

# Fraser Coast Regional Council Land Use Strategy

Built Form and Urban Design Report

Prepared for *GHD* by *AECOM*

June 2011

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GHD

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## **PREFACE**

This individual planning study report was commissioned by the Fraser Coast Regional Council (Council) as part its Sustainable Growth Strategy project to assist and inform in the development of a new planning scheme for the entire local government area. It is important to understand that while the study report and its recommendations are a significant input, it does not necessarily represent the final integrated policy position of Council. Rather, the information will be used to assist the drafting of elements of the new planning scheme. The integration and balancing of a range of project inputs, community and State government engagement and other information which becomes available to Council will also influence the final policy content of the new planning scheme. Following an initial review by the State, a statutory public consultation process will occur where formal submissions are considered by Council and the State government before the planning scheme is finally adopted.

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# 01

*Introduction*

# 01.1 Introduction

## Study Context

The entire Fraser Coast Region is considered to be the study area. The region covers an area of approximately 7,125 square kilometres and is governed by the Fraser Coast Regional Council.

The Fraser Coast Regional Council comprises two key urban centres, Hervey Bay and Maryborough, located in the north and central portion of the Council area respectively; surrounded by a number of rural/hinterland townships and settlements including Tiaro, Howard, Torbanlea, Bauple, Brooweena and Aldershot; and a string of coastal townships and fishing villages including Burrum Heads and Toogoom north of Hervey Bay, and River Heads, Maaroom, Poona, Boonaroo, Tinnanbar south of Hervey Bay. Several rural residential communities have also emerged more recently, including Glenwood, Bidwill and Dundowran; which are serviced by nearby centres.

## Purpose of the Study

This report is the initial part of the Built Form and Urban Design Strategy that will provide a set of principles and directions that inform and support a regional vision for the Fraser Coast Regional Council. The work is premised on:

- » Promoting Sustainable development patterns;
- » Strengthening economic bases;
- » Enhancing the regional role and identities of Maryborough and Hervey Bay;
- » Enhancing coastal and rural identities;
- » Strengthening neighbourhood character and identity; and
- » Providing residential choice.

This report forms the background to determining directions and recommendations for each locality in the Land Use Strategy to be delivered subsequently.

## Objectives

This report provides core principles and concepts in support of strategic directions for the key localities of Hervey Bay and Maryborough as well as the local townships. The following four themes are applied to identify key opportunities and organising principles leading to a set of built form and urban design principles:

### Ecological Environment

- » Retain, conserve and enhance existing environments;
- » Protect and enhance ecological habitats;
- » Connect existing ecological systems; and
- » Provide new ecological environments.

### “Wayfinding” Legibility and Mobility

- » Improve wayfinding within the key localities;
- » Provide gateways and entrances; and
- » Improve access and mobility for all modes of transport across the region.

### “Place Making” Identity

- » Provide direction to ensure the public realm retains and enhances the unique character of the region; and
- » Identify key areas for place improvements within the key localities.

### “Urban Form” Development Potential

- » Provide direction for future development patterns;
- » Ensure quality agricultural land is protected; and
- » Ensure future development is sustainable and protects the character of the region.

## Approach

This study represents a comprehensive approach to the development of a built form and urban design strategy that directly addresses the issues of urban growth and identity, but also provides a process that is creative and responsive to circumstances. The approach has been tailored to achieve specific objectives for the Fraser Coast Regional Council:

- » Support development of a regional vision and place making strategies;
- » Address key issues facing Fraser Coast growth in terms of the quality, sustainability and character of the urban structure, built form and public realm;
- » Provide a urban design framework for Hervey Bay and Maryborough; and
- » Facilitate the preparation of a Land Use Study.

To achieve these objectives, cross-reference to several other studies has not been possible, particularly for the activity centres and employment areas strategy.

## 01.2 Key Localities

The built form and urban design report focusses on the two key regional centres within the study area: Hervey Bay and Maryborough. The study also considered the role the local rural and coastal towns play. The following lists the key localities and Figure 1.1 shows their location:

### Regional Centres

- » Hervey Bay
- » Maryborough

### Local Towns

- » Aldershot
- » Bauple
- » Boonooroo -Tuan
- » Brooweena
- » Burrum Heads
- » Burrum / Torbanlea
- » Howard
- » Maaroom
- » Poona
- » River heads
- » Tiaro
- » Tinnanbar
- » Toogoom

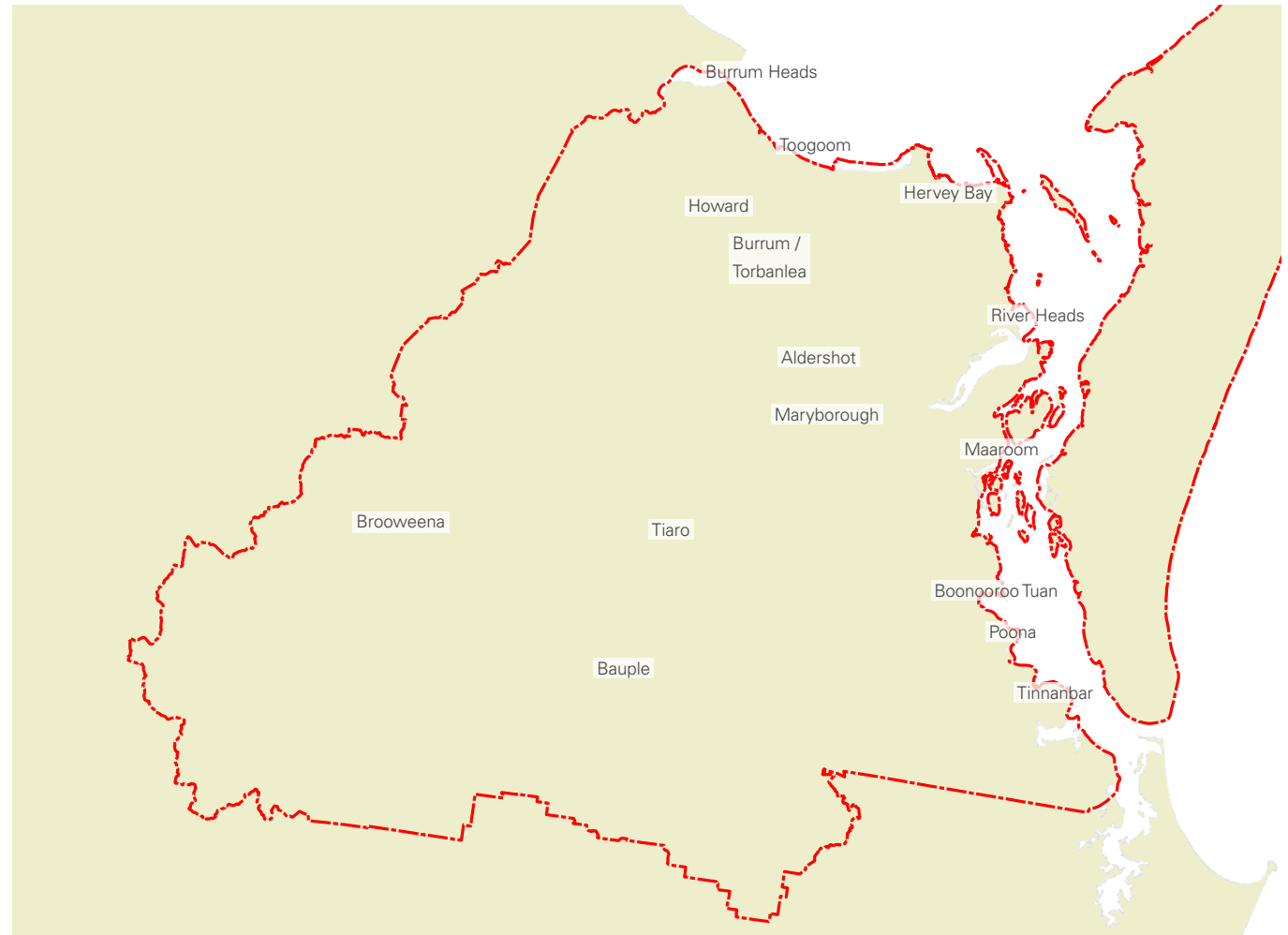


Figure 1.1 Study Area and Key Localities

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## 01.3 Demographic Profile

Extracted: Demographic Characteristics, Fraser Coast Sustainable Growth Strategy

The demographic overview of the Fraser Coast Regional Council indicates that:

- » The Fraser Coast is anticipated to experience continued strong growth to 2031, though noting that there will be a slower rate of growth associated with the working population.
- » Compared with the Queensland average, the Fraser Coast has a high proportion of people aged 55 years and over, and a lower proportion of people of working age particularly in the 25-34 year age group.
- » The age structure is reflected in the higher proportion of two-person (couple only) families and small average household sizes.
- » Smaller proportions of the Hervey Bay and Maryborough communities participate in the workforce, and of these a smaller proportion is employed full time and a higher proportion is unemployed.
- » Average individual and household incomes are significantly lower than the State average which reflects:
  - the high representation of older people as well as high proportions of unemployed people,
  - a slightly higher than State average of people employed part-time, and
  - high numbers of people employed in low-paying occupations.
- » The population of the Fraser Coast is made up of a high proportion of new residents compared to Queensland. Almost one third of the Fraser Coast population lived at an address outside of the area five years ago.
- » The Fraser Coast has a slightly lower proportion of Indigenous people and a lower proportion of people from non-English speaking backgrounds compared to the whole of Queensland.
- » Housing costs are relatively low in Hervey Bay and particularly in Maryborough compared with the State average.

## 01.4 Fraser Coast First Impressions

The following is an observation type narrative describing the experience a visitor might perceive on arriving at the Fraser Coast and is intended to stimulate a picture based on this impression. This is also captured in a set of images and notes that illustrate typical conditions and experiences of a number of locations.

The first impression of entering the Fraser Coast is of driving through quaint historical towns such as Bauple with wide streets, large set backs and magnificent views of landscaped settings. The region evidences a long history of settlement and this is emphasised on the drive into historic Maryborough. The impression of Maryborough is of coming back; back to a comfortable place, to spend time with an old friend. It is a place with big shady trees, remnants of old industry and streets that reflect human scale.

Major town elements include the deep banks of the meandering Mary River, a well preserved heritage core, large timber industrial structures, and a foundry with steel relics that are close to the central area. The core is characterised by century old brick buildings next to more recent retail and commercial development, and the town beyond is predominantly older residential areas with large sweeping verandahs, large lots, wide streets and mature landscapes.

The town area is legible, easily understood and navigated with its' grid layout, centrally located parks and reasonably well defined central business district. It is a country town servicing the local agricultural base as well as modern industry, and with a suitable diversity in retail offering for a community at a cross road between tourism, and traditional enterprise that is evolving to reflect market trends.

The journey from Maryborough to Hervey Bay is predominately through farmland, open space and native vegetated areas. The small township of Howard is on the way north and is once again a reminder of the area's past including a war memorial displaying past heroic residents.

Approaching the coast, the landscape changes, entering tea tree melaleuca and mangrove forest; visual clues of being closer to the coast. Reaching the ocean at Burrum Heads is a typical coastal fishing village with an informal streetscape comprising of mature vegetation and an assortment of architecture developed across different periods. This relaxed development form continues south at the coastal village of Toogoom. This fishing village is similar with a relaxed streetscape and eclectic built form. Informal seating and shading structures dotted through the village reinforce the water lifestyle and character.

The primary route and journey to Hervey Bay from Maryborough is also through farmland, open space and native vegetated areas including melaleuca. However, on arrival at Hervey Bay, the dominant experience is more a more typical suburban character; ribbon retail and big boxes dominated by parking lots, and houses of brick and tile across the landscape. This experience is in contrast to our perception of a more coastal sub-tropical character historically dominated by timber and tin, and also in contrast to the coastal esplanade experience. Hervey Bay has experienced rapid growth and this has injected higher density residential including mid-rise apartments and hotels into the mix, particularly along the esplanade areas. These developments appear typical of many similar coastal cities and do not necessarily distinguish a unique identity for Hervey Bay.

The identity of world famous Hervey Bay is in many forms obscured; by suburban residential areas, modern industrial estates, big box and ribbon retail, parking lots and wide roads lacking strong identity or character. There are few visual clues to the true identity of the township and how to find your way to the Bay.

The Esplanade provides a strong 'Bay' association by linking the villages of Urangan, Torquay, Pialba and Scarness. This provides a strong identity between city and water however, it has been eroded by an emerging continuous development intensity. The retention of mature open space along the Esplanade, and the clustering of villages, reinforces the scale and diversity of the foreshore. Moving away from the strongly defined identity of the Esplanade, the village character recedes into a standard suburban form and 'placeless' identity.

As a major arrival point to Hervey Bay, Urangan Harbor is identifiable only by road signs, with no landmarks to indicate the importance of this precinct. Limited shade is a notable factor, however the water view across the Great Sandy Straits to Fraser Island reinforces the significance of this location.

Hervey Bay is a place where being by the water is calm and without fear. The tide range allows people to venture onto the flats, which is a unique attribute. The Bay is also a gateway to excellent boating and fishing. The village style is relaxed and friendly, active without being too busy or overcrowded, where family is considered and catered for.

Further south at River Heads, the development pressures of Hervey Bay are experienced here with an eclectic mix of housing styles. Differences dominate the village; between old and new area with vegetation, or lack of, being the major factor.





### Bauple - typical character elements

- » Open streetscape character allowing long distance views to landscape setting (including Mount Bauple);
- » Wide streets with large set backs;
- » No footpath pavement;
- » Large trees/ landscape dominates built form; and
- » Single storey built form with notable vertical elements e.g. flag poles.



### Maryborough centre - typical character elements

- » Open streetscape character allowing long distance views to landscape setting;
- » Wide streets dominate with limited set backs in commercial;
- » Formal pavement and footpaths typical;
- » Notable vertical elements e.g. clock tower(s) and historic light poles in commercial areas;
- » Mainly double storey brick built form on main street with single storey transition through to residential areas.
- » Varied, level roofscape and open verandahs; and
- » Onstreet parking / pedestrian activity and vitality.



### Maryborough suburbs - typical streetscape

- » Variety in street boundary treatment;
- » Dominance of heritage housing of mixed sizes and settings, ranging from large estates and small cottages;
- » Regular straight streets and blocks;
- » Wide range of street character including wide open pavement and spaces, narrower pavement with mature trees and grass verges, and narrow intimate laneways;
- » Importance of mature vegetation in setting the character;
- » Vegetation in private lots often overhangs/ frames/ shades public realm; and
- » 'Human' scale fencing and variety.



**Howard - typical streetscape character**

- » Mainly pitched roofs;
- » Single and two storey;
- » Strong mid distance landscape but limited street trees etc - open, mid road reserve;
- » Awnings;
- » Wide pavements;
- » Small township with links to heritage e.g. war memorial; and
- » Grid layout of roads.



**Burrum Heads- key character elements**

- » Typical **“Fishing Village”** comprising eclectic built form and architecture;
- » Informal streetscape - no footpaths, no kerbs and wide grassy verges; and
- » Mature (often remnant) vegetation in road reserves, dominating the streetscape.



**Toogoom - key character elements**

- » Typical **“Fishing Village”** comprising eclectic built form and architecture;
- » Informal “leisure” elements (seats, awnings);
- » Generally open front gardens, minimal fencing and lot boundaries defined by planting (shrubs, large trees); and
- » Relaxed streetscape - grassy verges, no footpaths, no kerbs.



**Toogoom - recent residential product**

Setbacks:

- » Lack of Enclosure; and
- » Grass and parked vehicles dominate the streetscape.

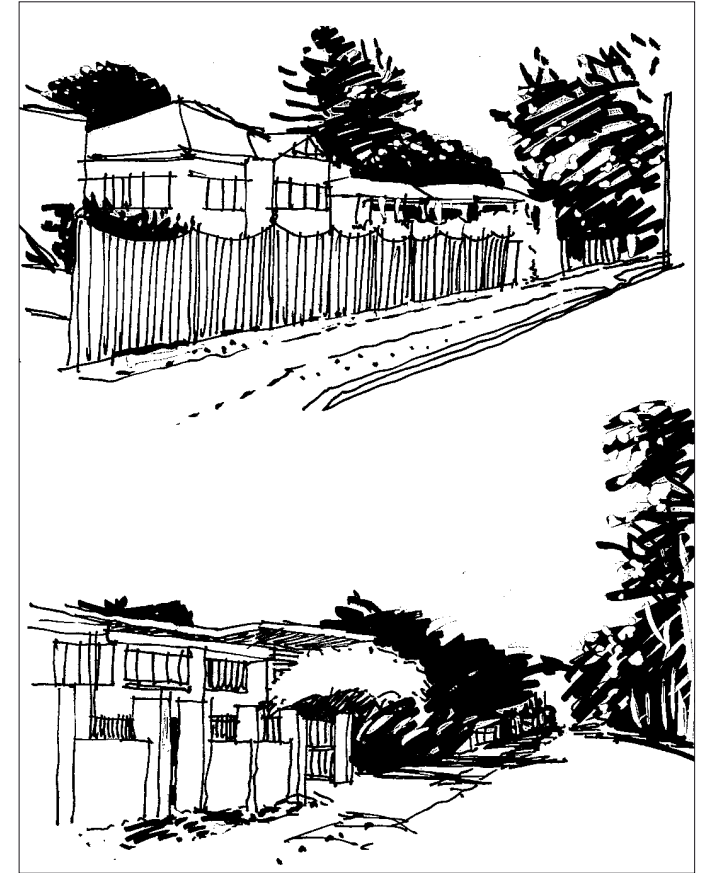
Streetscape:

- » Pavements, kerbs and palms are in contrast with fishing village character.



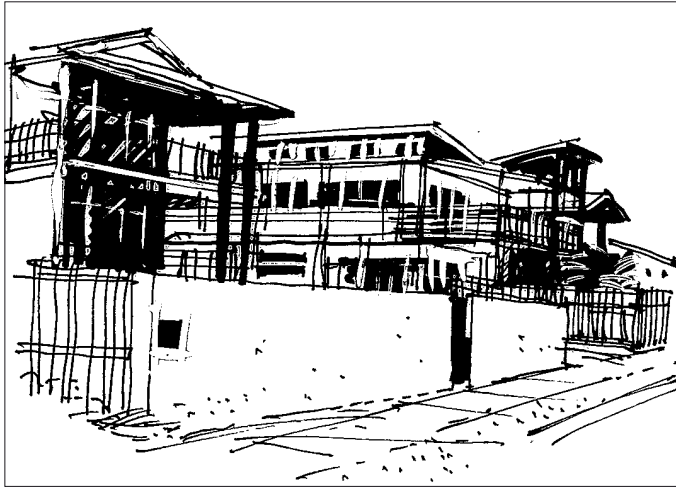
**Hervey Bay - typical residential streetscape character**

- » Wide road reserve with wide pavement;
- » Buildings dominant in the view, given limited landscape;
- » Buildings come to the street edge but varies - variety in edge to public/ private;
- » No street trees of significance and no regular pattern of street planting;
- » Straight vistas - grid pattern, modified by natural landform pattern;
- » Building heights generally 1-2 storey with slab on ground brick construction; and
- » Minimal place identity signage and limited public realm activity other than vehicle traffic.



**Hervey Bay suburbs - typical streetscape in older areas**

- » Building heights generally 1-2 storey with slab on ground brick construction
- » Variety in street layout and block lengths, particularly Urangun;
- » Variety in street boundary treatment and setbacks;
- » Variety in scale of green areas around houses;
- » Importance of mature vegetation in older areas;
- » Vegetation in private lots occasionally overhangs/ frames/ shades public realm; and
- » 'Human' scale fencing and variety.



**Hervey Bay - recent detached residential product**

- » Varied street frontage and scale tends to be two-storey;
- » Minimal gaps between buildings (narrower lots);
- » Street/ property boundary varied elements (eg. fencing, landscape, solid walls);
- » Occasional pools in front of dwellings limit planting;
- » Streetscape dominated by hard surfaces; and
- » Varied built form and roofscape, with deep verandahs and decks common.



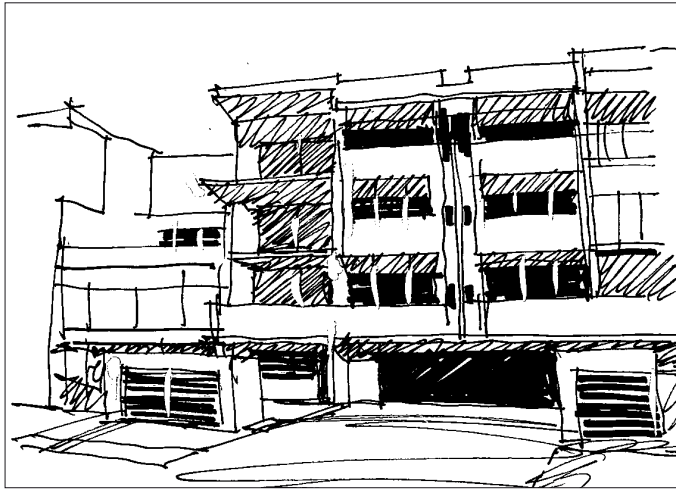
**Hervey Bay - newer suburbs**

- » Dominant and often inappropriate fencing;
- » Typically low buildings with roof views often dominant;
- » Insufficient space for road landscape, screening etc;
- » Natural topography occasionally modified and reshaped; and
- » Absence of street landscape to modify long distance views.



**Hervey Bay - recent mid-rise holiday accommodation**

- » Large scale boundary treatments common;
- » larger developments preclude achieving future through block links to increase permeability of long blocks;
- » Complexes often fronting two streets, with independent functions (back street as lobby only, front as the active zone);
- » Conflicts of use common - functional, back of house uses often poorly screened or controlled;
- » Large scale developments often adjacent older small scale homes and other uses (temporary condition until redevelopment occurs); and
- » Often built to edges, limiting provision for landscape treatment at the street.



**Hervey Bay - recent mid-rise holiday accommodation**

- » Prominence of hard surfaces;
- » Large carpark entries common;
- » Limited opportunity for significant vegetation to frame building bulk and provide balance of hard/soft; and
- » Mature vegetation on future development sites provide significant 'soft' landscape buffers - but likely to be lost in redevelopment with limited opportunity to introduce large scale landscape.



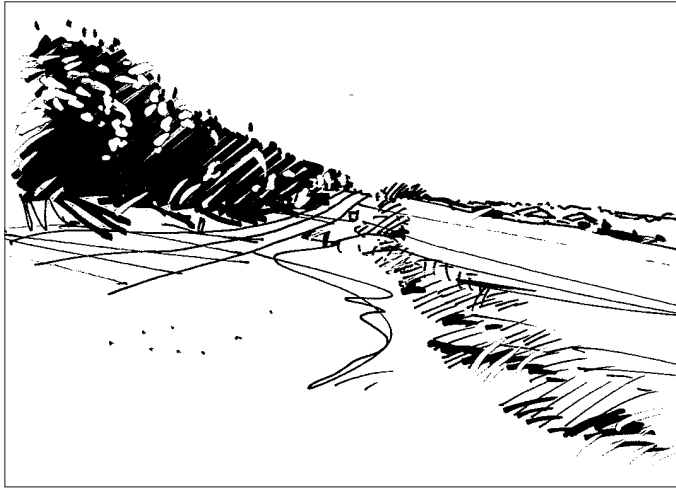
**Hervey Bay Esplanade - typical streetscape**

- » Dominance of landscape to the north favours and supports the suitability of greater built form diversity on south;
- » Close, enclosed space, with long distance views along street;
- » Pedestrians / cyclists are a more dominant activity than elsewhere in Hervey Bay, which in tandem with vehicles create vitality and vibrancy of activity in the street;
- » Mix of land uses and signage equals positive variety;
- » Building heights generally 1-3 storey; and
- » Mature vegetation dominates the skyline.



**Hervey Bay Esplanade - typical streetscape**

- » Signage, eclectic built form and wide mix of uses, dominated by boutique shops and restaurants;
- » Varied, low level roofscape;
- » Limited set backs in commercial areas;
- » Close abutment to residential areas/ allowing backdrop of vegetation; and
- » On street parking/ vitality.



### River Heads Road

- » Road contained by vegetation to the south, with open eastern slope descending to Great Sandy Strait, allowing elevated views to Fraser Island - important character;
- » Buildings do not break the skyline; and
- » Strong road edge vegetation screens development behind.



### River Heads - typical streetscape

- » Buildings typically do not impact on skyline;
- » Mature vegetation and built form balance;
- » Loose Definition of public/ private interface:



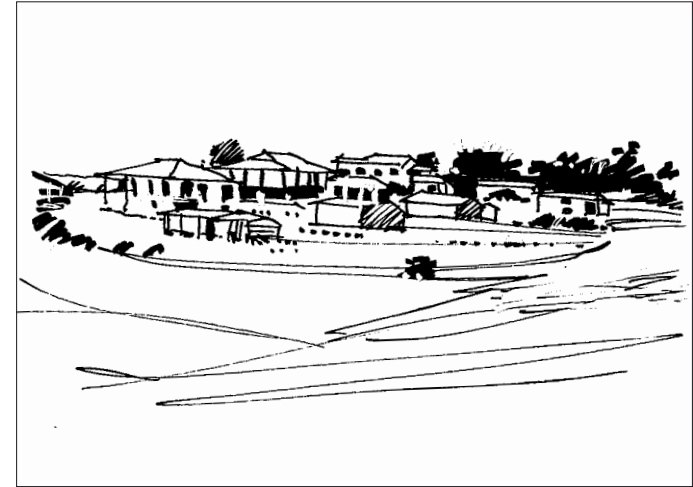
### River Heads - typical suburban residential character

- » Desire to capture views exposes the built form in the skyline;
- » Low density and sparse landscape use of significant landscape within a grassy, more pastoral setting; and
- » Even with some significant scaled housing, the significant landscape setting and views are dominant.



**River Heads - recent detached residential product**

- » Eclectic mix of styles;
- » Buildings dominate skyline at ridge rather than landscape;
- » Large grass setbacks with limited public realm enhancement; and
- » Contrasts with older areas where the landscape is critical part of the overall character rather than built form.



**River Heads - recent detached residential product**

- » Skyline/ horizon lost looking up the slope;
- » Lack of screens/ limited significant landscape in road reserve;
- » Note importance of retained vegetation; and
- » Sheds and water tanks a dominate feature.

02

*Hervey Bay*



## 02.1 Context

### Role and Function

Hervey Bay is located 300km north of Brisbane. It is known as the gateway to Fraser Island and for whale watching. The following is a description of the role and function Hervey Bay plays within the greater Fraser Coast Region:

- » Regional centre and largest urban settlement in the Fraser Coast Region;
- » Major tourist destination and gateway to Fraser Island and the southern part of the Great Barrier Reef;
- » Affordable coastal lifestyle in a subtropical setting that is particularly attractive to retirees and families;
- » Contains the majority of retail centres in the region, including:
  - Pialba Precinct;
  - Boat Harbour Drive Precinct;
  - Scarness, Torquay and Urangan Pier Precincts;
  - Urangan Central; and
  - Eli Waters;
- » Primary industries of employment include:
  - Retail trade (14.1%)
  - Construction (13.5%)
  - Health care and social assistance (13.3%)
  - Education and training (8.5%).

