



# Shire of Carnarvon

LOCAL PLANNING STRATEGY 2017

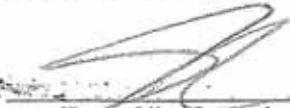
MARCH 2017



**ADVERTISING**

The Shire of Carnarvon Local Planning Strategy certified for advertising on 23 February 2016

Signed for and on behalf of the Western Australian Planning Commission



*an officer of the Commission duly authorised by the Commission  
(pursuant to the Planning and Development Act 2005)*

Date 25/02/16

---

**ADOPTED**

The Shire of Carnarvon hereby adopts the Local Planning Strategy, at the Ordinary meeting of the Council held on the 28th day of June 2016

  
MAYOR/SHIRE PRESIDENT  
CHIEF EXECUTIVE OFFICER

**ENDORSEMENT**

Endorsed by the Western Australian Planning Commission on

DATE 24/03/17



*an officer of the Commission duly authorised by the Commission  
(pursuant to the Planning and Development Act 2005)*

Date 29/03/17



**TABLE OF CONTENTS**

**PART 1**

<b>1</b>	<b>Introduction .....</b>	<b>2</b>
1.1	Purpose.....	2
1.2	Study Area .....	2
1.3	Why is the Strategy Important? .....	4
1.4	Content and Format.....	4
1.5	Relationship to Local Planning Scheme .....	4
1.6	Community Engagement .....	5
<b>2</b>	<b>Shire of Carnarvon’s Future .....</b>	<b>7</b>
2.1	Objectives .....	7
<b>3</b>	<b>Strategic Plan for Carnarvon .....</b>	<b>8</b>
3.1	Introduction .....	8
3.2	Key Principles .....	8
3.3	Key Issues and Opportunities.....	8
<b>4</b>	<b>Strategies and Actions .....</b>	<b>14</b>
4.1	Population Growth .....	15
4.2	Tourism .....	17
4.3	Settlements.....	21
4.4	Community Needs .....	25
4.5	Rural Land Use and Activity .....	28
4.6	Business and Employment.....	31
4.7	Transport .....	34
4.8	Infrastructure .....	37
4.9	Planning for Coastal Environments .....	40
4.10	Integrating Water and Land Use Planning – Carnarvon Townsite and Surrounds .....	43
4.11	Culture .....	46
4.12	Resources Industry.....	48

**PART 2**

<b>1</b>	<b>Local Profile and Considerations.....</b>	<b>51</b>
1.1	Location and Context.....	51
1.2	Current Demographic Profile .....	52
1.3	Education .....	58
1.4	Economy and Employment.....	61
1.5	Tourism .....	64
1.6	Housing Demand and Supply .....	66
1.7	Natural Environment .....	71
1.8	History and Heritage .....	79
1.9	Native Title .....	82
1.10	Transport.....	83



1.11	Utilities .....	85
<b>2</b>	<b>State and Regional Planning Context.....</b>	<b>88</b>
2.2	Key Legislation Relevant to PLanning.....	88
2.3	Key State and Regional Strategies.....	89
2.4	Key Planning Related Policies.....	99
<b>3</b>	<b>Local Planning Context.....</b>	<b>107</b>
3.1	Strategic Community Plan .....	107
3.2	Carnarvon 2020 – A Strategy for Sustainable Development.....	108
3.3	Carnarvon Tourism Strategy (2010) .....	108
3.4	Current Schemes.....	109
3.5	Current Local Planning Policies.....	110
3.6	Carnarvon Townsite and Environs Strategy Plan.....	117
3.7	Current Structure Plans .....	119
<b>4</b>	<b>Key Issues .....</b>	<b>128</b>
4.1	Population and Growth Scenarios .....	128
4.2	Tourism.....	132
4.3	Housing.....	137
4.4	Health Services.....	139
4.5	Education and Training.....	141
4.6	Ageing in Place .....	144
4.7	Community Spirit/Morale .....	146
4.8	Horticultural Expansion.....	148
4.9	Coastal Planning.....	150
4.10	Infrastructure and Services.....	157
4.11	Business and Employment .....	160
4.12	Transport .....	164
4.13	Planning for Water.....	167
4.14	Future Development .....	172
4.15	Culture and Heritage.....	174
4.16	Management of Crown Land .....	178
4.17	Basic Raw Materials .....	179
<b>5</b>	<b>Implementation, Monitoring and Review .....</b>	<b>180</b>
5.1	Implementation .....	180
5.2	Review .....	180
	<b>Appendices .....</b>	<b>181</b>
	<b>Appendix A Stakeholder Engagement Summary</b>	
	<b>Appendix B Infrastructure Demand Analysis</b>	
	<b>Appendix C Demographic and Economic Analysis</b>	
	<b>Appendix D Radio Quiet Protections</b>	



**FIGURES:**

FIGURE 1 – SUBJECT STUDY AREA.....3  
 FIGURE 2 – SHIRE OF CARNARVON – WHOLE OF SHIRE STRATEGY MAP ..... 10  
 FIGURE 3 – SHIRE OF CARNARVON – LOCAL PLANNING STRATEGY PLAN..... 11  
 FIGURE 4 – SHIRE OF CARNARVON – LOCAL PLANNING STRATEGY PLAN (TOWNSITE) ..... 12  
 FIGURE 5 – SHIRE OF CARNARVON, CORAL BAY- LOCAL PLANNING STRATEGY PLAN..... 13  
 FIGURE 6 – STRATEGY PRIORITY TIMEFRAMES ..... 14  
 FIGURE 7 – CONTEXT MAP ..... 51  
 FIGURE 8 – POPULATION (2011) ..... 52  
 FIGURE 9 – ESTIMATE RESIDENT POPULATION (CARNARVON SHIRE) ..... 52  
 FIGURE 10 – INDIGENOUS POPULATIONS (2011) ..... 55  
 FIGURE 11 – POPULATION FORECASTS: GROWTH AND DECLINE (ABS) ..... 56  
 FIGURE 12 – POPULATION FORECAST (DOP) ..... 57  
 FIGURE 13 – POPULATION ALTERNATIVE FORECAST (ABS FOR DOH) ..... 57  
 FIGURE 14 – PRIMARY AND SECONDARY EDUCATION (2011) ..... 59  
 FIGURE 15 – TERTIARY EDUCATION (2011)..... 60  
 FIGURE 16 – OCCUPATION (2011)..... 62  
 FIGURE 17 – LOCAL TOURISM ATTRACTIONS ..... 65  
 FIGURE 18 – COMPOSITION OF HOUSING STOCK (2011)..... 67  
 FIGURE 19 – NUMBER OF BEDROOMS (2011) ..... 69  
 FIGURE 20 – CARNARVON TOWNSITE AND ENVIRONS STRATEGY PLAN ..... 118  
 FIGURE 21 – BABBAGE AND WHITLOCK ISLAND STRUCTURE PLAN IMPLEMENTATION ..... 121  
 FIGURE 22 – EAST CARNARVON AND KINGSFORD STRUCTURE PLAN IMPLEMENTATION ..... 122  
 FIGURE 23 – CARNARVON AIRPORT STRUCTURE PLAN IMPLEMENTATION ..... 124  
 FIGURE 24 – CORAL BAY SETTLEMENT STRUCTURE PLAN IMPLEMENTATION..... 125  
 FIGURE 25 – LOCAL TOURISM CONTEXT PLAN .....136  
 FIGURE 26 – SPP 2.6 EXCERPT ..... 152  
 FIGURE 27 – EXTENT OF 100 YEAR ARI FLOODING PRIOR TO FLOOD MITIGATION WORKS  
 (EXCERPT FROM APPENDIX B)..... 167  
 FIGURE 28 – EXTENT OF 100 YEAR ARI FLOODING FOLLOWING FLOOD MITIGATION WORKS  
 (EXCERPT FROM APPENDIX B)..... 168  
 FIGURE 29 – CARNARVON FLOOD MITIGATION WORKS (BROWNS RANGE ALLIANCE  
 WEBSITE) ..... 170  
 FIGURE 30 – FLOODWAY MAPPING PRIOR TO FLOOD MITIGATION WORKS (DOW)..... 171  
 FIGURE 31 – CONVENTIONAL AND PROPOSED WATER MANAGEMENT FRAMEWORK FOR  
 CARNARVON ..... 173

**TABLES**

TABLE 1 – AGED DISTRIBUTION (2011) ..... 53  
 TABLE 2 – BIRTHPLACE (2011) ..... 54  
 TABLE 3 – POPULATION FORECAST (ABS)..... 56  
 TABLE 4 – CARNARVON’S PRIMARY AND SECONDARY SCHOOLS (2014)..... 59  
 TABLE 5 – LABOUR FORCE (2011) ..... 61  
 TABLE 6 – TOP SIX INDUSTRIES OF EMPLOYMENT (2011) ..... 63



TABLE 7 – HOUSING TENURE (2011) .....69

TABLE 8 – COST OF HOUSING (2011).....70

TABLE 9 – HOUSEHOLD COMPOSITION (2011) .....70

TABLE 10 – RECOGNISED HERITAGE PLACES .....79

TABLE 11 – CARNARVON AIRPORT RUNWAY DETAILS.....84

TABLE 12 – DEVELOPMENT STATUS OF RESIDENTIAL AND FUTURE RESIDENTIAL LAND IN THE SHIRE OF CARNARVON ..... 129

TABLE 13 – ESTIMATED CAPACITY OF RESIDENTIAL LAND DEEMED CAPABLE OF SUBSTANTIAL FURTHER DEVELOPMENT IN CARNARVON SETTLEMENT LAND-USE PLAN .....130



## ABBREVIATIONS

ABS	AUSTRALIAN BUREAU OF STATISTICS	LPS	LOCAL PLANNING STRATEGY
ACT	AUSTRALIAN CAPITAL TERRITORY	LPP	LOCAL PLANNING POLICY
ADS	ARTERIAL DRAINAGE STRATEGY	LWMS	LOCAL WATER MANAGEMENT STRATEGY
AEP	ANNUAL EXCEEDANCE PROBABILITY	MHI	MUNICIPAL HERITAGE INVENTORY
ARI	AVERAGE RECURRENCE INTERVAL	NCRS	NINGALOO COAST REGIONAL STRATEGY CARNARVON – EXMOUTH
BCA	BUILDING CODE OF AUSTRALIA	NSW	NEW SOUTH WALES
BUWM	BETTER URBAN WATER MANAGEMENT	NWCH	NORTH-WEST COASTAL HIGHWAY
CALM	CONSERVATION AND LAND MANAGEMENT	OBRM	OFFICE OF BUSHFIRE RISK MANAGEMENT
CMSAC	CARNARVON MEDICAL SERVICE ABORIGINAL CORPORATION	OTC	OVERSEAS TELECOMMUNICATIONS COMMISSION
DAA	DEPARTMENT OF ABORIGINAL AFFAIRS	PDWSA	PUBLIC DRINKING WATER SOURCE AREA
DFES	DEPARTMENT OF FIRE AND EMERGENCY SERVICES	PM&C	PRIME MINISTER AND CABINET
DIWA	DIRECTORY OF IMPORTANT WETLANDS IN AUSTRALIA	SPP	STATE PLANNING POLICY
DOF	DEPARTMENTS OF FISHERIES	UWA	UNIVERSITY OF WESTERN AUSTRALIA
DOH	DEPARTMENT OF HEALTH	UWMP	URBAN WATER MANAGEMENT PLAN
DOL	DEPARTMENT OF LANDS	WACHS	WESTERN AUSTRALIA COUNTRY HEALTH SERVICE
DOLA	DEPARTMENT OF LAND ADMINISTRATION	WAPC	WESTERN AUSTRALIAN PLANNING COMMISSION
DOP	DEPARTMENT OF PLANNING	WWTP	WASTE WATER TREATMENT PLANT
DOT	DEPARTMENT OF TRANSPORT		
DOW	DEPARTMENT OF WATER		
DPAW	DEPARTMENT OF PARKS AND WILDLIFE		
DSP	DISTRICT STRUCTURE PLAN		
DWMS	DISTRICT WATER MANAGEMENT STRATEGY		
IAS	INDIGENOUS ADVANCEMENT STRATEGY		
ILUA	INDIGENOUS LAND USE AGREEMENT		
ISP	INTERNET SERVICE PROVIDERS		

# Shire of Carnarvon

LOCAL PLANNING STRATEGY 2017

MARCH 2017

## **PART ONE: LOCAL PLANNING STRATEGY**







# 1 Introduction

## 1.1 PURPOSE

The Shire of Carnarvon has sought to establish a Local Planning Strategy (LPS) that will be the Shire's strategic land use and decision-making document for the next 10-15 years. This is the first time that a local planning strategy has been prepared for the Shire of Carnarvon.

The LPS is intended to provide a clear plan for the future development across the entire Shire of Carnarvon area, including the various settlements, Carnarvon Townsite and the coastal tourist settlement of Coral Bay. More specifically the Strategy aims to:

- set out the key aspirations of stakeholders;
- accommodate the future needs of the community;
- create opportunities to enhance and protect local attributes; and
- provide a framework to achieve long-term local and regional objectives and goals.

The Strategy, among other matters, is intended to guide the preparation of a new Local Planning Scheme for the Shire – to ultimately replace existing Town Planning Schemes 10 and 11. The LPS is also intended to provide a framework for investment by both the public and private sector.

A clear vision for the area has been established for the area through the Shire of Carnarvon Community Strategic Plan, as follows:

*"The Shire of Carnarvon will remain a wonderful place of endless opportunity, with a pristine environment, where the desert meets the sea".*

It is the aim of the LPS to build upon the established vision set by the Community Strategic Plan and to provide some real, 'on the ground' actions that can be progressed in the aim of delivering this vision.

There is acknowledgement of the significant amount of work that has been previously undertaken by the Shire of Carnarvon, Department of Planning (DoP) and other stakeholders, which provides a strong foundation for the LPS. Key planning documents relative to the Shire have been reviewed and have enabled a deeper understanding of the context and historical background of various matters relating to the Shire and the wider Region. This Strategy has pulled these documents together, explored key issues facing the Shire and recommend strategies and actions various stakeholders are to implement in ensuring that the future of Carnarvon is self-assured and prosperous.

## 1.2 STUDY AREA

The LPS applies to the whole of the Shire of Carnarvon, as depicted in **Figure 1**.

The Shire of Carnarvon spans an area of approximately 46,500 square kilometres of Western Australia's northern coastal land. The Shire occupies approximately 450 kilometres of the coastline and extends inland for approximately 200 kilometres. The Shire is located within the Gascoyne Region, bordered by the Shire of Exmouth to the North, Shire of Upper Gascoyne to the East and Shire of Shark Bay to the South.

The Carnarvon Townsite, the main settlement, is the regional centre, situated approximately 1,000 kilometres North of Perth Metropolitan Region. Coral Bay, located 220 kilometres North of Carnarvon Townsite is one of Australia's premier holiday destinations, best known for its recreational activities



associated with the Ningaloo Reef. Coral Bay was the colloquial name for the southern section of the Maud's Landing Townsite, originally gazetted in 1915. Numerous amendments to both the Maud's Landing Townsite and Coral Bay occurred from 2004 onwards. Coral Bay became a gazetted townsite in 2010, formalising both the name and boundaries of the settlement.

The remainder of the Shire is home to various horticultural activities being undertaken on the fertile delta of the Gascoyne and pastoral activity on the arid inland landscape. The stretch of coast forming the western boundary of the Shire not only represents a significant natural landmark within the Western Australian context but also forms the platform for many tourism activities and fishing industry.

FIGURE 1 – SUBJECT STUDY AREA



Source: Urbis, 2014



### 1.3 WHY IS THE STRATEGY IMPORTANT?

Over the next 10-15 years, the Shire of Carnarvon will face a number of opportunities and challenges that will affect the Shire's economy, environment and way of life.

The Strategy identifies the most important issues and presents a framework for the Council, community and various Government agencies to work together to:

- Maximising the potential opportunities;
- Planning for future growth and change in a way that strengthens the economy; and
- Helping the community to thrive and protect the rich natural and cultural heritage.

The Shire of Carnarvon will be central to developing and delivering the LPS and recommended strategies and actions. The community will also play an important role in supporting the delivery of the strategy and informing the Shire and key Government stakeholders in the changing circumstances and emerging trends that may trigger an alternative approach and/or the revisiting particular strategies and actions. This united approach to the future planning of the Shire will enhance the way the Shire and local community prioritise, support and deliver projects that will make a real difference to the future of the Region. Further, the Strategy will provide the strategic basis for attracting and accessing a suit of programs and funding to implement several strategies and actions.

### 1.4 CONTENT AND FORMAT

The Shire of Carnarvon LPS has been prepared in the context of the Western Australian Planning Commission's document titled 'Local Planning Manual – A Guide to the preparation of Local Planning Strategies and Local Planning Schemes in Western Australia' (March 2010) and is divided into two separate parts;

#### – **Part 1: The Strategy**

This is the 'operational part' of the document – it outlines the major characteristics and issues relevant to future planning and development of the Shire of Carnarvon, with specific actions, approaches, tasks and exercises that should be undertaken over the life of the document to fulfil that vision.

#### – **Part 2: Background Information and Analysis**

Part 2 of the document provides a comprehensive understanding and analysis of the relevant planning framework, unique characteristics and opportunities and challenges facing the Shire of Carnarvon. The findings of Part 2 form the basis for the vision and actions of Part 1.

This Strategy has been built from the 'ground up', based on the outcomes of engagement with community representatives and the relevant State Government agencies. Consideration has also been given to the new *Planning and Development (Local Planning Schemes) Regulations 2015* as part of the statutory framework, in the preparation of the Strategy.

### 1.5 RELATIONSHIP TO LOCAL PLANNING SCHEME

It is intended that the Shire's new Local Planning Scheme No.13 will apply to the whole of the Shire of Carnarvon. It will replace the Town Planning Scheme No.10 as the primary set of planning controls for the Carnarvon townsite and immediate surrounds, and Town Planning Scheme No.11, which currently covers the balance of the Shire.



The LPS is the guiding document for the preparation and review of the Local Planning Scheme. The Scheme is the primary means by which the Shire can ensure that any new development contributes towards the objectives and overall strategic vision of the LPS.

## 1.6 COMMUNITY ENGAGEMENT

Community consultation undertaken in the preparation of the Shire's Strategic Community Plan 2011 further highlighted the community's desire and expectation to be part of the decision-making processes concerning the future of the Shire of Carnarvon. The Shire's Strategic Community Plan includes the following objective for Civic Leadership:

*"Leadership and community engagement to ensure the best use of our physical, financial and human resources."*

Community and other relevant stakeholder input into preparing the LPS has been important to the Shire and ensures the ideas and aspirations of the local community are captured. This ensures the outcomes are locally driven and assist in working towards a shared vision, as established under the Strategic Community Plan.

As part of the Strategic Community Plan, a significant amount of consultation has already been undertaken with the people of Carnarvon with the outcomes forming the starting point for further consultation.

The consultation objectives for the preparation of the LPS include:

- Promoting and building awareness of the intent and process involved in the preparation of the LPS;
- Identifying community values, aspirations for future development and attitudes to key planning issues;
- Identifying key constraints and opportunities afforded to the Shire; and
- Providing opportunities for stakeholders and the broader community to participate in the preparation of the LPS.

Consultation with community members and other local stakeholders occurred in late 2014 and early 2015, including advertising of Council's intentions to prepare a LPS on the Shires website, the local paper and through correspondence to individual stakeholder groups. One-on-one meetings with Government and community organisations occurred in late 2014, ahead of the formal advertising period which occurred in 2016.

The following issues and opportunities were specifically identified:

- Opportunities and constraints for improving the tourism offer available in the Shire of Carnarvon including marketing efforts, diversification of accommodation, capitalising on underutilised destinations and activities and Shire-wide coordination.
- Realising the locational advantages of the Shire being positioned as the regional centre between two world heritage areas, as well as other key destinations such as the Kennedy Ranges and Mount Augustus.
- The cost of housing in the Shire is seen as a challenge in attracting and retaining new residents. In particular, the availability of 3 and 4 bedroom dwellings in the low-mid price range. The affordability of housing in the Shire is constrained, in part by the wind rating building standards for



cyclone prone areas as well as the undersupply of local builders, materials and labour. The Australian Building Codes Board's Final Regulation Impact Statement indicates that on average there is a 6% increase in building costs per individual house when building in a cyclone prone area.

- The existing gaps in aged care accommodation and the critical issue of future supply of appropriate accommodation and level of care to allow residents to 'age in place'. Attracting investment in the aged care market has proved difficult in the past.
- The Carnarvon Multi-Purpose Health Service is the primary medical centre servicing the Gascoyne Region. The Centre does not have the capacity and facilities to adequately service the Region into the future.
- A key factor in the transient nature of the population is the quality and availability of secondary education providers. Generally, families with children will leave once their children reach Year 8/9 to pursue higher quality education providers either in Geraldton or Perth.
- The closure of several retail chains and the view that the population is declining have resulted in negativity and drop in community morale which has stymied local investment and entrepreneurship.
- There is an opportunity for local small business to fill the market gap left by major retailers and to promote local spending.
- The Gascoyne Food Bowl Initiative and horticultural expansion has raised some concerns among growers with regard to water availability, competitive advantage and concern that national or multinational groups will push local, family run plantations out of the market.
- While there are concerns regarding horticultural expansion, the growth of this industry either on existing plantations or new land will provide local economic benefits and opportunities as well as a potential catalyst for continued population growth.
- Infrastructure is seen as a major constraint to development in general including residential expansion, tourism opportunities, and capitalising on commercial positioning of the Shire. In particular, the availability of water and quality of infrastructure represents a key constraint.
- There is a perceived gap between job vacancies and appropriately qualified local people to fill these jobs.
- The future of the pastoral industry was investigated and in particular alternate land use opportunities that could be pursued to supplement pastoral activities.

A summary of the outcomes and directions from the consultation undertaken is provided in **Appendix A**.



## 2 Shire of Carnarvon's Future

The Shire's vision for the future has been expressed in its Community Strategic Plan;

### VISION FOR THE SHIRE OF CARNARVON.

*“The Shire of Carnarvon will remain a wonderful place of endless opportunity, with a pristine environment, where the desert meets the sea.”*

The Community Strategic Plan provides a broad framework to guide the future of the Shire over the next 10 years, with the preparation of the LPS being the key mechanism for implementing the vision from a land use planning perspective.

### 2.1 OBJECTIVES

The established guiding aims and objectives of the LPS are set out below:

#### OBJECTIVES

- To foster local economic development and employment opportunities that build upon local strengths and opportunities;
- To ensure that the planning framework and land use planning supports population attraction/retention as a basis for steady growth;
- To support the implementation of state and regional planning policy, current strategies and strategic development initiatives;
- Provide a strategic planning framework for the assessment and consideration of subdivision and development applications;
- Identify, foster and protect the rich and diverse European and Indigenous culture of the local area and population;
- Provide for safe, secure and vibrant urban areas within the towns and settlements for residents and visitors, allowing for future growth, supported by a diverse economic base;
- Capitalise and build upon the established transport network to improve synergies between key urban, commercial and tourism precincts and to increase the Shire's exposure within the regional setting;
- Position the settlements of Carnarvon and Coral Bay as key tourist hubs for the region;
- To provide the strategic basis for the preparation of the Shire's new local planning scheme.



## 3 Strategic Plan for Carnarvon

### 3.1 INTRODUCTION

The Plan identifies a range of opportunities for the Shire of Carnarvon that focuses on managing population growth, water, transport, tourism, infrastructure, diversification of the economy, education and training, healthcare, community resilience and infrastructure that promotes 'liveability', the natural environment and the celebration of culture.

### 3.2 KEY PRINCIPLES

The key principles driving the Strategic Plan for the Shire of Carnarvon over the next 10 – 15 years are as follows:

- Facilitating opportunities for steady population growth, particularly within the Carnarvon townsite and surrounds.
- Continuing to provide support for economic development, recognising the value of building a diverse economic base with potential opportunities for growth in the areas of tourism, horticulture and residential growth – taking advantage of the climate, lifestyle and access to a variety of natural assets.
- Generally seeking to put Carnarvon as a town 'on the map' as a place with a positive future.
- Facilitating the protection of natural assets through appropriate land tenure and management arrangements, recognising that sometimes competing demands are being placed on these areas.
- Continuing to provide support for ongoing pastoral activities while recognising the potential opportunities for a diversification of activities.
- Acknowledging and celebrating the history of the area and the areas cultural diversity.
- Facilitating the orderly and proper planning of the area, including the establishment/advancement of appropriate planning frameworks (structure plans, local planning policies and similar).
- Facilitating a focus on shared responsibilities through partnerships, collaboration and stakeholder engagement.

### 3.3 KEY ISSUES AND OPPORTUNITIES

There are a number of key issues, opportunities and constraints in the local area that need to be carefully considered in the planning for the future of the Shire of Carnarvon. The key issues and opportunities may be summarised in the following:

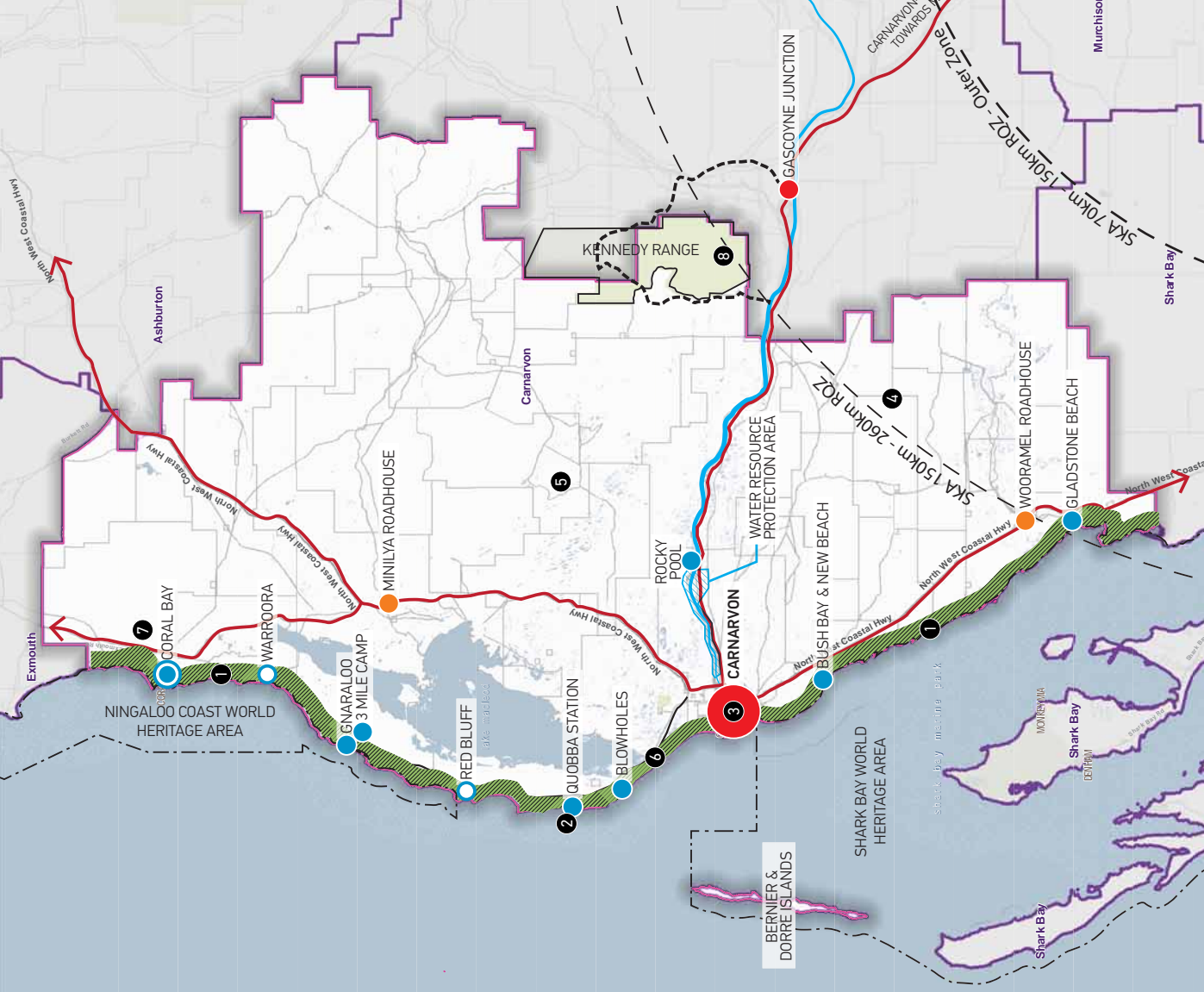
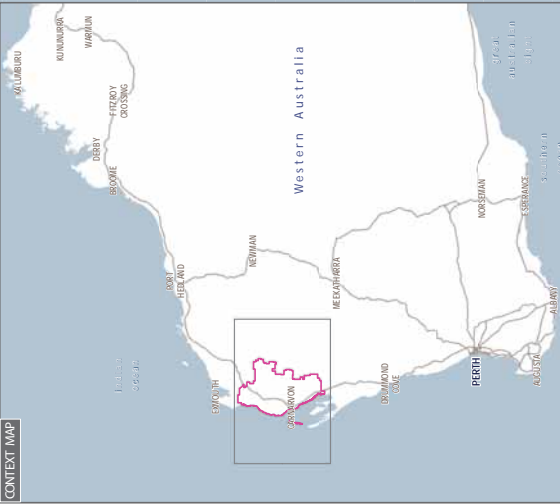
- Accommodating future population growth.
- Planning for the expansion of tourism activities.
- Ensuring that housing meets the needs of the local community.
- Ensuring appropriate access to health services.
- Ensuring appropriate access to education and training.
- The ability for people to be able to 'age in place'.
- Overall community spirit and moral.
- Expansion of horticultural activities.
- Management of coastal areas.



- Effective infrastructure delivery.
- Supporting economic development.
- Planning for transport networks.
- Integrating water resources into the planning process.
- Recognising the value of culture and heritage.

The following sections set a number of strategy plans, along with specific strategies and actions in the context of the identified principles and key issues and opportunities.



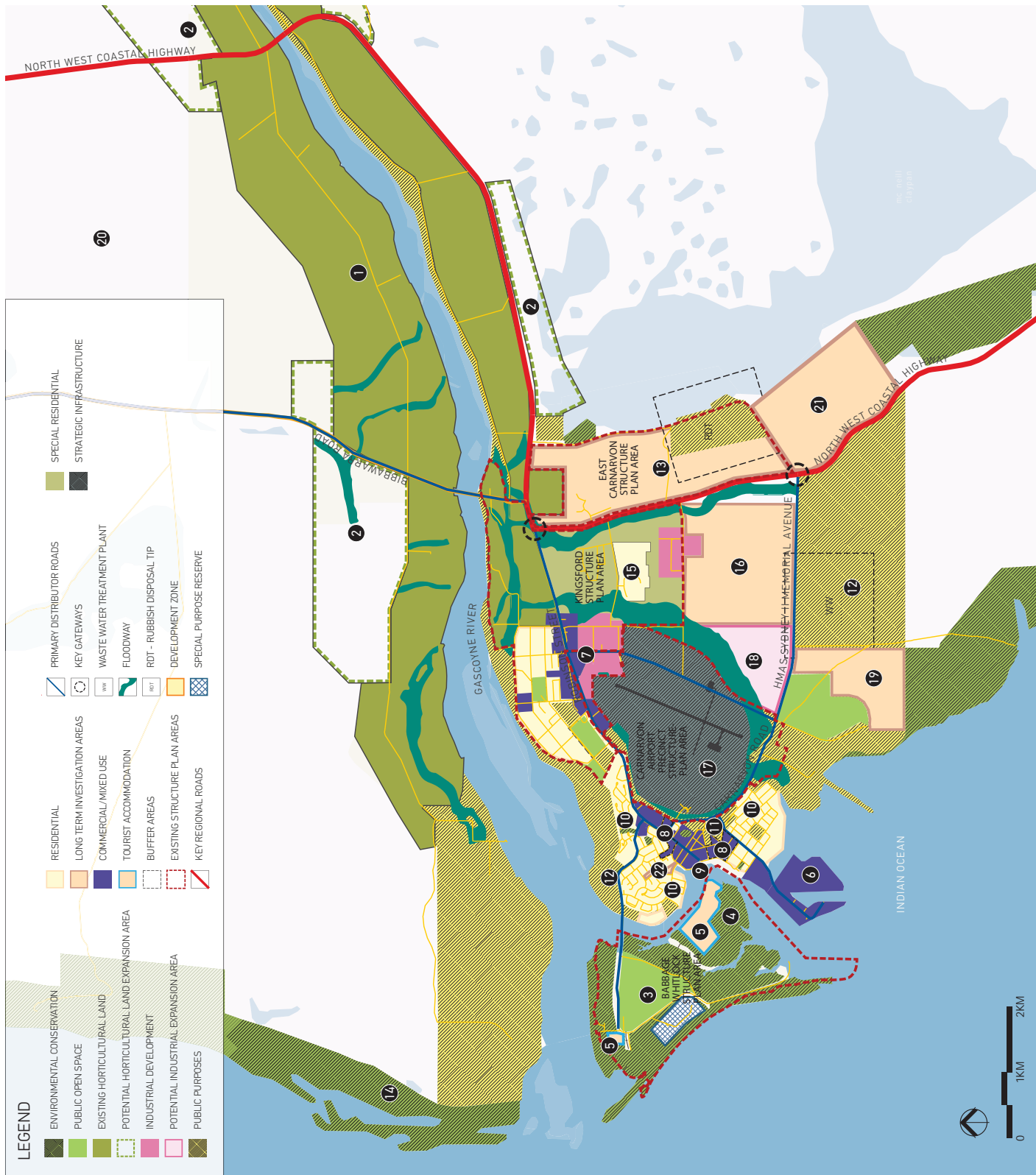


**PLANNING ACTIONS**

1	<ul style="list-style-type: none"> <li>Reclassify land along the coast (regardless of tenure) to 'Environmental Conservation' as formally determined by the Department of Lands to provide increased control over the protection and management of the coast to ensure future development does not compromise the amenity of the natural environment. A Coastal Management Strategy should be prepared to inform the detailed consideration of coastal protection and planning as formally determined by the Department of Lands.</li> </ul>
2	<ul style="list-style-type: none"> <li>Coastal nodes should be zoned 'Tourism' to reflect their primary land use. A Coastal Management Strategy will assist in guiding decision-makers on any future development applications, regardless of tenure.</li> </ul>
3	<ul style="list-style-type: none"> <li>Retain Carnarvon as the key regional hub for both locals and visitors with opportunities for further growth as identified on the Town of Carnarvon Strategy Map.</li> </ul>
4	<ul style="list-style-type: none"> <li>Radio-quiet zone related to the Square Kilometre Array project. Landowners should consult with the Murchison Radioastronomy Observatory (MRO) before applying for any radio communications license from the ACMA.</li> </ul>
5	<ul style="list-style-type: none"> <li>Pastoral Lands retain existing rural zoning</li> </ul>
6	<ul style="list-style-type: none"> <li>Deep Water Port Exploration</li> </ul>
7	<ul style="list-style-type: none"> <li>Ensure land use and development in Coral Bay is consistent with approved Structure Plan.</li> </ul>
8	<ul style="list-style-type: none"> <li>Work with the Shire of Upper Gascoyne and the Mid-West Development Commission with respect to improve tourism opportunities and linkages through Kennedy Ranges as identified in the Mid West Tourism Development Strategy.</li> </ul>

	SHIRE OF CARNARVON
	LOCAL GOVERNMENT AREA
	KEY REGIONAL ROAD CONNECTION
	ENVIRONMENTAL CONSERVATION
	NATIONAL PARK
	CARNARVON REGIONAL CENTRE
	TOURISM CENTRE
	TOURISM NODE
	MINOR TOURISM NODE
	SERVICE CENTRE
	WATER PROTECTION AREA
	GASCOYNE RIVER
	POTENTIAL TOURISM CONNECTIONS

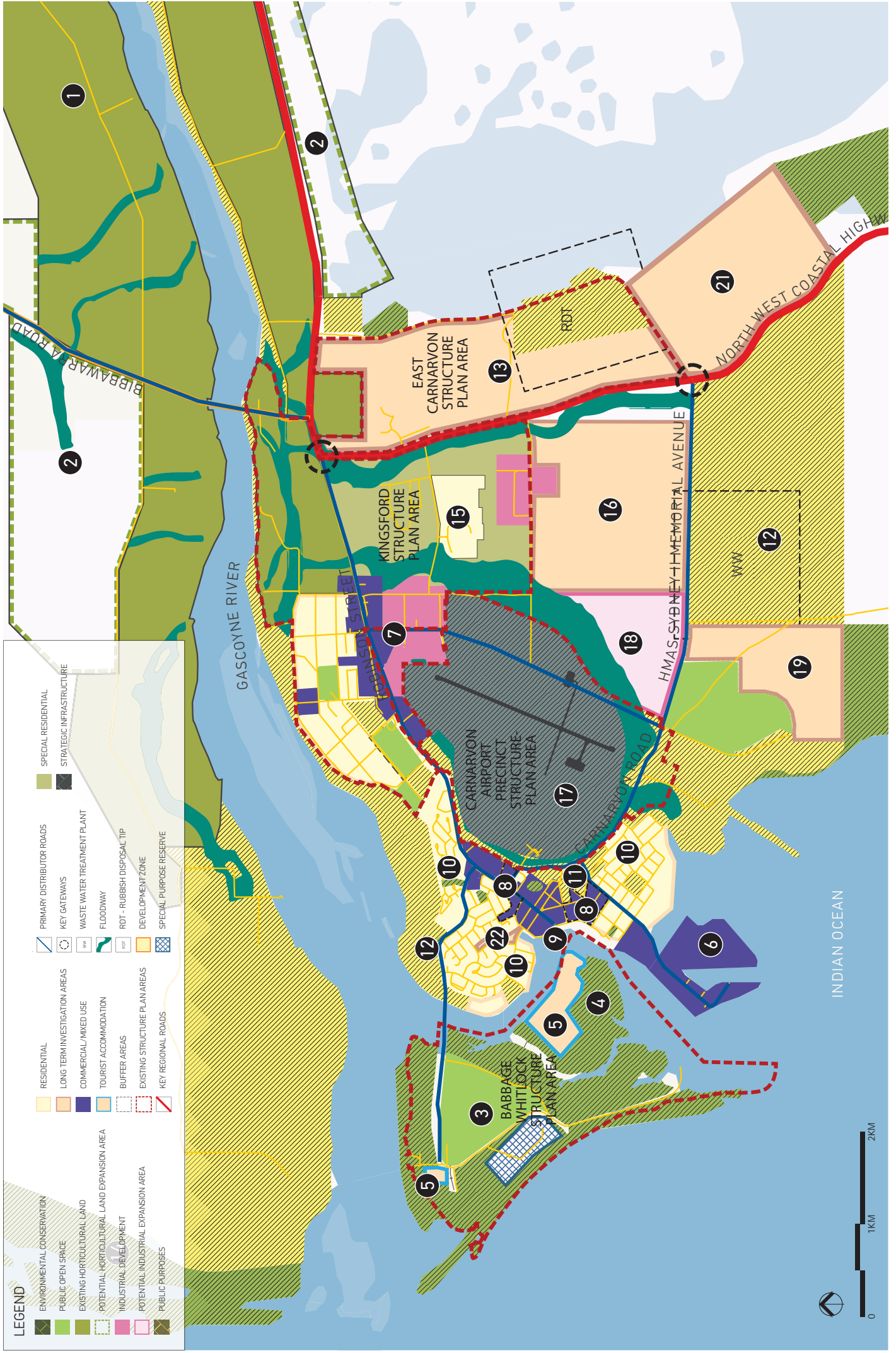
**SHIRE OF CARNARVON - WHOLE OF SHIRE STRATEGY MAP**  
FIGURE 2: DATE 13.03.2017



**PLANNING ACTIONS**

<b>1</b>	<ul style="list-style-type: none"> <li>Intensive horticultural land use to continue</li> <li>Identify horticultural expansion areas as 'Development Investigation Areas' in the short-term requiring structure planning</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>Structure Plan to then guide future development and re-zoning to 'Intensive Horticulture'</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>Develop the new 9-hole golf course as per Babbage SP</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>Conservation areas to protect existing mangroves, wetlands and foreshore</li> </ul>
<b>5</b>	<ul style="list-style-type: none"> <li>Focus on provision of additional tourism accommodation</li> </ul>
<b>6</b>	<ul style="list-style-type: none"> <li>Promote preparation a Local Development Plan or Structure Plan in consideration of existing use/development, and future mixed use/tourist development opportunities for the Carnarvon Yacht Club and commercial boat harbour.</li> </ul>
<b>7</b>	<ul style="list-style-type: none"> <li>Land is to be zoned and reserved in accordance with the East Carnarvon and Kingsford Structure Plan.</li> </ul>
<b>8</b>	<ul style="list-style-type: none"> <li>Increase density within these areas due to their access to community facilities and proximity to town centre.</li> </ul>
<b>9</b>	<ul style="list-style-type: none"> <li>A Coastal Management Plan should be progressed to review and manage planning along the fascine and coastal areas in accordance with State Planning Policy and to assist in the appropriate management and protection of the fascine and coast.</li> </ul>
<b>10</b>	<ul style="list-style-type: none"> <li>Retain existing residential densities and zoning for Brockman, Morgantown &amp; South Carnarvon</li> </ul>
<b>11</b>	<ul style="list-style-type: none"> <li>Potential for the expansion of the Carnarvon Multi-Purpose Health Centre.</li> </ul>
<b>12</b>	<ul style="list-style-type: none"> <li>Future decommissioning of existing waste water plant</li> <li>500 metre buffer to be imposed on new site</li> </ul>
<b>13</b>	<ul style="list-style-type: none"> <li>Brown Ranges and surrounding land requires detailed investigation in terms of appropriate zonings under the new Scheme which take into consideration constraints arising from existing land use buffers and conflicting development.</li> </ul>
<b>14</b>	<ul style="list-style-type: none"> <li>Reclassify land along the coast (regardless of tenure) to 'Environmental Conservation' as formally determined by the Department of Lands to provide increased control over the protection and management of the coast. A Coastal Management Plan should be prepared to inform the detailed consideration of coastal protection and planning.</li> </ul>
<b>15</b>	<ul style="list-style-type: none"> <li>Identify the built residential blocks at Murgullah Village and the former Special Use welfare housing as a R20 Residential Zone.</li> </ul>
<b>16</b>	<ul style="list-style-type: none"> <li>Potential light industrial or service commercial area within close proximity to key transport networks</li> <li>Potential long-term opportunity for transport hub</li> </ul>
<b>17</b>	<ul style="list-style-type: none"> <li>The Carnarvon Airport is to be zoned 'Development Zone' to provide flexibility moving forward and to minimise the need for amendments to the Scheme until greater certainty is achieved.</li> </ul>
<b>18</b>	<ul style="list-style-type: none"> <li>Opportunity for co-location of various light industrial land uses into the future with linkages associated with the airport / transport sector - subject to further flood mitigation work for this area.</li> </ul>
<b>19</b>	<ul style="list-style-type: none"> <li>Long-term Investigation Area to redevelop golf course</li> <li>Land potentially constrained due to sewerage treatment plant relocation</li> </ul>
<b>20</b>	<ul style="list-style-type: none"> <li>Potential Long-term re-location site for new Carnarvon airport</li> <li>Appropriate zoning/reserve to be considered in new scheme</li> </ul>
<b>21</b>	<ul style="list-style-type: none"> <li>Low density development Investigation Area at Broadcast Australia Site</li> </ul>
<b>22</b>	<ul style="list-style-type: none"> <li>Brockman Park Long Term Investigation Area - Parks and Recreation Areas, Surplus Land, and Aged Care facilities analysis is required to assist in long-range planning for the Shire</li> </ul>

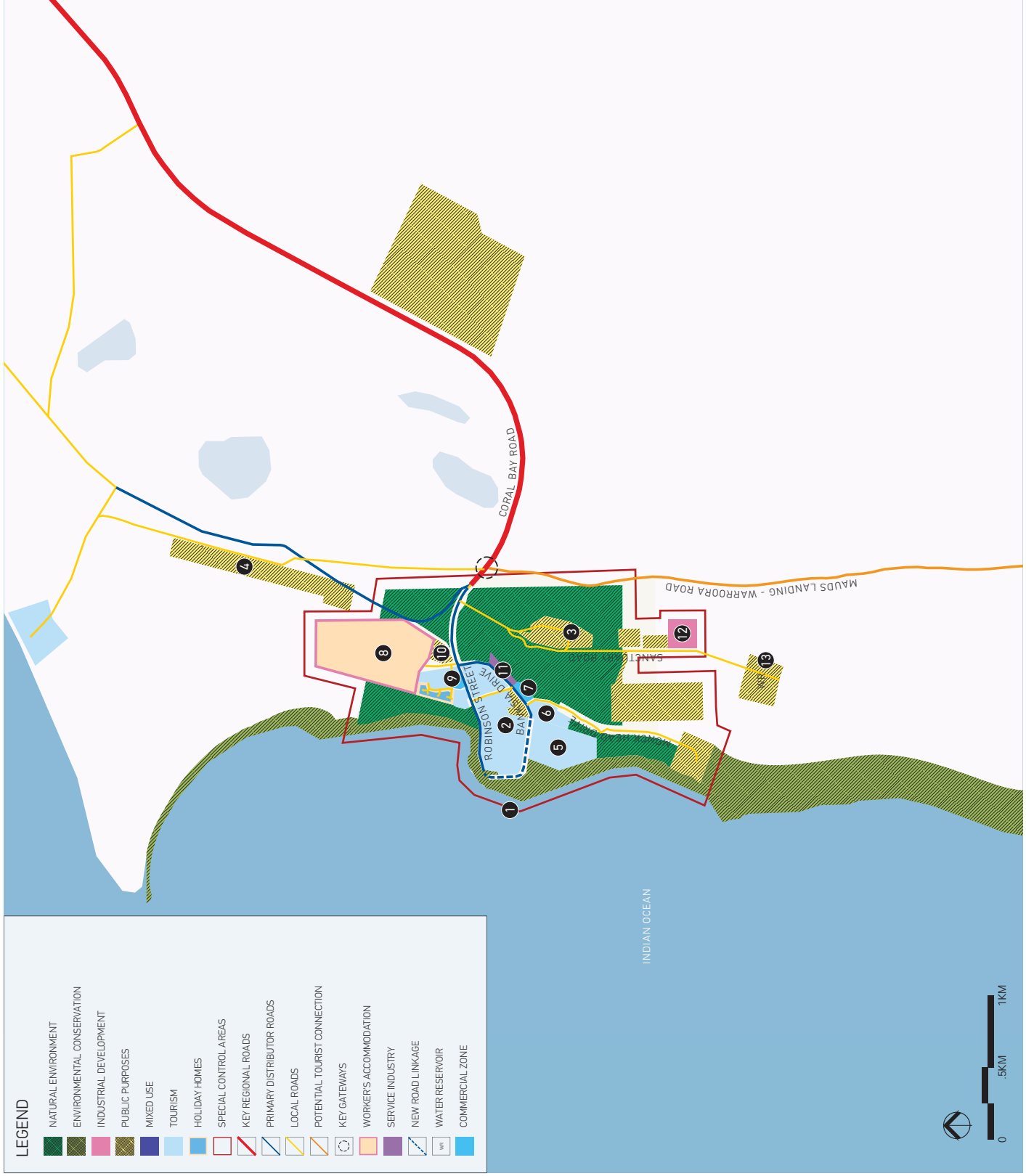
**SHIRE OF CARNARVON - LOCAL PLANNING STRATEGY PLAN**  
 FIGURE 3: DATE 13.03.2017



**SHIRE OF CARNARVON - LOCAL PLANNING STRATEGY PLAN (TOWNSITE)**  
 FIGURE 4: DATE 13.03.2017

## PLANNING ACTIONS

<b>1</b>	<ul style="list-style-type: none"> <li>Ongoing protection of foreshore reserve and public open space areas</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>Existing accommodation sites to remain consistent with adopted Local Development Plans (formerly ODPs)</li> <li>Ensure the subdivision of land for permanent residential occupation is continued to be prohibited within Coral Bay to retain the tourist character and holiday fabric of the settlement</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>Re-location of waste disposal site to land south of waste water treatment plant (site currently constrained due to proximity to town)</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>Potential relocation of Coral Bay airstrip to a yet to be determined location to the east subject to funding and demand.</li> </ul>
<b>5</b>	<ul style="list-style-type: none"> <li>Long-term opportunity for tourism development pending subject to a required ODP (future LDP in scheme 13)</li> </ul>
<b>6</b>	<ul style="list-style-type: none"> <li>Recommended for overflow caravan and camping accommodation during peak period or additional workers accommodation (Opportunity to increase economic return)</li> </ul>
<b>7</b>	<ul style="list-style-type: none"> <li>Re-location of the existing fuel station including a convenience automotive store and trailer parking to Lot 62</li> </ul>
<b>8</b>	<ul style="list-style-type: none"> <li>Predominant use of land as workers accommodation for people engaged in business at Coral Bay.</li> <li>Potential to cater to 400 workers as a part of Local Development Plan</li> </ul>
<b>9</b>	<ul style="list-style-type: none"> <li>Existing commercial sites offer sufficient retail opportunity within the settlement</li> <li>Relocation of WA Country Health Service clinic to Government and cultural precinct will allow for commercial and retail growth into the future</li> </ul>
<b>10</b>	<ul style="list-style-type: none"> <li>Government and cultural precinct as an entrance statement to Coral Bay. There is opportunity for improved tourism and cultural signage</li> <li>Long-term potential for greater Department of Education presence to cater to permanent worker population</li> <li>Opportunity for an Indigenous Interpretive Centre</li> </ul>
<b>11</b>	<ul style="list-style-type: none"> <li>Opportunity for workers accommodation combined with workshop and storage units to cater to tradespeople providing services to the settlement</li> </ul>
<b>12</b>	<ul style="list-style-type: none"> <li>Identified lack of suitable space for household and commercial storage and limited light industrial purposes</li> <li>Investigate expansion of storage area site</li> </ul>
<b>13</b>	<ul style="list-style-type: none"> <li>Waste water treatment facility</li> <li>Sufficient land capacity to cater to any upgrades or expansions as determined in the CBSSP</li> </ul>



SHIRE OF CARNARVON - CORAL BAY LOCAL PLANNING STRATEGY PLAN  
 FIGURE 5: DATE 13.03.2017



## 4 Strategies and Actions

A number of strategies and actions have been formulated to further the established vision, principles and objectives of the Local Planning Strategy.

The following strategies and actions are intended to guide decision making within the Shire of Carnarvon over the next 10-15 years. Each action has been categorised according to its level of priority, to ensure that an integrated and sustainable approach is applied to the future planning of the Shire. Timeframes applicable to each priority level are outlined in **Figure 6** below.

FIGURE 6 – STRATEGY PRIORITY TIMEFRAMES



It is important to note that the timeframes relate to the commencement of a particular action and not the project completion.

Each of the ensuing sections includes the following aspects to achieve the various goals of the strategy:

**DIRECTION:** A brief statement setting out the future direction of the Shire in response to each of the Strategy and Action areas.

**OBJECTIVES:** Sets out the Shire's specific objectives in addressing the key issues identified in Section 4 of the Strategy and informing the proposed actions.

**ACTIONS:** Sets out a variety of actions to achieve the Shire's future direction and objectives. The actions are divided into recommendations for the new Local Planning Scheme (LPS) Text, Local Planning Scheme Maps, the development and review of the Shire's Local Planning Policy (LPP) framework, and other complementary actions outside the conventional statutory planning framework. The Local Planning Strategy will ultimately provide the strategic basis for the preparation of the Shire's new local planning scheme.



## 4.1 POPULATION GROWTH

Direction:



Retaining population and achieving steady growth

Objectives:

1. As far as possible, ensure the planning framework supports retention of population and promotes steady growth.
2. Provide a strategic planning framework for the assessment and consideration of subdivision and development applications.
3. Provide for increased population growth within the Shire by establishing controls for the coordinated planning and development of land to be used for residential purposes and allow for complimentary uses to provide a range of services to meet the needs of the local residents.

