policy
Protection of the Natural Environment Policy
Carbon Emissions Reduction Policy
CRC Climate Change Strategy 2010 - 2015
Douglas Shire Council Sustainability Code
CRC Climate Change Adaptation Action Plan**

Landscape Design

Landscape Design is the art of arranging or modifying the features of a landscape, an urban area, etc., for aesthetic or practical purposes and is usually divided into hardscape design and softscape design. This will include planting and paving, signage and furniture as well as place making.

Precinct

A distinct area with generally definable boundaries

Streetscape

The visual appearance of a road, including the rhythm of the built form elements such as roads, street furniture, vegetation and open space that combine to form the streets character.

Hardscape

The hard elements such as paving, decking and other usually trafficable areas

Softscape

The planted elements within a design such as trees, shrubs and flowering plants, grasses and turf.

Sightlines

The clear line of sight from one vehicle to another, generally at intersections, roundabouts and driveways. Sightlines protect both vehicles and pedestrians and need to make allowance for small children.

Viewsheds/View Corridor

Viewsheds and view corridors are areas of particular scenic or historic value that are deemed worthy of preservation against development or other change. These are often spaces that are readily visible from public areas such as from public roadways or public parks. The preservation of clear lines of sight to features of significance within these areas is a vital component of the landscape design process.

Street Hierarchy and Road Hierarchy

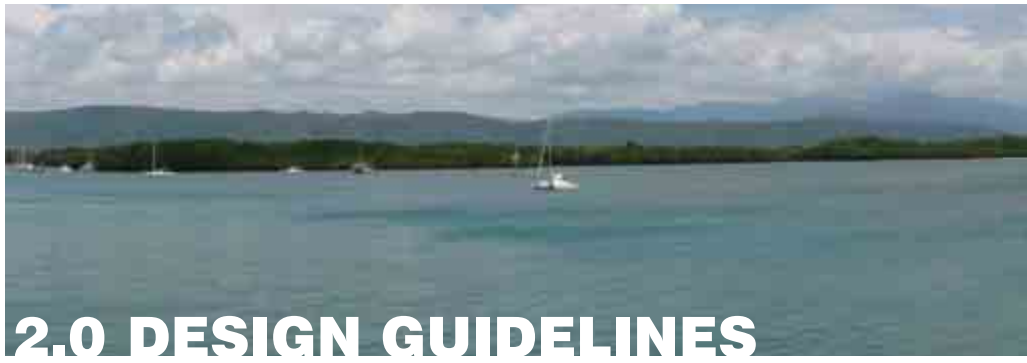
The hierarchy of streets and roads is an urban design and traffic management technique for separating vehicular through-traffic from local streets.





2

DESIGN GUIDELINES



2.1 Philosophy of Change

The existing character of Port Douglas underpins its attraction to both residents and visitors. Change will be limited, or controlled to ensure that the town retains its iconic charm and appeal.

The Landscape Design Guide Vision

"...landscape design enhances the experience of residents and visitors alike in Port Douglas and adds authenticity to the tropical village character".

The aim is to ensure that future change remains true to the relaxed village feel of the town, an incremental change that appears both natural and in harmony with the current surroundings. Subtle transformations are sought which will blend with and flow from the unique character of Port Douglas.

2.2 Key Design Principles

Landscape Design is guided by the following set of principles:

- **Landscape is designed and maintained to create a safe and accessible environment with a strong pedestrian focus.**
- **The style and form of landscape and built elements and selection of plant species and materials are consistent with the tropical character of Port Douglas.**
- **The selection and placement of plants creates a shady, park-like atmosphere which features and showcases native species.**
- **All landscape works embody principles of sustainability, including:**
 - » *Reduced consumption of water*
 - » *Conservation of ecological and biodiversity values*
 - » *Maintainability and longevity*
 - » *Local employment*





- Landscape design honours the many layers of cultural heritage in Port Douglas through art, design, interpretation and story-telling.
- The unique qualities of individual precincts are clearly distinguishable within the overall village character.
- Landscape projects deliver a choice of recreational options and experiences, from the main street to nature-based activities.

“...landscape design enhances the experience of residents and visitors alike in Port Douglas and adds authenticity to the tropical village character”

streets



“streets to be designed primarily for pedestrians and cyclists”

2.3 Design Elements

Streets

Why this is important

Port Douglas is not a car dominated town. Movement corridors are to be characterised by shady trees, soft edges, water sensitive urban design elements, natural finishes and mixed materials. Green infrastructure will continue to be used as a foil to the urban fabric of the town centre and plays a leading role in the character of the tropical streetscape.

Streets need to be safe and accessible for all users, including people with impairments. The level of passive surveillance of a street, traffic speed and parking behaviour affects the actual and perceived safety of pedestrians. The current mixture of activities along the northern end of Macrossan Street serves as an example of this principle. Traffic speeds are controlled by the number and movement of pedestrians and by the function of on street parking. This is a model to be used across local streets.

Streets that feel safe are more likely to foster social encounters and activity. The key aim is to create streets where people have opportunities for walking and cycling, and this requires streets to be designed primarily for pedestrians and cyclists not just for cars.

Design principles

- *Design local streets to reduce traffic speeds so that pedestrians, cyclists and vehicles can mix safely. On-street parking can help slow traffic speeds and shared spaces foster respect and caution from drivers.*
- *Provide clear routes for pedestrians and bicycles as well as for vehicles. If separate cycle paths are provided indicate them with street markings or by discrete but clearly displayed and well-designed signage.*
- *Ensure pedestrian and bicycle routes are direct, continuous and well lit, and that appropriate street crossings are provided.*
- *Reduce road signage to a minimum.*
- *Streets need to accommodate the Carnivale Parade.*
- *Shade trees and tropical plantings are a key feature of the tropical streetscape.*
- *Maintain village atmosphere and avoid the tendency to urbanise.*
- *Maintain idiosyncrasies of the streetscape with an ‘if it isn’t broke don’t fix it’ attitude across the town.*
- *Create a series of linked public spaces that provide a unified identity for the public realm whilst respecting the ad-hoc nature of the current streetscapes.*

Response to common issues

How will we create a legible hierarchy of tropical streets?

The quality and scale of landscape design will be used to define streets within the hierarchy of the established road network. The main streets will be defined through the use of large scale trees and open street edges. Local streets can be smaller in scale with a more enclosed character to help reduce traffic speeds and create a more pedestrian friendly and intimate environment.

Refer to **Section 3.0 Precincts** for further details of individual streets.

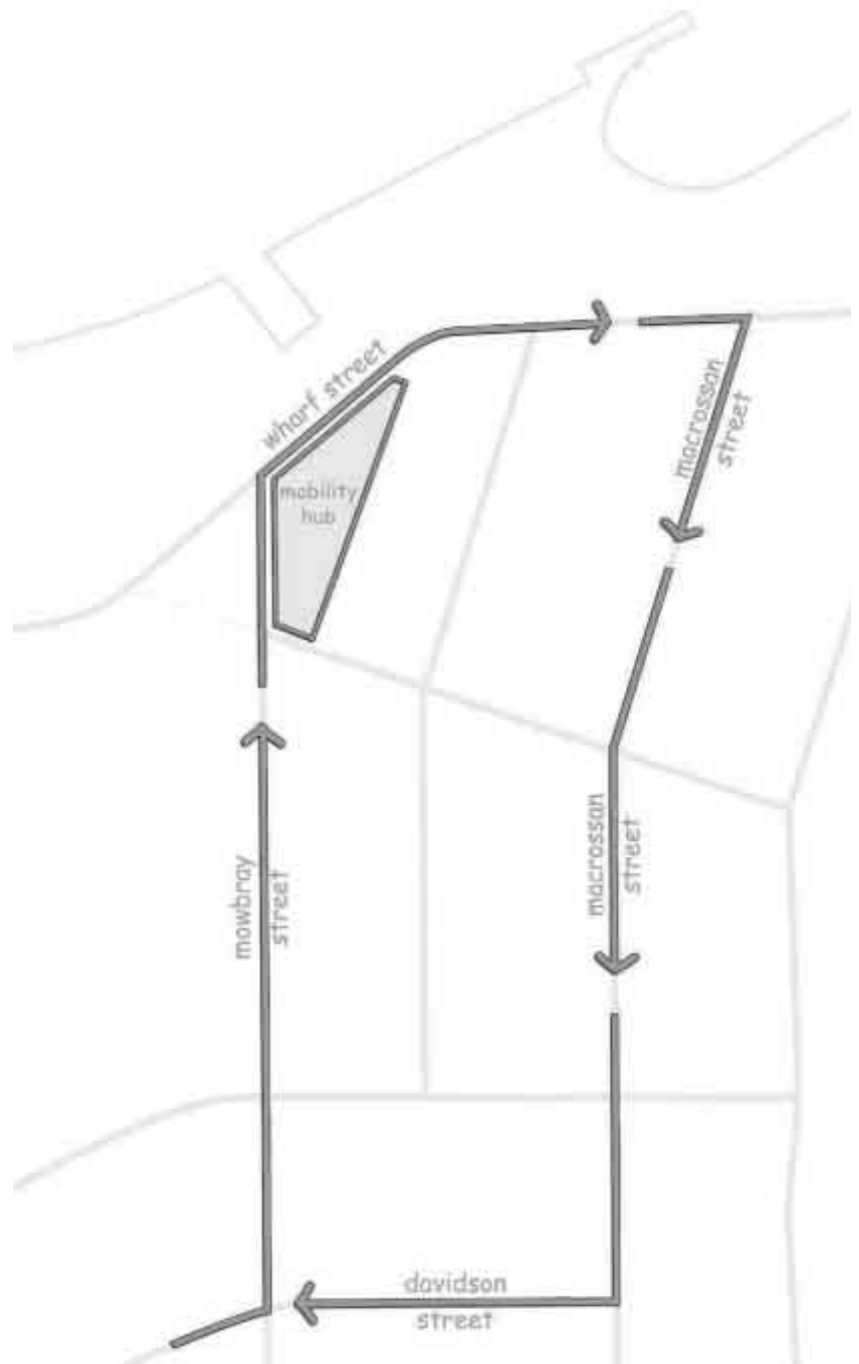


Illustration showing the main street network and proposed traffic circulation, to and from the town centre



intersections



Intersections

Why this is important

Intersections are the points at which all users of the street converge. They must be designed for the safe and convenient passage of all users. Intersections that prioritise pedestrians generally cause drivers to slow down. Traffic signals and excessive road signage are not features of Port Douglas and should not form part of future traffic solutions within the town centre.

Local streets are for pedestrians and cyclists as well as for vehicles. Our aim is to create walkable neighbourhoods and active communities, therefore, streets must be pedestrian-friendly. On local streets, well-designed intersections provide an improved pedestrian environment. They allow pedestrians to cross safely and directly without diverting from their chosen route.



Typical Macrossan Street intersection with lush tropical plantings

Design principles

- *Design intersections to reflect the road hierarchy.*
- *Control vehicle speeds on minor streets by:*
 - » *Extending verges to narrow the carriageway at the intersection (creating 'pinch-points').*
 - » *Using differently textured materials on the carriageway across the throat of the intersection to identify a change of road structure and to alert drivers to pedestrians and cyclists.*
 - » *Ensuring the design indicates the presence of the intersection on all approaches.*
 - » *Use planting to delineate road geometry.*
 - » *Ensure planting complies with current CPTED principles while maintaining the tropical relaxed feel.*
 - » *Splitter islands are not generally recommended because when they are used, larger splays (kerb radii) are required to enable trucks, buses and other large vehicles to turn, which compromises pedestrian amenity and safety and widens intersections.*



Response to common issues

Intersections and the street hierarchy

Different treatments can be used to indicate the priority of connecting streets. The image above has used a different approach by widening the verges and using planter beds close to the street edge to visually and physically narrow the street throat - further indicating that it is the lower order street.

Materials palette:

- *Interlocking unit pavers (which can be used to extend pathway treatments across roadway)*
- *Porphyry blocks / setts*
- *Bauxite overlays*
- *Exposed aggregate*
- *Aggregate surface treatments*

“walkable neighbourhoods”



Kerbless garden beds with inorganic mulch and WSUD landscape treatment



Porphyry setts - example of intersection treatment

Porphyry setts



pathways



Key Plan showing location of pathway types



Pathways through open space areas

- Waterfront Park
- Island Point
- Four Mile Beach Esplanade
- Sport and Recreation Precinct



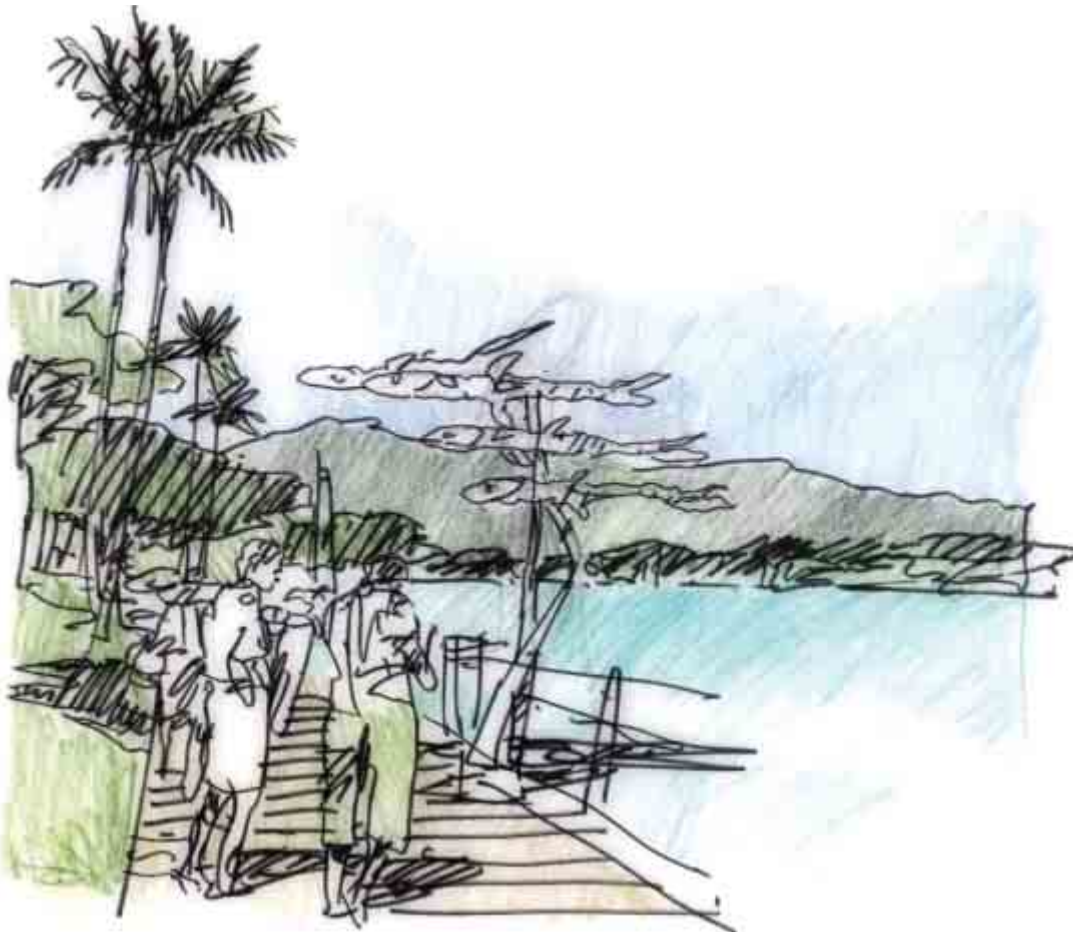
Pathways within main town centre

- Village Centre



Pathways outside main town centre

- Town Gateway Precinct





pathways



pathways through open space areas

Why this is important

The role of pathways across the open spaces which comprise the Waterfront of Port Douglas is to provide a legible and permeable environment which can be easily traversed by pedestrians and cyclists. Pathways will link these open spaces with the wider townscape and provide for logical and desirable movement across the site.

Design principles

- *Paths are to be visually unobtrusive and pedestrian in nature.*
- *Use natural materials, and create soft edges which blend with natural landscape features.*
- *Signage and cultural interpretation can be laid on horizontal plain and incorporated within the path network.*
- *Use of a mixed palette of natural materials for the path treatments to lessen the impact of the path network on natural or predominantly landscaped areas.*
- *Sustainable materials and products will be sought for all landscape treatments.*
- *Paths must be usable by all members of the public including those people with disabilities.*
- *Paths are to be organic and curvilinear in appearance rather than angular and geometric, reflecting the relaxed unhurried feel of Port Douglas reflecting the open parkland experience.*





Materials Palette:

- Concrete (coloured in natural palette)
- Exposed aggregate (using local aggregate and sand)
- Timber decking
- Recycled plastic decking in grey
- Decomposed granite
- Unit pavers and interlocking paving systems

How large do these pathways need to be?

Pathways need to respond to local levels of foot traffic and allow for a variety of uses:

- Pedestrians
- People with disabilities and impairments
- Joggers and recreational walkers
- Prams and push chairs
- Cyclists (shared paths or dedicated cycle paths as directed by the current cycle strategy for Port Douglas).
- Service vehicles (routine maintenance)

Pathways may vary from 2 metres to 4 metres depending on location. For specific path requirements refer to **Section 3.0 Precincts**.