### Demographics

Hervey Bay has undergone significant growth over the last decade. This is due to the attractiveness of Hervey Bay as a place to retire. An outline of the current and projected growth is provided below. These facts have informed the understanding of the current and future function and the urban framework of Hervey Bay:

- » Population of 43,545, which is 51% of the Fraser Coast population;
- » Experienced the highest level of recent population growth within the Region (average growth rate of 27.1% between 2001 - 2006);
- » Expected to be the major growth centre with an average annual growth of 2.8% from 2007-2026 (projected population 97,671); and
- » Median population age is 44 years, with 36% aged 55 years and over; the high median age reflects the locality's attractiveness as a sea-change destination and an attractive retirement location.

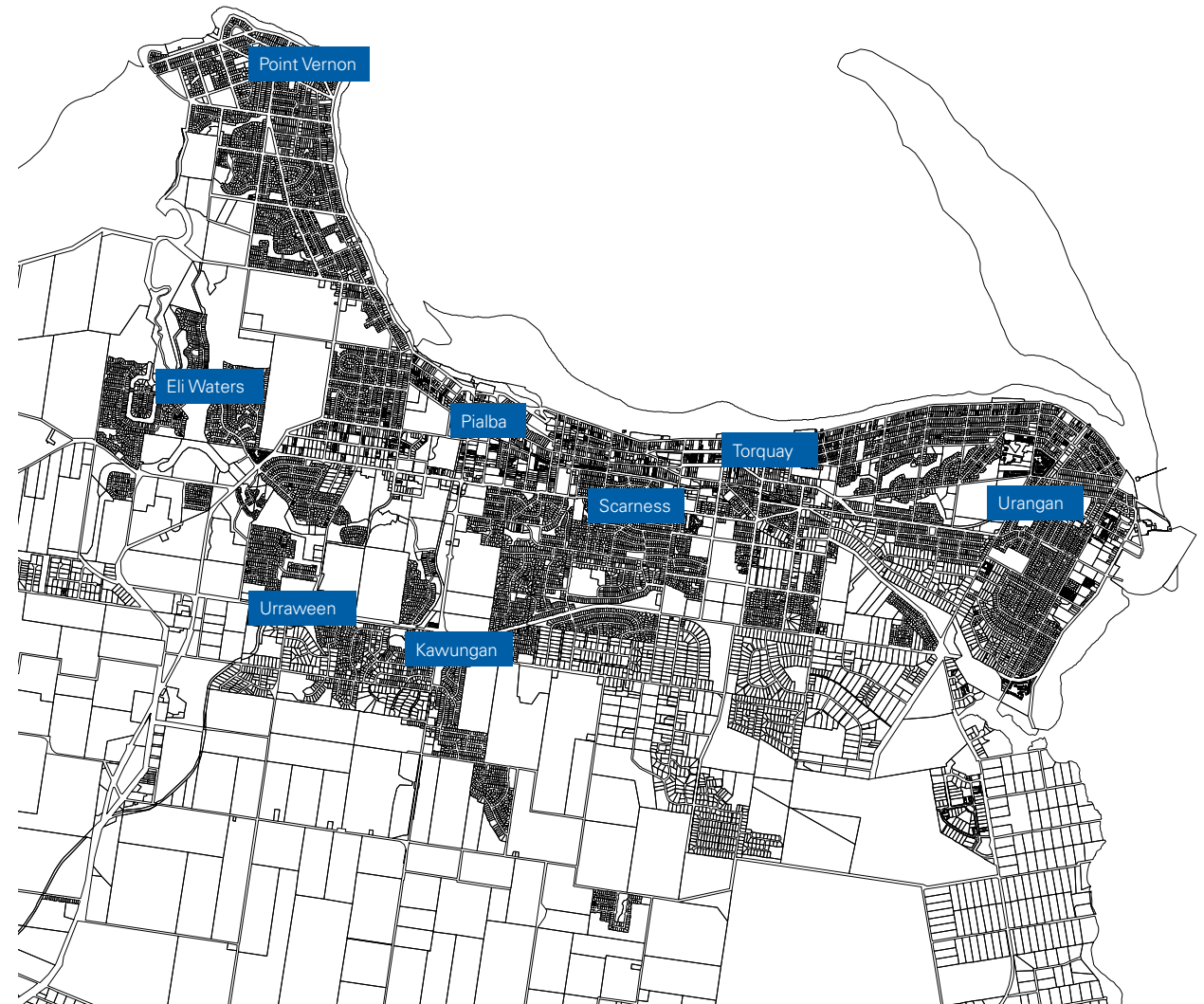


Figure 2.1 Key Locality: Hervey Bay

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## 02.2 Attributes, Issues and Challenges

### Site Attributes

Hervey Bay and the suburbs which it comprises have many attributes which has led to significant growth in population in recent years, including:

- » A calm and safe bay, which is protected by Fraser Island;
- » A gentle sloping hillside leading down to the foreshore flats, that offers ocean views across its expanse;
- » Recently upgraded airport with regular service to Brisbane and Sydney;
- » Urangan Boat Harbour which is the primary harbour and location for many water based recreation facilities and activities including:
  - Whale watching vessels;
  - Fishing Charters; and
  - Cafes/ Restaurants.
- » A number of villages, particularly along the foreshore, which establish the sense of place for Hervey Bay;
- » A rural / environmental edge which is eroding as development occurs at the edges;
- » A southern backdrop ridgeline, visible from the lower slopes, which is being eroded by encroaching residential development.

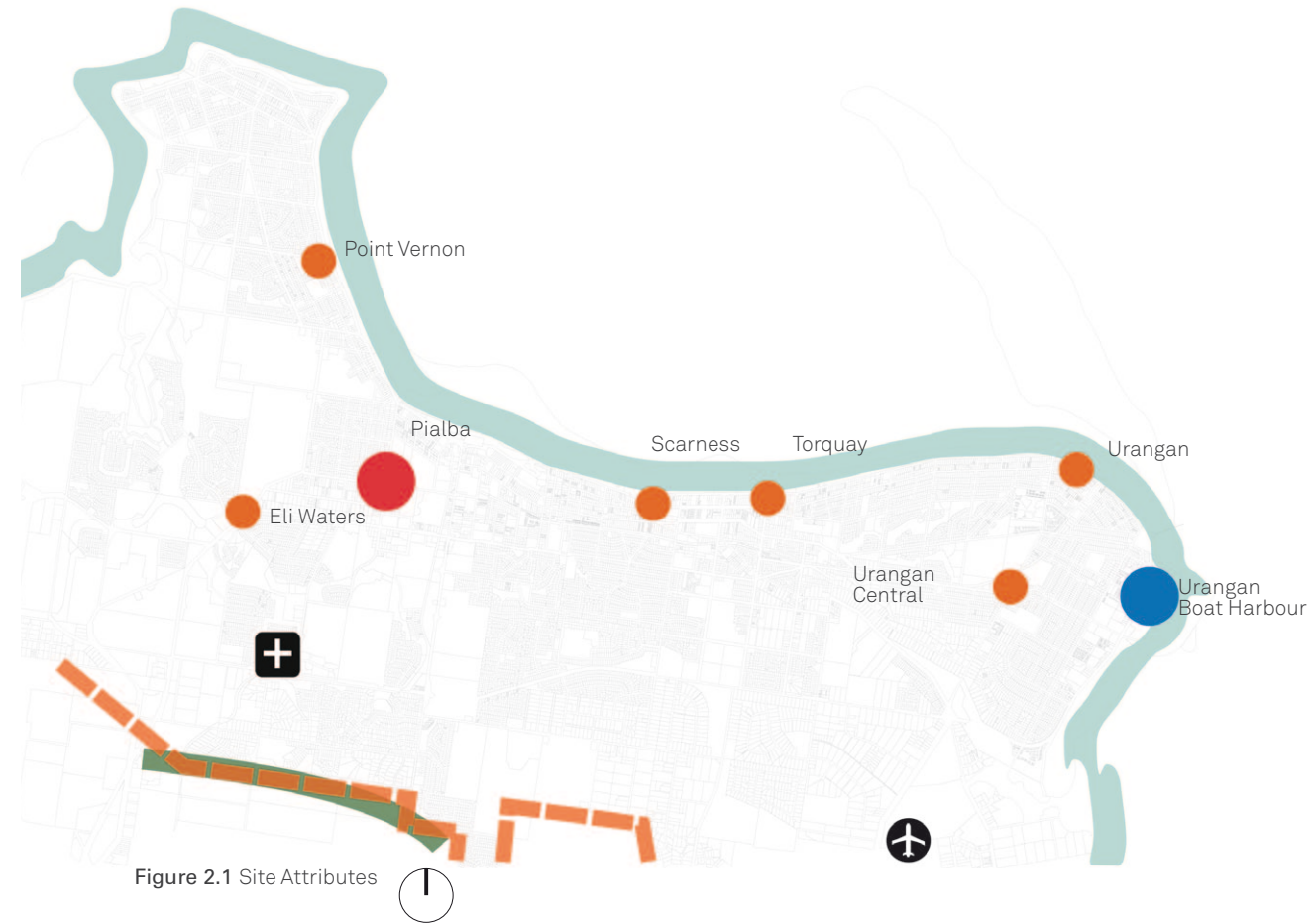
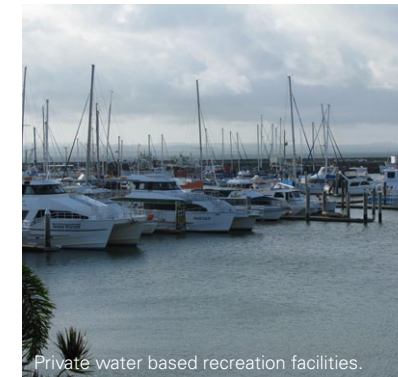
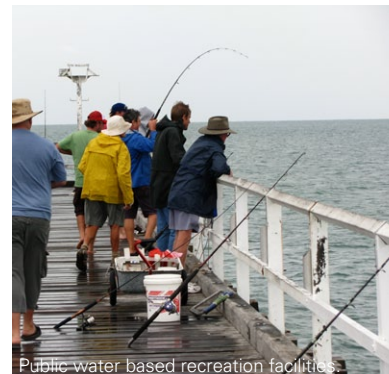


Figure 2.1 Site Attributes



- Airport
- Foreshore
- Rural Edge
- Primary Community Activity Precincts
- Urangan Boat Harbour
- Village Nodes
- Ridgeline
- Hospital

## Issues

There are a number of key issues and challenges facing Hervey Bay, including:

- » Hervey Bay lacks a defined central city focus at Pialba but rather a spread out separation of uses;
- » Joining of separate villages over time into one urban area;
- » Ribbon retail development strung along Boat Harbour Drive;
- » Development pressures from growth / sprawl at the rural edge;
- » Many housing areas, particularly upland, are not well serviced locally, due to low density development, requiring car trips for all local services;
- » Limited sense of “green”, undefined parks, and general absence of trees within many streetscapes;
- » Existing ridge line as a southern backdrop is threatened by encroaching development;
- » Many underutilised and undeveloped parcels within the urban area;
- » Foreshore areas are generally low lying with increasing challenges related to sea-level rise and climate change impacts; and
- » No obvious gateway experience or entrance to the area with poor navigation once within the urbanised area.

## Opportunities

There are many opportunities to improve the built and urban form within Hervey Bay, including:

- » Establish uniformed gateways and entrances for residents and visitors into Hervey Bay;
- » Conserve and enhance the delineation of Hervey Bay’s ridge line and provide connectivity and open space along the line;
- » Enhance definition of key character areas and “village atmosphere”, particularly along the foreshore;
- » Improve foreshore through rationalisation of infrastructure which will provide better streetscape amenity for pedestrian environments; and
- » Enhance the character of the area through capitalisation of the natural beauty.

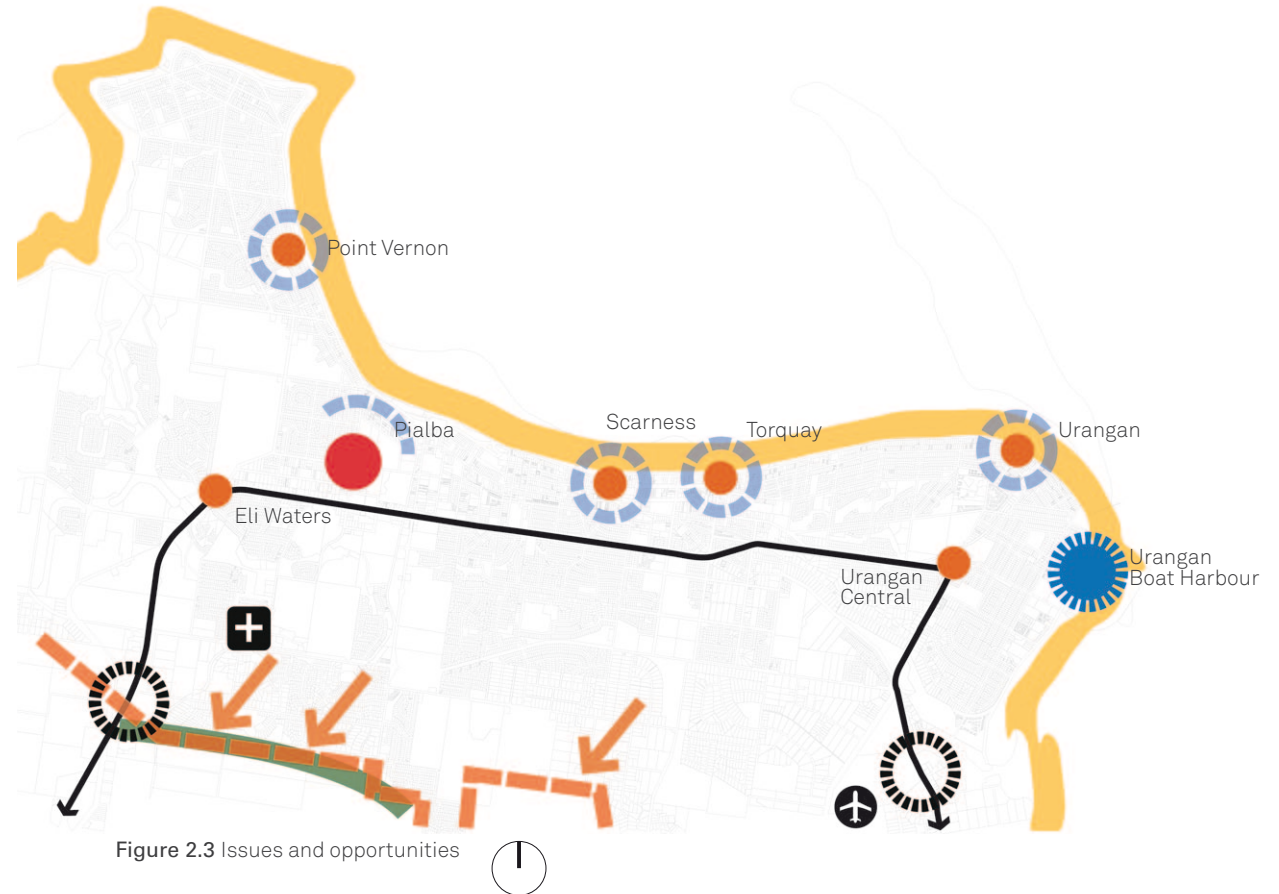
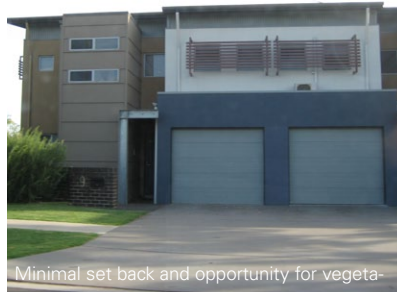


Figure 2.3 Issues and opportunities



Minimal set back and opportunity for vegeta-



Limited opportunity for vegetation along road.



Cluttered streetscape / No vegetation

- Enhance the foreshore / village character
- Encroachment of development
- Enhancement Role of Harbour
- Primary Roads / Entries
- Airport
- Hospital
- Gateways - Key Locations

## 02.3 Comparisons

The following benchmarks compare Hervey Bay with other regional coastal settlements in Queensland and northern NSW.

The comparisons highlight similar and varying built form, landscape conditions and settlement patterns as reference points.

References to these benchmarks are useful to Fraser Coast Regional Council in determining elements that Hervey Bay might choose to adopt or avoid in establishing how development should evolve, and how distinct place making might be achieved.

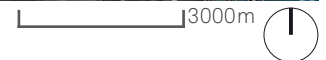
Several desirable elements drawn from the following benchmarks include:

- » Connected foreshore with urban design initiatives, which act as gateways into each node/ village;
- » Several intimate and distinct beach neighbourhoods, each with local retail or “heart” activity;
- » Iconic trees, particularly along the foreshore, and treed streets that reinforce a “leafy” setting;
- » Limiting a continuous development forming a wall along the foreshore edge;
- » Natural landscape breaks evident between settlement areas - reinforced by the topography;
- » Retention of traditional Queensland architecture precincts;

- » A rural edge which confines development; and
- » Avoiding canal type development.



Figure 2.10 Hervey Bay, Qld



## Redcliffe

- » Several small urban centres along the coastline have connected over time to become a single urban foreshore;
- » Situated as a separate town away from the Brisbane City;
- » A historical retail strip at the coast (esplanade) and a more recent internal retail core area away from the coast;
- » Connected foreshore with urban design initiatives, which act as gateways into each retail node;
- » Central retail core at the coast undergoing revitalisation to reinstate lifestyle value of the esplanade and pier as the heart of the community;
- » Foreshore protected by Moreton Island;
- » Iconic trees, particularly along the foreshore, and treed streets that reinforce a “leafy” suburban setting;
- » Retention of traditional Queensland architecture precincts; and
- » Medium rise buildings which create landmarks along the coastline.

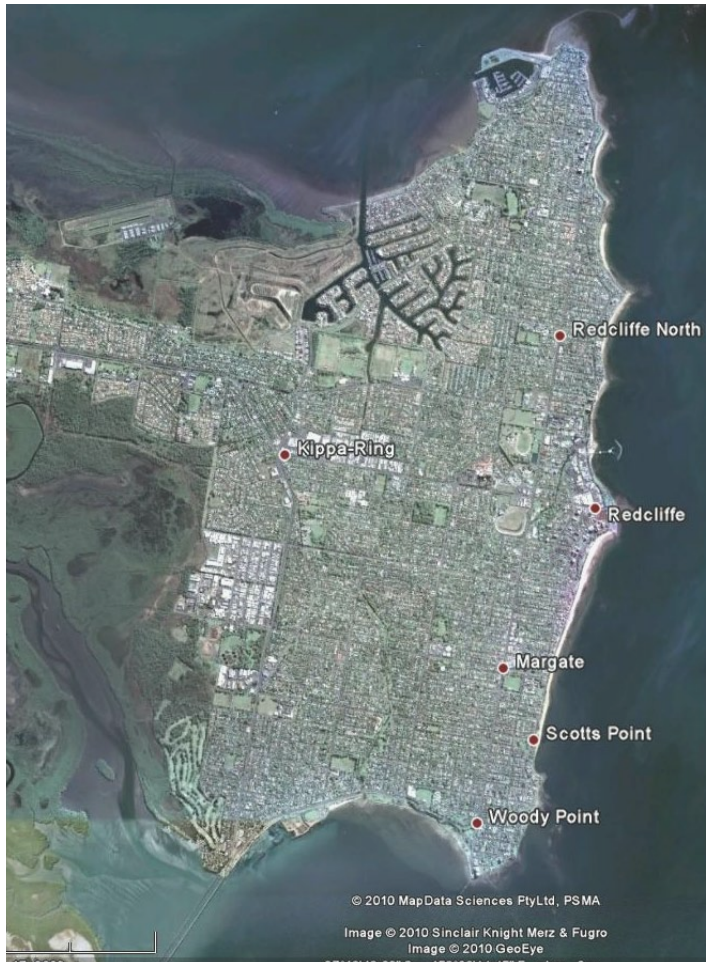


Figure 2.5 Redcliffe, Qld



Continuous access along the foreshore



Traditional architecture  
Balance of soft and hardscapes



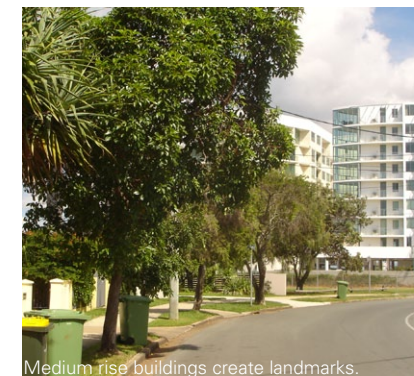
Heavily vegetated streetscapes



Landscape and Urban Design “Gateway”



Formalised foreshore



Medium rise buildings create landmarks.

### Gold Coast

- » Several urban centres that have blended together along the coastline;
- » Significant high rise development as a wall along the foreshore edge;
- » Tourism is a major source of revenue that has defined the urban form and principal activities and character;
- » Limited evidence of the natural environment in urban areas;
- » Highly modified environment (man made canals);
- » A rural edge which confines development.

### Sunshine Coast

- » Individual urban centres along the coastline;
- » Significant high rise development as a wall along the foreshore edge;
- » Tourism is a major source of revenue that has defined much of the urban form;
- » Desirable community for retirement, slower-paced than the Gold Coast;
- » Highly modified environment (man made canals)
- » A rural edge which confines development.

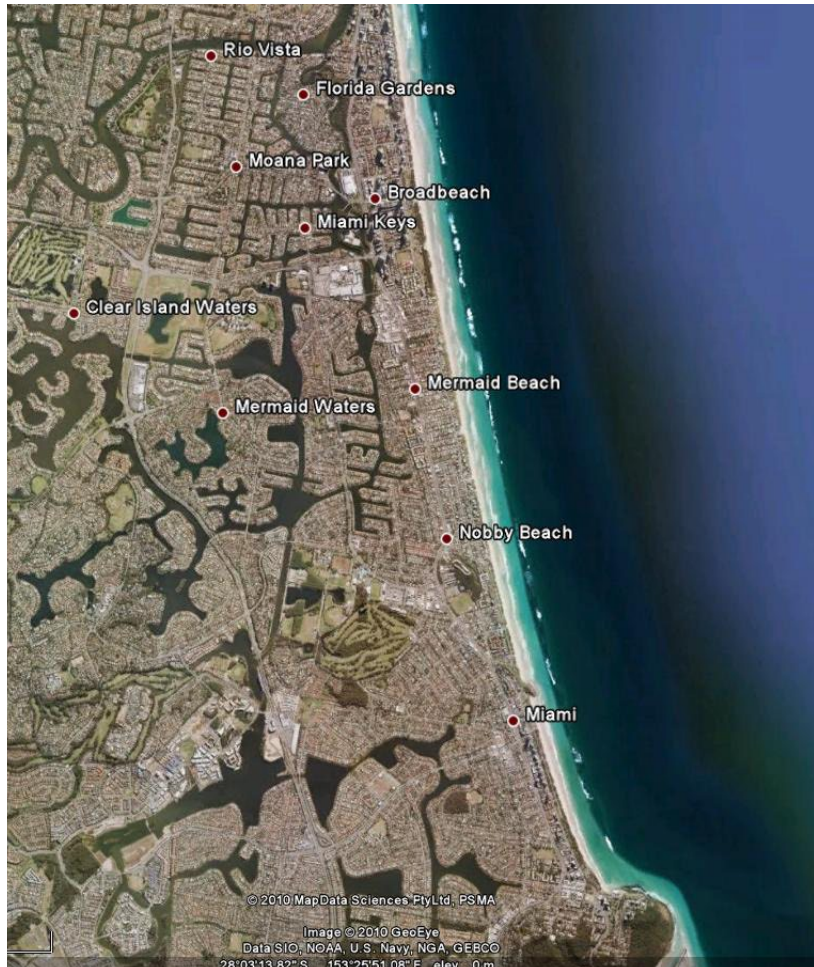


Figure 2.6 Gold Coast, Qld

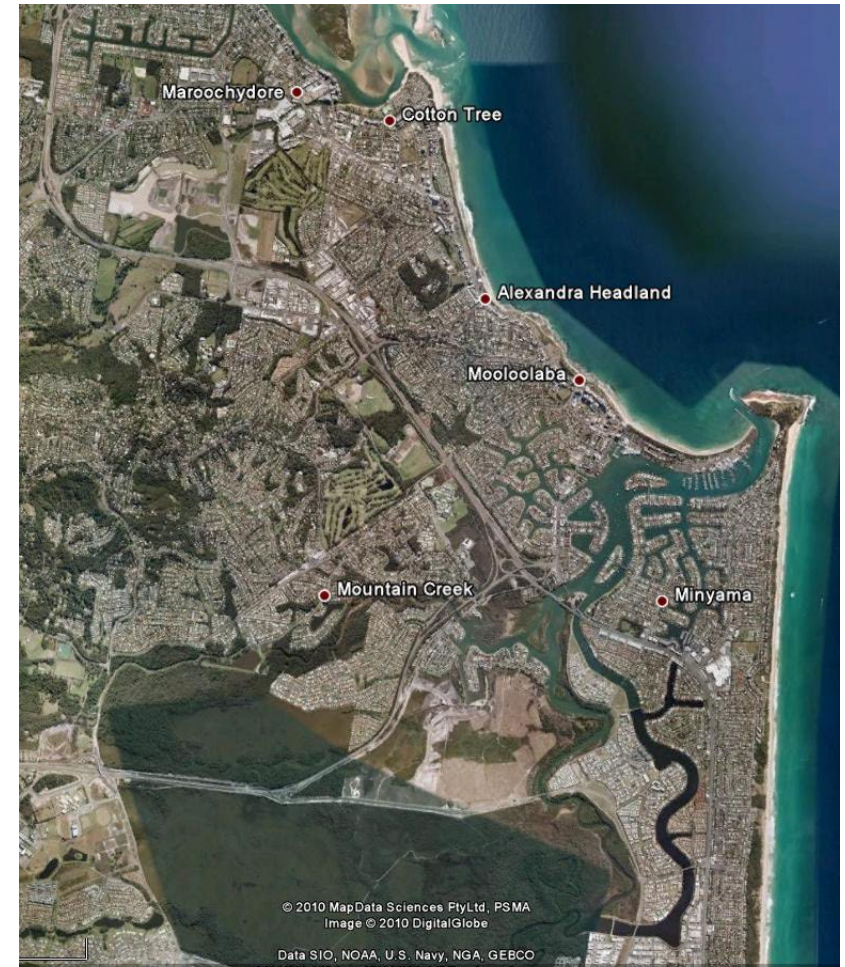


Figure 2.7 Sunshine Coast, Qld

### Sandgate/Shorncliffe

- » Small community centres along the coastline that have blended together and now most commonly referred to as Shorncliffe;
- » Pier into Moreton Bay reinforces location identity of Shorncliffe;
- » Operates as a quiet outer suburb of Brisbane, virtually attached to inner suburbs;
- » Limited retail and business activity; and
- » Retention of traditional Queensland architecture precincts;

### Coffs Harbour

- » Single central town, and several small settlements and development clusters dotted along the coast;
- » Natural landscape breaks are evident between settlement areas - reinforced by the topography;
- » Several intimate and distinct beach neighbourhoods, each with local retail;
- » Small harbour with recreational marine infrastructure;
- » Tourism is a major driver of activity;
- » A rural edge which confines areas suitable for development.