Strategic Policy Position:

1. There is sufficient land for residential development in Carnarvon; infill of existing areas is a priority and no additional land needs to be designated for this purpose at this time.
2. Arrangements for the delivery of wastewater infrastructure shall form part of the critical considerations in the planning for Structure Plan areas.
3. Different scenarios of population, decline/stabilisation/growth needs are intrinsically linked with a wide range of other matters, including business investment confidence, access to education, healthcare and housing etc.
4. This strategy aims to promote consolidation and incremental growth within existing residential and commercial areas. Growth will not expand the town boundaries; however, the expansion of the Carnarvon Airport Precinct is a new development which will increase the size of the footprint of the town. Brown Range will be identified as an Investigation Area for future growth.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Matters for consideration in the new Scheme: (a) Include in the aims of the Scheme text wording to the effect of or similar to: "Facilitate the orderly and proper development of land by establishing controls for the coordinated planning and development of land that are appropriate in the local context, are capable and practical to implement, and meet the future needs of local residents." (b) Structure Plans have been provided for Babbage Whitlock Island, Coral Bay Settlement, East Carnarvon and Kingsford as indicated on the Shire of Carnarvon Local	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>Planning Strategy Plan. A structure plan has been approved by the WAPC for the horticultural areas along the Gascoyne River. A structure plan may be required for Browne Range investigation area in the future.</p> <p>(c) Establish site and development requirements under Schedule 1 and possible supplementary deemed provisions under Schedule 2 of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</p>		
<p>2. Recommended Local Planning Policy (LPP) development and review:</p> <p>Review LPP framework, with a view to identify opportunities to streamline application and approvals processes, and in turn minimise potential risks and delays associated with securing approvals for new investment.</p>	Short-term	Shire of Carnarvon
<b>– OTHER COMPLIMENTARY ACTIONS</b>		
<p>3. Liaise with key stakeholders to review potential population growth scenarios and associated implications.</p>	Medium-term	Shire of Carnarvon; Department of Planning; and Gascoyne Development Commission
<p>4. Explore the potential for a working group to be established (including the Shire, GDC, DoP and potentially other stakeholders) to develop a deeper understanding of the potential barriers to growth and potential measures to respond to the different barriers – with a focus on potential partnerships and strategic infrastructure investments.</p>	Medium- term	Shire of Carnarvon
<p>5. Brown Ranges and surrounding land requires detailed investigation in terms of appropriate zonings under the new Scheme which take into consideration constraints arising from existing land use buffers and conflicting land uses and development.</p>	Medium- term	Shire of Carnarvon

Note: retaining and attracting new businesses and providing for employment opportunities in the Shire is also addressed under 4.7 Business and Employment.



## 4.2 TOURISM

Direction:



Encourage the growth and retention of tourism opportunities to strengthen the tourism industry.

Objectives:

1. Identify, protect and enhance important tourism nodes within the Shire.
2. Recognise and support the potential of tourism to the local economy through the planning framework.
3. To foster employment opportunities through tourism initiatives that are built on local strengths and opportunities.
4. Position the settlements of Carnarvon and Coral Bay as the key tourism hubs for the Gascoyne Region.

Strategic Policy Position:

1. The Coral Bay Settlement Structure Plan 2015 will continue to guide tourism development in Coral Bay.
2. Tourism development on Crown land will be largely regulated and managed by the Department of Lands or relevant management agency. Tourism development on privately owned land will be largely regulated and managed by the local planning scheme.
3. The Shire is prepared to manage tourism nodes/areas where management responsibilities are established in consultation with relevant state government agencies.
4. The Tourism Development Strategy (2010) should be revised and actions plans should be progressed on various strategies and actions that remain relevant.
5. Tourism opportunities will be expanded through improved and broadened accommodation facilities and exploration of unique tourism experiences that put Carnarvon 'on the map'.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Matters for consideration in the new Scheme: (a) Include in the aims of the Scheme text to the effect of or similar to: “To provide for and foster a range of tourist facilities and accommodation, and to protect and enhance existing tourist attractions and amenities.” (b) Provide for the appropriate control of tourism development within remote coastal nodes through a variety of Scheme provisions that may include additional uses for local reserves,	Short-term	Shire of Carnarvon





ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>Special Control Area provisions, Additional Use provisions or similar.</p> <p>(c) Establish tourism development requirements in Part 4 of the Scheme that are appropriate in the local context and are capable of practical implementation. These requirements should consider aspects such as height, density and setbacks and similar.</p> <p>(d) Include appropriate land use definitions for tourism land uses including but not limited to:</p> <ul style="list-style-type: none"> <li>i. Holiday Home</li> <li>ii. Caravan Park</li> <li>iii. Chalet</li> </ul> <p>(e) Reassess the Tourism Nodes in the local government area in order to address the proposed increase in bed numbers for guest accommodation in nodes such as Quobba and Gnaraloo or any other consistent with State Planning Policy 6.3 Ningaloo Coast.</p>		
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Maintain the 'Tourism' zoning for existing/established tourism land uses.</p> <p>(b) Existing accommodation sites to remain consistent with adopted Local Development Plans.</p> <p>(c) Investigate the zoning of new tourism land in proximity to the town centre and Fascine, where existing services are provided and identify appropriate sites suitable for incorporating short-stay accommodation.</p> <p>(d) Generally include land along the coast within a reserve for the purposes of 'Environmental Conservation' or 'Recreational' as formally determined by the Department of Lands. Currently the coastal sections are zoned Rural under the existing scheme, however the Environmental Conservation will provide more appropriate guidance for the future planning of these areas over and above a broad rural zone. There is the ability for formal land tenure arrangements to be advanced in parallel with, and independent of, the new scheme. Reclassifying land along the coast to 'Environmental Conservation' or 'Recreational' (as formally determined by the Department of Lands) will provide increased control over the protection and management of the coast.</p>	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>(e) Coastal nodes should be zoned 'Tourism' to reflect their primary land use. A Coastal Management Strategy will assist in guiding decision-makers on any future development applications, regardless of tenure.</p> <p>(f) Identify Coral Bay on the Strategy map as a Special Control Area and require development within this area to be consistent with the Coral Bay Settlement Structure Plan 2015.</p>		
<p>3. Recommended LPP development and review:</p> <p>(a) Review the Advertising and Signage Policy to ensure the development of signage within the Shire is consistent and aids in the creation of an attractive brand/image for the Shire.</p> <p>(b) Review the existing Alfresco Dining LPP and ensure it captures and promotes the dining experience sought in the Shire, including preferred locations, forms of development and the pathway to approval. The advertising process for alfresco dining applications will be a requirement under the Scheme.</p>	Short-term	Shire of Carnarvon
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>4. Complete a review of signage and potentially improve signage to key tourist attractions, gateway points, accommodation and long vehicle parking sites for the Shire as a whole.</p>	Short-term	Shire of Carnarvon; and Main Roads Western Australia
<p>5. Encourage tourism and economic development within the Shire:</p> <p>a. Undertake a review of accommodation that confirms the on-going demand for various accommodation types to inform planning, and investment decisions.</p> <p>b. Market the Shire as a unique fresh food hub (including required infrastructure / improvements) which promotes the Carnarvon township as an important destination and also a stopover for tourists on a drive holiday to stock up on fresh fruit and vegetables.</p> <p>c. Market Carnarvon township as a destination for long distance yachting community (including required infrastructure/ improvements).</p> <p>d. Cater for accommodation for 400 workers in Coral Bay as a part of Local Development Plan. Requirement for</p>	Medium-term	Shire of Carnarvon; Department of Tourism; Carnarvon Chamber of Commerce; Main Roads Western Australia; and Department of Transport



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>appropriate Management Statements and caveats to control occupation of dwellings.</p> <p>e. Develop the existing Space and Technology Centre as a specialised tourism precinct as there is vacant land in this area.</p>		
<p>6. Encourage and facilitate through flexible planning and supportive programs, tourism activity on horticultural operations. Where it can be demonstrated that it will not compromise the functionality of horticultural activities, tourism related uses should be considered for designation as 'IP' uses (incidental to the predominant use) under the new Scheme.</p>	Short-term	Department of Agriculture; Shire of Carnarvon; and Department of Planning
<p>7. Long-term opportunity for tourism development to the west of Banksia Drive in Coral Bay subject to the preparation of a structure plan that demonstrates both capability and suitability for development.</p>	Long-term	Shire of Carnarvon
<p>8. Investigate the establishment of Quobba – Gnaraloo Road north of Gnaraloo Bay through to Coral Bay as a 4WD 'wilderness coastal road' controlled and managed by the DPaW and Shire of Carnarvon in collaboration with key stakeholders.</p>	Short-term	Shire of Carnarvon in collaboration with key stakeholders (i.e. Pastoralists, Dept. of Planning, Dept. of Fisheries, Department of Lands, Tourism WA, Traditional Owners, Carnarvon/Coral Bay communities).
<p>9. Reassess Tourism Nodes in the area that is managed by the local government in order to address the proposed increase in bed numbers for guest accommodation in towns such as Quobba and Gnaraloo, as part of the management arrangements for the potential coastal excision areas and any associated pastoral lease conditions.</p>	Short-term	Shire of Carnarvon in collaboration with key stakeholders (i.e. Pastoralists, Dept. of Planning, Department of Lands, Tourism WA, Dept. of Parks and Wildlife).
<p>10. Department of Lands and the Shire to establish and formalise informal camping, and meet increasing demand for managed nature based camping along the Gascoyne coast at existing and future development nodes as identified and prescribed in the Ningaloo Coast Regional Strategy as well as future nature based camping sites at Bush Bay/New Beach and Miaboolya Beach.</p>	Medium-term	Shire of Carnarvon Department of Lands
<p>11. Investigate establishment of Quobba – Gnaraloo Road north of Gnaraloo Bay as gazetted road through to Coral Bay as a 4wd 'wilderness coastal</p>	Short-term	Department of Parks and Wildlife Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
road' controlled and managed by the DPW and Shire of Carnarvon in collaboration with key stakeholders.		Key stakeholders (i.e. Pastoralists, Dept. of Planning, Department of Lands, Tourism WA, Australia Coral Coast, Traditional Owners, Carnarvon/Coral Bay communities).

### 4.3 SETTLEMENTS

Direction:



New development and subdivision is appropriately identified and planned for in a logical manner.

Objectives:

1. Ensure there is an appropriate supply of residential land and housing stock to cater for future growth.
2. Promote redevelopment of areas that can provide increased housing opportunities and housing diversity in areas close to the town centre.

Strategic Policy Position:

1. Future development in Coral Bay will be guided by the Coral Bay Settlement Structure Plan and any further approved local structure plans or local development plans.
2. Future development in the Carnarvon Airport Precinct will be guided by the Carnarvon Airport Precinct Structure Plan and any further approved local Structure plans or local development plans.
3. Future Development on Babbage and Whitlock Island will be guided by the Babbage and Whitlock Island Structure Plan and any further approved local Structure plans or local development plans.
4. Future development in East Carnarvon and Kingston areas will be guided by the East Carnarvon Kingsford Structure Plan and any further approved local Structure plans or local development plans.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Recommended text provisions for new LPS: (a) Include in the aims of the Scheme text wording to the effect of or similar to: <i>"To plan for the consolidation of existing settlements and ensure a diverse range of housing options are provided".</i>	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>(b) Ensure that smaller settlements, such as Blowholes and Three Mile Camp (Gnaraloo), are suitably guided by appropriate management arrangements and set out a requirement that all land use and development must be in accordance with an approved management plan (or similar). Management of these settlements should be guided by the Caravan Parks and Camping Ground Act 1995.</p> <p>(c) Ensure the subdivision and development of land for permanent residential occupation is continued to be prohibited within Coral Bay to retain the tourist character and holiday fabric of the settlement as per the <i>Coral Bay Settlement Structure Plan 2015</i>.</p> <p>(d) Seek to generally reflect recommended zones and reserves in the Coral Bay Settlement Structure Plan in the preparation of the new local planning scheme.</p> <p>(e) Where relevant generally reflect the management and land use outcomes of the Carnarvon Airport Structure Plan in the new local planning scheme.</p> <p>(f) Where relevant generally reflect the management and land use outcomes of the Babbage and Whitlock Islands Structure Plan in the new local planning scheme.</p> <p>(g) Seek to generally reflect recommended zones and reserves in the East Carnarvon and Kingsford Structure Plan in the preparation of the new local planning scheme.</p> <p>(h) Seek to generally reflect recommended zones and reserves in the Carnarvon Food Bowl Structure Plan in the preparation of the new local planning scheme.</p>		
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Include the current airport site as a 'Strategic infrastructure reserve' with Structure Plan providing guidance for future detailed planning, subdivision and development. Once development is envisaged, undertake Scheme amendments to provide appropriate zonings/reservations to accommodate the airport and its surroundings.</p> <p>(b) Include the Coral Bay Settlement Structure Plan area as a Special Control Area.</p>		Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>(c) Generally, maintain the existing residential density coding and zoning identified under the Scheme, providing for opportunities for increased density in areas of high accessibility and amenity, such as the Fascine or areas surrounding the town centre. Promotion of commercial and mixed use opportunities, such as cafes along Olivia Terrace and the waterfront area. Ensure that the local heritage of the Shire is preserved and enhanced during this process. Retain existing residential densities and zoning for Brockman, Morgantown &amp; South Carnarvon.</p>		
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>3. Identify appropriately located underutilised Shire and State owned land and facilitate release for residential development or aged care accommodation. The management of State and local government land assets requires careful consideration, ordinarily advanced through an asset management plan or a 5-10 year business plan. Land for aged care accommodation should be sourced from underutilized Shire and State owned land, such as land that is zoned Open Space or vacant school sites.</p>	Medium-term	Shire of Carnarvon; and Department of Lands
<p>4. Prepare a public open space strategy in order to identify areas of land that are potentially under-utilised and that could be established to better meet needs of the community into the future, and further to evaluate Open Spaces within the Shire and presenting recommendations to guide the future development and management of parks, reserves and sporting facilities within the Shire.</p>	Short Term	Shire of Carnarvon
<p>5. Explore opportunities for building partnerships with State government agencies to facilitate the timely and cost effective delivery of infrastructure and facilitate private sector investment (particularly wastewater).</p>	Medium-term	Shire of Carnarvon; and Servicing Authorities
<p>6. Identify the built residential blocks at Mungullah Village and the remainder of the former Special Use - Welfare Housing Zone as a R20 Low Density Residential Zone.</p>	Medium-term	Shire of Carnarvon
<p>7. Low Density Residential Development Investigation Area at Brown Range Investigation Area (special rural/residential development – large lots, lifestyle lots, unserviced or unsewered).</p>	Long-term	Shire of Carnarvon
<p>8. Long Term Investigation Area -at Brockman Park for Parks and Recreation Areas, Surplus Land, and Aged Care facilities analysis.</p>	Long-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
9. Opportunity for workers' accommodation combined with workshop and storage units to cater tradespeople providing services to the settlement in Coral Bay.	Short-term	Shire of Carnarvon
10. There may be a need for a Structure Plan for the Brown Range Investigation Area to be prepared in the future to provide guidance for existing and future land use, inclusive of: <ul style="list-style-type: none"> <li>• Landfill site with an increase in site area to accommodate future expansion of landfill for Carnarvon.</li> <li>• Amending the zoning of the expanded landfill site in the new local planning scheme to an appropriate use' with prescribed buffer as per EPA Guiding Statement No.3.</li> <li>• Alignment and possible future dedication of a heavy haulage bypass road.</li> <li>• Consideration of the existing motor cross track and the existing Horizon Power Station and the buffers that will be needed around these sites.</li> <li>• Recognising existing and proposed land use, land tenure and prescribe separation distances to preserve such uses.</li> </ul>	Short-term	Shire of Carnarvon
11. LPP for the historic Carnarvon Overseas Telecommunications (OTC) precinct in consideration of State Heritage Listing and conservation value, with a focus on existing and future use/development.	Medium-term	Shire of Carnarvon
12. Any streetscape improvements are to be undertaken as part of any town centre Development Plan or Streetscape Revitalisation Strategy (as relevant)	Medium-term	Shire of Carnarvon
13. Designate expansion of the Carnarvon Town Centre eastward along Robinson Street up to and including the Justice Complex and Cultural Centre with recognition of future commercial opportunities.	Medium-term	Shire of Carnarvon
14. Prepare a Local Development Plan or Structure Plan for the area bounded by Olivia Terrace, Robinson Street and Camel Lane that details future mixed use development opportunities.	Medium-term	Shire of Carnarvon
15. Promote preparation of a Local Development Plan or Structure Plan in consideration of existing use/development, and future mixed use/tourist development opportunities for the Carnarvon Yacht Club and commercial boat harbour.	Medium-term	Shire of Carnarvon



#### 4.4 COMMUNITY NEEDS

Direction:



Health care, education and training opportunities meet the needs of the current and future local community.

Objectives:

1. Ensure Carnarvon is a place where community leadership and a spirit of 'working together' addresses and overcomes problems.
2. Community members are proud of their town and welcome opportunities to promote Carnarvon as a special place to live, work and visit.
3. Education and training opportunities are recognised as performing a critical role in community well-being, economic development and ensuring a skilled local and empowered workforce.
4. Community well-being is improved through the provision of services and facilities that are specific to community needs.
5. Provide for safe, secure and vibrant urban areas within the towns and settlements for residents and visitors.

Strategic Policy Position:

1. Align community needs with the Babbage and Whitlock Island Structure Plan, and Coral Bay Settlement Structure Plan, endorsed in 2015.
2. Ongoing diversification into the type of education and vocational programs on offer is important in developing a local community that is skilled in existing and emerging employment sectors.
3. Various action strategies and opportunities are available to the Shire, community, business owners and other Government representatives for lifting community spirit and morale.
4. Long-term Water Corporation planning for the East Carnarvon and Kingsford area indicates that the site will be connected to a sewer reticulation system, which gravity drains to a new pump station and ultimately into the new WWTP.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Matters for consideration in the new Scheme: (a) Include in the aims of the Scheme text to the effect of or similar to:  Promote the health, safety, convenience and the economic and general welfare of the community, by ensuring the reservation, zoning, use and development of land positively contributes to the physical and social environment.	Short-term	Shire of Carnarvon





ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Review the identification of various parcels of land as reserves for Public Purposes as well as land that ought to be reserved for Public Purposes.</p> <p>(b) Ensure that existing school sites, previous school sites and educational facilities (e.g. the Durack Institute) are appropriately zoned and reserved under the new LPS and allow sufficient room for expansion or the co-location of compatible uses into the future. The identification of any additional land required for a public purpose will need to be progressed in conjunction with the relevant agency/provider, with a view to confirm exact requirements, funding and land tenure arrangements.</p> <p>(d) Progress with the rezoning of land identified for residential aged care so that they are 'development ready' for providers.</p>	Short-term	Shire of Carnarvon
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>3. Continue to foster a collaborative approach and stakeholder engagement with respect to the delivery of health care facilities and services in the local area.</p>	Short-term	Shire of Carnarvon; WACHS; and Local health providers
<p>4. Investigate opportunities to provide a greater health care presence within Coral Bay following the finalisation of the Settlement Structure Plan.</p>	Medium-term	Shire of Carnarvon; and WACHS
<p>5. Potential for the expansion of the Carnarvon Multi-Purpose Health Centre.</p>	Medium-term	Shire of Carnarvon; Department of Health
<p>6. Continue to support the development of partnerships with the WACHS services and primary health care providers to ensure an integrated approach to health care into the future.</p>	Short-term	Shire of Carnarvon
<p>7. Establish local events and programs that recognise local achievements on a regular basis, celebrate completion of projects and celebrate local business and local produce (in accordance with Tourism and Economic Development Action Plan, once prepared).</p>	Short-term	Shire of Carnarvon; Local businesses; and Local community
<p>8. Continue to actively pursue State government funding for Stage 2 of the Carnarvon Community College.</p>	Short-term	Shire of Carnarvon; Gascoyne Development Commission; State Government; and



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
		Department of Education
9. Continue to support joint-partnerships with local businesses to improve vocational offer to young people (in accordance with Tourism and Economic Development Action Plan, once prepared).	Medium-term	Shire of Carnarvon; Local businesses; and Education providers
<ul style="list-style-type: none"> <li>Consider how potential education and training precincts can be effectively integrated with surrounding local areas, with respect to both location and design.</li> </ul>	Medium-term	Shire of Carnarvon
10. Both existing and potential new education facilities should be appropriately identified and zoned in the Local Planning Scheme, to provide an effective land use planning framework for the future.	Short-term	Shire of Carnarvon
11. Long-term potential for greater Department of Education presence in Coral Bay to cater to permanent worker population.	Long-term	State Government; and Department of Education
12. Promote and encourage a flexible planning approach to development of aged and dependent persons housing in Carnarvon.	Short-term	Shire of Carnarvon
13. Develop proposed trails network (i.e. Gascoyne River, Babbage and Whitlock Islands, and coastal/Coral Bay).	Medium-term	Shire of Carnarvon Department of Sport and Recreation
14. Attend to proposed co-location of sporting facilities (i.e. golf course/tennis courts) on Babbage Island.	Medium-term	Shire of Carnarvon
15. Investigation of future site for motocross track.	Medium-term	Shire of Carnarvon



## 4.5 RURAL LAND USE AND ACTIVITY

### Direction:



Recognise the economic and social importance of the Shire's pastoral and horticultural industry to ensure it can continue as a major land use in the Shire.

### Objectives:

1. Facilitate continued growth and development of the pastoral and horticultural industry and related opportunities through a flexible planning approach, including a focus on reducing administrative requirements.
2. Achieve a balanced approach to diversifying economic activity and the conservation of pastoral lands.
3. Recognise on-going horticultural activities in the local area, including realising opportunities for growth in production.

### Strategic Policy Position:

1. Broad-acre agriculture and pastoral uses will predominantly be accommodated in a future 'Rural' zone.
2. High quality agricultural land in the Carnarvon Shire is the areas used for intensive horticulture and the horticulture expansion area identified in the Gascoyne Food Bowl project.
3. Support workers/seasonal staff accommodation in Rural and Intensive Horticulture areas, where appropriate.
4. The enhancement and marketing of the Shire as a 'Food Bowl' would not only benefit the horticulture industry, it would also generate benefits across a range of other LPS considerations such as tourism, business etc. Land expansion and the release of land to be informed by close analysis of the intended primary produce market, and guided by the strategic planning undertaken as part of the Gascoyne Food Bowl project.
5. Give consideration to the preparation of a Local Biodiversity Strategy that is both relevant and practical in local context.
6. Public reserves will be managed jointly by Department of Parks and Wildlife and traditional owners under joint management agreements. Pastoralists along the coast will also have an ongoing role in management where appropriate management arrangements have been established.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Recommended text provisions for new Scheme: (a) Include in the aims of the Scheme text to the effect of or similar to: "Protect and enhance the Shire's pastoral and horticultural industries to preserve its on-going contribution to the local economy." (b) Establish a set of zone objectives for the 'Rural' zone to appropriately guide the management of	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>land use and development to protect broad acre and pastoral uses.</p> <p>(c) Establish a set of zone objectives for the Intensive Horticulture zone to appropriately guide the management of land use and development to protect intensive agricultural and horticultural activities (apply the wording for this zone as provided for in SPP 2.5 and the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>).</p> <p>(d) Provide for workers'/workforce accommodation in Rural and Intensive Agriculture or horticultural areas in a new local planning scheme</p> <p>(e) Develop a Local Planning Policy (LPP) for the development of workers'/workforce accommodation in Rural and Intensive Agriculture or horticultural areas.</p> <p>(f) Include definition for 'Workforce accommodation' from Planning and development (Local Planning Scheme) Regulations 2015 in scheme text.</p>		
<p>2. Recommended map designations for new scheme:</p> <p>(a) Designate the existing and future agricultural and horticultural land as being within the Intensive Horticultural zone (apply the wording for this zone as provided for in SPP 2.5 and the Planning and Development (Local Planning Schemes) Regulations 2015).</p> <p>(b) The Gascoyne Food Bowl District Structure Plan has been approved by the WAPC and represents horticultural expansion areas.</p>	Short-term	Shire of Carnarvon
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>3. Where appropriate and supported by stakeholders, enter into joint management arrangements with relevant government agencies for the management of coastal land which has been excised from pastoral leaseholders.</p>	Short-term	Department of Lands; and Shire of Carnarvon
<p>4. Review signage and branding within the Shire that relates to the horticulture industry (in accordance with Tourism and Economic Development Action Plan, once prepared).</p> <p>Establish a Local Biodiversity Strategy for the region, as Carnarvon is one of Australia's 15 National Biodiversity Hotspots. The exact scope of the strategy would be determined in conjunction with relevant agencies, including the Department of Parks and Water and the Department of Planning and would be subject to funding availability. The on-going management of</p>	Medium-term	Shire of Carnarvon; and Main Roads Western Australia



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
land for pastoral purposes is a matter that will need to be considered as part of pastoral lease renewal processes, recognizing the challenges associated with potential land degradation.		
5. Market the Shire as a unique organic food hub that promotes Carnarvon as a destination for tourists on a drive holiday to stock up on fresh fruit and vegetables.	Medium-term	Shire of Carnarvon; Tourism WA; and Gascoyne Development Commission
6. Support workers/seasonal staff accommodation/housing to be provided in Rural and Intensive Horticulture areas. There is a demand for compliant season workers' accommodation to support existing and expanded horticultural activities in Carnarvon and the Wooramel locality there has largely been non-compliance in this regard in the Intensive Horticulture zone. For this reason, land use classification and enforceable standards are to be inserted in new Local Planning Scheme.	Short-term	Shire of Carnarvon



## 4.6 BUSINESS AND EMPLOYMENT

### Direction:



The local community is offered a diverse range of local business and employment opportunities within settlements.

### Objectives:

1. On-going sustainability and growth of local businesses and local brands within the Shire.
2. Encourage and support the development of new businesses and investment opportunities that foster local economic development and create employment opportunities.
3. Ensure that land is appropriately zoned to provide opportunities for business investment over the next 10-15 years.
4. Revitalise the Carnarvon Township as the primary centre with a focus on strong retail, commercial, food and beverage and entertainment uses.

### Strategic Policy Position:

1. It will be important for the Shire to continue with the establishment of an economic development action plan to identify specific actions that will help to realise potential opportunities. Economic sectors that could assist in diversifying the economy in the future include tourism, seasonal workers' accommodation, fishing, yachting, transport, infrastructure, industry, healthcare and the expansion of horticultural activities.
2. Opportunity to encourage the development and location of value adding businesses and support industries to enhance the existing local economy.
3. Future growth in the horticultural industry will require new goods and services as well as adequate commercial and industrial land for agri-business activities.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Matters for consideration in the new Scheme: (a) Include in the aims of the Scheme text to the effect of or similar to: "Encourage employment and economic growth, provide opportunities for new and value-added industries and businesses to support the development of convenient, lively, accessible and attractive local centres". (b) Establish a 'Service Commercial' zone under the new Scheme which allows for showrooms and bulky goods which do not detract from the retail primacy of the town centre. (c) Establish commercial development requirements that are appropriate in the local context and are capable and practical to implement. These	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>requirements should consider aspects such as height, density, car parking and setbacks as well as any other relevant requirements.</p> <p>Create a CBD Development Plan that addresses issues such as the long term revitalisation of the CBD and future parking requirements.</p>		
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Zone existing commercial land outside of the town centre along Robinson Street as 'Service Commercial'.</p> <p>(b) Identify the Space and Technology Centre as a specialised tourism precinct that will attract investment into this area.</p> <p>Create a Special Purpose Reserve for Lots 1198, 1044 and 626 (State owned land) associated with Nor-West Seafoods.</p>	Short-term	Shire of Carnarvon
<p>3. Recommended LPP development and review:</p> <p>(a) Review the Advertising and Signage Policy to ensure the development of signage within the Shire is consistent and aids in the creation of an attractive brand/image for the Shire. The Development Application requirements for the advertising of businesses (including alfresco dining) should be set out in new Scheme, consistent with the model provisions for local planning schemes.</p> <p>(b) Promote the establishment of wayside stalls within the Intensive Horticultural Zone subject to council's discretion. Advertising/signage for the wayside stall will also be subject to council's discretion when adjudicating a development application for a wayside stall. When new signage requirements are established, the Shire will need to ensure that these are appropriately communicated to raise awareness and encourage people to take such action so as to bring signage into conformity.</p> <p>(c) Create a Food &amp; Beverage Policy that captures and promotes the dining experience sought in the Shire, including appropriate locations, forms of development and the pathway to approval.</p> <p>Ensure that the current Alfresco Dining Local Planning Policy provides guidance on how Development Applications for private property should be handled when there is a proposal for dining to extend into the road reserve. The Local Planning Policy should provide clarity to applicants and the Shire about the approval requirements for use of the road reserve, including but not limited to the alfresco dining license</p>	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
requirements, public liability insurance, pedestrian thoroughfares, permanent/temporary structures including awnings and pillars, outdoor furniture, health standards and applicable statutory fees.		
<b>OTHER COMPLIMENTARY ACTIONS</b>		
4. Promote the use of holiday homes in Coral Bay to present an opportunity to capture additional visitors during peak period to increase economic return  5. Relocation of WA Country Health Service Clinic to Government and Cultural precinct will allow for commercial and retail growth into the future.	Short-term	Shire of Carnarvon
6. Work with business owners and the local community to formulate a local 'brand' reflecting the various offerings available in Carnarvon to provide a cohesive and unified statement to attract visitors and showcase Carnarvon (in accordance with Tourism and Economic Development Action Plan, once prepared).	Short-term	Shire of Carnarvon Chamber of Commerce Local Community
7. Identify key industry sectors and develop programs to strengthen their contributions to employment and understand the barriers to growth (in accordance with Tourism and Economic Development Action Plan, once prepared).  7. Opportunity for co-location of various light industrial land uses to the east of the current airport site into the future, with linkages associated with the airport /transport sector - subject to further flood mitigation investigations being completed for this area.	Long-term	Shire of Carnarvon Chamber of Commerce Department of Industry
8. Provide for Workers Accommodation in the different agricultural zones and localities.	Long-term	Shire of Carnarvon





## 4.7 TRANSPORT

Direction:



The Shire has a safe, logical and efficient movement network

Objectives:

1. Ensure effective access to the existing and potential markets through maintenance and enhancement of key freight routes and nodes, to meet the needs of the industry.
2. Ensure the Carnarvon Township is accessible and identifiable to visitors and passers-by from regional transport routes.
3. Provide and maintain high level of transportation infrastructure to support future population growth, tourism activities and the freight industry.
4. Capitalise on the established transport network to improve synergies between key urban, commercial and tourism precincts to increase the Shire's exposure within the regional setting.
5. Ensure key tourism precincts and attractions are accessible and identifiable to visitors.

Strategic Policy Position:

1. The Carnarvon Airport Precinct Structure Plan will guide future land uses and development within the Airport and the immediate surrounds. The Shire has reserved land to the north of Carnarvon for a future airport development. Carnarvon Airport to be included in a new local planning scheme as a 'Strategic infrastructure reserve'.
2. Banksia Drive and Robinson Street to be shown on strategy maps as important components of the movement network for Coral Bay. Continue to promote Robinson Street as the primary access and entry way to the Carnarvon townsite.
3. Consideration to be given to a freight transport laydown area in Carnarvon for trucks going from Broome, Exmouth, Geraldton to Perth. Continued dialogue with both local and regional industry stakeholders and the implementation of an economic development action plan.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Recommended text provisions for new Scheme:  (a) Include in the aims of the Scheme text to the effect of or similar to:  "Plan for and protect important transport routes from inappropriate development, using setbacks, signage and limited access routes, ensuring the local transport network provides a high level of safety, efficiency and legibility for local residents, visitors and businesses".	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>(b) Establish development requirements that are appropriate in the local context and are capable and practical to implement, including the instances where Traffic Impact Assessments or similar are required in support of development proposals.</p> <p>(c) Establish a transport hub opportunity within Carnarvon. Show the hub on the Strategy Map and include it in the economic development action plan. Continue dialogue with industry stakeholders, both local and regional, to understand opportunities and challenges that can be overcome.</p>	Short-term	Shire of Carnarvon
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Ensure all roads are reserved appropriately to reflect the responsibility and purpose according to the local and regional road hierarchy.</p> <p>(b) The Carnarvon Airport is to be classified 'Strategic infrastructure' reserve and development is to align with the Carnarvon Airport Precinct Structure Plan.</p>	Short-term	Shire of Carnarvon
<p>3. Recommended LPP development and review:</p> <p>(a) Review the Advertising and Signage Policy to ensure the development of signage within the Shire is consistent and aids in the creation of an attractive brand/image for the Shire.</p>	Short-term	Shire of Carnarvon
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>4. Identify and prioritise road improvement projects as part of a capital works program.</p>	Short-term	Shire of Carnarvon Main Roads Western Australia
<p>5. Determine the future role and function of HMAS Sydney Memorial Drive and decide whether to make improvements (in accordance with Tourism and Economic Development Action Plan, once prepared).</p>	Medium-term	Shire of Carnarvon Main Roads Western Australia Tourism WA
<p>6. Review sign-posting to the Carnarvon Township and the Shire's various tourist attractions and activities.</p>	Short-term	Shire of Carnarvon Main Roads Western Australia
<p>7. Review the need and potential locations for the new Bejaling Shoals Deep Water Port and the airport site (airport proposed to move to the north of the town), reflected as potential long-term opportunities on the Strategy maps.</p>	Long-term	Shire of Carnarvon Gascoyne Development Commission Department of Transport Department of Planning



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
8. Potential re-location of Coral Bay airstrip east subject to funding and demand.		
9. Establish the necessary frameworks required for a collaborative, inter-agency approach as required (partnerships, memorandums of understanding, steering committees etc.) for improvements to the transport network (in accordance with Tourism and Economic Development Action Plan, once prepared).	Long-term	All
10. Promotes linkage/connectivity between the eastern portion of the airport and existing General Industry area/North West Coastal Highway to facilitate opportunity for Carnarvon as a future transport/freight hub.	Long-term	Shire of Carnarvon



## 4.8 INFRASTRUCTURE

### Direction:



The Shire's future population growth, tourism activities and industries will be supported by necessary infrastructure.

### Objectives:

1. Provide utility infrastructure to support the future development of the Shire.
2. Provide wastewater infrastructure which has the capacity to service growth and development within the Shire and in particular, future growth areas.
3. Provide telecommunication and internet infrastructure, which has the capacity to service future growth and development within the Shire.
4. Plan for the expansion of existing Scheme water infrastructure and the construction of new infrastructure to service the horticultural industry.

### Strategic Policy Position:

1. Development outside of the existing town centre is constrained by the limited access to the local reticulated sewer network, however overall the WWTP is not expected to reach capacity until 2030.
2. Long-term Water Corporation planning for the East Carnarvon and Kingsford area indicates that the site will be connected to a sewer reticulation system, which gravity drains to a new pump station and ultimately into the new WWTP.
3. There is great potential for solar and wind energy activities within the region, and to a lesser extent, tidal power (tidal power is a more challenging venture compared to solar and wind power, but it is worth investigating).
4. Developer contributions shall be in accordance with Part 7 of the *Planning and Development (Local Planning Scheme) Regulations 2015* and State Planning Policy 3.6.
5. Growth potential for infrastructure services has been the subject of recent structure planning. Proper consideration will need to be given to the availability of servicing strategies, for the long term and for potential interim arrangements for investigation areas such as Brown ranges.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Matters for consideration in the new Scheme:  Include in the aims of the Scheme text to the effect of or similar to:  <i>"Promote the health, safety, convenience and the economic and general welfare of the community, by ensuring the reservation, zoning, use and development of land positively contributes to the physical and social environment".</i>	Short-term	Shire of Carnarvon Water Corporation



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>(a) Include in the scheme text:</p> <p>Standard/template 'Development Contribution Plan' provisions set out in the <i>Planning and development (Local Planning Scheme) Regulations 2015</i>.</p>		
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Ensure all utilities infrastructure and future land requirements are appropriately reserved for Public Purposes. As part of the advertising of the Local Planning Strategy and the preparation of the new local planning scheme, further engagement with the relevant servicing agencies is envisaged – including the confirmation of both existing and future land requirements. A range of detailed design considerations will need to be explored to delineate exact land requirements.</p> <p>(b) Represent the proposed Waste Water Treatment Plant that will be positioned to the south east of the airport site, which will replace the existing Waste Water Treatment Plant that is to the north of Brockman. 500 metre buffer to be imposed to new site</p> <p>(c) Existing waste disposal site in Coral Bay has limited capacity long-term. Site currently constrained due to proximity to town. Re-location of waste disposal site to land south of waste water treatment plant and that an exact area be determined.</p> <p>(d) Identified lack of suitable space for household and commercial storage and limited light industrial purposes in Coral Bay. Investigate expansion of storage area site.</p> <p>Relocation of rubbish tip to the Brown Range Structure Plan area.</p>	<p>Short-term</p> <p>Medium-term</p> <p>Medium-term</p> <p>Medium-term</p> <p>Medium-term</p>	<p>Shire of Carnarvon</p> <p>Shire of Carnarvon</p> <p>Shire of Carnarvon</p> <p>Shire of Carnarvon</p> <p>Shire of Carnarvon</p>
<p>3. Recommended map designations for Strategy Map:</p> <p>a) Identify potential growth or investigation areas, such as Brown Range, on the strategy map in this report. Growth potential for infrastructure services has been the subject of recent structure planning. As part of any structure planning ahead of subdivision/development, proper consideration will need to be given to the availability of servicing strategies, for the long term and for potential interim arrangements, where appropriate.</p>	<p>Short-term</p>	<p>Shire of Carnarvon</p>



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>4. Work with the Water Corporation to support the delivery of an infill sewer program to existing urban areas within the Carnarvon townsite.</p>	Medium-term	Shire of Carnarvon Department of Planning
<p>5. Work collaboratively to establish appropriate mechanisms for the relocation of the existing Waste Water Treatment Plant and the protection of this land from future development.</p>	Long-term	Shire of Carnarvon Water Corporation
<p>6. Undertake a detailed review of the technical requirements and costs associated with infrastructure delivery for subdivisions and developments with a view to identifying potential barriers to change/improve the cost effectiveness of service delivery.</p>	Medium-term	Shire of Carnarvon Service Delivery Authorities (WaterCorp, Horizon Power, etc.) Department of Planning
<p>7. Where appropriate establish Developer Contributions in accordance with Part 7 of the Planning and Development (Local Planning Scheme) Regulations 2015 and State Planning Policy 3.6 to facilitate the timely and equitable delivery of infrastructure will need to be considered over time, including in the LPS. Consideration will need to be given to the financial risks to stakeholders associated with the establishment and operation of Development Contribution Plans, along with the availability of alternative delivery mechanisms.</p>	Short-term	Shire of Carnarvon



## 4.9 PLANNING FOR COASTAL ENVIRONMENTS

Direction:



Existing and future development in the Shire acknowledged the impacts of climate change and plans for the appropriate response to the issues it raised for the local community.

Objectives:

1. Acknowledge the objectives set out in State Planning Policy 2.6 – Coastal Planning and State Planning Policy 6.3 – Ningaloo Coast, and ensure that these objectives are implemented.
2. Maintain the Ningaloo coast as an all-seasons recreation and nature-based tourism destination and limit growth with managed staged development, to ensure that the community continues to enjoy a remote and natural experience.
3. Preserve and protect the natural environment and enhance, and rehabilitate degraded areas within the environment.
4. Consolidate future residential, commercial, higher-impact tourism and industrial development in the town of Carnarvon, and provide strategic directions for their future growth.
5. Support the resolution of land tenure/management arrangements for coastal areas by the Department of Lands, in conjunction with stakeholders and in an open and transparent manner.
6. Consider the potential effects of land-use planning decisions in or adjacent to the Ningaloo Coast World Heritage Area, that have the potential to adversely affect the values of the Area.

Strategic Policy Position:

1. Align the objectives for coastal planning with SPP 2.6 – Coastal Planning and SPP 6.3 – Ningaloo Coast.
2. The Department of Parks and Wildlife is to manage the land on behalf of the Government. Unallocated Crown land is to be administered under Department of Lands. Coastal camping will continue to be managed by pastoralists until the alternative arrangements are established.
3. Land tenure/management arrangements for coastal areas are matters of critical importance and are currently being considered through the processes associated with pastoral lease renewal.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
SPECIFIC PLANNING ACTIONS		
1. Recommended text provisions for new Scheme:  (a) Include in the aims of the Scheme text to the effect of or similar to:  "Acknowledge and plan for the changing coastal process, and protect and enhance areas within the Shire identified as being of significant environmental value, including the	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>Shark Bay and Ningaloo Coast World Heritage Areas"</p> <p>(b) Establish provisions requiring Visual Impact Assessments, in accordance with the WAPC Manual for Visual Landscape Planning in Western Australia, for development within prominent coastal tourism areas.</p> <p>(c) A Coastal Management Plan should be prepared to inform the detailed consideration of coastal protection and planning as part of a holistic Environmental Management System implemented to international standards.</p> <p>(d) Establish Special Control Area provisions for Coral Bay to ensure coastal development does not compromise the amenity of the natural environment or unduly subject it to adverse impacts from coastal processes. These provisions should ensure development considers:</p> <ul style="list-style-type: none"> <li>i. the likelihood of the proposed development adversely affecting, or being adversely affected by, coastal processes;</li> <li>ii. the likelihood of the proposed development adversely affecting any dune or beach of the shoreline or foreshore;</li> <li>iii. the likelihood of the proposed development adversely affecting the landscape or the scenic or environmental quality of the land in the locality; and</li> <li>iv. whether adequate safeguards and rehabilitation measures have been, or will be, taken to protect the environment.</li> </ul>		
<p>2. Recommended map designations for new Scheme:</p> <p>(a) In accordance with State Planning Policy 2.6 (Coastal Planning) and the associated Coastal hazard risk management and adaptation planning guidelines, a sea level rise of 0.9m by 2110 shall be required to be taken into account. As already discussed, a coastal management strategy will progress a periodical review of foreshore planning in the local area, including but not limited to the recommendations contained within the Fascine Management Plan (2010).</p>	Short-term	Shire of Carnarvon





ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>(b) Generally, include land within a reserve for the purposes of 'Environmental Conservation'. Currently the coastal sections are zoned Rural under the existing scheme, however the Environmental Conservation will provide more appropriate guidance for the future planning of these areas over and above a broad rural zone. There is the ability for formal land tenure arrangements to be advanced in parallel with, and independent of, the new scheme.</p> <p>(c) Conservation areas to protect existing mangroves, wetlands and foreshore.</p>		
OTHER COMPLIMENTARY ACTIONS		
<p>3. The Department of Parks and Wildlife is to manage coastal reserve land on behalf of the Government. Unallocated Crown land is to be administered under Department of Lands. Coastal camping will continue to be managed by pastoralists until the reserve is created.</p>	Short-term	Department of Parks and Wildlife and Department of Lands in consultation with relevant stakeholders
<p>4. Consideration to be given to the advancement of an updated regional coastal strategy in conjunction with relevant stakeholders.</p>	Long term	Shire of Carnarvon State Agencies
<p>5. To partner with other key stakeholders (Government Agencies, Conservation/NRM Groups, Pastoral lease holders) to develop and implement strategies to manage the Shire of Carnarvon coastline.</p>	Long term	Shire of Carnarvon State Agencies
<p>6. Recognise the impacts of climate change and develop a climate change adaptation plan for the Shire of Carnarvon to respond to the issues such as the impact on key economic activities such as horticulture and fishing. Sustainable approaches should become the focus of economic development and diversity within the context of climate change.</p>	Short-term	Shire of Carnarvon
<p>7. Review the findings of the Gascoyne Local Government Coastal Planning Study and Structure Plan and implement the relevant recommendations.</p>	Medium-term	Shire of Carnarvon; Department of Planning



#### 4.10 INTEGRATING WATER AND LAND USE PLANNING – CARNARVON TOWNSITE AND SURROUNDS

Direction:



The Shire is appropriately protected from the effects of severe weather events and makes efficient use of water resources.

Objectives:

1. Ensure that an integrated approach to land use and water management planning is achieved into the future, based on principles of risk management.
2. Ensure that an effective and contemporary planning framework is established and maintained for coastal areas within the Shire of Carnarvon, recognising the importance of these areas and potentially competing demands.
3. Facilitate the efficient use of land and water resources.
4. Encourage the implementation of water related state and regional planning policy as well as strategic development initiatives.

Strategic Policy Position:

1. As per the East Carnarvon Kingsford Structure Plan, the floodway and floodplain have limited development potential other than the growing of crops or agistment of animals, and all development will require assessment by the Department of Water and the Shire.
2. As per the East Carnarvon Kingsford Structure Plan, development (i.e. filling, building, etc.) that is located within the flood fringe is considered acceptable with respect to major river flooding. However, a minimum habitable floor level of 0.50 metres above the adjacent 100-year flood level is recommended to ensure adequate flood protection. New subdivisions and dwellings within the flood fringe are to incorporate minimum habitable floor levels of 0.30m, and 0.60m.
3. It recommended that a post-development Arterial Drainage Strategy, which incorporate the draft Structure Plan areas collectively, be developed to address regional flood management issues to ensure that any interface requirements related to flows and flood levels across the Structure Plan boundaries are understood.
4. It is proposed that detailed Local Water Management Strategy be prepared for the Structure Plan areas. By providing a greater degree of detail, issues related to fragmented ownership should be easier to manage.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Matters for consideration in the new Scheme:  (a) Include in the aims of the Scheme text to the effect of or similar to:  "Protect local public drinking water supply areas from inappropriate development and	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<p>ensure there is a sufficient and sustainable supply of water for the existing and future horticultural and pastoral activities".</p> <p>"Ensure existing and future development within the Shire is appropriately sited and protected from the effects of flooding".</p> <p>(b) Establish Special Control Area provisions to provide additional development controls for all land within the Gascoyne River Floodplain and other Flood Prone Land.</p> <p>(c) Provide for the appropriate control of development within the Gascoyne River Floodplain and any other Flood Prone Land, including requirement for proposals to demonstrate the effect it may have on the efficiency, capacity of the floodplain and other infrastructure to carry and discharge flood waters.</p> <p>(d) Establish appropriate controls for development within land identified as a Public Drinking Water Source Area</p> <p>(e) In flood Prone Areas' add specific design standards/provisions for:</p> <p>Residential housing based on pole/stilt construction with a raised finished floor level (FFL) above the prescribe flood level height as determined by the Dept. of Water.</p> <p>(f) Outbuildings with a maximum prescribed height above the natural ground level (NGL) and openings at either end to accommodate the flow through of water during a flood event.</p>		
<p>2. Recommended map designations for new Scheme:</p> <p>(a) Designate a Special Control Area over all land within a Floodway Area or any other land identified as flood prone based on existing Department of Water mapping and modelling for 1:100 year Average Recurrence Interval (ARI) events for the Carnarvon townsite and surrounds with the understanding that bona fide agricultural infrastructure will be included or listed as exempted development.</p> <p>(b) Designate a Special Control Area over the land identified as a Public Drinking Water Source Area.</p>	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>OTHER COMPLIMENTARY ACTIONS</b>		
<p>3. Give consideration to the preparation of an arterial drainage strategy for the Carnarvon townsite and surrounds to:</p> <ul style="list-style-type: none"> <li>(a) Establish a holistic and refined framework for flood protection; and</li> <li>(b) Minimise the work required to be done through local water management strategies, which will provide cost and timeframe benefits for stakeholders into the future.</li> </ul>	Short-term	Shire of Carnarvon Department of Water Department of Planning Department of Agriculture and Food
<p>4. Pursue a location-responsive approach to the implementation of the WAPC's Better Urban Water Management framework for the Carnarvon townsite and surrounds, as part of any Structure Plan preparation.</p>	Short-term	Shire of Carnarvon Department of Water Department of Planning



## 4.11 CULTURE

### Direction:



The local community celebrates local character, culture and heritage and inspires civic pride and a sense of place.

### Objectives:

1. Ensure that places of heritage are managed to preserve Carnarvon's rich heritage.
2. Identify, establish and conserve places of cultural heritage significance for present and future generations.

### Strategic Policy Position:

1. The celebration of local heritage may provide an opportunity to assemble the local community and develop a sense of place.
2. Future development should respect State and local heritage places.
3. Native Title and land use agreements are a key consideration in planning for tourism and land use activities.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
<b>SPECIFIC PLANNING ACTIONS</b>		
1. Prepare a Heritage Local Planning Policy to guide Council's discretion in determining development applications relating to heritage places and such policy should entail the use of the Aboriginal Heritage Due Diligence Guidelines.	Short-term	Shire of Carnarvon
2. Undertake a comprehensive review of the Shire's current Municipal Inventory of Heritage Places in accordance with the specific requirements of the Heritage of Western Australia Act 1990.	Short-term	Shire of Carnarvon
<b>OTHER COMPLIMENTARY ACTIONS</b>		
3. Sites of heritage significance will need to be given proper consideration as part of assessment processes, in accordance with relevant statutory requirements. Where appropriate, conditions regarding on-going site management may be established as conditions of approval. The Local Planning Strategy provides a framework for land use and decision making for next 10 – 15 years and among other matters seeks to acknowledge and highlight the importance of heritage values in the local area. Under Schedule 2 - Deemed provisions for local planning schemes, Part 3 includes Heritage protection provisions. It will also be important the Shire continues to partner with other community	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
stakeholders in respect of the active management of specific heritage places.		
4. Explore opportunities to work with the Aboriginal community of Carnarvon in programmes available under the Commonwealth Indigenous Advancement Strategy.	Medium-term	Shire of Carnarvon Local Aboriginal community members
5. As part of tourism planning and marketing, promote the importance of Aboriginal history and culture as a significant tourism attraction of the region.	Short-term	Shire of Carnarvon Local Aboriginal community members Tourism WA
6. Ensure that Aboriginal heritage and cultural considerations are considered in planning for the Carnarvon Township, including ongoing engagement (such as through the Aboriginal reference group) as per the Aboriginal Heritage Due Diligence Guidelines.	Medium-term	Shire of Carnarvon
7. Consider the findings of the Cultural Needs Study and integrate those needs into planning decisions and Shire activities.	Medium-term	Shire of Carnarvon
8. Promote the Government and Cultural Precinct as an entrance statement to Coral Bay.	Medium-term	Shire of Carnarvon
9. Opportunity for an Indigenous Interpretive Centre in Coral Bay.	Medium-term	Shire of Carnarvon Tourism WA
10. Opportunity for improved tourism and cultural signage in Coral Bay.	Medium-term	Shire of Carnarvon Tourism WA
11. Establish heritage precinct on Babbage Island, within the vicinity of the One Mile Jetty.	Short-term	Shire of Carnarvon



## 4.12 RESOURCES INDUSTRY

Direction:



To recognise the potential of resource-based industries to deliver local and regional benefits, as part of a broad economic base for the area.

Objectives:

1. To maximise potential social and economic benefits associated with the resources sector, including but not limited to salt mining
2. To minimise the likelihood of land use-conflicts.
3. As far as practicable, ensure that there is clarity regarding different statutory approval requirements.

Strategic Policy Position:

1. To ensure the due consideration is given to land use planning matters in the consideration of resource proposals, in accordance with the provisions set out in the *Mining Act 1978*.
2. To recognise that petroleum and geothermal activities may necessitate multiple statutory approvals (including DA consent under the local planning scheme). As far as practicable, approvals should be progressed in parallel.

ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
SPECIFIC PLANNING ACTIONS		
1. Include 'Mining Operation' as an 'X' Use in the General Industry zone including all other zones and a 'D' use in the 'Rural Zone'.	Short-term	Shire of Carnarvon
2. Include as a footnote to the zoning table in the new Scheme that states that "Mining' covered by the Mining Act 1978 is exempt from the requirement for planning approval and will be determined in accordance with the Mining Act 1978.	Short-term	Shire of Carnarvon
3. Insert the following text into 'Additional requirements that apply to land in Scheme area' as a requirement for the whole scheme area:  "Requirement for consultation to commence mining  In considering proposals to commercially extract minerals, Council may exercise its discretion to inform the Minister for Mines and Petroleum and the Minister for Planning in writing that the granting of a mining lease or general purpose lease in contrary to the provisions of the Scheme and the Local Planning Strategy.	Short-term	Shire of Carnarvon



ACTIONS:	PRIORITY	IMPLEMENTATION/ RESPONSIBILITY
OTHER COMPLIMENTARY ACTIONS		
4. To work with relevant government agencies, including the Department of Mines and Petroleum, to ensure that stakeholders have access to information regarding resources in the area.	Short-term	Shire of Carnarvon



# Shire of Carnarvon

LOCAL PLANNING STRATEGY 2017

MARCH 2017

## **PART TWO: BACKGROUND ANALYSIS AND INFORMATION**





# 1 Local Profile and Considerations

## 1.1 LOCATION AND CONTEXT

The Shire of Carnarvon, along with the Shires of Exmouth, Upper Gascoyne and Shark Bay, is one of four Local Government areas which comprise the Gascoyne Region of Western Australia. The Shire is located centrally within the Gascoyne Region, bound by the Shire of Exmouth to the North, The Shire of Ashburton to the North-east, the Shire of Upper Gascoyne to the East, the Shire of Shark Bay to the South and the Indian Ocean to the West. The Carnarvon Local Government area is located approximately 900 kilometres North of Perth and spans an area of 46,663 square kilometres as illustrated in **Figure 7** below.