How will we manage service roads and vehicular access within the Waterfront Park?

Access for vehicles is limited in use and is not considered sufficient to require a network of dedicated sealed service roads which are undesirable within the proposed parkland. Vehicles will need to share paths with pedestrians and drive at speeds appropriate to such a mixed use.

The main path system will link the following:

- The new Marina and Rex Smeal Park
- Wharf Street and the Sugar Wharf
- The Combined Club and the Sugar Wharf

This simple path network will be treated with a mix of materials which will emphasise their pedestrian function while remaining usable to the various vehicles which may share them.

The path network is further designed to accommodate the necessary maintenance for the parkland and its various facilities:

- Rubbish collection
- Cleaning and servicing BBQs and furniture
- Access to the toilet block
- Deck maintenance
- Pool maintenance
- Building maintenance

Allowing for easy access will increase maintenance efficiency and prevent scouring and damage of the parkland by maintenance vehicles.

How large do these shared paths need to be?

With nearly one million visitors each year, shared paths will need to be a minimum of four metres wide to accommodate pedestrians and the following users:

- People with disabilities
- Joggers
- Prams and push chairs
- Cyclists

Service vehicles (this includes council vehicles, and delivery vehicles - which will need to access St Mary's Church and Sugar Wharf)

- Market stall holders
- Emergency vehicles
- Police



pathways



pathways within main town centre

Why this is important

Pathways are a major element within the streetscape informing the character of Port Douglas. Traditionally Port Douglas has made use of clay brick pavers and these have been used across most of the town centre. It is intended to continue to use clay pavers as a feature of the path network. The scale and pattern of pavers is well suited to the relaxed tropical feel of Port and lends a less urban appearance to the streetscapes.



Design principles

- *Paths will generally extend from the building line to the edge of kerb.*
- *Trees will be planted in tree grates and protected with tree grills (where space allows trees may be planted in garden beds at edge of footpath).*
- *Use natural materials, and create soft edges which blend with landscape features.*
- *Paths must be usable by all members of the public including those people with disabilities.*
- *Paths are to be organic and curvilinear in appearance rather than angular and geometric, reflecting the relaxed unhurried feel of Port and relating to the open parkland experience.*
- *Paths are “domestic” in their design rather than urban.*

Refer to **Part 3.0 Precincts (3.1 Village Centre)** for more detailed information on particular streets within the centre of Port Douglas



Materials Palette:

- *Natural Clay Pavers*
(Boral Summerset Opal
113x228x40mm or equivalent)

Clay Pavers should have the following characteristics:

- *Won't fade and sealing is not necessary to maintain the colour*
- *Hard wearing, resilient & durable*
- *Low maintenance as there is no need to seal or re-colour*
- *Easy to install and little maintenance requirements makes the overall cost low compared to alternatives*
- *High level of slip resistance*

Paver Patterns:

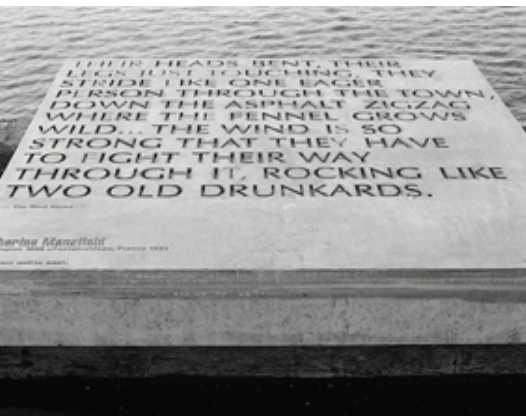
- *45 Degree Herringbone*
- *Stretcher or running bond (as alternative pattern only – to be used where herringbone pattern is not practical)*
- *Edge restraint and edge detail in soldier bond with mitred corner detail*

pathways outside main town centre

Why this is important

Pathways provide a safe walking environment for pedestrians and the system of pathways helps to articulate the pedestrian network. Pathways within these dominantly residential areas should be consistent with the FNQROC Development Manual and will generally measure between 1.4 and 2 metres in width, depending on local demand and site conditions. Pathways are generally to be located 600mm from the property boundary and allow for a grassed verge or nature strip within which shade trees can be planted.





Sandblasted concrete



Sandblasted patterned concrete

interpretation and signage

Interpretation and Signage

Why this is important

Interpretation and signage play a vital role in the legibility, permeability and accessibility between the waterfront, the town centre and surrounding areas. Way-finding assists on a practical level helping visitors to navigate the townscape and waterfront while locating key features and places of interest. Interpretive material tells the stories which are particular to Port Douglas and should be presented in forms which are readily accessible to the wider public. Both ensure that visitors and residents gain a full appreciation of Port Douglas and all that it has to offer; and that they are engaged in the broader historical and cultural influences that have shaped the township.

Both the Indigenous and non-Indigenous heritage of the waterfront should be recognised, enhanced and protected. All interpretation and signage recognising Port Douglas' Indigenous history and the connection of the Kuku Yalanji, Irikanji and Jabugai peoples to the area should be developed in close consultation and negotiation with representatives of the local Indigenous communities.

The waterfront of Port Douglas has a wealth of history some predating early white settlement as well as covering the growth of the town from its founding in 1877. While much of the early waterfront has been lost there remain several features which still give testimony to the towns past and its' importance as an administrative and maritime centre.

“visually interesting presentation of material”



“simple forms and clear text”

- *Sugar Wharf and Dixie Street*
- *St Mary's by the Sea*
- *The Stink Trees*
- *The Combined Club*
- *Rex Smeal Park (rock wall and mango plantings)*
- *Anzac Park*
- *The Court House and Police Reserve*

The intent is to develop the amenity of the waterfront as a major component of the tourism experience. The understanding and interpretation of the areas rich history is integral to this and should be expressed not just through conventional interpretive boards but also by recognising aspects of the original working waterfront which was so instrumental in the development of the township, integrating historic references within the landscape design. Heritage interpretation is discussed in more detail in **3.0 Precincts (3.2 Waterfront Parkland)**.

“Interpretive material tells the stories which are particular to Port Douglas”

Design principles

- *Interpretation and signage are to be visually unobtrusive (signage must not obscure views or create unnecessary visual clutter which detracts from the natural parkland feel).*
- *Signage can be located within the ground plane or at low level incorporated within the path network, furniture and art work.*
- *Landscape design should express and honour the many layers of cultural heritage through the selection of materials and forms which echo both indigenous and non-Indigenous historic land uses and activities .*
- *Signage will include maps which locate key areas of interest and landmarks which are to be located at key points across the town.*
- *Maps are to be augmented with discreet but legible navigational signs which can be integrated within the path network.*
- *Signage should be easy to read and accessible to a wide range of users including those for whom English is not the first language (the use of pictorial and diagrammatic maps is preferred).*
- *Emphasis on natural finishes in materials which acknowledge the cultural heritage values of the site.*

DESIGN GUIDELINES



Materials Palette:

- *Recycled timber (old wharf posts)*
- *Stone and raw concrete*
- *Stainless and galvanised steel*

Response to common issue

Way-finding signs will just be more visual pollution

Way-finding signage will be discreet and carefully situated to not intrude on the townscape while being accessible to all users. It can make use of existing signage, which already exists within the town and be located near or close to facilities where there is already infrastructure. Signage within the park will be minimised by the introduction of a simple and legible pedestrian network which will clearly articulate movement across the site. Signage will make use of the ground plane and area below waist height to avoid obscuring views and cluttering the broader landscape.



Examples of interpretive displays at low level

furniture

Furniture

Why this is important

Furniture has an obvious function within the landscape but also serves to emphasise areas of interest and can be grouped to create informal meeting places, which allow people to gather and creates a sense of community and vibrancy. Within the waterfront furniture should be located to provide rest under shade and to maximise key views of the inlet and those special buildings of interest, a topic discussed in more detail in **3.0 Precincts (3.2 Waterfront Parkland)**.

“The sugar industry, wharf structures, trams and cargo ships can all inform the design of and manufacture of furniture...”

“...located to maximise key views”

It is important to see furniture in the broader context of the story of Port Douglas, its community and shared histories. The sugar industry, wharf structures, trams and cargo ships can all inform the design of and manufacture of furniture and can help to tell this story and make visual links to the towns past. Design should avoid the “Disney Approach” to such elements and rely on simple authentic forms and materials to suggest rather than replicate historic artefacts; new and introduced elements should readily articulate their contemporaneity and not cloud the **authenticity** of historic features.

Within the town there is no current pattern to street furniture; it varies in style and form and offers a broad range of types from post war cast iron seats to in-built slatted timber benches. The variety of furniture types is not to be seen as a negative; the variety belies the evolution of the townscape and adds to the “authenticity” of the experience of visitors. A rigid palette of standardised urban furniture should be resisted in favour of a more relaxed approach, which tolerates the differences in form and style and has a “don’t fix it if it isn’t broke” approach to the current settings. Overtly urbanised forms should be avoided in favour of simple contemporary styles in natural materials.



Simple forms which reflect the local heritage values



Natural forms with a contemporary approach

Design principles

- Furniture is to be organic in nature and respect the heritage values of the waterfront.
- Raw simple shapes are preferred over standard urban forms.
- Unique and bespoke hand made pieces are preferred over commercial furniture types with the possibility to make use of local craftsmen and manufacturers.
- Furniture should not intrude on the parkland and can be integrated with interpretation and signage to minimise infrastructure.
- Replace all concrete picnic settings with a suitable contemporary setting.
- Where existing furniture is affected by site alterations ensure that where possible it is recycled and relocated within the project area.
- Sustainable options should be sought for all furniture selections.

“locally crafted and organic forms”

Materials Palette:

- Concrete (coloured in natural palette and exposed aggregate)
- Stone
- Recycled timber
- Stainless and galvanised steel

“unique and bespoke hand made pieces”

Response to common issue**Do we need a palette of furniture?**

The answer is that we do not. The variety of furniture relieves the sense of sameness which can result from such standardisation across project sites. The ad-hoc charm of a more random approach suggests a more natural growth and evolution, one in step with the towns' development over the last decades. While certain furniture such as the concrete picnic settings are not a positive feature and should be replaced; in general furniture need only adhere to the guidelines set out above to create a harmonious approach across the project site.



planting design



Planting Design

Why this is important

Port Douglas is well known as a tropical oasis; a place to refresh, restore and revitalise, either in the aquamarine reef waters of the Coral Sea, the crystal creeks of Mossman Gorge, or the palm fringed golden sands of Four Mile Beach. Plants play a vital role in establishing the relaxed tropical character of Port Douglas which makes it such an appealing place to live and visit. Streets lined with tropical trees, bordered by swathes of lush tropical foliage are a key feature of the township and help to distinguish Port Douglas from other destinations within Australia.

Port Douglas is unique in being the only place on Earth where two World Heritage listed sites can be found together; the Great Barrier Reef and the Daintree Rainforest. While development of the town has significantly altered the natural plant communities which once fringed its coastline, there still remain stands of mangroves, paperbarks, Beach Calophyllum and giant Fig trees.

Planting design helps to articulate these plant communities and integrate new features in to the

broader landscape. This guide recognises the value of exotic planting and the role it has played in establishing the resort character of Port Douglas; while acknowledging the importance of the regions natural plant communities. Mixed plantings incorporating both native and exotic plant species are supported across most of the townscape but should be restricted around the foreshore where a more natural approach is preferred, and where native species will enhance remnant stands of vegetation and the natural appearance of the coastline of the town.

Quality landscape design is imperative for good streetscapes. Street trees, when mature, tend to be the most prominent landscape elements. They can contain vistas and help to define boundaries, reduce traffic speeds by narrowing the perceived travel-way, and provide shade and habitat for fauna. Green streetscapes help to create a sense of place and are an attractive feature of port Douglas.

Refer to **3.0 Precincts** for specific view corridors.

“The overall landscape character of Port Douglas is of shady trees set within a parkland”



“acknowledging the importance of the regions natural plant communities”

Design principles

- The overall landscape character of Port Douglas is of shady trees set within a parkland. A number of iconic species, mostly endemic, are to be used strategically throughout town, whilst exotic feature planting adds localised colour and texture to key areas or landmarks.
- Landscaping should compliment the existing tropical coastal “resort town” character of Port Douglas and create dominantly tropically vegetated streetscapes.
- Ensure that existing vegetation on Site is retained, protected during works and integrated with the built environment.
- Ensure that landscaping screens buildings to reduce their bulk and to enhance the landscape character of the village.
- Mature vegetation on site is retained wherever possible to provide shade and maintain diversity in tree maturity across the site.
- Maximise landscaping in all streets with an emphasis on shade trees.
- Ideally, space trees so that the canopies touch when mature.
- Ensure there are no potential conflicts with other street elements, such as streetlights being blocked by the tree canopy, or car doors being opened onto tree trunks.
- Where appropriate integrate landscape design with water sensitive urban design systems.
- Use best practice tree planting technologies to assist in the preparation of tree pits.
- Incorporates new plants which encourage biodiversity; and maintains and strengthens the tropical and native landscape character of Port Douglas through high quality landscape works:
 - » Native species are incorporated into landscaping, as a means of providing continuity between developed and undeveloped areas.
 - » 60% of the total proposed species are endemic or native species.
 - » Native and endemic plant species characteristic of the area are to be included in the landscape design.
 - » Plant species are selected in accordance with the Plant Species Schedule in Port Douglas Planning Scheme Policy No 7 – Landscaping (please see Part 4.0 Appendix for a full Plant Species Schedule).



planting design



Iconic Native Tree/Palm Species:

Botanic Name	Common Name
Deplanchea tetraphylla	Golden Bouquet Tree
Livistonia muellerii	Dwarf Fan Palm
Dillenia alata	Red Beach
Melaleuca leucadendra	Weeping Paperbark
Melaleuca dealbata	
Melaleuca viridiflora	Broad Leaved Paperbark
Melaleuca quinquenervia	Broad Leaved Paperbark
Terminalia ssp.	
Callophyllum ssp.	
Barringtonia ssp.	
Alstonia scholaris	Milky pine
Peltophorum pterocarpum	Yellow Poinciana/Copper Pod
Ficus ssp.	Fig Trees

Iconic Exotic Tree/Palm Species

Delonix regia	Poinciana
Plumeria ssp.	Frangipani
Elaeis guineensis	African Oil Palm
Pterocarpus indicus	Indian Padauk

For a more detailed list of suitable plants for the Port Douglas area refer to **Appendix 4.2.**





Response to common issues

How can we ensure the health and success of our street trees?

Tree pits must be designed to accommodate the specified tree at maturity. Root cells and similar technologies can be utilised within street tree pit design to ensure root growth and avoid damage to localised infrastructure by the appropriate use of root barriers. Specialist advice on these technologies is to be sought prior to all street tree installation works proceeding.

How should exotic planting be used within future parkland design?

Exotic planting is not seen as a major feature of future landscape treatments within the waterfront parkland; and is only to be used in association with native and endemic species to create feature planting for key elements within the landscape design:

- *St Mary's by the Sea*
- *The Courthouse*
- *Water play or lagoon facilities and children's play area (suitable coastal plants)*

Wherever possible, existing native vegetation is to be retained, incorporated into the site design and protected during works. Mature vegetation is to be retained wherever possible as this provides shade and screening, often has cultural significance, and reduces the impact of redevelopment, providing a more natural mix of trees of varied maturity.

- *60% of the total proposed species are endemic or native species.*

Lush tropical plantings do not conform to CPTED principles!

A balance is needed between CPTED requirements and lush plantings, which typify the visitor experience of Port Douglas as a relaxed resort town. Planting helps to reduce the harshness and urbanity of the streetscape and contributes to the overall "barefoot" character of the town - which is designed around pedestrian use.



Tree pit design

water sensitive

“preserve the health and vitality of our waterways and the Great Barrier Reef”

Water sensitive urban design (WSUD)

Why this is important

Streets account for a significant percentage of the impervious area of our built environments, causing increased stormwater flows. They are also the source of a number of water borne pollutants such as sediments, metals and hydrocarbons that adversely affect the health of receiving waters. To preserve the health and vitality of our waterways and the Great Barrier Reef it is essential that we reduce the dispersal of these pollutants and protect our seas. WSUD elements can be integrated into open space and streetscapes to collect and treat runoff prior to discharge and can become interesting landscape features which integrate well with local vegetation communities.