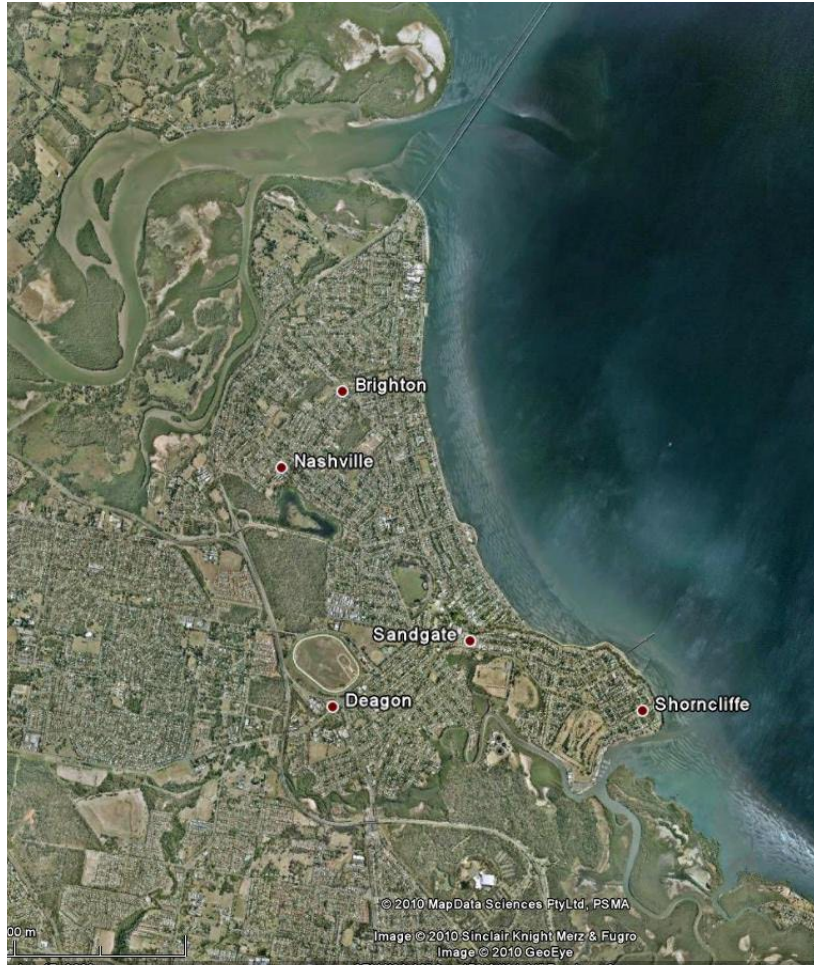


Figure 2.8 Sandgate, Qld

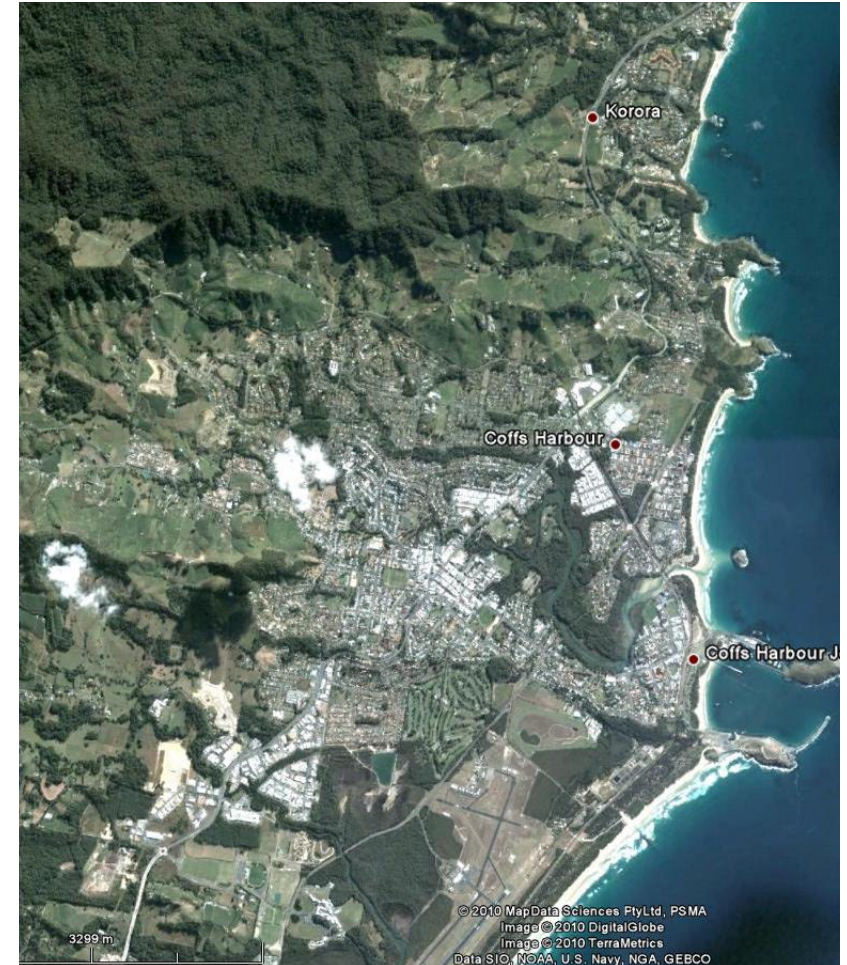
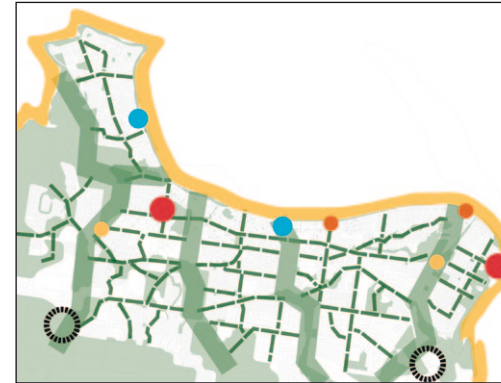
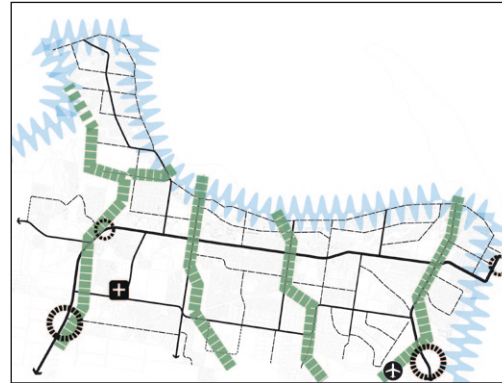
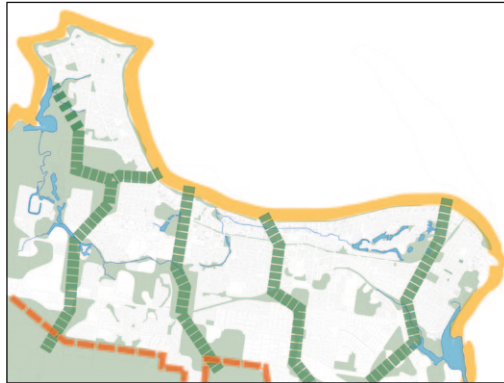




Figure 2.9 Coffs Harbour, NSW

## 02.4 Organising Principles

The following diagrams illustrate potential opportunities to integrate a range of organising principles that would together establish and reinforce a preferred pattern of growth and an urban design framework.












### Ecological Environmental Systems

-  Foreshore-beachfront / dune ecosystem
-  "Open Space" – landscape
  - » Retain- enhance existing
  - » Create new interconnected spines
  - » Preserve ridgeline
-  Waterways; potential restoration / enhancement of natural waterways
-  Urban/ rural boundary
-  "Green Spine" linear corridors
  - » Potential greenway linkages established for pedestrian/cycles between uplands and foreshore
  - » Combination of waterways / green spaces / streets to achieve linkages





### "Wayfinding" Legibility and Mobility

-  "Fraser Coast" experience
  - » Preeminent contextual focus
  - » Informal expansive – multi nodal
  - » Multi modal foreshore corridor
-  Principal road / travel corridor - high order role
-  Secondary road / travel corridor - local use
-  Local linkages
-  Signature gateway
-  Contextual gateway
-  "Green Spine" linear corridors

### "Place Making" Identity

-  Foreshore focus
  - » Coordinated seaside / natural / public realm identity
-  Urban gateway
  - » Primary entries into Hervey Bay
  - » Unambiguous identity between urban and rural character
- Centres Identity
  - Role and function of centres:
    -  » Pialba as the primary centre for Hervey Bay
    -  » Urangan / Boat Harbour as the primary tourism centre
    -  » Major Urban Nodes
    -  » Foreshore villages as the local identity centres
    -  » Other retail centres as local convenience (fresh food offer)
- Greenways Network
  -  » Green routes - roads and open spaces
  -  » Linking into "Green Spines"

### "Urban Form" Characteristics / Precincts

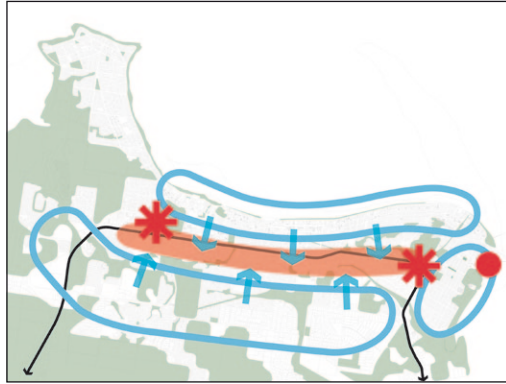
-  Primary activity centres at Pialba and Urangan / Boat Harbour
-  "Lifestyle Harbour" - World heritage / tourism
-  "Seaside Villages" – Foreshore
  - » Individual mixed-use villages / restaurants and tourism offer
-  "Town Centre" - Pialba
  - » Business and Civic Heart / Walkable Core
  - » Full commercial offer / Mixed-use
  - » Major community amenities
-  Point Vernon - Existing residential
-  "Coastal Residential" - Upland Communities
  - » Opportunity to infill new neighbourhoods



## 02.4 Organising Principles - Patterns of Growth -

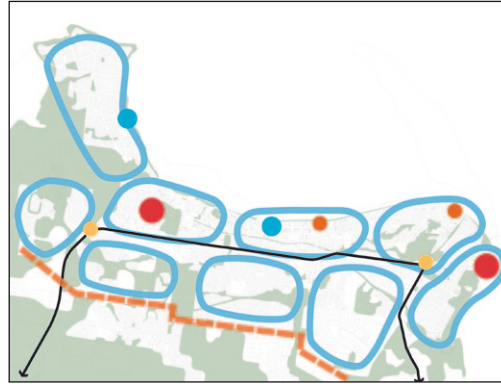
### Scenarios

The future growth of Hervey Bay can follow a variety of patterns. These patterns are driven and arise from a number of factors and, as scenarios, would not necessarily be exclusive. Rather it is likely a number of these patterns will emerge in an integrated scenario, which is represented by the principles in the following Urban Design Framework.



#### 01 One Hervey Bay “Central Spine”

- » Ongoing consolidation of urban area, particularly in lower slopes and harbour area, and allowing for expansion of urban lands - status quo approach
- » Two primary activity centres at Pialba and Urangan - either end of the spine
- » Foreshore and upland communities rely on the spine for primary services
- » Commercial development continues to expand along primary activity spine
- » Potential for Urangan harbour focus as an activity anchor at eastern edge



#### 02 Discrete Villages

- » Consolidate the urban area with limited expansion of urban lands - focus on infill and intensification within urban boundary
- » Range of nodes, and varying role and function of activity centres within discrete villages
- » Some nodes serve multiple roles in the centres hierarchy
- » Potential to expand community facilities at the primary activity centre



#### 03 Primary Activity Centres

- » Expanded urban area - allowing for expansion of urban lands - balance of infill and greenfield
- » Limited focus on discrete villages with more focus on a few higher order centres
- » Pialba and Urangan as primary activity centres
- » Opportunity for emergence of key activity centre closer to new communities, and in association with existing recreation facilities



#### 04 Foreshore Focus

- » Consolidate the urban area with focus on protecting ridgeline
- » Foreshore urban renewal and consolidation with emphasis on utilising existing services and infrastructure
- » Infill focus within existing urban areas
- » Primary commercial activity along east-west spine (Pialba to Urangan)

**Note: All use of the term “primary/secondary activity centre” is used in this document to imply comparative role and function only, and may not equate to regional planning and centres hierarchy designations.**

## 02.5 Urban Design Framework - Principles

### Preferred Pattern:

Recommendation that a preferred pattern be advanced based on the idea of Discrete Villages.

- » Foreshore experience as the dominant focus and primary driver for character / image / lifestyle of Hervey Bay.
- » Support a diversity of housing types promoting choice, sustainability and affordability.
- » Support smaller incremental and larger master-planned residential growth in all sectors of the market.
- » Clearly defined hierarchy of activity centres and mobility.
- » Safeguard continued diversity in foreshore precincts.
- » Facilitate positioning / character of individual villages/centres to reflect future desired form.
- » Promote a ridgeline preservation policy limiting encroachment of development to the south.
- » Encourage infill redevelopment.
- » Foreshore attributes maintained and enhanced through balancing natural and community amenities.
- » Urban/rural boundary redefined.
- » Gateways reinforced and redefined. Airport acts as gateway commercial centre – longer term +30 years relocation.

### Key Features:

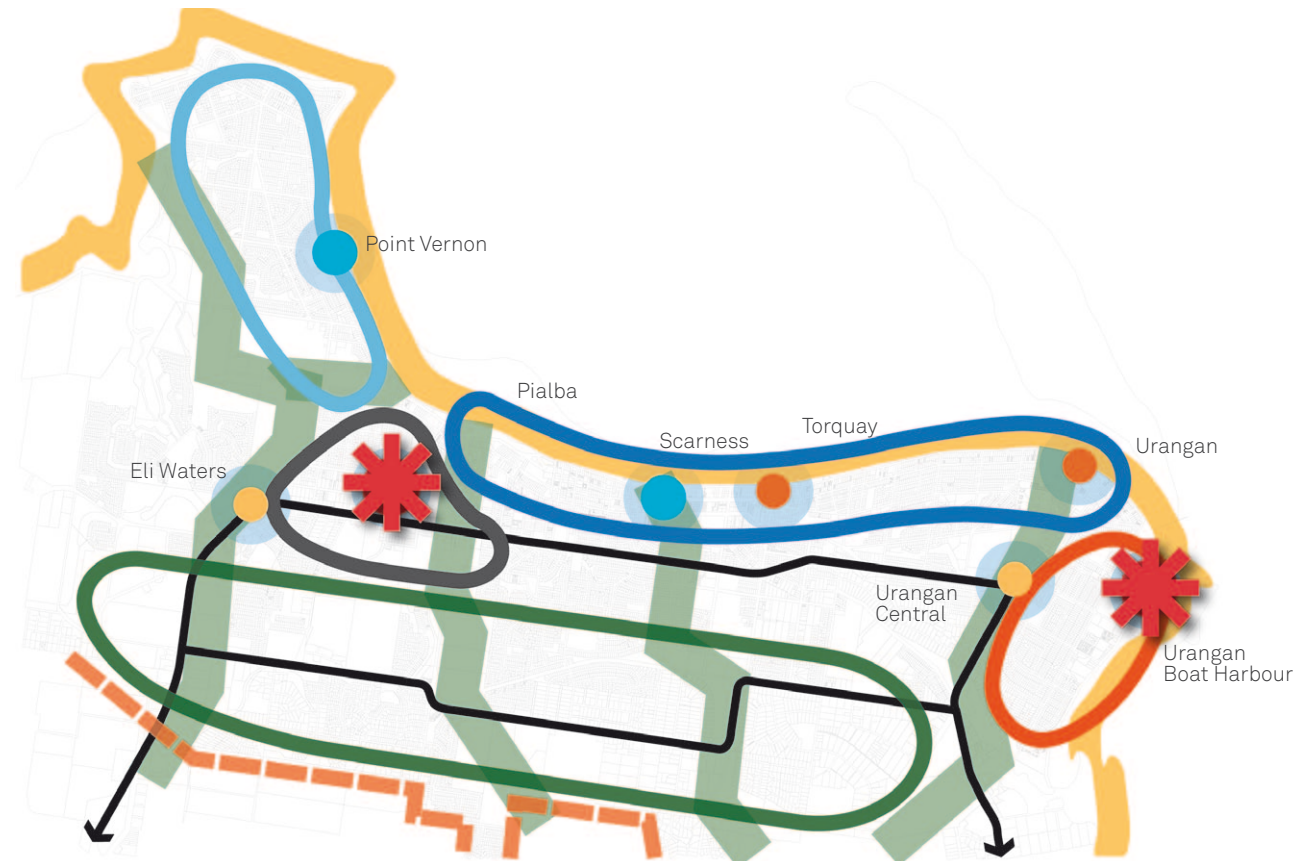
The following key framework principles for Hervey Bay achieve the objectives of this study and will form the basis for strategies. The framework responds to the themes and opportunities explored in the previous section and provides direction for sustainable growth.

#### Foreshore / Esplanade

- » Foreshore as the predominant identity / feature / amenity and focus for Hervey Bay.
- » Fully accessible and connected foreshore, along the length of the foreshore with wayfinding elements to reinforce unique villages / centres.
- » Foreshore to reflect the local characteristics and respond to the natural setting through appropriate built form and public realm treatments.
- » New infill development to be adaptive to mitigate potential sea level rise impacts.

#### Urban Boundary

- » Urban/rural interface strengthened to consolidate future development and to ensure the rural character of the area is not diminished.
- » Majority of growth encouraged to locate north of the ridgeline, within current urban areas.



#### Primary Centres

- » Pialba as the primary activity centre, with a full range of commercial and community services, civic facilities, housing and recreational amenities, reinforcing the idea of a walkable core.
- » Urangan to grow towards a primary activity centre role, but focused more on local area commercial and local community services, tourism and accommodation uses (secondary to Pialba).

- » Urangan to also serve as the gateway to Fraser Island and to Hervey Bay from the airport.

#### Local "Village" Nodes

- » Discrete local "village" nodes along the foreshore to reinforce historical settlement and identity.
- » Potential for additional local nodes to emerge in newer residential areas i.e Doolong Flats, located to reinforce existing hospital and recreational uses.

- Foreshore beachfront environs
- Town Centre Precinct
- Seaside Villages Precinct
- Lifestyle Harbour Precinct
- Point Vernon Precinct
- Coastal Residential Precinct
- ✱ Primary community/activity civic hubs
- Major Urban Nodes
- Foreshore Village Nodes
- Local 'Village' Nodes
- 800m Neighbourhood catchments to nodes
- - - Urban - Rural Boundary
- Primary - Green movement corridors
- Principal Movement Corridors

## 02.6 Future Development - Character Areas

There are a number of key character areas within Hervey Bay that have evolved from historical settlement patterns and more recently have demonstrated a variety of characteristics resulting from infill development. These distinct character areas are predominantly related to the foreshore edge, which can inform the nature of future development, and serve as a reference to inform the character of streets, landscapes, and scale of future development.

### **Point Vernon:**

Historically - long blocks, wide open straight roads, large lifestyle lots.

Recently - new communities on curvilinear layouts. Generally no footpaths, street trees not standard, deep front setbacks to homes.

The foreshore edge leading to Pialba is situated on a cliff rise with occasional long views across the water / sand flats to the east and Urangan in the distance, which offer Point Vernon residents a unique character and position in Hervey Bay.

The future character is expected to reinforce the sense of lifestyle living, openness, and lower densities, and to encourage more pedestrian friendly streets in new areas, with safe and shaded space to walk and cycle.

Large lots in older areas offer opportunity for infill residential (as dual occupant buildings), preferably in a built form that is not significantly out of scale with the older context.

### **Scarness & Torquay:**

Historically - local village shops along one side of the Esplanade behind the natural dune, with a few key retail and recreation amenities sited on the dune.

Recently - improvements to the streetscape at each village, infill higher density development along the frontage, and infill medium density in existing residential areas in the blocks behind.

The foreshore is dominated by the heavily treed, shaded dune system, which defines the character of these villages, along with traditional low scale shopfront architecture.

The future character is expected to reinforce historical characteristics, which are authentic

to this location, and for which people are attracted, along with new higher density residential, which meets the market appeal for waterfront living.

Leading away from the foreshore, and in the blocks behind, future development as allowed, is unlikely to impact on the value and character of the foreshore area.

### **Urangan:**

Historically - settlement and activity focused around the pier at the southeast edge of Hervey Bay, positioned along a constructed esplanade edge (no dune), with generally smaller homes (cottages) in the surrounding area, and street patterns of shorter blocks than elsewhere in Hervey Bay.

Recently - pier has become the key public amenity anchoring the eastern end of the foreshore promenade and connecting to significant urban park space (old rail lands), prevalence of tourism (hotel) and restaurant activities on the esplanade, limited retail, with some infill residential in blocks behind including gated retirement living.

The foreshore is dominated by a more urban, walled edge with direct ocean views and access to wide sand flats at low tide, and the pier.

### **Urangan Harbour:**

Historically - fishing and marine industry based harbour, uplands residential on long straight blocks, wide streets, few street trees.

Recently - tourism focus at the harbour with resorts, marine retail and tours, gateway to Fraser Island, infill higher density residential, and infill medium density pockets.

The foreshore is dominated by a marina and harbour with restaurants and tourism activities activating the place, which is unique in Hervey Bay.

## 02.6 Future Development - Key Elements

The following key elements identified below influence the character of future development within both existing villages and new community areas.

### **New Communities:**

For emerging new urban areas, which will be predominantly single family residential, there are a number of distinct characteristics that can inform the look and feel of these areas. For new communities, there is an expectation that the density achieve a target of 15 units/ha.

Based on the lower density characteristics of existing residential areas developed over the past 20 years, this 15 units/ha density target implies a change in the character of streets and landscapes in particular, and a change in the range of housing choice to be offered to the market, with smaller lot sizes becoming more prevalent.

Residential density at 15 units/ha equates to the expected density of several new communities in southeast Queensland, but is not yet represented in the Fraser Coast market, except in retirement villages and high-rise apartments.

Past residential development in Hervey Bay has ranged from approximately 7 units/ha to 12 units/ha in newer areas (such as Augustus Estate).

It is fair to expect that higher average density development in Hervey Bay, particularly in emerging communities, will follow the form and character of many examples in the new communities of southeast Queensland. Market acceptance of smaller lots is expected to increase and be seen as a suitable and affordable lifestyle choice.

The primary challenge in achieving average densities of 15 units/ha in new communities is minimum lot size. Lot sizes below 300 sqm with smaller detached housing choices, and as small as 200 sqm should be considered, for either detached or semi-detached housing product.

### **Implications of Sea-level Rise:**

With a key objective to promote infill projects and the redevelopment of historical foreshore villages, the implications of expected sea-level rise need to be considered.

At the core of this discussion, is the premise that an impending sea-level rise will not dictate or necessitate abandoning the existing urban foreshore areas which are the economic, amenity and identity foundations of Hervey Bay. Consequently, the implications of sea-level rise need to be addressed, as may be required, to reinforce the foreshore villages and all that they offer to Hervey Bay as a place, and for continuity of this critical economic driver in the region.

As a sustainability initiative, it is recommended that measures be established to suitably address potential climate impacts as they might affect habitable development codes, location of key services and infrastructure, and landscapes that include WSUD and integrated water cycle management elements, as key examples.

### **Built Form & Character Observations:**

When travelling throughout Hervey Bay, there is a general scarcity of trees in the public realm. Consequently, the built form dominates. Apart from the treed foreshore, the hillside backdrop, and pockets of trees (parks), the typical street view has very few trees with no organised street tree planting. This character is also prevalent in new residential areas.

With few trees in the street view, significant attention has been placed on the building architecture and the impacts that individual buildings, including heights, colours, and facades, have on the character of a street. While the architecture is varied in quality, character and “fit” with the surroundings, the attention on built form may be overstated due to the extent of visual exposure that results from a sparse landscape.

The value of street trees in defining the character of a community cannot be overstated. In Hervey Bay, part of the appeal is a sense of space, particularly large home sites, which should not be discounted, however, this appeal does not need to be diminished by trees in the street, and the benefits of these trees to urban areas are significant, including reducing heat island effects, promoting shade, comfort and walkable communities. It can also be argued that trees mitigate the need for greater built form controls (over time, trees are the dominant structure in the street view).

In many cases, built form controls are considered the primary means to ensuring quality in the built environment. For Hervey Bay, it is our recommendation that additional built form controls may not be required to address and achieve greater street appeal, but rather a comprehensive greening of streets can be the primary means of improving quality in the built environment. This approach can be applied to both established and new communities with equal impact and effect. In addition, increased street tree planting can be a positive community response to climate change impacts.

While additional built form controls for street appeal may not be necessary, it is recommended that controls be considered that promote improved sustainability outcomes. These would include appropriate solar shading of building facades and outdoor living spaces, recent introductions of green building materials and facade systems, and impervious surface areas (particularly parking lots). These measures will in turn generate better architectural solutions more suited to the north-facing slopes and sub-tropical conditions in Hervey Bay.

## 02.6 Future Development - Key Elements (continued)

### **Public Greenscapes:**

Significant areas of green offer significant value to the public realm. Typically, towns and cities provide suitable park space, however opportunity to establish greater character and an overall sense of green is generally achieved with greater impact along street corridors. A key opportunity exists in Hervey Bay to significantly change the perception of “green” within the streets and linear networks of the area.

#### Green Streets;

Greening a street with trees is a simple yet very effective way to establish a hierarchy of role and function for movement and wayfinding in a city.

Key streets can be selected for incremental implementation, with two primary types and roles - one for experience in moving and finding your way through the city, and the second more focused on providing shade and comfort for pedestrians along key desire routes in the city.

#### Green Spines;

Green spines such as dedicated pathway routes, separate from streets and connected to the park network, offer an obvious opportunity for greening. In order to promote use of these spines, comfort and safety are primary drivers. Consequently, while planting these spines to provide shade is desirable, the species selection should account for the need to protect public safety and views to the corridor.

### Green Linkages;

A number of green linkages exist in Hervey Bay. The opportunity exists to reinforce key urban linkages with landscape. For example from the Urangan pier along Pier Street back towards the gardens on Elizabeth Street; and Main Street and Taylor Street from the Esplanade into the core.

### **Gateways:**

There are two key gateways that warrant further investment and that can advance the arrival experience of travellers to Hervey Bay:

#### Arrival from Maryborough;

The primary vehicle arrival to Hervey Bay is via the Maryborough-Urangan Road, Highway 57. At present there is a road side sign south of Hervey Bay, but on arrival into the urban area, passing through Eli Waters and arrival at Boat Harbour Drive roundabout, there are few additional clues to announce an arrival or to aid with wayfinding. There is a sense that this roundabout is a gateway, however there are no obvious notifications that reinforce a sense of arrival. An opportunity exists at this approach to reinforce this as the gateway to Hervey Bay. At present, the dominant elements are commercial buildings that do not contribute to a unique sense of place

Potential exists to establish the landscape as the dominant element and to introduce themed gateway signage structures or elements that would define a unique entry experience within the public realm, and aid in wayfinding. Landscape can be in the form of a dominant change in tree species used, density of planting, seasonal variation, mounding and walls, etc.