FIGURE 7 – CONTEXT MAP



Source: Australia's Coral Coast

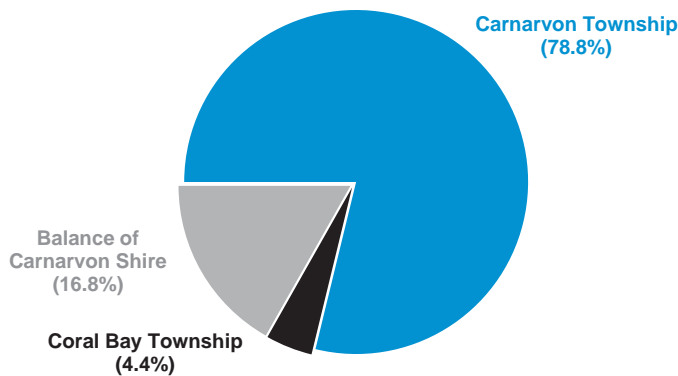


## 1.2 CURRENT DEMOGRAPHIC PROFILE

### 1.2.1 PEOPLE

At the 2011 Census, the Shire of Carnarvon had a population of 5,787 with a slightly higher share of males (51.2%) than females. The majority of the Shire's population is located within the Carnarvon Townsite, with the remaining split of population being located within other townships and on pastoral landholdings lying outside of the urban areas, as indicated in the **Figure 8** below.

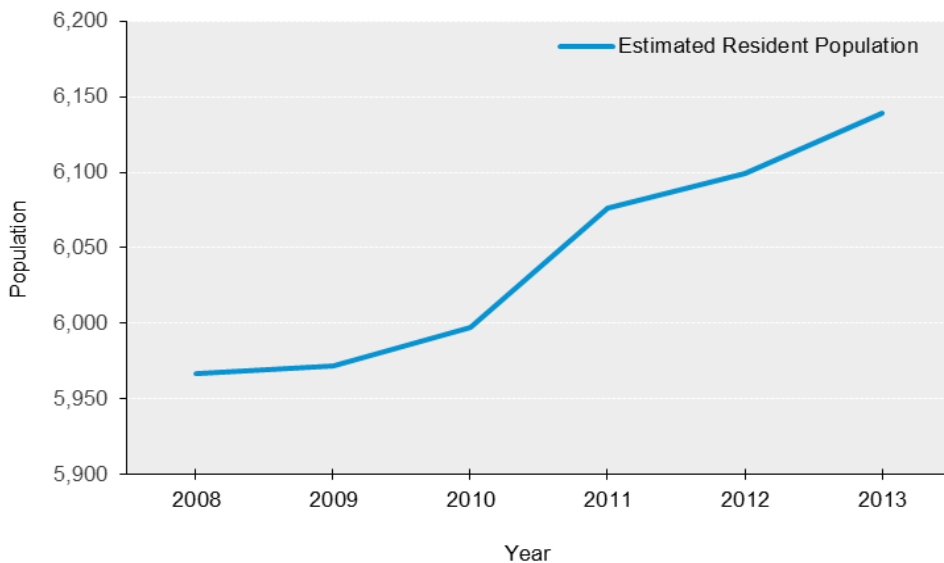
FIGURE 8 – POPULATION (2011)



Source: ABS, Urbis

Notwithstanding the above, the ABS estimated that residential population statistics for the Shire of Carnarvon was slightly higher at 6,076 people in 2011 (including usual residents who were away from home on Census night). Census data projections for 2013 estimated a total of 6,139 people, representing a 1% growth during this period. With the population sitting around 5,967 in 2008, these figures indicate a gradual growth in population over past years, reflecting a potential longer term trend of population increase. This trend is illustrated in **Figure 9** below.

FIGURE 9 – ESTIMATE RESIDENT POPULATION (CARNARVON SHIRE)



Source: ABS, Urbis



It is important to note that population statistics in this strategy are “population by residence”, rather than “population by enumeration” figures. The ABS Census 2011 data identified a discrepancy of 53% between the population by residence (5787 people), and the population by enumeration (8856 people), meaning there is a significant increase in population for 6-8 months of the year during the holiday season, which has not been represented in this report.

## 1.2.2 AGE

The average age of residents in the Shire of Carnarvon increased slightly between the 2006 Census (35.2 years) and that of 2011 (37.0 years). This most recent result is generally in line with the average age of Western Australians (36.9 years). The Shire’s age distribution and characteristics is described as follows:

- The townships of Coral Bay (13%) and Carnarvon (11%) were home to higher proportions of persons aged between 65 and 79 years than the State-wide proportion (9%);
- The township of Carnarvon (16%) was home to a lower proportion of persons aged between 20 and 34 years than the Coral Bay Township (30%) and State-wide (22%) proportions; and
- The township of Coral Bay (11%) was home to a lower proportion of persons aged between zero and 14 years than the Carnarvon Township (24%) and State-wide (20%) proportions.

TABLE 1 – AGED DISTRIBUTION (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Aged 0-14	24%	11%	23%	21%	20%
Aged 15-19	5%	0%	5%	6%	7%
Aged 20-34	16%	30%	17%	19%	22%
Aged 35-49	22%	26%	22%	22%	22%
Aged 50-64	20%	19%	21%	19%	18%
Aged 65-79	11%	13%	10%	9%	9%
Aged 80+	2%	1%	2%	3%	3%
Average Age	36.6	41.1	37.0	36.7	36.9
Dependency Ratio <sup>1</sup>	37%	25%	35%	33%	32%

1. Dependency ratio refers to the proportion of the population aged between 0-14 and over 65 years

Source: ABS, Urbis

(Table 1 above) illustrates that Carnarvon Township’s age proportions roughly correlate with the equivalent figures for the wider State.

Key observations include:

- At 24%, Carnarvon Township was home to a higher proportion of residents aged between zero and 14 years than non-metropolitan Western Australia (21%);
- Coral Bay Township was home to a significantly lower proportion of residents aged up to 19 years (11%) than any of the other geographies. In comparison, the next lowest proportions were recorded in non-metropolitan WA and total WA (27% apiece); and
- A significant 37% of Coral Bay Township residents were aged between 25 and 39 years, compared with 20% of residents across the Shire and 22% of persons residing throughout Western Australia. Considering Census night was in August and Coral Bay’s peak tourism season is May to October, many of those present, aged between 25 and 39 years, are likely to



have been seasonal workers or tourists (looking to relax and/or partake in a variety of water activities).

- 21% of Shire residents were aged between 50 and 64 years, compared with 18% of the population across Western Australia.
- 10% of Shire residents were aged between 65 and 79 years, compared with 9% of the population across Western Australia.

It is also worth noting that the average age of residents in the Shire increased slightly between the 2006 Census (35.2 years) and that of 2011 (37.0 years). The most recent result is generally in line with the average age of Western Australians (36.9 years) and as a state, the consensus is that Western Australia is an aging population.

The Shire is also home to lower proportions of people aged between 15 and 34 years than the results recorded state-wide. This is a negative, as such people are nearing (or in) full-time employment and child-bearing life stages.

### 1.2.3 BIRTHPLACE

The vast majority (81%) of persons present in the Shire of Carnarvon on Census night 2011 were Australian-born. The same proportion (81%) for the same demographic was recorded across Western Australia (minus the Perth metropolitan area). The top five foreign birth countries across the Shire were the United Kingdom (4.1%), Vietnam (2.6%), New Zealand (1.7%), Croatia (0.7%) and South Africa (0.6%).

As previously mentioned, the Census occurred during Coral Bay's peak tourism season (May to October) and it is therefore unsurprising that 24% of the township's population on Census night was born overseas (**Table 2**). The European continent accounted for 19% of people's origins, specifically the United Kingdom, Germany, Greece, Ireland and Italy. This further supports the theory that seasonal workers (on working holidays) and tourists comprised a significant proportion of persons present on Census night.

TABLE 2 – BIRTHPLACE (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Australian Born	84%	76%	81%	81%	67%
Overseas Born	16%	24%	19%	19%	33%
• Asia	3%	0%	5%	2%	7%
• Europe	7%	19%	8%	9%	15%
• Other	6%	5%	7%	8%	11%

Source: ABS, Urbis

### 1.2.4 INDIGENOUS POPULATION

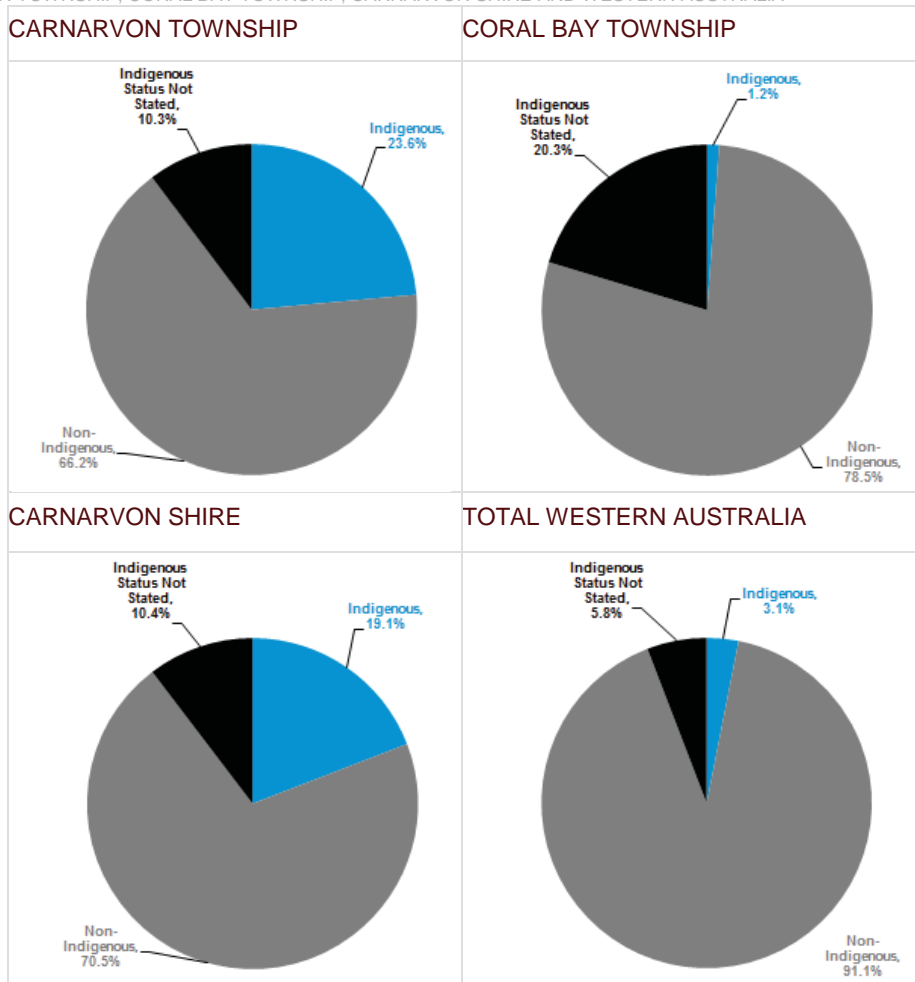
In 2011, Carnarvon Township (23.6%) and Shire (19.1%) were home to larger proportions of Indigenous Australians than the wider State of Western Australia (3.1%) or Coral Bay Township (1.2%), as illustrated in **Figure 10**. While the predominant demographic in each geography was non-indigenous, the State-wide proportion of non-indigenous (91.1%) is notably much higher.

As a proportion of persons present on Census night (19.1%), the Shire of Carnarvon's indigenous population remained unchanged between the 2006 and 2011 Census years.



FIGURE 10 – INDIGENOUS POPULATIONS (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA



Source: ABS, Urbis

This higher proportion of indigenous people within the Shire is represented by the Yamatji people, whose country stretches across the Gascoyne biographic Region, including Carnarvon. There are a number of diverse groups within the Yamatji country including: Yinggarda, Bayungu, Malgana, Thadgari and Thalanyji. Population Forecast

### 1.2.5 POPULATION GROWTH AND FORECASTS

Some projections for the Shire expect the total population will decline in coming years, assuming ‘a status quo’ scenario with forecasts prepared by the Australian Bureau of Statistics being one such example. According to the ABS, the Shire’s population could decline by 12.2% between 2007 and 2021, while Carnarvon Township’s population may decrease by 16.5% over the same period. These projections are outlined in **Table 3** and **Figure 11**.



TABLE 3 – POPULATION FORECAST (ABS)

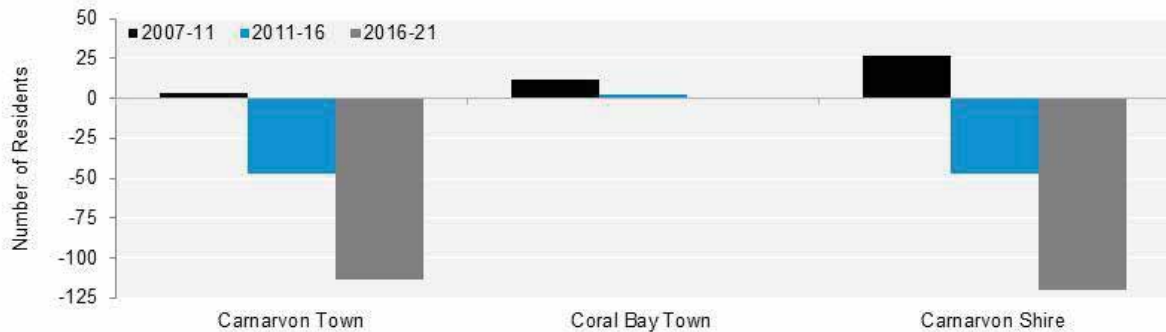
CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP AND CARNARVON SHIRE

	Population				Annual Population Growth (no.)			Annual Population Growth (%)		
	2007	2012	2016	2021	2007-12	2012-16	2016-21	2007-12	2012-16	2016-21
Carnarvon Town	4,786	4,804	4,566	3,997	4	-60	-114	0.1%	-1.3%	-2.6%
Coral Bay Town	216	273	275	275	11	1	0	4.8%	0.2%	0.0%
Carnarvon Shire	5,968	6,096	5,839	5,239	26	-64	-120	0.4%	-1.1%	-2.1%

Source: ABS, Urbis

FIGURE 11 – POPULATION FORECASTS: GROWTH AND DECLINE (ABS)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP AND CARNARVON SHIRE



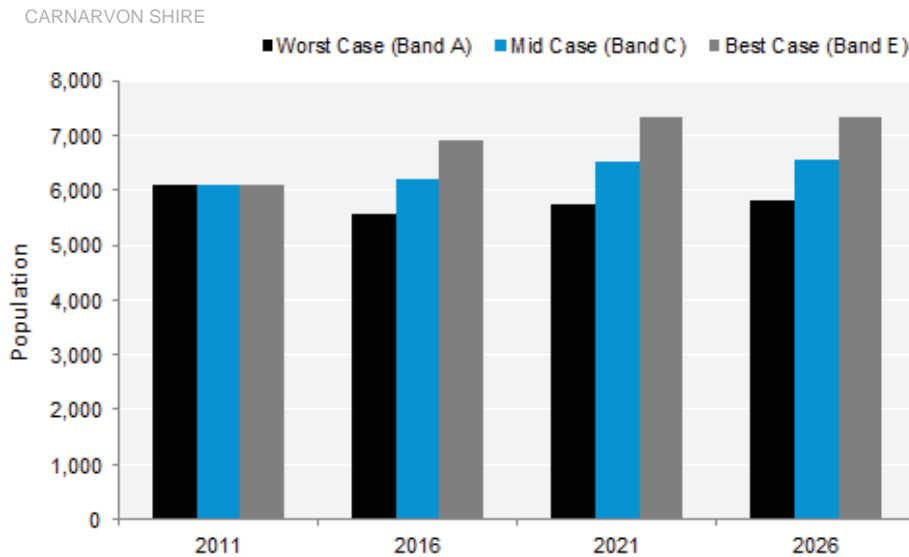
Source: ABS, Urbis

Alternative population forecasts have been prepared by the WAPC, titled *Western Australia Tomorrow Population Report No. 10 (version 1.2)*. The data for each municipal area comprise five forecast scenarios, ranging from worst case (Band A) to best case (Band E) and three possibilities in between (Bands B, C and D). Band C is generally the scenario favoured by property economists.

In the case of the Shire of Carnarvon, all scenarios other than worst case (Band A) predict a growing population. Band E's (best case) forecast figure for 2026 (7,330 persons) is a sizeable 20.6% higher than the starting figure in 2011 (6,080 persons). The difference between the WAPC's worst case scenario in 2026 and the best case equivalent is 1,510 persons. The different scenarios prepared by the WAPC are illustrated in **Figure 12**.



FIGURE 12 – POPULATION FORECAST (DOP)



Source: DoP, Urbis

It is important to note that population projections can be impacted by a number of external factors that do not reflect previous trends. Looking to the future, there is a wide range of potential factors that will have a bearing on population growth. Factors could include mining or industrial growth in the Gascoyne Region, the completion of major infrastructure such as roads, the implementation of State programmes and the success of local initiatives such as the Gascoyne Food Bowl. These factors need to be taken into account when considering the above projections.

Furthermore, the above projections are based on previous trends that have occurred in recent decades with the aim of providing population projections. It is also noted that other projections have been undertaken by the Australian Bureau of Statistics (ABS) on behalf of the Department of Health (DoH) and independent estimates have been prepared for the Shire which project a more neutral to positive growth scenario, as depicted in **Figure 13**.

FIGURE 13 – POPULATION ALTERNATIVE FORECAST (ABS FOR DOH)



Source: Unofficial ABS projections commissioned in 2008 by the Australian DoH, Urbis





In light of the various population projections that have been prepared, it is evident that the future population trend is uncertain and is likely to be determined by external factors that occur over the coming years. It is therefore important that the planning for the Shire establishes a positive outlook and focus on population retention and attraction. This is achievable by setting realistic and modest targets to facilitate sustainable growth.

Further consideration of the Shire’s population trends and targets and their implications on land use planning within the Shire is provided in Section 4.1.

**KEY PLANNING CONSIDERATIONS – DEMOGRAPHIC CHARACTERISTICS**

- The Shire’s population is diverse, presenting a variety of community needs and planning responses. The Shire’s population also consists of a range of different age groups. Therefore, planning considerations for this Shire will include a varied set of issues including both education and aged facilities.
- The Shire’s population fluctuates largely due to seasonal tourism. Sustained and incremental population growth is a key objective established in this document, supported by local economic development.
- Census data and estimates indicate that the Shire has experienced a gradual population growth over the years since 2008. This should be acknowledged, partially as it is contrary to some community perceptions.
- Different scenarios of population, decline/stabilisation/growth need are intrinsically linked with a wide range of other matters, including business investment confidence, access to education, healthcare and housing etc. The population projects prepared by the ABS for the DoH, show continued population growth in the Shire are considered to be achievable, desirable and a suitable basis for moving forward with land use planning.

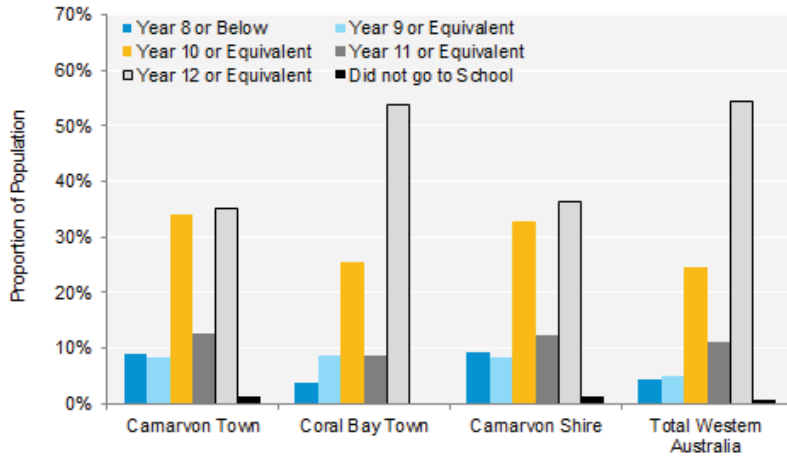
**1.3 EDUCATION**

The 2011 Census figures revealed that a lower proportion of Shire residents (36.2%) completed Year 12 than the proportion recorded across Western Australia (54.3%). Coral Bay Township’s result (53.9%) was roughly on par with the State-wide figure. While every person in Coral Bay Township had some level of schooling to their name, Carnarvon Shire (1.2%) recorded a larger proportion of persons who did not attend any level of school than the State average (0.7%). These statistics are illustrated in **Figure 14**.



FIGURE 14 – PRIMARY AND SECONDARY EDUCATION (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA



Source: ABS, Urbis

The Shire of Carnarvon offers four primary school options to residents: two Government and two independent. The equivalent of one and a half high schools exist, with St Mary Star of the Sea teaching students up to Year ten and Carnarvon Community College teaching students to Year 12. In 2013, three Government schools (Carnarvon Senior High School, East Carnarvon Primary School and Carnarvon Primary School) amalgamated, to form Carnarvon Community College.

**Table 4** below provides an overview of the schools, as at 2014. All are located (or based) in Carnarvon Township and together, are currently teaching around 1,200 students.

TABLE 4 – CARNARVON'S PRIMARY AND SECONDARY SCHOOLS (2014)

CARNARVON SHIRE				
SCHOOL	ADDRESS	OFFER	AFFILIATION	CURRENT NUMBERS
Carnarvon Christian School	Babbage Island Road, Carnarvon	Pre-primary, years one to seven	A Christ-centred, fee-paying school	150
St Mary Star of the Sea	Johnston Street, Carnarvon	Pre-kindergarten to Year ten	A Catholic, fee-paying school	300
Minoos Malgoo Aboriginal Pre-School	Saw Street, Carnarvon	Pre-school	Government, for Aboriginal children	Unconfirmed
Carnarvon School of the Air	Carnarvon Road, Carnarvon	Kindergarten to Year seven	Government	34
Carnarvon Community College (including Clontarf Academy for Boys)	Cleaver and Marmion Streets, Carnarvon	Kindergarten to Year 12	Government	700

Source: Department of Education, Carnarvon School of the Air, St Mary Star of the Sea, Carnarvon Christian School, Urbis



Regarding local tertiary education, the Durack Institute of Technology has a campus in Carnarvon. In addition to local short courses (Worksafe accreditation, recreational skippers' ticket, Auschem accreditation, Responsible Service of Alcohol and barista training), various certificates are offered in:

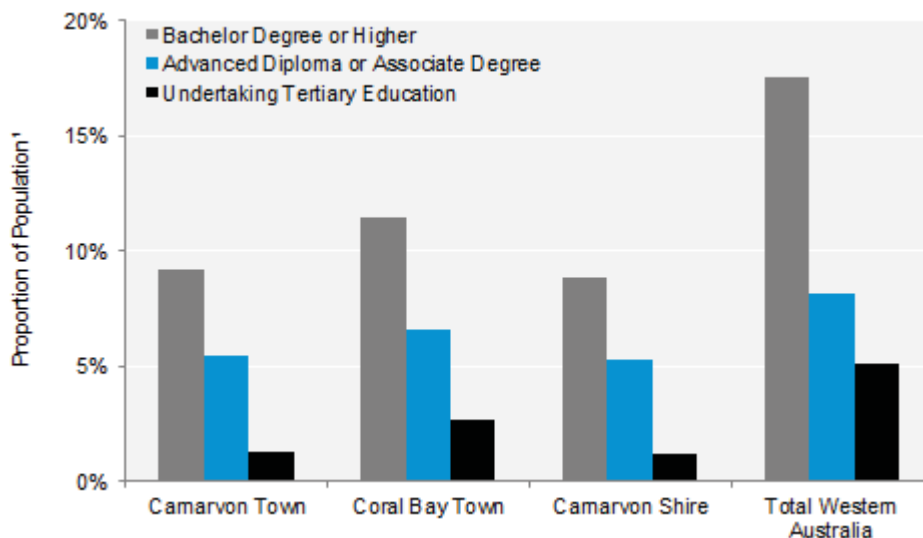
- Community: including services, aged care, education support;
- General education: including spoken and written education, gaining access to training and employment;
- Agriculture: including conservation and land management, rural operations, vertebrate pest management;
- Business: including administration, accounts, information technology, retail services, tourism, hospitality, training and assessment; and
- Other: such as automotive servicing, visual arts, clothing production, engineering, resources and infrastructure work, make-up and skin care.

While there are no university campuses within the Shire of Carnarvon, the University of Western Australia's Rural Clinical School has a physical presence in the township (in addition to 13 other regional centres). The office and student house (with three bedrooms) are both close to Carnarvon Township's centre. Tertiary education is also possible for people based in Carnarvon via Open Universities Australia (OAU). OAU consists of 12 Australian universities offering undergraduate and postgraduate qualifications from a range of faculties, with tuition largely occurring online.

An analysis of Census data from 2011 reveals 15.3% of Shire residents had some form of tertiary education (completed or underway), compared with 30.8% of persons across the State and 20.6% of persons in Coral Bay Township. Within the Shire, 8.9% of people had a bachelor degree or higher and 5.3% of persons had an advanced diploma or associate degree. Furthermore, 1.2% of people were undertaking tertiary education. **Figure 15** illustrates the level of tertiary education within the Shire and State of WA.

FIGURE 15 – TERTIARY EDUCATION (2011)

CARNARVON TOWN, CORAL BAY TOWN, CARNARVON SHIRE AND WESTERN AUSTRALIA



1. As a percentage of the total population aged over 18 years. Not all qualification and education options have been stated, therefore the percentages are of a range much larger than shown and will not add up to 100%.  
Source: ABS, Urbis



## KEY PLANNING CONSIDERATIONS – EDUCATION

- There are limited secondary and tertiary education options to local residents within the Shire of Carnarvon and this is representative within the lower than State average percentage of residents who have some form of tertiary education.
- The amalgamation of the Carnarvon Senior High School, East Carnarvon Primary School and Carnarvon Primary School has formed the Carnarvon Community College.
- The allocation of sufficient funding to advance the education offered in the Shire of Carnarvon has been identified as a concern for local stakeholders. This is reflected in the stakeholder engagement analysis.

## 1.4 ECONOMY AND EMPLOYMENT

The Shire's economic position remains firmly centred around the agricultural industry and in particular, horticulture. The majority of this horticultural activity is carried out along the Gascoyne River, where the fertile soils and sub-tropical climate make the Carnarvon Region suitable for growing a range of fruit and vegetables. In recent years, there has been a trend towards diversifying horticultural enterprises to include a more varied range of produce and to explore areas of ecotourism and wildflower production. It will be important for this industry to continue to diversify into the future to keep up with market trends and to allow for production to become less reliant on seasonal factors.

Beyond horticulture, employment is also concentrated around fishing and seafood processing, contributing significantly to the local and wider economy. Over the years, local producers have capitalised on the Region's proximity to the Asian market with increasingly more produce being exported to discerning customers in Japan, Hong Kong and Singapore.

### 1.4.1 LABOUR FORCE

#### 1.4.1.1 PARTICIPATION AND EMPLOYMENT

According to the 2011 Census, the unemployment rates of Carnarvon Township, Carnarvon Shire and Western Australia were on a par at 5% (**Table 5**). At 42% and 38% respectively, larger proportions of Carnarvon Township and Shire of Carnarvon residents were employed in blue collar roles than the State-wide proportion (34%). However interestingly, Carnarvon Township and Shire's blue collar results were lower than that for non-metropolitan Western Australia (44%).

TABLE 5 – LABOUR FORCE (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Labour Force Participation	66%	76%	68%	69%	69%
% Unemployed	5%	0%	5%	4%	5%
% Managers and Professionals	27%	31%	34%	29%	33%
% Other White Collar	31%	38%	28%	27%	33%
% Blue Collar Occupations	42%	31%	38%	44%	34%

Source: ABS, Urbis

#### 1.4.1.2 OCCUPATION AND INDUSTRY

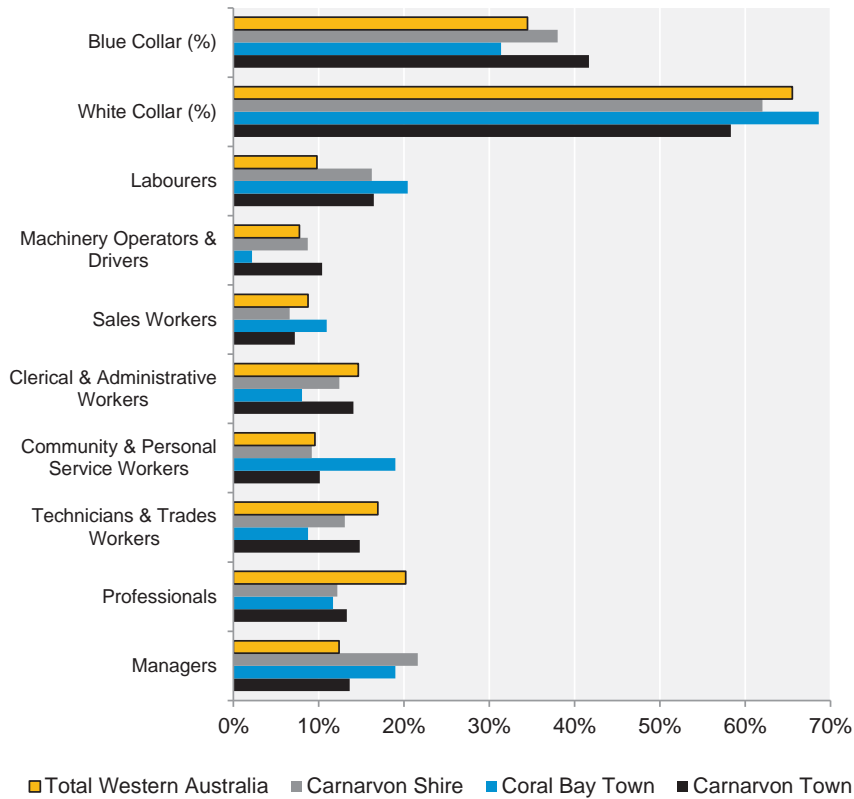
Prominent occupations in the Shire of Carnarvon included Managers (21.6%), Labourers (16.2%) and Technicians and Trades Workers (13.1%) as depicted in **Figure 16**. These compare with the top three



State-wide responses of Professionals (20.2%), Technicians and Trades Workers (16.9%) and Clerical and Administrative Workers (14.6%).

FIGURE 16 – OCCUPATION (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA



Source: ABS, Urbis

Closer analysis of Census 2011 data highlights different predominant employment industries in the townships of Carnarvon and Coral Bay. Around 12.5% of employed Carnarvon Township residents classified their employment industry as Health Care and Social Assistance, while one-third (or 33.3%) of Coral Bay Township’s working population was employed in the Accommodation and Food Services sector. Transport, Postal and Warehousing (20.7%) also rated highly in the settlement at Coral Bay. These figures are highly reflective of the activities associated with the tourism industry in Coral Bay. Meanwhile Retail Trade (10.7%) was the second largest industry of employment in Carnarvon Township, more so reflective of Carnarvon’s regional centre status. The top six industries based on levels of employment are outlined in **Table 6** below.



TABLE 6 – TOP SIX INDUSTRIES OF EMPLOYMENT (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	CARNARVON TOWN		CORAL BAY TOWN		CARNARVON SHIRE		TOTAL AUSTRALIA	WESTERN AUSTRALIA
1	Health Care and Social Assistance	12.5%	Accommodation and Food Services	33.3%	Agriculture, Forestry and Fishing	14.7%	Health Care and Social Assistance	10.6%
2	Retail Trade	10.7%	Transport, Postal and Warehousing	20.7%	Retail Trade	10.2%	Construction	10.4%
3	Construction	9.7%	Retail Trade	15.6%	Health Care and Social Assistance	9.6%	Retail Trade	10.3%
4	Education and Training	9.3%	Administrative Services	10.4%	Construction	8.7%	Manufacturing	8.4%
5	Public Administration and Safety	8.9%	Agriculture, Forestry and Fishing	6.7%	Accommodation and Food Services	8.0%	Education and Training	8.2%
6 (or equal 5)	Mining	7.8%	Manufacturing	6.7%	Education and Training	8.0%	Professional and Scientific	7.4%

Source: ABS, Urbis

Overall, the Agriculture, Forestry and Fishing employment sector within the Shire declined from 17.8% in 2006 to 14.7% in 2011. This is likely a reflection of the reduced catch limits and tighter licensing arrangements within the fishing industry and the expansion of other industries such as the mining of salt and gypsum at Lake McLeod and the construction of housing in new residential areas such as the Carnarvon NorthWater Estate. Notwithstanding the decline, the State Government has identified an untapped potential for the growth of the horticultural industry within the Gascoyne Region.

While the ABS does not classify tourism as an employment sector in its own right, it is likely that this sector is indirectly responsible for the employment of people in hospitality and food and beverage roles, such as managing accommodation, restaurants or pubs, and working in retail/service positions.

#### KEY PLANNING CONSIDERATIONS – ECONOMY AND EMPLOYMENT

- Increasing local employment opportunities will be important to maintain economic stability.
- It is likely that the range and variety of economic sectors will diversify into the future as a result of untapped economic markets, and changes to the pastoral lease arrangements.

#### 1.4.2 COMMERCIAL ACTIVITIES

The Gascoyne Region of Western Australia has a growing role as an economic driver of the State with its expanding agricultural sector, tourism operations and resource and mining industry.

This growth is set to continue with the release of additional irrigated agricultural land and further mining and petroleum projects in the pipeline. Investigations are being undertaken in relation to the Gascoyne Food Bowl Initiative, which has identified a further 400 hectares of land along the Gascoyne River for horticultural purposes. Although it is likely that the agricultural and tourism industry will remain the predominant industries within the Shire over the coming years, there are a number of commercial and retail businesses operating within the Shire that support these industries, provide services and offerings to the local and wider community and provide a range of local employment opportunities.

**Appendix C** includes a list of local businesses in Carnarvon Township. The list includes:

- 75 service and trade providers (including five car/truck rental businesses, two travel agencies, four freight/courier businesses, two real estate agencies, at least four allied health service providers and over ten vehicle-related sales and servicing businesses);



- 50 retail stores (including two of the “big four” banks, an IGA supermarket, Woolworths, three petrol stations, Australia Post and two pharmacies);
- 30 Government and educational service providers (such as five pre-school, primary and/or secondary schools; Durack Institute of Technology; University of Western Australia (UWA) Rural Clinical School; Centrelink and the Gascoyne Development Commission);
- 14 entertainment or hospitality venues (including one video rental store and 11 cafe, restaurant and fast food premises);
- 13 short-stay accommodation options (several caravan parks, backpackers’ accommodation, motels and apartments);
- Ten places of worship (various denominations);
- Seven child, aged care and hospital service providers (such as Silver Chain and Carnarvon Multi-Purpose Health Service); and
- Six recreational venues (including the Carnarvon Bowling Club, Golf Club, Race Club and Speedway).

Key retail precincts in Carnarvon Township include:

- Carnarvon Central: opened in 1985 and owned by Charter Hall, a listed Australian property group, Carnarvon Central is a neighbourhood centre anchored by Woolworths (4,002 m<sup>2</sup>). Other tenancies include eight specialty stores (1,027 m<sup>2</sup>) and four offices. Parking for over 50 vehicles is available on-site;
- Carnarvon Business Centre: comprising seven specialty shops (934 m<sup>2</sup>), tenants are mainly service providers (accountants, lawyers, estate agents and civil servants); and
- Detached tenancies in the vicinity of Robinson Street: including food and beverage offers, petrol stations, grocery and liquor retailers and other general discretionary/specialty retailers. One of the larger examples is the former Target Country tenancy (1,000 m<sup>2</sup>) on Alexandra Street.

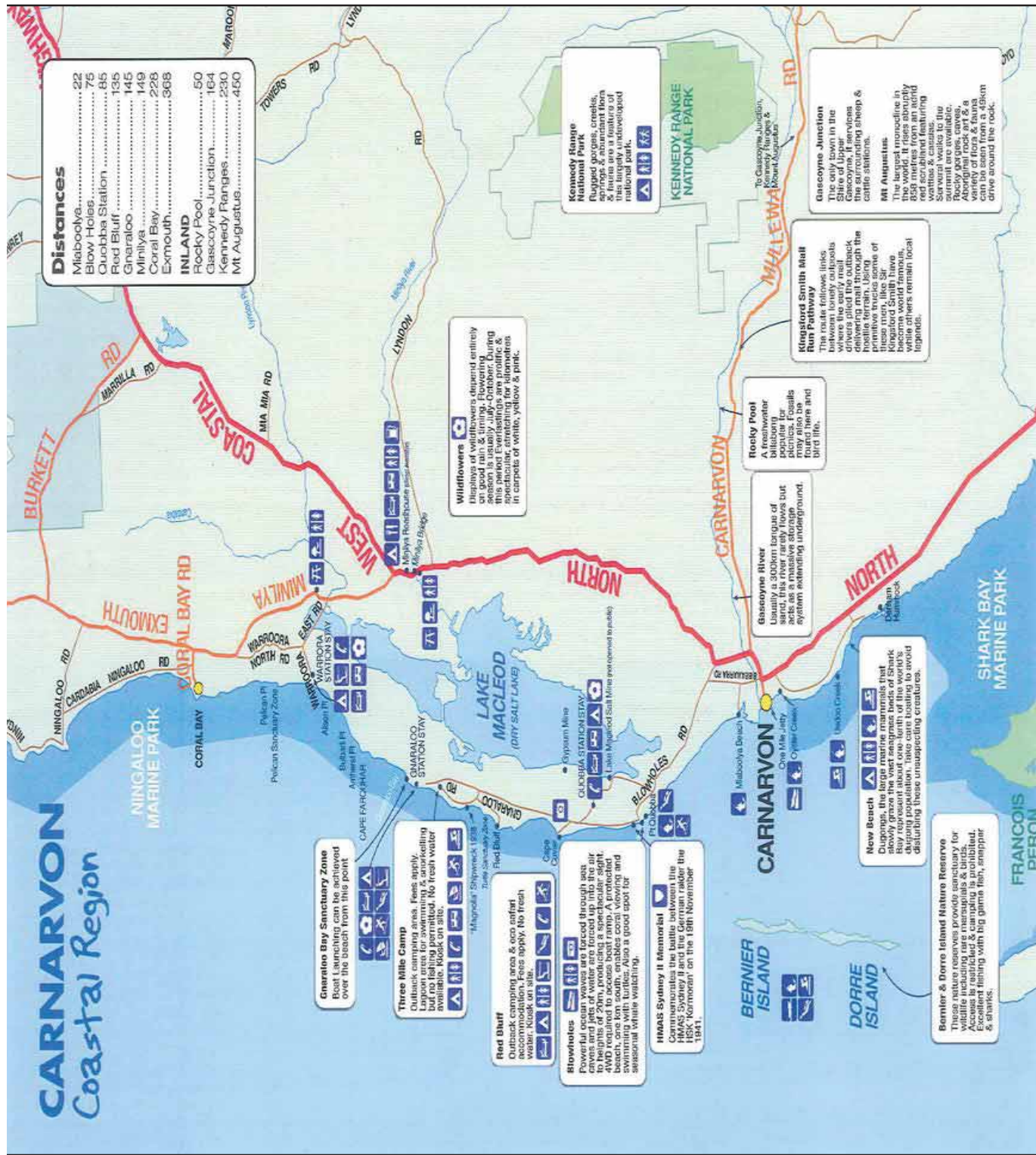
#### KEY PLANNING CONSIDERATIONS –COMMERCIAL ACTIVITIES

- There are a large number of service and trade providers within the Carnarvon Township, including freight/courier businesses, real estate agencies, health service providers and servicing businesses.
- A range of retail offerings are provided within the Carnarvon Township, commensurate with its role as a regional centre.
- At a local level, it will be important that the new Scheme when prepared appropriately zones land to reflect both existing activities and future opportunities.

## 1.5 TOURISM

Tourism Western Australia, the State Government agency responsible for promoting tourism in Western Australia, places the Shire of Carnarvon within the Coral Coast tourism Region. The Coral Coast extends for 1,100 kilometres from Cervantes in the south to Exmouth in the North. Ranking as the State’s third most visited Region outside of Perth, key attractions include the Ningaloo Reef, Shark Bay World Heritage Area, Pinnacles Desert, Kalbarri National Park and Abrolhos Islands. **Figure 17** provides a map of the local tourism attractions.

FIGURE 17 – LOCAL TOURISM ATTRACTIONS







Tourism Western Australia's *Coral Coast Destination Development Strategy (2007-2017)* and the Carnarvon Tourism Alliance *Tourism Development Strategy (2010)* provide the basis for tourism development and planning within the Shire of Carnarvon. As a destination, Carnarvon Township offers a somewhat limited range of heritage, cultural, natural and built attractions, although this strategy seeks to promote these local assets in the future. Geographically however, it is well placed to access a number of significant tourism drawcards including the Ningaloo Coast, Outback Pathways and the Warlu Way. These tourist attractions are varied in their nature and attract a range of tourists and visitors all seeking different experiences. Existing short-stay accommodation in both townships is largely comprised of caravan parks and campsites, with less than 30% of stock classified as hotel, motel or apartment/unit.

Although tourism makes a clear economic contribution to the wider Gascoyne Region, there is potential for the sector to strengthen and expand to become a more sustainable economic driver for the Shire of Carnarvon. The Shire's place on the tourism map can be established by improving access and information for visitors, expanding the accommodation offer and broadening Carnarvon's product offering and experiences to promote Carnarvon as a unique destination of its own standing.

### KEY PLANNING CONSIDERATIONS – TOURISM

- There are a number of local tourist attractions, particularly focussed around the natural landscape which surrounds the Carnarvon Township.
- There is the potential to strengthen and expand the tourism offer through improved and broadened accommodation and exploration of unique tourism experiences that put Carnarvon 'on the map'.

PICTURE 1 – CARNARVON HERITAGE AND COASTAL LANDSCAPE



## 1.6 HOUSING DEMAND AND SUPPLY

There were 1,949 occupied dwellings in the Shire of Carnarvon on Census night 2011. Of these, 76.0% were separate or detached houses (as opposed to semi-detached, unit or apartment dwellings). Around 13.1% of occupied housing stock was classified as "other" dwelling, largely comprised of tourism-style accommodation (caravan, camper and cabin). In addition to occupied dwelling stock, there were a further 294 unoccupied dwellings. These vacant homes accounted for 13.1% of total residential stock.



PICTURE 2 – EXAMPLES OF HOUSING STOCK IN CARNARVON



Source: REA Group

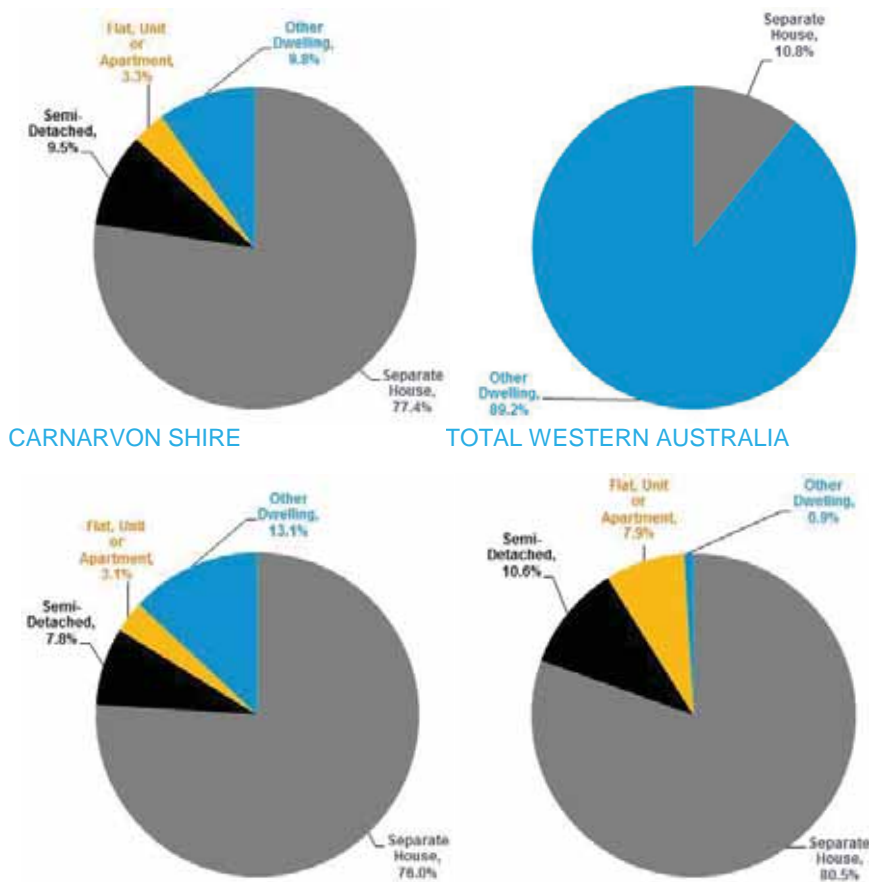
The residential compositions of Carnarvon Township and the Shire of Carnarvon are fairly similar. However Coral Bay Township, where 89.2% of stock was classified as “other”, differed significantly as illustrated in **Figure 18**.

FIGURE 18 – COMPOSITION OF HOUSING STOCK (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

CARNARVON TOWNSHIP

CORAL BAY TOWNSHIP



Source: ABS, Urbis



In October 2013, consultancy firm Pracsys undertook a housing needs report for the Gascoyne Development Commission. In relation to Carnarvon Township, its key findings were:

- The largest housing shortage lies within the one and two-bedroom public housing category;
- The largest housing surplus lies within the four or more bedroom category (houses which are also highly priced); and
- A shortage of 70 dwellings is expected over the next five to ten years (assuming low, but positive, population growth and largely unchanged economic conditions). However, if the Gascoyne Food Bowl Initiative is successful, further additional demand for dwellings is anticipated over the next ten years.

It is understood that this report did not take into consideration the provision of surplus land for housing development (i.e. within new structure planning areas) and was purely based on existing housing stock. It is therefore considered that this housing shortage may be catered for within the current structure planning areas such as East Carnarvon.

Regarding Coral Bay Township, the report's key findings were:

- The largest housing shortage lies within the (well-priced) one to three bedroom category;
- The largest housing surplus lies within the four or more bedroom category (houses which are medium to highly priced); and
- "Other" dwellings (caravans and holiday cabins) dominate local housing stock.

**Figure 19** illustrates the bedroom configurations of dwellings in various geographies. Carnarvon Township and the Shire of Carnarvon recorded similar proportional compositions, with three bedrooms dominating in each. In comparison, Coral Bay Township recorded a more even split between all varieties (although three bedrooms was again predominant) and the wider State largely consisted of three (40.0%) and four or more (42.8%) bedroom dwellings.

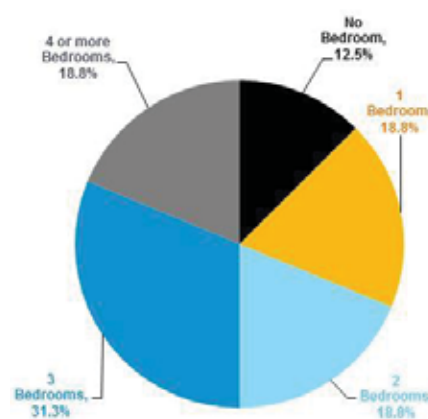
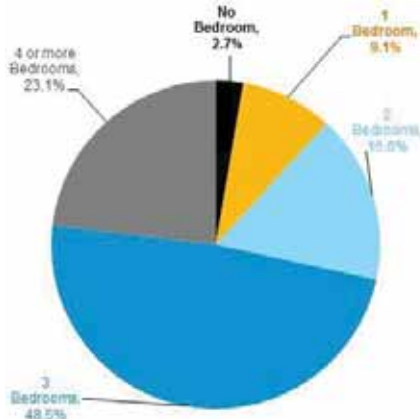


FIGURE 19 – NUMBER OF BEDROOMS (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

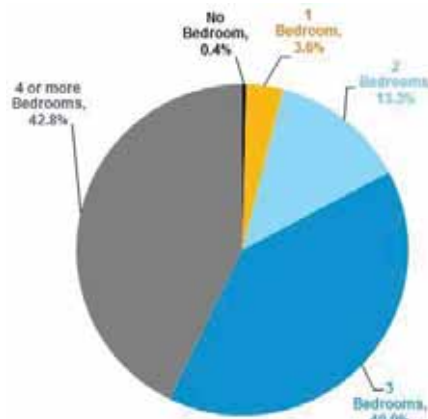
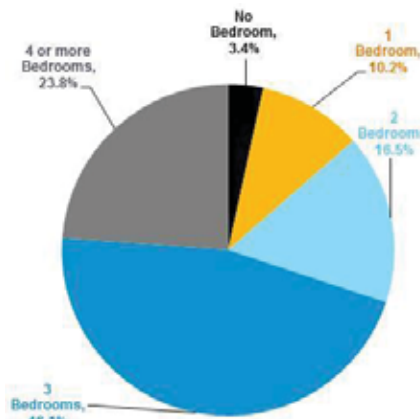
CARNARVON TOWNSHIP

CORAL BAY TOWNSHIP



CARNARVON SHIRE

TOTAL WESTERN AUSTRALIA



Source: ABS, Urbis

### 1.6.1 HOUSING TENURE

In 2011, the proportion of home owners in Carnarvon Shire (31%) was on a par with the non-metro Western Australia equivalent. However, the geographies differed among renters (44% of households in the Shire versus 36% across non-metro WA) and mortgagors (24% across the Shire and 31% across non-metro WA). Continuing the trends noted previously, Coral Bay Township presented unique characteristics: no dwellings were owned subject to mortgage, yet 62% of dwellings were owned outright (**Table 7**).

TABLE 7 – HOUSING TENURE (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	Carnarvon Township	Coral Bay Township	Carnarvon Shire	Non-Metro WA	Total Western Australia
Owner	28%	62%	31%	31%	30%
Purchaser	24%	0%	24%	31%	39%
Renter	47%	38%	44%	36%	30%

1. 'Other' Tenure Types have not been included  
Source: ABS, Urbis



## 1.6.2 COST OF HOUSING

As at the 2011 Census, the Shire of Carnarvon's average weekly rent (\$181) was around 40.5% lower than the State-wide average weekly rent (\$304). Urbis calculates that 2.8% of Carnarvon Shire households were experiencing rental stress in 2011, compared with 5.9% throughout Western Australia.

Similarly, average monthly mortgage repayments in the Shire (\$1,849) were notably lower than those across the State (\$2,116). Urbis calculates that 4% of Carnarvon Shire households were experiencing mortgage stress in 2011, compared with 8% throughout Western Australia (**Table 8**).

TABLE 8 – COST OF HOUSING (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	Carnarvon Township	Coral Bay Township	Carnarvon Shire	Non-Metro WA	Total Western Australia
Loan Mortgage Repayments (monthly \$)	\$1,698	\$0	\$1,849	\$1,836	\$2,116
% Households in Mortgage Stress <sup>1</sup>	1%	0%	1%	2%	2%
Rent Payments (weekly \$)	\$188	\$94	\$181	\$221	\$304
% Households in Rental Stress <sup>1</sup>	4.1%	0.0%	2.8%	4.1%	5.9%
% Households in Housing Stress	5%	0%	4%	6%	8%

1. The Affordable Housing Taskforce (established by the Australian Capital Territory (ACT) Government) has defined people as having difficulty in accessing affordable housing if they are in the lowest two quintiles (lowest 40%) of income distribution and pay 30% or more of their gross household income in housing costs. This group is referred to as being in housing stress.