Design principles

- *Use stormwater treatment elements in the urban landscape to maximise the visual and recreational amenity of future works.*
- *Size WSUD elements relative to the contributing impervious area (approximately 2-3% of its catchment depending on the geographical location).*
- *Generally, WSUD is most effective on slopes of 1 – 4%.*
- *Where slopes exceed 4% either bioretention street planters or additional flow control features (such as check dams with swales and bioretention systems) can be used.*
- *Use WSUD elements such as bioretention swales on the high-side verge reserve if there is one.*
- *Where the street runs perpendicular to contours use either verge for bioretention systems.*
- *Ensure street or driveway crossovers of bioretention swales are either at grade or incorporate a culvert crossing. If this is not possible, use discrete WSUD elements separated by driveway crossovers.*

Interlocking block pavers - permeable road treatments for local streets or service access areas



urban design

- *Native and endemic plant species can be utilised within the WSUD systems to absorb unwanted nutrients prior to discharge. These species can enhance local natural vegetation protecting local ecologies.*
- *WSUD treatments must be adapted for use Port which is in a high rainfall area.*
- *This street has a swale within its central median as part of the WSUD strategy. The unique kerb treatment and timber walkway also create an interesting streetscape.*
- *Swales can also be simple grass depressions on the street edge or within an open space area.*

Response to common issues

Bioretention systems present a health risk?

Badly performing WSUD treatments can present a health risk by promoting the presence of mosquito larvae in slow draining water retention systems. It is essential that WSUD features are designed to prevent the risk of insect breeding.

“WSUD elements can be integrated into open space and streetscapes”

Should all streets have WSUD elements?

It is not necessary or appropriate to provide WSUD elements on all streets. Stormwater however can be directed to a series of site-wide systems which utilise the natural topography of Port Douglas to concentrate stormwater to the area within the sports fields to the west of the town.

How should WSUD elements be integrated with travel-ways and parking areas?

Parking areas can be located adjacent to WSUD elements but should be designed to prevent vehicles damaging these systems. Bollards or kerbs with regular breaks are required to allow distributed flow to the WSUD element.

Parking areas may be interspersed between WSUD elements, such as parking bays between rain gardens.

Do WSUD elements require much maintenance?

In the first two years it is important to remove weeds. Only limited maintenance is required after this.



Grasscrete



Formalised roadside WSUD



WSUD incorporated into farmland



Example of swale in carpark



Example of WSUD treatment



Example of permeable paving





3

PRECINCTS



3.0 PRECINCTS

What are the main precincts within Port Douglas?

For the purposes of this document Port Douglas has been divided in to five distinct precincts. These in turn are divided into sub-precincts which have been identified as possessing their own distinct character.

Sub-precincts within the village centre are defined by street name while those within the existing waterfront have been selected based upon historic usage, which is already familiar to the residents of Port Douglas. The Four Mile Beach Esplanade is a stand alone precinct at the eastern end of the study area.

Village Centre Precinct ■

- Mowbray Street
- Warner Street
- Macrossan Street
- Wharf Street
- Grant Street
- Davidson Street

Waterfront Parkland Precinct ■

- Rex Smeal Park
- Anzac Park
- St Mary's by the Sea
- Sugar Wharf and Dixie Street
- Waterfront
- Island Point

Four Mile Beach Esplanade ■ Precinct

- Esplanade

Sporting and Recreation ■ Precinct

- Sports grounds
- Wharf Street

Town Centre Gateway Precinct ■

- Davidson Street





Illustration showing the main precincts within Port Douglas



“Macrossan Street is envisioned as a Green Spine”

3.1 Village Centre General description of design objectives for the village centre precinct

With the exception of wider circulation initiatives minimal changes to areas outside of the waterfront are anticipated. Over all design will ensure that each street maintains its' unique character, and derives this character from existing values, exhibiting a gentle approach to change and a respect for existing conditions.

A clear framework for access and circulation will include improvements to the intersection of Davidson and Mowbray Streets as the key gateway to the town, with the utilisation of Mowbray Street as the first node of arrival. This will highlight the importance of the proposed Community and Cultural Precinct and positions the waterfront as the key experience for those arriving in Port Douglas. The creation of the Mowbray Street Gateway sets the scene for the creation of a 'mobility hub' at the eastern end of Mowbray Street. The mobility hub is intended to consolidate visitor car parking, coach drop off and pick up facilities, cycle storage and hire car offices. This initiative will not remove

“each street maintains its' unique character”

the need for on street parking or other existing parking resources but, rather, will lessen demand on parking in the police reserve and mitigate the future removal of parking within the proposed waterfront park.

The realignment of the Davidson Street and Mowbray Street intersection will promote a clockwise vehicular circulation pattern by encouraging vehicles to use Wharf and Macrossan Streets as a 'loop'. Macrossan Street is envisioned as a “Green Spine” with the impacts of vehicle infrastructure being reduced by the introduction of additional tree planting, increasing green space amenity while connecting this highly successful retail strip to the overall open space system. This will form a lineal link from the Waterfront Park to Four Mile Beach and consolidate the east west axis that will connect these two key attractors and the town of Port Douglas.





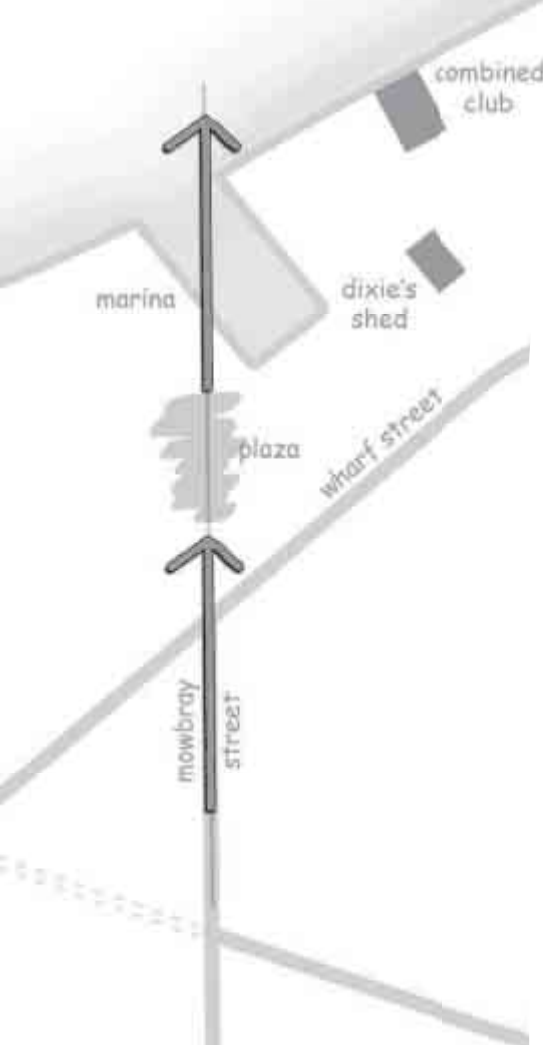
Port Douglas is not seen as a car dominated environment and as a result a key objective is to better promote walking and cycling throughout the town and to improve conditions for foot traffic. Improved street lighting for footpaths and improving the environmental quality and amenity of certain streets through tree planting are ways to ameliorate pedestrian environments. Streets should be kept to a human scale, which is both intimate and “non-urban” in style. The charm and appeal of Port Douglas lies in its rather ad-hoc, relaxed, “barefoot” feel where the mingling of lush tropical vegetation, footpath dining and small boutiques blend together in a way which encourages exploration and lends an unhurried tropical air to the centre of town. Design should encourage such pedestrian movement and assist in activating other less used areas of the town by encouraging access across the town as a whole.

“gentle approach to change”



“Port Douglas is not seen as a car dominated environment”





3.1.1 Mowbray Street

Description

In order to rationalise vehicular movement into and around the township, and in the interests of making the waterfront a defining aspect of the arrival experience, Mowbray Street will become the new Gateway to Port Douglas with traffic directed via a new entry feature located at Davidson Street. The scale of the road will express its status within the hierarchy and clearly articulate it as the major approach to the town centre and waterfront.

A waterfront plaza located within the proposed new Marina redevelopment will serve a number of functions within the broader network of public open spaces. It will provide a waterfront arrival node and a dramatic termination to the Cultural Precinct, offering opportunities for cultural events and activities within a more formalised space that will help transition between the marina development and the broader parkland to the north.

Land topography together with the location and nature of land within the sporting precinct allows opportunities for stormwater collection and treatment prior to discharge into the wider water network. The redirection of stormwater through treatment lines

north-west and south-east of the sports precinct will allow opportunity for improved purification and create multiple discharge points in to the Dickson Inlet, improving the quality of water along the waterfront

Mowbray Street will also function as the key access to the Cultural Precinct through which visitors will pass. It is envisioned as an inviting streetscape with a welcoming community focus, placing the community and its' values at the heart of the precinct.

This becomes the civic heart of Port Douglas and will express the community's values through the following features:

- *Community Centre within parkland setting*
- *Clink Theatre*
- *Community Gardens*
- *Bioretention basins and stormwater treatment systems adjacent to the Sports Precinct*



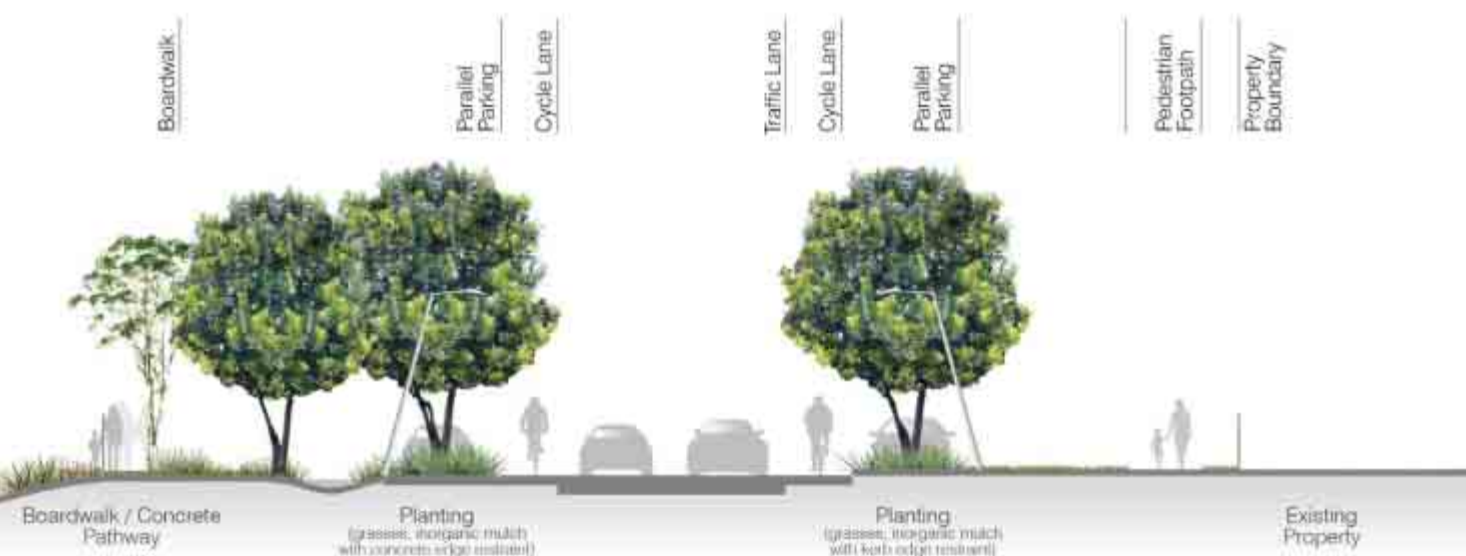
Typical Cross Section - Mowbray Street



Design guidelines/features

- Arrival landscaping and new entry statement at intersection with Davidson Street.
- Pedestrian friendly intersection treatment at Wharf Street to connect Waterfront Plaza and Mobility Hub.
- Integrate WSUD treatment to side of street no kerb.
- Meandering 2m wide concrete shared path along western side, passing through the WSUD treatment incorporating boardwalk and possible interpretive area to express commitment to sustainability.
- Shared path links to the existing cycle network and provides clear access to the waterfront (ensure safe crossing points across Wharf Street).
- Ensure community gardens do not interfere with areas suited to future WSUD features and are located close to the Community Centre to allow ease of access to facilities and provide greater passive surveillance.
- Create and articulate clear linkage to the waterfront for pedestrians and cyclists.
- The intersection at Davidson Street will be re-aligned to promote left turning vehicles.

**“the waterfront
a defining aspect
of the arrival
experience”**



3.1.2 Warner Street

Description

The section of Warner Street between Grant and Owen Streets has become something of an iconic streetscape for Port Douglas. Its avenue of Indian Padauk trees provides a shady and attractive environment, but this theme needs to be extended to the full length of Warner Street to Wharf Street. This will provide much needed shade and help to reduce the impact of the larger scale buildings in this section, of the street and help reconnect this part of the town to the waterfront.

“frame the view corridor to Dixie Street”

“reconnect this part of the town to the waterfront”

At present the dominance of the Coles building, its' loading and parking facilities and the proximity of other rather industrial scale buildings creates an uneasy feel more suited to town fringe than town centre. The planting of large scale tropical trees will lessen these impacts and improve the general streetscape. Landscaping will also frame the view corridor to Dixie Street, which is in fact in direct alignment with Warner Street and forms a strong axis to the Sugar Wharf and St Mary's by the Sea.



Typical Cross Section - Warner Street (between Grant and Wharf Streets)



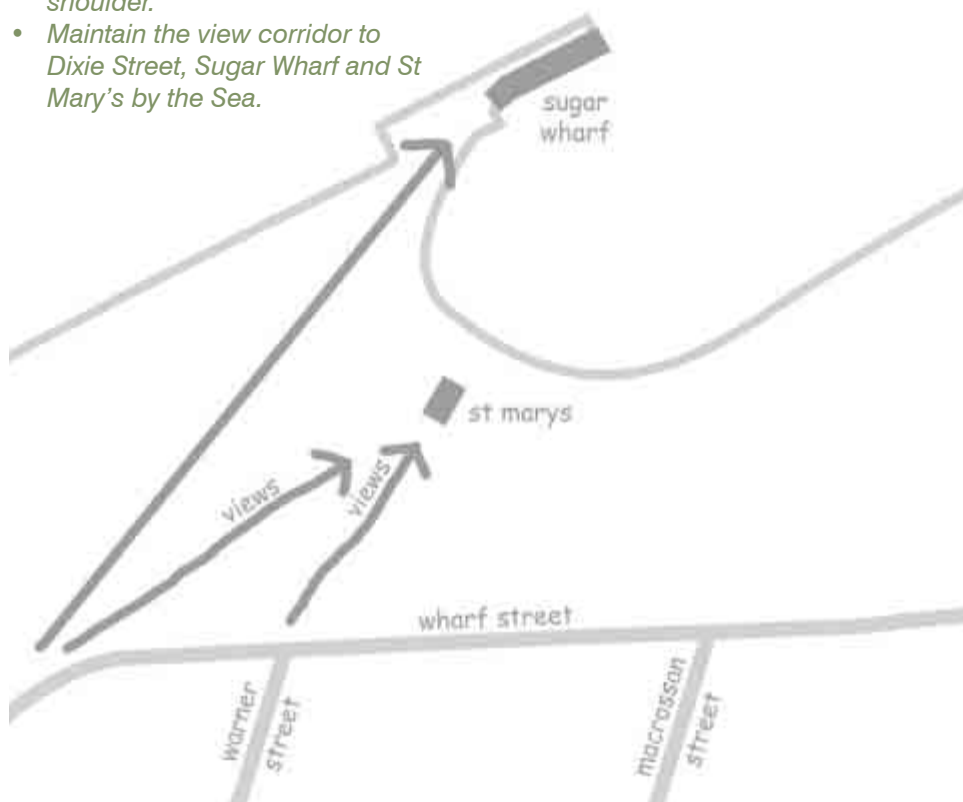
Example of decking in use on pathway under trees

Design guidelines/features Between Owen Street and Grant Street

- Incorporate a planted WSUD to the road side.
- No kerb and channel rather use a concrete edge restraint.
- Use a recycled decking system to relieve pressure on tree root systems and to allow for a pedestrian footpath.
- Decked crossovers for driveways.
- Develop a maintenance strategy to manage the existing trees and to ensure their long term health.
- Install one way system to reduce trafficable area (from Owen - Grant Streets only).

Between Grant Street and Wharf Street

- Indian Padauk trees planted in large islands within the road shoulder.
- Maintain the view corridor to Dixie Street, Sugar Wharf and St Mary's by the Sea.



Typical Cross Section - Warner Street (between Owen and Grant Streets)



3.1.3 Macrossan Street Description

Macrossan Street is the main shopping area of Port Douglas, and is a lively bustling thoroughfare typified by large shade trees and tropical plantings with small shops and outdoor dining. Vehicles are currently controlled by the dominance of pedestrians and by the movement associated with on street parking. This mix of activities slows traffic speeds and helps to foster a more relaxed and less urban atmosphere where pedestrians can move more freely and drivers give greater consideration to other road users.

With Mowbray Street becoming the main approach to Port Douglas it is anticipated that traffic along Macrossan Street will be further reduced. The extension of the current centre planting and parking along the northern end

“...typified by large shade trees and tropical plantings...”

of Macrossan to Davidson Street will see the consolidation of the “Green Spine” that will connect the waterfront parkland to Four Mile Beach.

The creation of the Green Spine would see the rationalisation of loading bays and on street parking along the Southern Side of the street to create a continuous shaded green spine that links the street to the waterfront parklands. This will require detailed traffic modelling to ensure its feasibility but in principle would deliver an enhancement in the overall amenity of street.