#### Airport to Urangan;

A key entry experience, particularly for tourism, is the drive from the airport into Urangan, and in particular to the harbour area. At present, this drive can be described as undefined, with adjacent land uses including industrial, service uses in a sporadic pattern. Investment in this arrival experience could be applied in the form of a consistent planting treatment, with regular street trees that would form an “avenue” along Booral Road and leading into Elizabeth Street, and linking to Boat Harbour Drive and Miller Street. A treed avenue approach would mitigate and lessen the impacts of adjacent land uses and establish a memorable arrival experience to Hervey Bay.

03

*Maryborough*

## 03.1 Context

### Role and Function

Maryborough is located on the Mary River and approximately 255km north of Brisbane. Maryborough is a major regional centre and second largest urban settlement within the region. The city was one of the first European settlements and as such holds significant heritage value.

- » Once Australia's largest port of entry to Australia and for the export of wool, cotton, timber, sugar and gold;
- » Is now recognised as one of Queensland's most notable heritage cities with significant commercial and residential building clusters/zones;
- » Core area of CBD is dominated by significant heritage buildings and non-primary retail;
- » Some emergence of lifestyle and cafe retail establishments in the CBD, which is improving patronage.
- » Accommodates regional offices of government, manufacturing and rural service industries;
- » Provides a significant proportion of the administrative, health, employment and business functions necessary to support a growing regional economy;
- » Provides local and convenience retail services in two main shopping centres and several smaller centres;
- » Tourism plays a significant role in the local economy, particularly to pass-through traffic - not as a tourist destination;

- » Primary industries of employment include:
  - Health care and social assistance (13.8%)
  - Retail trade (13.8%)
  - Manufacturing (13.2%)
- » Maryborough experienced a comparatively very low 9.4% growth in total jobs between 2001 and 2006;
- » The key tertiary education campus is the Wide Bay Institute of Tafe Maryborough; and
- » Certificate qualifications are the dominate type of qualification of Maryborough residents.

### Demographics

Maryborough has had slow growth over the past decade. An outline of the current and project growth is provided below. These facts have informed the understanding of the current and future function and the urban framework of Maryborough:

- » Population of 22,766 which is 26.9% of the Fraser Coast Population;
- » Low level of recent population growth (3.9% average annual population growth rate);
- » Expected to experience the lowest average annual growth rate compared to Hervey Bay and Woocoo/ Tiaro at 0.7% (projected population 31,308 by 2026);
- » Median population age is 41 years with 32.2% aged 55 years and over; and
- » 48.4% of households have an average income of less than \$26,000.

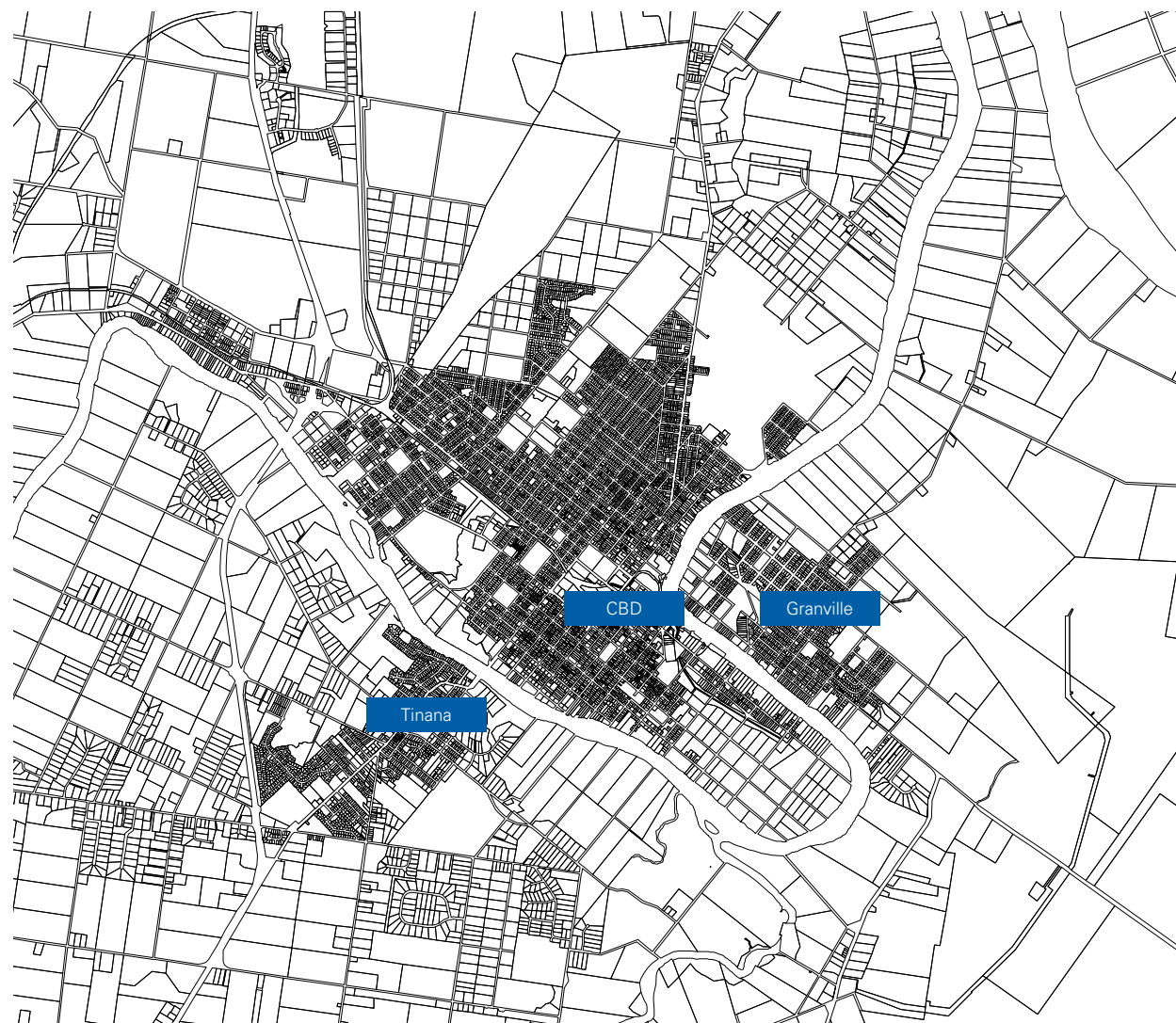


Figure 3.1 Key Locality: Maryborough

1:75,000 @ a4



## 03.1 con't Further Investigation Areas

Maryborough has not had rapid growth in recent decades. Within this context, two further investigation areas (FIAs) have been identified in Maryborough. These include Granville and Maryborough North as shown in figure 3.2. Both of these FIA zones are predominantly within existing rural and agricultural areas.

### Granville

The Granville Further Investigation Area is located approximately 2 kilometres to the east of the Maryborough Central Business Area and adjoins the existing residential neighbourhood of Granville. It has an area of approximately 595 hectares and is almost rectangular in shape.

### Maryborough North

The Maryborough North Further Investigation Area is located approximately 3 kilometres to the north of the Maryborough Central Business Area. It is bounded generally by the neighbourhoods of Aubinville and St Helens to the east, the neighbourhoods of Fairfield and Baddow to the south, the Maryborough Rifle Range and private property to the west and Saltwater Creek to the North. It has an area of approximately 810 hectares and is irregular in shape.



Figure 3.2 Further Investigation Sites









## 03.2 Site Attributes, Issues and Opportunities

### Site Attributes

Maryborough is a town with significant heritage value. This heritage value is the town's greatest attribute. Other attributes include:

- » Relatively flat with some undulating topography, strongly defined by the wide meandering Mary River, fringed by mangroves, local industries, historic riverfront houses and rural uses (sugar cane cultivation, small scale cropping, grazing);
- » The street pattern is a regular grid, making wayfinding easy, and offering views and vistas to the river landscape, and to iconic heritage landmarks within the central area;
- » The prevailing built form reinforces an urban setting, with building edges reinforcing the street pattern and with civic structures well sited in heritage landscapes (schools etc);
- » Scale and number of heritage assets establishes a rich character that distinguishes Maryborough from most other regional centres in Queensland;
- » Large stock of traditional Queensland housing in the neighbourhoods surrounding the City centre, much of which has been retained or renovated;

- » Local community values this history and is proud of the significant effort that has been made to preserve and re-use its heritage; and
- » Maryborough Heritage Markets held weekly in the city centre, since 1987.

-  Airport/ Development Potential
-  Hospital
-  Mary River
-  Rural Edge
-  Historic CBD Centre
-  Village Nodes

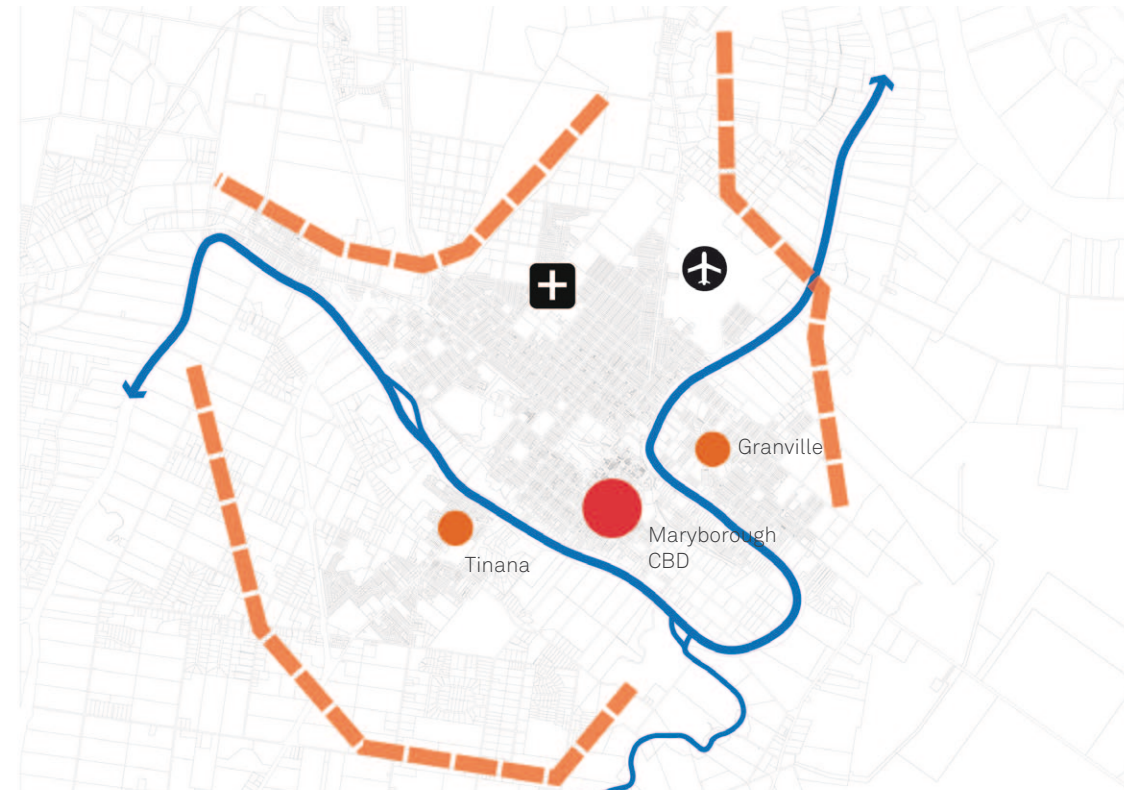


Figure 3.3 Attributes

## Issues

There are a number of issues and challenges facing Maryborough, including:

- » Slow growth in population and no pressures or drivers for significant development within the region, for example, no major new employment generators are proposed or obvious for Maryborough that would lead to population growth;
- » Potential for new bypass roads likely to further impact on viability of retail core area as pass-through traffic is removed further from the town, which will place pressure to allow additional strip retail along the bypass route away from the heart of the town;
- » The rural edge and ecological areas within these regions warrant protection and consideration needs to be given to the use and need for the identified FIAs, which if developed would expand infrastructure requirements;
- » Traffic access to Granville area is limited and would require a significant new bridge if major growth in the FIA was promoted; and
- » The Mary River constrains development potential close to the town core in flood overlay areas.

## Opportunities

There are many opportunities to improve the built and urban form within Maryborough, including:

- » Potential closure of the airport provides for development opportunity close to the core area, which would promote growth in a location that reinforces the town boundary;
- » Consolidation or expansion of development opportunities in Tinana ;
- » Proposed Maryborough Marine Industry Precinct;
- » The flood overlay limits development, in particular the significant non-developable area adjacent to the CBD provides an opportunity for floodplain conservation, agriculture and wetland rehabilitation. Figure 3.4 Maryborough Flood Overlay indicates these areas of opportunities; and
- » Existing built form and landscape policies that protect the significant heritage value within the town, particularly as a largely intact contiguous heritage zone, could be reinforced through Business Improvement incentives such as zoning, taxation or other policies that would encourage adaptive reuse and the revitalisation of core retail and commercial uses in the CBD; and
- » Introduce built form protection for residential areas to further protect the significant heritage value of the town.

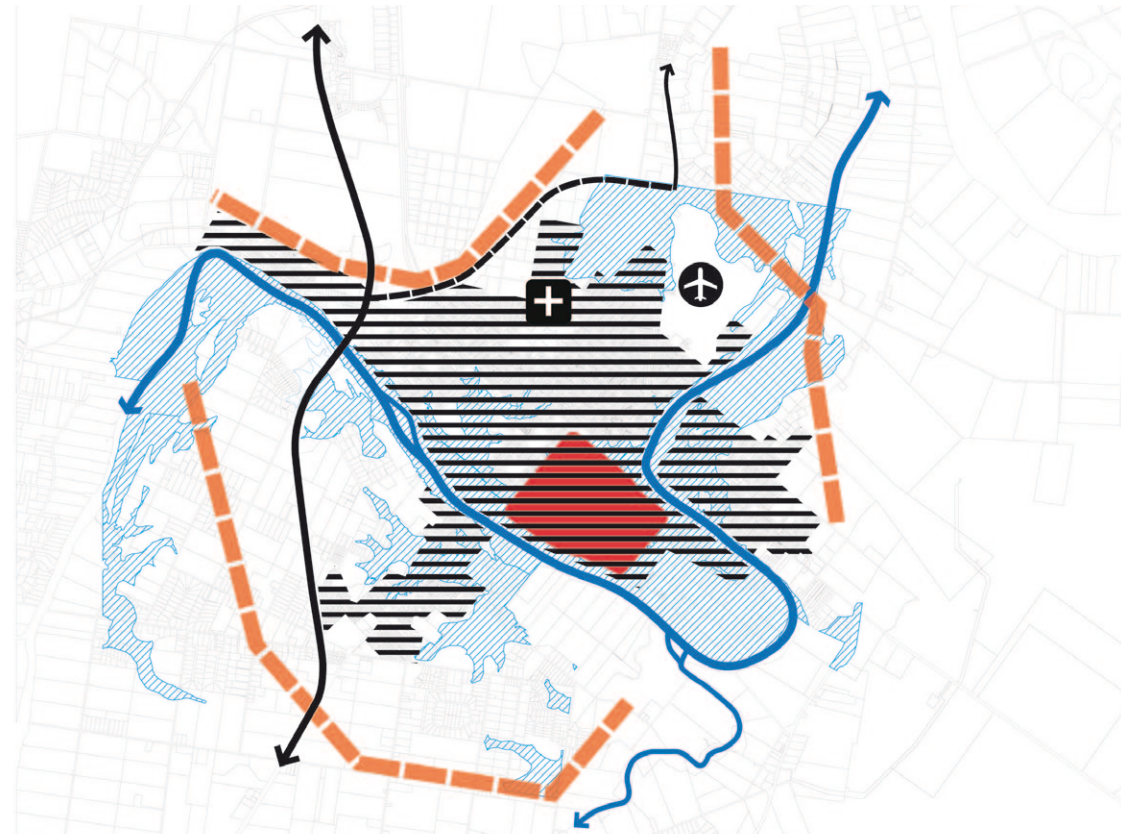





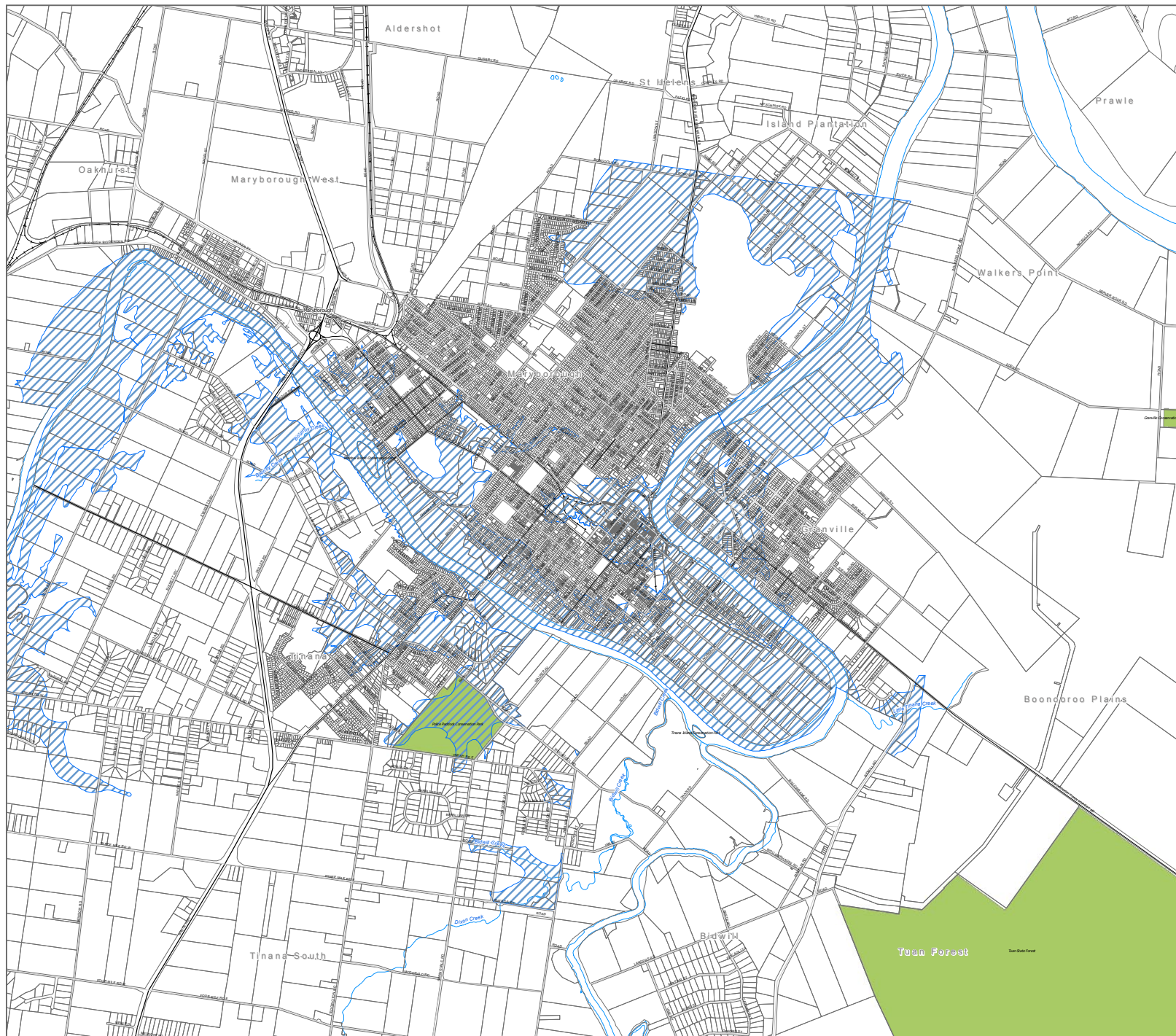


Figure 3.3 Issues and Opportunities

-  Mary River needs protecting and rehabilitation
-  Limited pressure for development outside rural edge
-  Policy to protect the town centre built form heritage
-  Policy to protect the residential built form heritage
-  Floodplain limits development opportunities (Figure 3.5 shows potential areas in detail)
-  Implications on town centre if by pass is built
-  Potential to redevelop airport



PROJECT ID 09513118.01  
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DATUM GDA 1994, PROJECTION MGA ZONE 56

0 0.5 1 2 Km

- ▲ Mountains/Peaks
- Rivers
- ▭ Fraser Coast Region Boundary
- Protected Areas
- ▨ floodoverlay\_region

MARYBOROUGH URBAN AREA + FLOODING

Figure 3.4 Maryborough Flood Overlay

## 03.3 Comparisons

A study was undertaken to compare Maryborough with other settlements within Queensland, New South Wales and Victoria.

The comparisons highlight similar and varying built form, landscape conditions and settlement patterns as reference points.

References to these benchmarks are useful in determining elements that Maryborough might choose to adopt or avoid in establishing how development should evolve, and how distinct place making might be achieved.

Desirable elements drawn from the following benchmarks include:

- » Township has significant heritage value, with housing retention encouraged and reinforced by a housing information kit for restorations;
- » Retail core remains in the CBD, with limited strip retail at the edges, which has preserved significant vitality and a busy core area.

### Ipswich

- » Similar relationship between the urban form and the meandering form of the river;
- » Growth of the town is based on industrial (mining) history;
- » Township has significant heritage value, with housing retention encouraged and reinforced by a housing information kit for restorations;
- » Core area retail has declined with emergence of big box and strip retail decentralised at city edges on main roads; and
- » Industrial/rail lands yet to be redeveloped.

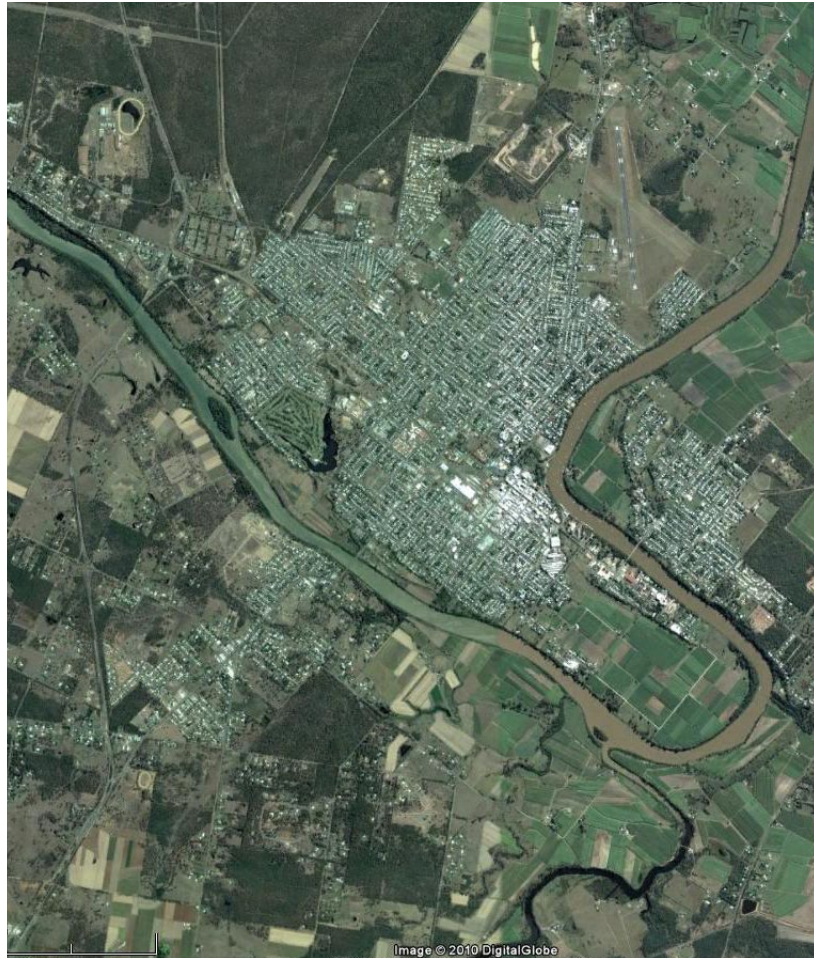


Figure 3.5 Maryborough, Qld

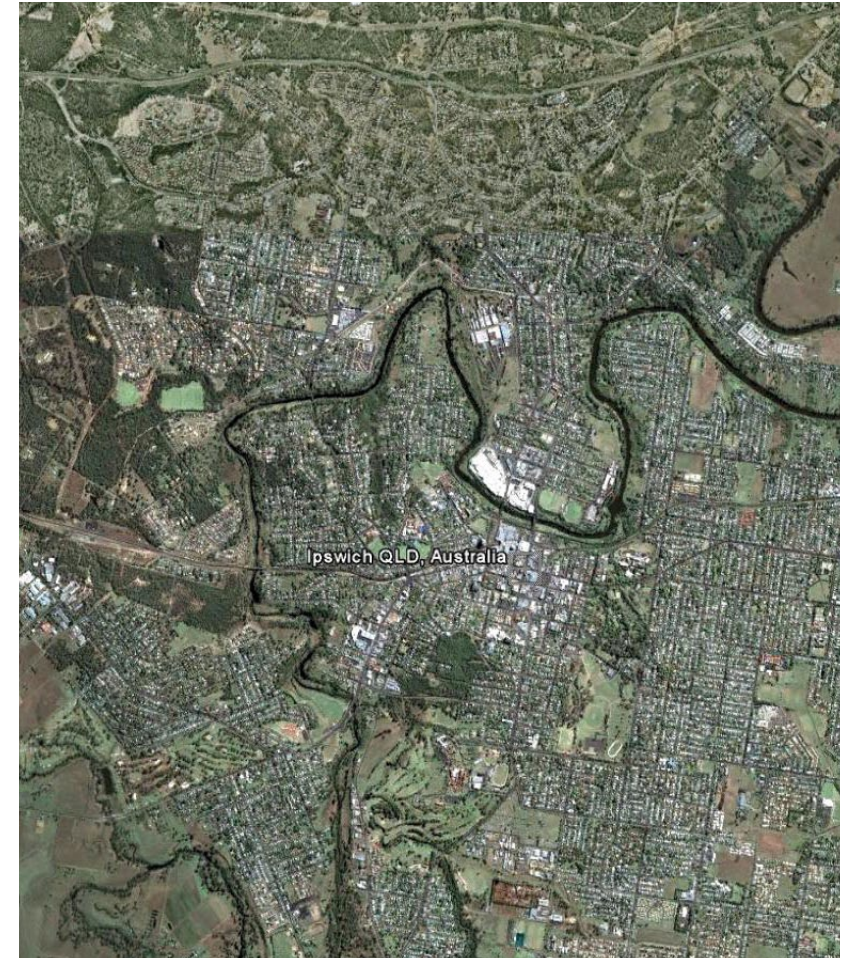


Figure 3.6 Ipswich, Qld

### Warnambool

- » Central regional township which supports and provides central facilities for other coastal and rural townships;
- » Acts as a principle activity centre for the region;
- » Employment and higher education hub for the western district.

### Lismore

- » Similar relationship between the urban form and the form of the river;
- » Similar relationship to Byron Bay as Maryborough has to Hervey Bay, with Lismore focused on surrounding agricultural and related service industries, and Byron Bay focused on tourism and related services;
- » Higher education focus for the town, which promotes vitality in the town;
- » CBD core is highlighted by a significant number of heritage buildings; and
- » Retail core remains in the CBD, with limited strip retail at the edges, which has preserved significant vitality and a busy core area.