Source: ABS, Urbis

## 1.6.3 HOUSEHOLD COMPOSITION

In 2011, the Shire of Carnarvon was home to a lower proportion (9%) of families with children (aged 15-18 years) compared with the equivalent for Western Australia (14%) (**Table 9**). This dependant age group potentially attends Year 10, 11 or 12 of high school. The comparatively lower proportion could be indicative of a propensity among qualifying families to move to larger centres for wider education opportunities.

It is also interesting to consider lone person households. In 2011 they accounted for 29% of households across the Shire, 30% within Carnarvon Township and 32% within Coral Bay Township. These compared with 24% of households across Western Australia. Considering the significant stock of dwellings with three or more bedrooms throughout the Shire (69.9%, see Section 1.2.1), there is perhaps an argument for the construction of smaller dwelling sizes with 1-2 bedrooms.

TABLE 9 – HOUSEHOLD COMPOSITION (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

	Carnarvon Township	Coral Bay Township	Carnarvon Shire	Non-Metro WA	Total Western Australia
Couples with no children	27%	49%	28%	30%	28%
Family with children <15	30%	10%	30%	31%	29%
Family with children >15	9%	0%	9%	11%	14%
Total Family (with children)	39%	10%	39%	41%	43%
Group Household	3%	8%	3%	3%	4%
Lone Person	30%	32%	29%	24%	24%
Other	1%	0%	1%	1%	1%

Source: ABS, Urbis



## KEY PLANNING CONSIDERATIONS – HOUSING

Increased provision of public housing and varied dwelling sizes will be an important consideration in addressing future local needs, particularly with respect to an ageing population and household composition trends.

## 1.7 NATURAL ENVIRONMENT

The Carnarvon Local Government area comprises a diverse range of landscapes, natural habitats, flora, fauna, and wetlands and not least of all is the gateway to two World Heritage sites, being Shark Bay and the Ningaloo Coast. Combined with the unique local climate, these features form the key natural assets which contribute to the inclusion of the Carnarvon Local Government area within one of Australia's 15 National Biodiversity Hotspots (Department of Environment, 2014).

### 1.7.1 CLIMATE

The Shire of Carnarvon experiences an arid to semi-arid climate characterised by hot dry summer months and cooler winter months, making Carnarvon ideal for the growth of tropic and sub-tropical fruit and vegetables.

The hottest months occur between January and March with average temperatures ranging between 29.3°C (20.6°C) in December and 32.5°C (23.4°C) in February. In 2007, the Bureau of Meteorology recorded Australia's hottest March temperature at Carnarvon Airport with a maximum of 47.8°C. During the winter months the average maximum temperature is a cooler 23°C between June and August with the average minimum temperature ranging between 10.9°C and 12.3°C. The lowest temperature recorded in Carnarvon was 2.4°C during July 1979.

For rainfall, the Shire of Carnarvon receives an average of 226.9mm yearly with the majority occurring during May, June and July. There are occasions where tropical cyclones occurring during the summer months bring heavy rainfall and strong winds. Despite Carnarvon's location within an identified cyclone Region, the last cyclone to make landfall at Carnarvon was Cyclone Frank, a Category 3 cyclone which occurred in 1995.

Climate change has rapidly become an important consideration for Australia and presents a particular challenge in regional areas. The Gascoyne Region, including Carnarvon is expected to be affected by a number climate change factors including:

- Increasing sea levels;
- Changing wind and rainfall patterns;
- Increases in the frequency and severity of tropical cyclone events;
- Increases in average temperature of up to 1°C by 2030;
- Increases in the rate of evaporation of surface water sources; and
- Increase in drought due to the combination of lower rainfall and high evaporation.

The effects of climate change are likely to have a significant impact on the Shire of Carnarvon, which relies on its climate for key economic activities such as horticulture and fishing.



### 1.7.2 FLORA AND FAUNA

The Carnarvon Basin is identified as one of Australia's 15 National Biodiversity Hotspots and provides various habitats for a diverse range of terrestrial and marine life. Most of the Carnarvon Local Government area remains uncleared apart from isolated areas within and surrounding settlements. However, as a result of historical grazing and pastoral activities occurring across much of the Shire, land outside of the Carnarvon town site has become degraded.

The natural vegetation within Carnarvon and the wider Gascoyne Region comprises Spinifex, Wattle and Poverty Bush varieties. Closer to the coastal and wetter areas of the Shire, the vegetation variety diversifies significantly. Along the rivers and adjacent flood plains, several varieties of eucalypt grow, together with Paperbarks. On the alluvial flats, shrubs present are of the Bluebush and Saltbush species, while on wetter sites, the shrub Halosarcia is present. Around coastal areas there is much growth of mangrove.

For fauna, the wide variety of both terrestrial and marine environments provides important habitat for diverse range of species. In particular, there are 38 threatened species that have been identified within the Carnarvon area comprising:

- 16 species of birdlife;
- 11 species of mammals;
- 8 species of reptile; and
- 3 species of sharks.

Further, the various habitats within the Carnarvon area support 60 migratory species as well as 94 listed marine species.

The Shire of Carnarvon area includes a single Threatened Ecological Community as well as four Priority Ecological Communities. Further, there is one species of Declared Rare Flora recorded in the Shire of Carnarvon and 47 listed priority species.

Due to the dominance of pastoral activity across the Shire it has resulted in significant effects on the natural bushland and the condition of vegetation. Further, the introduction of goats and sheep has had significant effects on the native flora and threatened environmentally sensitive sites and fencing is identified as a serious issue with management of livestock.

### 1.7.3 MARINE PARKS AND WATERWAYS

#### Ningaloo Marine Park and World Heritage Area

The Ningaloo Marine Park is an 'A' Class reserve which follows the coastal strip of the Shire of Carnarvon. The Park is vested in the Marine Parks and Reserves Authority and managed by Parks and Wildlife and includes the 40m of land above high water mark (adjacent to pastoral leases North of Amherst Point). The 'C' Class terrestrial reserve adjacent to the Coral Bay settlement is vested in the Conservation Commission of Western Australia and managed by Department of Parks and Wildlife (DPAW) for foreshore management. The conservation significance of Ningaloo Reef and surrounding marine areas has been recognised by State and Commonwealth governments and the marine park is noted for its diversity of ecosystems and habitats.

The Ningaloo Coast World Heritage Area was inscribed on the World Heritage List in June 2011. This creates an obligation on the Commonwealth and State Governments to ensure the world heritage values of the area are conserved. Accordingly, the *Environment Protection and Biodiversity Conservation Act 1999* ('the EPBC Act') regulates actions that will, or are likely to, have a significant impact on the world heritage values of a declared world heritage property. This includes relevant actions that occur outside the boundaries of a world heritage area.



In July 2015 coastal portions of pastoral leases adjacent to the Ningaloo Marine Park are proposed to be excluded from the leases and managed by DPAW for future addition to the conservation reserve system. The coastal portion of the Cardabia lease has already been excluded and is currently vested as unallocated crown land. The LPS should note the proposed additions of these areas to the conservation reserve system. This will ensure consistent protection strategies are applied across the entirety of the coastal environment and for the benefit of the general community.

PICTURE 3 – SHIRE OF CARNARVON NATURAL LANDSCAPE



### Shark Bay Marine Reserves and World Heritage Area

The Shark Bay coastline is a fragile land system of roughly 1,000km encompassed by the Shark Bay Marine Park and the Hamelin Pool Marine Nature Reserve, both 'A' Class reserves. Government, landholders and lessees have mixed responsibilities for managing these shores which have become the focus of intensifying recreational use. It is important that recreation and access to the marine reserves are facilitated on suitable areas of this coast. Shark Bay is an example of a relatively undisturbed ecosystem which displays significant geological and biological processes in its functioning. As well as the conservation values, the Shark Bay area displays several other important qualities including:

- Cultural values (the coastline can contain remnant camp sites associated with early primary industry)
- Recreational values (recreational and commercial fishing, camping, day use); and
- Educational and scientific values (the unusual geomorphology and range of fauna, flora and ecosystems provide extensive opportunities for public education and scientific and technical research).

The Shark Bay World Heritage Area was inscribed on the World Heritage List in 1991. The *EPBC Act* regulates the protection and maintenance of the values of the Shark Bay World Heritage Area. Any proposed action which will, or has the potential to, adversely impact on the world heritage values must be referred to the Shark Bay World Heritage Advisory Committee and the Commonwealth Government.

The Shire of Carnarvon Local Government Area includes several coastal sections of the Shark Bay Marine Park, including:

- The Wooramel Special Purpose Zone (seagrass protection);
- Gladstone Special Purpose Zone (dugong protection);
- Disappointment Reach Sanctuary Zone;





- Around a third of the eastern coastline of the Hamelin Pool Marine Nature Reserve (the only marine nature reserve in the State);
- Reserve 30885 (an 'A' Class Reserve for the Preservation of Sedimentary Deposits); and
- The Bernier and Dorre Islands Nature Reserve.

A 40m wide strip of unallocated crown land exists along much of the shoreline between the marine reserve boundaries and the pastoral lease boundaries. It is necessary for visitors to cross this area to access the marine park and this area is subject to increasing pressure and degradation from recreational use.

The Wooramel seagrass bank covers about 1,030 square kilometres and is the largest structure of its kind in the world. The bank structure is a major part of the Shark Bay ecosystem and is recognised as an essential nursery area for important fish and invertebrates, as well as an important area for dugongs. The bank contains various habitats for seagrass, molluscan fauna and mangrove and microbial mat communities in the inter-tidal and supra-tidal zones of the coast. The seagrass is vital to the nutrient cycles of Shark Bay.

The Gladstone area contains Halodule seagrass which is highly nutritious for dugongs and is likely why high numbers of cow/calf groups congregate in the summer months. The area is used mostly in the winter months by recreational line and net fishers who camp in the Gladstone area. During the summer months visitor use is restricted to local users who fish in the channels.

World heritage listing recognised that natural processes occurring in Hamelin Pool are of major ecological significance. Stromatolites, microbial communities and other marine features around the tidal zone of Hamelin Pool are extremely fragile and sensitive to disturbance. Use of this coastline should be limited and controlled. The Shark Bay World Heritage Area also encompasses the Bernier and Dorre Islands and waters to the east. The shallow waters east of Bernier and Dorre Islands provide rich seagrass and coral habitats for many species including turtles and dugongs and many commercially fished species.

#### Lake MacLeod

The Lake MacLeod catchment covers an area of roughly 52,682 square kilometres. The coastal Lake wetland itself covers an area of 2,072 square kilometres and is separated from the Indian Ocean by coastal dunes and outcrops of limestone rock. At the furthest points, Lake MacLeod is 110km long and 40km wide.

Lake MacLeod is regionally and nationally significant due to its unique saline-freshwater habitat, and is listed in the Directory of Important Wetlands in Australia (DIWA). In 2006 the Northern Ponds were submitted for a Ramsar Convention listing, meeting five of the eight criteria required for a permanent listing. While no Ramsar site has been declared so far at Lake MacLeod, consultation is continuing with key stakeholders.

The Lake is a large evaporate pan and recognised wetland in the Carnarvon area and has regionally significant environmental, social and cultural values. The Lake has a Conservation Category status and is considered significant for migratory bird species.

While the Lake is mainly dry, the episodic flooding by the Lyndon, Minilya and immediate tributaries following heavy rains provides great diversity to plant and animal species dependent on the changing habitat. The Region of the Lake holding water all year (irrespective of rainfall) is the Northern Ponds and overflow from the ponds also provides a source of water to the broader Lake bed.

#### Bernier, Dorre & Koks Islands



The vision for Bernier, Dorre & Koks Islands is to protect the unique natural and significant cultural values. Therefore, consistent with the recommendations from the Shark Bay Terrestrial Reserves Management Plan (2000), only low-key recreational day use may be provided and camping will continue to be prohibited, except for research and management projects.

The following vegetation associations have been identified on Bernier and Dorre Islands:

- On Bernier Island, open hummock grassland of spinifex (*Triodia plurinervata*) with mallee (*E. oraria*, *E. obtusiflora* subsp. *dongarraensis*) and *Melaleuca cardiophylla*, *Thryptomene baeckeacea*, *Acanthocarpus preissii* and *Beyeria cinerea* shrubs;
- On both islands thicket shrubland of *Acacia* (*A. ligulata*, *A. sclerosperma*, *A. tetragonophylla*) shrubs over chenopods and shrubs of *Atriplex bunburyana*, *Ptilotus obovatus* and *Scholtzia leptantha*;
- On the west coastline dwarf scrub open heath of *Diplolaena dampieri*, *Scaevola crassifolia* and *Westringia rigida*; and patches of drift sand, rocky outcrops and samphire.

In 1986 Bernier and Dorre Islands were registered as protected areas under the Aboriginal Heritage Act 1972, and listed on the Register of the National Estate by the Australian Heritage Commission in 1985, based on the islands' natural values, and in 1987 the area's cultural heritage significance was added to the listing.

#### Kennedy Range National Park

The Kennedy Ranges National Park is a remarkable landscape feature and comprises an isolated remnant of an older land surface. Apart from the outstanding geology and scenic beauty the park is valued for a variety of natural values. A key priority and project for the Gascoyne Region to 2020 is that the Mt Augustus and Kennedy Range National Parks is to be developed as tourist attractions, offering tourism accommodation and facilities in closed proximity.

The natural values include:

- Representative of a remnant of an older surface, much of which has remained relatively intact due to the geology, relative isolation, difficulty of access and lack of permanent water over much of the area;
- Springs and soaks that provide important habitats for invertebrates that do not occur elsewhere in the region or do so only rarely;
- Mooka Spring and its associated creek represent a regionally significant aquatic system and an unusual ecological community;
- A diverse mix of predominantly arid flora of southern affinities and with outliers more common in the south-west;
- Diverse geology that is richly fossiliferous, including rare semiprecious gemstone and fossil occurrences, which helps unravel Australia's recent geological evolution;
- Vegetation of top of the range that has been subjected to minimal livestock grazing; and
- Qualities of remoteness and naturalness not readily available elsewhere in the Carnarvon Bioregion.

Cultural values include:

- 187 Aboriginal sites have been recorded, to date, in and around the planning area;
- An important part in the mythological history of the region; and
- Historic features such as the disused Binthalya Homestead and the relics of the old Merlinleigh Homestead provide evidence of the former rich pastoral history in the planning area.

#### Management Objectives for Nature Reserves and National Parks under CALM Act



In accordance with section 56(1) in preparing a management plan the Conservation Commission shall have the objective of achieving or promoting the purpose for which the land is reserved and the plan will be designed (in the case of national parks and conservation parks) to fulfil the demand for recreation by the members of the public as is consistent with the proper maintenance and restoration of the natural environment, the protection of indigenous flora and fauna and the preservation of any feature of archaeological, historic or scientific interest and (in the case of nature reserves) to maintain and restore the natural environment, and to protect, care for and promote the study of indigenous flora and fauna and to preserve any feature of archaeological, historic or scientific interest. In preparing a proposed management plan for any land, the Conservation Commission shall have the objectives protecting and conserving the value of the land to the culture and heritage of Aboriginal persons (CALM Act section 56 (2)).

The LPS recognises the value of management plans under the CALM Act as valuable sources of info relevant to environmental, cultural, heritage and recreational values.”

### Gascoyne River

The Gascoyne River is the longest river in Western Australia (865km). The river has its source between Meekatharra and Newman in the Robinson Ranges west of the Gibson Desert and flows into the Indian Ocean at Carnarvon. The Gascoyne River catchment covers an area of about 80 400 km<sup>2</sup>.

The Gascoyne River flows for about 120 days of the year and for the rest of the year the river flows underneath the dry river bed. The sandy river bed acts as a huge water storage system and the water table (river's aquifers) lie below the desert sands. The river flows through many permanent pools that are valuable to both stock and native species. The river has enormous economic value to the region as it supports the Carnarvon Horticultural District. Horticulture is an important contributor to Western Australian production of fresh fruit and vegetables for both local and export markets. It is well placed geographically, offering short sea freight delivery times to many Asian and Middle East markets.

The Gascoyne River mouth has particular natural value in that it encompasses bird refuge and watching areas, fish habitat, and filtration for water entering into the World Heritage Areas and seagrass beds at Wooramel. Lorna Glen/Eraheedy and the surrounding area is known for its unique biodiversity values. The native vegetation along the river upstream primarily consists of scattered perennial shrubs of various types amongst a very scattered acacia overstorey, and supports an extensive pastoral industry.

Erosional features are widespread throughout the Gascoyne River catchment however and have increased over time. It is almost certain that these features have developed as a result of loss of groundcover since European settlement. It is known that vegetative groundcover reduces erosion, and it is clear that erosion would be much less if the catchment was in better condition. Improving catchment condition (perennial groundcover) is an important aim that will likely reduce the impact of minor and moderate flood events, in particular soil erosion. This will require long periods with greatly reduced grazing pressure and interventions at critical control points in the landscape. It is likely that future high rainfall events will continue to result in localised flooding, soil loss and damage to infrastructure unless catchment condition is improved.

Culturally, the river has a rich history. The river has cultural significance to Aboriginal people who continue to undertake customary activities such as hunting, teaching and carrying out religious responsibilities. Europeans discovered the river in 1839 by the explorer Lieutenant George Grey, who named it after a friend, Captain John Gascoyne. Captain Gascoyne was a member of the London Association for the Protection of the Interests of the Colony.



#### 1.7.4 WATER

The key water assets located in the Carnarvon consist of seasonally flowing surface water as well as groundwater sources.

The primary surface water source within the Carnarvon area is the Gascoyne River, which is the longest river in Western Australia, stretching out to 865 kilometres. The Gascoyne River is what is known as an upside down river which conveys surface flows for 120 days of the year on average. Throughout the remainder of the year, the water is confined to underground flows.

The Gascoyne River has experienced flooding in past, with the 2010 flood being regarded as the most severe flood to take place along the river in Western Australia on record. As more and more seasonal changes occur, it will become increasingly important to ensure that suitable actions are taken to reduce the impacts of potential flooding. The new Local Planning Scheme should provide a basis for minimising loss of property and life from potential flooding by including 'Special Control Area' provisions or similar. In general terms, the floodplain and floodway boundaries should be defined in accordance with the 1 in 100-year flood levels and associated mapping produced by the Department of Water (DoW).

Based on the significance of past flood events (most recently in 2000 and 2010), and substantial damage to buildings/ property specific design standards are required for flood prone areas, with such standards to be enforceable and negate or reduce the risk of loss to the property owner; increased height of flood water on adjoining property; and liability of injurious affection on land owners and the local government. The Department of Water uses the following guiding principles to assess whether proposed development in flood prone areas is acceptable with regard to major river flooding:

- Proposed development has adequate flood protection from a 1 in 100 AEP flood event.
- Proposed development does not detrimentally impact on the existing 1 in 100 AEP flooding regime of the general area.

For groundwater, the Shire of Carnarvon is wholly located within the Gascoyne Groundwater Area, which is a proclaimed management area under the *Rights in Water and Irrigation Act 1914*. The groundwater assets within the Shire comprise the Carnarvon Artesian Basin, which contains the Birdrong Aquifer. The area Birdrong Aquifer is roughly 50,000 square kilometre's making it Western Australia's most geographically extensive aquifer.

There is a single proclaimed Public Drinking Water Source Protection Area within the Shire of Carnarvon which comprises the Carnarvon Water Reserve. There is also a single un-proclaimed Public Drinking Water Source Protection Area; the Coral Bay Water Reserve. The Carnarvon Water Reserve water source protection plan is under review while the protection plan for the Coral Bay Water Reserve is in preparation.

PICTURE 4 – GASCOYNE RIVER





### 1.7.5 SOILS

The soils in the Gascoyne Region have many features that are common to semi-arid soils elsewhere in Australia. Most obvious is the red colouration of the soil which is due to soil particles covered by oxides of iron.

Towards the coast, sandy calcareous soils are often lighter in colour due to littoral shell fragments and oxide leaching. Further, the browner calcareous earths differ again due to the high concentrations of carbonates and lower concentrations of iron oxides. Organic matter is low and concentrated within the top few millimetres.

The alluvial soils of the Carnarvon plantation area are loamy fine sands or silty loams. They are well drained and alkaline. Fertility is high and only small amounts of nitrogen fertiliser are required for high yields.

#### KEY PLANNING CONSIDERATIONS – NATURAL ENVIRONMENT

- The effects of climate change are likely to have a significant impact on the Shire of Carnarvon, which relies on its climate for key economic activities such as horticulture and fishing. Therefore, it is important that sustainable approaches become the focus of economic development and diversity within the context of climate change.
- There is a need to identify what natural assets are important to the Shire to ensure they are appropriately protected. The consideration of environmental assets as part of planning processes should be guided by EPA Guidance Statement No33, which identifies environmental factors including but not limited to: fauna and flora, marine parks and wetlands, water sources, soils, air quality, heritage sites.
- Give consideration to the preparation of a Local Biodiversity Strategy that is relevant and practical in local context.
- The protection of the coast and conservation reserve systems (through a Coastal Management Strategy or the like) will be an ongoing consideration for the Shire of Carnarvon. Further, the dealing and managing of those areas excised from pastoral leases will need to be addressed by the Shire in conjunction with the Department of Lands (DoL) and other relevant Government agencies.
- Access to and management of valued natural assets is a growing concern in ensuring the protection of these areas.
- Consideration to be given to the availability of water as the horticultural industry grows.



## 1.8 HISTORY AND HERITAGE

### 1.8.1 EUROPEAN HERITAGE

A list of all heritage places within the Carnarvon Local Government area is provided in **Table 10** below.

TABLE 10 – RECOGNISED HERITAGE PLACES

NO.	PLACE NAME	ADDRESS	LOCALITY	MANAGEMENT CATEGORY
1.	Tramway Bridge & Tramway	off Olivia Terrace	Babbage Island	1
2.	One Mile Jetty	off Annear Place	Babbage Island	1
3.	Site of 'Meatworks'	off Silver City Road	Babbage Island	5
4.	Prawning Jetty	off Binning Road	Babbage Island	2
5.	Lighthouse Keepers Cottage	19 Annear Place	Babbage Island	1
6.	'Mungallah' Aboriginal Village	1 Wahlarado Way	East Carnarvon	3
7.	Dwelling - 'The Hermitage'	232 Margaret ROW	East Carnarvon	2
8.	RAOB Hall	36 Cleaver Street	South Carnarvon	2
9.	Carnarvon Pioneer Cemetery	Richardson Street	South Carnarvon	1
10.	Dwelling – 6 Crowther Street	6 Crowther Street	South Carnarvon	3
11.	Dwelling – 'Red House' Homestead	36 Finnerty Street	East Carnarvon	2
12.	Former Masonic Lodge	12 Francis Street	Carnarvon	2
13.	St George's Anglican Church	10 Francis Street	Carnarvon	1
14.	Jubilee Hall	cnr Francis & Rushton Streets	Carnarvon	2
15.	St Mary's Star of the Sea Church	21 Johnston Street	Carnarvon	1
16.	War Memorial	cnr Francis & Stuart Streets	Carnarvon	2
17.	Dwelling – 14 Francis Street	14 Francis Street	Carnarvon	3
18.	Dwelling – 30 Francis Street	30 Francis Street	Carnarvon	2
19.	Dwelling – 17 Hill Street	17 Hill Street	Carnarvon	3
20.	Dwelling – 19 Hill Street	19 Hill Street	Carnarvon	3
21.	Dwelling – 4 James Street	4 James Street	Carnarvon	2
22.	Dwelling – 'Lefroy' Townhouse	9 Johnston Street	Carnarvon	2
23.	Lewer Island Plantation Dwellings	289 Margaret ROW	Kingsford	2



NO.	PLACE NAME	ADDRESS	LOCALITY	MANAGEMENT CATEGORY
24.	Site of the Gascoyne River Bridge	North West Coastal Highway	North Plantations	1
25.	Former NASA Tracking Station	Lot 256 North West Coastal Highway	Brown Range	2
26.	OTC Satellite Earth Station	off Mahony Avenue	Brown Range	1
27.	Carnarvon Cemetery	Lot 292 North West Coastal Highway	Brown Range	4
28.	Afghan Camp Sites	129 William Street	East Carnarvon	5
29.	Carnarvon Cyclone Shelters	12 & 24 Crowther Street	South Carnarvon	3
30.	Gascoyne Hotel	55 – 57 Olivia Terrace	Carnarvon	2
31.	Stroud Building Garage Façade	53 Olivia Terrace	Carnarvon	3
32.	Pioneer Park	1 Baston Street	South Carnarvon	4
33.	Carnarvon Hotel	121/125 Olivia Terrace	South Carnarvon	3
34.	Dwelling – 113 Olivia Terrace	113 Olivia Terrace	Carnarvon	2
35.	Dwelling – 109 Olivia Terrace	109 Olivia Terrace	Carnarvon	2
36.	Dwelling – 107 Olivia Terrace	107 Olivia Terrace	Carnarvon	2
37.	Dwelling – 103 Olivia Terrace	103 Olivia Terrace	Carnarvon	2
38.	Dwelling – 101 Olivia Terrace	101 Olivia Terrace	Carnarvon	2
39.	Dwelling – 97 Olivia Terrace	97 Olivia Terrace	Carnarvon	2
40.	Site of 'Mauds Landing'	Mauds Landing Warroora Road	Coral Bay	5
41.	'HMAS' Sydney Memorial	Gnaraloo Road	Macleod	5
42.	Red Bluff Cave	Red Bluff Beach	Macleod	5
43.	Homeswest Building	30 Robinson Street	Carnarvon	1
44.	ANZ Bank Building	19 Robinson Street	Carnarvon	1
45.	Gascoyne Memorial Centre	12 Robinson Street	Carnarvon	3
46.	Robinson Street Shop Facades	24 – 26 Robinson Street	Carnarvon	2
47.	Carnarvon Water Tanks	44 Stuart Street	Carnarvon	4
48.	Dwelling – 52 Shallcross Street	52 Shallcross Street	East Carnarvon	3



NO.	PLACE NAME	ADDRESS	LOCALITY	MANAGEMENT CATEGORY
49.	Site of Carnarvon Aboriginal Reserve	cnr Lewer Road & William Street	East Carnarvon	5
50.	Gascoyne Research Station	238 South River Road	South Plantations	1
51.	Carnarvon Senior High School	19 Cleaver Street	Carnarvon	3
52.	Sandhurst Hotel	153 William Street	East Carnarvon	3
53.	Mooka & Binthalya Homesteads	Mooka Pastoral Lease	Kennedy Range	3
54.	Former Post & Telegraph Office	8 Robinson Street	Carnarvon	2
55.	Coolkilya Pool	Wandagee Station	Minilya	1
56.	Gladstone Jetty	Wooramel Station	Wooramel	5
57.	Gneudna Paddock	Williambury Station	Minilya	1
58.	Wandagee Hill	Wandagee Station	Minilya	1
59.	Ningaloo Coast	Shire of Carnarvon	Maclead & Lyndon	1
60.	Wooramel Sea Grass Bank	Wooramel Station	Wooramel	1
61.	Lock Hospital Ruins	Bernier & Dorre Islands	Bernier & Dorre Islands	5
62.	OTC Earth Station Staff Quarters	11 Craggs Court	Brown Range	2
63.	Inggarda Aboriginal Mission	281 Bibbawarra Road	North Plantations	3
64.	Dwelling – 31 Cleaver Street	31 Cleaver Street	South Carnarvon	2
65.	Dragon Pearl Chinese Restaurant	18 Francis Street	Carnarvon	3
66.	Brickhouse Station Homestead	415 North West Coastal Highway	Inggarda	2
67.	Babbage Island Lighthouse	Annear Place	Babbage Island	2
68.	Point Quobba Lighthouse	Lot 474 Blowholes Road	Macleod	2
69.	Norwest Seafood Prawning Factory	21 Binning Road	Babbage Island	2
70.	40 Mile Tank Site	North West Coastal Highway	Inggarda	5
71.	Dwelling – 143 Olivia Terrace	143 Olivia Terrace	South Carnarvon	2





NO.	PLACE NAME	ADDRESS	LOCALITY	MANAGEMENT CATEGORY
72.	King Waves Kill Sign	cnr Blowholes & Gnoraloo Roads	Macleod	3
73.	NASA Tracking Station Staff Quarters	6 Richards Street	Brockman	3
74.	Bibbawarra Bore & Trough	Lot 3000 Bibbawarra Road	Inggarda	4
75.	Port Hotel	1 Alexandra Street	Carnarvon	2
76.	The Fascine	Olivia Terrace	Carnarvon	2
77.	French's Shack	6 Robinson Street	Coral Bay	2

## 1.8.2 INDIGENOUS HERITAGE

As at October 2014, there were 216 registered Aboriginal heritage sites within the Shire of Carnarvon that had been assessed by the Department of Aboriginal Affairs (DAA) and were identified on its Aboriginal Heritage Enquiry System. Most of the sites were artefacts / scatter, and the remaining sites included engravings, paintings and skeletal material as well as those of a ceremonial and mythological nature.

## 1.9 NATIVE TITLE

Native title is recognised under Australian law. Indigenous Australians can apply for a native title determination seeking recognition of native title rights and interests under the *Native Title Act 1993*.

There are three native title determination applications and one native title determination within the Shire of Carnarvon. The three applications are:

- Gnulli (WC 1997/028) which covers most of the Shire of Carnarvon, as well as parts of the Shires of Upper Gascoyne, Exmouth and Ashburton
- Malgana Shark Bay People's Application (WC 1998/017) located along the southern boundary of the Shire of Carnarvon as well as the northern part of the Shire of Shark Bay
- Budina People (WC 2004/05) located in the North-east corner of the Shire of Carnarvon boundary, and the south-western boundary of the Shire of Ashburton

The native title determination was made for the Thudgari People (WCD 2009/002). The determination in 2009 recognised non-exclusive native title rights and interests over 10,500 square kilometres of pastoral country in the Upper Gascoyne. The determination covers a North-east portion within the Shire of Carnarvon boundary as well as areas of the Shires of Upper Gascoyne and Ashburton. As part of the determination, 14 indigenous land use agreements (ILUAs) were signed to determine access rights to the various pastoral stations covered by the determination. The representative for all the applications and the determination is the Yamatji Marlpa Aboriginal Corporation.



## 1.10 TRANSPORT

### 1.10.1 ROADS

The existing local and regional road network is anticipated to have sufficient capacity to service additional demand and traffic volumes for the foreseeable future.

The major road servicing the town is North-West Coastal Highway (NWCH). The NWCH links Geraldton to Port Hedland and provides the primary route for interregional freight movements and tourist travel. There are several upgrades planned for the Highway including widening carriageways, providing additional overtaking lanes and improving the standards of road shoulders.

The road network under the control for the Shire can be separated into those roads servicing the town and those servicing the extensive pastoral, coastal and remote areas of the Shire. The key roads that service the Carnarvon town site comprise:

- HMAS Sydney II Memorial Avenue – provides a southern connection from the town to the NWCH. This road provides alternative access to the Carnarvon town centre, however it lacks a defined purpose and does not receive the same level of traffic as Robinson Street.
- Robinson Street - the main distributor road for the town centre from the NWCH. The road falls within the jurisdiction of Main Roads WA (MRWA), although the Shire accepts responsibility for maintaining the road verge. There has previously been interest in extending the dual portion of Robinson Street, however the existing arrangement has sufficient capacity to maintain an acceptable level of service in the medium to long term.
- Babbage Island Road – provides the only vehicle access to the Babbage and Whitlock islands is along Babbage Island Road located at the northern end of the Babbage Island.
- Cornish Street – provides the key link between Carnarvon Road, Robinson Street and the primary industrial area. The increase in industrial activity and in particular freight will compel the widening of this road to allow for heavy vehicles.
- Douglas Street – links Carnarvon Road to Harbour Road and is surrounded chiefly by residential development. Future reconstruction is likely to be required to improve safety for local residents.
- Harbour Road – provides alternative access to Cornish Street from the NWCH. Further, this road is the primary means of access the Road Train Assembly Area located on Hudson Street. As future freight and industrial activity grows Harbour Road will be requiring sealing to Cornish Street to provide improved access to the industrial area for heavy vehicles.

Other key roads that service the wider Shire area include:

- Carnarvon – Mullewa Road – provides the primary link from the NWCH to Gascoyne Junction and the Murchison and Mullewa areas to the south. This road also provides access from the Carnarvon townsite to the Kennedy Range and Mount Augustus. Further, this road also serves as a key interregional and interstate route for the transport of horticultural produce.
- Blowholes Road – key route to the Blowholes settlement and tourist attraction.
- Quobba - Gnaraloo Road – Links the Blowholes with Quobba and Gnaraloo Stations.
- Lyndon Road – provide the primary means of access to pastoral stations in the North-eastern area of the Shire.

Streetscape improvements will be undertaken as part of a Streetscape Revitalisation Strategy.



### 1.10.2 AIRPORTS

Air travel facilities within the Shire of Carnarvon comprise the Carnarvon Airport and the Coral Bay Airstrip. The Carnarvon Airport is owned and operated by the Shire of Carnarvon and serves as a major regional airport providing for daily passenger services throughout the Gascoyne Region and to Perth. The Airport has three sealed runways which provide for different aircraft. The runways are classified in **Table 11** as follows:

TABLE 11 – CARNARVON AIRPORT RUNWAY DETAILS

RUNWAY	CASA CLASSIFICATION	CONSTRUCTION	LENGTH
Primary Runway	Code 3	Bitumen	1,679m
Secondary	Code 2	Bitumen	1,140m
Small Plane	Code 1	Natural Surface (silt/sand)	478m

Currently the Carnarvon Airport is unsuitable for use by commercial jet aircraft and is limited to smaller propeller driven aircraft. Further, the Shire of Carnarvon has determined the existing airport site is suitable for the foreseeable future although various upgrades have been foreshadowed. The Carnarvon Airport Structure Plan has been adopted by the Shire which will guide the future development of the Airport precinct.

The Coral Bay Airstrip comprises a natural surface runway suitable for light aircraft only and is typically utilised for charter flights. The Department of Transport (DoT) manages the airstrip which is located on Cardabia Station and owned by the Baiyungu Aboriginal Corporation. The airstrip currently meets the Civil Aviation Safety Authority and Royal Flying Doctor Service standards for both day and night operations.

#### KEY PLANNING CONSIDERATIONS – TRANSPORT

- The Carnarvon Airport Structure Plan will guide future land uses and development within the Airport and the immediate surrounds. The Shire has reserved land to the north of Carnarvon for a future airport development. The scheduling and operating of flights from a commercial perspective (i.e. linkage to the global distribution system) is beyond the scope of matters that a land use planning strategy can effectively deliver – beyond recognizing the importance of such services and ensuring that land is appropriately zoned and reserved for the new site in the Scheme. Nonetheless, this remains an input consideration for the community.
- Include the Carnarvon Airport Precinct Structure Plan area in a new local planning scheme as a 'Strategic infrastructure' reserve.
- Linkages to key tourist attractions and other settlements will be a key consideration in expanding and developing the tourism industry.
- Banksia Drive and Robinson Street to be shown on strategy maps as important components of the movement network for Coral Bay.
- Establish a freight transport laydown area in Carnarvon for trucks going from Broome, Exmouth, and Geraldton to Perth. Continued dialogue with both local and regional industry stakeholders and the implementation of an Economic Development Action Plan. Acknowledgment of potential challenges associated with long-haul transport movements at present (e.g. multiple drivers negating need for stopovers); with a view that there will be potential opportunities in the future if Carnarvon can position itself as a hub and 'open for business'.



## 1.11 UTILITIES

### 1.11.1 WATER

Birdrong Sandstone is the main aquifer in the Carnarvon Artesian Basin and covers an area of some 25,000 km<sup>2</sup>. Artesian bores are found from south of Shark Bay to Exmouth and up to 70 km inland. The depth to the aquifer ranges from 120 m in the south to over 1500 m in the North. The basin is recharged through areas of outcrop along the eastern extent of the basin. The aquifer is estimated to recharge at a rate of 17,000 ML a year. There is an estimated 30GL a year available for commercial use.

Carnarvon's water is sourced from groundwater bores located along the Lower Gascoyne River. The Water Corporation and Gascoyne Water Cooperatives borefields extend along the Gascoyne River between Brickhouse Station and Rocky Pool and extract water from Subareas B-L. These supply 1.8 GL/year for Town Water Supply and 6-7GL/year for the irrigation industry via a reticulated supply system. Owners of horticultural properties along the North and south banks of the Gascoyne River extract about 5-6 GL of water from Sub-Area A via private bores.

Existing infrastructure for the town's water supply includes a disinfection treatment plant, pump stations, distribution mains and reticulation mains. The major storage tanks are located at Brown Range and both the low level (LL) and high level (HL) tanks have a capacity of 4,500KL. There is a further 1.8GL held in reserve for future town water supply.

### 1.11.2 SEWER

The Draft Country Sewage Policy has been used to guide the requirements for un-sewered subdivisions and land development. The Shire of Carnarvon has the following view on the Draft Country Sewerage Policy: "Where properties cannot be connected to a reticulated sewerage system, wastewater must be treated and disposed on site with a minimum lot size of R10. Due to sewer access constraints, R10 lots will require large areas for wastewater treatment.

Most of the existing Carnarvon townsite area is serviced by reticulated sewer. However, a large part of the South Carnarvon area is not connected to a wastewater system. This is chiefly due to engineering difficulties and high costs associated with high water tables, black swamp (acid sulphate) soils and dewatering problems. Further, the East Carnarvon and Kingsford area currently have no access to sewer. When a property cannot be connected to a reticulated sewerage system, the wastewater should be treated and disposed of. The policy defines a minimum acceptable development lot size of 2000m<sup>2</sup> or R5 for unsewered lots in the 'Residential designated area'. Due to sewer access constraints, R5 lots will require large areas for wastewater treatment. Development and subdivision should take into consideration the future impact of sewer connection and the resulting densification.

Water Corporation planning suggests the Waste Water Treatment Plant (WWTP) will be relocated around 2030, when the existing plant reaches its treatment capacity. The Water Corporation advises that:

- Ground and hydrogeological studies have been carried out on the new WWTP site.
- The new WWTP will be constructed to minimise odours and buffers will be defined by odour modelling.
- The southern WWTP site was selected following consultation with stakeholders and members of the community.

Long-term Water Corporation planning for the East Carnarvon and Kingsford area suggests the area will be connected to a reticulation sewer system in the future. This system will gravity drain to a new pump station and eventually into the new WWTP. It is recommended that the property location be protected by a 500m buffer, both on the strategy map and in the new scheme.



### 1.11.3 POWER

The existing Mungullah power station in Carnarvon has a total capacity of 18MW and has the ability to be expanded to provide for the Region's forecast growth. The power station is connected to the connection to Dampier to Bunbury gas pipeline and consists of five diesel-fuelled generators and five gas-fuelled generators. The power station has also been designed to allow for adding renewable energy expansion in the future to increase generation capacity. The Carnarvon townsite is also supplied with power from a small scale photovoltaic facility. Outside of the townsite electricity is provided through private photovoltaic systems, wind farms and generators. The Dampier to Bunbury Natural Gas Pipeline (DBNGP) traverses the Shire and according to DMP there is reasonable chance that in future there will be new pipelines built connecting to the DBNGP either to supply gas to power generation facilities/developments or receiving natural gas from undeveloped gas fields.

There is no formal plan to replace overhead power lines with an underground reticulated network in the Carnarvon Region but Horizon Power are retrofitting services where it is possible with available funds. According to Horizon policy, all new subdivisions should be underground developments to ensure security and reliability of power supplies.

There are existing renewable energy projects in Carnarvon and there is further potential to expand these opportunities, including solar, wind and tidal energy.

### 1.11.4 TELECOMMUNICATIONS

Telstra's Optic Fibre network runs up the NWCH less than 3km out of Carnarvon. The fibre cable branches off and runs into the town's main exchanges.

Coverage maps for the NBN Co suggest that Carnarvon is to be included in the rollout. Preliminary investigations pointed out that fibre construction will begin in April 2014 and this phase is likely to be completed over 2014 to 2017. The areas of roll out are limited to Brockman, Brown Range, Carnarvon, East Carnarvon, Kingsford, Morgantown and South Carnarvon.

Developers of new residential estates have the option to pay an extra fee to Telstra or an alternative service provider for provision of a high speed broadband network. In either case the developer will be responsible for installing all pit and pipe infrastructure which will be required to accommodate a future high speed broadband network.

Several Internet Service Providers (ISPs) operate in Carnarvon and ADSL is available to many residents. However, there are still major issues with some areas of the community only having access to dial up or satellite broadband. The network continues to be upgraded.

3G coverage is available with Optus and Telstra, with Optus limited to Carnarvon Townsite and Coral Bay only. Telstra towers are intermittent along the NWCH. Optus recently relocated their tower to Robinson Street and indicated a future development of 4G coverage.

Television and radio service needs are well met with the full range of digital channels available to the community.

The Square Kilometre Array (SKA 150km -260km RQZ and SKA 70km-150km RQZ – Outer Zone) is shown on the Shire of Carnarvon – Whole of Shire Strategy Map, and indicates the constraint on the use of radio signals in this area. Refer to Appendix D for details regarding Radio Quiet Productions.

#### KEY PLANNING CONSIDERATIONS –UTILITIES

- Connection to sewer largely dictates ability to release land for development. The Shire may be able to seek State Government support for the funding of infill sewerage programs and similar. As part of



structure planning, arrangements may need to be established that address both interim and ultimate infrastructure delivery – to facilitate subdivision and development in a timely and cost effective manner.

- Potential issues with access to services and infrastructure during natural disasters.
- Planning for water (agriculture, industrial, domestic) is a key consideration and is being considered as part of wider discussions with the Shire and Government agencies.



## 2 State and Regional Planning Context

It is important that the LPS for the Shire of Carnarvon is considered in its State and regional planning context. In this regard, this Section seeks to identify and review each relevant State and regional planning strategy, policy and plan and to analyse the potential relevance of each document to the Shire of Carnarvon.

### 2.2 KEY LEGISLATION RELEVANT TO PLANNING

DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p><b>Planning and Development (Local Planning Schemes) Regulations 2015 (WAPC, 2015)</b></p>	
<p><i>The Planning and Development (Local Planning Schemes) Regulations constitute the manner and form in which Local Planning Schemes and Strategies are to be prepared and amended, including model and deemed provisions for Local Planning Schemes.</i></p>	
<ul style="list-style-type: none"> <li>• Sets out the requirements for local planning schemes and local planning strategies.</li> <li>• Establishes the process for preparing and progressing local planning schemes and local planning strategies.</li> <li>• Sets out the process and requirements for amendment a local planning scheme.</li> <li>• Sets model provisions for local planning schemes which must be adhered to for all new local planning schemes unless otherwise approved by the WAPC.</li> <li>• Establishes a suite of deemed provisions that will automatically apply as part of all existing and future local planning schemes.</li> </ul>	<ul style="list-style-type: none"> <li>• Any new town planning scheme will be required to be in accord with the model provisions for local planning schemes.</li> </ul>
<p><b>Western Australian Mining Act 1978 (WA State Government, as amended 2017)</b></p>	
<p><i>The WA Mining Act 1978 provides the regulatory regime for mining related proposals.</i></p>	
<ul style="list-style-type: none"> <li>• Under section 120 of the Mining Act 1978, the Minister for Mines and Petroleum is required to take into account any planning instrument made under the Planning and Development Act 2005.</li> <li>• Generally, the WA Mining Act 1978 prescribes the conditions for acquiring particular mining interests.</li> </ul>	<ul style="list-style-type: none"> <li>• The role of the Shire of Carnarvon includes the consideration of referrals for mining lease or general purpose lease under s120 of the Mining Act 1978. It also includes the opportunity to comment on the grant of any mining tenement.</li> <li>• The role of the Shire of Carnarvon is limited to consideration of referrals for mineral extraction in accordance with s120 of the <i>WA Mining Act 1978</i>.</li> <li>• In this context, it remains important that consideration be given to the drafting of the new Scheme in terms of the aims, objectives and zones.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
	<ul style="list-style-type: none"> <li>• Mining activities have the potential to be in conflict with existing rural and pastoral land uses.</li> <li>• Mining operations have the potential to significant impact on the local and regional road network.</li> </ul>
<p><b>Petroleum and Geothermal Energy Resources Act 1967 (WA State Government, as amended 2016)</b></p> <p><i>The Petroleum and Geothermal Energy Resources Act 1967 provides the regulatory regime for petroleum and geothermal related activity in WA.</i></p>	
<ul style="list-style-type: none"> <li>• The Act provides a framework for the consideration of petroleum and geothermal related activities, however unlike the Mining Act does not provide specific exemptions from a requirement to obtained development consent under the provisions of a local government planning scheme. In short, some development proposals may require multiple and parallel approvals to be sourced ahead of commencement of works on-site.</li> <li>• Applications for development consent should be accompanied by sufficient information for the assessing authority to understand the scope of parallel approvals being sought. Upon receipt of an application, the Shire would ordinarily refer an application to the relevant state government agency (e.g. Department of Mines and Petroleum) for comment/recommendation ahead of determination</li> <li>• provides a framework for the construction, operation and maintenance of pipelines and supporting structures</li> </ul>	<ul style="list-style-type: none"> <li>• The potential need for multiple approvals within different statutory frameworks, including development consent under the provisions of a local scheme needs to be recognised.</li> <li>• The identified matters to be considered in the determination of applications for development consent should be consistent with those recommended within the new <i>Planning and Development (Local Planning Scheme) Regulations 2015</i>.</li> </ul>

## 2.3 KEY STATE AND REGIONAL STRATEGIES

DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p><b>State Planning Strategy 2050 (WAPC, 2014)</b></p> <p><i>Overall strategic plan for the State – informs future frameworks, plans, strategies and policies.</i></p>	
<ul style="list-style-type: none"> <li>• Raw materials to continue to drive State's economy and renewable energy to be major driver of industry.</li> <li>• WA's population will increase from 2.5 million people to over 4.3 million by 2050. The</li> </ul>	<ul style="list-style-type: none"> <li>• Compared to other areas in Western Australia, there are relatively limited opportunities for the extraction of raw materials. However, there may be opportunities for renewable energy.</li> </ul>





DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p>population is expected to age significantly and Perth will continue to attract 75% of residents.</p> <ul style="list-style-type: none"> <li>• Communities should be diverse, affordable, accessible and safe.</li> <li>• Economic development should be on facilitating trade, investment, employment and community betterment.</li> <li>• Landscapes and the natural environment should be protected.</li> <li>• Regional areas should capitalise on their unique characteristics, assets and resources.</li> <li>• Carnarvon is identified as the Regional Centre for the Gascoyne, with Exmouth recognised as the Sub-Regional Centre.</li> <li>• The Shire of Carnarvon and the entire Mid-West, Gascoyne and Goldfields-Esperance regions are in the 'Central Sector' of the State. Mining will drive growth, along with existing agricultural, fishing and tourism industries.</li> <li>• Future opportunities for expanding the agricultural sector are being pursued including a significant increase to Carnarvon's cultivated district.</li> </ul>	<ul style="list-style-type: none"> <li>• There is a need to meet the needs of an ageing population, with respect to housing and healthcare – at present, some older people are needing to leave the area due to a lack of access.</li> <li>• Housing affordability is a challenge in the local area, due to two key factors being compliance with wind ratings for the construction of new houses and the limited availability of local builders, trades and materials.</li> <li>• It is important that a business environment is fostered that encourages and facilitates investment and local employment opportunities. A diverse/broad economic base should be viewed as a strength, in the context of reducing risk/vulnerability and building resilience.</li> <li>• Impacts on the landscape and natural environment should continue to be important consideration for the assessment of development proposals.</li> <li>• There are a number of unique characteristics that should be protected and built upon, including climate, lifestyle and accessibility (eg to world heritage areas).</li> <li>• The important role Carnarvon performs as a regional centre needs to be recognised in the Strategy and identified actions. In particular, recognition as the primary employment and services hub for the Gascoyne.</li> <li>• Agricultural, fishing and tourism industries should be recognised and supported as part of broader efforts to support economic development. Value adding activities such as 'downstream' processing should be encouraged/supported.</li> <li>• The expansion of the agricultural sector needs to be carefully planned to ensure opportunities for local and State benefit are realised.</li> </ul>
<p><b>Gascoyne Regional Planning and Infrastructure Framework (WAPC, 2015)</b></p> <p><i>Provides regional context for land use planning in Gascoyne, outlines major issues, priority actions and infrastructure projects.</i></p>	
<ul style="list-style-type: none"> <li>• Vision for Region is to evolve into a major living, working and investment destination.</li> <li>• The Shire of Carnarvon comprises 62% of the Region's population. Carnarvon Town site is</li> </ul>	<ul style="list-style-type: none"> <li>• The LPS should establish clear strategies and actions to assist in working towards the vision for the Region.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p>identified as a 'Regional Centre' providing a high level of goods and services for the Region.</p> <ul style="list-style-type: none"> <li>• Nearby Minilya and Wooramel comprise key 'Service Centres' within the Shire, while Coral Bay is identified as one of the regions two 'Tourism Centre's'.</li> <li>• The mining industry within the Shire primarily comprises salt production which accounts for almost half the States total salt production.</li> <li>• Challenges identified for Carnarvon include the lack of services such as reticulated sewerage and protection from severe weather events.</li> <li>• Challenge in planning for a population that may decline due to costal migration or potential growth due to resource projects.</li> <li>• Currently none of the local governments within the Gascoyne Region have a LPS, which presents an opportunity to coordinate strategic planning in the Region.</li> <li>• The delivery of key transport and health projects are considered to be key infrastructure priorities, including but not limited to:           <ul style="list-style-type: none"> <li>- Construction of Banksia Drive at Coral Bay</li> <li>- Carnarvon Regional Multi-Purpose Health Service Upgrade</li> <li>- Carnarvon Airport Relocation Study</li> <li>- Upgrades to Robinson Road intersection with the NWCH</li> <li>- New aged care facility at Carnarvon</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The settlement hierarchy proposed in the LPS should be consistent with the settlement hierarchy proposed in the regional planning and infrastructure framework</li> <li>• The important role Carnarvon performs as a regional centre needs to be recognised in the Strategy and identified actions.</li> <li>• The framework establishes a settlement hierarchy for the Gascoyne region and identified the following for the Shire of Carnarvon:           <ul style="list-style-type: none"> <li>- Regional Centre – Carnarvon</li> <li>- Tourism Centre – Coral Bay</li> <li>- Tourism Node – Quobba, Blowholes, Gnaraloo Station (including Three mile and Gnaraloo homestead)</li> <li>- Minor Tourism Node – Red Bluff, Warroora</li> <li>- Service Centre – Wooramel, Minilya</li> </ul> </li> <li>• The salt mining that takes place in the local area needs to be recognised in the LPS.</li> <li>• The delivery of wastewater infrastructure shall form part of the critical considerations in the planning for individual development/Structure Plan areas.</li> <li>• Different scenarios of population, decline/stabilisation/growth need are intrinsically linked with a wide range of other matters, including business investment confidence, access to education, healthcare and housing etc.</li> <li>• These identified goals should be identified in the LPS and in the future Local Planning Scheme.</li> <li>• A number of key existing transport and health infrastructure projects need to be acknowledged in the LPS.</li> <li>• The focus of the Strategy on diversifying the economic base of the Region should be reflected in the LPS, with clear strategies and actions established for all sectors including:           <ul style="list-style-type: none"> <li>- Horticulture</li> <li>- Tourism</li> <li>- Salt mining</li> <li>- Fishing</li> <li>- Industrial</li> </ul> </li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
	<ul style="list-style-type: none"> <li>The focus on infrastructure improvements should be reflected in the LPS, recognising both the direct and indirect impacts of such investment on economic development and community wellbeing.</li> </ul>
<p><b>Gascoyne Regional Investment Blueprint 2050 (Gascoyne Development Commission, 2015)</b></p> <p><i>An aspirational plan to map the way forward for the region, identifying opportunities, barriers and strategies to guide investment and development in the Gascoyne Region to 2050</i></p>	
<ul style="list-style-type: none"> <li><b>Population Critical Mass</b> Achieving a critical mass of population in the Gascoyne (23,000 residents by 2050) is essential to normalising regional property and labour markets, justifying the supply of quality infrastructure and enhancing the sustainability and resilience of the regional economy.</li> <li><b>Protecting the Environment and Natural Amenity</b> The capacity of the Gascoyne to attract new residents, tourists, skilled workers and investment is contingent on developing employment opportunities while maintaining the natural environment. The region's environmental attributes are fundamental economic assets and economic growth must be managed in a way that sustainably protects these assets.</li> <li><b>Diversifying the Regional Economy</b> Increasing the diversity of employment, industry value adding and economic activity is critical to enhancing the Gascoyne's prosperity within a competitive global environment. Diverse economies are more sustainable and are able to respond rapidly to emerging challenges and opportunities.</li> <li><b>Human Capacity Building</b> People are the primary asset of any economy. Productivity, innovation and entrepreneurship coupled with governance and strong leadership are all essential elements of modern economies and building the capacity of the regional workforce and communities is critical to driving future prosperity.</li> <li><b>Intensifying and Expanding Food Production</b> The comparative advantage of the Gascoyne region in food production needs to be further</li> </ul>	<ul style="list-style-type: none"> <li>Flexible planning framework required to supply a variety of land uses on relatively short demand to meet the needs of the community, especially with regard to ageing in place, tourism and a diversifying horticultural industry.</li> <li>LPS to recognise the need for growth and expansion, especially of economic land uses.</li> <li>LPS to encourage a diversity of tourism product to be available through a flexible and considerate planning framework.</li> <li>Improved access and efficient movement network to be a focus of detailed planning at district and local levels.</li> <li>Continued focus on intensifying and expanding food production a requirement of planning instruments.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p>actioned for the region to achieve its economic potential. This includes continued introduction of partial and complementary cropping onto pastoral land and the attraction of domestic and international investment into horticultural, pastoral and aquaculture production.</p> <ul style="list-style-type: none"> <li>• Growing Incomes           <p>The tourism and agriculture sectors are the largest employers in the region<sup>4</sup>. Value adding to the services and products of these sectors, increasing the skills profile of the labour force and further involvement in the mining and energy resource project supply chains is critical to growing the regions incomes. Value adding to these sectors, increasing the skills profile of the labour force and further involvement in to major mining and energy resource project supply chains is critical to growing incomes and maintaining and enhancing the purchasing power of households.</p> </li> <li>• Addressing Affordability           <p>Attracting new residents and households requires improvements in housing affordability across the region to be achieved and maintained over time, through effective land and housing supply and increases in household purchasing power (i.e. incomes).</p> </li> <li>• Maximising Private Sector Investment           <p>Identifying opportunities for private sector investment to contribute to the achievement of the Vision is critical to the success of the Blueprint. This requires identifying and analysing opportunities and promoting those to national and international markets and investors.</p> </li> <li>• Social Capital           <p>Community infrastructure can act as an ‘attractor’ which encourages people to live in or visit a particular area. Given that a key component of a sustainable community is diversity, providing a range of quality community infrastructure can help to attract and retain a diverse population. Investment in social capital will be an essential component to achieving the Blueprint Vision.</p> </li> </ul>	
<p><b>Gascoyne Coast Regional Strategy (WAPC, 1996)</b></p> <p><i>Strategic land use plan for coast from Shire of Carnarvon to the Shire of Exmouth</i></p>	