“...relaxed and less urban atmosphere...”



Carnivale parade



“...’green spine’ that will connect the waterfront parkland to four mile beach”



Design guidelines/features

- Extend median planting and centre parking along the remainder of Macrossan Street between Owen Street and Davidson Street.
- Minimise the impact of the large intersections with surface treatments.
- Streetscape improvements must make provision for the Carnivale Parade.
- Maintain the ad hoc nature of the streetscape by allowing for non-uniform approach to street furniture.
- Maintain and enhance the current mix of tropical shade trees allowing for flowering species to add colour and interest.
- Improvements to the current intersection with Davidson Street to improve pedestrian movement and reinforce the axis with the Esplanade Four Mile beach.
- Maintain current pathway treatments (Refer to Part 2.0 Design Guidelines - Pathways Across Town).



Typical Cross Section - Macrossan Street



“Wharf Street provides valuable views to the waterfront and the sea and mountains beyond”

3.1.4 Wharf Street Description

Once Mowbray Street is activated as the major approach to the town Wharf Street will play a key role within this new arrival experience. In general Wharf Street provides valuable views to the waterfront and the sea and mountains beyond.

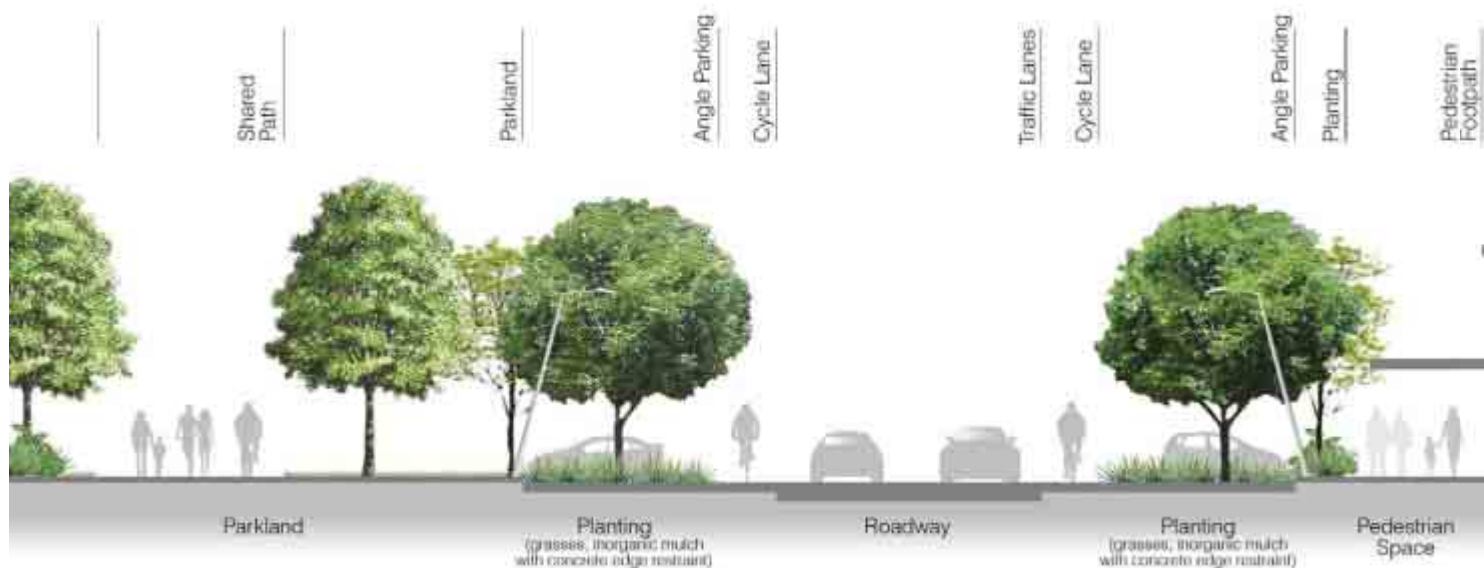
Main View corridors:

- *Maintain the view corridor to St Mary's by the Sea as Wharf Street passes the boat yard and the combined club*
- *Maintain the view corridor to St Mary's by the Sea and the Sugar Wharf (Dixie Street) from the intersection at Warner Street*

Wharf Street is to be designed as a slow vehicle environment to allow for the safe movement of pedestrians to the waterfront parkland. Landscaping will provide a transition from the current edge of the town to the open parkland setting of the proposed waterfront.

Design guidelines/features

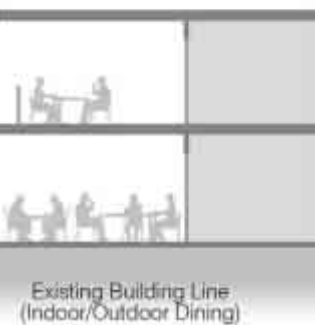
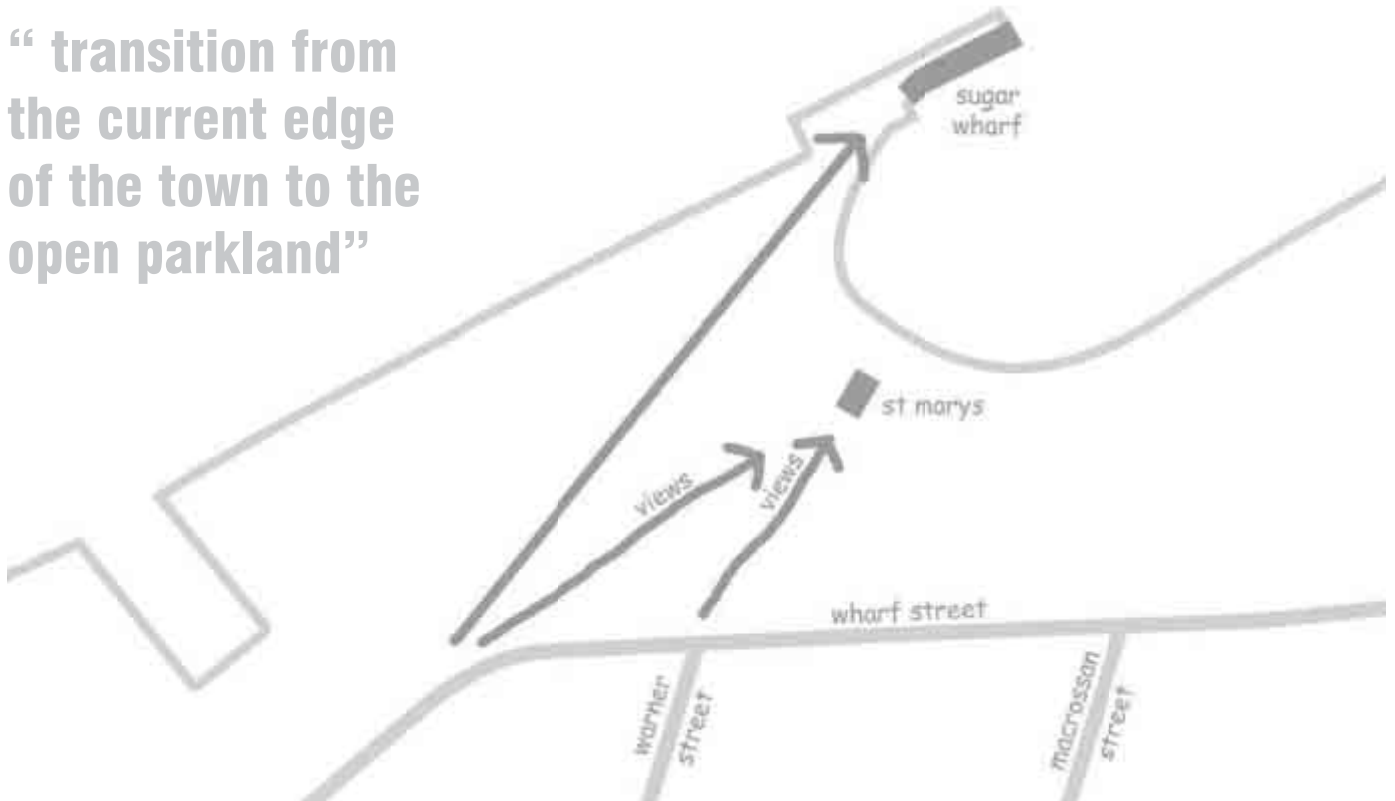
- *Slow vehicle environment.*
- *Pedestrian friendly.*
- *Transition from town edge to parkland (eastern and western sides of Wharf Street).*
- *Parkland edge treatment to park informal (avoid rigid plantings of Poinciana trees avenue planting styles).*
- *Facilitate pedestrian/cyclist movement between new marina and the parkland via clearly defined public access along the Wharf Street frontage of the plaza.*
- *No additional kerbing to the waterfront park edge and use bollards or similar to restrict vehicular access.*
- *Park edge open to allow free access and clear views of the waterfront park.*
- *Maintain view corridors (refer to illustration opposite).*



Typical Cross Section - Wharf Street



“ transition from
the current edge
of the town to the
open parkland”





3.1.5 Grant Street Description

The extension of Mowbray Street to Wharf Street to create a new approach road to town will result in the closure of Grant Street between Mowbray Street and Wharf Street. The construction of the Mobility Hub will, however, help activate this corner of Grant Street. There is a lively café scene with shaded outdoor dining at the Macrossan Street end of Grant Street and will improve circulation to and from this area of the town.

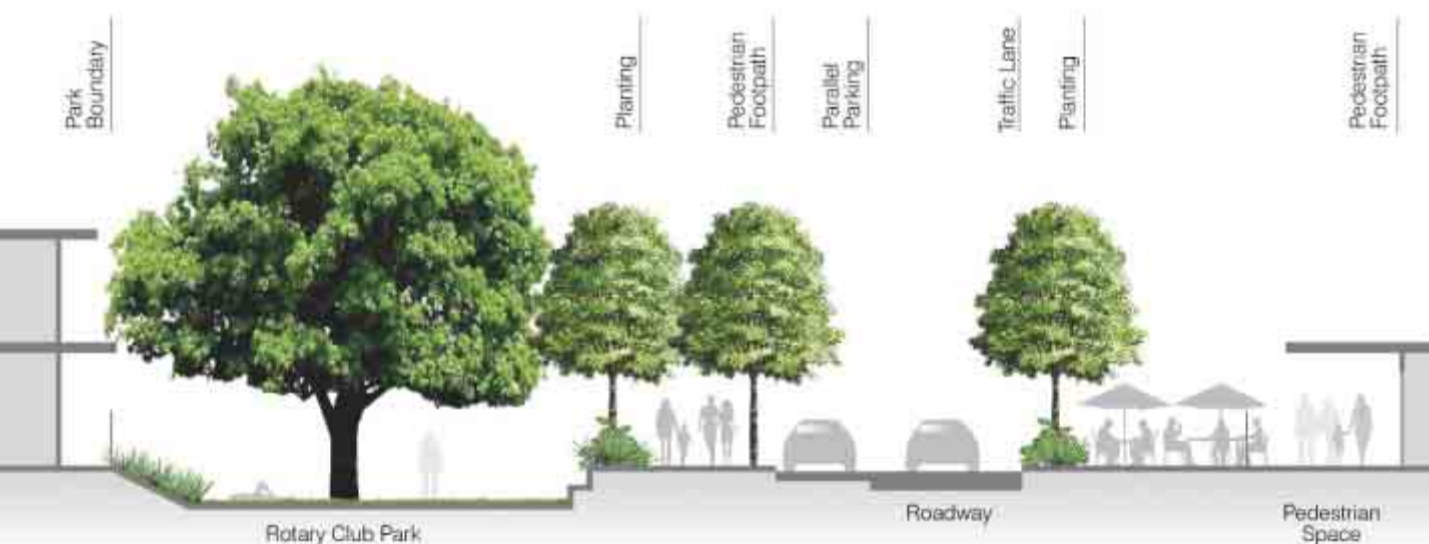
lively café scene with shaded outdoor dining

The southern end of Grant Street adjacent to Macrossan Street along its eastern side has a lively café scene with shaded outdoor dining facing the Rotary Club Park. This western side of the street requires tree planting to enhance the streetscape with large shade trees.

Design guidelines/features

- *General Streetscape improvements in line with recent development.*
- *Continue theme of Copper Pods to Mowbray Street.*
- *Trees in grates at 8m centres along existing footpath to provide more shade.*

“tree planting to enhance the streetscape with large shade trees”



Typical Cross Section - Grant Street



Rotary Club Park





**“welcome visitors
and enhance the
sense of arrival”**

3.1.6 Davidson Street
(between Macrossan
Street and Mowbray
Street)

Description

In order to rationalise vehicular movement into and around the township, and in the interests of making the waterfront a defining aspect of the arrival experience, Mowbray Street will become the new Gateway to Port Douglas with traffic directed via a new entry feature located at Davidson Street. The scale of the road will express its status within the hierarchy and clearly articulate it as the major approach to the town centre and waterfront.

Design guidelines/features

- *The provision of a roundabout offers the greatest opportunity for a landscaped arrival feature.*
- *Possible entry sign to welcome visitors and enhance the sense of arrival.*
- *Roundabout layout designed to emphasise the Mowbray Street turn off and promote Mowbray Street as the approach to the Town via the waterfront.*
- *Incorporate Calophyllum ssp. to link existing themes on Mowbray Street.*
- *Incorporate “iconic” plant species such as licuala and cabbage palms as well as white flowering plants that compliment prevailing street themes.*
- *Signage should be clear and simple in design and in materials which associate to Port Douglas’ maritime history - use of stainless steel and hardwood timber.*

**“...Gateway to
Port Douglas...”**



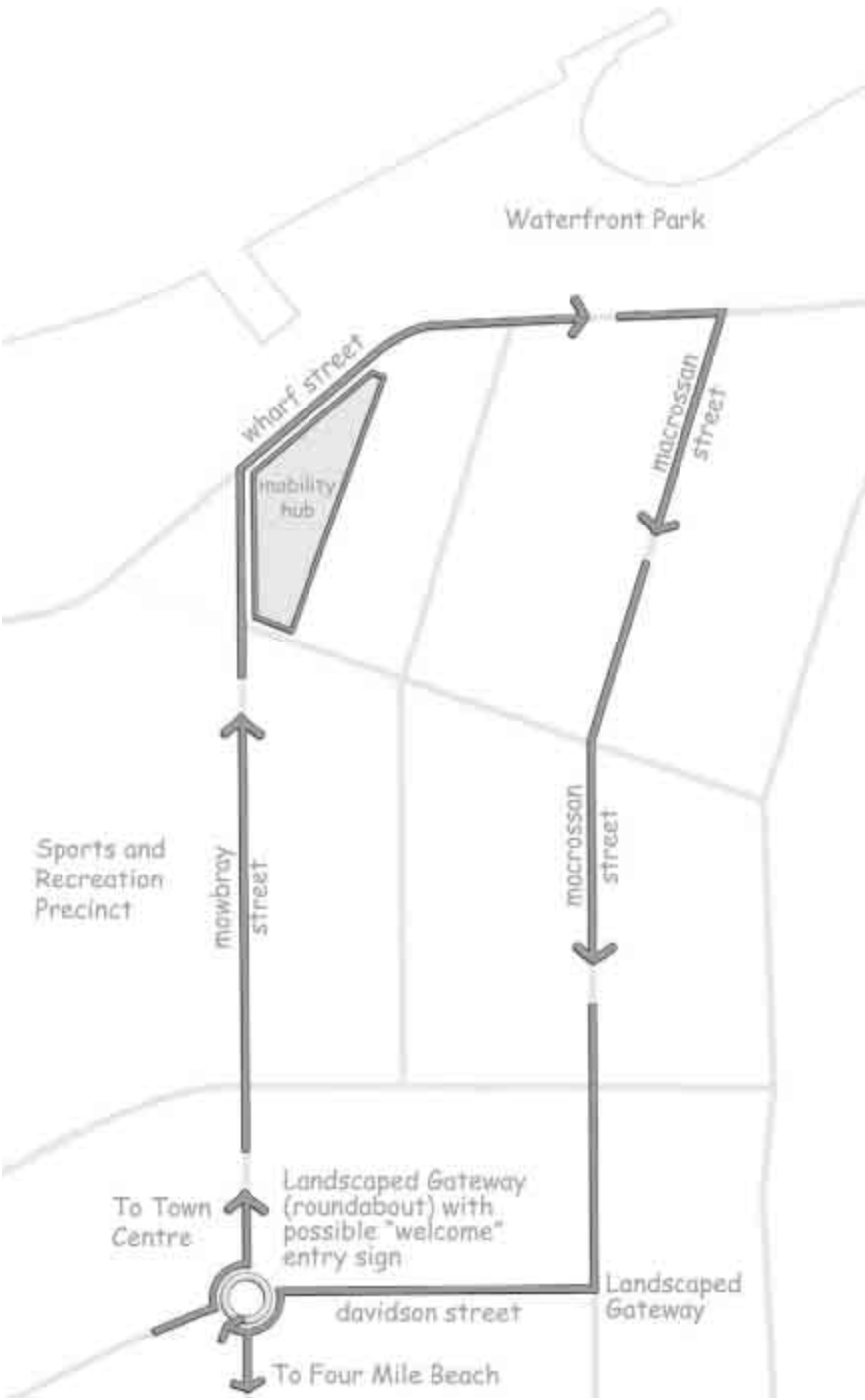


Illustration showing new circulation within the town





3.2 Waterfront Parkland General description of design objectives for the waterfront parkland precinct

The Master Plan recognised the role of the waterfront as a principle feature of Port Douglas. A key focus of the master planning process was the creation of a “walkable waterfront” allowing unrestrained public access to the waters edge from the Combined Club through to Rex Smeal Park. The implementation of a new gateway via Mowbray Street will ensure the waterfront will become a defining experience for visitors to Port Douglas as they approach the village centre.