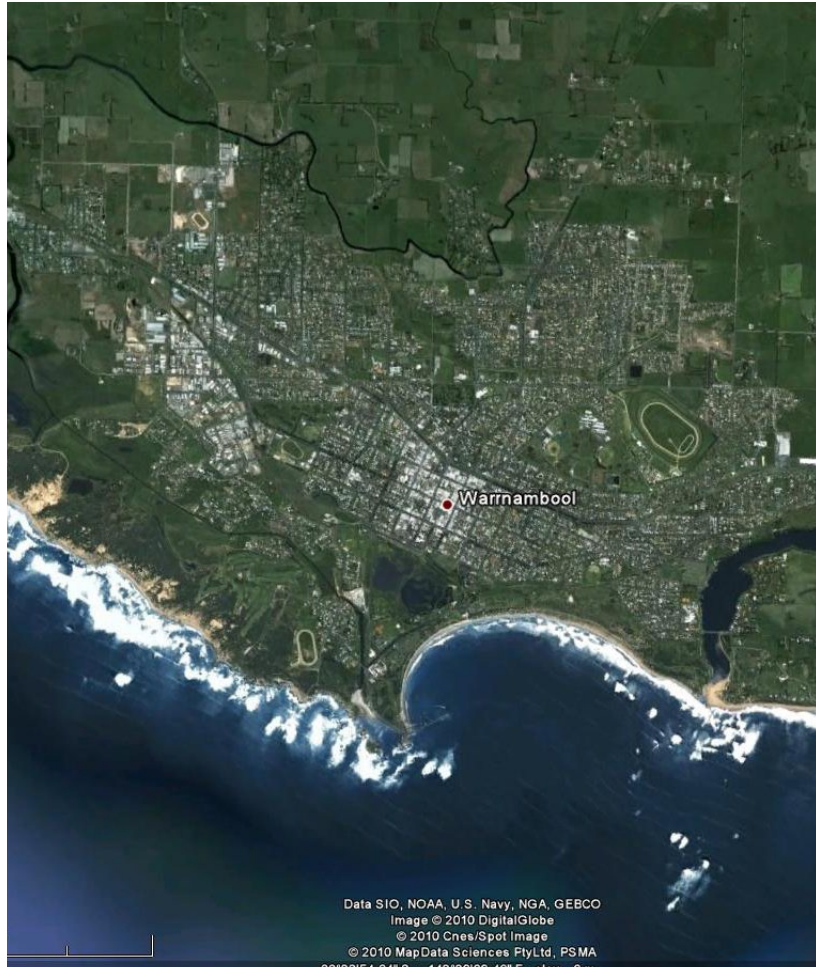


Figure 3.7 Warnambool, Vic

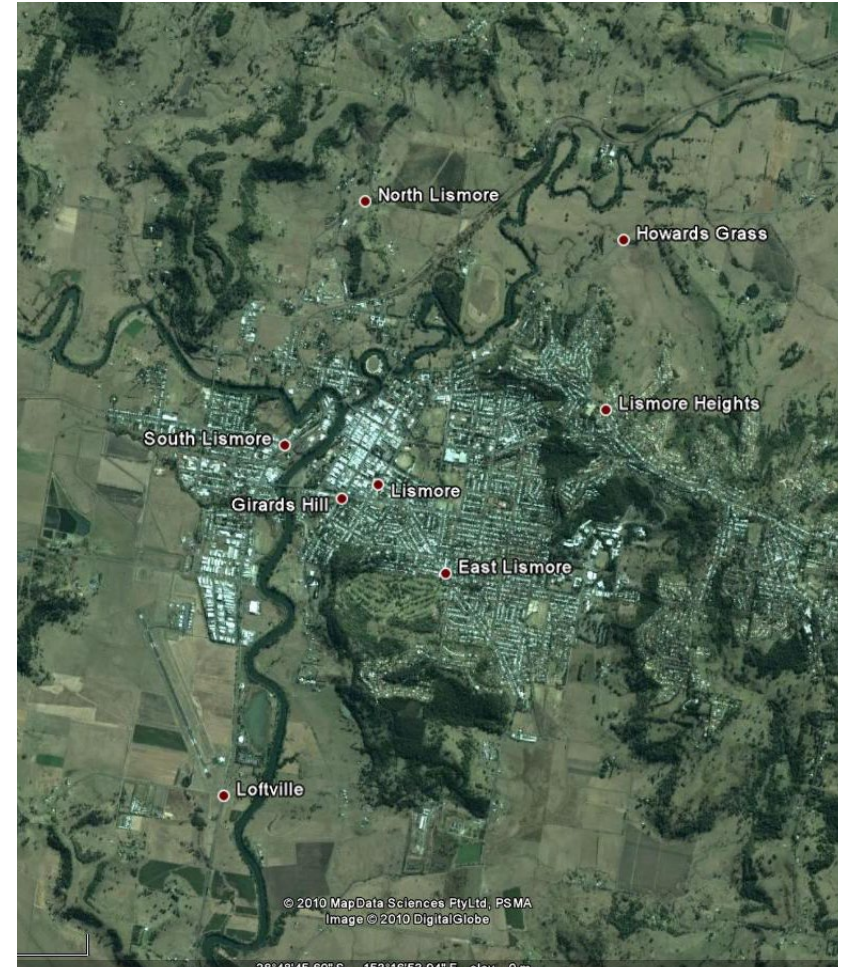
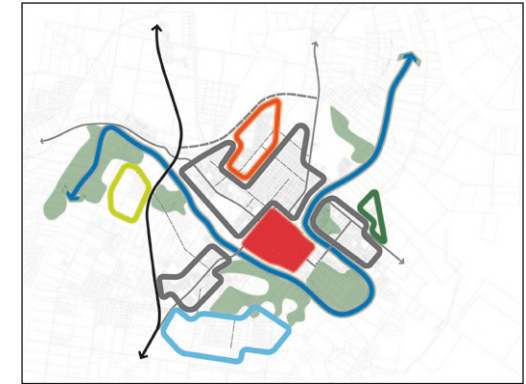
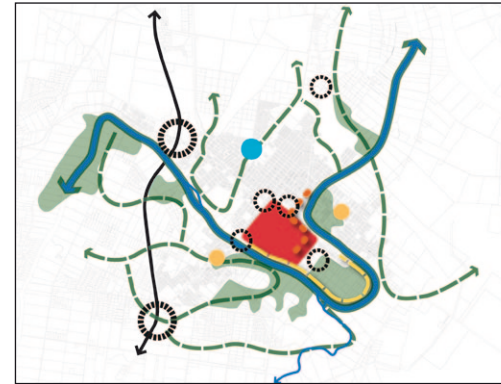
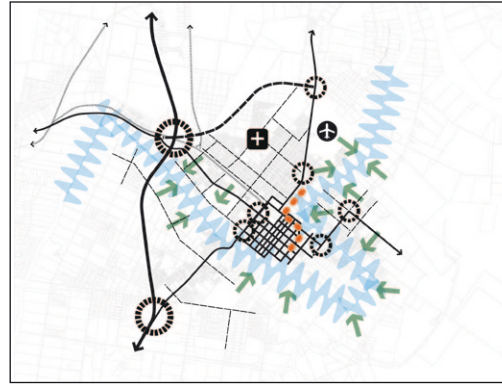
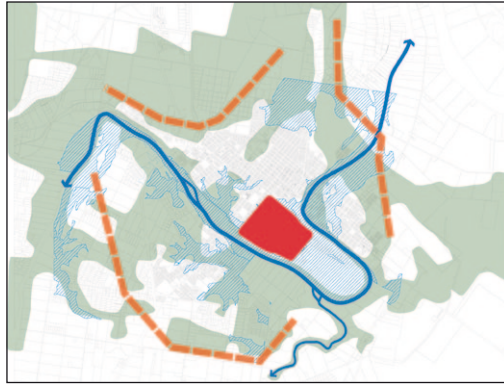


Figure 3.8 Lismore, NSW






## 03.4 Organising Principles













### Ecological Environmental Systems

-  Mary River corridor
  - » Restore diversity and indigenous habitats
  - » Ensure water quality
-  Heritage city centre
  - » Reduce resource and energy consumption
  - » Encourage renewable
  - » Minimise carbon emissions
-  Ecological Habitat Enhancement
-  Flood Plain conservation and wetland rehabilitation
  - » Create new habitats
  - » Encourage productive landscapes (seasonal food production)
-  Rural/urban boundary





### “Wayfinding” Legibility and Mobility

-  Mary River Environs
  - » Principle contextual feature and open space – linear focus
-  Maryborough City Centre
  - » Orthogonal street pattern
  - » Introduce comprehensive planning strategy
-  Convergent linkages and desire lines to river environs reinforce corridor open space
-  Principle access corridor (Bruce Highway)
-  Potential city by-pass
-  Signature gateway
-  Contextual gateway
-  Heritage corridor

### “Place Making” Identity

-  Mary River ecological/habitat corridor
-  Maryborough city centre hub and heritage Focus
-  Maryborough Health Hub
-  Retail centres as local convenience (fresh food offer)
-  Heritage Riverside Precinct and Lennox streetscape corridor
-  Urban gateways define/mark urban/rural boundary
-  City Centre Gateways
  - » Reinforce significance of formal entries
-  Environmental Spines
  - » Interlinked and convergent on river environs
-  Riparian, wetland and ephemeral habitat areas and respites
-  City centre river edge loop

### “Urban Form” Development Potential

-  City Centre Heritage
  - » Principal civic activity and tourism hub/ heritage focus
-  River Environs
  - » Conservation, habitat and food production landscape
- Sustainable new communities
  -  » North Maryborough
  -  » Granville ‘village’
  -  » West Maryborough ‘hamlet’
  -  » South Maryborough (Police Paddock Environs)
-  Existing Settlements
  - » Consolidate and enhance local community and image

## 03.5 Urban Design Framework - Principles

### Key Features

The following key framework principles for Maryborough achieve the objectives of this study and will form the basis for strategies. The framework responds to the themes and opportunities explored in the previous section and provides direction for sustainable growth.

#### Maryborough City Centre

- » Principal activity centre and heritage tourism focus;
- » Reinforce heritage values of the core through policies that encourage adaptive reuse and that encourage renewal of retail shopfronts and building facades;
- » Reinforce the heritage core with a consistent streetscape strategy that builds on existing improvements.

#### Mary River Environs

- » Restore and reinforce diversity and indigenous habitats along the Mary River corridor;
- » Floodplain conservation and wetland rehabilitation;
- » Explore productive landscapes as integral to town life; and
- » Integrated river environs with the central town.

#### Urban/ Rural Boundary

- » Institute an urban / rural interface and boundary to consolidate future development within the town core and to ensure the rural character of the area is not diminished;
- » Facilitate urban development that strengthens the core; and
- » Consolidate and enhance existing town core through incentives to infill redevelopment sites.

#### New Village Town Centres

- » New local villages which will provide community hubs and complement the main town centre;
- » Act as gateways to the wider city and region.

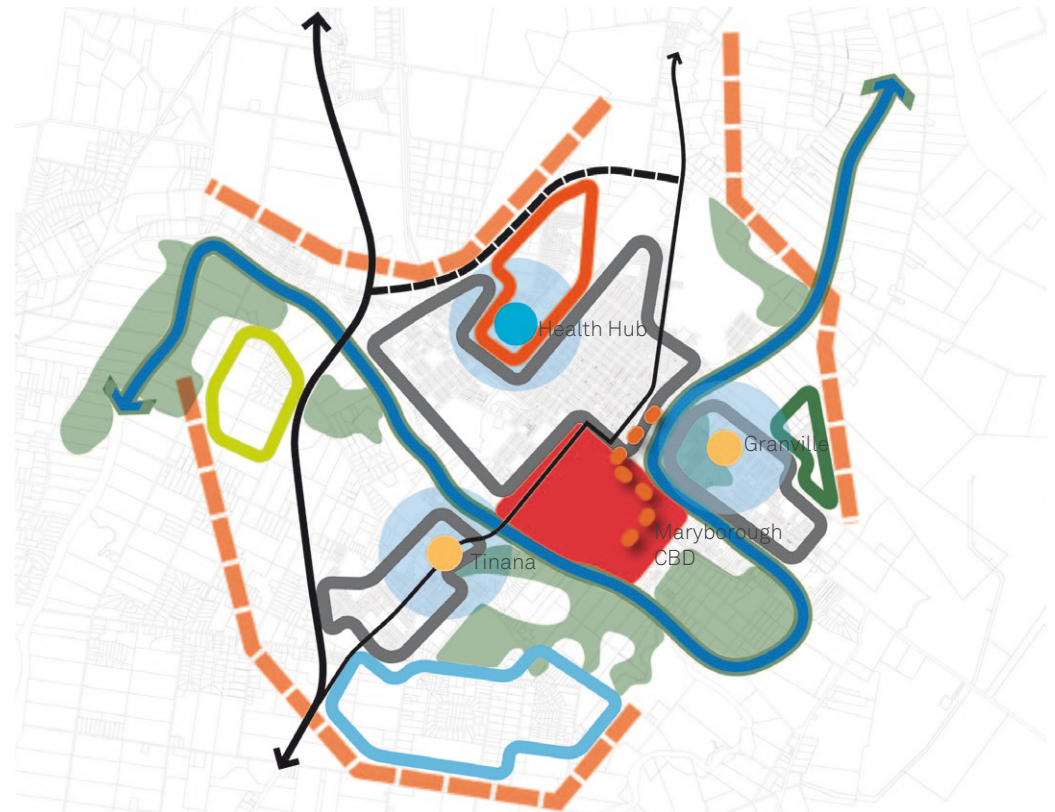
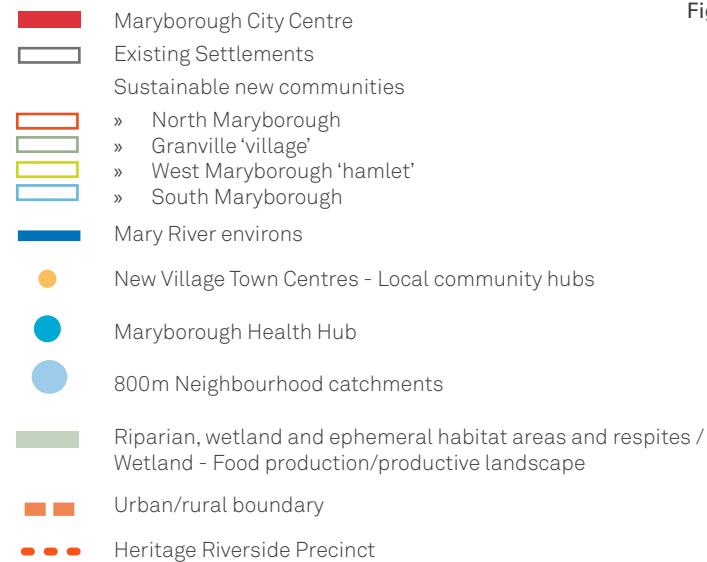


Figure 3.9 Urban Design Framework



04

*Coastal + Rural Townships*



## 04.1 Context

This section looks at the role and character of the coastal and rural townships in the context of the entire region and provides urban design principles to future development.

This built form and urban design framework is based on high-level analysis of key elements such as local character (e.g. built form), urban structure (i.e. positioning of the key pieces of the urban environment, such as local shops, open space, parking), movement and access, and natural environment/systems; culminating in responsive key principles / themes -

- » Containment of Urban Structure
- » Definition, conservation and enhancement of heritage features
- » Direction for future urban infrastructure; and
- » Place Making and Identity i.e. response to the landscape

“setting” and local character  
The following coastal and rural townships have been considered in this urban and built form strategy (from north to south):

- » Burrum Heads
- » Toogoom
- » Howard
- » Burrum / Torbanlea
- » River Heads
- » Aldershot
- » Maaroom
- » Brooweena
- » Tiaro
- » Boonooroo -Tuan
- » Poona
- » Bauple
- » Tinnanbar

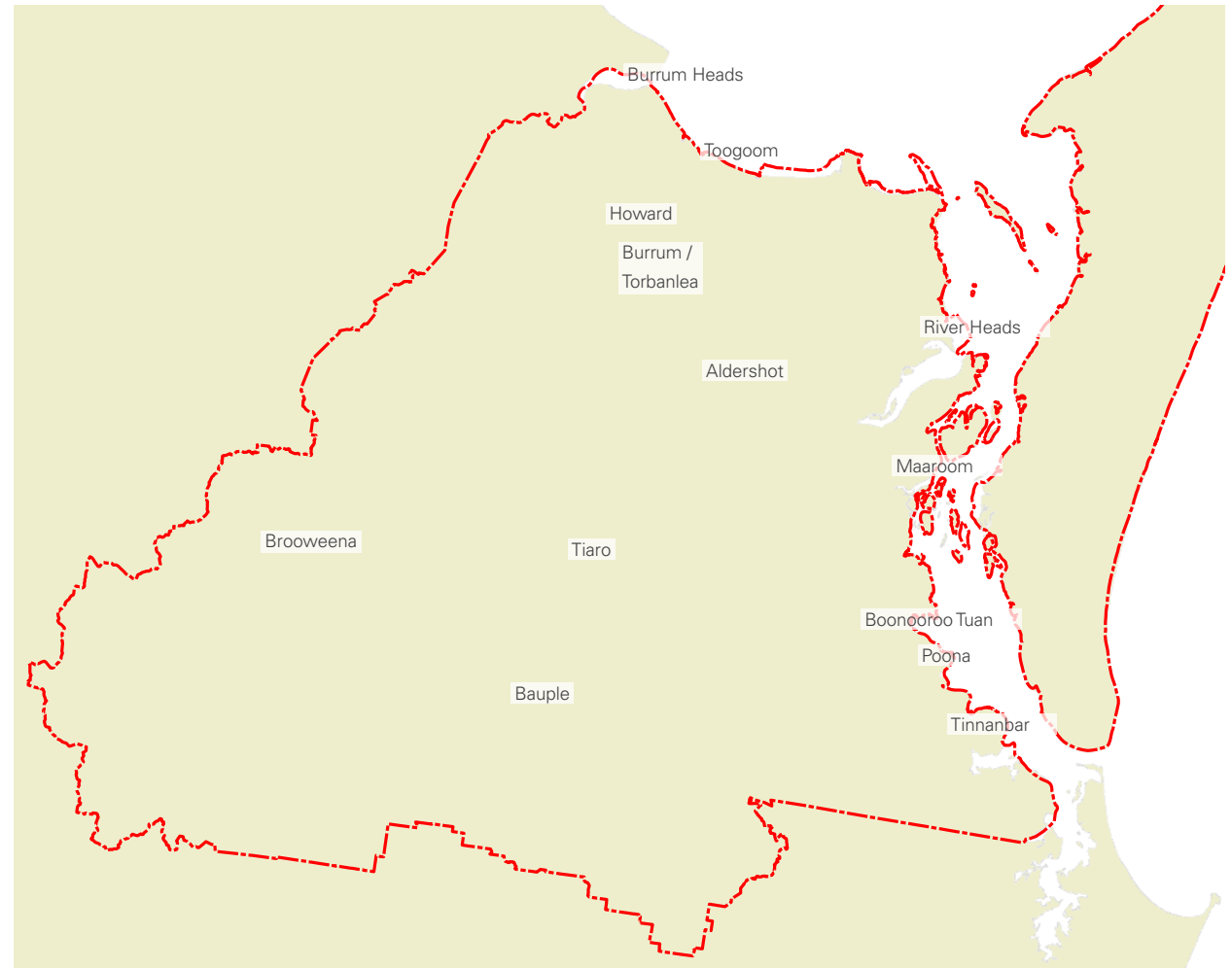


Figure 4.1 Coastal and Rural Townships

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## 04.2 Role and Function

### Burrum Heads

- » Small coastal town located at the southern entrance of the Burrum River mouth, amidst Burrum Coast National Park
- » Formally known as 'Traviston'; a holiday destination for residents (former mine workers) of Howard and other inland areas at the end of the nineteenth century
- » Renamed 'Burrum Heads' in 1950, this holiday spot reflected a preference for a remote lifestyle
- » New residential developments and estates have extended rapidly in recent years west of the town centre
- » New foreshore residential development with 'village centre' and parkland approximately 3km southeast of the town centre
- » Primary industries of employment include:
  - Construction
  - Accommodation & food services
- » Comprises a mixture of permanent and holiday accommodation with small-scale retail services and community facilities
- » Of the 558 occupied private dwellings in 2006, 57.9 % were detached houses and 34.2% were "other dwellings" i.e. caravans, cabins, houseboats (ABS, 2006)



Image source: <http://www.dolphinwatersestate.com.au/fcc2.pdf>



Image source: <http://www.panoramio.com/photo/8133987>



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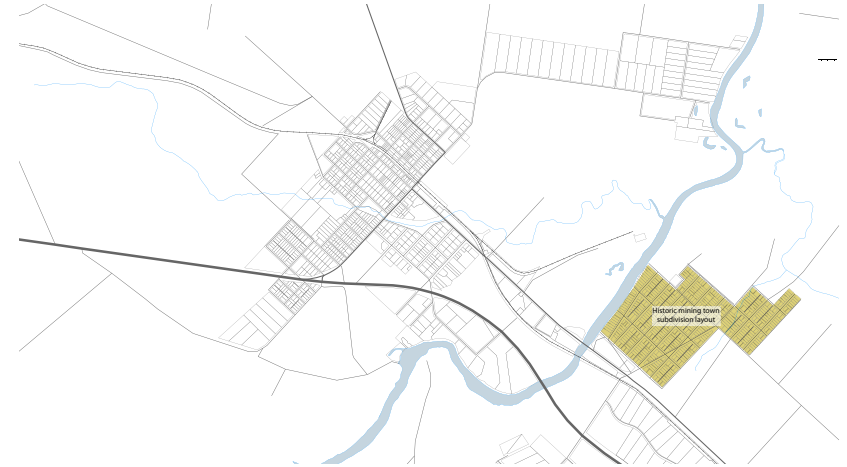
## Toogoom



- » This small coastal town evolved as a collection of small farms during the late 19th and early 20th centuries; later emerging as a residential area and holiday spot.
- » New residential developments and estates have extended rapidly in recent years behind the foreshore esplanade, characterised by a low density homogenous neighbourhoods of detached houses
- » Linear settlement form
- » Primary industries of employment include:
  - Health care & social assistance
  - Construction
  - Education & training
- » Population of 993; a 24% increase since 2001 (ABS, 2006)
- » Median population age is 50 years (ABS, 2006), with 35.6 % of the population between 25-54 years



## Howard



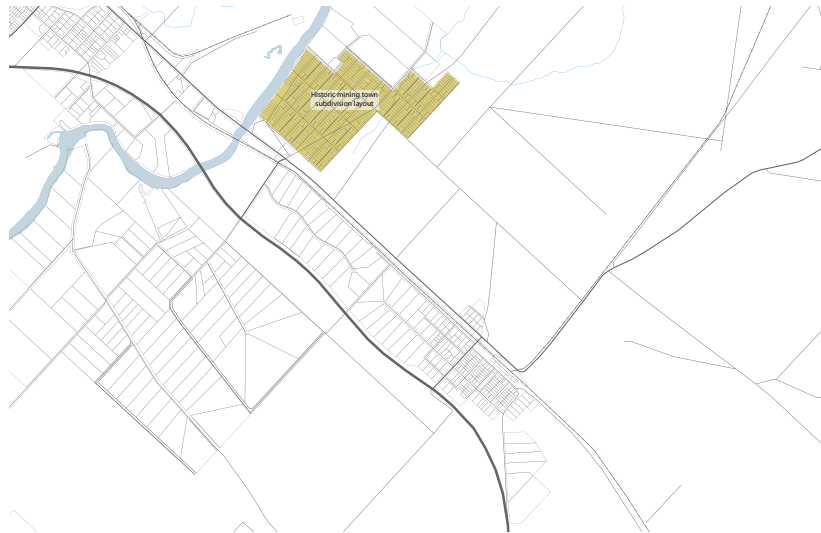
- » Ex-coal mining town; also supported Howard power station until 1980. Now a small rural service centre for the surrounding mixed agricultural area of citrus orchards and sugar plantations
- » Brooklyn House (c.1890), a high set Victorian era Queenslander home, is a key landmark in the town;
- » Total labour force of 250 in 2006. Primary industries of employment include:
  - Retail trade (17%)
  - Health care & social assistance (15%)
  - Construction (11%)
  - Manufacturing (9%)
- » Population of 1,069 (ABS, 2006); a 13% increase since 2001
- » Median population age is 48 years, with 31.7% of the population between 25-54 years (ABS, 2006)
- » 92.8% of the 456 occupied private dwellings were detached houses in 2006 (ABS, 2006)



## Burrum / Torbanlea

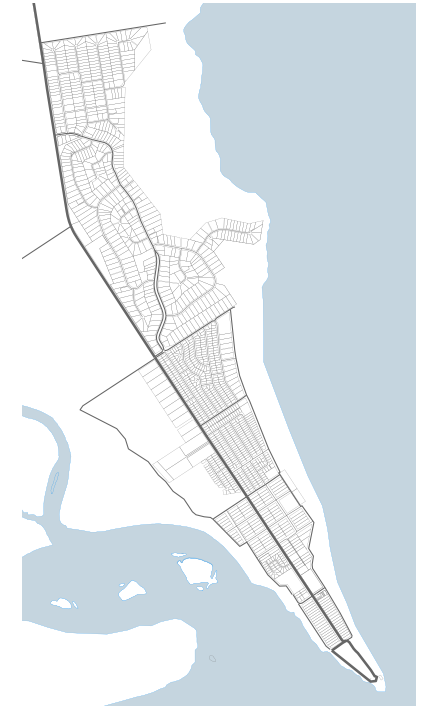


- » Ex-coal mining town (the shaft was unsuccessfully excavated and abandoned in 1871) located on the Maryborough to Bundaberg railway; now a small rural centre with a primary school.
- » The Miners Arms Hotel (c.1889) is a local landmark
- » Primary industries of employment include construction, retail trade and manufacturing
- » Population of 419 (ABS, 2006 Census data); a 12% increase since 2001
- » Median population age is 41 years (ABS, 2006), with 37.6 % of the population between 25-54 years

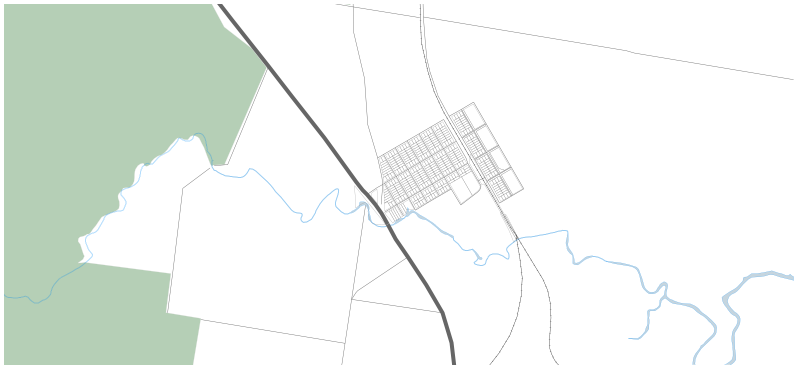


## River Heads

- » This coastal settlement has evolved along a peninsular south of Hervey Bay, overlooking Fraser Island and the mouth of the Mary River
- » Population of 930 (ABS, 2006 Census data); median population age is 47 years (ABS, 2006), with 36.6% of the population between 25-54 years
- » A key boating node, providing car parking, boating ramps for recreational vessels and a vehicular access point to Fraser Island, via the Kingfisher Bay barge and the Fraser Venture barge
- » Mostly permanent residential, located on the east-facing hill slope overlooking Fraser Island
- » Main route (River Heads Road) traverses a prominent ridgeline
- » Residential character defined by large scale modern (post 1970) double storey detached residences set on large blocks (>600m<sup>2</sup>)
- » Small-scale retail services; population generally supported by Hervey Bay (approximately 10km to the north)
- » Former Hervey Bay Planning Scheme notes River Head's potential to accommodate some form of marine related development due to its strategic location at the mouth of the Mary River, and the potential for a deep-water anchorage