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>• Appropriate management for the coastal Region and its natural features in ensuring sustainable development of tourist and recreational facilities. There is a strong need to link the planning of the Region with adequate levels of coastal management to ensure the short and long-term protection of the environment.</li> <li>• Tourism is identified as a significant growth industry, with other economic development opportunities including gypsum production, aquaculture, land-based facilities for offshore petroleum and export industries.</li> <li>• Isolation of areas outside of main centres such as Carnarvon places high demand on infrastructure and servicing authorities.</li> <li>• Demand for nature-based tourism or ecotourism throughout the Region.</li> </ul>	<ul style="list-style-type: none"> <li>• The LPS needs to recognise the sometimes competing demands on coastal environments. Specific actions in respect of advancing management arrangements for the coastline need to be identified. A relevant consideration is the 2015 expiry/renewal of pastoral leases.</li> <li>• The opportunities for increased tourism activities in the area need to be recognised in the LPS.</li> <li>• The demands for infrastructure and associated challenges need to be acknowledged in the LPS.</li> <li>• The demands for nature-based tourism or ecotourism need to be acknowledged in the LPS.</li> </ul>
<p><b>Ningaloo Coast Regional Strategy Carnarvon to Exmouth (NCRS) (WAPC, 2004)</b></p> <p><i>Identifies land uses, the roles of Carnarvon, Exmouth and Coral Bay within the region, the Coastal tourism framework, coastal sectors and the access network for the region.</i></p>	
<ul style="list-style-type: none"> <li>• Identifies the preferred land uses for specific locations within the study area. The Regional land use plan builds on the opportunities, constraints, values and planning issues and aims to guide broad land use over the 30-year life of this strategy.</li> <li>• It is expected that a range of tourism opportunities will be provided at the coastal tourism nodes identified in the framework, ranging from camping through to Eco lodge style accommodation. Both government bodies and private operators will provide these opportunities, which will be developed as part of the implementation of the strategy. This may include staging within identified coastal tourism nodes, and staging of tourism opportunities along the Ningaloo coast. As part of the implementation of the strategy further consideration of the staging of development along the Ningaloo coast is required.</li> <li>• No new tourism development shall be considered outside of Carnarvon, Exmouth and Coral Bay until land vesting and management in relation to the pastoral coastal exclusion process has been agreed.</li> <li>• Planning and development controls will have a strong environmental focus, to ensure that individual developments have as little impact as</li> </ul>	<ul style="list-style-type: none"> <li>• LPS to inform Scheme to restrict provision of residential zoned land to the Carnarvon town site.</li> <li>• LPS to inform Scheme to restrict provision of tourism and tourism related zoned land outside of identified nodes.</li> <li>• The LPS needs to encourage careful coastal development control and provides focus on conservation of wilderness coast.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p>possible, and that development is staged in a manner that is informed by an understanding of cumulative impacts and is consistent with the protecting the environmental values of the area. This will include proactive coordination and facilitation of low-impact, nature-based tourism developments consistent with the plans, policies and guidelines outlined in this strategy. Carnarvon and Exmouth are both well positioned to cater for higher-order and higher-impact development, infrastructure and tourism facilities. These towns provide the bookends for development of the Ningaloo region and should be promoted for their development opportunities.</p> <ul style="list-style-type: none"> <li>• Coral Bay has developed as a tourism settlement in a relatively ad hoc manner, and is under increasing environmental pressure from tourist visitation. Good planning, strong development controls and improved infrastructure is required if Coral Bay is to continue to be an attractive destination for tourists seeking to experience the Ningaloo Reef in a remote holiday atmosphere.</li> <li>• Identifies hierarchy of tourism nodes: <ul style="list-style-type: none"> <li><i>Tourism nodes (up to 500 bed equivalent)</i> <ul style="list-style-type: none"> <li>- Blowholes</li> <li>- Quobba</li> <li>- Gnaraloo</li> </ul> </li> <li><i>Minor tourism nodes (up to 200 bed equivalent)</i> <ul style="list-style-type: none"> <li>- Red Bluff Camp</li> <li>- Three Mile Camp</li> <li>- Brubudjoo</li> <li>- Warroora Minor Tourism Node</li> </ul> </li> <li><i>Eco lodge nodes (up to 100 bed equivalent)</i> <ul style="list-style-type: none"> <li>- Gnaraloo Bay</li> <li>- Elle's Camp</li> <li>- Cape Range National park Eco lodge</li> <li>- Homestead tourism nodes (up to 50 bed equivalent)</li> <li>- Warroora Homestead</li> </ul> </li> <li><i>Coastal camping nodes (site specific based on environmental conditions).</i></li> </ul> </li> </ul>	



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p><b>Roads 2030 Regional Road Development Strategy – Gascoyne (Main Roads WA/WALGA 2013)</b></p> <p><i>First review of the Roads 2025 Regional Development Strategy.</i></p>	
<ul style="list-style-type: none"> <li>• Strong growth in the tourism sector is placing extra demands on the Region’s road network, with most of the activity being located along the coast.</li> <li>• Future growth in the agricultural, petroleum and mining sectors is likely to place an additional strain on the Regions road network.</li> </ul>	<ul style="list-style-type: none"> <li>• The important and diverse functions of the regional road network need to be recognised in the LPS. A collaborative and holistic approach is required to infrastructure planning – including but not limited to matters such as road safety. A movement network plan should be established in the LPS.</li> <li>• It is not anticipated that within the Shire of Carnarvon that there is likely to be any significant additional demands on the regional road network, however the opportunity for further improvements (such as overtaking lanes) need to be acknowledged.</li> </ul>
<p><b>Draft Country Sewer Policy (Department of Health, 2003)</b></p> <p><i>Guides sewerage provision, restrictions on development for non-sewered areas. Understood to already being applied.</i></p>	
<ul style="list-style-type: none"> <li>• Generally requires all residential and non-residential development to be connected to reticulated sewerage systems – particularly if systems are available, and/or where no connection would pose a risk to public health or the environment.</li> <li>• On-site disposal may be permitted, if lot sizes are a minimum of 1,000sq.m (2,000sq.m if clay), if it can demonstrated to the satisfaction of the Shire that the land is capable for on-site disposal.</li> <li>• There is no limit on townsite expansion without sewer, in contrast to previous policy.</li> </ul>	<ul style="list-style-type: none"> <li>• The localities of Morgantown, the town centre, Brockman and parts of South Carnarvon are connected to the town’s wastewater system. A large part of the South Carnarvon area is not connected to wastewater system. East Carnarvon and Kingsford area also currently have no access to sewer.</li> <li>• Whilst the Draft Country Sewerage Policy has been used to guide the requirements for un-sewered subdivisions and land development, to ensure that infill and consolidation can occur in areas where reticulated sewerage is not available, wastewater must be treated and disposed of on site with a minimum lot size of R10. R10 lots will require large areas for wastewater treatment.</li> <li>• The Shire is in support of the R10 unsewered lots in accordance with the Draft Country Sewerage Policy and the East Carnarvon and Kingsford District Plan, 'however, applications will need to be considered on their individual merits. The need for an effective framework that facilitates the timely, cost effective and equitable delivery of reticulated sewer needs to be acknowledged in the LPS.</li> <li>• The preferred approach to planning for sewer infrastructure needs to be explored further in consultation with the Department of Planning and WaterCorp.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p><b>Tourism Development Priorities 2010-2015 Coral Coast (WAPC, 2010)</b></p> <p><i>Tourism WA's 2010 function sets out the strategic tourism priorities for the Coral Coast.</i></p>	
<ul style="list-style-type: none"> <li>• Carnarvon is identified as being a consolidated tourism destination within the Tourism Area Lifecycle, whereas Coral Bay is identified as being within a period of stagnation.</li> <li>• Transport options available to visitors without their own vehicle or a hire vehicle is limited and that this is a major priority for improvement.</li> <li>• In Carnarvon, although the town has a range of lower end accommodation, such as caravan parks, backpackers and three star motels, most of this accommodation is relatively dated and in need of refurbishment. There is also a perceived lack of quality higher end resort-type accommodation on sites that overlook the ocean.</li> <li>• With the Carnarvon Township being viewed by many visitors as a transient base for restocking supplies rather than an end destination, there is also considered to be a need to build up the attraction base in the town to encourage extended length of stay.</li> </ul>	<ul style="list-style-type: none"> <li>• There is a need for an effective planning framework to guide tourism activities in both Carnarvon and Coral Bay, acknowledging work completed to date and currently underway.</li> <li>• The diverse needs and expectations of visitors needs to be recognised. On a practical level, private/hire vehicles are likely to remain the predominant form of transport.</li> <li>• It is important that the need for an attractive investment environment is acknowledged, for both the renewal of existing businesses and the establishment of new businesses.</li> <li>• There is a need to acknowledge and respond to the common perceptions in respect of Carnarvon being a supply centre rather than a destination in its own right.</li> </ul>
<p><b>Destination Development Strategy (Coral Coast) (Tourism WA, 2007)</b></p> <p><i>Tourism WA's action plan prepared in light of the outcomes of the Strategic Plan 2005-2010, to focus on regional development resources and enhancing the tourism product in iconic areas.</i></p>	
<ul style="list-style-type: none"> <li>• Strategy focusses on marketing strategies and opportunities for growth in market segments such as marine eco/nature-based tourism, water-based holidays, fishing and wildflower discoveries.</li> <li>• Focus on the unique features that appeal to tourists within the Region which provide iconic tourism experiences and prioritising these attractions.</li> <li>• Aims to develop strategies to address identified gaps in infrastructure, attractions, accommodation and other tourism facilities.</li> <li>• Identifies areas that are considered to be "leverage areas" which are perceived as an iconic attraction and are market ready.</li> <li>• A number of strategies/projects are identified for Coral Bay, including redevelopment of existing caravan park into sustainable tourism accommodation, the development of a range of</li> </ul>	<ul style="list-style-type: none"> <li>• A number of projects identified in the Strategy have been undertaken such as improved information stations and boat ramp access, river mouth walk trail, Carnarvon Aboriginal Heritage and Cultural Centre, jetty restorations etc. It is generally the larger projects that have yet to be funded. Specific marketing actions are generally considered to be beyond the scope of land use planning.</li> <li>• The LPS needs to identify and seek to protect/enhance the unique features of the area.</li> <li>• The LPS should seek to identify specific gaps and provide recommended strategies and actions for future planning.</li> <li>• There is the need to establish a greater number of annual /seasonal iconic events that attract people from the wider Region.</li> </ul>





DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p>3-4 star accommodation and the upgrade of the airstrip.</p> <ul style="list-style-type: none"> <li>The Strategy identifies the need to construct a new larger airport terminal in Carnarvon.</li> </ul>	<ul style="list-style-type: none"> <li>A number of general improvements to amenities and directional signage are important in catering to tourists.</li> <li>The LPS needs to recognise the status of, and guidance provided within, the Airport Structure Plan.</li> </ul>
<p><b>Tourism Planning Guidelines (WAPC, 2014)</b></p> <p><i>These guidelines seek to encourage the inclusion of tourism planning as a component of the LPS.</i></p>	
<ul style="list-style-type: none"> <li>Provide a framework for the consideration and incorporation of tourism into local planning strategies. The guidelines provide an outline for the tourism component of a LPS including the purpose, content and scope.</li> <li>The tourism component of a LPS should establish the aim, vision and objectives for tourism land use and development in the Local Government area.</li> <li>The current and potential role of tourism in the local economy should be examined, including the competitive advantages of the locality through an assessment of tourism destination development in terms of accommodation, access, attractions, activities, amenities, current and projected demand, and opportunities for developing tourism products.</li> <li>The ongoing role of tourism in the locality should be recognised in the land use planning process through recommendations on appropriate tourist zones, tourism precincts, tourism sites, tourism land requirements and the introduction of specific tourism land uses.</li> <li>Ultimately, a LPS should identify actions and timeframes for the achievement of tourism related goals and strategies.</li> </ul>	<ul style="list-style-type: none"> <li>The LPS should identify and assess existing and new tourism sites for development or expansion within the Carnarvon townsite and beyond.</li> <li>An assessment of the sites based on development capacity and the existing supply and demand of different accommodation options is required to be undertaken.</li> <li>A review of the Carnarvon Tourism Strategy 2010 is required and recommendations included into the LPS, where appropriate for future land use planning.</li> <li>As part of the Scheme review a number of planning mechanisms may need to be introduced. These could include special control areas or specific Tourist zones and/or detailed planning requirements such as the preparation of structure plans prior to subdivision and/or development, and incentives such as plot ratio bonuses to encourage the provision of tourist accommodation or to increase the scale of tourism components in a mixed use development.</li> </ul>
<p><b>Planning Bulletin 49 – Caravan Parks (WAPC, 2014)</b></p> <p><i>This bulletin sets out matters to be considered on the planning for the development of new caravan parks and redevelopment of existing caravan parks.</i></p>	
<ul style="list-style-type: none"> <li>The bulletin seeks to address the retention of caravan parks and to encourage the development of new caravan park facilities.</li> <li>The difficulties in terms of commercial sustainability of caravan parks is acknowledged and requires flexibility in the mix of accommodation options, site design and other aspects such as risk management.</li> </ul>	<ul style="list-style-type: none"> <li>The existing tourism accommodation options in Carnarvon and the wider area will be need to be considered as part of the LPS, in accordance with the Tourism Planning Guidelines.</li> <li>The LPS may identify any sites in the Carnarvon townsite that may be appropriate for intensification or infill tourist development.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>The future land requirements, planning controls and infrastructure needs for caravan parks should be addressed in the tourism component of a LPS.</li> <li>In the identification and assessment of new or existing caravan parks sites a number of matters should be considered including site suitability, coastal or fire hazards, access and connection to services.</li> </ul>	<ul style="list-style-type: none"> <li>The LPS should provide guidance for the general designation of zones and reserve to be considered as part of a new Local Planning Scheme. A Scheme may include a specific zoning for caravan park sites rather than including them under the generic tourism zone.</li> </ul>
<p><b>Planning Bulletin 83 – Planning for Tourism (WAPC, 2013)</b></p> <p><i>This bulletin sets out the policy position of the WAPC to guide decision-making by the WAPC and Local Government for subdivision, development and scheme amendment proposals for tourism purposes.</i></p>	
<ul style="list-style-type: none"> <li>The bulletin responds to the need for a more strategic and flexible approach to tourism planning to support investment in the industry.</li> <li>LPS should incorporate local tourism planning to identify tourism precincts and tourism sites.</li> <li>Until a LPS is in place, a scheme amendment or development proposal for non-tourism or residential uses on tourist zoned land needs to address matters contained in Local Planning Manual 2010.</li> <li>The WAPC will consider the application of this bulletin where appropriate in the assessment of structure plans, subdivision, strata applications and development applications on sites zoned for tourism purposes or similar.</li> </ul>	<ul style="list-style-type: none"> <li>The preparation of the new/amended Local Planning Scheme should reflect this bulletin and guidance contained in the Local Planning Manual 2010.</li> <li>Schemes should include a range of tourist and mixed use zonings allowing for tourism developments and the permissibility of land uses in each zone.</li> <li>To reduce the likelihood of tourism accommodation being used as permanent or semi-permanent accommodation, a maximum length of stay provision of three months in any 12 month period should apply to the tourism units on all developments. This can be implemented through a condition or provision in the Scheme.</li> </ul>

## 2.4 KEY PLANNING RELATED POLICIES

DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p><b>SPP2.0 Environment and Natural Resources (2003)</b></p> <p><i>Policy to guide conservation and protection of environment assets, and sustainable resource management.</i></p>	
<ul style="list-style-type: none"> <li>Environmental and natural resource management should be integrated with broader land use planning and decision-making.</li> <li>Natural environment should be protected, conserved and enhanced, including marine environments. One way of achieving this is appropriate coastal setbacks.</li> </ul>	<ul style="list-style-type: none"> <li>The LPS will need to give consideration to the protection and enhancement of key natural areas and natural resources.</li> <li>The LPS will need to give consideration to the framework for the management of coastal areas.</li> <li>The LPS should generally seek to recognise the natural resources and environmentally sensitive areas within the local area.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>Natural resources should be sustainably used and managed, including water. Soil and land quality should also be maintained.</li> <li>Aquaculture facilities need to be appropriately located to avoid land use conflict.</li> <li>High value and scenic landscapes should be protected.</li> </ul>	<ul style="list-style-type: none"> <li>Any proposed for aquaculture would need to be considered on its merits, having regard for the applicable planning framework – specific guidance is not considered necessary to establish at this time.</li> <li>Planning for landscape and visual impacts should be progressed generally in accordance with the WAPC guidelines.</li> </ul>
<p><b>SPP2.5 Agricultural and Rural Land Use Planning (2002)</b> <i>Policy for rural and agricultural zoned land, and rural residential areas.</i></p>	
<ul style="list-style-type: none"> <li>Rural land should be protected from incompatible uses – resource, agricultural and other primary production uses should be protected.</li> <li>Any land use change from rural to urban or otherwise must be supported by a WAPC endorsed strategy.</li> <li>Priority agricultural land must be protected.</li> <li>Rural zones should be used for primary production, tourism, environmental and cultural pursuits. Tree farming is an appropriate use for rural land where sustainable.</li> <li>The use of rural land for intensive or emerging primary production land uses does not warrant creation of new or smaller rural lots on an unplanned, <i>ad hoc</i> basis.</li> <li>Creation of new rural lots will be by exception and in accordance with Development Control Policy 3.4 – Subdivision of rural land, or planned in a strategy or scheme.</li> <li>Development Control Policy DC: 3.4: Subdivision of Rural Land (2016) sets out the principles that will be used by the WAPC in determining applications for subdivision of rural land.</li> <li>The Rural Planning Guidelines (2016) were developed to respond to submissions and provide guidance in using and interpreting State Planning Policy 2.5 and Development Control Policy 3.4. Section 2 of the Rural Planning Guidelines describes the process for planning for priority agricultural land and Section 3 provides guidance on planning for rural land.</li> </ul>	<ul style="list-style-type: none"> <li>The LPS should recognise the importance of rural lands and provide appropriate recommendations (text and zoning) for consideration in the Local Planning Scheme.</li> <li>Land identified for priority agricultural land in a strategy or scheme is to be retained for that purpose.</li> <li>The appropriate use of land identified in the rural zone should be recognised in the Local Planning Scheme.</li> <li>The LPS should, if relevant, provide a framework for rural living areas, to ensure relevant planning matters are properly considered in the assessment process.</li> <li>In accordance with DC 3.4, the protection of Primary Agriculture Land will need to be recognised in the LPS. Similarly, Intensive Horticulture land shall only be subdivided in line with an approved Structure Plan.</li> <li>In accordance with the Rural Planning Guidelines, priority agricultural land within the Shire should be identified within the Strategy and Scheme for this purpose. The guidelines also include direction on how to identify land prioritised for agricultural, rural living and extractive industries within a Scheme.</li> </ul>
<p><b>SPP2.6 State Coastal Planning Policy (2013)</b> <i>Guidance for decision-making within coastal zones, including reserves and land use change.</i></p>	



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>Land use planning needs to take into account coastal process, landform stability, hazards, climate change etc.</li> <li>Future urban development should be concentrated at existing coastal settlements. Continuous linear coastal development is highly discouraged. Environmental capability and community need must be demonstrated for this to occur.</li> <li>Urban development should facilitate public coastal access, and facilitate commercial and infrastructure (ports, harbours, ramps) coastal needs.</li> <li>Coastal development should maintain existing environmental flows and hydrological cycles.</li> <li>Building height within 300m of coast should be carefully considered in context of locality.</li> <li>Foreshore reserves are required to maintain environmental integrity of coast.</li> <li>The State Coastal Planning Guidelines (2013) provide key guidance on the application of SPP 2.6.</li> <li>The guidelines provide direction for the consideration of infill development, mechanisms and procedures for community engagement and access to coastal areas and the consideration of ecological values, landscape, indigenous heritage, cultural heritage, public access and coastal processes in determining an appropriate foreshore reserve width.</li> </ul>	<ul style="list-style-type: none"> <li>Coastal setbacks need to be properly considered as part of planning decisions – this needs to be recognised in strategies and actions.</li> <li>Future urban coastal development will need to generally take place immediately around the Carnarvon and Coral Bay townsites rather than more generally along the coast.</li> <li>Consideration of coastal implications for infrastructure including roads and boating facilities.</li> <li>Conservation considerations will need to be balanced with demand for commercial, tourism and infrastructure. Strong emphasis on ecotourism will be important in achieving this balance.</li> <li>The guidelines should be applied at the earliest appropriate stage of the planning process, e.g. rezoning of the land. This should be recognised in the LPS.</li> <li>Coastal hazard risk management and protection should be addressed within the LPS through the establishment of appropriate reserves, zones or special control areas.</li> <li>The boundary of any coastal protection area is to be determined in the early stages of planning and in consultation with the Department of lands.</li> <li>The Shire will need to engage the community during any management plan formulation and coastal hazard risk management and adaptation through the structure planning and/or strategy planning stage.</li> <li>Proponents should be requested to supply necessary information where decision makers believe it is necessary to enable decisions to support the policies.</li> </ul>
<p><b>SPP2.7 Public Drinking Water Source (2003)</b></p>	
<p><i>Policy to protect and manage public drinking water source areas.</i></p>	
<ul style="list-style-type: none"> <li>Local and regional planning strategies should identify Public Drinking Water Source Area's based on advice from the Department of Water.</li> <li>All priority source protection areas in Public Drinking Water Source Area (PDWSAs) should be shown as special control areas in Region schemes and in Local Government schemes.</li> </ul>	<ul style="list-style-type: none"> <li>There is a single proclaimed PDWSA in the Shire; the Carnarvon Water Reserve along the Gascoyne River which is a Priority 1 water source.</li> <li>The Strategy and scheme should protect this water source from any impacts of future</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>Land uses and developments in all priority source protection areas that have the potential to impact detrimentally on the quality and quantity of public drinking water supplies should not be permitted unless it can be demonstrated, having regard to advice from the Department of Water, that such impacts can be satisfactorily managed.</li> </ul>	<p>expansion or incompatible land uses through a Special Control Area.</p>
<p><b>SPP2.9 Water Resources (2006)</b> <i>Policy on surface and groundwater catchments.</i></p>	
<ul style="list-style-type: none"> <li>Inform planning actions by identifying all water resources above and below ground in the subject area, and mapping and prioritising them in terms of State, regional or local significance.</li> <li>Take into account potential impacts the water resource may have on a land use when determining the compatibility of locating a land use near natural or artificial water resource/s (for example, flooding or disease vector and nuisance insects such as mosquitoes and midges).</li> <li>Recognise and take into account State Government management strategies for water resource issues such as water protection areas, wetland protection, water provisions for environmental flow requirements, riparian management and water allocation plans. Ensure the availability of water resources is compatible with the future requirements of the proposed and surrounding land use through an assessment of quantity and quality requirements for both the development and the environment.</li> <li>Maximise the opportunities for compliance with best practice stormwater management, including infiltration/detention of stormwater on-site/at the source.</li> </ul>	<ul style="list-style-type: none"> <li>The need for an integrated approach to land use/water planning should be recognised in the LPS strategies/actions.</li> <li>The Strategy should identify all important water sources and development scenarios should consider the implications of these assets. The new Scheme should provide for the protection of important water sources through appropriate mechanisms such as special control areas or reserves.</li> <li>There is a need for stakeholders to work together in a collaborative matter in the planning for water including but not limited allocation, consumption, reuse and flood protection.</li> <li>The LPS may need to recognise the need for an effective water management planning framework that is relevant to the local area.</li> <li>The Shire of Carnarvon should consider the need for the preparation of a District Water Management Plan covering the Carnarvon Townsite.</li> </ul>
<p><b>SPP3 Urban Growth and Settlement (2006)</b> <i>Guides development of urban areas.</i></p>	
<ul style="list-style-type: none"> <li>Housing should have good access to employment, commercial, recreation and other facilities.</li> </ul>	<ul style="list-style-type: none"> <li>The LPS will need to recognise the factors that should be considered in the identification of areas for further housing.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>Housing options should be diverse to suit various household sizes, ages and incomes.</li> <li>Vacant and underutilised land should be utilised for urban growth.</li> <li>Commercial land uses should be clustered.</li> <li>Urban development should foster a sense of identity and community. Higher density development should be close to commercial facilities and near transport options.</li> </ul>	<ul style="list-style-type: none"> <li>The importance of providing a diversity of housing choices needs to be recognised in the LPS.</li> <li>Infill of existing urban areas should be considered, where practical and appropriate.</li> <li>Retail, community and commercial areas in Shire's should be concentrated where possible.</li> <li>There is a need to foster the local identity through land use planning, particularly in the Carnarvon townsite. Planning for arrange of residential densities should be considered in detail through the preparation of structure plans.</li> </ul>
<p><b>SPP3.2 Aboriginal Settlements (2011)</b></p> <p><i>Guidance on planning for permanent Aboriginal communities.</i></p>	
<ul style="list-style-type: none"> <li>All Aboriginal settlements are to have an endorsed Layout Plan.</li> <li>Layout Plans are to reflect the growth aspirations of the resident community and traditional owners based on sound planning principles including consideration of known cultural, environmental, economic, tenure and infrastructure constraints, opportunities and requirements.</li> <li>Local Government is to classify land as 'settlement' zone in a Local Planning Scheme and include provisions that require development to be in accordance with the endorsed Layout Plan.</li> </ul>	<ul style="list-style-type: none"> <li>The Shire currently has a single Aboriginal Settlement community (for the purposes of the SPP) being the Mungullah Settlement.</li> <li>Future development should be guided by an adopted layout plan.</li> <li>The new Scheme should include a settlement zone and appropriate provisions allowing for the implementation of the future layout plan.</li> </ul>
<p><b>SPP3.4 Natural Hazards and Disasters (2006)</b></p> <p><i>Guide the assessment of planning proposal that may be affected by natural disasters</i></p>	
<ul style="list-style-type: none"> <li>Proposed development on a floodplain is considered acceptable with regard to major flooding as long as it does not produce an adverse impact on surrounding development and it has an adequate level of flood protection.</li> <li>The 100-year ARI flood should be used as the defined flood event. The floodplain of a defined flood event should be used as the area over</li> </ul>	<ul style="list-style-type: none"> <li>The Strategy may identify areas that may be subject to natural hazards and consider these in setting forth development scenarios.</li> <li>The new Scheme may need to incorporate appropriate mechanisms for protecting development from flooding, coastal storm surge and bushfire. This may be included in the strategies and actions identified in the LPS.</li> </ul>



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p>which controls on land use and development need to recognise the impacts of flooding.</p> <ul style="list-style-type: none"> <li>All habitable, commercial and industrial buildings should have their floor levels above the level of the defined flood event.</li> </ul>	
<p><b>SPP3.5 Historic Heritage Conservation (2007)</b> <i>Sets out practices for the planning for, conservation and protection of heritage assets.</i></p>	
<ul style="list-style-type: none"> <li>Specific scheme provisions are required to protect heritage assets.</li> <li>Limitations should be made on alterations to and demolition of heritage assets, and also development near heritage assets.</li> <li>Local planning policies should be considered in addition to with the model provisions for local planning schemes.</li> </ul>	<ul style="list-style-type: none"> <li>There are currently 11 places within the Shire that are currently on the State Heritage Register.</li> <li>The Shires Town Planning Scheme includes 17 heritage places under its Heritage List.</li> <li>The Shire currently has 78 Heritage Listings on its MHI, which is currently under review.</li> <li>Updated scheme provisions and local planning policy framework should be developed to provide further guidance with regard to heritage places.</li> <li>A formal Heritage List may be included in the new Scheme along with provisions for the assessment and inclusion of new heritage places on the list. The new Scheme should include provisions for the creation, adoption and review of the Heritage List – this may be reflected in the recommendations contained in the LPS.</li> </ul>
<p><b>SPP3.6 Developer Contributions for Infrastructure (2009)</b> <i>Sets out principles for developer contributions.</i></p>	
<ul style="list-style-type: none"> <li>Defines the scope, principles and process for determining developer contributions.</li> <li>Sets out with the model provisions for incorporating development contribution plans into local planning schemes.</li> </ul>	<ul style="list-style-type: none"> <li>The appropriateness of potentially establishing development contribution arrangements to facilitate the timely and equitable delivery of infrastructure will need to be considered over time, including in the LPS.</li> <li>A cautious approach should be taken to the establishment of any DSP, having regard for the financial risks involved.</li> <li>A new Local Planning Scheme will need to include the model text provisions to allow the Shire to collect developer contributions.</li> </ul>
<p><b>SPP3.7 Planning in Bushfire Prone Areas (2015)</b> <i>Policy on how land use should address bushfire risk management.</i></p>	



DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<ul style="list-style-type: none"> <li>• Applies to all land which has been designated as bushfire prone by the Fire and Emergency Services (FES) Commissioner as highlighted on the Map of Bush Fire Prone Areas.</li> <li>• Guides the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.</li> <li>• The Australian Standard for the Construction of buildings in bushfire-prone areas AS3959 would apply in areas which have been formally designated as bushfire-prone areas.</li> <li>• The Office of Bushfire Risk Management (OBRM) has endorsed Bushfire Management Guidelines as a standard. As an OBRM-endorsed standard, these guidelines, in conjunction with SPP 3.7, will be the predominant document in Western Australia for use by Department of Fire and Emergency Services (DFES) as well as other referral authorities.</li> <li>• The State Bushfire-Prone Area Map, identifies all land across the State as being either within, or outside of, a bushfire-prone area. The OBRM is responsible for preparing and administering the Bushfire-Prone Area Mapping.</li> <li>• The guidelines assist with assessing bushfire risk, how to apply SPP 3.7 and defining the roles and responsibilities of decision makers, proponents and stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring local planning instruments, including strategies, scheme and scheme amendments incorporate the State bushfire-prone area maps and establish requirements that address bushfire risk in accordance with the bushfire regulations.</li> <li>• Following the release of the OBRM bushfire-Prone Area Mapping, a bushfire hazard level assessment should be completed for bushfire-prone areas in the Shire to determine the extent of the risk in consultation with DFES.</li> <li>• Ensure that subdivision, development and land use proposals take into account bushfire protection requirements and include specified fire protection measures.</li> <li>• The Shire will be responsible for administering development controls in accordance with the Local Planning Scheme, with due regard to SPP 3.7.</li> </ul>
<p><b>SPP5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning (2009)</b></p>	
<p><i>Guideline to minimise noise impacts from transport infrastructure.</i></p>	
<ul style="list-style-type: none"> <li>• NWCH is identified as primary freight route.</li> <li>• Noise limits should generally be kept to 55dB during the day and 50dB at night (10pm to 6am) from outside the facades of nearby buildings.</li> <li>• Noise protection measures and notifications on titles are possible ways to reduce noise impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• Development in proximity to the NWCH needs to consider noise implications early in the planning process.</li> <li>• Development application and subdivision applications will need to be considered on a case-by-case basis.</li> </ul>
<p><b>SPP 6.3 Ningaloo Coast (2004)</b></p>	





DOCUMENT AND RELEVANT PROVISIONS	POTENTIAL IMPLICATIONS FOR SHIRE OF CARNARVON LPS
<p><i>To accompany the Ningaloo Coast Regional Strategy and has the following key objectives: of direct relevance to land use planning</i></p>	
<ul style="list-style-type: none"> <li>• Addresses 11 Guiding Principles:               <ul style="list-style-type: none"> <li>- Sustainable development</li> <li>- Community aspirations</li> <li>- Aboriginal heritage</li> <li>- Economic development</li> <li>- Interdependence</li> <li>- Limits of acceptable change</li> <li>- Precautionary principle</li> <li>- Cumulative impacts</li> <li>- Protection of high-conservation values</li> <li>- Protection of remote values</li> <li>- Protection of biodiversity</li> </ul> </li> <li>• In determining all applications, the WAPC and local government will ensure that no application will be approved within Coral Bay or the significant environmental areas which is inconsistent with this policy and the NCRS.</li> <li>• No applications for higher impact tourism, residential, commercial or industrial developments will be approved unless:               <ul style="list-style-type: none"> <li>- They are within the townsites of Carnarvon and Exmouth</li> <li>- Consistent with this policy and the relevant structure plan components of the Ningaloo coast regional strategy Carnarvon to Exmouth</li> <li>- Consistent with the applicable local planning strategy policies and objectives and town planning scheme.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Clear guidance regarding acceptable and sustainable development on the Ningaloo coast.</li> <li>• LPS to recognise the Ningaloo coast as an all-seasons recreation and nature-based tourism destination and limit growth with managed staged development, to ensure that the community continues to enjoy a remote and natural experience.</li> <li>• Planning framework to encourage preservation and protection of the natural environment and should seek to enhance and rehabilitate degraded areas.</li> <li>• Continued focus to consolidate future residential, commercial, higher-impact tourism and industrial development in the townsite of Carnarvon provide strategic directions for its future growth.</li> </ul>



## 3 Local Planning Context

### 3.1 STRATEGIC COMMUNITY PLAN

As part of the Integrated Planning Framework, the Shire prepared the Strategic Community Plan, which sets out the community's long-term vision, values, aspirations and priorities. The purpose of the Plan is to integrate asset, service and financial plans ensuring the resource capabilities of the Shire are matched with the needs of the community. This document provides the Shire with a collective means of influencing and undertaking decisions within the local community.

The Shire's Strategic Community Plan 2011 is the Shire's first integrated plan. The community engagement undertaken for this Plan enabled the local community to share their visions and aspirations for the future.

Through this process, the community identified the following aspirations and values:

### ASPIRATIONS AND VALUES.

- A prosperous, relaxed, safe community with exceptional lifestyle choices;
- A place where communities live in harmony;
- A place where diversity and opportunity is embraced;
- Recognised for achieving innovative development;
- A place that preserves our pristine environment and natural open spaces;
- Well positioned to achieve economic success based on our location, infrastructure, water resources and business opportunities; and
- The growth hub of the Gascoyne Region

Based on the feedback from the community engagement process the Shire established a set vision for the future which captured these key aspirations and values:

### VISION FOR THE SHIRE OF CARNARVON.

“The Shire of Carnarvon will remain a wonderful place of endless opportunity, with a pristine environment, where the desert meets the sea.”



This vision will provide the foundation for the LPS, whereby strategies and actions have been prepared to help achieve this shared vision.

### 3.2 CARNARVON 2020 – A STRATEGY FOR SUSTAINABLE DEVELOPMENT

The purpose of the Carnarvon 2020 Strategy is to set out a sustainability framework for addressing the potential future challenges facing the local area. The Strategy sets out goals for the four key areas of Government, Economy, Social and Environment along with desired outcomes for each. The goals and outcomes for the local area include:

1. *Government Goal - Understanding, Partnering and Delivering Better Outcomes for the Regions*
  - a. *Government decision-making based on a thorough understanding of regional issues;*
  - b. *Planning in partnership for a sustainable future; and,*
  - c. *Effective Government service delivery in the regions.*
2. *Economic Goal – Growing a Diversified Economy*
  - a. *Skilled Communities;*
  - b. *Improved Regional Infrastructure;*
  - c. *Diversified Regional Economy; and,*
  - d. *Enhanced Regional Investment.*
3. *Social Goal - Educated, Healthy, Safe and Supportive Communities*
  - a. *Life Long Learning in the Regions*
  - b. *Effective Health Service Delivery*
  - c. *Safe Regional Communities*
  - d. *Enhanced Quality of Regional Lifestyles*
  - e. *Cohesive Communities*
4. *Environmental Goal - Valuing and Protecting the Environment*
  - a. *Improved Environmental Management*
  - b. *Sustainable Natural Resource Management*
  - c. *Conservation and Restoration of our State's Natural and Built Heritage.*

The Strategy has identified a number of specific projects and actions required to realise the goals and outcomes above. A number of these projects and actions have been reinforced within this LPS to ensure that key goals and objectives of the documents are aligned.

### 3.3 CARNARVON TOURISM STRATEGY (2010)

The primary purpose of the Carnarvon Tourism Strategy (Tourism Strategy) is to realise Carnarvon's tourism potential and identify what improvements, additions, actions and messages are required in the short-medium term to achieve this. The Tourism Strategy outlines the issues facing the current approach to tourism within Carnarvon, identifying a lack of cohesion between promotion, signage and satisfactory provision for accommodation.

The Tourism Strategy seeks to deliver a more united and focussed approach to the 'Carnarvon Brand' while delivering a broader approach to promotion through focussing on experiences and unique destinations. The Tourism Strategy seeks to build on Carnarvon's unique location and deliver an appealing and broad tourism offer by focussing on several opportunities including:

- Comparatively lower costs;
- Emerging heritage, cultural and food attractions (e.g. OTC, Gwoonwardu Mia, local produce / seafood, weekend markets, food trail);



- Untapped marine attractions (e.g. humpback whales, dugongs, turtles, mangrove creeks);
- Alfresco hospitality and socialising within a Mediterranean climate [e.g. at cafes, restaurants and pubs] and ideally at revamped or new “outdoor venue”; and
- Vastly improved visitor orientation that focusses on Carnarvon as the hub (in a hub and spoke context).

Further, the key tourist areas, such as Coral Bay, are operating at 100% occupancy during peak tourism periods. The strain on the existing infrastructure and services has been recognised in previous studies undertaken by the Shire and the Gascoyne Development Commission and this issue has been closely examined in developing the LPS.

### 3.4 CURRENT SCHEMES

The Shire of Carnarvon currently administers two planning schemes being Town Planning Scheme No. 10 and District Zoning Scheme No. 11. Town Planning Scheme No. 10 relates to the Carnarvon townsite and surrounds while District Zoning Scheme No. 11 relates to the balance of the Shire, including Coral Bay.

#### 3.4.1 TOWN PLANNING SCHEME NO. 10

The Shire of Carnarvon Town Planning Scheme No. 10 (TPS 10) was gazetted on 26 February 1988 and is the longest running planning scheme in Western Australia.

TPS 10 sets out the land use permissibility and general development requirements for the Scheme area which includes the Carnarvon townsite and environs. TPS 10 does not include objectives for the overall Scheme area or the individual zones. Further, TPS 10 is in need of review to provide consistency with the model provisions for local planning schemes and to ensure that an effective planning framework is in place for the future.

Several actions within the LPS focus on ensuring the suitable statutory framework is incorporated into the new Local Planning Scheme. In particular, this will seek to address various key issues and to provide a suitable path forward in considering and determining development applications within the Shire.

#### 3.4.2 DISTRICT ZONING SCHEME NO. 11

The Shire of Carnarvon District Zoning Scheme No. 11 was gazetted on 11 August 1995.

The Scheme has the following key objectives:

- To promote the continued use of the rural sector of the Shire for productive agricultural pursuits.
- To introduce development controls and incentives which will ensure the orderly and proper development of the general rural area of the Shire of Carnarvon, to the overall benefit of the local community.
- To encourage the orderly and appropriate development of a range of tourist and recreational accommodation along the coastal sector of the Shire.
- To ensure any tourist development along the coast is compatible with broader environmental conservation and land use objectives as defined in the Shark Bay Region Plan, the Ningaloo Marine Park Management Plan, and is consistent with coastal management and planning objectives contained within the Country Coastal Planning Policy as published by the then Department of Planning and Urban Development.
- To encourage rural activity which promotes sound soil conservation practice.



There is an opportunity for the scheme review to consolidate DZS 11 into a new Local Planning Scheme for the entire Local Government area. The review of local demographics, infrastructure analysis and consideration of the key issues currently facing the Shire has provided the basis for considering and updating the above objectives. This will ensure they are aligned with current State and local planning frameworks and the strategic vision of the Shire. A new set of objectives will be reflected in the new Local Planning Scheme which will apply to the Shire as a whole.

### 3.5 CURRENT LOCAL PLANNING POLICIES

The Shire of Carnarvon has previously prepared a number of local planning policies to provide additional information about the position that the Shire will take on certain planning matters. In making a determination under the scheme the Shire must have regard to each relevant local planning policy to the extent that the policy is consistent with the scheme. A brief overview of all the Shire's current local planning policies is provided below:

POLICY	RELEVANT PROVISIONS	IMPLICATIONS
<b>Intensive Horticulture and Plantations</b> <b>February 1988</b>	<ul style="list-style-type: none"> <li>There is a presumption against lots smaller than 6ha unless demonstrated subdivision will not detract from the viability of the lots for Intensive Horticultural purposes and where a water supply service is assured.</li> <li>Any development considered to compromise the use of land for horticultural or plantation production will not be supported.</li> </ul>	<ul style="list-style-type: none"> <li>The scheme review may consider incorporation of these requirements into the scheme.</li> <li>The Strategy may identify important horticultural / agricultural land for protection in consultation with the Department of Agriculture.</li> </ul>
<b>Control of Commercial and Industrial Areas (Light and General Industry Zones, and Special Use Zones)</b> <b>February 1988</b>	<ul style="list-style-type: none"> <li>The minimum lot size would not be less than 1000 square metres and for new subdivisions an average of 2000 square metres would be sought.</li> <li>Within the General Industrial Zone a minimum lot size of 1500 square metres will be required with a 25 metres minimum effective frontage.</li> <li>Building setbacks from Robinson Street, Boundary Road and Boor Street will be 15 metres. As lot sizes increase the Council may require larger setbacks from streets and increased effective frontages to bring the scale of development into harmony with development on smaller lots.</li> </ul>	<ul style="list-style-type: none"> <li>The scheme review may consider incorporation of these requirements into the scheme.</li> </ul>
<b>Central Area Precinct Development Guidelines</b> <b>February 1988</b>	<ul style="list-style-type: none"> <li>Front setbacks should, where possible, blend with adjacent buildings so that continuity in the street edge is created.</li> <li>While the town should not attempt to look 'rustic' the simple use of</li> </ul>	<ul style="list-style-type: none"> <li>The guidelines are an important tool for setting out the design principles for the Central Area Precinct.</li> <li>Consideration may be given to the merging of the guidelines</li> </ul>



POLICY	RELEVANT PROVISIONS	IMPLICATIONS
	<p>building materials (timber, brick, block, stone) will ensure a good fit with the character of the Precinct.</p> <ul style="list-style-type: none"> <li>• Preferably new verandahs should be a separate item on the façade, not part of a roof extension. The style should be simple, generally flat, although the primary requirement is a good fit with neighbouring buildings.</li> </ul>	<p>with the Central Area Precinct Policy requirements.</p>
<p><b>Airport Approaches</b> <b>February 1988</b></p>	<ul style="list-style-type: none"> <li>• With respect to the South-West-North-East Runway used by jet aircraft, Council will: <ul style="list-style-type: none"> <li>i. limit the height of any new development to accord with DoT specifications.</li> <li>ii. examine each proposal to determine whether or not any development or land use will interfere or adversely affect communications and aviation equipment.</li> <li>iii. in the case of the North-Eastern Flight Path, generally oppose any residential development unless very exceptional circumstances can be proved to exist justifying a departure from this Policy.</li> <li>iv. in the case of the South-West Flight Path, examine each proposal for new residential development with the impact of the Flight Path in mind and seek to secure forms of development which will minimise amenity loss from aircraft movements.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The scheme review may consider incorporation of these requirements into the Scheme in the form of a Special Control Area. However, amendments to the Policy may be required to reflect the Carnarvon Airport Structure Plan.</li> <li>• Consultation with the relevant State and Federal Government agencies should be included.</li> </ul>
<p><b>Fascine Area Control</b> <b>Undated</b></p>	<ul style="list-style-type: none"> <li>• Generally, the Policy does not relate to development rather it relates to on-water activities and the control of pedestrian movements in the park land areas adjacent to the Fascine.</li> </ul>	<ul style="list-style-type: none"> <li>• The intent of the Policy is in need of review. A local law may be a more appropriate mechanism for the control of on-water activities.</li> </ul>
<p><b>Promotion of Development Fronting the Fascine</b> <b>Undated</b></p>	<ul style="list-style-type: none"> <li>• The Policy provides design guidance for new development adjacent to the Fascine. For all intents and purposes the Policy is in the form of design guidelines focussing on several architectural</li> </ul>	<ul style="list-style-type: none"> <li>• The policies provide important guidance for development adjacent to the Fascine for the purpose of protecting the local amenity.</li> </ul>



POLICY	RELEVANT PROVISIONS	IMPLICATIONS
	<p>elements relating the North-west style.</p>	<ul style="list-style-type: none"> <li>The scheme review may consider the incorporation of provisions for variation to the Residential Design Codes.</li> <li>There is a need to update this Policy to serve as a variation to the Residential Design Codes.</li> </ul>
<p><b>Central Area Precinct</b> <b>Undated</b></p>	<ul style="list-style-type: none"> <li>The Policy sets out design guidance for new development in the Central Area Precinct. This includes standards on setbacks, scale, character, colours and signage.</li> </ul>	<ul style="list-style-type: none"> <li>The Policy builds on the broad principles of the Central Area Precinct Guidelines. The Policy and the guidelines could potentially be merged to form a single document.</li> <li>The scheme review may consider the incorporation of provisions and principles in terms of development standards and objectives relating to a town centre zone.</li> </ul>
<p><b>McGlades Road Land Release</b> <b>Undated</b></p>	<ul style="list-style-type: none"> <li>The key provisions of the Policy are:               <ol style="list-style-type: none"> <li>The area of land in a ploughed or other vulnerable condition shall be limited at any one time and no two adjacent properties shall be in a vulnerable condition at one time.</li> <li>Any cultivation that is undertaken shall be at right angles to the general direction of flow of flood water.</li> <li>Fencing shall be designed so that it will not impede, concentrate or redirect the flow of flood waters and shall not be constructed across natural drainage channels.</li> <li>Access tracks through the area shall be maintained at higher levels than the surrounding ground to reduce their potential to become flood channels and shall be minimised through their shared use by adjoining properties.</li> <li>The area shall only be used for growing tree crops and areas between tree rows shall not be cultivated. Mangoes are</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>The intent of the Policy is in need of review. Several provisions are not able to be addressed through the land use planning process.</li> <li>The scheme review may consider the incorporation of provisions relating to flood protection.</li> </ul>



POLICY	RELEVANT PROVISIONS	IMPLICATIONS
	<p>the most preferred crop, however, Bananas are acceptable.</p> <ul style="list-style-type: none"> <li>vi. General levelling of land may be undertaken with floodway channels excluded and no filling to occur.</li> <li>vii. No buildings will be permitted on the land.</li> <li>viii. An erosion buffer of 100 metres of natural vegetation shall be maintained along the river bank.</li> <li>ix. All water requirements of the land shall be met from the existing water allocations of contiguous properties.</li> </ul>	
<p><b>Alfresco Dining</b> <b>October 2012</b></p>	<ul style="list-style-type: none"> <li>• Alfresco activities must conform to the following, unless in the opinion of Council variations should apply:</li> <li>• Pedestrian Zone: 2.0 metres minimum width;</li> <li>• Alfresco Zone: 2.5 metres maximum width;</li> <li>• Kerbside Zone: 0.5 metres minimum (abutting on-street parking);</li> <li>• 1.0 metres minimum (abutting a lane of traffic);</li> <li>• The Policy also outlines requirements and standards relating to street furniture, accessibility, shelter, screening, car parking and insurance.</li> </ul>	<ul style="list-style-type: none"> <li>• The Policy is important in ensuring alfresco dining is appropriate for the particular location to which it is proposed and that it will not hinder pedestrian movement.</li> <li>• A revised policy has the potential to provide additional clarity for the proponents and the Shire in terms of approval requirements.</li> </ul>
<p><b>Carnarvon Small Boat Harbour Policy</b> <b>August 1995</b></p>	<ul style="list-style-type: none"> <li>• The Policy sets out land use permissibility within the Policy area. Further, the Policy includes standards and requirements relating to setbacks, scale, character, colours and signage.</li> </ul>	<ul style="list-style-type: none"> <li>• The intent of the Policy is in need of review. Land use permissibility should be incorporated into the new Scheme if appropriate.</li> </ul>
<p><b>Usage of 'I' Symbol</b> <b>February 2004</b></p>	<ul style="list-style-type: none"> <li>• Signage displaying the 'I' symbol will only be considered for attended and unattended tourist information bays or centres where they have been accepted by the appropriate State tourist authority as an officially recognised tourist information centre of facility.</li> </ul>	<ul style="list-style-type: none"> <li>• The intent of the Policy is in need of review. These provisions should be incorporated into a broader signage policy or local law.</li> </ul>