“...the waterfront will become a defining experience for visitors...”

Key to the consolidation of the new walkable waterfront is the removal of private buildings and parking between the Combined Club and the Sugar Wharf. The reclamation of this area for public open space will offer many key design opportunities:

- *The creation of a continuous boardwalk between the combined club and sugar wharf*
- *The creation of public moorings*
- *Enhance Market Park, and allow waterside market access along the newly formed boardwalks*
- *Improve the range of activities and experiences offered by the current park*
- *Enhance the current landscape settings for the historic sites of Sugar Wharf and St Mary's by the Sea*
- *Enhance views to the Sugar Wharf, St Mary's by the Sea and the inlet from Wharf Street*





Future design of this area should seek to transition the waterfront parkland from the marina at its southern end, where there is a concentration of built form, to a more natural, undeveloped character at the far northern end of Rex Smeal Park.

“walkable waterfront”

Activity is concentrated around the Sugar Wharf. Sugar Wharf, the Combined Club and St Mary's by the Sea represent a vital reminder of Port Douglas' historic past.

Rex Smeal Park will remain relatively untouched and serve as an area of passive recreation, a quiet zone, which will continue to serve as a function area for special events.

Pathways form an essential component of the redevelopment of the waterfront parkland as they articulate the space and assist with way-finding reducing the need for signage. Solutions to providing pathways, access ways and supporting market activities need to be as unintrusive as possible.

The current lack of appropriate maintenance access across the site has led to it being worn by vehicle tracks which have eroded the grass and created a scarred appearance with dust and exposed earth dominating the parkland. This issue is to be addressed by the inclusion of appropriate access paths which can be combined with pedestrian paths to minimise impacts on the parkland. While paths are acknowledged as a key component of the parkland they are not to be a dominant feature of the landscape. A sealed path will provide access throughout the precinct to all users, including maintenance vehicles.

This simple path network will assist in the maintenance of the park and allow for more controlled vehicular access, directing pedestrian movement through and across the site, incorporating the historic features.

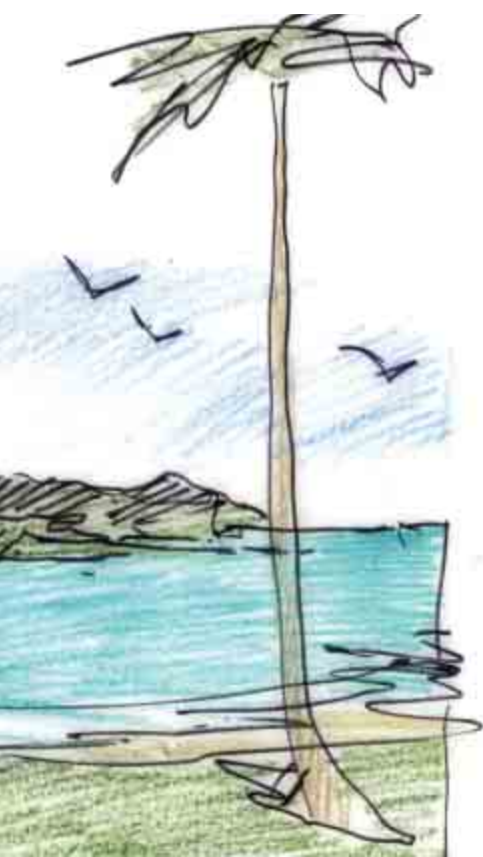
The waterfront has a vibrant cultural past representing both the early settlers and the traditional owners alike and there is extensive opportunity for interpretive signage, which can help to articulate the towns' historic context and link the modern waterfront to the past.

The waterfront parkland is divided in to the following sub-precincts:

- *Rex Smeal*
- *Anzac Park*
- *St Mary's by the Sea*
- *Sugar Wharf and Dixie Street*
- *Waterfront*
- *Island Point*

Further north there would be fewer built structures (although some picnic facilities) and more natural landscape. Opportunities to provide limited parking under the existing trees should be investigated to improve accessibility for a range of users.

The design seeks to remove the large areas of car parking and improve the general park amenity of this area. Also to resolve the impact of the markets on the environment with the possibility to relocate the markets to the northern end of the park thereby providing waterfront access.





3.2.1 Rex Smeal Park Description

Rex Smeal Park is located on a site of enduring historic significance to the Port Douglas community. The park is built within the confines of the former sea pool constructed in Port Douglas in 1972 to provide a safe swimming environment for the town's residents. The pool was constructed using quarried rocks, partly built on top of the remains of the original nineteenth century stone jetty. This jetty was the first to be built in the town to service the loading and unloading of cargo. It was located at the end of Wharf Street, which soon became the most important thoroughfare in the burgeoning town. Although the sea pool initially proved popular and successful, it eventually became unusable and was filled in during 1976, at which point the new park was named in honour of Rex Smeal, a former Douglas Shire Council overseer.

This park enjoys patronage by residents and visitors alike for its amenity and unimpeded views of the Coral Sea and mountainous backdrop.

The Port Douglas Court House Museum and the Police Reserve

The Port Douglas Court House was constructed on its current site in 1879 as the first court house in the town and is one of the earliest surviving timber constructed court houses in Queensland. The building now operates as a local history museum and has been run by the Port Douglas Historical Society since 1997. The Court House is the only survivor of the original government buildings that

were constructed along Wharf Street during the latter part of the nineteenth century. The Court House is currently listed in the Queensland Heritage Register, the former Douglas Shire Policy for Cultural Heritage and Valuable Sites and under the National Trust of Queensland.

As early as 1878, a large area of the current police reserve was marked as "Reserved for Police use". As Port Douglas grew in importance the town became the headquarters for the police in the area and it served in this capacity for a number of years. The original barracks and site office are no longer, having been moved to Einsliegh. The current buildings date from the 1960s to the present day, but provide an historical link to the sites past and to the early establishment of an administrative quarter.

Kuku Yalanji

Port Douglas is located in the tribal lands of the Kuku Yalanji people. It is believed that there were originally three or five groups within the tribe. Their territory included rainforest, range, riverine and coastal environments. The communities lived on a wide and varied range of natural resources. For the Kuku Yalanji, the environment was a humanised landscape, one described in human terms where seasonal changes were interpreted as changes in the human or social world. It was interacted with, spoken to and acted upon and in return provided materials and resources.

The discovery of gold in the Hodgkinson River and the opening up of the Christie Palmerston Road





to the coast in 1877, brought with it an incredible and inconceivable change for the Kuku Yalanji tribe. Early contact was often violent with fatalities occurring on both sides.

The area now known as Rex Smeal Park was an important meeting place and campsite for the Kuku Yalanji people before white settlement encroached on their traditional grounds. The Kuku Yalanji would meet here with members of the neighbouring peoples from the Irikanji and the Jabugai. The mango tree plantings, which persist to this day, were particular to these meeting areas, and still have a high social value to the local indigenous community due to their connection to the community Elders.

The beach near the court house and adjacent to Rex Smeal Park was historically used by the women of the Kuku Yalanji during oyster fishing.

“...important meeting place and campsite for the Kuku Yalanji people...”

Historic rock wall



Design guidelines/features

- *Preserve and incorporate the existing rock wall in to any future changes to the site.*
- *To protect existing trees, large scale parking is to be restricted and a semi-formalised shared path/parking and set down area provided within the footprint of existing access tracks to service special events.*
- *Informal permeable surface to Rex Smeal access path.*
- *Access approach to Rex Smeal (toilet block) to incorporate an enhanced planted swale as part of a WSUD treatment.*
- *Replace the tired BBQs with more appropriate lightweight structures.*
- *Create link to coastal Trail with appropriate signage.*
- *Remove and replace the existing signs with more appropriate signage.*
- *Replace damaged steps to the beach adjacent to Rex Smeal Park with low key access steps in natural form.*
- *Retain existing character and features and enhance setting as a quiet area for passive recreation.*
- *Renovate the toilet block and screen facilities with suitable planting.*
- *Explore the indigenous and non-Indigenous cultural heritage values of the area by incorporating interpretive displays and art work based on these themes.*
- *Incorporate an appropriate Kuku Yalanji name on the theme of the meeting place to compliment the later 1970s naming of the park.*
- *Natural transition to the coastal vegetation zone.*
- *Informal path network, which clearly articulates both the coastal path and the island point road lookout.*
- *Replace existing BBQs with more suitable light weight structures (Refer to 2.0 Design Guidelines - Furniture).*
- *Maintain views to and from the Court House across the park.*
- *Maintain views from end of Anzac Park to ocean.*
- *Relocate toilet and BBQ facilities to maintain key views.*
- *Replace existing play area with new nature based adventure playground incorporating imaginative play elements around the existing fig trees.*
- *Provide permanent performance platform with demountable stage structure adjacent to police reserve.*

Annual Port Douglas food and wine festival





3.2.2 Anzac Park Description

Anzac Park was originally part of the government precinct that included a host of official buildings which had sprung up along Wharf Street during the early part of the nineteenth century. The Park itself originally formed part of Macrossan Street and only recently became into a local government reserve allowing for the creation of a war memorial. The contemporary Park features a commemorative Anzac statue erected in 1923, a disarmed sea mine from World War II, discovered on Four Mile Beach, and a number of commemorative plaques marking the celebration of Australia's Centenary of Federation, erected by the Rotary Club of Port Douglas in 2001.

Design guidelines/features

- *Screen police station with suitable native plants incorporated with WSUD treatment.*
- *Rationalise recent tree planting with species of an appropriate size (minimum 100 litre specimens).*
- *Landscaping should emphasise the key axis with Macrossan Street.*
- *Re-establish and enhance views to the waterfront.*
- *Open up views to Sugar Wharf from waterfront edge of Anzac Park.*
- *Establish appropriate beach access to cove.*
- *Repair and update damaged rotary club displays.*



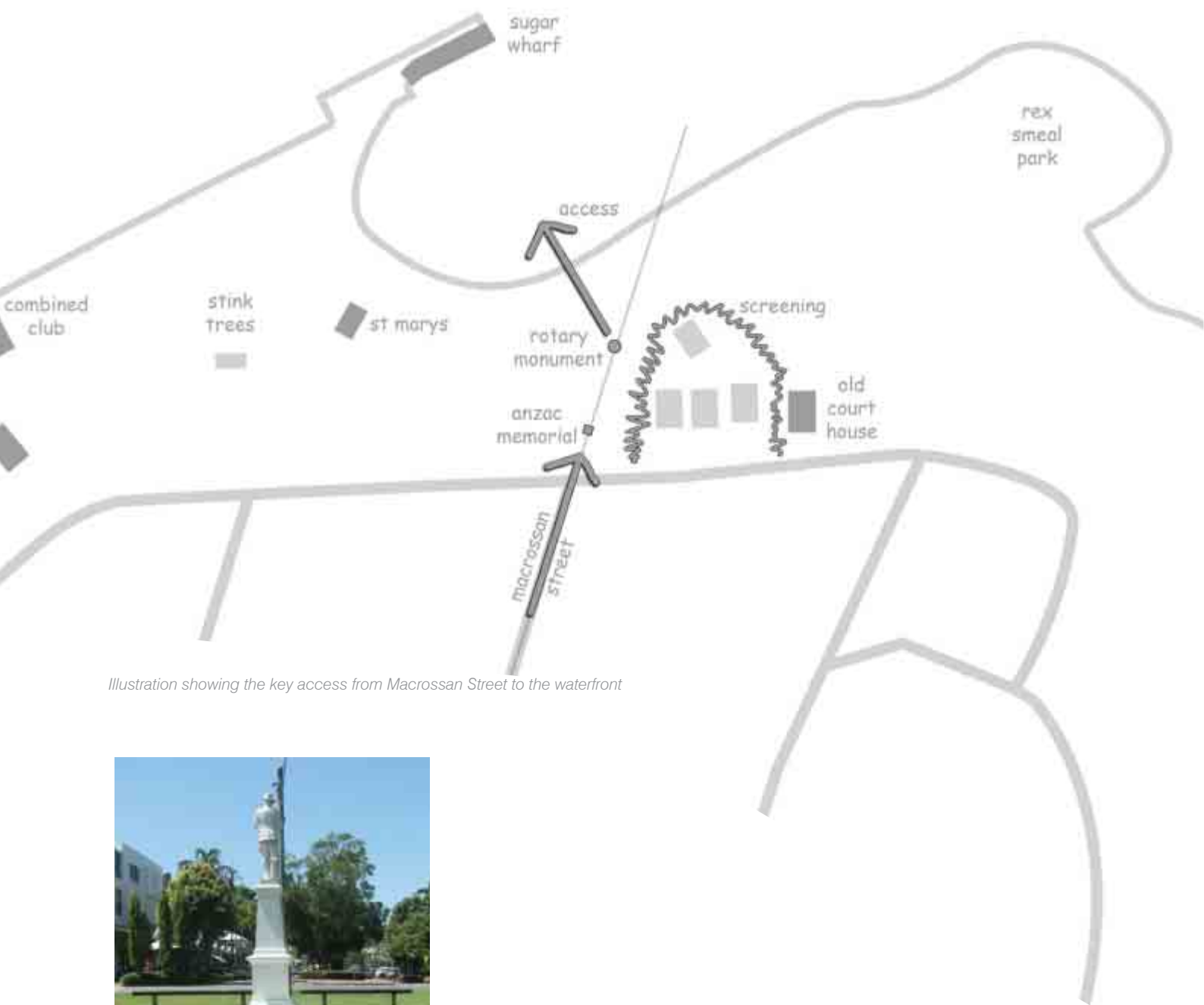


Illustration showing the key access from Macrossan Street to the waterfront





3.2.3 St Mary's by the Sea

Description

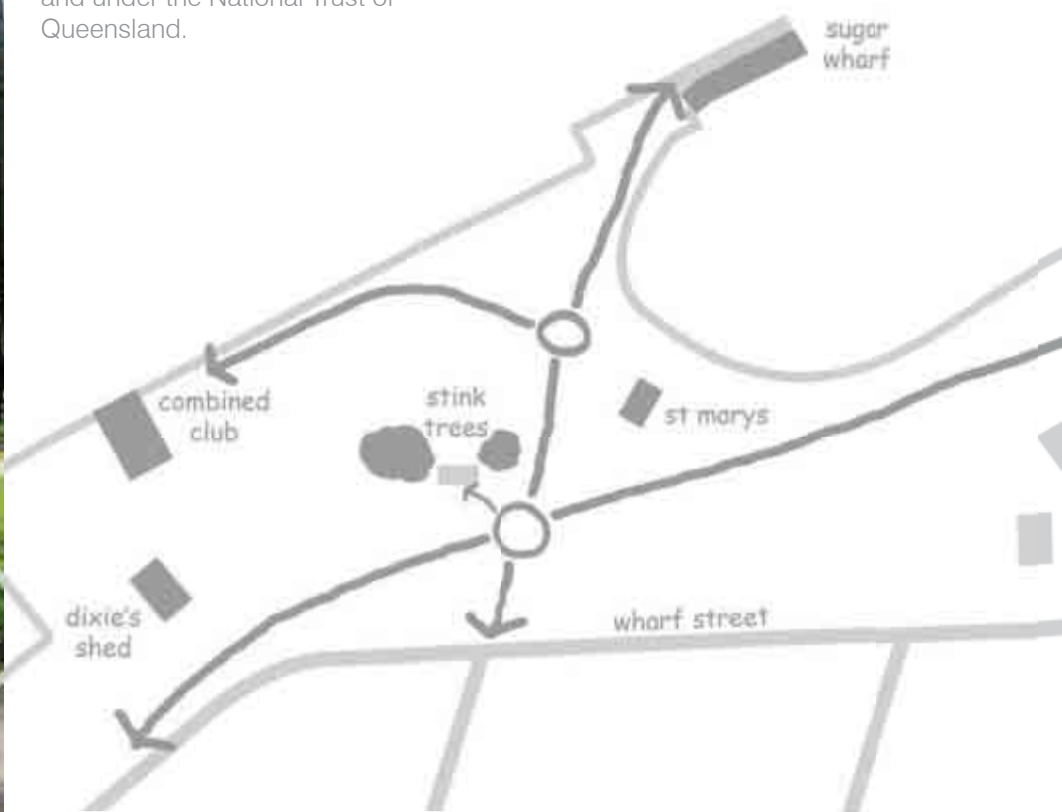
St Mary's by the Sea is one of the oldest buildings in Port Douglas and was reconstructed in about 1911 from the remains of the original Port Douglas Catholic Church, which had been destroyed during a cyclone in March of that year.