## Aldershot

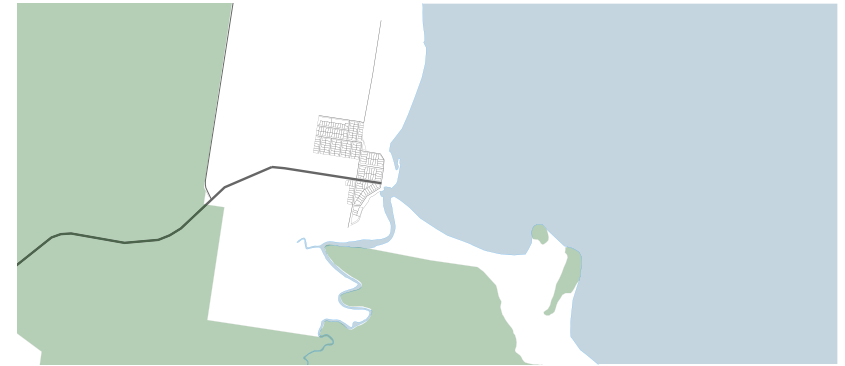


A former industrial town north of Maryborough, focussed on the North Coast railway line and former smelting works (1893 - 1906) which produced high-grade refined copper, lead, silver and gold from ore bodies at Zeehan, Tasmania, Adelaide, Melbourne and Sydney

- » Population of 516 (ABS, 2006 Census data); a 38% increase since 2001
- » Median population age is 37 years (ABS, 2006), with 38.8% of the population between 25-54 years
- » Total labour force of 188 in 2006. Primary industries of employment include:
  - Health care & social assistance
  - Manufacturing
  - Retail trade
- » 98.5% of the 197 occupied private dwellings were detached houses in 2006 (ABS, 2006)
- » Open cut coal mine proposed by Northern Energy Corporation, north of Aldershot (Colton Mine lease application lodged), planned to produce 500,000 tonnes of coal per annum



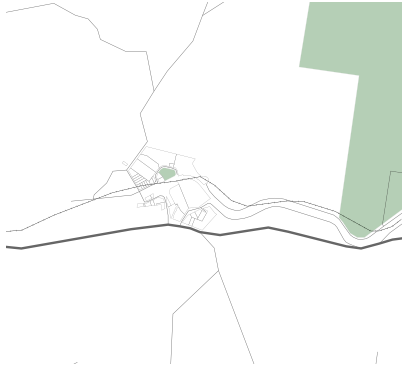
## Maaroom



- » Small coastal town located at the northern entrance of the Maaroom Creek mouth, amidst Poona National Park
- » Population of 234 (ABS, 2006 Census data); median population age is 56 years (ABS, 2006), with 32.5% of the population between 25-54 years
- » A key boating node, providing an all weather boat ramp with tidal access for fishing
- » Mostly permanent residential and recreational facilities (including an extensive foreshore parkland), located on gently sloping land overlooking Great Sandy Strait and Fraser Island
- » Small-scale retail services; population generally supported by Maryborough (approximately 20km to the north west)
- » Strong sense of remoteness and tranquility afforded by its natural setting (mangrove lined estuaries, tidal mud flats, melaleuca woodland and heath associated with Poona National Park) and small scale incremental settlement pattern



## Brooweena



- » Brooweena is a very small but important historic town in the western part of the Fraser Coast Region (part of the former Woocoo Shire), which established in the late 19th Century on the Maryborough-Gayndah railway (opened in 1889) as a timber milling settlement, mainly drawing on hoop pine and managed hardwood plantations (timber mill built c.1924).
- » The town contains a primary school, timber mill and a collection of historic buildings such as the Woocoo Shire Council Hall (c.1915, pictured below), blacksmith's shop, and post office, old farm equipment and a historical museum.



## Tiaro

- » Small rural town located on the North Coast railway, which supports the surrounding producers (dairy, sugar, fruit, vegetables, maize), timber mills and farmers (cattle, pigs)
- » Once provided an overnight stop between the goldfields of Gympie and the port of Maryborough during the late nineteenth century
- » Primary industries of employment include:
  - Public administration & safety
  - Retail trade
  - Health care & social assistance
  - Transport, postal & warehousing
- » Population of 432 (ABS, 2006 Census data); a 21% increase since 2001
- » Median population age is 49 years (ABS, 2006), with 40.7 % of the population between 25-54 years



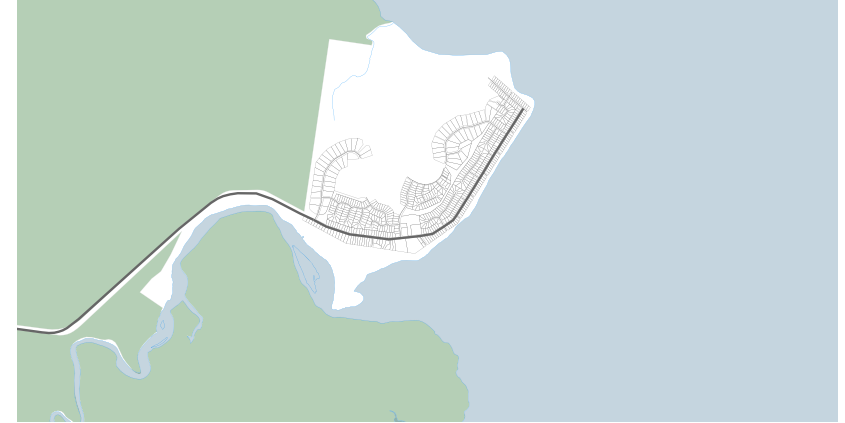
Image source: <http://www.panoramio.com/photo/3694895>

## Boonooroo - Tuan



- » Small coastal town located at the southern tip of the Poona National Park
- » A key boating node, providing a boat ramp with tidal access for fishing
- » Mostly permanent residential and recreational facilities
- » Small-scale retail services; population generally supported by Maryborough (approximately 24km to the north west)
- » Strong sense of remoteness and tranquility afforded by its forested setting and minimal access (only accessed via Boonooroo Road)

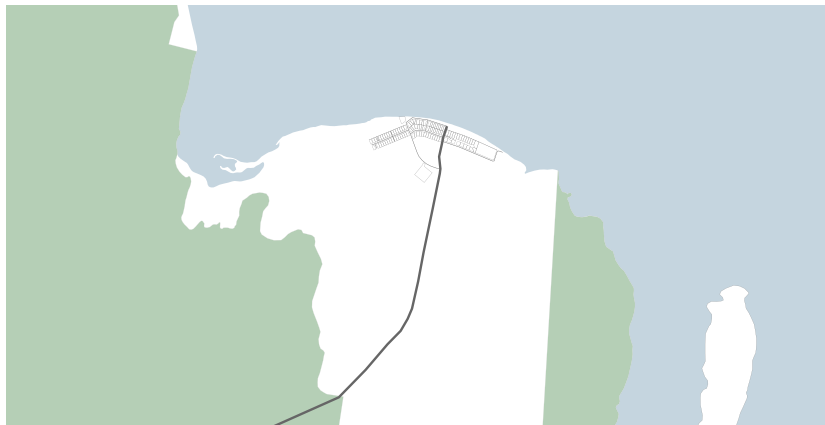
## Poona



- » Small coastal town located at the northern entrance of the Poona Creek mouth, amidst a forested setting (abuts Tuan State Forest)
- » Population of 289; median population age is 55 years, with 31.7% of the population between 55-64 years and 31.4% between 25-54 years (ABS, 2006 Census data)
- » A key boating node, providing a boat ramp with tidal access for fishing
- » Mostly permanent residential and recreational facilities (including a foreshore parkland and caravan park)
- » Small-scale retail services; population generally supported by Maryborough (approximately 30km to the north west)
- » Strong sense of remoteness and tranquility afforded by its forested setting and minimal access (only accessed via Poona Road from Maryborough-Tuan Forest Road)



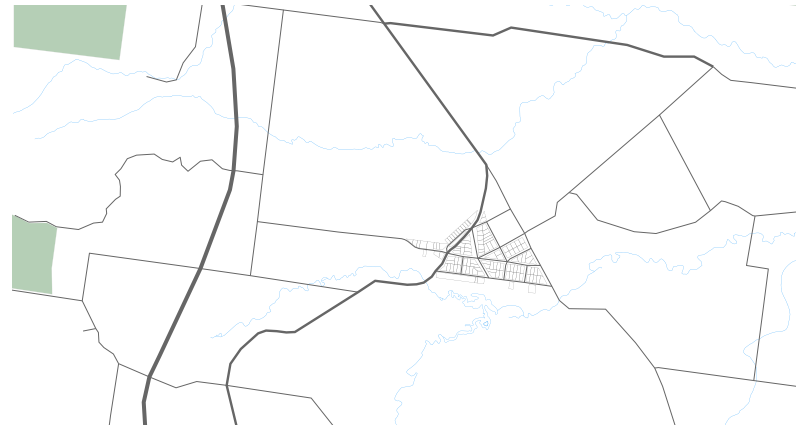
## Tinnanbar



- » Very small coastal town located on a north facing beach amidst Tuan State Forest
- » In the 2006 Census, this location had a very low population count and therefore there is no data available for this location
- » Comprises a mixture of permanent and holiday accommodation with no retail services
- » Very strong sense of remoteness and tranquility afforded by its forested setting, its small-scale incremental pattern of development, informal roads (often unsealed) and minimal access (only accessed via Tinnanbar Road from Maryborough-Tuan Forest Road, approximately 40km south east of Maryborough )



## Bauple



- » Small rural township (named after the Bopple Nut, better known as the macadamia nut, which is native to this area) surrounded by sugar canefields and native forest, at the foothills of Mount Bauple
- » Primary industries of employment include:
  - Agriculture, forestry & fishing
  - Health care & social assistance
  - Retail trade
  - Manufacturing
- » 98.3% of the 180 occupied private dwellings were detached houses in 2006 (ABS, 2006)





## 04.3 Attributes of the coastal townships

### Settlement pattern and growth

The coastal townships (including unique “Fishing Villages”) have very similar attributes which has led to their growth and development in recent years, including:

- » A fairly calm and safe foreshore, which is protected by Fraser Island;
- » Relatively close to major service nodes i.e. Hervey Bay and Maryborough;
- » A strong sense of place and remoteness in foreshore areas; and
- » A valuable rural / environmental setting (which is being encroached as development occurs on the edge)

However, the growth is often occurring at a rapid rate (compared with the historical incremental growth) in the form of large scale residential developments comprising few services and a homogenous character and little response to the coastal setting and character.

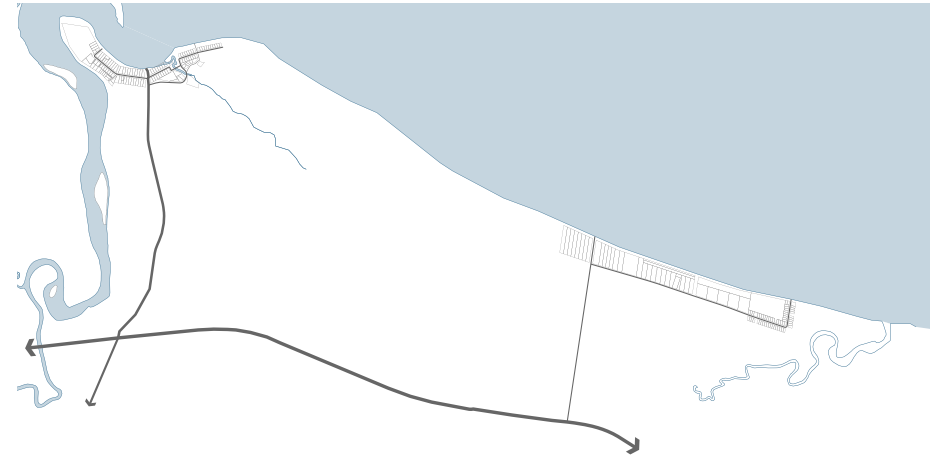


Figure 4.2 Typical urban structure / settlement pattern (c.1950s)

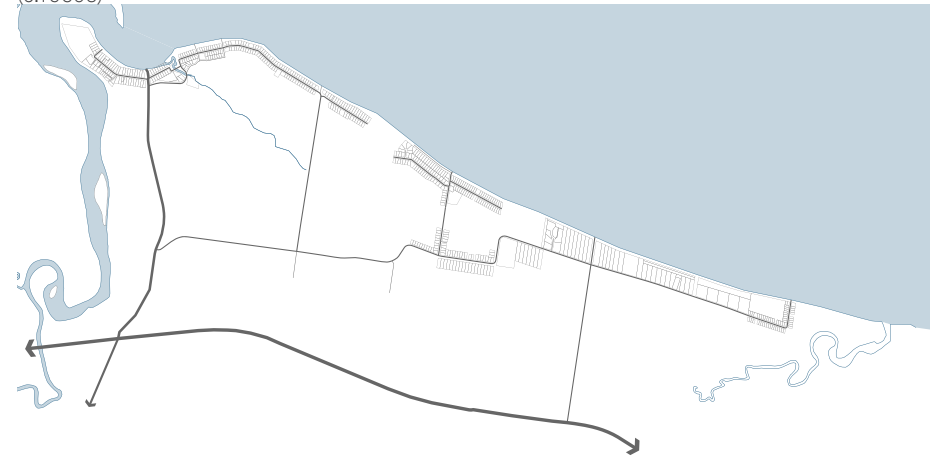


Figure 4.3 Typical urban structure / settlement pattern (c.1970s)

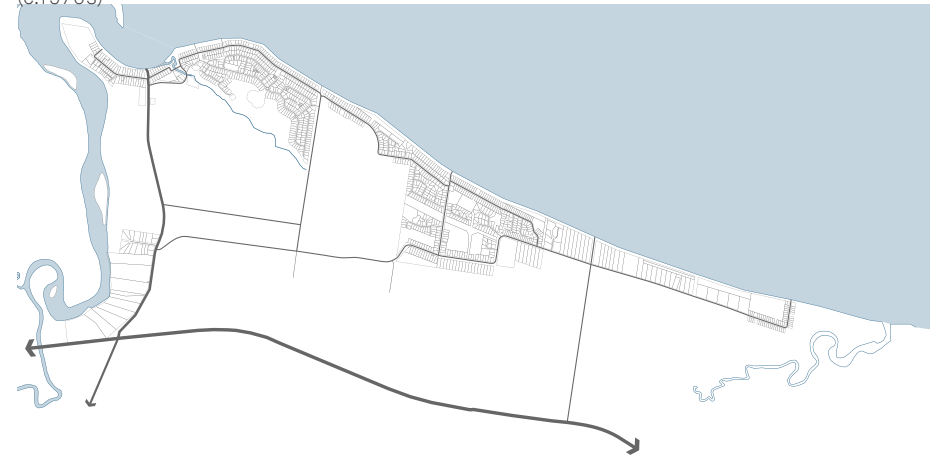


Figure 4.4 Typical urban structure / settlement pattern (post 2000)

## 04.4 Issues and Challenges of the coastal townships

### Streetscape and public realm

Important features of the “fishing village” streetscape include:

- » Eclectic built form and architecture providing a varied and interesting streetscape
- » Open and permeable buildings i.e. use of timber, tin, fibro boards, timber cladding and external screening/shading
- » Generally open front gardens, minimal fencing and lot boundaries defined by planting (shrubs, large trees)
- » Shady streetscapes with verandahs / balconies / porches often overlooking the street



Figure 4.5 Typical streetscape and public realm (c.1950s)

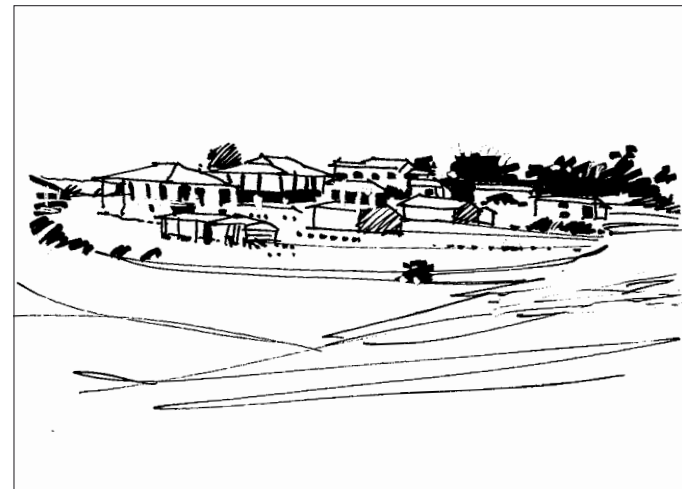


Reoccurring features which detract from the “fishing village” streetscape character (often in newer residential areas) include:

- » Lack of streetscape enclosure due to vegetation clearing
- » Grass and parked vehicles dominating the streetscape
- » Planting does not respond to the natural coastal character i.e. use of palms and ornamental shrubs
- » Street pattern and built form has little response to the existing topography, vegetation and built form, resulting in rooflines dominating the skyline
- » Building materials and architecture has little response to the coastal setting i.e. use of brick, render, masonry, high barrier fences
- » Use of tinted glass, or blinds and curtains drawn, air-conditioning



Figure 4.6 Recent residential streetscape and public realm (post 2000)



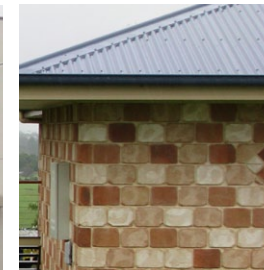
**Positive coastal built form elements include:**

- » variation in building styles, detailing, materials and colours e.g. pitched tin roofs, coloured fibro boards, timber cladding, external screening/shading, louvers
- » good permeability within the block structure, reflecting an outdoor-based lifestyle i.e. foreshore access and linear tracks between houses
- » “walkable” neighbourhoods containing shady human scale streets, lined with trees/shrubs and overlooked by verandahs / balconies / porches
- » development makes use of extensive native vegetation and large shade trees in private and public spaces



**Negative coastal built form elements include:**

- » often homogenous building densities, heights, type, and scale in new residential developments
- » built form allows little penetration of breezes, natural light and the natural environment (i.e. clipped hedges and manicured lawns dominate the streetscape)
- » often little response to natural features e.g. the topography and vegetative character, which has an adverse effect on the visual character
- » Building materials and architecture has little response to the coastal setting i.e. use of brick, render, masonry, high barrier fences
- » Use of tinted glass, or blinds and curtains drawn, air-conditioning



## 04.5 Attributes, Issues and Challenges of the rural townships

### Settlement pattern and growth

The rural townships comprise a distinct townscape character and settlement pattern (often nucleated around commercial centre / main street), which is strongly linked to their history, landscape setting and role in the local area.

Each of the townships has evolved from key industries (e.g. forestry, timber milling, mining). Legacies for these industries are often still remnant in their townscape character, for example:

- Brooklyn House (c.1890) in Howard; a high set Victorian era Queenslander home (built by William Rankin who managed coal mines in the local area);
- Workers cottages of former coal miners scattered throughout the Burrum (often abandoned)
- Woocoo town hall (meeting chambers for former Woocoo Shire Council / Councillors)

The townships also provide a key service node for surrounding rural areas (e.g. providing schools, post office, minor retail, food outlet, pub, fuel supplies, rural/hardware supplies).

Growth in recent years has generally been slow and often associated with commercial development along main routes, some renovation of traditional “Queenslander” style houses and rural residential style living options for those working in Hervey Bay, Maryborough and Gympie.

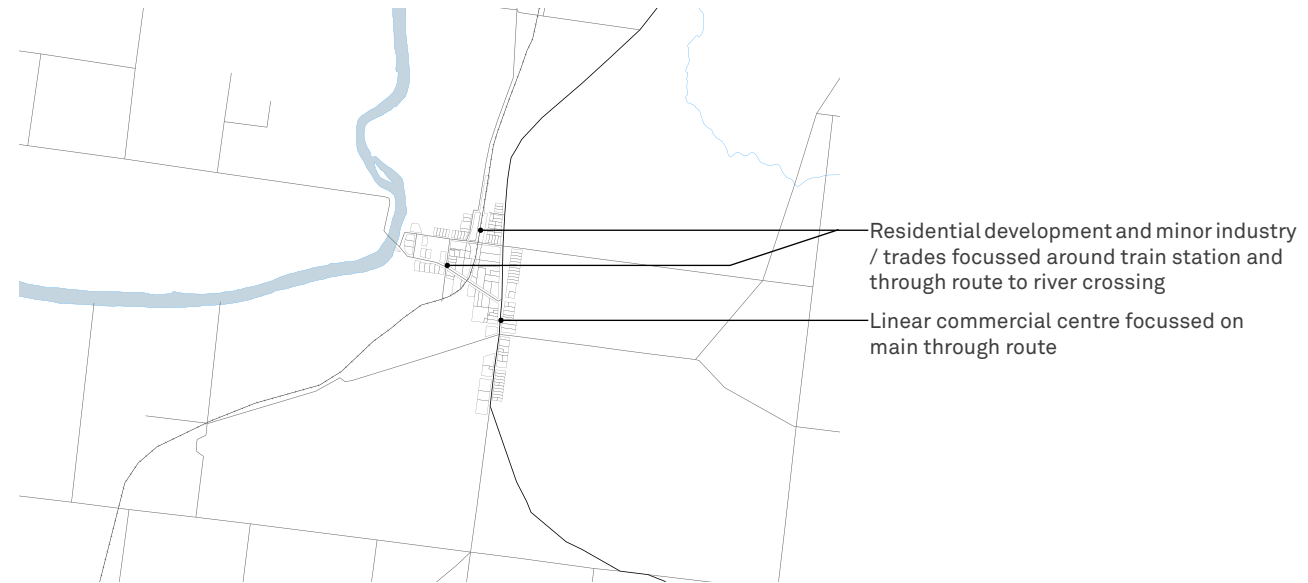


Figure 4.7 Typical urban structure / settlement pattern (c.1950s)



Figure 4.8 Typical urban structure / settlement pattern (post 2000)

## Streetscape and public realm



Figure 4.9 Typical “Main Street” streetscape and public realm



Figure 4.10 Typical residential streetscape and public realm



Figure 4.11 Distinctive “Main Street” streetscape and strong connection with the town’s landscape setting

Important features of the “rural village” streetscape include:

- » A clear hierarchy of roads and streets, often comprising a main through-route and side streets generally set out on a grid layout
- » Rows of local shops / services (typically single storey timber buildings with pitched tin roofs) open directly onto the main street, providing an active frontage and a townscape of human scale through use of awnings and wide pavements with outdoor seating
- » Streets boast a collection of traditional “Queenslander” style houses with well vegetated front gardens bounded by ornamental, low boundary walls/fences and hedges
- » Roads have an informal character, containing few kerb and channelling, generous grassed verges and a wide shady streetscape with verandahs / balconies / porches often overlooking the street
- » Open and permeable buildings i.e. use of timber weatherboards, tin, timber cladding and external screening/shading
- » Local points of interest generally include railway bridges / stations, schools, pub/hotels and historic buildings such as the town hall/council chambers, miner huts and industrial buildings (e.g. timber mill, mining structures)
- » Strong visual connection with the town’s landscape setting e.g. views to surround landmarks such as Mount Bauple, retaining remnant tracts of vegetation where possible, use of trees/shrubs in streetscape planting and gardens which are characteristic of the local area

**Positive rural built form elements include:**

- » variation in building styles and colours, but consistency in use of materials and detailing e.g. terracotta tiled or tin roofs, timber weatherboards, timber and cat iron cladding, external screening/shading, glass and timber louvers
- » grid street pattern with a hierarchy of wide principal through streets and side street, typically comprising consistent house setbacks allowing generous front gardens
- » “walkable” neighbourhoods containing shady human scale streets, lined with trees/shrubs and overlooked by verandahs / balconies / porches



**There is little pressure for change at present, however as these townships grow, potential negative rural built form elements (which should be avoided) may include:**

- » urban form in newer residential developments/estates comprising a street pattern of long curvilinear feeder streets with short subsidiary roads culminating in cul de sac/dead ends, which don't connect well to the existing grid street pattern
- » frontages often dominated by separate double garages and driveways
- » streetscapes with little response to natural features (e.g. the topography and vegetative character), which has an adverse effect on the visual character
- » built form that has little response to the historic rural setting i.e. homogenous building densities, heights, materials, scale, detailing and unsympathetic building materials i.e. overuse of brick, render, masonry, high barrier fences

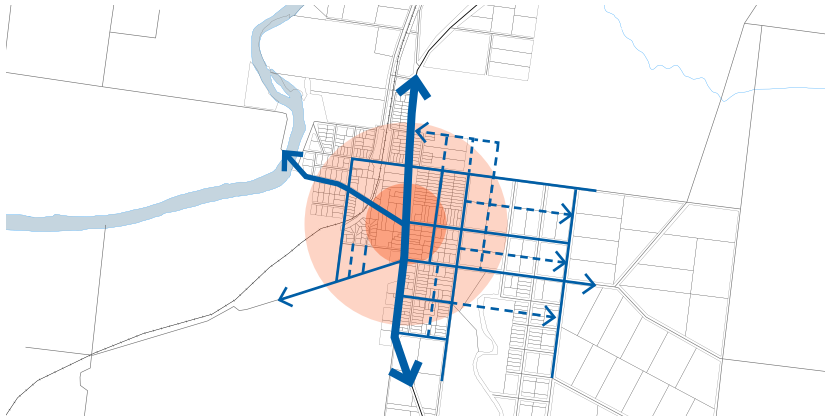
## 04.6 Summary of key issues affecting the coastal + rural townships

### **Key issues affecting the growth of rural and coastal villages include:**

- » Provision of infrastructure (particularly sewage, but also water)
- » Lack of employment opportunities
- » Lack of access to services and community facilities
- » The need for urban consolidation and town centre/foreshore improvements
- » Maintenance of the existing (and quickly dilapidating) heritage 'Queenslander' housing stock
- » Provision of affordable yet high quality, diverse residential options
- » Recreation and accessibility i.e. footpaths, walking trails
- » Traffic management and parking

## 04.7 Principles for the coastal + rural townships

### Containment of Urban



#### Principles:

- » Promote urban containment and consolidation of urban structure through facilitating infill of vacant and redevelopment sites in the town centre/foreshore to help add to and support existing infrastructure and focus growth in and around the town centre
- » Promote permeable urban form i.e. small urban blocks that allow pedestrians to move with ease and convenience, giving alternative choices or routes to follow, and bringing street crossings closer together

#### Potential solutions:

- » Preparation of urban containment policies (i.e. land use, housing, transport outcomes) to manage the location, character, and timing of growth to support a variety of objectives such as compact development, preservation of greenspace and efficient use of infrastructure