POLICY	RELEVANT PROVISIONS	IMPLICATIONS
<p><b>Design Guidelines and Development Standards</b> <b>Undated</b></p>	<ul style="list-style-type: none"> <li>• The Policy area relates to the land zoned 'Special Use' on Lot 10 Robinson Street, east Carnarvon. The minimum setbacks for the site are:               <ul style="list-style-type: none"> <li>- Rear and side 10 metres</li> <li>- Robinson Street 16 metres</li> <li>- Marmion Street 10.5 metres</li> </ul> </li> <li>• Further the Policy addressed car parking, landscaping, signage and external appearance.</li> </ul>	<ul style="list-style-type: none"> <li>• The guidelines are an important tool for ensuring design standards for the site.</li> <li>• The scheme review may consider the incorporation of these standards as part of Special Provisions or Additional Use conditions given the Policy relates only to a specific site.</li> </ul>
<p><b>Land Use and Development of the Carnarvon Airport</b> <b>Undated</b></p>	<ul style="list-style-type: none"> <li>• For development applications and uses at the Airport the following matters shall be considered:               <ol style="list-style-type: none"> <li>i. compatibility with the airports' effective and efficient operation;</li> <li>ii. safety and risk;</li> <li>iii. traffic numbers, traffic circulation and car parking;</li> <li>iv. the length of tenure requested;</li> <li>v. the level of servicing required; and</li> <li>vi. any other matter deemed appropriate by the Shire.</li> </ol> </li> <li>• Land uses considered unacceptable for development within the Policy area include residential, retail, education, general industry and noxious industry.</li> </ul>	<ul style="list-style-type: none"> <li>• The intent of the Policy is in need of review. Land use permissibility should be incorporated into the new Scheme if appropriate.</li> <li>• The scheme review may consider the amendment of the Policy to reflect the Carnarvon Airport Structure Plan.</li> </ul>
<p><b>Northwater Development</b> <b>November 2006</b></p>	<ul style="list-style-type: none"> <li>• The Policy area relates to Stage 2 of the Northwater Residential Estate. The Policy sets out broad objectives and design guidelines to ensure future residential development is consistent with the 'Carnarvon Character'.</li> </ul>	<ul style="list-style-type: none"> <li>• The guidelines are an important tool for ensuring design standards in Northwater Stage 2, however they do not include any specific standards or requirements. It is not clear how applicants would meet the principles set out by the Policy.</li> </ul>
<p><b>Outbuildings</b> <b>July 2009</b></p>	<ul style="list-style-type: none"> <li>• For outbuildings on residential zoned lots up to 1,000m<sup>2</sup> in area the subject land must either contain an existing lawfully approved dwelling development (e.g. single house, grouped-dwelling, etc.), or be the subject of a valid building</li> </ul>	<ul style="list-style-type: none"> <li>• Continued limits on outbuildings are encouraged to maintain townsite amenity.</li> </ul>



POLICY	RELEVANT PROVISIONS	IMPLICATIONS
	<p>permit granted by the Shire for a residential (dwelling) development.</p> <ul style="list-style-type: none"> <li>On residential zoned lots of 1,000m<sup>2</sup> or greater and in all other zones detailed in this Policy an outbuilding may be approved prior to construction of a dwelling, although ablution facilities will not be supported without the establishment of an approved commercial activity.</li> <li>Permanent or temporary human habitation is NOT permitted within an outbuilding deemed a Class 10 (non-habitable) building under the Building Code of Australia (BCA).</li> </ul>	
<p><b>Shipping (Sea) Containers</b> <b>December 2011</b></p>	<ul style="list-style-type: none"> <li>The placement of a sea container on land in all zones other than the Rural', 'Intensive Horticulture', 'General Industry', or 'Light Industry' zone shall be the subject of an application for planning consent, as a sea container is considered incidental 'development' under the Shire of Carnarvon Town Planning Scheme No.10.</li> <li>Only one sea container will be permitted per property and the location of the sea contained will ensure there are no detrimental impacts on the amenity of the area.</li> </ul>	<ul style="list-style-type: none"> <li>This Policy is important to protect townsite amenity.</li> <li>The policy will need to be reviewed in parallel with the new Scheme to ensure ongoing effectiveness.</li> </ul>
<p><b>Advertising and Signage</b> <b>December 2012</b></p>	<ul style="list-style-type: none"> <li>Generally, displays on signs shall be directly related to the business name, products, and/or services within the tenancy. Further, sites with two street frontages are permitted to have signage facing each of the related streets (a maximum of three (3) signs facing each frontage).</li> </ul>	<ul style="list-style-type: none"> <li>The Policy is important in the protection of local amenity.</li> <li>The incorporation of principles and desired outcomes may be considered for signs seeking to vary the standards of the Policy.</li> <li>Review policy to ensure consistency with new scheme and <i>Planning and development (Local Planning Schemes) Regulations 2015</i></li> </ul>
<p><b>Event Guide</b> <b>March 2013</b></p>	<ul style="list-style-type: none"> <li>The Policy sets out the process and requirements for attaining the necessary approvals for events, including development approval where required.</li> </ul>	<ul style="list-style-type: none"> <li>The Policy is important in ensuring events are appropriately managed and the necessary approvals are attained. However, the complexity of the document and the process for gaining approval may present a</li> </ul>



POLICY	RELEVANT PROVISIONS	IMPLICATIONS
		<p>significant barrier to event organisers.</p> <ul style="list-style-type: none"> <li>The scheme review may consider the exemption of events lasting less than 48 hours from requiring development approval, to reduce administrative barriers for both the Shire and the organisers.</li> </ul>
<p><b>Northwater Stage 4 Design Guidelines</b>  <b>February 2014</b></p>	<ul style="list-style-type: none"> <li>Provisions relating to primary frontages, fencing and roofing materials are within the Policy. Second hand transportable dwellings are permitted provided they meet a certain level of detail.</li> </ul>	<ul style="list-style-type: none"> <li>The guidelines are an important tool for ensuring design standards in Northwater Stage 4. Any future planning proposal over the area should consider the guidelines.</li> </ul>



### 3.6 CARNARVON TOWNSITE AND ENVIRONS STRATEGY PLAN

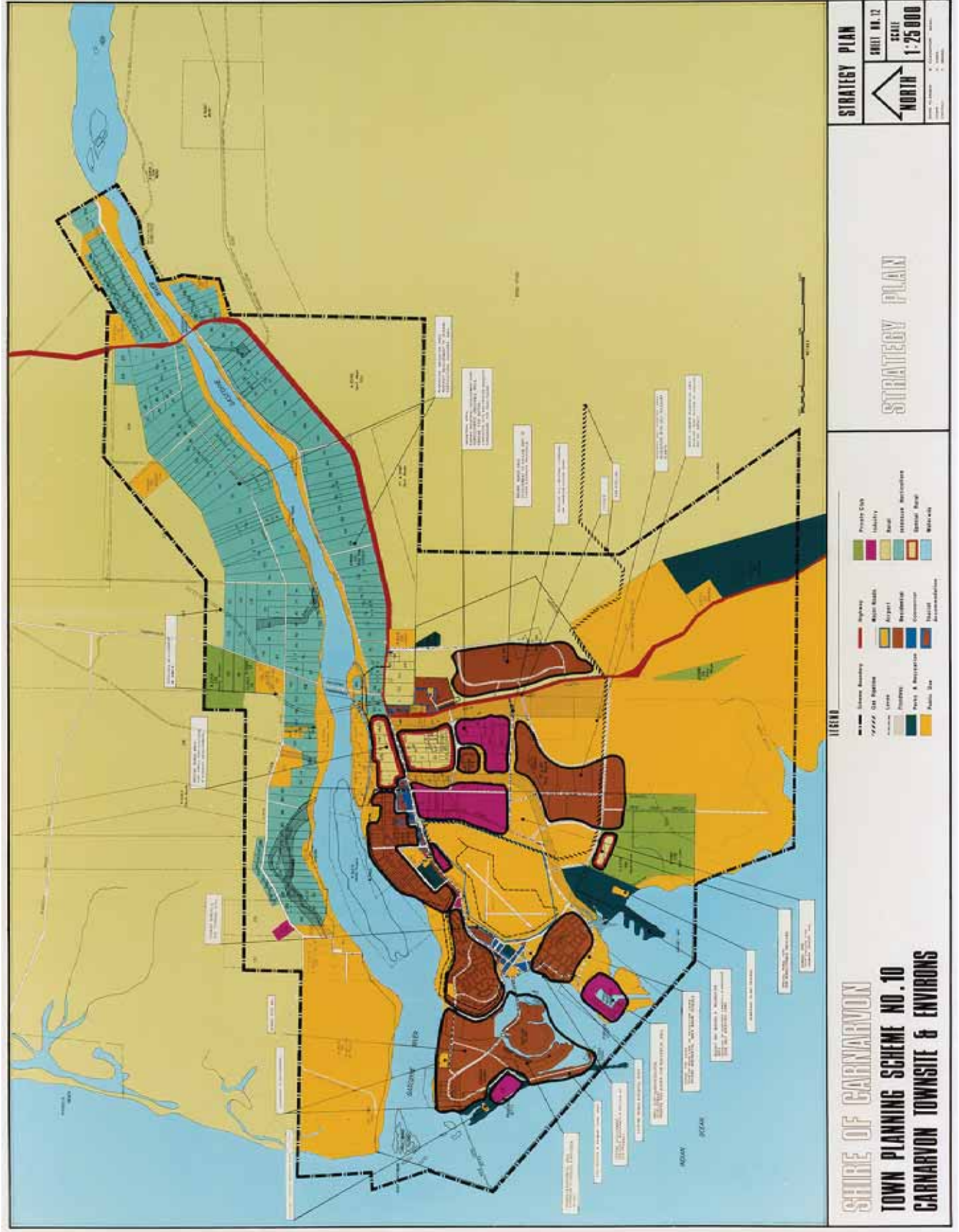
The Carnarvon Townsite and Environs Strategy Plan (the Strategy Plan) forms part of the documentation supporting the Shire of Carnarvon Town Planning Scheme No. 10. The Strategy Plan (**Figure 20**) was developed prior to the gazettal of TPS 10 in 1988, with the purpose of spatially setting out a framework for future land use and development of the Carnarvon Townsite.

Chiefly the Strategy Plan outlined the following spatial outcomes:

- Provision of new land for residential development at Babbage and Whitlock Islands, South Carnarvon and East Carnarvon;
- Expansion of the existing industrial area east of the Carnarvon Airport;
- Identification of schools sites;
- Identification of land for tourism related development; and
- Protection of land for recreational purposes.

The Carnarvon Townsite has developed in accordance with the Strategy Plan apart from Babbage and Whitlock islands, where the focus has changed to tourism development as a result of detailed planning. The Strategic Land Use plans forming this LPS build on this early Strategy Plan and provide a contemporary spatial framework for the Shire for the next 10-15 years. The Strategy Plan has been superseded by the new LPS.

FIGURE 20 – CARNARVON TOWNSITE AND ENVIRONS STRATEGY PLAN





### 3.7 CURRENT STRUCTURE PLANS

Several master plans and structure plans are either in operation or preparation. The LPS has considered the various structure plans currently in operation or being considered by the Shire and in particular:

- their potential impact on the future development of the Shire.
- how their overall intent can be incorporated into the Shire's future planning framework.

A consideration of the structure plans is provided below.

#### 3.7.1 CARNARVON FASCINE WATERWAY AND ENVIROS MASTER PLAN 2010

The timber fascine (timber retaining wall) along the Gascoyne River in Carnarvon was built to prevent erosion of the river banks during floods.

The Fascine area is proposed to be seweraged in the short term and thus may have limited opportunities for redevelopment in keeping with retaining heritage listed buildings in the area. The Carnarvon Fascine Waterway and Environs Master Plan (adopted by Council on 14 December 2010) seeks to guide the enhancement of the Fascine waterway and environments, in recognition of its significant potential to the sustainable future of the townsite. The Master Plan outlines a vision for the Fascine and town centre, attracting funding, investment opportunities, and community support. The Master Plan aims to achieve:

- An enhanced user environment.
- An enhanced visual landscape.
- Mitigation of adverse flood and storm surge impacts (a key priority).
- Integrated terrestrial, aquatic and maritime uses and activities.
- An improved image and identity for the town.

The Plan identifies strategies in response to key opportunities and constraints of the Master Plan. These strategies include; protection (infrastructure), revitalisation and connection. The Master Plan seeks to upgrade several areas in achieving these objectives. It is recommended that this plan be reviewed periodically, in the context of a precautionary approach and taking into account the latest information available through state policies and coastal planning as part of the preparation of an overall Coastal Management Strategy.

#### 3.7.2 BABBAGE AND WHITLOCK ISLANDS STRUCTURE PLAN 2014

The Babbage and Whitlock Islands Structure Plan seeks to provide a planning framework for the future development of a range of land uses on the islands. The land uses identified by the Structure Plan for this area include:

- Limited low density residential uses.
- A focus on tourist and independent living development comprising predominately of self-contained, high-end, 'lock and leave' style accommodation. These uses would also provide a form of centrally managed, long-term accommodation for retirees.
- Camping and caravan facilities with access to the coastal foreshore.
- Conservation reserves to protect the wetlands, mangroves and remnant vegetation on the islands.
- Preservation of low-key foreshores free from development and the development of pedestrian walkways for beach access.
- Development of a 9-hole public golf course including clubhouse facilities.



- The islands offer an opportunity for future residential and tourism uses in the area. A fish processing plant may constrain future planning for the locality, it is identified that these areas are exposed to storm surge and cyclone events.

The Structure Plan was adopted by Council in October 2014 and approved the WAPC in December 2014. The implementation of the structure plan, including integration into the new local planning scheme is depicted in **Figure 21**.

### 3.7.3 EAST CARNARVON AND KINGSFORD STRUCTURE PLAN

The East Carnarvon and Kingsford Structure Plan provides a contemporary planning framework for the development and subdivision of the area including providing services, infrastructure and various land use activities and was approved by WAPC in November 2015. For residential land, the Structure Plan intends to deliver a mix of low density residential dwellings (between 600-1000) and rural residential dwellings (between 290-380 dwellings).

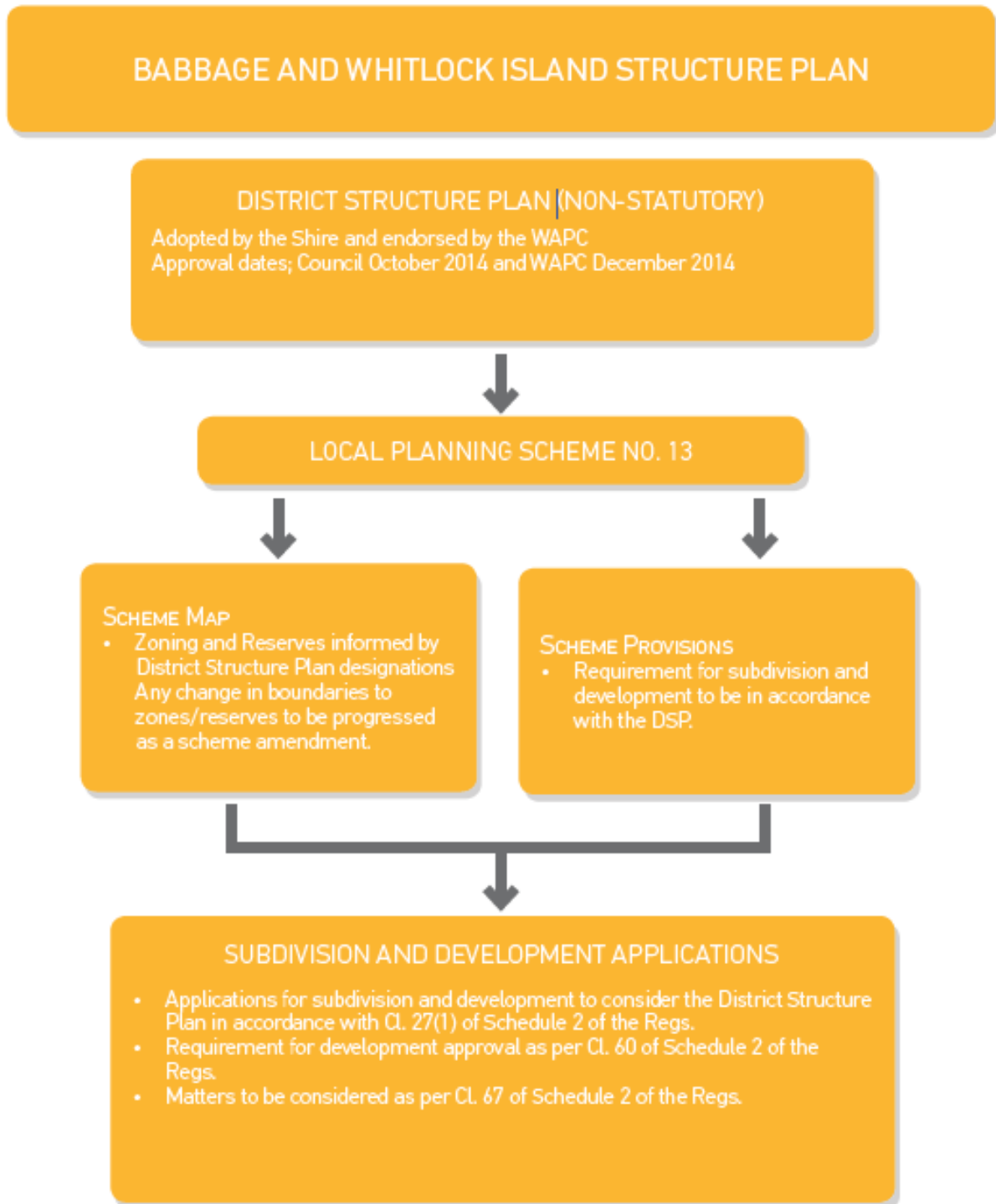
The Structure Plan also provides for mixed use, service commercial, industrial and horticultural development throughout the Structure Plan area. Implementing the Structure Plan is reliant on completing several future discussions and works to provide the necessary infrastructure for development to occur. This includes:

- Preparing a District Water Management Strategy;
- Design guidelines for the area;
- Water Corporation support for relocating the WWTP and the provisions of reticulated sewer to the area; and
- Completing the necessary documentation for establishing developer contributions under SPP 3.6.

The implementation works above should be considered in preparing the LPS and the new local planning scheme. Further, the new Scheme may incorporate the uses of the Structure Plan. The implementation of the structure plan, including integration into the new local planning scheme, will be determined in consultation with the WAPC (refer, **Figure 22**).



FIGURE 21 – BABBAGE AND WHITLOCK ISLAND STRUCTURE PLAN IMPLEMENTATION

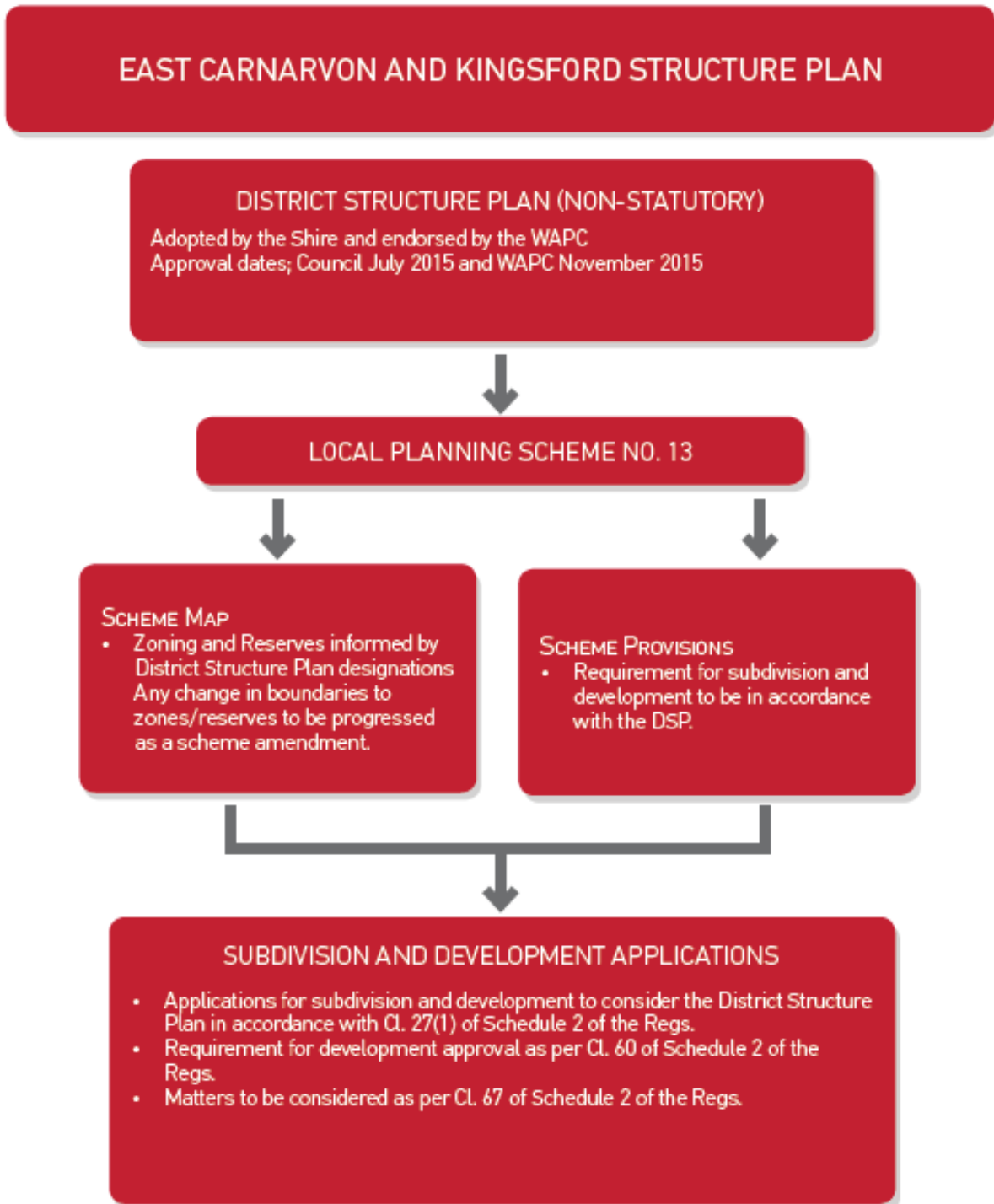


*Preliminary recommendations only for new scheme. Final drafting of text and maps to confirm designations and associated provisions.*





FIGURE 22 – EAST CARNARVON AND KINGSFORD STRUCTURE PLAN IMPLEMENTATION



*Preliminary recommendations only for new scheme. Final drafting of text and maps to confirm designations and associated provisions.*



### 3.7.4 CARNARVON AIRPORT STRUCTURE PLAN

The Carnarvon Airport Structure Plan seeks to outline the short, medium and long-term development scenarios for the Airport area and was approved by the WAPC in October 2014. The Structure Plan sets out the following vision for the Carnarvon Airport site:

*To develop an efficient and fully functioning airport of regional significance, supported by suitably located land uses including residential, recreation, community, industrial and commercial. Together, they will maximise Carnarvon's competitive advantage, promote economic development and job growth in such a way that strengthens the identity of Carnarvon.*

The Structure Plan provides a detailed planning framework across the Airport site and surrounds to guide the development of the area over the next 20 years. In particular, the Structure Plan seeks to encourage developing various uses including:

- A diverse and affordable range of housing options;
- Commercial and Industrial development; and
- Tourism accommodation and facilities.

Further, the Structure Plan also identifies land for public open space, community uses and associated infrastructure including extending the levee bank.

The LPS will reflect the approved Structure Plan and the review of the Scheme may incorporate the Structure Plan area as a 'Strategic Infrastructure' reserve with specific provisions for future development. The implementation of the structure plan, including integration into the new local planning scheme is depicted in **Figure 23**.

### 3.7.5 CORAL BAY SETTLEMENT STRUCTURE PLAN

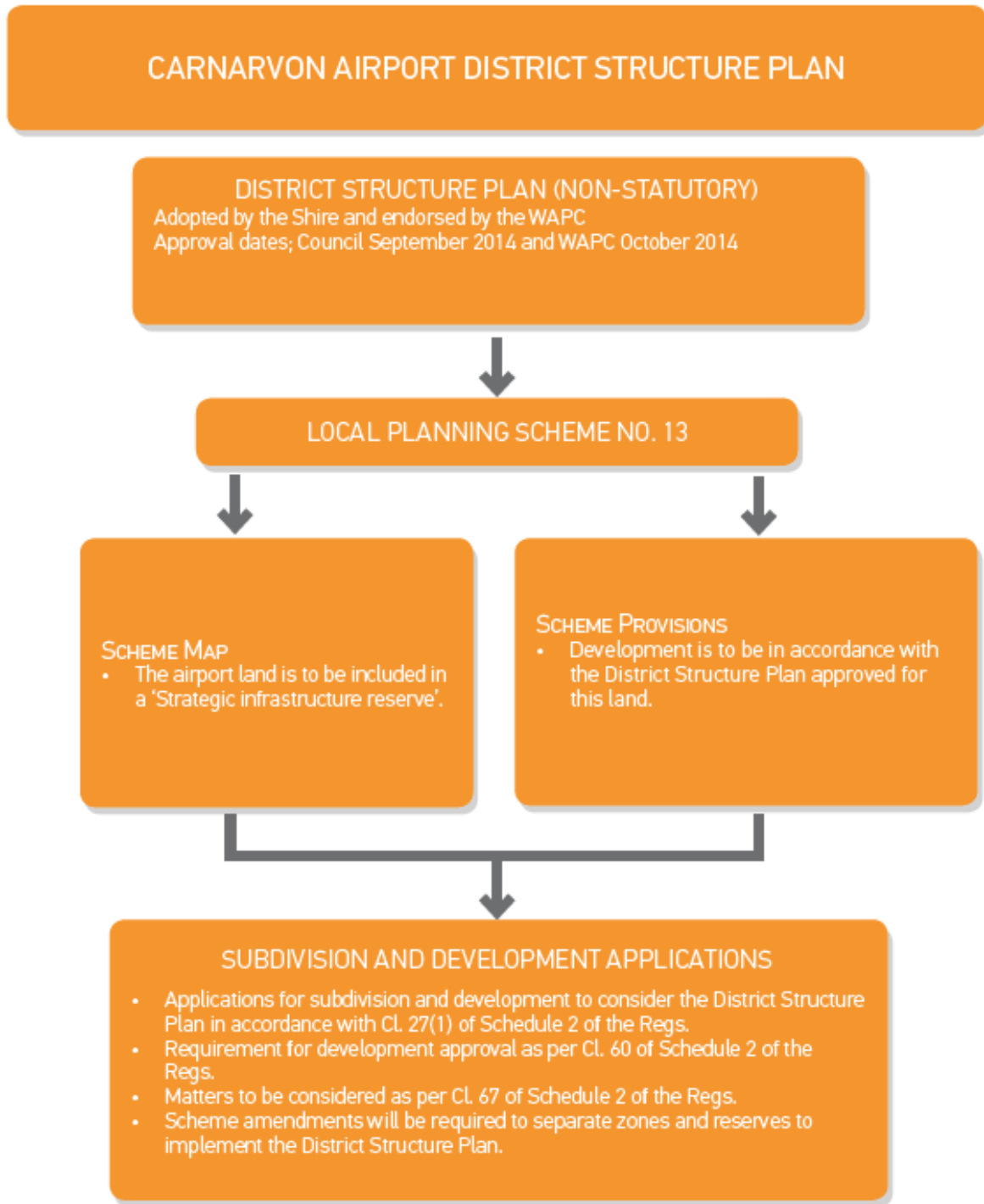
Coral Bay is identified as a tourism settlement and is under increasing environmental pressure through tourist visitation. One of the major considerations of the Settlement Plan is managing visitor populations and the adverse effect on environmental assets. Planning mechanisms such as a suspension on development, population threshold, Storm surge lines and height controls are sought to be implemented in response to these concerns. The Coral Bay Settlement Plan seeks to address planning and land use issues, and infrastructure coordination with Coral Bay for the next 30 years, including issues relating to day users.

The LPS will reflect the approved Structure Plan and the review of the Scheme may incorporate the Structure Plan area as an appropriate zone with specific provisions on subdivision and development.

WAPC endorsed the Structure Plan in March 2014 subject to Cabinet endorsement. After consideration, Cabinet endorsed the Structure Plan subject to Coral Bay remaining as a tourist destination on February 2015. As such, freehold subdivision for permanent residential accommodation within Coral Bay is not permitted. The implementation of the structure plan, including integration into the new local planning scheme is depicted in **Figure 24**.



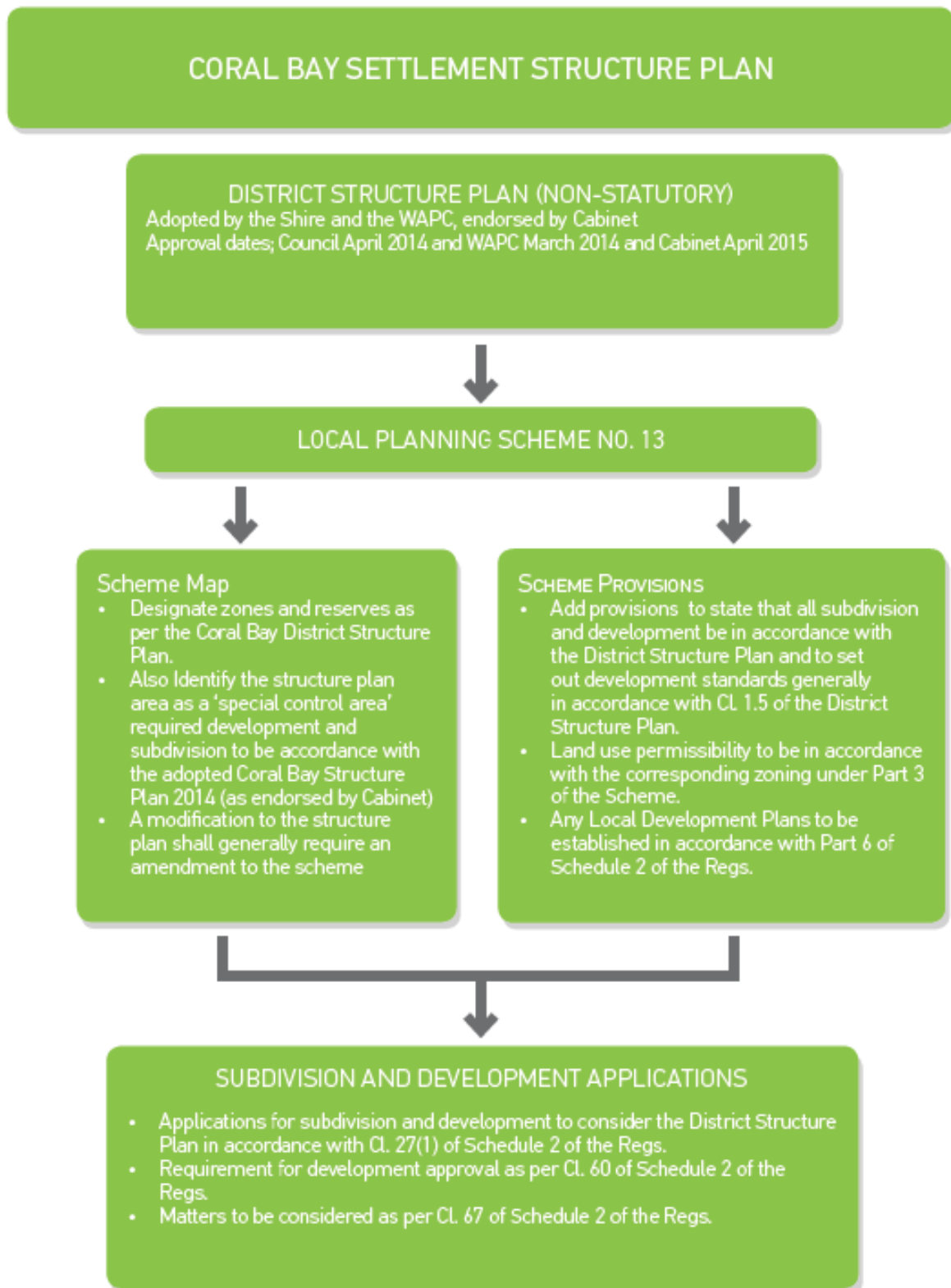
FIGURE 23 – CARNARVON AIRPORT STRUCTURE PLAN IMPLEMENTATION



*Preliminary recommendations only for new scheme. Final drafting of text and maps to confirm designations and associated provisions.*



FIGURE 24 – CORAL BAY SETTLEMENT STRUCTURE PLAN IMPLEMENTATION



*Preliminary recommendations only for new scheme. Final drafting of text and maps to confirm designations and associated provisions.*



### 3.7.6 BROWN RANGE SUBDIVISION GUIDE PLAN

The Brown Range Subdivision Guide Plan as adopted to provide a broad framework for the subdivision and development of the Brown Ranges area.

Since the adoption of the Guide Plan no development or subdivision has occurred which is likely a result of the significant constraints present at this location. These constraints include the undulating topography, flood plains and the absence of important infrastructure such as potable water and sewerage.

Further, there are a range of land uses within this precinct including the Mungullah Power Station, the existing motor cross track, and the landfill site with an increase in site area to accommodate future expansion. These existing land uses need to be considered, along with management of land tenure and prescribe separation distances to preserve such uses. At present the Brown Ranges precinct is largely zoned for residential use, which is not appropriate for the existing uses on the site.

Despite the constraints outlined above, the Brown Range area may present an opportunity for growth in the future, however it is likely this opportunity would require the preparation and a new structure plan informed by the necessary technical studies. For the purpose of the LPS, this area has been identified as a 'development investigation area'.

### 3.7.7 GASCOYNE FOOD BOWL DISTRICT STRUCTURE PLAN

The Gascoyne Food Bowl District Structure Plan was approved in 2016 and provides strategic guidance to land use and development of land which has been identified for horticultural development under the Gascoyne Food Bowl Initiative. Along with the capability of the land (risk to flooding and salinity and the availability to water), the identification of individual land parcels for release to the market have been based on ensuring the delivery of land parcels which will cater to future primary production and not rural living. The main purpose of the Structure Plan is to assist with the implementation of the planned release of over 400 hectares of land to increase the capability of Carnarvon's Horticultural Industry.

The Structure Plan recommends new zones and provides guidance on new scheme provisions, ensuring land is adequately sized for the purposes of primary agriculture and horticultural development to meet the market demands whilst maintaining control to protect and retain the land for such purposes without further subdivision into smaller ad hoc rural lots. The LPS will reflect the Structure Plan, with the identification of 'potential horticultural land expansions areas'. The review of the Scheme will incorporate the Structure Plan area as a special control area, with specific subdivision and development provisions.

## 3.8 IMPLEMENTATION OF SPECIAL CONTROL AREAS

Special Control Areas are proposed where there is a specific matter or planning instrument that needs to be considered in the planning for an area, including the determination of an application for development approval or subdivision approval – Special Control Areas are intended to apply, notwithstanding the zoning of the land and/or other specific Scheme text provisions. Examples may include buffers around a waste water treatment plant as a specific constraint, through to a requirement for subdivision/development to be in accordance with a structure plan.

It should be noted that in the case of the Fascine foreshore area the use of a Special Control Area in accordance with State Planning Policy 2.6 (Coastal Planning) and the associated Coastal hazard risk management and adaptation planning guidelines, a sea level rise of 0.9m by 2110 shall be required to be taken into account. It is recommended that this is advanced through a periodical review of foreshore planning in the local area, which includes recommendations contained within the Fascine Management Plan (2010).



### 3.9 IMPLEMENTATION OF INVESTIGATION AREAS

An investigation area should not be construed as a specific recommendation for the rezoning of land, until such time as further investigations have progressed and recommendations established (such as through the preparation of a structure plan or similar). Coastal areas, industrial/transport areas/current golf course will be included as investigation areas.



## 4 Key Issues

### 4.1 POPULATION AND GROWTH SCENARIOS



The latest estimated residential population statistics (ABS) for the Shire of Carnarvon show a population of 6,076 people in 2011 and 6,139 in 2013 which represents 1% growth during this period. This growth reflects a longer term trend of population increase that has occurred since 2008, at which point the population was 5,967.

Western Australia Tomorrow (Western Australian Planning Commission, 2015) contains population forecasts produced by the State Demographer. These are considered to be the State's official population forecasts. Forecasts have been produced for Shire of Carnarvon to the year 2026 and estimate that the for the median (Band C) and high growth (Band E) forecasts the Shire's population will 6,550 and 7,330 for 2026. For the purposes of this strategy the Shire is more optimistic about the potential population growth that may result from mining, industrial growth and completion of major infrastructure in the Gascoyne Region and delivery of local initiatives such as the Carnarvon 'Food Bowl'. Consequently, this strategy proposes three population scenarios:

- Scenario 1: a population of 6,682 people by 2030;
- Scenario 2: a population of 7,907 people by 2030; and
- Scenario 3: a population of 10,147 people by 2030.

It is important to note when considering the future growth scenarios that population statistics in this strategy are "population by residence", rather than "population by enumeration" figures. The ABS Census 2011 data identified a discrepancy of 53% between the population by residence (5787 people), and the population by enumeration (8856 people), meaning there is a significant increase in population for 6-8 months of the year during the holiday season, which has not been represented in this report.

#### **Scenario 1: Business as Usual – 6,682 People by 2030**

Under a business as usual scenario, calculated assuming a historical annual average growth rate of 0.5%, the Shire of Carnarvon's population would reach 6,682 people by 2030. This scenario reflects a slightly lower growth rate than experienced since 2008, which has been 1%. While a part of this growth will come from local births, most of this growth will need to occur as part of interregional migration.



### **Scenario 2: Moderate Growth – 7,907 People by 2030**

Under a moderate growth scenario, comprising an annual average growth rate of 1.5%, the Shire of Carnarvon's population would reach 7,907 people by 2030. This scenario will require a greater level of intervention to encourage growth. While a component of this growth will come from local births, again most of this growth will need to occur as part of interregional migration.

### **Scenario 3: High Growth – 10,147 People by 2030**

Under a high growth scenario, comprising an annual average growth rate of 3%, the Shire of Carnarvon's population would reach 10,147 people by 2030. This scenario will require significant investment in the local economy, establishing new businesses and providing new and upgraded infrastructure. Most of this growth will need to occur as part of interregional and interstate migration.

### **Capacity to accommodate growth scenarios**

To gain a general understanding of the potential capacity of currently zoned residential land and future residential land to accommodate population growth the Department of Planning has undertaken a broad assessment of the development status of current and future residential land. The assessment of development status identifies land as being 'developed' or 'capable of substantial further development' as described below:

**Developed:** 'developed' land is broadly considered as land where development exists or where the necessary infrastructure and services to accommodate development exist. Subdivision is generally consistent with its zoning, however existing urban areas that could potentially accommodate increases in density through urban infill are considered to be 'developed.'

**Capable of substantial further development:** Land 'capable of substantial further development' consists of undeveloped or underdeveloped land on greenfield sites, where subdivision reflective of its zoning is yet to exist. In some instances, however, land may have conditional subdivision approval or be part of a broader structure planning process that still needs to be finalised. It is important to note that the development of areas that are currently considered to be capable of substantial further development may be subject to a number of constraints; including scheme amendments, structure planning, infrastructure provision, environmental and heritage issues.

TABLE 12 – DEVELOPMENT STATUS OF RESIDENTIAL AND FUTURE RESIDENTIAL LAND IN THE SHIRE OF CARNARVON

	TOTAL (HA)	DEVELOPED (HA)249	CAPABLE OF SUBSTANTIAL FURTHER DEVELOPMENT (HA)
Residential	728	249	479
Future Residential	33	0	33
Residential and Future Residential	761	249	512





As identified above, 728 ha of zoned residential land exists in Carnarvon, of which 479 ha (about 66 per cent) is considered to be capable of substantial further development. Residential land around the town centre is mostly developed. However, there are considerable undeveloped centrally-located parcels fronting the fascine at Brockman, and between the existing residential area of South Carnarvon and the boat harbour. Eastern areas of the settlement, particularly East Carnarvon, Kingsford and Brown Range, are where most of Carnarvon's undeveloped and under-developed residential-zoned land is situated. Despite their status in the local planning scheme, more intensive development in some of these areas will require provision of essential service infrastructure and further structure planning.

There is an additional 33 ha of future residential land identified, nearly all of which has been proposed for special residential purposes in the East Carnarvon and Kingsford District Structure Plan 2014. This includes the potential intensification of some existing rural-residential areas.

The estimated capacity of residential and future residential land capable of substantial further development is considered in Table 13. It considers three scenarios that are based on land being fully developed at different average residential densities (R10, R20 and R30). Under these density scenarios, potential lot yields and additional population yields have been calculated. From this, an overall potential population capacity has been estimated for each of the three density scenarios.

TABLE 13 – ESTIMATED CAPACITY OF RESIDENTIAL LAND DEEMED CAPABLE OF SUBSTANTIAL FURTHER DEVELOPMENT IN CARNARVON SETTLEMENT LAND-USE PLAN

ESTIMATED CAPACITY OF RESIDENTIAL LAND DEEMED CAPABLE OF SUBSTANTIAL FURTHER DEVELOPMENT IN CARNARVON SETTLEMENT LAND-USE PLAN				ESTIMATED POPULATION CAPACITY		
Relevant land use category	Area (ha)	Average density	Potential lot yield <sup>1</sup>	Current population <sup>2</sup>	Potential population yield from additional lots <sup>3</sup>	Estimated total population <sup>4</sup>
Residential	479	R10	3,114	6,098	7,474	13,572
		R20	6,227	6,098	14,945	21,043
		R30	9,341	6,098	22,418	28,516
Residential and Future Residential	512	R10	3,329	6,098	7,990	14,088
		R20	6,656	6,098	15,975	22,073
		R30	9,985	6,098	23,964	30,062

<sup>1</sup>The 35% of land necessary to support land requirements for public open space and streets (Liveable Neighbourhoods, 2007) has been factored into these figures.

<sup>2</sup>Shire of Carnarvon 2015 Preliminary Estimated Residential Population (Australian Bureau of Statistics, 3218.0 – Regional Population Growth 2014-15).



<sup>3</sup>The population yield per dwelling is calculated at 2.4 people per dwelling unit (average people per household for the Gascoyne SA3 – Australian Bureau of Statistics, 2011 Census).

<sup>4</sup>The 'estimated total population' is the sum of the 'current population' and the 'potential population yield from additional lots' columns.

Based on the current extents of zoned residential land and land identified for future residential purposes, there appears to be a sufficient amount of land in Carnarvon capable of substantial further development to cater for the population growth anticipated to 2030 under proposed population scenarios 1, 2 and 3.

Whilst the availability of residential land is not considered to be a limitation in accommodating population growth, the provision of community facilities; health and education and infrastructure such as sewer and availability of water would be the key areas of consideration in ensuring the needs of a growing population are met.

Within the context of an ageing population, pressure and demand for care and the increasing diversity of care will continue to be a key issue, regardless of the growth rate scenario. At the same time the ageing of the workforce will exacerbate any workforce shortages in critical areas. It is therefore important that those sectors are appropriately invested in to ensure that younger, skilled workers are moving into the industry, continuing its contribution to the local economy.

## KEY PLANNING CONSIDERATIONS – GROWTH SCENARIOS

- The delivery of wastewater infrastructure shall form part of the critical considerations in the planning for individual development/Structure Plan areas.
- Different scenarios of population, decline/stabilisation/growth needs are intrinsically linked with a wide range of other matters, including business investment confidence, access to education, healthcare and housing etc.
- Infill of existing urban areas should be considered, where practical and appropriate. There are significant areas already identified for increased densities that have not been subdivided and/or developed to their potential.
- Meeting the key requirements of a desirable place to live, which include: quality health care, education and training options, job opportunities, business and investment opportunities, and a broad range of lifestyle choices including art, sport and recreation will assist in facilitating and catering to growth.
- Significant areas of centrally located vacant waterfront land potentially available for appropriate development.
- Population growth under all three scenarios can be accommodated within the areas that have been planned for consolidation (as mentioned above), subject to the delivery of the necessary infrastructure.



## 4.2 TOURISM



Tourism is an important industry, worth nearly \$190 million annually to the Gascoyne – the Region's greatest industry earner. There has been extensive reporting on the State and direction of tourism in the Shire of Carnarvon (and the Region more broadly) by various agencies. Besides reviewing this background information, related agencies were consulted as part of preparing this LPS.

The *Coral Bay Settlement Structure Plan 2014* has been considered and endorsed by Cabinet on 16 February 2015. The Cabinet decision specifically states that "*Coral Bay remaining as a tourist destination and not allowing freehold subdivision for permanent residential accommodation*"

The Gascoyne Development Commission has recently prepared the Gascoyne Tourism Strategy, which includes the Shire of Carnarvon. The Strategy identifies projects for the Shire that will address the following key issues:

- An extreme need for caravan park facilities;
- Desire for better community identification of Carnarvon as a tourist town;
- Current absence of incentive to visit Carnarvon from the NWCH;
- Insufficient promotion of the Shire's location relative to Shark Bay, Mount Augustus and the Kennedy Ranges;
- The Shire's tourist proposition is insufficiently defined and there is insufficient clarity the optimum tourist group is being marketed to;
- Carnarvon is perceived to lack flair and it can be difficult to find food and beverage outlets.

Despite the issues, tourism is seen as critical to the viability of the Region. As described in Tourism WA's *Tourism Development Priorities for Australia's Coral Coast 2010-2015*, tourism:

- Encourages diversified regional economies
- Develops strong and vibrant regional communities through employment and business opportunity
- Can benefit indigenous communities
- Can be compatible with environmental objectives

According to Tourism WA, Carnarvon's visitors are generally '*elderly travellers on extended stay, families on short-term holidays and travellers passing through Carnarvon heading for nearby or further destinations.*'

Surveys have shown the Gascoyne Region's '*remote wilderness experience and exceptional climate*' (Tourism Profile Investment Profile, Gascoyne Development Commission) are the primary factors that attract tourists to the Region. Quality fresh food has also been recognised as a potential/emerging attraction (Tourism WA).

The main impediments to tourism for the Shire include the difficulty, distance and cost of access. Once in the Gascoyne, the distance between attractions mean that tourist access is difficult for those without



access to a private motor vehicle and can become costly due to distances travelled by those with access to vehicles.

Inadequate accommodation supply to satisfy demand is also an impediment in peak season. Previous studies have noted the highly seasonal nature of tourism in the Region and that this has been an impediment to developing new tourist accommodation. This is evident within the Shire of Carnarvon, particularly at Coral Bay.

Some business types are extremely reliant on tourism to succeed. By way of example, accommodation and café/restaurants rely on tourism for their business by a factor of 50% (Tourism WA). We note in this regard earlier comments on the difficulty of finding places to dine in Carnarvon.

The Shire of Carnarvon accommodates 107,000 overnight visitors per year, which is the 3<sup>rd</sup> highest rate of visitation in the Gascoyne Region (though more recent estimates put the figure closer to 140,000). Further research on the proportion of visitors to various locations within the Shire would be helpful to determine areas in most need of infrastructure improvements and those where the tourist proposition needs improvement. The average length of stay in the Shire of Carnarvon is some 6-8 nights.

For the tourist offer, we note work by Tourism WA shows that Coral Bay is in a period of 'stagnation' with a high level of attraction but low level of access. Part of Coral Bay's access issue is, as identified above, inadequate accommodation to meet demand. The Carnarvon town site is described by Tourism WA as being within a period of 'consolidation' with a medium rating for all key performance indicators (access, accommodation, attractions/activities and amenities).

There is perceived potential for additional higher end accommodation within the Carnarvon town site, particularly at the waterfront. However, the feasibility and demand for such accommodation requires detailed consideration.

The Ningaloo Coast Regional Strategy: Carnarvon to Exmouth notes that camping occurs both in the Ningaloo Marine Park and on pastoral leases outside the Cape Range National Park and this has been managed in various ways by the different pastoral lessees. Although there is some level of management of the tourism activities, the increasing number of campers is leading to some degradation of the coastal environments.

According to the Ningaloo Coast Regional Strategy: Carnarvon to Exmouth:

- *"All camping along the coast will be formalised and managed across a range of experiences within remote and semi-remote settings.*
- *Managed camping will assist in the reduction of environmental degradation (vegetation clearance, ad hoc creation of four-wheel drive tracks, waste management, etc.) caused by unmanaged camping.*
- *Camping may include the delineation of single camp sites to multiple camp sites, camping grounds, small groupings, small commercial operations such as cabins or eco-camp proposals in association with coastal features or activities.*
- *Rationalisation of some existing campsites to prevent long-term environmental damage may occur and lead to defined and managed campsites that do not detract from the natural and remote visitor experience. In the short-term, much of the camping will continue to occur on pastoral leases. Management of camping will occur through a partnership with pastoral leaseholders, relevant state agencies, local government and visitors camping along the coast".*

It is recommended under the above strategy that there is a considered focus on the continued preparation of management plans and similar to guide activities along the coast, whether this is



through a stand-alone management plan (such as the Blowholes management plan) or a formal part of lease arrangements with the Department of Lands. Each specific activity location along the coast will need to be considered on its merits in order to determine suitability for retention into the future, and will have regard for a range of factors including community values, recreational opportunities and environmental conditions. As an overall principle, consistent with the Ningaloo Coast Regional Strategy, there should be a continued focus on the consolidation of activities into appropriate nodes. It is considered most appropriate that the management of these tourism nodes be undertaken through an overall Coastal Management Strategy which provides guidance of the future use and development of these nodes regardless of tenure. Additional control and management can be provided through conditions of lease for land under pastoral lease.

Tourism WA has identified several priorities for tourism in the Gascoyne Region, with the following considered relevant to the Shire of Carnarvon:

- Facilitate the development of worker's accommodation in Coral Bay
- Facilitate the development of tourism accommodation in coastal nodes
- Ensure tourism related development is incorporated into the proposed Carnarvon Waterfront development
- Improve interpretation in the Ningaloo Reef Region
- Facilitate the development of indigenous tours, services and products in the Region

Besides the above, the Carnarvon Tourism Alliance has identified gaps and opportunities for tourism within the Shire. Those relevant to this LPS are highlighted below.

### **Critical Gaps**

- Carnarvon's limited accommodation and peak utilisation in July is potentially forcing some visitors to leave Town and/or camp in areas unwelcomed by the Shire and community.
- Directional signage in and around Carnarvon to popular day use sites, public amenities and to major routes is sporadic and inconsistent.
- Car parking in and around Town for long vehicles is lacking and not well signposted.
- Carnarvon's year-round average temperature of 26°C is truly Mediterranean however there is limited opportunity for visitors to dine and socialise outdoors.
- Day trip self-drive routes to popular sites could be better signposted to raise awareness of the options and to help guide visitors along recommended routes.
- Carnarvon has no high-end accommodation such as resorts, eco-safari or luxury apartments.
- Carnarvon has limited capacity to accommodate bus/coach groups due to high demand from year-round business travellers.

### **Main Opportunities**

- Broadening Carnarvon's product offering by introducing a kayak trail, whale/dugong tours, Gwoonwardu Mia experiences, Fascine aquatic activities, socialising within the cafes/restaurants/pubs, seafood-produce themes, and more effective promotion of a wider range of day use sites and day trip destinations.
- Enhance the OTC experience by providing a detailed Management Plan to guide future use/development of the OTC heritage precinct.