In 1987, the Catholic Church gave St Mary's Church (now in a state of deterioration) to the local community who rallied to have it relocated to its current location in November 1988. Once relocated, St Mary's Church was restored and renamed "St Mary's by the Sea". It is used as an ecumenical community church for weddings, carol services and other special services and events. The building is now listed in the Queensland Heritage Register, the former Douglas Shire Policy for Cultural Heritage and Valuable Sites and under the National Trust of Queensland.

"The Stink Trees"

Locally known as "The Stink Trees", these specimens of *Ocotea usambarensis* were rumoured to have been planted by a visiting sailor during the later years of the nineteenth century. The species is native to Africa and it was valued at the time by cabinet makers in southern Africa. These trees are indicative of the town's historic status as a major trading port in North Queensland and bear testimony to its maritime history.

During its flowering season the *Ocotea* trees emit a unique and rather unpleasant, sweet odour; hence its colloquial name "stink trees". This odour and the historical connotations that are inherent in this introduced species have seen it become a locally significant feature of the Port Douglas Waterfront and highly valued by the local community.





Design guidelines/features

- Vehicle set down area close to the church to be incorporated in to the main pedestrian network.
- Key node on footpath network and a perfect area for a meeting place.
- Opportunity for public art feature as part of the above based on local heritage or environmental values.
- Opportunities for additional heritage interpretation of historic uses within the area.
- Enhance the scenic charm of the church and provide a suitably relaxed tropical setting for photo opportunities for both wedding parties and tourists.
- Opportunity to enhance and enlarge the existing relaxed and informal tropical garden theme around the church with an emphasis on scented flowers.

- Maintain view corridor from Wharf Street.
- Secondary view corridor from Warner Street (relocate the existing electrical box at end of Warner Street to open views to church).
- Remove the existing play areas and bollards adjacent to the church.

Toilet Block

- Screen existing toilet block to reduce visual impact.
- Connect to main footpath network.
- Highlight "The Stink Trees" with appropriate interpretive signage.



"The Stink Tree"

"...one of the earliest Catholic Churches in North Queensland"





Dixie Street



Aerial c1938



Sugar Wharf

Council Wharf c.1920

Single tram track on stone pitched approach prior to wharf shed modifications mid-1920s

© DSHS 2007



3.2.4 Sugar Wharf

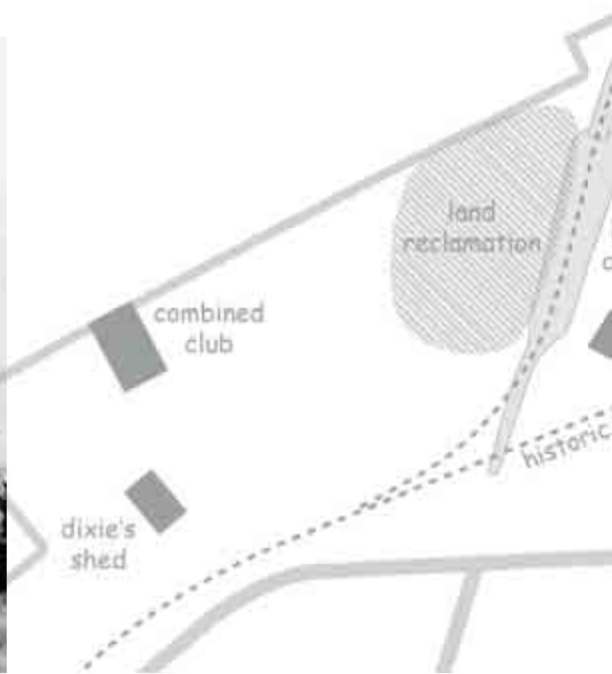
Port Douglas was established in 1877 as a port to service the newly opened Hodgkinson Goldfield. Between 1877 and 1893, Port Douglas functioned primarily as a port for the mining hinterland and secondarily as an administrative and service centre for the surrounding developing agricultural districts. Following the decision in 1885 to construct a railway terminus at Cairns trade with Port Douglas soon dwindled and the town survived principally as a sugar port, with the last sugar shipment being made in 1958.

There were a number of associated buildings with the early wharfage. This included two storage sheds which were erected on the Divisional Board Wharf in 1896. These sheds projected into the channel so as to load lighters that would ferry bagged sugar to larger

vessels anchored out to sea. The completion of the Mossman to Port Douglas tramway in 1900 meant that the sheds were used simply for the storage of the sugar as it awaited transportation to larger vessels.

The Port Douglas and District Combined Club

In 1973 The Port Douglas and District Combined Club took over the use of the one remaining shed, the other having been demolished in the 1960s. The original wharf structure and jetty were lost during subsequent land reclamation during 1977. The timber framed original structure has been substantially altered over time including a new roof and frontage. In spite of these alterations the current building is listed in the Queensland Heritage Register, the former Douglas Shire Policy for Cultural Heritage and Valuable Sites and under the National Trust of Queensland.





The Sugar Wharf

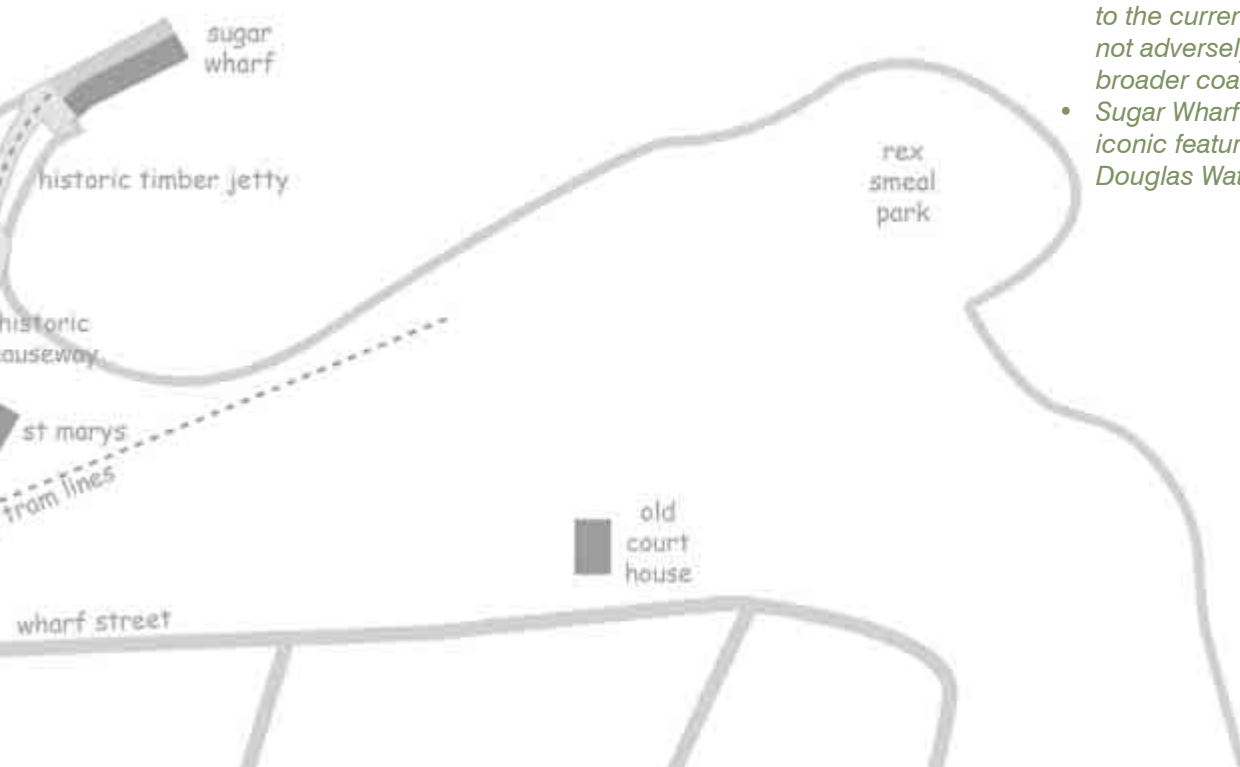
The Sugar Wharf building we see today was constructed in 1904 for the Douglas Shire Council and was designed to handle general cargo as well as sugar. The new wharfage benefited from the construction of the tramway network linking the sugar mills of Mossman to the township of Port Douglas. The original nineteenth century approach to the wharf consisted of a stone pitched wall, a precision placed stone ramp some fifty metres long, was extended by the addition of a timber jetty during the 1904 upgrade. At this same time the original storage shed was extended and relocated over the new jetty, sliding the structure back from the wharfs' outer face.

The space between the original stone-pitched jetty and the storage building was reclaimed in 1977 and

the timber framed jetty removed and the stone pitched jetty replaced by the rock wall which remains to this day, however parts of the original stone pitched jetty are still in evidence at the side of the new earth filled access to the building. Dixie Street is built on the alignment of this old jetty, and the original stone pitched approach is enclosed beneath the tarmac. The Sugar Wharf building and the Combined Club are all that remains of the complex of buildings which made up the historic working waterfront of Port Douglas. Tramway buildings including a station, customs office, bond store, workshop and goods shed have all been lost. The Sugar Wharf is listed in both the Queensland Heritage Register, the former Douglas Shire Policy for Cultural Heritage and Valuable Sites and under the National Trust of Queensland.

Design guidelines/features

- *Enhance the landscape setting to the Sugar Wharf with historically sensitive treatments which recognise and acknowledge the historic character of the wharfage.*
- *Opportunity to expose the historic stone pitched causeway currently hidden beneath Dixie Street and enhance the historic axis with Warner Street.*
- *Link Dixie Street to the gardens adjacent to St Mary's by the Sea.*
- *Opportunity to restore part of the original quay line to the limit of the original stone causeway and reinstate a timber jetty in imitation of the 1904 original with adaptation to suit the modern requirements of the Sugar Wharf and it's possible future uses.*
- *All restoration work must consider and respond to the effects of coastal influences and ensure that any changes to the current waterfront do not adversely impact on the broader coastal zone.*
- *Sugar Wharf is seen as an iconic feature of the Port Douglas Waterfront.*





3.2.5 Waterfront Description

The waterfront of Port Douglas was once the life blood of the town; and it was here that numerous wharves were established to provide facilities for the developing port. As trade began to decline upon the construction of the Cairns railway terminus in the late 19th century, sugar became the major export. With the last shipment in 1958, the remaining wharves fell into decline and only the Combined Club and the Sugar Wharf Building remain. In 1977, the waterfront between these remaining wharves was reclaimed and the area developed to provide a mix of residential and commercial buildings, which remain on the site to the present day.

A key focus of the master planning process was the creation of a 'walkable waterfront' providing public access to the waters edge all the way from Rex Smeal Park to the Combined Club. The reclamation

“...creation of a walkable waterfront”

of this area as public open space is a key component of the waterfront park and the demolition and removal of the current buildings is crucial to this new vision. This area is seen primarily as an open space precinct that meets the needs of residents and the expectations of tourists. An experience that is supported by 'clean' or 'light' maritime activity, which reflects the combined recreational and working nature of the port and ensures that boating is once again a central element to the waterfront experience.

The waterfront will provide a quayside boardwalk, potentially incorporating floating pontoons, which will provide clear access from the Combined Club to the



Typical Cross Section - Mooring Pontoon and Boardwalk



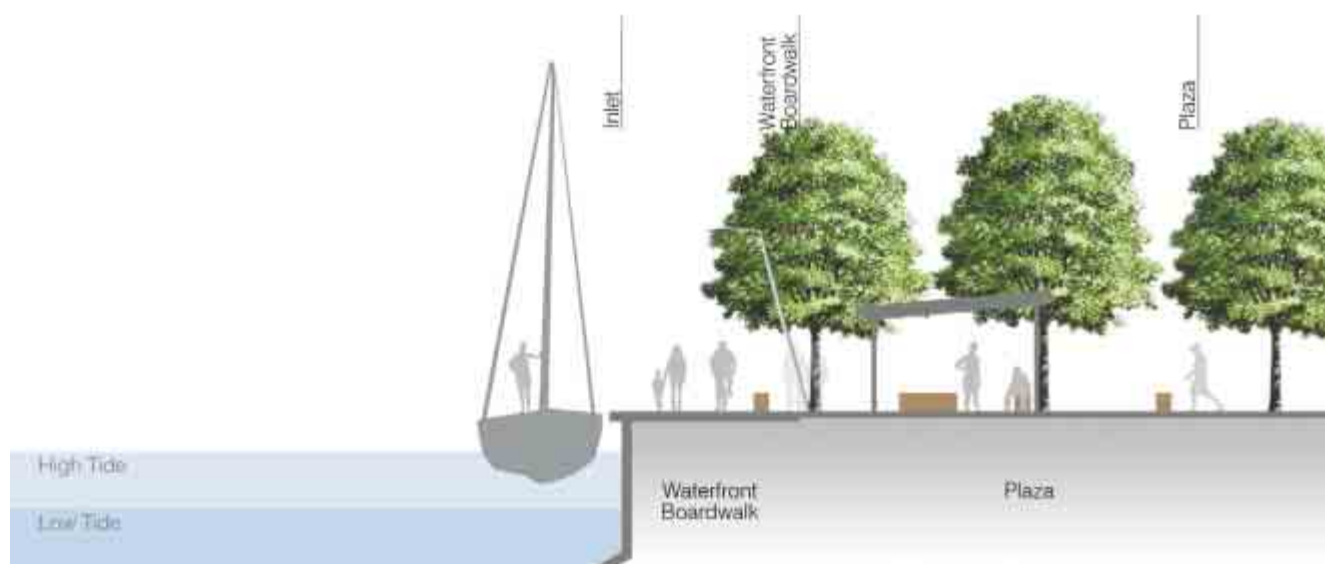
Sugar Wharf and St Mary's by the Sea. The boardwalk will take full advantage of the stunning views and allow opportunities to extend the current Sunday Markets to the waters edge. The amenity of the area will be enhanced by the construction of BBQ pavilions which will encourage and facilitate social gatherings and make best use of the magnificent ocean views.

Design guidelines/features

- *The removal of several buildings associated with the existing waterfront leases.*
- *To allow unrestrained public access to the waterfront from the Combined Club and the Sugar Wharf and St Mary's by the Sea.*
- *To develop the amenity of the waterfront and surrounding areas as a major component of the tourism experience.*
- *Improve the visual relationship between the town and waterfront by enhancing ocean views.*
- *Create a park land with pedestrian boardwalk, community facilities, short-term public boat mooring and visually sympathetic low scale pavilions.*
- *The boardwalk should respect the heritage values of the waterfront.*
- *Boardwalk structures should not impede views to inlet (low edge barriers are preferred over balustrades where these are practicable and provide adequate safety).*
- *Boardwalk structures should reflect the simple working nature of the historic wharves; simple, raw forms are preferred over more sophisticated urban design solutions.*
- *To provide a suitable waterside extension to the existing Sunday Markets.*
- *BBQ pavilions located to maximise views and local breezes, light structures which minimise the visual impact on the park land and possible views.*
- *Pavilions to be enhanced by shade trees (tree canopies can camouflage roof structures).*
- *Boardwalk should provide ample opportunity to sit and admire the magnificent views and furniture can be integrated in to the boardwalk structure (edge barriers).*
- *Lighting should not interfere with the natural appearance of the shoreline or create excessive light pollution and spoil night-time views by excessive glare.*
- *Low level lighting to boardwalk (concealed within barrier structures).*



Example of timber boardwalk



Typical Cross Section - Waterfront Plaza



Example of timber boardwalk

3.2.6 Island Point Description

Flagstaff Hill, originally known as 'Billy Goat Hill' is closely associated with the development of Port Douglas both as a functioning maritime port and later as a popular tourist destination. Flagstaff Hill was established as the location where the town's Harbour Master would raise the flag to alert Port Douglas to the approach of a vessel; and later as a cyclone warning. In the following years a scenic lookout at the end of Island Point Road was developed and this spot became an attraction to tourists for the vistas it allows to the Pacific Ocean and Four Mile Beach. A Global Direction Plaque was erected by the Rotary Club for the people of Port Douglas after its formation in 1988; and the plaque demonstrates the strong sense of community that evolved in the town through the actions of such groups.

As this area was essential to Queensland's shipping trade, the dangers of outlying reefs were originally marked by buoys and a small red light located at Island Point. As this proved insufficient, a small lighthouse was constructed in 1879, which was later replaced following damage caused during the 1911 cyclone.

Flagstaff Lookout, the former Shipping Flagstaff, the Global Direction Plaque and the Island Point Lighthouse are all listed under the Douglas Shire Council Policy No 4: Cultural Heritage and Valuable Sites, the National Trust of Queensland List of Cultural Heritage and Valuable Sites. Flagstaff Hill is now located within a conservation area and is within the Flagstaff Hill Special Management Area.