### Structure



#### Principles:

- » Maintain and enhance the distinctive character of the coastal and rural townships, including the scale, massing and built form of the main street and surrounding neighbourhoods, street tree planting, rich architectural detailing, parks, unique signage and township entry and exit statements

#### Potential solutions:

- » Undertake a heritage study which will identify, assess, and protect historically and culturally significant buildings and plants, integrating them within the overall township, taking care to locate buildings and infrastructure in a way that does not endanger them
- » Develop incentive schemes for owners to maintain and enhance heritage 'Queenslander' housing stock



## Definition, conservation and enhancement of heritage features



### Principles:

- » New urban areas will promote new technologies in sewage management and provide sustainable “off-grid” solutions
- » Wherever possible new urban areas will incorporate best-practice urban water management techniques relating to stormwater quality and quantity, water conservation and re-use and ecological health
- » Parks and linear open spaces must be located and arranged to maximise the opportunities for integration of best practice urban water management functions and ensure storm water run-off will not degrade the quality of surface and underground receiving waters or prevent adverse impact to valued natural environments

### Potential solutions:

- » Consider a Development Contributions Plan to assist with providing public realm infrastructure such as stormwater treatment devices, resolved parking solutions, landscaping, street furniture and picnic facilities

## Place Making and Identity



### Principles:

- » Residential development must incorporate sub-tropical neighbourhood design principles and represent an environmentally sustainable and site responsive approach to urban development that supports and enhances the context in which it is located and strengthens local identity
- » New residential development will be of a quality that contributes positively towards the overall character and liveability of the township and neighbourhoods and provides a variety of lifestyle options to suit a range of household types and affordability levels in a timely manner which is responsive to market conditions
- » New residential development

should be designed to deliver high standards in sustainable design. In particular consideration should be given to the delivery of contemporary designs that

- takes its cues from desirable qualities of traditional vernacular
- maximise access to natural light
- allow for natural ventilation
- orientate buildings to optimise opportunities for habitable spaces to face predominantly north

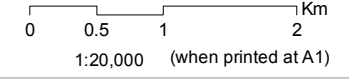
### Potential solutions:

- » Identify and develop provisions to protect critical natural features including waterways, wetlands, stands of vegetation and linkages between these sites as part of the process of identifying areas suitable for urban development
- » Development patterns should respond to the topography and natural drainage e.g. position roadways, pathways and subdivision layouts in accordance with natural contours and co-locate linear green infrastructure (i.e. open space networks, cycle ways and neighbourhood parks) with natural drainage systems
- » Buildings fronting principal streets and parkland will present a high quality appearance, incorporating articulated exterior walls and rooflines, a mixture of building materials and exterior finishes and suitable landscaping to contribute towards public realm quality
- » High and solid front fences are not permitted to ensure that properties can overlook the street
- » Preparation of species lists to promote local character and distinctiveness

A1



DATUM GDA 1994, PROJECTION MGA ZONE 56



- ▲ Mountains/Peaks
- Rivers
- Protected Areas
- Fraser Coast Region Boundary

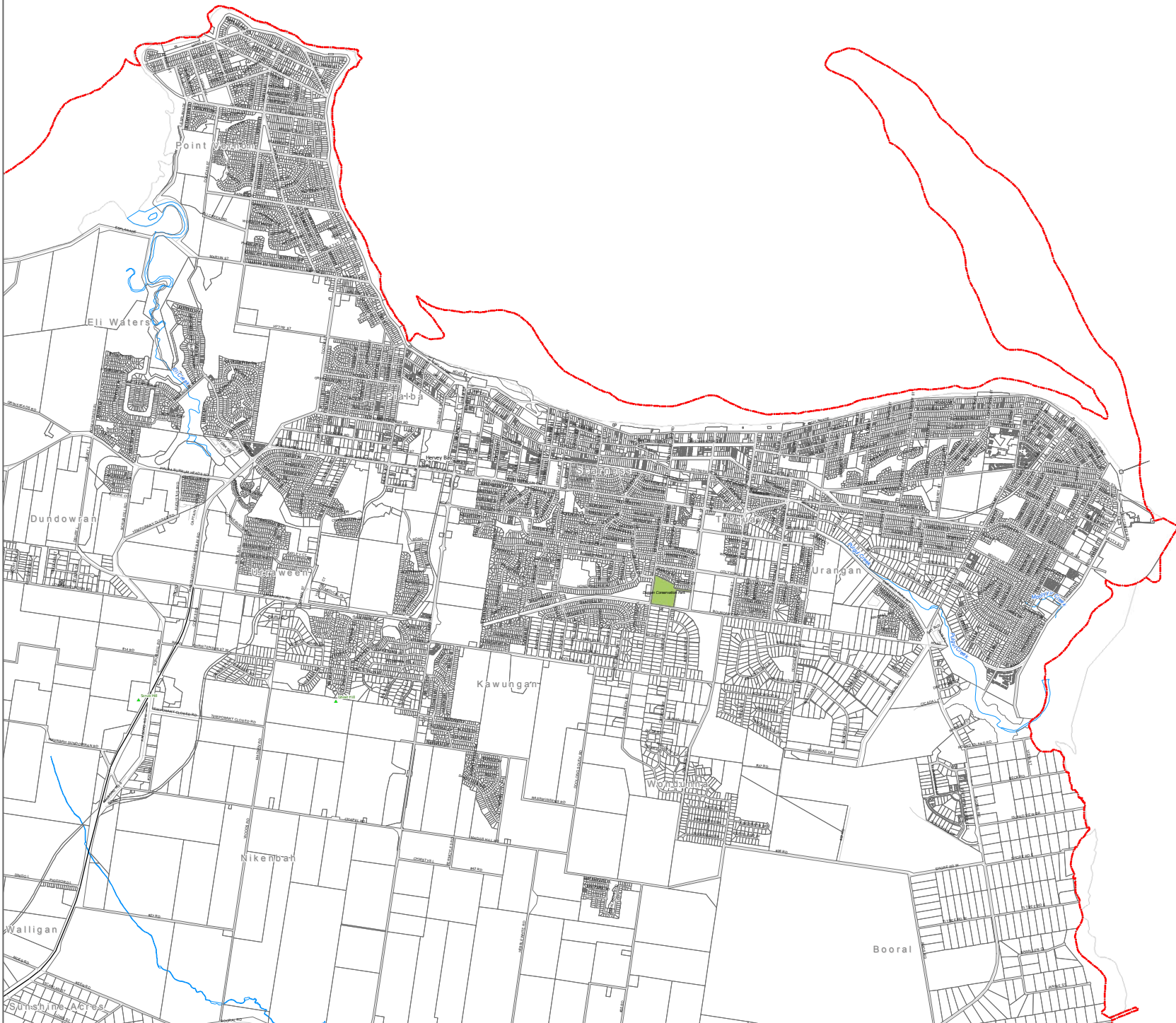


FIGURE 1  
HARVEY BAY URBAN AREA

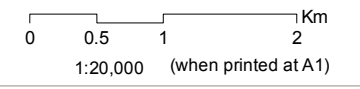
Client

Report Title

Figure  
**F1**



DATUM GDA 1994, PROJECTION MGA ZONE 56



- Mountains/Peaks
- Rivers
- 5m Contours
- Protected Areas
- Fraser Coast Region Boundary

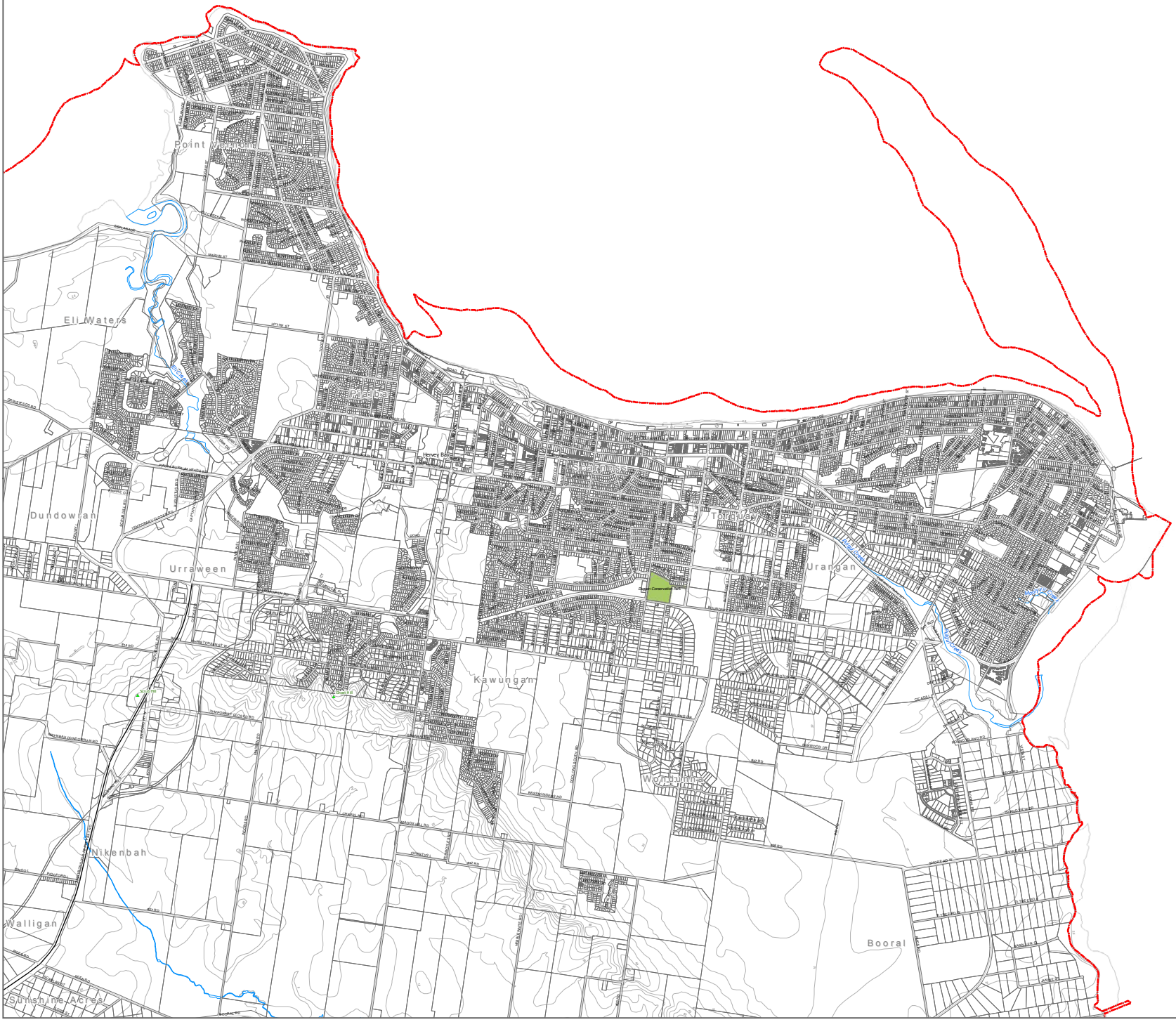


FIGURE 4  
HARVEY BAY URBAN AREA + CONTOURS

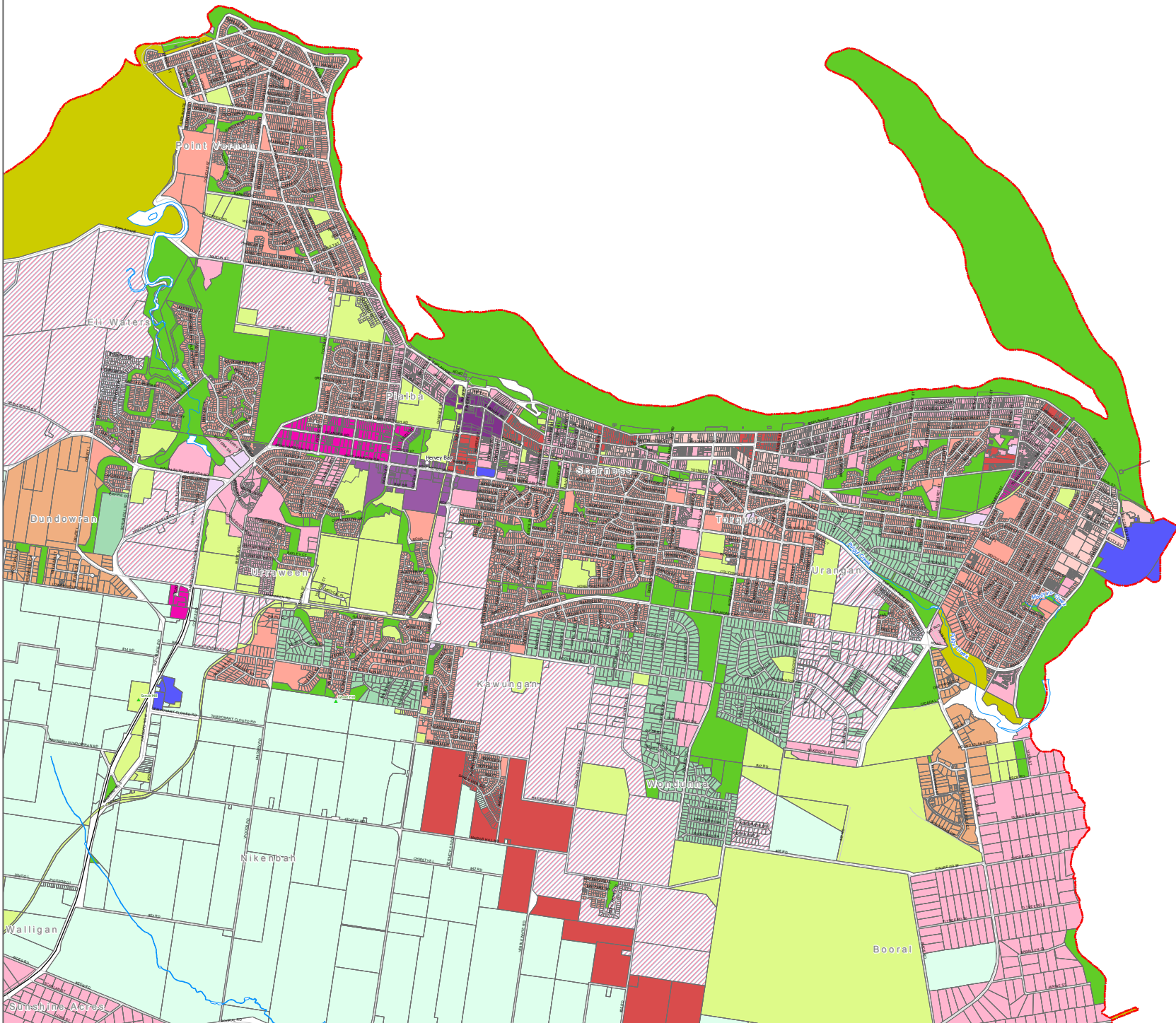
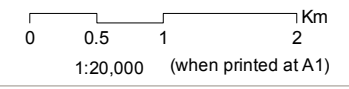
Client

Report Title

Figure  
**F4**



DATUM GDA 1994, PROJECTION MGA ZONE 56

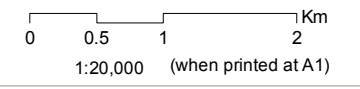


- Fraser Coast Region Boundary
- ▲ Mountains/Peaks
- Rivers
- HBCC\_TPZones\_region
- ZONE\_NAME
- Business
- Conservation
- Emerging Communities
- High Density Residential
- Industry
- Low Density Residential
- Medium Density Residential
- Mixed Use
- Multizone
- Neighbourhood Business
- Open Space
- Park Residential
- Particular Development
- Pialba Business
- Rural
- Rural Residential
- Service / Trade
- Township
- Special Purposes

FIGURE 2.1  
 HARVEY BAY URBAN AREA  
 LAND USE/ZONING PLAN



DATUM GDA 1994, PROJECTION MGA ZONE 56



- Fraser Coast Region Boundary
- Railway\_Line
- IPADrainage\_Buffer\_region
- StormTideSurgeLevels\_region

DESCRIPTIO

0m to H.A.T (2.0m AHD)
0m to H.A.T (2.15m AHD)
0m to H.A.T (2.63m AHD)
0m to below 0m AHD
2.0m to 2.5m AHD
2.15m to 2.5m AHD
2.5m to 3.0m AHD
2.63m to 3.0m AHD
3.0m to 3.5m AHD
3.5m to 4.0m AHD
4.0m to 4.5m AHD
4.5m to 5.0m AHD
5.0m to 5.5m AHD
Above 5.0m AHD

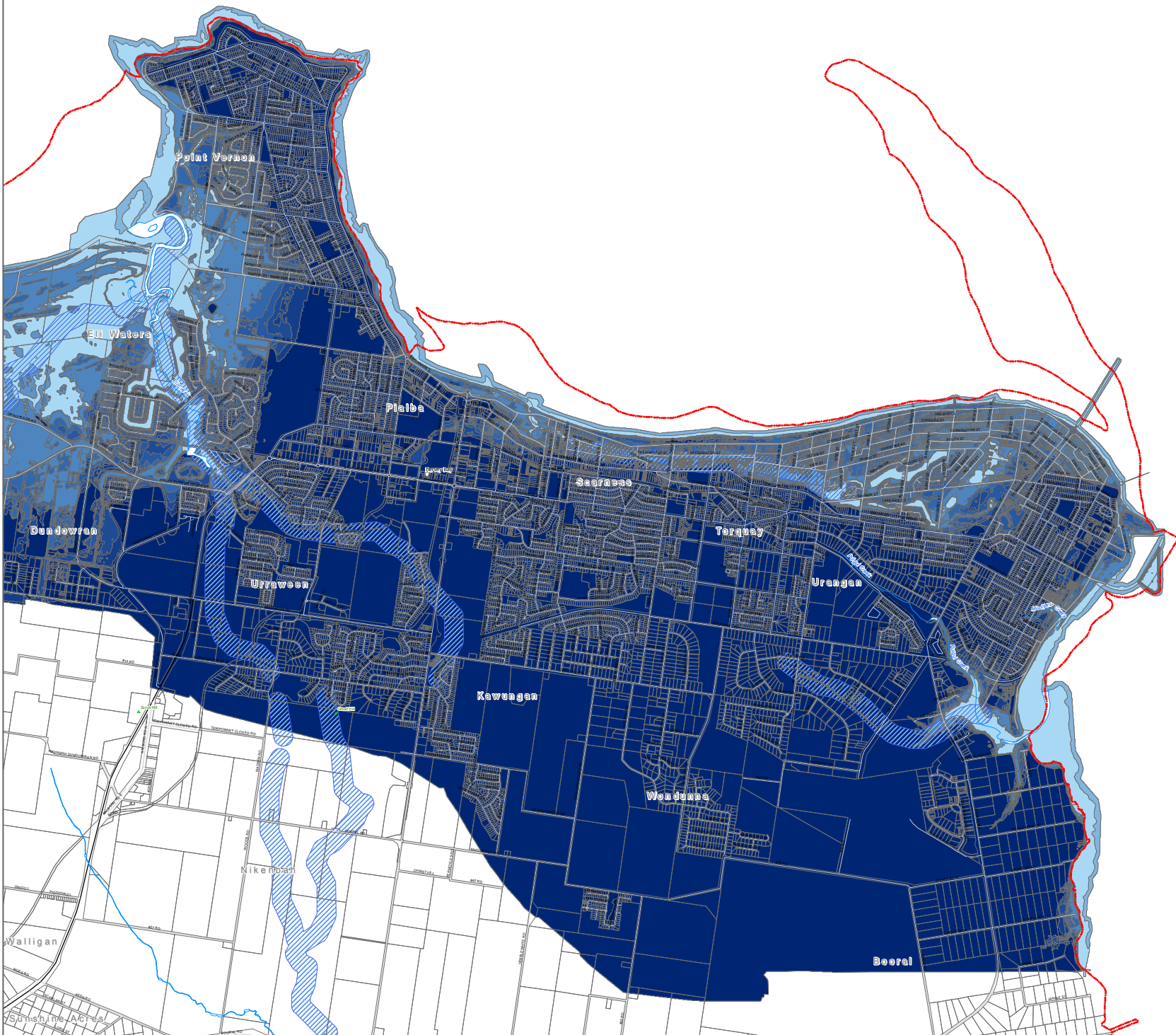
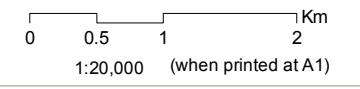


FIGURE 2.2  
 HARVEY BAY URBAN AREA  
 FLOOD INUNDATION



DATUM GDA 1994, PROJECTION MGA ZONE 56



- ▲ Mountains/Peaks
- Rivers
- Fraser Coast Region Boundary
- FCRC FIRE RISK
  - Moderate
- IPA FIRE RISK
  - Medium

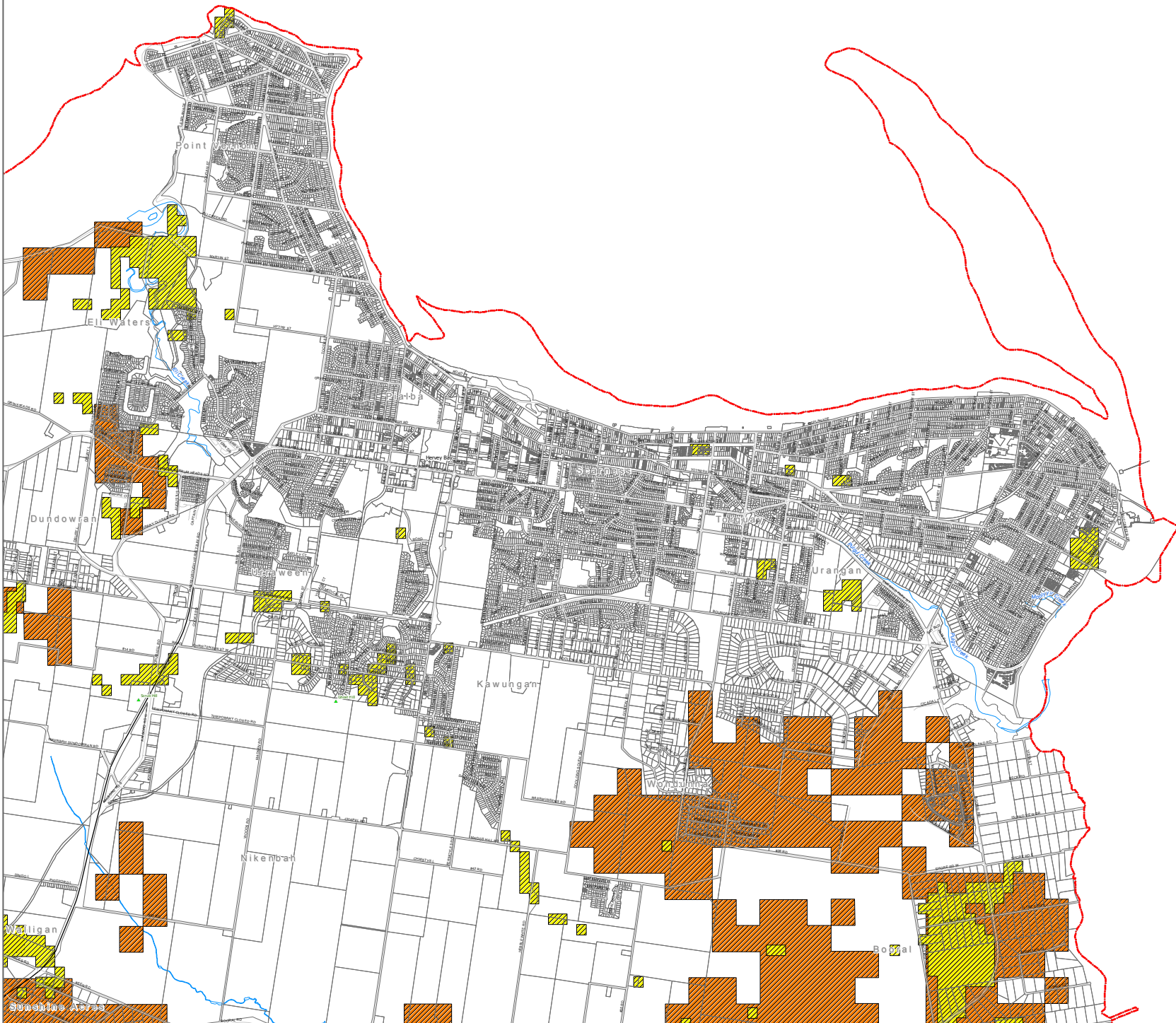
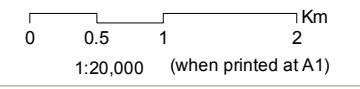


FIGURE 2.3  
 HARVEY BAY URBAN AREA  
 FIRE RISK / BUSHFIRE HAZARD



DATUM GDA 1994, PROJECTION MGA ZONE 56



- Fraser Coast Region Boundary
- Railway\_Line
- Slope percent
  - 0 - 5%
  - 5 - 10%
  - 10 - 15%
  - 15% +

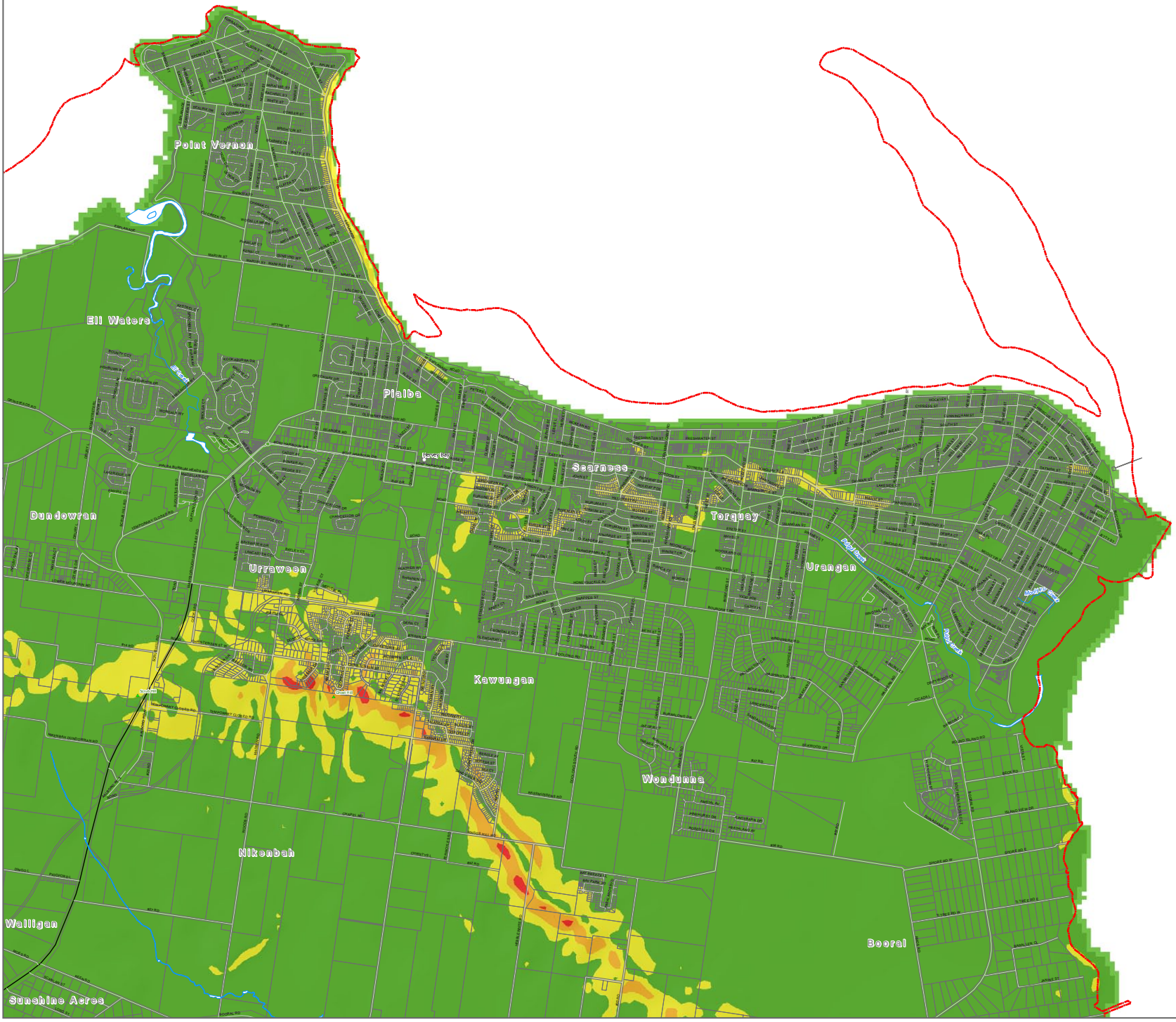
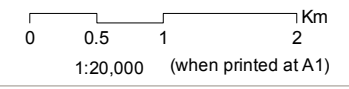