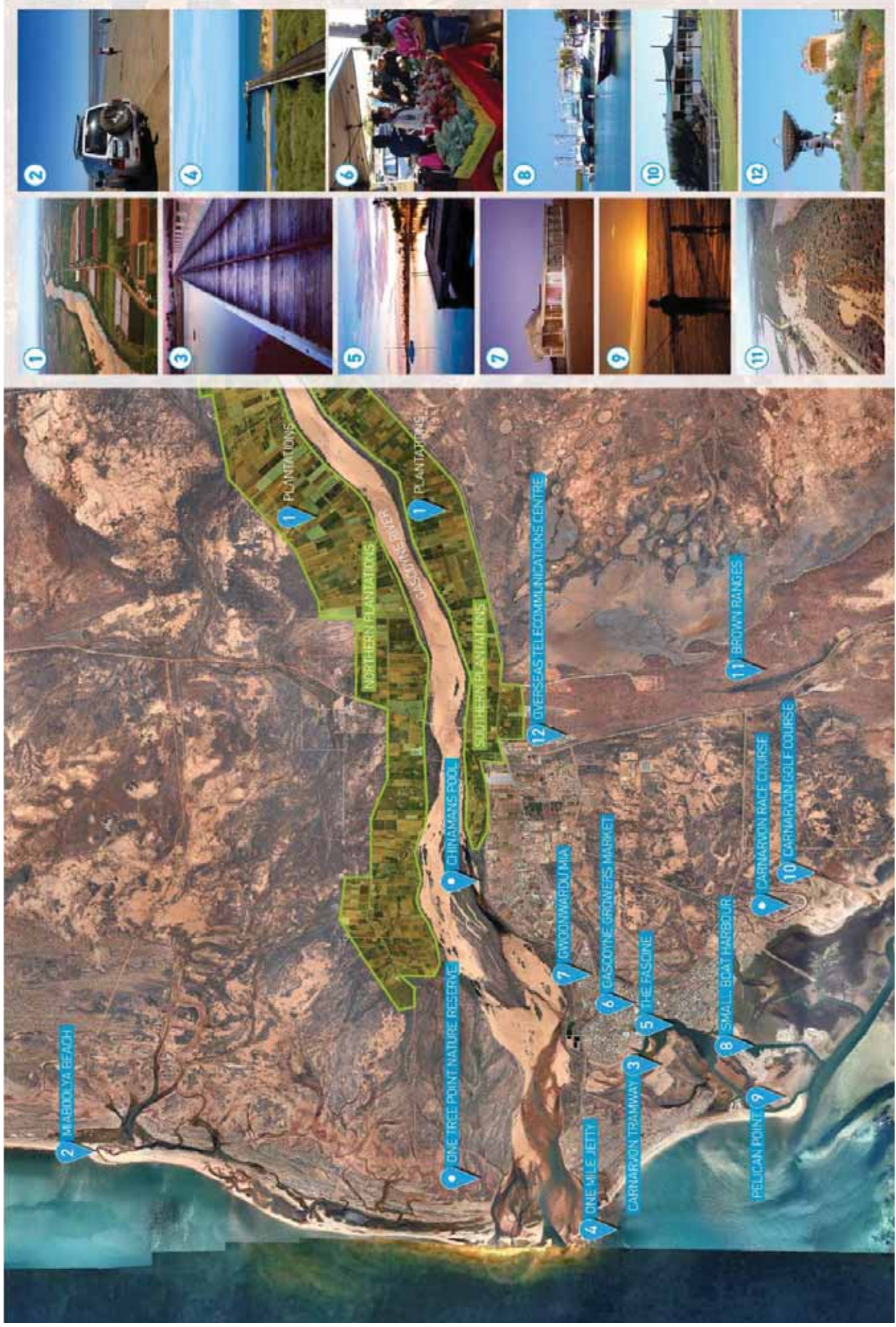


- Increased camping accommodation including new overflow and short-stay transit area.
- Collective bargaining by stakeholders and local agencies to have Government release Unallocated Crown Land or vacant crown land for accommodation development.'

#### KEY PLANNING CONSIDERATIONS – TOURISM

- Focusing tourism to existing established nodes is considered to reduce issues regarding management and is aligned to strategic direction. Whilst acknowledging that management of the coast will be heavily determined by land tenure under separate legislation, it is important that the Shire establish a Coastal Management Strategy which provides adequate control over the management of land under the Shire's control and provides guidance for the consideration of future development applications within tourism nodes, regardless of tenure.
- Insufficient accommodation in peak periods –Coral Bay is in particular need of workers' accommodation.
- The seasonality of tourism in the Region is an impediment to new accommodation.
- Remote wilderness is a key attraction of the Shire. There also are opportunities to enhance the area as a food destination.
- Distance from Perth is both an attraction and a disincentive to development.
- The demand for and feasibility of higher end accommodation in Carnarvon and the Shire is a potential challenge.
- Limited café/dining opportunities exist, especially outdoor opportunities.
- Whilst the delineation of areas to be excised from pastoral leases has been largely finalised, the management arrangements associated with this land is yet to be determined. The management and tenure arrangements of this land will assist in determining the best path forward in terms of facilitating additional accommodation opportunities.
- As mentioned above, additional tourism and workers' accommodation should be focussed around existing nodes (including Coral bay). Advancement of a review of an updated regional Coastal Management Strategy is a matter that will need to be considered into the future and will assist in providing guidance (regardless of tenure) to the appropriate location of additional accommodation.

FIGURE 25 – LOCAL TOURISM CONTEXT PLAN





## 4.3 HOUSING



The affordability of housing has significant flow-on impacts on community wellbeing and the economy. For example, local businesses rely on housing affordability as this increases employee recruitment and retention. Further, housing affordability contributes significantly to attracting and retaining future and existing residents as they are better able to match their needs to the range of housing that is available. Overall, the availability of affordable housing indirectly affects many other aspects of the local community including vibrancy, access to services and community spirit and morale.

### **Current Housing Supply and Demand Situation**

The *Gascoyne Housing Needs Assessment* undertaken by Pracsys in 2013 identifies the existing housing stock in the Shire is considered to be affordable with housing costs as a proportion of income. The average cost of renting accommodation in the Shire is significantly lower than the State equivalent. Similarly, average monthly mortgage repayments in the Shire are notably lower than those around the State. However, the availability of suitable housing to meet the requirements of existing and future residents is limited.

As identified in the *Gascoyne Housing Needs Assessment* (Pracsys, 2013), the mismatch between the supply and demand of housing in Carnarvon can be summarised by the following points:

- There is a surplus of 1 and 2 bedroom dwellings.
- There is an undersupply of 1 and 2-bedroom public housing.
- There is an undersupply of three bedroom dwellings.
- There is an undersupply of 4+ bedroom dwellings.
- Approximately 13.1 % of the total housing stock comprises caravans, cabins, houseboats, tents or other non-stand forms of housing.
- Approximately 13.1% of the total housing stock is unoccupied.

A general shortage of suitable housing has been identified within Carnarvon. It is worth noting however that new structure planning areas in East Carnarvon and Babbage and Whitlock Islands present opportunities for the release of land for residential development. It will be important that future residential development focusses on addressing the gaps within the current market through providing a diversity of housing that meets the identified needs and demands of the local community.

### **Factors Affecting Housing Supply and Demand**

The disparity between the supply and demand for different types of housing may have arisen due to several factors including:

- the age of the existing housing stock;
- the significant changes in the local demographic and lifestyle during this period; and
- the lack of incentives for private investment in the low-end of the market due to the high costs of construction.

This creates a 'catch 22' whereby to cater for this disparity, the construction of new housing stock is required to service demand, however, due to construction costs, this presents a significant financial





barrier. High costs of construction are common in many regional areas, especially in northern Australia, primarily due to two factors:

- The availability of builders, labour and materials and isolation from major population centres; and
- The requirements under the BCA for houses to meet cyclone wind ratings, which are applicable in Carnarvon.

Public housing availability is a key issue that has been identified, including for the Aboriginal community at Mungullah. The balance is likely to be due to a shortage of affordable housing, combined with a lack of aged care facilities. This has resulted in a significant pressure on Government agencies to provide such accommodation. Securing Government funding to facilitate public housing is a key barrier in providing opportunities for people to 'age in place'.

### **Opportunities**

- Provide a diverse range of housing typologies within new structure planning areas that cater to the needs of the local community.
- Explore opportunities for urban infill or redevelopment of existing housing stock on land that is already serviced, potentially reducing overall construction costs and providing greater opportunities for affordable housing.
- Prepare a public open space strategy that could identify unused open space areas for future use.
- Prioritising projects that have direct links with economic objectives may make funding easier.

### **KEY PLANNING CONSIDERATIONS – HOUSING**

- The cost of building new houses is increased by the need to satisfy building requirements associated with cyclone wind ratings (typically adding 6% to the construction cost). Additionally, the construction cost for new homes is further increased by the unavailability of local builders, labour and materials.
- The cost of housing within the Shire has led to 13.1% of people living in inappropriate housing. However, it should be noted that census data relies on data from the August 2011. As Coral Bay's peak and shoulder tourism seasons are May to October and the wider Shire's peak tourism season is June to August, tourists and seasonal workers would have a significant impact on the results. A sizeable proportion of Coral Bay's short-stay accommodation is comprised of chalets, cabins and campsites (assumed to be largely occupied on Census night, given it coincided with peak tourism season), as opposed to more established units or serviced apartments.
- The high construction cost excludes potential home builders from accessing schemes such as Key Start to aid in financing the construction of new homes.
- There is a general shortage of public housing, particularly for aged care. In addition, the existing public housing stock comprises a significant number of dwellings built greater than 30-40 years ago and are in need of replacement.
- The Shire has a vacancy rate of 13.1% of the total dwelling stock which may be attributed to holiday homes and the like. However, a proportion of unoccupied dwellings are attributed to the poor quality/standard of some housing.
- Uncertainty and cost, coupled with the absence of clear incentives for developers to provide for housing at the lower end of the market, has led to a defined reluctance to pursue the housing market in the Shire.
- Excluding unoccupied housing and other housing types (caravans, cabins, houseboats, tents, etc.) there was a shortage of 71 dwellings in 2013. The key shortages are for 3 and 4 bedroom dwellings at the low and mid-range of the market. Conversely, there is an oversupply of 1-2 bedroom dwellings in the low to mid-range and four bedroom dwellings in the high price range.
- Land release within structure planning areas such as East Carnarvon will cater to any housing demand. However, the key barrier will be the delivery of required infrastructure.



## 4.4 HEALTH SERVICES



Access to health care is a basic need for local communities and ultimately impacts both directly and indirectly on community wellbeing. Several studies, investigations and research by various State Government agencies has been undertaken to determine a suitable service plan for the Gascoyne Region. Key priorities have previously been identified, as detailed in the 'Service Plan 2010-2020: Gascoyne Health District' (WA Country Health Service – Mid-west), to be as follows:

- Aged care, residential and home care needs
- Patient assistance travel scheme
- Drug and alcohol prevention programs
- Dental services
- Ambulance service
- Mental health services
- Accessibility of care and delivery of at home care

### **Existing Health Services**

The Carnarvon Multi-Purpose Health Service is the primary health care provider within the Shire of Carnarvon. Other services available to the community and the Region more widely include the Multi-Purpose Service in Exmouth, nursing posts in Coral Bay and Burringurrah, a Silver Chain nursing posts in Denham and Carnarvon. Further, there are various community based services that are also available. The Carnarvon Medical Service Aboriginal Corporation (CMSAC) is also a key health provider to Aboriginal people residing in Carnarvon and surrounding areas.

An alcohol and drug treatment facility has also recently opened, located at the Carnarvon Multi-Purpose Health Service site. That facility provides a dual purpose – a 'sobering up' service combined with a community drug service team that offers specialist counselling and prevention services. This facility is also the base for the Mid-West Community Drug Service team.

There is a growing need to consider the future health services requirements as a result of a population that is experiencing demographic change, particularly for an ageing population and the growing tourism industry. It is also important to consider the role of Carnarvon as a regional service hub and its ability to meet the needs of wider Region.

### **Future Needs**

There is an identified need to diversify the health care options available as well and to better integrate health services that are already being provided within the Shire. In Carnarvon, community and primary health services are provided from different areas of the multi-purpose health service, and given the design constraints of the current building, they cannot be amalgamated.

Due to the level of remoteness, it is challenging to attract and retain specialists for high care and to obtain the necessary funding for the improvements to existing care facilities. It is therefore likely for the foreseeable future that highly acute patients will continue to be transferred to larger regional centres such as Perth, where specialised services and medical equipment is available. The integration and amalgamation of health services, wherever possible will assist in capitalising on the shared use of



medical facilities and equipment, resulting in additional funds being allocated to diversifying the health offer.

Specialised services such as physiotherapy, mental health, rehabilitation aged care, hydrotherapy pools, etc. have also been raised by the local community as being key gaps within the health care sector. Where possible the Shire and other stakeholders are encouraged to work with Government agencies in gaining funding to provide specialised community services that can be provided in the local area through existing facilities.

A key barrier currently facing the Shire is providing satisfactory health care opportunities to the ageing population. This is having a direct impact on population retention as the elderly and sometimes the entire family are forced to relocate to larger regional centres to gain the care and specialised services they require.

It will be important the Shire continues to support Government agencies, seek funding where available and form partnerships with service providers to ensure that a more integrated approach is undertaken in delivery health care.

**KEY PLANNING CONSIDERATIONS – HEALTH SERVICES**

- Access to adequate health care is considered to be a basic need for community wellbeing and may be an important consideration for people deciding whether to move to/continue residing in the local area.
- An ageing population will add pressure on district health services to manage health conditions more commonly seen in older population groups.
- Some of the local community have difficulty accessing mainstream services, due to living in remote areas and a lack of transport and/or financial difficulties.
- Allocating resources appropriately and efficiently is an ongoing consideration in ensuring health services are provided adequately and in a timely manner.
- Continued support to other Government agencies in providing culturally sensitive alternative care, including early intervention and preventative community and outreach services to Aboriginal communities.



## 4.5 EDUCATION AND TRAINING



Education plays an important role in maintaining and strengthening a skilled community. The availability and offering of post-secondary education within a community is commonly linked to population trends due to education and labour migration.

Although there are some emerging opportunities for education and training, some challenges remain for the Carnarvon area – some are common to regional towns across Western Australia and others are more localised. Access to various senior-secondary and post-secondary education opportunities remain limited. There are particular challenges associated with providing quality education opportunities from school years 9 onward.

Access to limited to education and training opportunities (particularly senior-secondary and tertiary) has the potential to result in significant direct and indirect costs to both the family and the local community. Chief among these costs are young people and their families potentially leaving the Shire to pursue education in larger urban centres such as Geraldton and Perth.

Early stakeholder engagement for the LPS identified several areas of concern on the limited education opportunities in the Shire including:

- Impact on community morale;
- Business investment;
- Retaining skills; and
- The impacts on overall population numbers in the local area.

### **Current Education & Training Status**

The Gascoyne Region is the only Region in Western Australia without immediate access to university education. It is therefore not surprising that post compulsory education participation rates in the Gascoyne Region are well below the State's average. The only post-secondary education facility offered in Carnarvon is provided by the Durack Institute of Technology. A new campus is proposed within Carnarvon which will enable the Institute to expand its range of courses. Future courses that may be offered include trades training, in areas such as construction, mining and automotive; health and community services; hospitality; agriculture; computing etc. The expansion of this post-secondary education opportunity will be important in developing a more comprehensive education offer to the local and wider community, with a reduced need to travel to major urban centres.

The Carnarvon Community College commenced in 2009, resulting from the merger of the Carnarvon Senior High School, East Carnarvon and Carnarvon Primary Schools. The State Government funded amalgamation was intended to eventually provide students with better access to a wider range of programs, courses and facilities. The amalgamation of the campuses has been divided into three stages. Stage 1 and 2 comprise new pre-primary, primary and general school facilities as well as a new trade training centre specialising in metal fabrication and building construction. Only funding for Stage 1 has been secured so far, resulting in the inability for the amalgamation process to be properly completed.

It has been identified that both St Mary's and the Carnarvon Christian College are nearing capacity. Looking into the future, it is important that land use planning and service delivery are suitably progressed to accommodate growth into the future – particularly with an increased focus on providing senior-secondary opportunities.



It is understood that consideration has in the past been given to develop an 'education precinct' within the local area to provide opportunities for the clustering of education opportunities and realising potential synergies and benefits. While progress on achieving a specific precinct has been limited, it is a matter that presents further opportunities into the future and is considered worth of potential investigation.

Despite the above, there have been some progressive changes to the education approach over recent years, representing a shift in the attitude towards education and a growth towards an improved education offer. Some examples of ventures undertaken over recent years include:

- the Open Learning Centre at the Carnarvon High School;
- initiatives through the Education and Training Regional Industry Advisory Committee;
- the Aboriginal School Based Training Program;
- At Risk Students Attraction and Retention Strategy; and
- improved vocational programs.

It is important that these sorts of initiatives and programs continue to be invested in and promoted throughout the local area.

### **Opportunities for the Local Community**

Providing flexible, responsive and innovative education and training enables people to develop skills necessary for them to reach their full potential. One challenge facing young people has been the lack of access to vocational education and employment and training opportunities, particularly for Aboriginal kids. However, as mentioned above, over the last few years many programs and activities have been established through partnerships to boost the local youth's aspirations. Continuing to facilitate local youth involvement in local industries through support pathways from education and training to employment and enterprise development is important. This process aids in fostering a greater level of interest in education of local youth and providing greater opportunities to them. Opportunities may also exist for increased coordination and liaison with Commonwealth funded initiatives, such as the Remote Jobs and Communities Program providers who provide specialised training for job seekers, work experience and job placement services in remote Australia.

There are employment and career opportunities within the local area associated with the agricultural sector. Other major employment 'industries' are tourism, health care, education and training. Having a diverse economic base for the local area should be considered as a strength and opportunity looking into the future. Achieving alignment over time between education/training and local employment opportunities remains both a challenge and opportunity. There is potential for to develop 'life skills' training for students that will provide students with job-readiness skills to prepare for their transition into the workforce and extracurricular activities that target youth development and readiness.

The new Durack Institute campus in Carnarvon, although not likely to be co-located with the Carnarvon Community College, may provide greater capacity to deliver a skilled workforce to the local economy and wider Gascoyne Region. The location of the centre and its integration in the surrounding resources and facilities is an important consideration. With limited funding available and the number of students too small to justify a university campus within the Shire, it is crucial that high schools and the Institute continue to invest in career training programs. This will ensure that youth know their options and how they can position themselves to stay in their communities and have their career success.

Increased opportunities for 'distance education' may deliver some benefits for the local community, when considered as part of an overall suite of education and training initiatives that potentially allow young people to stay in the local area.



Existing education and training institutions must recognise the limited career opportunities available to rural youth. In particular, it is important the existing education and training institutions provide sufficient support and opportunities to gain skills that could be used in a career path in their local community.

#### KEY PLANNING CONSIDERATIONS – EDUCATION AND TRAINING

- Access to a variety of senior-secondary and tertiary education continues to be limited and has been identified as a key constraint in retaining residents, particularly families with children at secondary school age and youth who may be more enticed by job opportunities in larger regional centres. The importance of education opportunities needs to be recognised in terms of both direct and indirect impacts.
- The provision of flexible and innovative education and training is crucial in fostering a greater level of interest in education and providing greater opportunities.
- Ongoing diversification into the type of education and vocational programs on offer is important in developing a local community that is skilled in existing and emerging employment sectors.



## 4.6 AGEING IN PLACE



With 33% of the Shire's population within the 50 years or older age cohort, health facilities and aged housing will need to adjust to not only cater for Carnarvon's ageing population over time, but also the wider Region.

Carnarvon is effectively a 'hub' for the surrounding pastoral areas and townsites and is intended to provide a satisfactory level of services to these areas, including places where the aged can properly be cared for. Existing issues within the Shire surround providing satisfactory accommodation for the elderly, health care and support services. There are Independent Living Units available (managed by the Gascoyne Memorial Foundation), and limited accommodation within the permanent care facility at the Carnarvon Multi Service Centre for elderly residents needing a high level of care.

There is an apparent gap in services for those elderly residents who require a low level of care, but are unable to live independently. Many elderly residents are forced to move away from their home towns to urban centres such as Geraldton and Perth due to the lack of opportunity to 'age in place'. Distances to these alternative housing and care facilities are considerable, isolating the elderly from their family, friends and local communities.

### **Aged Care Facilities:**

The existing permanent care facility located at the Carnarvon Multi-Purpose Health Service is the only aged care facility available to the local community. This facility is at capacity, out-dated and considered inadequate in servicing the ageing population, particularly in the long term.

In 2012, Verso prepared a report for the Shire which investigated and measured the needs and demands of the local community. This report also identified the required services into the future and quantified the need for additional aged care within the Shire. This report concluded the preferred option would be to provide a sustainable level of development through a residential aged care facility. Ideally this would be pursued in conjunction with aged persons housing (Independent Living Units) and other services in the Carnarvon town centre to serve the local community and the wider Region. This integrated approach required the capital funding from housing and service providers for initial construction and for the continuing viable operation of residential aged care and related activities.

Since the report, the absent willingness of a private provider to operate a residential aged care facility in Carnarvon has added further stress on the elderly requiring aged care. Subsequently, in 2014 the State Government allocated funds to the WA Country Health Service to provide a new 24 bed residential aged care facility at the Carnarvon Multi-Purpose Health Service. The Shire's preference has previously been for residential aged care facility to be provided independently from the Carnarvon Multi Service Centre (as recommended by Verso). However, the Shire supported the initiative on the basis that additional 'high-end' care is urgently required. Further, future provision of an additional 'low-end' residential aged care facility has become an integral feature in planning for Independent Living Units to meet the increasing regional need.

Not long after, State Government funding was awarded in providing a feasibility and design report into creating a new standalone residential aged care facility. This has been jointly funded by the Gascoyne Development Commission, Carnarvon Shire and the Gascoyne Memorial Foundation. The planning for this site is being progressed. The delays and complications in acquiring funding or having any willingness from a private provider in developing aged care has led to a prolonged delay in meeting the current need. That said, there remains an opportunity to provide suitable facilities into the future.



**Alternative and Adaptable Housing Options:**

In conjunction with the above aged care facilities, the Shire may need to continue to facilitate the delivery of housing options that extend beyond that of traditional aged care facilities. There are opportunities for the Shire to encourage greater diversity of housing stock in new residential development areas which have potential to provide alternative and affordable housing options and support services within close proximity. Investigations should be undertaken into the benefit and feasibility of financial incentives or density bonuses for developers and aged care providers. Such an approach could incentivise development of diverse and adaptable housing options for people within areas that offer high amenity and accessibility to services and lifestyle activities.

It is acknowledged the expectations of older people in 20 years will be very different. The changing aspirations of the ageing population will result in the elderly wanting to make their own choices about where and how they live with consumer preferences to be to stay in “communities of interest”. It is therefore important that future housing development considers the full needs of the ageing population and not just their care needs.

**KEY PLANNING CONSIDERATIONS – PLANNING FOR AN AGEING POPULATION**

- There are indications that there is an increasing ageing population which has implications on the type of housing that needs to be provided to enable people to ‘age in place’.
- As a result of limited age care facilities in the Shire, particularly between Geraldton and Karratha, there is significant pressure on the existing aged care facility in Carnarvon, namely the Carnarvon Multi-Purpose Health Service.
- Presently many of the older population have to move to Geraldton or Perth to attain the level of care they require, isolating them from their friends, family and local communities.
- Encouragement of building designs that to cater to the practical needs of the elderly will allow people to ‘age in place’.
- There is the opportunity to set aside land for further community facilities to meet any identified needs at the time that future planning proceeds, such as aged care. Any future structure planning areas will need to identify the level of demand for such land uses to meet the needs of the community.
- There is scope for a wider range of land use options in the ‘Residential’, ‘Residential Development’ and ‘Townsite’ zone, including aged and dependent person accommodation which is currently a ‘use not listed’ under the Local Planning Scheme.
- Council should continue to advocate for the development of ‘low-end’ residential aged care and Independent Living Units in identified sites.





## 4.7 COMMUNITY SPIRIT/MORALE



The Shire of Carnarvon, much like many other regional towns, has faced challenges in recent years that have impacted both local business and the community's outlook on the future.

Many rural and remote communities experience challenges by definition, by virtue of their locations and associated access to goods and services, as well as employment opportunities and income. This can have a 'domino effect', resulting in a declining population, loss of skilled community members, ageing population as young people move to larger urban centres, loss of financial capital and impacts on social environments. As a result of these considerations, the wellbeing of a community can be significantly affected.

It is evident, through discussions with the local community and as recognised by the Shire, there is sometimes a lack of optimism from some residents towards the future of Carnarvon. The closing of some key retail outlets, combined with a forecast of a reducing population, have led to a negative view of the town's future. There remains optimism within some sectors of the community. However, there is a need to address aspects of the low community morale so opportunities and goals for the town can be fully realised.

The possible future outlook for Carnarvon is multifaceted and there are several positive aspects of the Shire of Carnarvon that can be capitalised on to provide the Shire and the community with a dynamic future. The location, climate, lifestyle, success of horticulture and local businesses are some of the many elements the Shire of Carnarvon has to offer. It is important the stakeholders continue to work together in promoting their local area, develop optimistic opportunities for businesses and local residents through strong partnerships and work towards their common goals. Embracing change and encouraging innovative ideas in promoting Carnarvon will be important in realising the town's full potential.

There are several short-term opportunities available to the local community that may assist in lifting the community spirit and morale, including:

- Recognising local achievements on a regular basis.
- Completing several projects and celebrating this within the community.
- Creating opportunities for open dialogue between different segments of the local community including residents, business owners and Local Government representatives.
- Creating more spaces where different people can meet and feel safe at all times.
- Celebrating local business and local produce.

The Shire completed a Strategic Community Plan in 2011 that sets out a 10+ year vision for the Shire. The Community Plan was developed with community input and shares the Shire's vision and aspirations for the future and sets out actions to 'work towards a brighter future for the Carnarvon community.' The Plan contains strategies under several objectives addressing economic, Environmental, Social, Cultural and Civic Leadership outcomes. Many of those strategies address aspects of community spirit and morale and it may be useful if those strategies, and associated actions, are reviewed to ensure the strategies are effective and relevant in moving forward.

Consistent with SPP No.3 in planning for the future of settlements, there will need to be a strong focus on building partnerships between State and Local Government, service providers, industry groups, developers, businesses and the community in the land use planning and design process.



#### KEY PLANNING CONSIDERATIONS – COMMUNITY SPIRIT/MORALE

- It is evident that there is an existing level of community concern due to the closing down of key retail outlets, combined with forecasts indicating a population decline. Various action strategies and opportunities are available to the Shire, community, business owners and other Government representatives in lifting community spirit and morale. These opportunities may include, but are not limited to, the following activities:
  - Community events such as market days or cultural days.
  - On-going stakeholder engagement and communications in respect of planning matters.
  - The establishment of a community leadership network and strategic partnerships.
  - Improved signage along the main road network.
  - Increased funding for education providers.
  - There are many actions and strategies available, which will in turn require consideration of costs and benefits. Overall, it is important the community gets the sense that the area has a positive future as a basis for attracting and retaining residents, as well as attracting business investment.



## 4.8 HORTICULTURAL EXPANSION



Horticulture is a major industry within the Shire and capitalises on the Region's comparative advantages relating to soil, climate and an absence of pests, and disease. Importantly, the Shire boasts a 'seasonal advantage' whereby it supplies southern areas (of Western Australia) and eastern states with 'counter season' produce.

According to the Gascoyne Development Commission:

In 2015 the Gascoyne horticultural industry produces approximately 38,242 tonnes of produce worth \$71.7 million. Of this, fruit accounted for 13,012 tonnes worth \$19.9 million and vegetables 25,230 tonnes of valued at \$51.8 million. The primary centre of production is the 'Carnarvon Horticulture District', which is situated on the Gascoyne River Delta. The district extends over some 1,000 – 2,000 hectares of land with roughly 50% of this area under crop. The district is situated some 4 kilometres northeast of the Carnarvon town centre. With a share of 14.8%, *Agriculture, Forestry and Fishing* is a dominant employment industry, however further information is required on the specific proportion of horticulture as an employer and whether it is growing or contracting.

Production and quality rates within the district have increased over time through the application of technology. Water and maintenance costs nevertheless remain core challenges for local producers.

Horticulture is strongly associated and identified with the Gascoyne Region because of its quality, range and availability of produce. Emphasis of Carnarvon's role and status as the centre of high quality food production in the Region has the potential in becoming a key strength for tourism planning into the future.

Traditionally, the district has cropped winter vegetables, tropical and sub-tropical fruit. The State Government is working with operators to test opportunities to increase production within both fruit and vegetable overall and on crop variety. This will be facilitated by:

- Recently completed upgrades to the district's irrigation pipeline as well as further expansion.
- The 'Gascoyne Food Bowl Initiative' (initiative), which will result in the release of additional land (and water) for future priority agriculture and horticultural development in the aim of expanding the industry.
- Under the Initiative, the advancement of some 400+ hectares of land is potentially available for horticultural activities into the future.

For the Gascoyne Food Bowl Initiative to progress, a number of procedural steps prior to the release of this additional land. For example, there are several outstanding matters including land tenure (Vacant Crown Land to Freehold in some cases), Native Title and amendments to the Shire of Carnarvon's Local Planning Scheme (subject to supporting technical reports). The Gascoyne Food Bowl District Structure Plan has been approved by the WAPC in 2016 and informs the future rezoning to Intensive Horticulture under the Shire's new Scheme (or any other wording for this zone as provided for in SPP 2.5 and the *Planning and Development (Local Planning Schemes) Regulations 2015*.



As part of early stakeholder engagement for the LPS, some existing producers expressed reservations about the proposed expansion of horticulture, on the following matters:

- Potential impacts on existing land values;
- Water availability for both existing and new areas;
- The risk of multinational companies buying the expansion areas and pushing existing, smaller producers from the market through economies of scale; and
- The complexities associated with governance and management arrangements for borefields.

It is understood that these various concerns and issues will be addressed through the detailed planning for the Initiative. Formal consultation will be undertaken during the structure planning process which will ensure that these matters are addressed and appropriately managed as part of the structure plan.

**Other Considerations:**

'Horticulture' is important to the local identity of Carnarvon as well as for visitors and it can be stated that it is also important to the 'tourism' industry. The horticulture industry also generates a need for transportation and water infrastructure.

Furthermore, there is a demand for compliant season workers' accommodation to support existing and expanded horticultural activities in Carnarvon and the Wooramel locality. Current issues of non-compliance require provision of land use classification and enforceable standards to be inserted in a new Local Planning Scheme.

**KEY PLANNING CONSIDERATIONS – HORTICULTURE**

- The enhancement and marketing of the Shire as a 'Food Bowl' would not only benefit the horticulture industry, it would also generate benefits across a range of other LPS considerations such as tourism, business etc.
- Future expansion of the horticultural activity within the Shire is to be guided by a structure plan to ensure that environmental issues and water allocations have been appropriately considered. Any land released to the market is to be zoned 'Intensive Horticulture' consistent with the existing plantations.
- A need for sufficient infrastructure, including water supply, to reinforce existing and new production areas.
- A need for effective transport routes to ensure effective access to market.
- A need to manage the impacts that natural disasters such as bushfire, drought, flooding and cyclones have on horticulture.
- A need for ongoing stakeholder engagement as part of the planning process.
- Demand for compliant season workers' accommodation to support existing and expanded horticultural activities in Carnarvon and the Wooramel locality.
- A need for strategic direction regarding land use and development control for pastoral land holdings.



## 4.9 COASTAL PLANNING



There is nearly 400 kilometres of coastline within the Shire of Carnarvon. While representing a significant asset and presenting various opportunities, there is a need to acknowledge there may be competing economic, social and environmental demands that need to be carefully considered as part of planning for the future.

For the planning for the Shire of Carnarvon with a 10-15 year horizon, there are several key considerations including but not limited to the following:

- The existing policy context;
- Land management responsibilities, including interactions with pastoral leases;
- The planning for settlements;
- The planning for tourism;
- Specific recommendations for the preparation of a new town planning scheme.

Remote wilderness experience and exceptional climate are the main attributes that draw visitors to the Gascoyne. While the visitor's desire to "get away from it all" and "escape the cold" are key motivators, it is the unique natural attractions of the Region that are the undeniable drawcard.

### **State Planning Context:**

*State Planning Policy 2.6 –Coastal Planning (SPP 2.6)* provides a State-wide framework for the coastal planning in Western Australia. SPP 2.6 recognises the varied and unique nature of coastal environments and accordingly the need for a flexible approach to be embraced for coastal planning and management. SPP 2.6 is applicable to the entire coastal environment within the Shire of Carnarvon.

For the coastline extending to the North of the Carnarvon Townsite (**Figure 26**), *State Planning Policy 6.3 – Ningaloo Coast (SPP 6.3)* has established the following four key objectives:

1. Provide State agencies, Local Government, community and proponents with clear guidance regarding acceptable and sustainable development on the Ningaloo Coast.
2. Maintain the Ningaloo Coast as an all-seasons recreation and nature-based tourism destination and limit growth with managed staged development, to ensure that the community continues to enjoy a remote and natural experience.
3. Preserve and protect the natural environment and enhance and rehabilitate degraded areas within the environment.
4. Consolidate future residential, commercial, higher-impact tourism and industrial development in the towns of Carnarvon and Exmouth and provide strategic directions for their future growth.

SPP 6.3 is required to be read with the Ningaloo Coast Regional Strategy (2004) and the Regional Land Use Plan (refer overleaf). In broad terms, the LPS does not seek to seek variation to the objectives and framework established under both SPP 2.6 and 6.3. The regular review of these State Planning Policies is however supported to ensure that they remain contemporary and effective.



### **Local Planning Scheme and Policy Context:**

There are a series of policy areas identified under the Shire's current Town Planning Scheme No. 11 generally stretching along the coast.

#### **5.3 COASTAL POLICY AREAS**

##### *5.3.1 General*

*1.3.1.1 In considering any development within the Coastal Policy Areas, Council shall be mindful of;*

- i. need to ensure development recognises any environmental constraints which may exist, particularly with respect to mangrove communities, inter-tidal mudflats, coastal dune areas vulnerable to erosion, and samphire flats; and*
- ii. any constraints associated with servicing which may restrict development opportunities. Where considered appropriate, Council will seek advice and comment from relevant public authorities.*

*1.3.1.2 In a broader context, Council is mindful of its priority role in managing the coastal resource for the benefit of the general community, ensuring that development is for the long-term good of that community, and that development will not generate any ongoing environmental, social or economic costs over and above the benefits any proposal may also be seen to generate.*

*5.3.1.3 Any decision made within the Coastal Policy Area will be assessed in accordance with the Policy statements in Section 5.3.5 and provisions related to specific Special Uses described in Schedule No. 1 - Special Use Sites.*

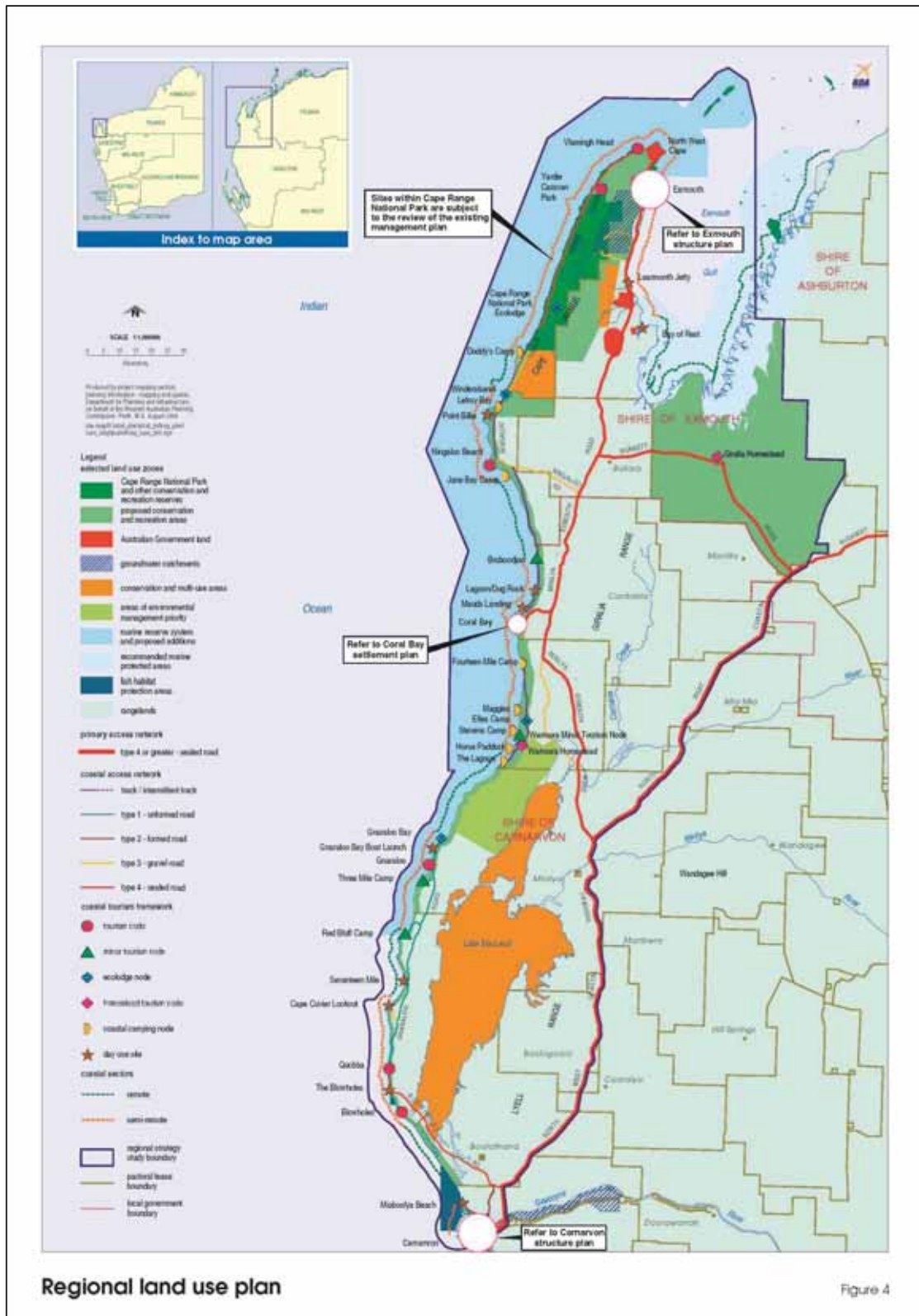
There are provisions in the Scheme relating to each development area, providing broad guidance and objectives. There is also the overall scheme objective set out in Scheme 11:

*"To ensure any tourist development along the coast is compatible with broader environmental conservation and land use objectives as defined in the Shark Bay Region Plan, the Ningaloo Marine Park Management Plan, and is consistent with coastal management and planning objectives contained within the Country Coastal Planning Policy as published by the Department of Planning and Urban Development."*

Specific recommendations in planning for the future, including the preparation of a new town planning scheme, are outlined later in this Section.



FIGURE 26 – SPP 2.6 EXCERPT



Source: Ningaloo Coast Regional Strategy Carnarvon to Exmouth 2004



## **Management Responsibilities along the Coast**

The management regime for the coastal is a key consideration in the planning for the coastal environment within the Shire of Carnarvon. Among other matters, the issue of the exclusions and excision of land for public purposes from relevant pastoral leases along the coast has been a matter of stakeholder dialogue for several years.

In 2000, several amendments made to the pastoral provisions of the *Land Administration Act 1997* ('the LAA') came into effect. One of these amendments concerned excluding land for a 'public purpose' from a pastoral lease to be renewed on 1 July 2015. The primary purpose of this provision was to accommodate land required by the (then) Department of Conservation and Land Management (CALM) for conservation purposes. However, the amendments to the LAA also included provision for other Government agencies and Local Government to exclude land for a public purpose. The Shire was invited by the (then) Department of Land Administration (DoLA) and now DoL to consider any land within an existing pastoral lease needed for a public purpose.

In 2002, Council in recognising the need to provide several public recreational places and public access routes to its coast (despite the management burden this might place upon it), resolved as follows:

*"... that it desires to excise a coastal strip of land for public purposes from relevant pastoral leases along the coast from 1 July 2015. The coastal strip should extend from the Carnarvon Shire Council south boundary to the North boundary. The coastal strip should be generally 2-3 km wide and should follow the coast from south to North."*

In December 2002, DoLA advised of several proposed pastoral exclusions within the Shire for a public purpose. Exclusions were proposed from the coastal frontages of Ningaloo, Cardabia, Warroora, Gnaraloo, Quobba, and Booltathana pastoral leases on the Shire's northern coast, and from the coastal frontages of Brickhouse, Edaggee and Wooramel pastoral leases on the Shire's southern coast. Exclusions were also proposed from the Cardabia pastoral lease for townsite expansion of Coral Bay, and from the Doorawarrah pastoral lease and other parts of the Brickhouse pastoral lease for horticulture.

Land excluded from the coastal frontages of the Ningaloo, Cardabia, Warroora, Gnaraloo (the coast North of Gnaraloo Bay) pastoral leases was to be excluded for conservation and recreation purposes and vested in the Conservation Commission. The reason for this was that this coastal strip largely adjoined the then Ningaloo Reef Marine Park contiguous with the Shire boundary. Land excluded from the frontage of the Boolathana pastoral lease was to be excluded for recreation and tourism and jointly vested in the Departments of Fisheries (DoF) and (then) Planning and Infrastructure (now DoP). Land excluded from the coastal frontages of the Gnaraloo (the coast south of Gnaraloo Bay), Quobba, Brickhouse, Edaggee and Wooramel pastoral leases was to be excluded for recreation and tourism development and jointly vested in the Shire and the DoF.

Released in 2004, the Ningaloo Coast Regional Strategy Carnarvon – Exmouth (NCRS) articulated a policy position for managing excised areas. The NCRS for the Ningaloo 'coastal strip' (containing the Gnaraloo and Quobba exclusions) sought to have the land vested in the Conservation Commission WA.

In May 2005 the Shire was advised the pastoral exclusion program concluded and the Minister for Planning and Infrastructure had approved several pastoral exclusions within the Shire. It is understood the only difference between the approved list and the early list of proposed exclusions was that DPAW (formerly CALM) became the acquiring authority for the Edaggee exclusion instead of the Shire and the DoF jointly. While the Shire was the nominated management authority for the coastal strips south of Gnaraloo Bay to the southern boundary of the Quobba pastoral lease, and for the coastal strip south of Oyster Creek to the southern boundary of Wooramel (excluding the Edaggee coastal strip) the process to enact has not yet been completed.





In September 2014, the Shire of Carnarvon sought to reaffirm its previously established position in respect of coast areas, as follows:

*“That Council advise the DoL with respect to the Shire’s position as a management authority over the exclusion areas from pastoral leases (including Quobba Station) that it seeks to –*

- 1. Be an active manager in partnership with another appropriate State agency that could include the DPAW;*
- 2. Establish a memorandum of understanding with the DoL (and possibly DPAW) prior to July 2015 to define the areas of responsibility associated with the management over the exclusion areas, including the Quobba pastoral lease.”*

For the Blowholes Reserve, a management plan has been developed to provide a framework to guide future planning, development and management of recreation and tourism at the Blowholes Reserves. In particular, the Management Plan sets out guidance until the year 2035 as the Blowholes transitions from shacks to new chalets with formal leases and enhanced management. The Blowholes Management Plan was adopted by the Shire in September 2014 and at the time of writing the Management Plan was before the Minister for Lands for consideration.

In planning for the future, there are several relevant considerations, including:

- Decision-making responsibilities, ensuring the matters of significance to the local community are given due and proper consideration.
- The financial/resources burden associated with the active management of coastal areas.
- Public liability and insurance issues, including risks associated with coastal cliffs and the road network.
- The potential to attract external funding.
- The degree of consistency in planning for coastal environments.

Establishing a level of direction and certainty for the future management of coastal environments is an important short-term action to be led by the relevant State government agencies. The creation of public conservation and recreation reserve will be part of the coastal management process and its extent needs to be formally determined by the Department of Lands. Public reserves will be managed jointly by the Department of Parks and Wildlife and traditional landowners under a joint management agreement. Pastoralists along the Ningaloo coast will also have an ongoing managing role. Unallocated Crown land will be administered by the Department of Lands. It is acknowledged that the above management arrangements operate separately to the land use planning for the coast and will progress in parallel to the Shire’s Scheme review.

The management of exclusion areas and the responsibilities of authorities (whether it be the Shire or any other authority) is crucial in the future protection of the coast. It is therefore important that the new Scheme consider how the coast can best be managed from a land use and development perspective, regardless of tenure and separate management arrangements. It is recommended that the proposed 'Environmental Conservation' or 'Recreational' strip (as formally determined by the Department of Lands) of the coast within the Shire of Carnarvon be classified to recognise its conservation values and the more specific considerations required for coastal areas. The 'Environmental Conservation' reserve is considered to assist in the control and management of land, regardless of tenure and will assist in managing the informal use of land for various tourism uses which are occurring outside of identified nodes.



PICTURE 5 – CARNARVON BLOWHOLES



### **Planning for Coastal Access:**

As part of the planning for coastal environments, vehicular access (both private and access) is a key consideration. In appropriate locations, the overall coastal road network should cater for continued or improved public access to the coast.

It needs to be acknowledged the extent of coastal access can have a significant impact on the character of an area. Therefore, it is common to have various aspirations and concerns by different stakeholders including but not limited to individual landowners and leaseholders, members of the local community, visitors to the area and relevant authorities.

Specific design considerations may include:

- Potential access to areas suitable for viewing and recreation.
- Visual impacts of the infrastructure.
- The delineation of areas for public and private access.
- Potential conflicts with wildlife.
- Potential conflicts with stock.
- Ongoing maintenance responsibilities.

Having regard for the above-mentioned matters, road planning needs to be progressed in a strategic manner and in conjunction with stakeholders.

The *Gascoyne Roads 2025 Regional Road Development Strategy* (2007) recognised the importance of coastal access as follows:

*“A need exists for road access to extend along the coast between Point Quobba, Ningaloo and Exmouth to assist tourism and service industry development planned for towns along the coast. Between Pt Quobba and Warroora, the distance to the coast from NWCH is considerable and the area in between is occupied almost entirely by Lake MacLeod. The only reasonable option for coastal access is the development of a good standard road near the coast linking the various facilities and places of interest”*



There remains the opportunity to establish a stronger linkage from areas from within the Shire of Carnarvon though to Ningaloo and Exmouth. It is recommended the merits of this medium to long-term opportunity be properly considered further in the future and a formal decision made by the Shire.

### **Other Relevant Sections (Settlements and Tourism)**

The SPP6.3 – *Ningaloo Coastal* has provided broad guidance for planning for settlements along the coast including consolidating future residential, commercial, higher-impact tourism and industrial development in the towns of Carnarvon and Exmouth. This Section should be read with the other specific Section on ‘planning for settlements’ and ‘planning for tourism’;

Under both SPP 2.6 and SPP 6.3, any proposed development on the coast is required to be supported by a coastal planning strategy and foreshore management plan.

### **Preparation of New Local Planning Scheme**

The LPS is intended (in part) to provide a strategic context for the review of existing local planning schemes 10 and 11, and in turn preparing a new Local Planning Scheme. Under Section 77 of *Planning and Development Act 2005*, the Local Government is required to have regard for SPPs 2.6 (Coastal Planning) and 6.3 (Ningaloo Coast) in preparing a new scheme. In particular, the following matters may need to be considered in preparing a new scheme:

- A contemporary set of objectives for coastal planning for the coastal environment, including but not limited to opportunities for tourism activities.
- A contemporary set of local planning policy provisions in the Scheme, giving effect to any relevant local planning policy.
- Identifying appropriate zones and reserves for depiction on Scheme maps, generally reflecting any agreed outcomes regarding management arrangements established through considering pastoral leases and areas excised.
- A contemporary set of objectives for the different zones within the Scheme area, reflecting the need to comprehensively plan for coastal environments.
- A contemporary set of development requirements, for matters such as building heights, setbacks and similar.
- A contemporary set of provisions on places of heritage significance, ensuring that proper consideration is given to such matters in decision-making processes.
- A contemporary set of provisions related to ‘exempted development’, such that there is clarity about the approval requirements for developments proposed within coastal environments.

### **KEY PLANNING CONSIDERATIONS – COASTAL PLANNING**

- There is a need to recognise the extensive coastline within the Shire of Carnarvon and the sometimes competing demands on these areas.
- There is an existing State framework for coastal planning, through *SPP 2.6 – Coastal Planning* and *SPP 6.3 – Ningaloo Coast*.
- Land tenure/management arrangements for coastal areas are matters of critical importance and are currently being considered through the processes associated with pastoral lease renewal. Public reserves are being managed jointly by the Department of Parks and Wildlife and traditional landowners under a joint management agreement. Pastoralists along the Ningaloo coast also have an ongoing managing role. Unallocated Crown land is administered by the Department of Lands.



## 4.10 INFRASTRUCTURE AND SERVICES



The growth of Shire's population and key economic drivers such as the horticultural industry and tourism will continue to catalyse the need for new and upgraded infrastructure to serve the local population and business community. Further, the growth of population and tourism will support the expansion and viability of key infrastructure currently servicing the area, such as the Carnarvon Airport. As the local economy experiences growth and diversification there will be a demand for upgraded services such as telecommunications and access to high speed internet.

### Water

Existing infrastructure for the town's water supply includes a disinfection treatment plant, pump stations, distribution mains and reticulation mains. The major storage tanks are located at Brown Range and have a capacity of 4,500KL. There is a further 1.8GL held in reserve for future town water supply. The East Carnarvon and Kingsford areas have access to scheme water through existing water mains and the licensed allocation is adequate to cater for the current system demands. There is some additional capacity; however, upgrades will be required to the water mains to ensure adequate efficiency.

The growth in visitation to Coral Bay may require expanding the existing desalination plant in the long term.

A key barrier to future residential as well as commercial and industrial development is the efficiency of water infrastructure. In particular, this relates to the ability to provide adequate water pressure to satisfy fire safety requirements. This has already impacted the ability of local businesses and community facilities to expand.

The existing irrigation distribution system provides water security for fruit and vegetable producers in the Carnarvon area and provides the basis for future expansions of the Gascoyne Food Bowl. The system is capable of servicing the proposed 400 hectare expansion as well as the 1200 hectare Carnarvon horticulture precinct it currently services. However, the consistency of water supply is the key issue for horticultural activities rather than access to water. The lack of consistent supply has a profound impact on the ability of growers to make accurate investment decisions about crop expansion. Further, this lack of consistency also impacts the ability of growers to negotiate contracts due to uncertainty around supply.

### Sewer

Most of the existing Carnarvon townsite area is serviced by reticulated sewer. However, a large part of the South Carnarvon area is not connected to wastewater system. This is chiefly due to engineering difficulties and high costs associated with high water tables, black swamp (acid sulphate) soils and dewatering problems. Further, the East Carnarvon and Kingsford area currently have no access to sewer.

Water Corporation planning suggests the WWTP will be relocated around 2030, when the existing plant reaches its treatment capacity. The Water Corporation advises that:

- Ground and hydrogeological studies have been carried out on the new WWTP site.
- The new WWTP will be constructed to minimise odours and buffers will be defined by odour modelling.



- The southern WWTP site was selected following consultation with stakeholders and members of the community.
- Long-term Water Corporation planning for the East Carnarvon and Kingsford area indicates the area will be connected to a sewer reticulation system, which gravity drains to a new pump station and eventually into the new WWTP.

The absence of sewer infrastructure to South and East Carnarvon and Kingsford is a key constraint on future residential growth and significantly increase the cost of development. Currently the minimum lot size permitted for residential lots not connected to reticulated sewer is 2,000m<sup>2</sup>.

### **Power**

The existing Mungullah power station in Carnarvon has a total capacity of 18MW and has the ability to be expanded to provide for the Region's forecast growth. The power station is connected to the Dampier to Bunbury gas pipeline and consists of five diesel-fuelled generators and five gas-fuelled generators. The power station has also been designed to allow for adding renewable energy expansion in the future to increase generation capacity. The Carnarvon townsite is also supplied with power from a small scale photovoltaic facility. Outside of the townsite electricity is provided through private photovoltaic systems, wind farms and generators.

There is no formal plan to replace overhead power lines with an underground reticulated network in the Carnarvon Region but Horizon Power are retrofitting services where it is possible with available funds. According to Horizon policy, all new subdivisions should include underground power to ensure security and reliability of power supplies.

The construction and maintenance of local and regional infrastructure in the Shire has implications for several other components of this LPS, the most notable being tourism, business, horticulture and housing. The absence of adequate infrastructure to service the growth of these aspects of a community can serve as a significant barrier whereas the investment in improved infrastructure may serve as catalyst for local economic and population growth. Some particular examples include:

- Providing for reticulated sewer to enable the development and redevelopment of areas for residential growth;
- Upgrading and maintaining infrastructure to deliver the necessary water volume and pressure to facilitate the growth of local businesses including the horticultural industry;
- Upgrading and maintaining the local and regional road network to cater for the growth of the logistics and freight industry and capitalise on Carnarvon's unique location along the coast and in proximity to the NWCH;
- Facilitating the ongoing operation of the Carnarvon Airport to improve the frequency and financial viability of air services and aid the growth in the local tourism industry; and
- Advocating for improved telecommunications and information services infrastructure to allow for diversifying the local economy, facilitating the export of local produce and providing improved access to long distance education opportunities.

### **Renewable energies**

A specific use class has been included in the Town Planning Scheme for power generation, including renewable sources. The use class is a discretionary use in all zones, to provide flexibility in the exact locations depending on operational requirements and proponent aspirations.