“scenic lookout”



Typical Cross Section - Island Point Road Lookout



Design guidelines/features

- Provide a discovery walk from Rex Smeal Park to Four Mile Beach via Island Point Road.
- Provide a sensitively designed lookout located at the axis of Grant Street on Island Point Road.
- Lookout to offer views across the townscape and currently unseen ocean views to the north.
- Improve the visitor experience with suitable interpretive signage.
- Combination of asphalt shared paths and dedicated concrete footpaths with recycled decking to lookout.
- The natural values of the site should be protected and enhanced.
- Infrastructure should be simple and unobtrusive in character and compliment the natural setting.
- Create a pedestrian connection between the island point lookout and Macrossan Street as a pedestrian only extension of Grant Street.
- Island Point is a continuation of the natural parkland experience offered at the northern end of Rex Smeal Park.
- Island Point offers nature based recreation in combination with heritage and scenic trail.
- The Island Point Road corridor will be dominated by the natural landscape that surrounds it.
- Platforms and stairs associated with the lookout structures will be light weight to reduce the impact on the natural soil structure and reflect the secluded qualities of the hill top.



Island Point Lighthouse



View from Flagstaff Hill Lookout



Grasscrete

3.3 The Four Mile Beach Esplanade

General description of design objectives for the waterfront parkland precinct

Design of the Four Mile Beach Esplanade will reorganise the road to provide a more pedestrian friendly environment including calmed traffic and streetscape treatments to improve the visitor experience and provide a more fitting naturalistic gateway to the beach front.

3.3.1 The Esplanade Description

The Esplanade at Four Mile Beach is a popular destination for locals and visitors alike. Situated at the eastern end of Macrossan Street and, only a short walk from the centre of town, it serves as a Gateway to the famous Four Mile Beach, considered to be the best in the Far North Queensland.

The Esplanade runs parallel to the beach and adjoins a small area of beachfront parkland. This currently offers picnic and BBQ facilities, outdoor showers, drinking fountains and cycle parking as well as access to the beach itself.



Porphyry Setts



Granite aggregate spray seal

“naturalistic gateway to the beachfront”

Typical Cross Section - Port Douglas Esplanade (between Macrossan and Mowbray Streets)





Typical WSUD treatment

Design guidelines/features

- Active and passive recreation opportunities and high quality vegetation and landscaping.
- Use of grasscrete to parking areas to minimise extents of bitumen and reduce perceived road widths.
- Create an improved sense of arrival at the beach front with informal native and endemic gateway planting.
- Improve pedestrian safety and enhance the existing “shared zone” approach to the roadway.
- Maintain two-way traffic and on road cycling but limit line marking and traffic speeds.
- Limit change and maintain relaxed feel of the esplanade.
- Re-alignment of roadway to remove the parallel parking to the park frontage to open up beach front park.
- Incorporate WSUD treatments within the drainage design.
- Improve and formalise visitor car parking and inhibit vehicular access to the parkland.
- Incorporate pedestrian friendly intersection treatments at Mowbray and Macrossan Streets.
- Landscape treatments to incorporate WSUD elements and to reflect the local dunal vegetation communities.
- Enhance and open the view corridor to the sea at the end of Macrossan Street and create an informal grassed “plaza”.
- Offer equal access to the beach via the life savers hut and improve disabled parking and access to facilities.
- Minimise kerb and channel and use WSUD friendly edge treatments to parkland.
- Minimise use of barrier kerbs and maintenance strips and use edge restraints to separate landscape areas.
- Informal tree planting using a mix of endemic species.



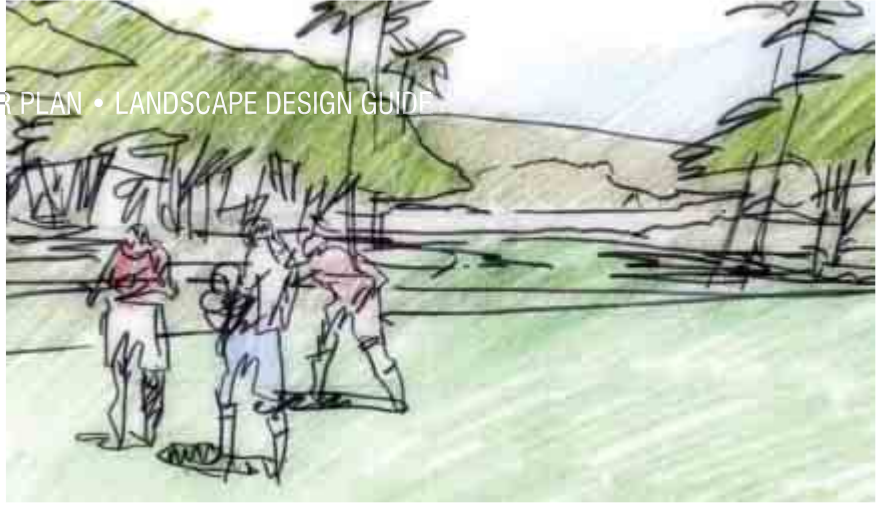
Europ plank recycled plastic decking



Kerbless planting beds with simple concrete edge restraints, incorporating WSUD treatments

Artist Impression of Mowbray Street Gateway to Four Mile Beach





“...improving the quality of water along the waterfront”

3.4 Sporting and Recreation Precinct

Description

Land topography together with the location and nature of land within the sporting area allows an opportunity for stormwater collection and treatment prior to discharge into the wider water network. The redirection of stormwater through treatment lines north-west and south-east of the sports precinct will allow opportunity for improved purification and create multiple discharge points in to the Dickson Inlet, improving the quality of water along the waterfront.

Design guidelines/features

- Infrastructure to be balanced by the addition of native plantings and shade trees which harmonise with the surrounding natural vegetation.
- Open up views through to Wharf Street and the Marina to visually connect the sports precinct to the waterfront.
- Improve pedestrian access to the site from Wharf Street, the Marina and Mowbray Street
- Capture stormwater run-off and filter through natural drainage lines.
- Provide a natural backdrop to the Marina and the Wharf Street scenic rail and cycle network.
- Protect and enhance the natural plant communities that currently occur in this precinct.
- Landscaping should respect the current natural landscape values through the use of native and endemic species.
- Create a network of pedestrian footpaths which will provide access and improve circulation through and across the precinct.
- Incorporate WSUD treatments as part of overall landscape strategy and make physical links to the proposed WSUD features along Mowbray Street.





3.4.1 Wharf Street (between Mowbray and Port Street)

Description

This section Wharf Street is relatively under used at present. It serves mainly as a local access road for the sports grounds and the yacht club, and is used mainly by locals.

Bally Hooley is the name given to the historic little steam train that operates from the Marina Mirage station in Port Douglas every Sunday and follows the tracks along Wharf Street to St Crispins Station located at the 12th tee of the Mirage Golf Course. The two coal-fired locomotives (Speedy and Bundy) that haul the trains are both over 55 years old, and are the last steam engines used by the Mossman Sugar Mill. The track on which these trains run has been in existence for over a century, and the whole little set-up is much loved by locals and visitors alike. The railway is operated by a dedicated small group of passionate volunteers.

Design guidelines/features

- *Wharf Street will remain the key access to the yacht club and sports grounds.*
- *Maintain and enhance the scenic values of the train operations.*
- *Protect and enhance the remnant natural vegetation.*
- *Incorporate WSUD treatments.*
- *Principle cycle route to the Waterfront Park and Marina (connecting to the existing cycle path network).*
- *Dedicated and fully separated cycle path.*
- *Concrete pedestrian footpath with boardwalks as required.*
- *Opportunities for interpretive signage on heritage values, WSUD treatments in adjacent sports grounds and the local ecology.*
- *Improve pedestrian access to and from the sports grounds.*



Example of WSUD incorporated with parking

“a natural backdrop to the Marina and the Wharf Street scenic rail and cycle network”



Typical Cross Section - Wharf Street (between Port and Mowbray Streets)



Typical tropical plantings fronting adjacent property



Example of roadside WSUD treatments

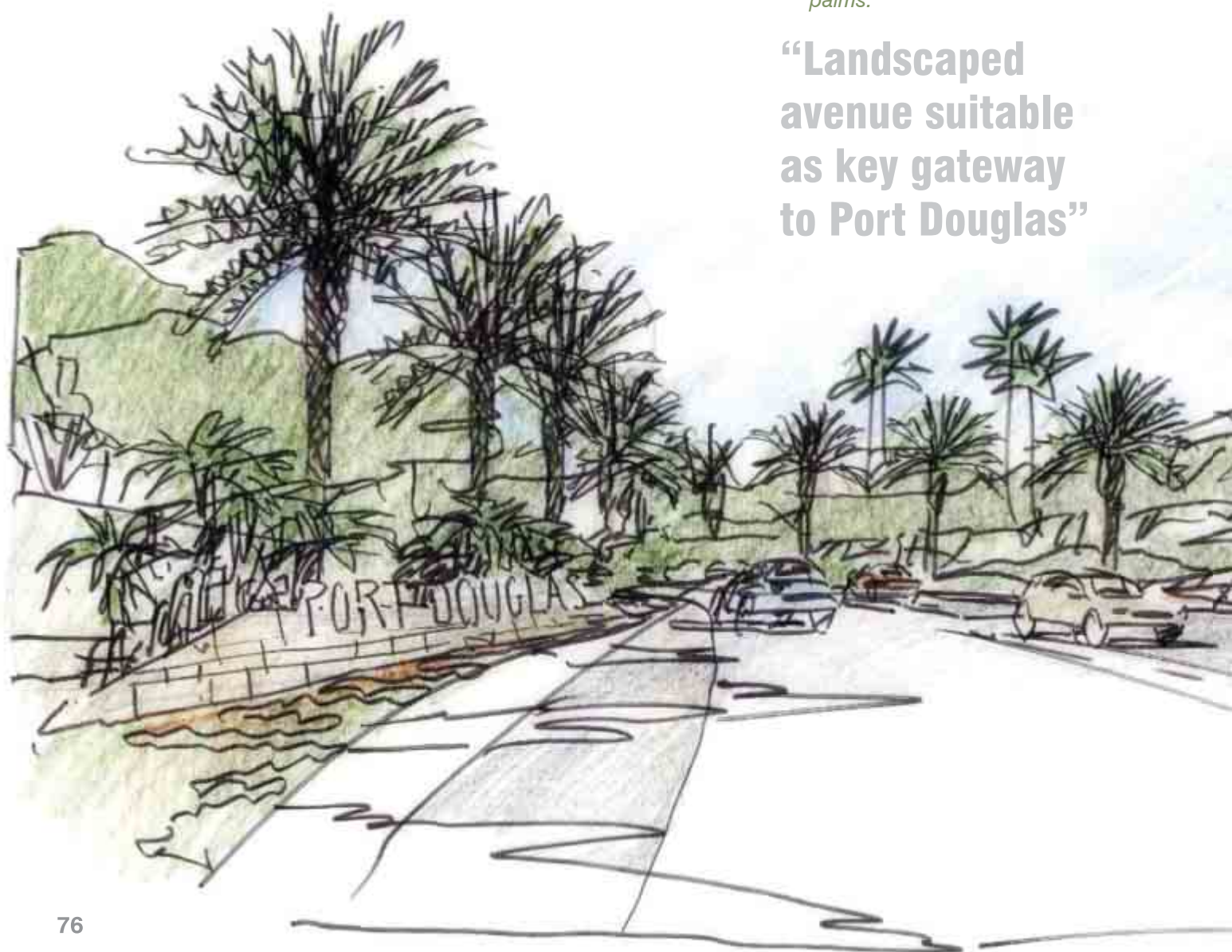
3.5 Town Gateway Precinct Description

This precinct is dominated by Davidson Street which is the main approach road in to the centre of Port Douglas. The precinct is enhanced by a series of resort-style hotels and apartments which fringe the road and contribute to the tropical character of this key gateway.

Design guidelines/features

- Incorporate WSUD treatments where possible.
- Gateway treatment at the intersection of Port Street emphasising the main cycle route along Wharf Street.
- Maintain the current mix of landscape solutions, incorporating resort style plantings with more natural parkland features with large shade trees and avenues of palms.

“Landscaped avenue suitable as key gateway to Port Douglas”

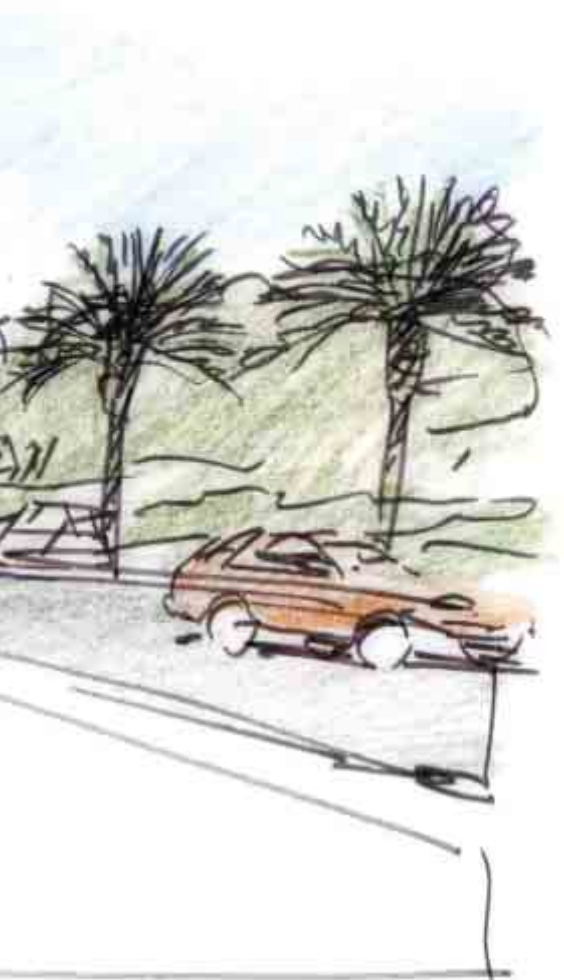




View of Port Douglas Road with avenue of oil palms



Typical Cross Section - Davidson Street (between Port and Mowbray Streets)







4

APPENDIX

4.0 APPENDIX

4.1 List of special projects

Item no	PDWMP	Priority	Deliv.	PROJECT TITLE	BRIEF PROJECT DESCRIPTION	COM Dependency	\$
1				Grant Street	Street Tree Planting between Macrossan Street and Mowbray Street Includes: <ul style="list-style-type: none"> • specimen trees 100 litre • possible specialist root cell technology for hard pave tree planting in accordance with best practice • tree grates and grills (in accordance with the workshop outcomes) 		
2				Mowbray Street	Plant Street trees in Avenue along Mowbray Street <ul style="list-style-type: none"> • continue existing theme of <i>Callophyllum</i> ssp. along community centre side of street • find suitable species for planting along CLINK side of street • 100 litre specimens with tree stakes 		
3	4B/5J/10A			Mowbray Street Extension	Potential to punch through the connection to Wharf Street <ul style="list-style-type: none"> • need to relocate the "Faugh-a-Ballagh" locomotive • approx. 90 metres of new road surface • local drainage issues • possible vegetation impacts 		
4				Warner Street	Initiate street tree management programme for existing street trees between Grant Street and Owen Street <ul style="list-style-type: none"> • staged pruning/removals to enhance existing health of trees and assist in providing required streetscape infrastructure (parking/driveways/access) 		
5	5C/5I			Rex Smeal Park	Improvements to the existing access/service road at end of Wharf Street <ul style="list-style-type: none"> • Requires further investigation to ensure works will not interfere planned development • incorporation of WSUD treatments • design of more pedestrian friendly/shred zone approach to access/service road 		
6				Anzac park	Enhance Anzac park with appropriate species <ul style="list-style-type: none"> • replace existing new plantings and tree grills with appropriate species • open/enhance view corridor to inlet from Macrossan Street • replace existing bollards with appropriate treatments in accordance with the workshop outcomes 		
7	9A			Intersection improvements	Limited to surface treatments with possibility of using permeable pavements/water storage. <ul style="list-style-type: none"> • Wharf Street and Macrossan Street • Wharf Street and Warner Street • Macrossan Street and Grant Street • Macrossan Street and Warner Street • Macrossan Street and Owen Street • Macrossan Street and Davidson Street • Warner Street and Grant Street 		
8	9B/10B			Mowbray/Davidson Intersection	Provide arrival node at this location <ul style="list-style-type: none"> • investigate options (roundabout) • implement • planting in accordance with workshop outcomes 		