FIGURE 24  
 HARVEY BAY URBAN AREA  
 SLOPE ANALYSIS





DATUM GDA 1994, PROJECTION MGA ZONE 56



- Fraser Coast Region Boundary
- Railway\_Line
- heritagepoly\_region

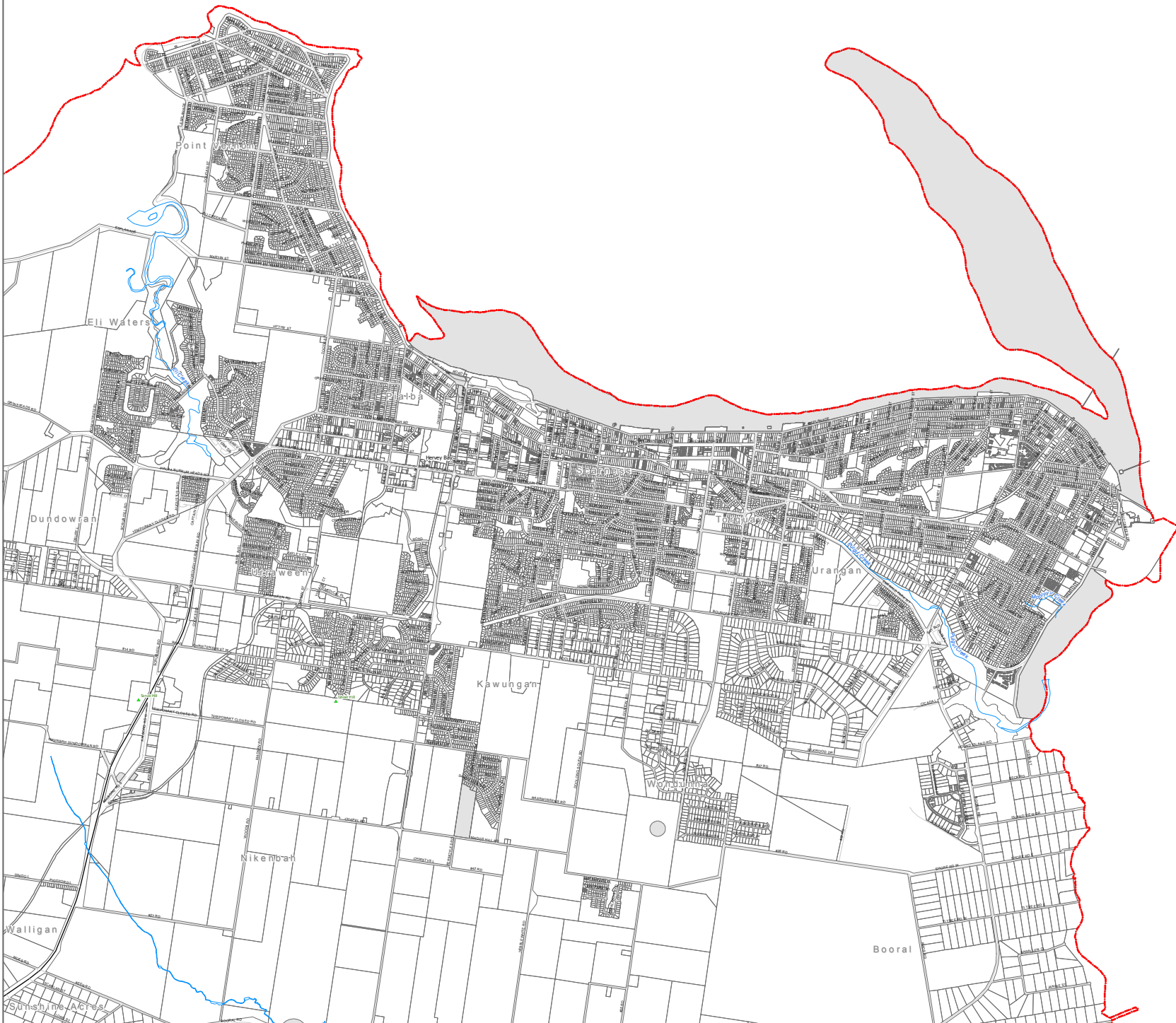
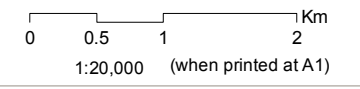


FIGURE 2.5  
HARVEY BAY URBAN AREA  
HERITAGE OVERLAY



DATUM GDA 1994, PROJECTION MGA ZONE 56



- ▲ Mountains/Peaks
- Rivers
- Fraser Coast Region Boundary
- Protected Areas

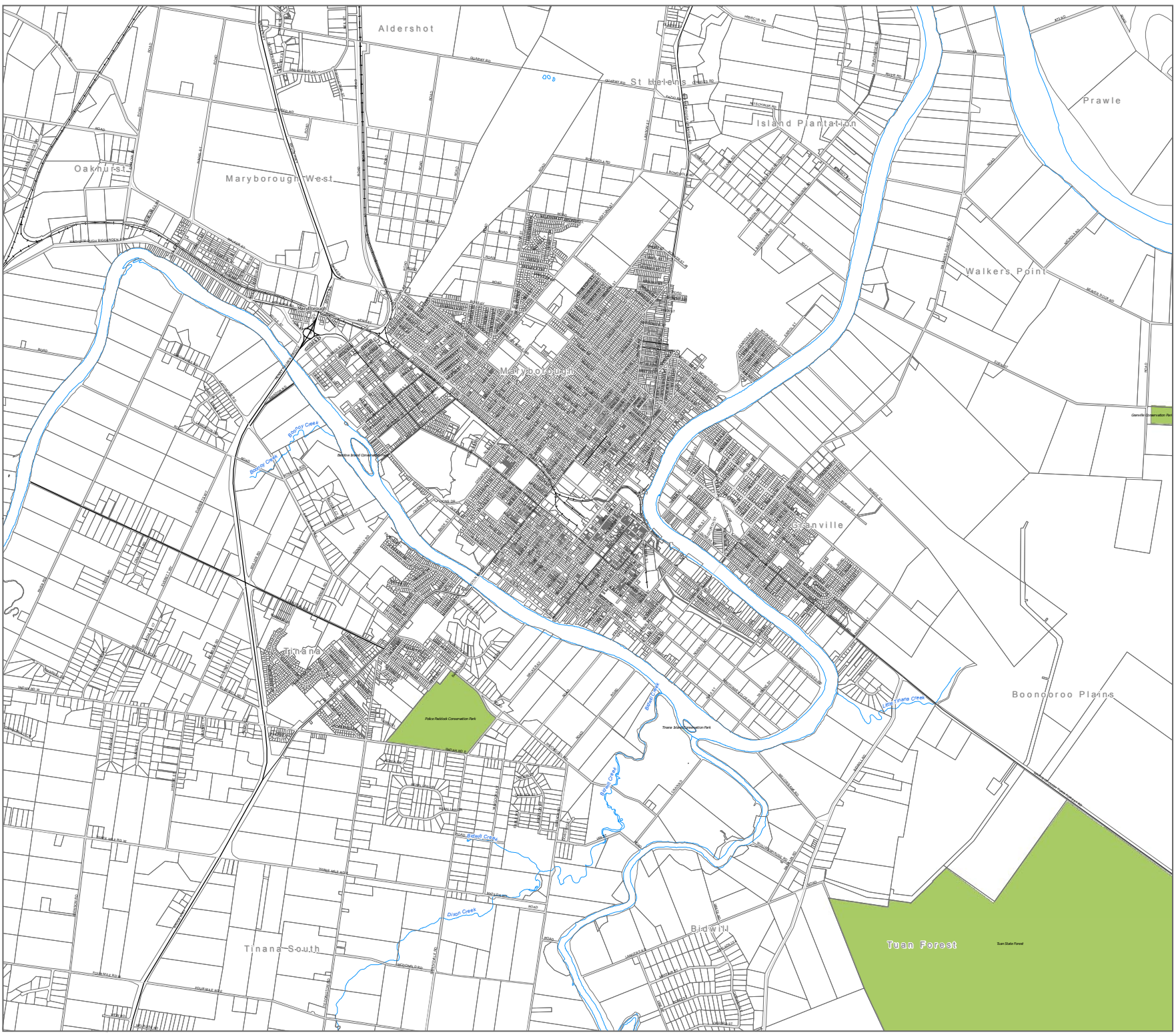


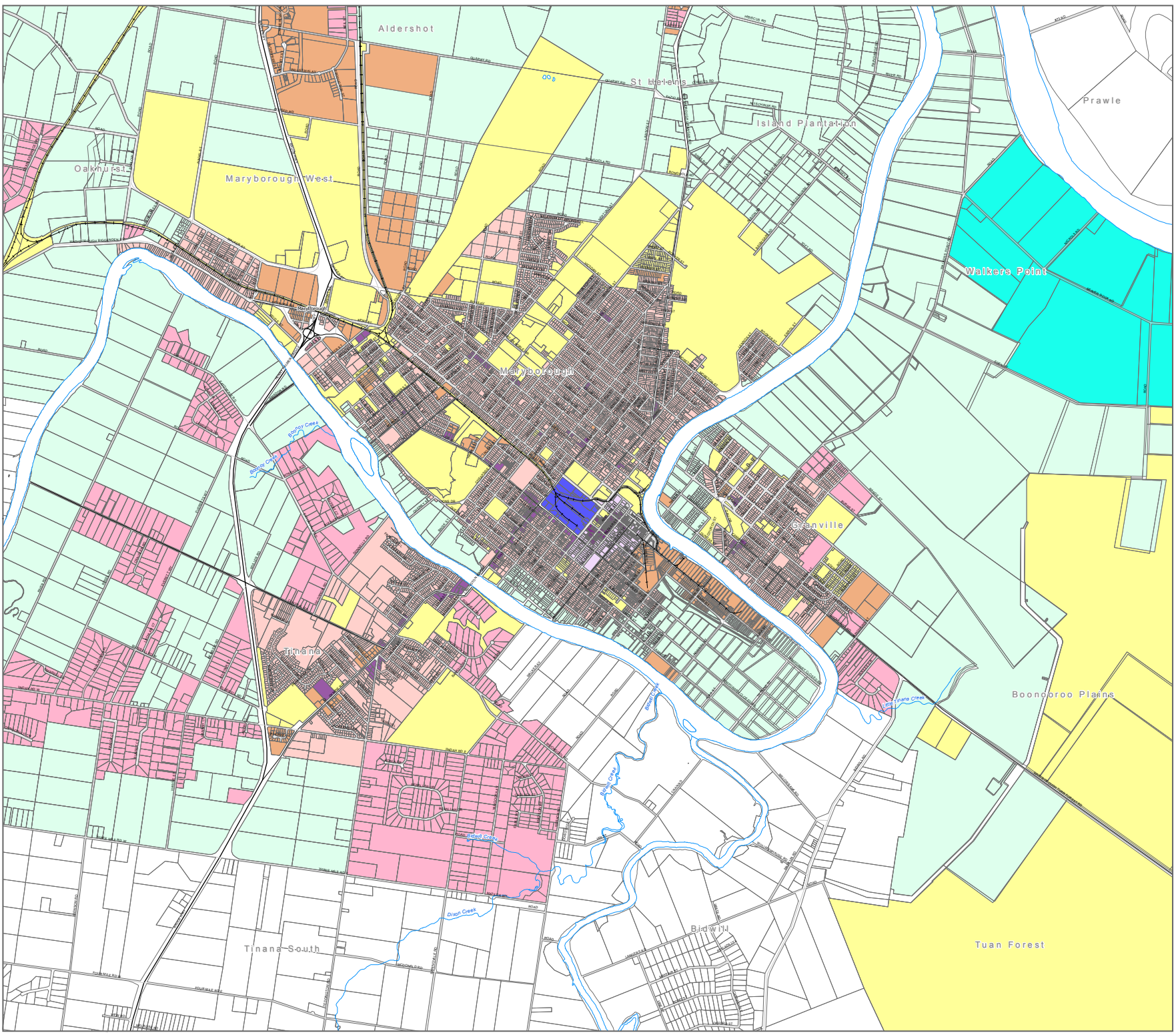
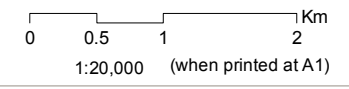
FIGURE 2  
 MARYBOROUGH URBAN AREA

Client  
 Report Title

**Figure**  
**F2**



DATUM GDA 1994, PROJECTION MGA ZONE 56

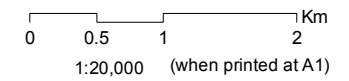


- Fraser Coast Region Boundary
- ▲ Mountains/Peaks
- Rivers
- MCC\_city\_plan\_region\_region
- NAME
- Commercial
- Commercial Core
- Commercial Frame
- Community
- Community Services Core
- Future National Park
- Industrial
- Industrial Services Node
- Low Density Residential
- Marine Surrounds
- Railyards Redevelopment
- Refuse
- Residential
- Rural
- Rural Residential
- Tourist Facility
- Village Centre
- Wharf Street

FIGURE 3.1  
 MARYBOROUGH URBAN AREA  
 LAND USE/ZONING PLAN



DATUM GDA 1994, PROJECTION MGA ZONE 56



- Mountains/Peaks
- Rivers
- Fraser Coast Region Boundary
- Protected Areas
- floodoverlay\_region

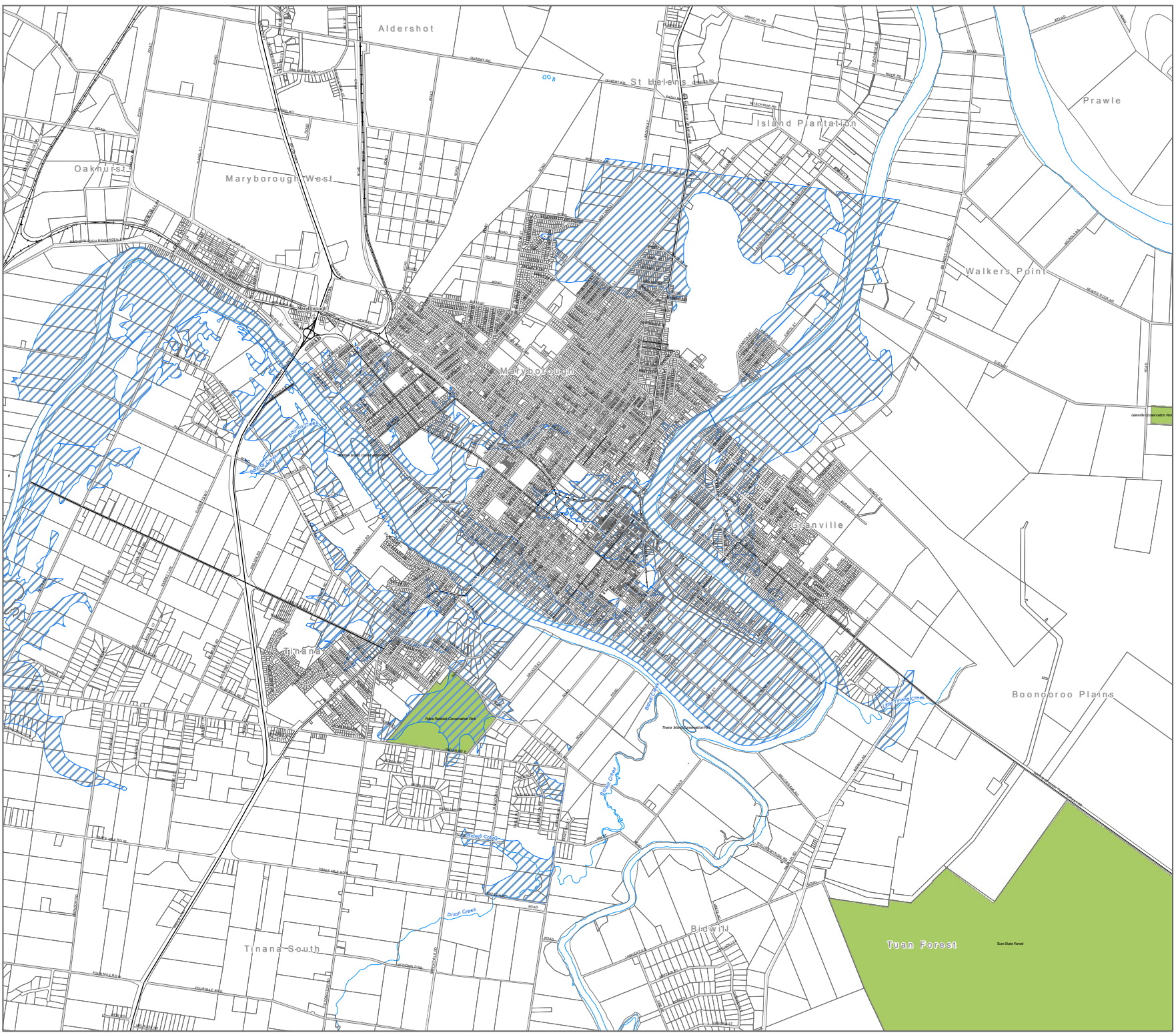


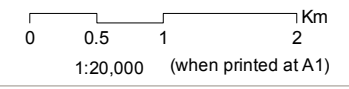
FIGURE 5  
MARYBOROUGH URBAN AREA + FLOODING

Client  
Report Title

Figure  
**F5**



DATUM GDA 1994, PROJECTION MGA ZONE 56



- Fraser Coast Region Boundary
- ▲ Mountains/Peaks
- Rivers
- FCRC FIRE RISK
- Moderate
- bushfire\_region
- MCC BUSHFIRE RISK
- MEDIUM BUSHFIRE HAZARD
- LOW BUSHFIRE HAZARD

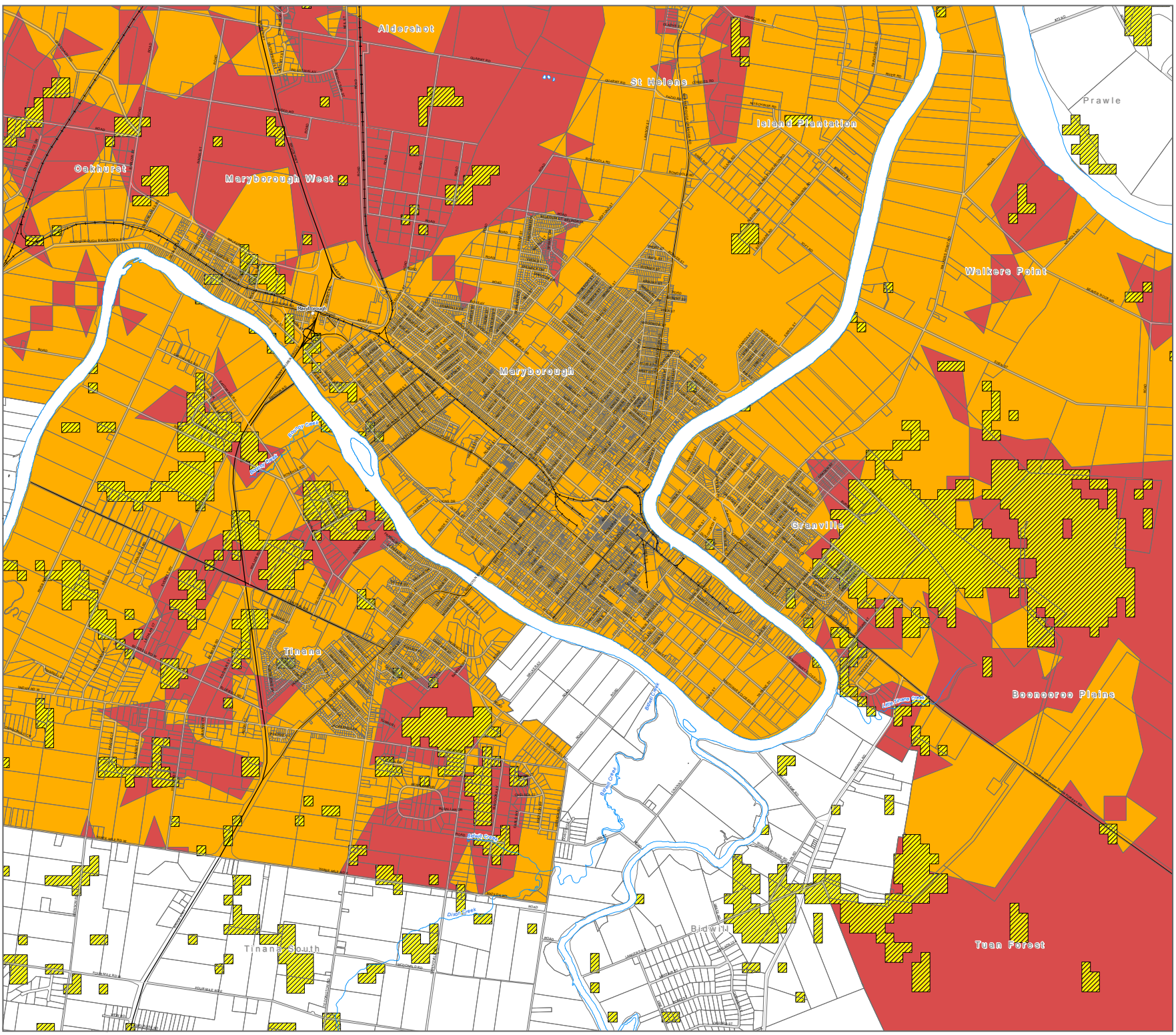
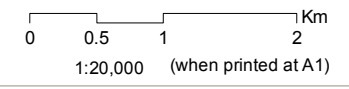


FIGURE 3.3  
 MARYBOROUGH URBAN AREA  
 FIRE RISK / BUSHFIRE HAZARD



DATUM GDA 1994, PROJECTION MGA ZONE 56



- Fraser Coast Region Boundary
- Railway\_Line
- Slope percent
  - 0 - 5%
  - 5 - 10%
  - 10 - 15%
  - 15% +

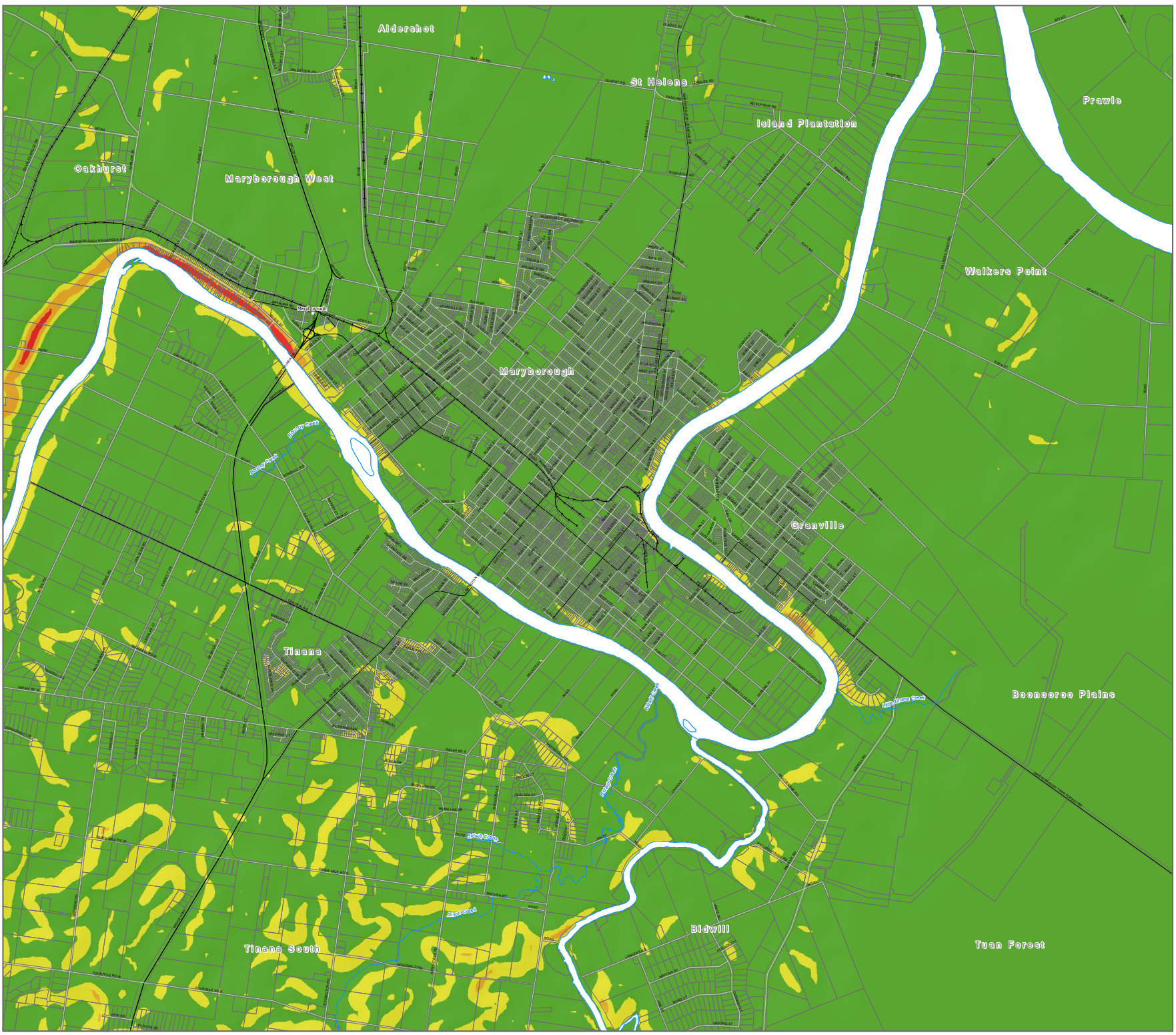


FIGURE 3.4  
 MARYBOROUGH URBAN AREA  
 SLOPE ANALYSIS