Item no	PDWMP	Priority	Deliv.	PROJECT TITLE	BRIEF PROJECT DESCRIPTION	COM Dependency	\$
9	5K			Esplanade (Four Mile Beach)	Complete detail design with consideration to workshop outcomes <ul style="list-style-type: none"> • <i>landscape treatments and the use of native species</i> • <i>parkland edge (palette of native trees – not in avenues)</i> • <i>refer to iconic tree species list (port Douglas Landscape Plan Engagement Workshop Outcomes)</i> • <i>use of different surface treatments to reduce impacts and soften footpaths</i> • <i>use of permeable pavements and WSUD edge treatments to soften road edge and on street parking</i> 		
10				Screen Planting to Police Residences	Install native screen planting to existing police residences <ul style="list-style-type: none"> • <i>liaise with police and establish cooperation agreement</i> • <i>define future boundaries in light of proposed future land uses</i> 		
11				WSUD Treatments along Mowbray Street	Construct bioretention areas along Mowbray Street on Sports Precinct side of road. <ul style="list-style-type: none"> • <i>ensure that Community Garden does not limit/obstruct potential for future water treatment in area</i> • <i>incorporate WSUD as key feature of Cultural Precinct</i> • <i>incorporate future footpaths in design of WSUD features</i> • <i>wetland experience with seating and shelter</i> • <i>interpretive areas</i> 		
12				Mowbray Street footpath relocation	Re align the existing footpath to allow greater incorporation with potential water treatment areas <ul style="list-style-type: none"> • <i>path to meander among trees</i> • <i>soft edge</i> • <i>incorporate boardwalk and interpretive signage at WSUD areas</i> 		
13				Community Gardens	Construct the community gardens in an appropriate location which will not interfere/impede future water treatment along Mowbray Street <ul style="list-style-type: none"> • <i>incorporate community gardens with existing and proposed infrastructure</i> • <i>ensure gardens are linked to existing and future footpaths</i> 		
14	10C			Macrossan Street streetscape improvements	Continuation of median treatments along Macrossan Street between Grant Street and Davidson Street <ul style="list-style-type: none"> • <i>installation of median parking and tree islands</i> • <i>100 litre minimum specimen trees</i> • <i>new line marking to shoulder parking (angle to parallel)</i> 		
15				Davidson Street streetscape improvements	Continuation of median treatments along Davidson Street between Macrossan Street and Mowbray Street <ul style="list-style-type: none"> • <i>installation of median parking and tree islands</i> • <i>100 litre minimum specimen trees</i> 		

4.2 List of suitable Plant Species

Botanical Name	Common Name	Height at Maturity	Suitable as a Street Tree	Suitable Under a Powerline
Abelmoschus moschatus subsp. tuberosus		Ground Cover	No	Yes
Abutilon auritum		1-1½m	No	Yes
Acacia falciformis		2-3m	No	Yes
Acacia hylonoma		8m	Yes	No
Acacia leptocarpa	Swamp Wattle	6m	Yes	No
Acacia leptoloba		3-5m	No	No
Acacia leptostachya		3m	No	Yes
Acacia pubirhachis		3-5m	Yes	No
Acacia racospermoides	White-barked Wattle	3-5m	Yes	No
Acacia simsii		2-3m	No	Yes
Acalypha lyonsii		1-3m	No	Yes
Acanthus ilicifolius	Holly-leaf Mangrove	1m	No	Yes
Acmena hemilampra	Blush Satinash	6-10m	Yes	No
Acmena smithii	Lillipilli	2-6m	Yes	No
Acmena sp. Mt. Misery		5-8m	No	No
Acrostichum aureum		1-3m	No	Yes
Acrostichum speciosum	Mangrove Fern	1-2m	No	Yes
Adenanthera pavonina	False Red Sandalwood	6-10m	Yes	No
Adenia heterophylla		Large Vine	No	No
Adiantum atroviride	Maidenhair Fern	Ground Cover	No	Yes
Adiantum hispidulum	Maidenhair Fern	Ground Cover	No	Yes
Aglaia elaeagnoidea	Coastal Aglaia	6-8m	Yes	No
Aidia racemosa	Wild Randa	6-8m	Yes	No
Aidia sp. Gap Creek		6-8m	Yes	No
Alchornea ilicifolia		1-3m	No	Yes
Alchornea thozetiana		2-5m	No	No
Alectryon connatus	Alectryon	6-8m	Yes	No
Alectryon tomentosus	Woolly Rambutan	6-8m	Yes	No
Allocasuarina littoralis	Black She Oak	3-8m	No	No
Alocasia brisbanensis		1m	No	Yes
Alpinia arctiflora	Native Ginger	1-2m	No	Yes
Alpinia caerulea	Common Ginger	1-2m	No	Yes
Alpinia hylandii	Native Ginger	1m	No	Yes
Alpinia modesta	Native Ginger	1m	No	Yes
Alyxia ruscifolia		1-1½m	No	Yes
Amomum dallachyi		2m	No	Yes
Amorphallus galbra		1m	No	Yes
Amphineuron terminans		1m	No	Yes
Antidesma bunius	Herbert River Cherry	6-8m	Yes	No
Antidesma erostre	Native Currant	6-8m	Yes	No
Antidesma parvifolium		2-3m	No	Yes
Aphananthe philippinensis	Native Elm	2-5m	No	No
Archidendron grandiflorum	Laceflower Tree	3-6m	Yes	No
Archidendron hendersonii	White Laceflower	3-5m	No	No
Archidendron lucyi	Scarlet Bean	5-8m	Yes	No
Archirhodomyrtus beckleri	Rose Myrtle	2-3m	No	Yes

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<i>Archontophoenix alexandrae</i>	Alexandra Palm	6-8m	Yes	No
<i>Arenga australasica</i>	Arenga	6-8m	No	No
<i>Argophyllum lejourdanii</i>		2-3m	No	Yes
<i>Argophyllum</i> sp. Koolmoon Creek		2m	No	Yes
<i>Argophyllum verae</i>		2m	No	Yes
<i>Argusia argentea</i>		2-3m	No	Yes
<i>Aryterya divaricata</i>	Rose Tamarind	5-6m	Yes	No
<i>Aryterya paucifolia</i>	Pink Tamarind	2-3m	No	Yes
<i>Asplenium australasicum</i>	Bird's Nest Fern	1m	No	Yes
<i>Asplenium nidus</i>	Bird's Nest Fern	1m	No	Yes
<i>Asteromyrtus angustifolia</i>		3-5m	No	No
<i>Asteromyrtus brassii</i>		3-5m	No	No
<i>Asteromyrtus symphyocarpa</i>		3-5m	No	No
<i>Atractocarpus fitzalanii</i>	Brown Gardenia	5-8m	Yes	No
<i>Babingtonia tozerensis</i>		1m	No	Yes
<i>Baeckea frutescens</i>		2-4m	Yes	Yes
<i>Bambusa forbesii</i>	Native Bamboo	3-5m	No	No
<i>Barringtonia calyptata</i>	Mango Pine	20-30m	Yes	No
<i>Banksia aquilonia</i>	Northern Banksia	4-5m	Yes	No
<i>Banksia dentata</i>		4-5m	Yes	No
<i>Banksia plagiocarpa</i>		3-4m	Yes	No
<i>Banksia robur</i>		1-2m	No	Yes
<i>Banksia spinulosa</i>		1m	No	Yes
<i>Barringtonia acutangula</i>	Freshwater Mangrove	3-5m	Yes	No
<i>Barringtonia asiatica</i>	Beach Barringtonia	20-30m	Yes	No
<i>Blechnum orientale</i>		1m	No	Yes
<i>Blechnum indicum</i>		1m	No	Yes
<i>Bombax ceiba</i>	Bombax	8-12m	No	No
<i>Brachychiton acerifolius</i>	Flame Tree	5-10m	No	No
<i>Buchanania arborescens</i>	Jallara	10-15m	Yes	No
<i>Buckinghamia celsissima</i>	Ivory Curi Tree	5-10m	Yes	No
<i>Calophyllum bicolor</i>		5-8m	Yes	No
<i>Calophyllum inophyllum</i>	Beach Calophyllum	15-20m	Yes	No
<i>Callipteris prolifera</i>		1m	No	Yes
<i>Cananga odorata</i>	Perfume Tree	10-20m	No	No
<i>Caralia brachiata</i>	Corkwood	5-10m	Yes	No
<i>Castanospermum australe</i>	Black Bean	10-15m	Yes	No
<i>Casuarina equisetifolia</i>	Beach She Oak	10-15m	No	No
<i>Cleistanthus hylandii</i>	Bernie.s Cleistanthus	2-4m	No	Yes
<i>Cochlospermum gillivraei</i>	Kapok Tree	6m	No	No
<i>Cordia subcordata</i>	Sea Trumpet	10m	Yes	No
<i>Cordyline cannifolia</i>	Native Cordyline	1-2m	No	Yes
<i>Crinum pendunculatum</i>	Swamp Lily	1-3m	No	Yes
<i>Cupaniopsis anacardioides</i>	Tuckeroo	10m	Yes	No
<i>Cupaniopsis flagelliformis</i>		2-4m	No	Yes
<i>Curcuma australasica</i>		Less than 1m	No	Yes
<i>Cyathea cooperi</i>	Tree Fern	5m	No	No

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Darlingia darlingiana	Brown Silky Oak	8-15m	Yes	No
Davidsonia pruriens	Davidson's Plum	4-6m	No	No
Deplanchea tetraphylla	Golden Bouquet Tree	15m	Yes	No
Dianella caerulea	Flax Lily	1m	No	Yes
Dillenia alata	Red Beech	6-10m	Yes	No
Dimorphocalyx australiensis	Shiptons Glory	2-4m	No	Yes
Diospyros compacta	Sea Ebony	3-6m	Yes	No
Diplogottis diphylostegia	Northern Tamarind	5-10m	Yes	No
Diplogottis smithii	Smiths Tamarind	4-8m	No	No
Eucalyptus torelliana	Cadagi	15-20m	Yes	No
Eugenia reinwardtiana	Beach Cherry	3m	No	Yes
Eupomatia laurina	Bolwarra	6m	No	No
Euroschinus falcata	Pink Poplar	15-20m	Yes	No
Eustrephus latifolius	Wombat Berry	Vine	No	Yes
Fagraea cambagei	Cape Jitta	6m	No	No
Ficus benamina	Weeping Fig	8-15m	Yes	No
Flindersia bourjotiana	Silver Ash	15-20m	No	No
Flindersia braleyana	Queensland Maple	15-20m	No	No
Ganophyllum falcatum	Daintree Hickory	15-20m	Yes	No
Garcinia warrenii	Native Mangosteen	6-10m	No	No
Gardenia ovularis	Native Gardenia	4-8m	No	No
Gardenia psidioides	Native Gardenia	1-2m	No	Yes
Gardenia rupicola	Native Gardenia	1-2m	No	Yes
Gardenia scabrella	Native Gardenia	2-3m	No	Yes
Glycosmis trifoliata	Pink Lime	3-4m	No	Yes
Gmelina dalrympleana	Grey Teak	6-10m	Yes	No
Graptophyllum excelsum	Scarlet Fuschia	1-2m	No	Yes
Grevillea baileyana	White Oak	10-15m	Yes	No
Grevillea glauca	Bushmans Clothespins	3-6m	No	No
Guettarda speciosa		3-6m	No	No
Guioa lasioneura	Silky Tamarind	6-8m	No	No
Harpullia arborea	Cooktown Tulipwood	4-8m	No	No
Harpullia frutescens		1-2m	No	Yes
Harpullia pendula	Tulipwood	8-10m	Yes	No
Hibbertia banksii		1-2m	No	Yes
Helichrysum rupicola	Native Daisy	Less than 1m	No	Yes
Homalium circumpinnatum	Brown Boxwood	8-10m	Yes	No
Hoya australis	Native Hoya	Vine	No	No
Hoya pottsii	Native Hoya	Vine	No	No
Hydriastele wendlandiana	Water Palm	5-8m	No	No
Hymenosporum flavum	Native Frangipani	5-8m	No	No
Intsia bijuga	Kwila	15-20m	Yes	No
Jagera pseudorus	Foam Bark	5-8m	Yes	No
Leea indica	Bandicoot Berry	3-5m	No	Yes
Lepidozamia hopei	Zamia Palm	5-10m	No	No
Leptospermum madidum	Weeping Tea Tree	3-5m	Yes	No
Leptospermum polygalifolium	Tea Tree	1-2m	No	Yes
Licuala ramsayi	Fan Palm	20m	No	No

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Lithomyrtus obtusa	Pink Myrtle	1-1½m	No	Yes
Livistona muelleri	Fan Palm	12m	No	No
Lomandra longifolia	Mat Rush	1m	No	Yes
Lophostemon suaveolens	Swamp Mahogany	15-20m	Yes	No
Maniltoa lenticellata	Cascading Bean	8-10m	Yes	No
Melaleuca dealbata	Red Tea Tree	15-20m	Yes	No
Melaleuca leucadendra	Tea Tree	20-25m	Yes	No
Melaleuca viridiflora	Broad Leaf Tea Tree	5-10m	Yes	No
Melastoma affine	Native Lassandra	1-1½m	No	Yes
Melia azedarach	White Cedar	15-20m	No	No
Melicope elleryana	Corkwood	15-20m	Yes	No
Melicope rubra	Little Euodia	6-8m	Yes	No
Micromelum minutum	Lime Berry	3-5m	No	No
Miliusa brahei	Raspberry Jelly Tree	5-8m	Yes	No
Millettia pinnata	Pongamia	10-15m	Yes	No
Mimusops elengi	Red Coondoo	10-15m	No	No
Morinda citrifolia	Cheese Fruit	3-10m	No	No
Nauclea orientalis	Leichhardt Tree	10-15m	Yes	No
Neofabricia myrtifolia		3-5m	Yes	Yes
Nypa fruticans	Nypa Palm	4-6m	No	No
Palaquium galactoxylum	Cairns Pencil Cedar	10-15m	No	No
Pandanus brookei	Screw Pine	4-6m	No	No
Pandanus cookii	Screw Palm	4-6m	No	No
Pandanus tectorius	Screw Palm	4-6m	No	No
Pandorea jasminoides		Vine	No	Yes
Pandorea pandorana	Wonga Vine	Vine	No	Yes
Pararchidendron pruinsum	Snow Wood	8-10m	Yes	No
Paraserianthes toona	Acacia Cedar	10-15m	Yes	No
Passiflora aurantia	Native Passionfruit	Vine	No	Yes
Pavetta australiensis	Snow Cloud	2-3m	No	No
Phaius tancarvilleae		1-1½m	No	Yes
Phaleria clerodendron	Scented Daphne	3-5m	No	No
Phaleria octandra	Cape Daphne	1-1½m	No	Yes
Phyllanthus cuscutiflorus		3-4m	No	No
Pittosporum ferrugineum	Rusty Pittosperum	5-8m	No	No
Pittosporum rubiginosum	Red Pittosporum	2-3m	No	Yes
Planchonia careya	Corky Apple	4-6m	No	No
Pleiogynium timorense	Burdekin Plum	15-20m	Yes	No
Pleomele angustifolia	Native Dracena	3-4m	No	Yes
Podocarpus grayae	Brown Pine	8-10m	No	No
Polyalthia nitidissima	Canary Beech	5-8m	Yes	No
Polyscias elegans	Celerywood	10m	No	No
Pouteria castanosperma	Saffron Boxwood	5-8m	Yes	No
Pouteria obovata	Yellow Boxwood	5-8m	Yes	No
Pouteria sericea		2-3m	No	Yes
Premna serratifolia	Coastal Premna	4m	No	No
Proiphys amboinensis	Cardwell Lily	1m	No	Yes
Ptychosperma elegans	Solitaire Palm	5-8m	Yes	No

Botanical Name	Common Name	Height at Maturity	Suitable as a Street Tree	Suitable Under a Powerline
<i>Rhodamnia spongiosa</i>	Northern Malletwood	3m	No	No
<i>Scaevola taccada</i>	Sea Lettuce	2m	No	Yes
<i>Scolopia braunii</i>	Brown Birch	5-8m	No	No
<i>Shefflera actinophylla</i>	Umbrella Tree	10m	No	No
<i>Sophora tomentosa</i>	Silver Bush	2-3m	No	Yes
<i>Stenocarpus sinuatus</i>	Wheel of Fire	15m	Yes	No
<i>Sterculia quadrifida</i>	Peanut Tree	10m	Yes	No
<i>Syzygium australe</i>	Lillipilli	3-5m	Yes	No
<i>Syzygium fibrosum</i>	Fibrous Satinash	5-8m	Yes	No
<i>Syzygium forte</i>	Flakybark Satinash	10-15m	Yes	No
<i>Syzygium luehmannii</i>	Cherry Satinash	8-15m	No	No
<i>Syzygium suborbiculare</i>	Red Lady Apple	5-10m	Yes	No
<i>Syzygium tierneyanum</i>	Creek Satinash	8-10m	Yes	No
<i>Syzygium wilsonii</i> ssp. <i>wilsonii</i>	Powderpuff Lilipilli	1-3m	No	Yes
<i>Syzygium xerampelinum</i>	Mulgrave Satinash	5-8m	Yes	No
<i>Tabernaemontana orientalis</i>	Gondola Bush	3-4m	No	No
<i>Tarenna dallachiana</i>	Tree Ixora	5-8m	No	No
<i>Thespesia populnea</i>	Pacific Rosewood	10m	Yes	No
<i>Toeckia daemelianum</i>	Cape Tamarind	5-8m	Yes	No
<i>Toeckia pterocarpum</i>	Glossy Tamarind	5-8m	No	No
<i>Tristanopsis exiliflora</i>	Kanuka Box	5-8m	No	No
<i>Xanthostemon chrysanthus</i>	Golden Penda	6-10m	Yes	No
<i>Xanthostemon youngii</i>	Red Penda	3-5m	No	No
<i>Xanthostemon verticillatus</i>	Poland's Penda	3-5m	Yes	No



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