According to the Office of Energy, Government of Western Australia (Renewable Energy Handbook, 2010), Carnarvon has the highest level of solar radiation in the world. A 1kW Solar PV System



installed in Carnarvon will produce 6kW of power per day. This is six times the rated capacity of a system. The average household consumption per day is approximately 15kW. Large scale solar plants should generally be located close to existing grid infrastructure.

There is a commercial wind farm operating in Coral Bay that generates 2.24 MW. There is also the potential for new facilities associated with wind energy to be developed in the future.

The North Western coastline of Australia has numerous inlets and bays that offer promising sites tidal energy opportunities. The development of tidal energy is disadvantaged, however, by the small range of neap tides, which is too low for power generation, and the impracticality of absorbing large amounts of intermittent power in a remote region without installing costly long transmission links to population centres.

### **Developer contributions**

Developer contributions shall be in accordance with Part 7 of the *Planning and Development (Local Planning Scheme) Regulations 2015*. In the preparation of the new scheme, the Shire will need to be cognisant of the standard/template 'Development Contribution Plan' provisions set out in the Regulations. In the future and in the instance that the Shire decides that there is sufficient rationale to establish a contribution plan in the future, a 'complex scheme amendment' would need to be progressed, providing an opportunity for stakeholder input prior to finalisation and implementation. State Planning Policy 3.6 provides an overall framework for the collection and expenditure of funds resulting from development related demands. Consideration would need to be given to the financial risks to stakeholders associated with the establishment and operation of a development contribution plan.

### **KEY PLANNING CONSIDERATIONS – INFRASTRUCTURE**

- Development outside of the existing town centre is constrained by the limited access to the local reticulated sewer network, however overall the WWTP is not expected to reach capacity until 2030 (the current Waste Water Treatment Plant is designed to service a nominal population of 9000 with a licensed treatment capacity of 1800 kL/d).
- The localities of Morgantown, the town centre, Brockman and parts of South Carnarvon are connected to the town's wastewater system. A large part of the South Carnarvon area is not connected to wastewater system. East Carnarvon and Kingsford area also currently have no access to sewer.
- Long-term Water Corporation planning for the East Carnarvon and Kingsford area indicates that the site will be connected to a sewer reticulation system, which gravity drains to a new pump station and ultimately into the new WWTP.
- There is currently no formal plan to replace overhead power lines with an underground reticulated network in the Carnarvon Region but Horizon Power are retrofitting services where it is possible with available funds.
- There is great potential for solar and wind energy activities within the region, and to a lesser extent, tidal power (tidal power is a more challenging venture compared to solar and wind power, but it is worth investigating).



## 4.11 BUSINESS AND EMPLOYMENT



An active, vibrant and growing economy is critical in both building and maintaining a strong community. The performance of the local economy directly affects several key areas relating to the growth and prosperity of a community including:

- The ability to earn a living;
- Developing skills and access vocational and technical training;
- Attracting and retaining new residents;
- Attracting new investment and sustaining existing businesses;
- Providing access to important services for the local community;

The ABS reports there were 665 registered businesses located within the Shire of Carnarvon in 2012. The profile was dominated by micro and small businesses, with just 159 businesses (or one in four) employing at least five people. With a share of 14.8%, *Agriculture, Forestry and Fishing* was the dominant employment industry in 2011, followed by *Retail Trade* at 10% and *Health care & social assistance* at 9%.

However, the support for locally owned businesses has declined in recent years and the extent of both retail and other goods available. This is attributed to the opening of the local Woolworths store which resulted in the closure of several locally owned businesses such as the butchers, grocery store and others. However, the town has also experienced the close of several retail chains in recent years including Target Country, Retravisio and Red Dot. This has further reduced the local availability of goods, which has subsequently resulted in residents either purchasing online or travelling to Geraldton to make certain purchases.

Based on consultation, it was clear the closure of these retailers has had an impact on the confidence of existing and potential local businesses. This decline in confidence relates to pursuing both completely new opportunities as well as capitalising on the closure of other businesses and the emerging gaps in market share. In particular, the tourism industry is seen as a major opportunity for local businesses to capitalise on as well as the imminent expansion of horticultural development.

Rio Tinto's Dampier Salt Mine at Lake McLeod has a current production capacity of 2.9 million tonnes per annum and has potential for future expansion.

The Shire of Carnarvon has an abundance of tourism activities and destinations available which, if capitalised on, could support the growth and expansion of support industries. Similarly, the horticultural expansion associated with the Gascoyne Food Bowl Initiative has the potential to increase the demand for agribusiness services. Further, there are numerous opportunities for local entrepreneurship to increase and for new business opportunities to be created.

The Federal Government recently commenced an initiative to support local entrepreneurs and business development. The Entrepreneurs Infrastructure Programme targets small and medium business in the following industries:

- Advanced Manufacturing;
- Food and Agribusiness;
- Medical Technologies and Pharmaceuticals;



- Mining Equipment, Technology and Services;
- Oil, Gas and Energy Resources;
- Enabling Technologies and Services for the above listed sectors.

The Programme provides both business management assistance and access to research resources to aid in identifying opportunities for business as well as providing industry connections. In particular, the Programme has the potential to support several key business opportunities not currently being pursued in Carnarvon.

There are several existing industry sectors within the Shire that lend themselves to creating new business as well as value adding to existing commercial activities. However, one of the key barriers for new business is exposure, both locally and to wider markets. Specifically, the issue of exposure stems from the following:

- a limited number of suitable spaces within the local main street;
- the absence of adequate way-finding to create an opportunity for people visiting the town to discover local business; and
- insufficient internet and communications infrastructure to support businesses seeking to trade to a wider catchment.

As well as new businesses, there is also opportunity to improve the offer from existing commercial activities to ensure spending is retained in the local economy rather than farmed out to other centres or internet retailers.

There are several actions the local community in partnership with the local, State and federal governments can undertake to promote growth in new and existing businesses. Some example actions include:

- Value adding to existing horticultural activities through downstream processing, pursuing tourism opportunities or investigating alternative uses for waste such as biofuel or distillery operations;
- Develop relationships between local businesses to facilitate local supply (for example supply contracts with IGA/Woolworths to support local growers);
- Investigate opportunities to complement existing businesses that attract people from outside the convention trade areas;
- Develop an overall 'Carnarvon' brand and promote the Shire of Carnarvon as a regional centre offering a distinct tourism and business experience;
- Improve way-finding into the Carnarvon town centre, local and regional tourism attractions and the horticultural district to take advantage of passing trade;
- Identify opportunities to fill local gaps in the economy and encouraging the community and visitors to buy local;
- Improving the quality of service offered by local businesses through further training and customer feedback;
- Investigate opportunities for grant funding for local businesses to refurbish shop facades;
- Lobbying/pitching to businesses outside of the Shire which offer services that are in high demand within the local community; and





- Promoting regular dialogue between the business community, Local Government staff and elected members.

The investment in new business opportunities and diversifying the local economy will ensure growth in employment and attracting and retaining suitably qualified workers. Further, establishing new industries will provide a greater breadth of opportunities for on-the-job training for young people. While the existing local economy is centralised around the horticultural industry, the future of local businesses is closely related to other issues such as water, Infrastructure, Housing, Growth, Education as well as community spirit and morale. Further, the decline in pastoral activity presents an opportunity to pursue a diversified range of business activities including tourism.

### KEY PLANNING CONSIDERATIONS – BUSINESS & EMPLOYMENT

- Carnarvon is recognised as the Regional Centre for the Gascoyne Region. The CBD of Carnarvon is identified on the strategy map as the area to the south of the intersection of Babbage Island Road and Robinson Street, and it continues to the south until Robinson Street meets the foreshore. It extends as far west as Olivia Terrace and as far east as Cleaver Street.
- Encourage expansion of the Carnarvon Town Centre eastward along Robinson Street up to and including the Justice Complex and Cultural Centre with recognition of future commercial opportunities. The new Courthouse/Police Station location opposite the Aboriginal Cultural Centre bookends and provides justification for expansion of the Carnarvon Town Centre.
- A detailed plan should be prepared to guide future land use/development given the extent of vacant land as a result of the relocation of a number of government services to alternate locations.
- Encourage future mixed use development opportunities through the preparation a Local Development Plan or Structure Plan for the area bounded by Olivia Terrace, Robinson Street and Camel Lane.
- Promote future mixed use/tourist development opportunities for the Carnarvon Yacht Club and commercial boat harbour.
- Promote preparation a Local Development Plan or Structure Plan in consideration of existing use/development, and
- Opportunity to encourage the development and location of value adding businesses and support industries to enhance the existing local economy.
- Future growth in the horticultural industry will require new goods and services as well as adequate commercial and industrial land for agri-business activities.
- Growing exports of local produce and providing adequate education and training opportunities will require improvements to the existing telecommunications and information services available in the Shire.
- Evaluate the local policy framework to ensure events that benefit the local economy, such as the local markets, are encouraged.
- Way-finding into the Carnarvon town centre and the accessibility of local and regional tourism assets could be leveraged to support local businesses.
- Existing access to telecommunications and information services is not adequate to support some business opportunities or long distance education for vocational or tertiary aged students.
- The Shire is struggling to attract big businesses and the gap in the market is being met by retailers situated in Geraldton or online.
- There is an opportunity for local business to capitalise on the market gap left by major retailers that have closed down such as Retravision and Target, the planning framework should support and promote this.



- Carnarvon is geographically positioned to take advantage of a number of energy generation opportunities including solar and wind.
- Aged care and retirement services and amenities present a significant opportunity that is not currently being capitalised on. The provision of aged care accommodation can be facilitated by a number of different parties, of a commercial and non-commercial nature. In each situation, a business case would ordinarily need to be established, with financial returns potentially varying significantly.
- The future of the pastoral industry and lease arrangements presents an opportunity to pursue new business and employment opportunities providing it is supported through the land use planning framework.
- There is opportunity for the expansion of the salt mine at Lake McLeod, and the planning framework should support and stimulate this economic activity.



## 4.12 TRANSPORT



The transport characteristics of the Shire are both diverse and unique. This is largely due to its coastal location, relative isolation, scattered and distinctive tourist attractions, a regional freight route (NWCH) and the importance of primary produce as an industry sector (the associated need for ready access to market).

### **Road:**

The Shire contains various road types from national highways and regional freight routes, to local streets and informal coastal and tourist routes. The background reporting reviewed in advance of this LPS suggests that several of these routes are in need of improvement as described below:

- Potential widening of the Exmouth-Minilya Road;
- Overtaking lanes and shoulder improvements on the NWCH;
- Upgrading of road train facilities;
- Upgrading to specifically encourage visitors to Carnarvon townsite;
- A better defined role/function of HMAS Sydney Memorial Drive; and
- Upgrades to Robinson Street/Babbage Island Road.

Main Roads Western Australia is responsible for the NWCH and has advised the following with particular regard to that route:

- The anticipated increase in demand on the NWCH (both freight and tourist) will have maintenance and operational implications;
- This LPS should identify areas of growth within the Shire to assist in prioritising upgrades;
- Fire and flood as a result of climate change may impact on construction, maintenance and levels of service on roads across the Shire; and
- Important ecological habitats may be situated in some road reserves.

The continued and growing importance of the NWCH is reinforced by the Western Australian Regional Freight Transport Network Plan. The Plan confirms that *'Western Australia's regional road freight task will be around two times what it was in 2010.'*

Specifically, that document confirms the NWCH south of Carnarvon will be a focus for route review to support the resources industry and overall regional development. Specific items for consideration (via the review) include widening roads and constructing bridges across flood-prone sections of the NWCH from Minilya to Main Roads' Gascoyne Boundary. It will be critical to ensure the Highway retains (indeed enhances) capacity to accommodate oversize and larger combination vehicles as well as tourist and other users:

*'The NWCH will play a significant role in accommodating the Region's transport needs into the future. The Highway is the primary coastal route between Geraldton, Carnarvon, Karratha and Port Hedland and provides access to tourist destinations and mining and pastoral communities. It is for these reasons that the NWCH will be an investment priority for the Western Australian Government.'*



The NWCH is also the primary road access linking to the township of Carnarvon, which is accessible via a western turn at the intersection with Robinson Street or with HMAS Sydney Memorial Drive. Carnarvon's isolation from the NWCH is problematic for attracting tourism and passing trade to (and through) the town.

Memorial Drive requires greater definition of its intended function. For example, if it is intended to be a monument or a tourist drive, the absence of landscape quality means that it is fulfilling neither role to an optimum level. Conversely, Robinson Street provides a similarly direct route to town and is fringed by farms and industry. This route represents a closer and more accurate indication of the town's characteristics and, therefore, may be better suited as the primary tourist route into town.

The Gascoyne Regional Infrastructure Review of 2013 identifies the following potential future projects for the Carnarvon local road network:

- Extension of Dual Carriage Way to the NWCH;
- Robinson Street Lighting;
- Dual Use Pathway Lighting;
- Coastal Road to Gnoraloo – seal and re-aligned.

For Coral Bay, the Infrastructure Review notes the following project opportunities:

*'The intersection of the access to the workers' accommodation and Banksia Drive will potentially require upgrade in the future following the conversion of Robinson Street to a pedestrian mall.'*

Further, the Regional Roads Development Strategy identifies upgrades to:

- Coral Bay Road including improved traffic safety by widening road and shoulders;
- The intersection between Minilya-Exmouth Road and Coral Bay Road; and
- The intersection of Coral Bay Road and the Sanctuary Road.

### **Air:**

Reliable and cost effective air access to the Region is important from the perspective of fostering business opportunities, service provision, emergency services, tourism and access to market. At present, the expense of flights of Carnarvon is problematic – it is a potential disincentive to tourism and a significant cost for Carnarvon residents needing to travel to and from Perth. Further research would be required to determine whether tourists would utilise air to access the Gascoyne Region if fares were cheaper, or whether driving is the more attractive option regardless. As discussed in the Tourism Section, isolation is a key attraction of the Shire and its tourism destinations are difficult to access without a vehicle.

At present the Carnarvon Airport does not accommodate a regular passenger transport jet service. Consideration should be given to whether an upgrade to accommodate jets would result in greater patronage to the area or would improve access to market for primary producers. If so, such upgrades should not occur until there is confirmation the Airport is in the optimum location, including in relation to flood events.

Coral Bay has a rural-standard airstrip capable of supporting light and emergency aircraft. Such facility is important for local servicing needs, adventure tourism and emergency medical access for local residents, tourists and workers.

In the long term the Carnarvon Airport Structure Plan proposes that the current airport site is developed for residential and industrial uses and the airport runway is moved to the north of the town,



within the next 20+ years. This is depicted on the strategy map as a potential long term opportunity. For the purposes of detailed land use planning for the foreseeable future, including the preparation of the new Scheme, the current airport site will remain as is, and provide opportunities for upgraded when necessary and as funds become available.

**Port:**

There are several port and harbour areas within the Shire of Carnarvon:

- The port at Cape Cuvier is in private ownership and is used to export primary resources.
- Mooring facilities at Carnarvon including the Carnarvon Yacht Club and fishing boat harbour.
- Coral Bay – protection for recreational boat users as well as a floating pontoon to accommodate commercial operators.

The most critical issues for consideration relate to commercial port facilities and the potential to enhance recreational boating facilities at Carnarvon.

For a new commercial port, the Gascoyne Development Commission commissioned a report (2010), which confirmed demand for additional ‘berth space’ in the Region to support exports and critically assessed several options for the same. However, the report concluded that:

*‘In summary, though a clear demand for a port has been identified and environmental and land access constraints may be overcome, the high costs of the port development indicate that only a large, long-term resources project would justify the development of the port.’*

For recreational moorings we note that Carnarvon is the only accessible safe harbour for recreational boaters in the Gascoyne Region, which represents an opportunity to market the town as a destination for boating-based tourism. There may also be an opportunity to further expand the Marina to include further pens for local and visiting craft.

This Section on Transport within the LPS should be read with the Business component of the report by reason that effective transport linkages support business development. The need to provide safe and reliable access to coastal tourist attractions and the mooring issues discussed above also generates strong linkages to Coastal Planning and Tourism. The need to access markets means there is symmetry between transport and horticultural expansion. Population, Settlements, and employment are also affiliated.

**KEY PLANNING CONSIDERATIONS – TRANSPORT**

- Determine the priority for various road projects and for what purpose: safety, tourism and/or aesthetics. The intended function and hierarchy of the road network is depicted on the strategy maps.
- The road demands on the NWCH in particular will increase for both tourism and freight.
- The function of HMAS Sydney Memorial Drive into the future is to be resolved.
- Location and upgrades to the Airport based on demand and feasibility.
- Expansion of Carnarvon Marina as a safe recreational harbour particularly for long distance yachters.
- Determination of the need and location of a new freight port.
- Currently the Carnarvon Airport is limited to smaller propeller driven aircraft.
- The Coral Bay Airstrip comprises a natural surface runway suitable for light aircraft only and is typically utilised for emergency services and tourist businesses, but not passenger flights.
- Long term opportunity to move the airport site to the north of the town.

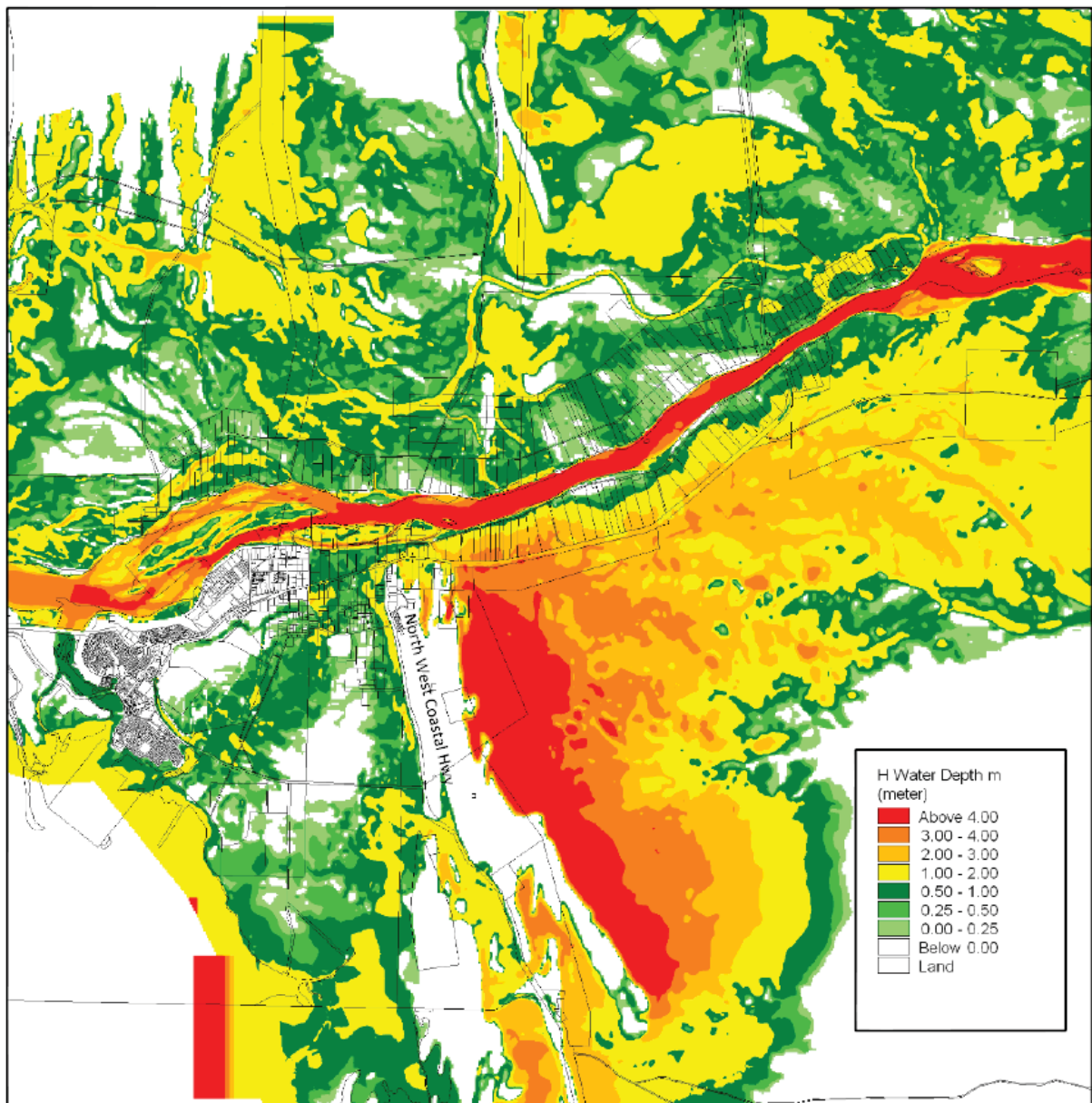


#### 4.13 PLANNING FOR WATER



The Carnarvon town site has been well protected from major flooding from the Gascoyne River by an extensive levee bank system. However, the surrounding horticultural areas had minimal flood protection and were prone to severe flood damage as shown in **Figure 27**.

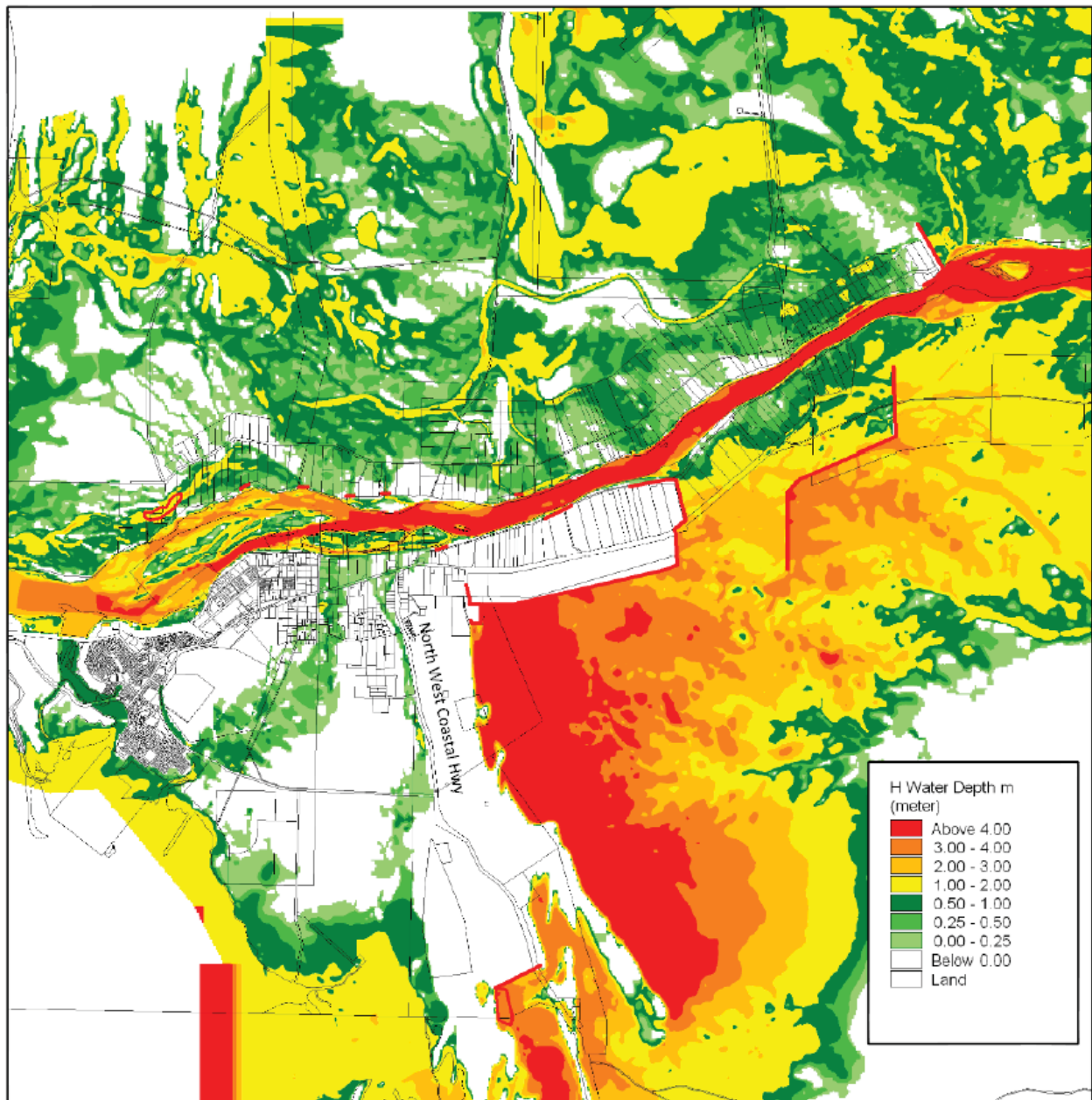
FIGURE 27 – EXTENT OF 100 YEAR ARI FLOODING PRIOR TO FLOOD MITIGATION WORKS (EXCERPT FROM APPENDIX B)





The extent of flooding reported by drainage models for the 100 year ARI event following the Carnarvon Flood Mitigation Works is shown in **Figure 28**. This shows a reduction in the flood levels in the horticultural district (adjacent to the Gascoyne River) and parts of the Kingsford area. However, flood levels to the east of Brown Range and to the area south of Carnarvon are expected to increase.

FIGURE 28 – EXTENT OF 100 YEAR ARI FLOODING FOLLOWING FLOOD MITIGATION WORKS (EXCERPT FROM APPENDIX B)



The importance of the Carnarvon Horticultural District triggered the Lower Gascoyne River – Carnarvon Floodplain Management Study (SKM, 2002) and a subsequent review following the 2010 flood. This ultimately led to the Carnarvon Flood Mitigation Works, which was implemented in two stages to reduce the average annual flood damage in the area and to increase development potential.



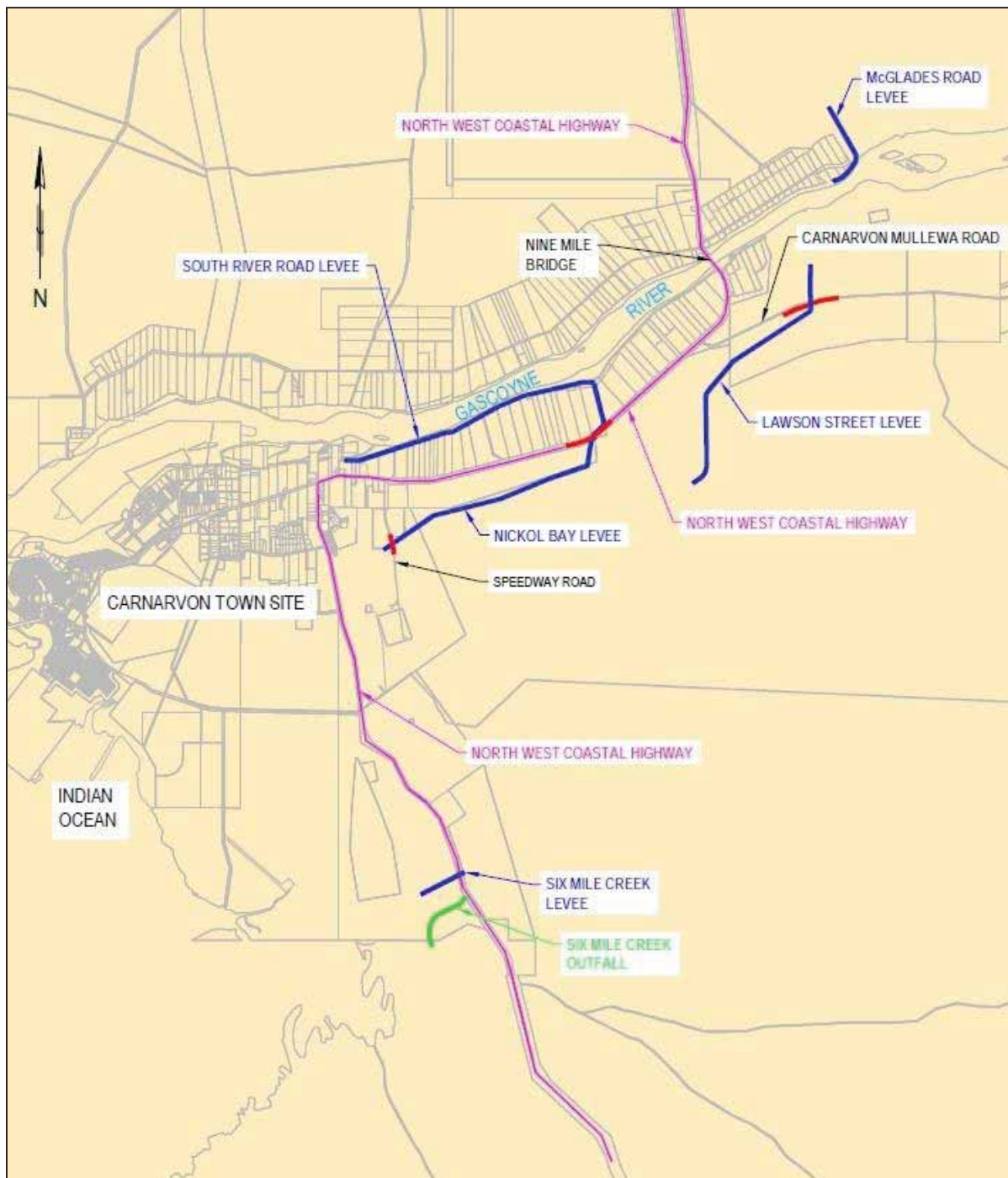
Stage one of the Carnarvon Flood Mitigation Works included the acquisition of the Santa Rosa Plantation and upgrade works on two floodways on the NWCH, located south of Brown Range. Stage two of the project consisted of a series of levees designed to protect the township and parts of the Carnarvon Horticultural District and surrounding areas. Five new levees were constructed or extended creating a total of 16 kilometres of levees at heights varying between 1 metre and 6 metres. These levees include (refer **Figure 29**):

- Six Mile levee (completed Dec 12).
- Lawson Street levee (completed Dec 13).
- Nickol Bay levee (completed Feb 14).
- South River Road levee (completed May 14).
- McGlades Road levee (completed Jun 14).





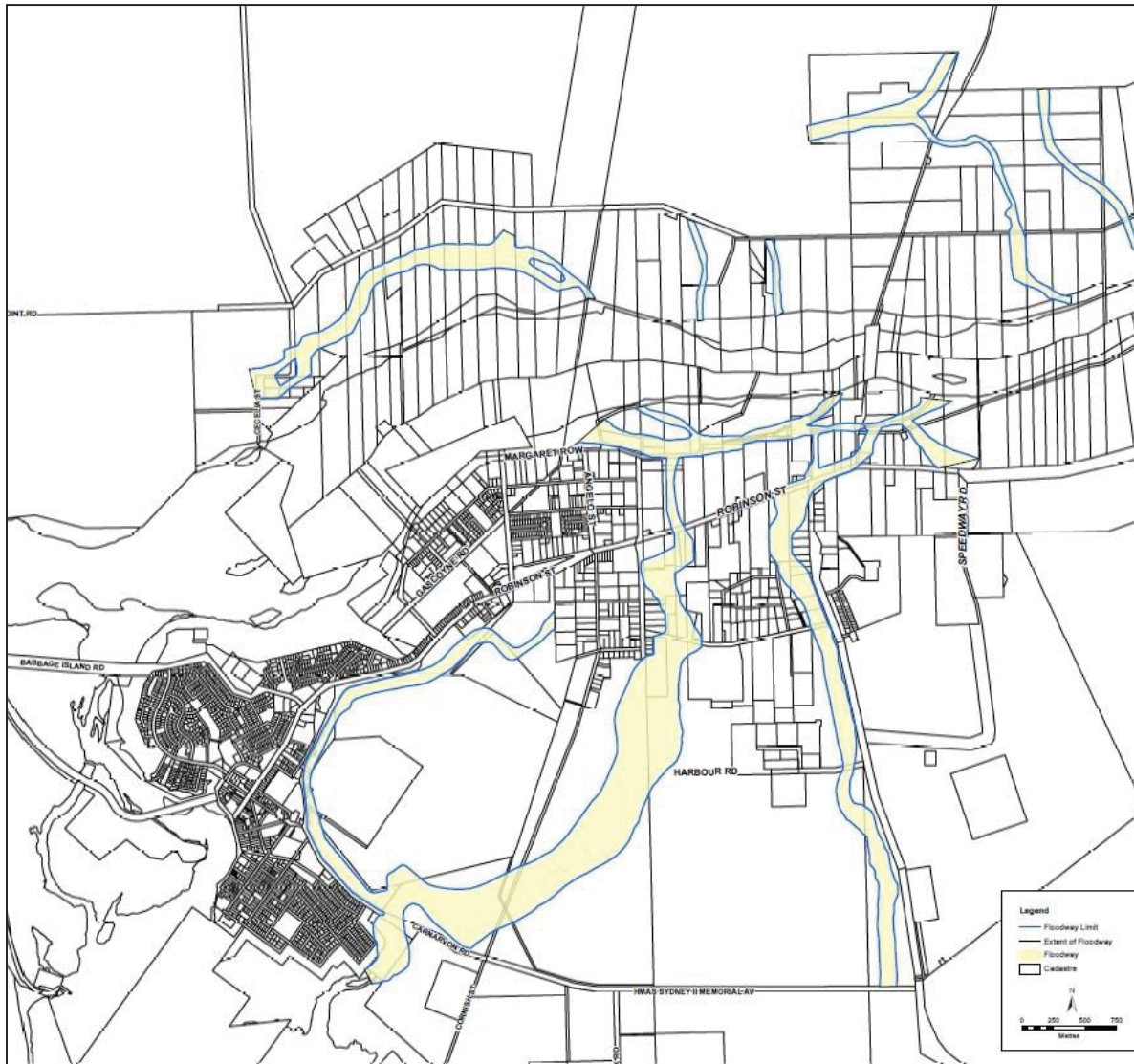
FIGURE 29 – CARNARVON FLOOD MITIGATION WORKS (BROWNS RANGE ALLIANCE WEBSITE)



DoW floodway mapping for the Carnarvon area is shown in **Figure 30**. The DoW has advised that the extent of the floodways are based on the pre-flood mitigation works scenario (prior to construction of the flood levees in the area). Therefore, it is expected that the floodway's, particularly in the Kingsford area, will reduce in width which will increase development potential and lessen development constraints in the area.



FIGURE 30 – FLOODWAY MAPPING PRIOR TO FLOOD MITIGATION WORKS (DOW)





## 4.14 FUTURE DEVELOPMENT

### 4.14.1 FRAMEWORK FOR INTEGRATING LAND USE AND WATER MANAGEMENT PLANNING

Better Urban Water Management (WAPC, 2008) provides a framework for how water resources should be considered at each planning stage. It requires water management strategies and plans to be prepared for each phase of the planning process to progressively refine development proposals based on the findings of more detailed investigations.

The planning process outlined in Better Urban Water Management (BUWM) is considered as the ideal process in a more densely populated setting. In the context of Carnarvon however, there are inherent constraints in adopting the BUWM framework. This is due to the following:

**1. Draft Structure Plans are well advanced** – A significant amount of work has been undertaken in preparing three structure plans in Carnarvon. At this stage, these documents are not accompanied with a water management plan and are being considered in the preparation of the LPS.

**2. Scale of future subdivision projects and fragmented ownership** – It is likely that future subdivision applications in the Structure Plan areas will be for small scale developments. Future developers will be deterred from undertaking projects if they are required to prepare plans and undertake studies for large areas that far exceed the size of their development (due to financial constraints etc.). Additionally, it is also likely that future development proposals will be scattered throughout the Structure Plan areas, requiring more detailed planning upfront to clarify the requirements for smaller isolated developments.

The formal approach outlined in BUWM would require the East Carnarvon and Kingsford District Structure Plan (DSP) and the Carnarvon Airport Precinct DSP to have an associated District Water Management Strategy (DWMS). Future planning within these areas will then require a Local Water Management Strategy (LWMS) as part of structure planning, and Urban Water Management Plan's (UWMP) will be required as part of the subdivision proposal. However, given that detailed flood studies and groundwater studies have already been undertaken for the Carnarvon area to establish the baseline predevelopment scenario, it is recommended that an alternative approach be adopted.

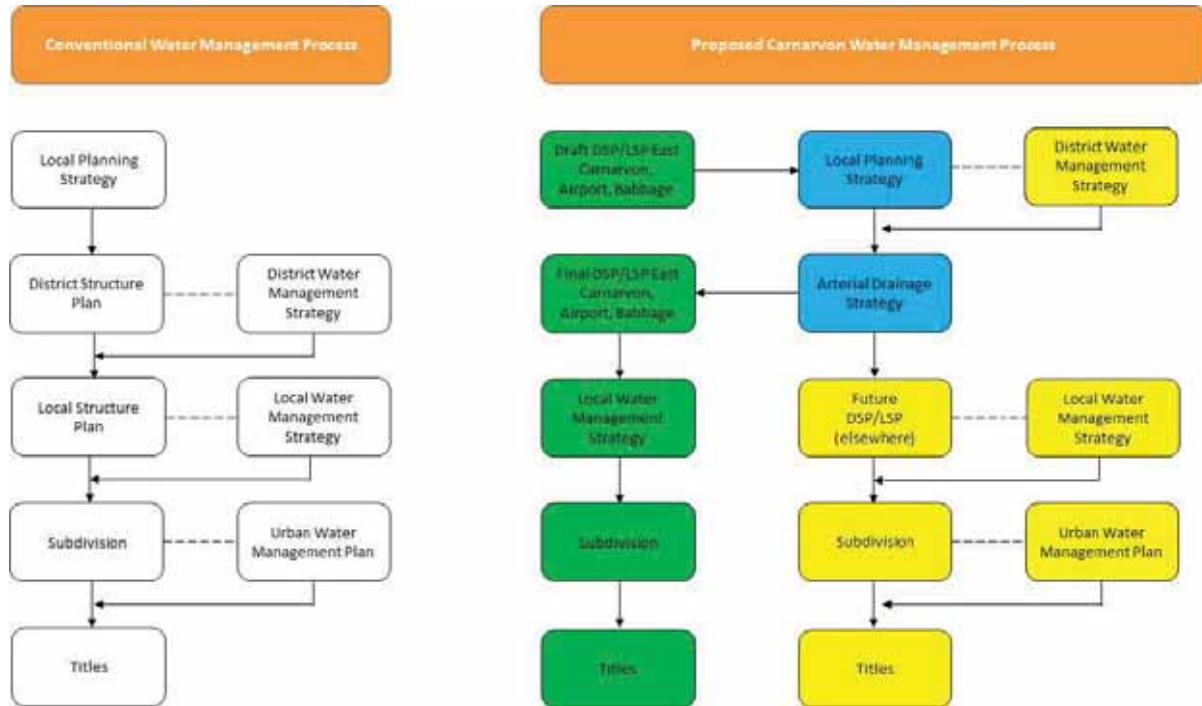
**Figure 31** diagrammatically shows the ideal BUWM process and the proposed alternative for Carnarvon.

The key differences between the recommended approach and that outlined in BUWM is as follows:

- **Post-development Arterial Drainage Strategy (ADS)** – It is recommended that a post-development ADS, which incorporates the draft Structure Plan areas collectively, be developed. The ADS will address regional flood management issues to ensure that any interface requirements related to flows and flood levels across the Structure Plan boundaries are understood. In turn, this will ensure that drainage corridors are sized appropriately (i.e. developers located downstream will understand their obligations and provide appropriate corridors to safely convey flows through their site. Equally, upstream developers will need to meet peak flow rates and flood levels to minimise the risk of flooding the downstream landholdings).
- **LWMS** – It is proposed that detailed Local Water Management Strategy be prepared for the Structure Plan areas. By providing a greater degree of detail, issues related to fragmented ownership should be easier to manage.
- **UWMP** – It is proposed that UWMP's be removed from the process in Carnarvon on the basis that more detailed LWMS will be developed and future developments are likely to be small in scale.



FIGURE 31 – CONVENTIONAL AND PROPOSED WATER MANAGEMENT FRAMEWORK FOR CARNARVON



It is understood the preparation of an Arterial Drainage Strategy is subject to the availability of funding and therefore may not be possible in the short term.



## 4.15 CULTURE AND HERITAGE



### **European Heritage:**

The Shire of Carnarvon is unique in its location between two of Western Australia's three World Heritage Sites. Further, the Shire also includes a significant number of State and locally significant heritage places. In total there are 90 heritage places within the Shire which includes the Shark Bay and Ningaloo World Heritage Areas, 10 State Heritage listed places and 78 places which are identified as significant by the local community.

Heritage is expressed in several forms ranging from buildings, streets, parks, plazas, trees, gardens, views—essentially anything in the built or natural environments that has cultural significance. Most heritage places within the Shire are located within the Carnarvon townsite itself and primarily comprise various private dwellings, hotels, infrastructure and civic buildings. The local heritage places significant to the Carnarvon community are recorded in the Local MHI with a limited number of these places also included on the Heritage List as part of TPS 10.

The purpose of the MHI is to record and document places which in the opinion of the local community are, or may become, places of cultural heritage significance. On the other hand, the Heritage List comprises a statutory list of places established under the Local Planning Scheme to which a level of protection provided.

The process for identifying local heritage and the accuracy and completeness of the information included in these databases is critical in satisfying the statutory obligations under the *Heritage of Western Australia Act 1990*. Further, this information is also important for protecting and promoting heritage places for future generations. Further, the protection and promotion of local heritage has several knock-on effects for the community.

The history and heritage of a place is an expression of local identity and distinguishes one community from another. For a visitor to a community it is one of the first things that are noticed. Heritage tells the story about where a place has come from, why people choose to live and work there and reflects community values. Further, celebrating heritage and the local identity of a community can inspire community pride and economic vitality. Embracing, enhancing and celebrating the local heritage of a place has the potential to attract visitors and tourists, attract new residents, and consequently, attract and support businesses.

To this end there is a need to undertake a review of the Shire's MHI and the Heritage List with the review of the local planning schemes. Further, the new Local Planning Scheme should include provisions for the protection and enhancement of heritage in accordance with the with the model provisions for local planning schemes.

In terms of development, a new local planning policy should be formulated to set out a number of matters relating to development and heritage places including:

- The matters to be considered in determining development applications places included either MHI or Heritage List;
- The information required to accompany development applications;
- The process for reviewing, updating and amending the MHI and the Heritage List; and
- Details and criteria for incentives to encourage the retention and enhancement of heritage places.



The process of reviewing the MHI and Heritage List will provide an opportunity to shine the spot light on the history and identity of Carnarvon and subsequently serve as a vehicle for revitalising a sense of community spirit and pride.

### **Native Title:**

Native title is recognised under Australian law. Indigenous Australians can apply for a native title determination seeking recognition of native title rights and interests under the *Native Title Act 1993*.

There are three native title determination applications and one native title determination within the Shire of Carnarvon. The three applications are:

- Gnulli (WC 1997/028) which covers most of the Shire of Carnarvon, as well as parts of the Shires of Upper Gascoyne, Exmouth and Ashburton
- Malgana Shark Bay People's Application (WC 1998/017) located along the southern boundary of the Shire of Carnarvon as well as the northern part of the Shire of Shark Bay
- Budina People (WC 2004/05) located in the North-east corner of the Shire of Carnarvon boundary, and also the south-western boundary of the Shire of Ashburton

The native title determination was made in respect of the Thudgari People (WCD 2009/002). The determination in 2009 recognised non-exclusive native title rights and interests over 10,500 square kilometres of pastoral country in the Upper Gascoyne. The determination covers a North-east portion within the Shire of Carnarvon boundary as well as areas of the Shires of Upper Gascoyne and Ashburton. As part of the determination, 14 ILUAs were signed to determine access rights to the various pastoral stations covered by the determination. These ILUAs are mentioned below.

The representative for all the applications and the determination is the Yamatji Marlpa Aboriginal Corporation.

### **Indigenous Land Use and Other Agreements**

In 2002, the State Government and the Gnulli native title claimants entered into an agreement to construct a cultural centre in exchange for relinquishing native title rights over parts of waterfront land. Following that agreement, the Gascoyne Aboriginal Heritage and Cultural Centre (Gwoonwardu Mia) was built and opened in 2009. That centre includes an interpretative exhibition that recognises the history and culture of the five Aboriginal language groups of the Gascoyne: Inggarda, Baiyungu, Talanji, Thudgari and Mulgana. The centre facility also includes a café, retail space, meeting rooms and an outdoor performance space. Gwoonwardu Mia is managed by a Board of Management, who in turn is supported and advised by an Indigenous Reference Group comprising members of each of the five language groups.

Several agreements have also been entered into between the Baiyungu Aboriginal Corporation and the State Government for areas of the Coral Bay townsite and joint management of a conservation and recreation reserve.

There are also several ILUAs registered within the Shire of Carnarvon, although it is likely that other agreements may have been in place but have now expired and are no longer on the Register.

Following the Thudgari determination in 2009, the Registered Native Title Body Corporate for the determination area (the Wyamba Aboriginal Corporation) entered into several ILUAs with the lease holders for 14 pastoral leases within this area. Two of those registered ILUAs are within the Shire of Carnarvon boundary: Williambury (WI2010/017) and Lyndon (WI2010/015).

In 2013, the Budina native title claimants entered into a series of ILUAs with pastoralists, approximately 150 km east of Coral Bay. The Budina People's native title claim is located within the boundaries of both the Shire of Carnarvon and the Shire of Ashburton. One of the Budina People's ILUAs is within the Shire of Carnarvon: the Lyndon agreement (WI2013/004).



### **Indigenous Heritage:**

As at October 2014, there were 216 registered Aboriginal heritage sites within the Shire of Carnarvon that had been assessed by the DAA and were identified on its Aboriginal Heritage Enquiry System. Most of the sites were artefacts / scatter, and the remaining sites included engravings, paintings and skeletal material as well as those of a ceremonial and mythological nature.

### **Mungullah Community:**

The Mungullah Community is located 7km from the Carnarvon Townsite. It houses roughly 150 people, although this can increase at certain times. SPP 3.2 (Planning for Aboriginal Communities) is not applicable to the Mungullah Community as it is within the Carnarvon Townsite and not classified as an Aboriginal Settlement under that Policy. An outline plan was produced by the DoP in 2009, but there is no requirement to produce a Community Layout Plan under SPP 3.2. It is understood the DAA is currently considering a policy for town-based Aboriginal communities.

### **Recognition of Aboriginal Heritage:**

The Shire's Strategic Community Plan 2011 identifies a number of strategies in relation to cultural heritage and, in particular, recognition of local Aboriginal heritage. The following strategies are of note in relation to Aboriginal heritage:

- 4.2.2 – Establish a Memorandum of Understanding with the Aboriginal community to acknowledge and support their culture, self-determination and enterprise initiatives
- 4.2.3 – Develop a Reconciliation Action Plan supporting positive relationships with local Aboriginal people.

These strategies have not yet been fully realised. The completion of these strategies could enable various opportunities for recognition of the Aboriginal community and its heritage to be developed in consultation between the Shire and the community.

### **Cultural Tourism:**

The Gascoyne cultural centre, Gwoonwardu Mia, contains an interpretative exhibition with significant information about the Aboriginal history of the Shire of Carnarvon. There are opportunities for further tourism opportunities by way of 'on country' tours and these could be explored and developed within the Shire of Carnarvon.

### **Cultural Needs Study:**

The Gascoyne Development Commission commenced a Cultural Needs Study in 2014 which aims to 'identify the cultural and recreational needs of the Gascoyne Aboriginal people, with the recommendations used to inform the planning and development of support services, facilities and events.' The Study had not been released at the time of writing.

### **Indigenous Advancement Strategy:**

The Australian Government commenced a new Indigenous Advancement Strategy (IAS) on 1 July 2014. The IAS replaced a large number of individual programmes, with five broader programmes under the following areas:

- Jobs, Land and Economy
- Children and Schooling
- Safety and Wellbeing
- Culture and Capability



- Remote Australia Strategies.

The Australian Government advises that the objective of the Strategy is 'to improve the lives of Indigenous Australians', with a particular focus on:

- Getting Indigenous Australians into work, fostering Indigenous business and ensuring Indigenous people receive economic and social benefits from the effective management of their land and native title rights;
- Ensuring children go to school, improving literacy and numeracy and supporting families to give children a good start in life;
- Increasing Year 12 attainment and pathways to further training and education;
- Making communities safer so that Indigenous people enjoy similar levels of physical, emotional and social wellbeing as that enjoyed by other Australians;
- Increasing participation and acceptance of Indigenous Australians in the economic and social life of the nation; and
- Addressing the disproportionate disadvantage in remote Australia.

Part of the IAS includes a move to a regional model within the staff network of the Department of Prime Minister and Cabinet (PM&C). Carnarvon is serviced by the Geraldton Regional Office of the Indigenous Affairs Network of PM&C. There will be ongoing and future opportunities for the Aboriginal community, the Shire, local stakeholders and other agencies to identify and implement projects that address the objectives of the Australian Government's IAS.

#### KEY PLANNING CONSIDERATIONS – CULTURE & HERITAGE

- Without accurate information there is a potential risk that places of local heritage significance will be lost.
- The accuracy of information within the current Scheme presents a barrier for owners of local heritage to pursue development incentives linked to conserving these places.
- The celebration of local heritage may provide an opportunity to rally the local community and develop a sense of place.
- It is important that future infill development respects State and local heritage places.
- Native Title and land use agreements are a key consideration in planning for tourism, pastoral leaseholds and land use activities.





## 4.16 MANAGEMENT OF CROWN LAND

There are significant areas of crown land within the Shire of Carnarvon. Crown lands include but are not limited to:

- Lands the subject of pastoral leases,
- A, B and C class reserves, and
- Unallocated crown land.

### Land management and tenure

The future tenure and management of coastal areas has been, and currently remains, the subject of consideration by relevant stakeholders including the Minister for Lands. More broadly there is a considerable diversity in the crown land areas involved and the associated consideration of existing and potential future land uses. In this context, the following observations are made:

- There are significant opportunities for stakeholders to work collaboratively to consider new opportunities for the use of Crown land, to assist in achieving both local and regional benefits.
- A Coastal Management Strategy should be progressed for areas the subject of public activity, such as coastal nodes, to establish a clear path forward for future management direction and associated actions/responsibilities.

As part of deliberations on land management issues, there is generally the opportunity to concurrently progress appropriate land tenure arrangements, including ownership, vesting, management orders and similar.

### Consideration of development proposals

As a broad approach, tourism related developments on Crown land will be regulated and managed by the Department of Lands or relevant management agency. In contrast, tourism developments on privately owned land will be regulated and managed by the Shire's local planning scheme. The matters that should be taken into consideration when determining the merits of a development proposal, shall remain largely the same irrespective of land tenure/determining authority – for example potential community benefits, potential environmental impacts, having regard for state planning objectives etc.

The *Land Administration Act 1997* provides a statutory framework for the consideration of many crown land related matters. The Minister's consent is generally required prior to an application being lodged. Additional guidance for stakeholders is made available through the Crown Land Practice Manual, available on-line from the Department of Lands.

### **KEY PLANNING CONSIDERATIONS – CROWN LAND**

- There are considerable areas of crown land within the Shire of Carnarvon.
- There is merit in the continue progression of a Coastal Management Strategy for area of public usage, such as coastal nodes on crown land, to establish a framework that sets out a direction along with actions/responsibilities.
- Applications for development consent generally require the consent of the Minister for Lands.



#### 4.17 BASIC RAW MATERIALS

A geological survey by the Department of Minerals and Petroleum identified limestone, sand and river sand as the regionally significant basic raw materials for the area. This information as well as the tenure for the basic raw materials, active and inactive quarries and pits is shown on a 1:100 000 resource potential for land use planning map compiled by Geological Survey of Western Australia. This information can be accessed on the link below.

<http://geodocs.dmp.wa.gov.au/viewer/viewerComponentAction.do?documentId=498235&viewMarkId=0&ct=true&at=none&btv=true&atv=false&vmtv=false&ac=ff0000&cabinetId=1101&pg=0&scl=22&bds=0|0|10426|7447>



## 5 Implementation, Monitoring and Review

### 5.1 IMPLEMENTATION

The LPS has established a land use framework for the next 10-15 years for the Shire of Carnarvon. The Strategy will be used as a planning tool to assist Council, State Government and the community in their respective roles in land use decision-making.

To a large extent the outcomes of the Strategy will be implemented through the preparation of the Shire's new Local Planning Scheme which will support the implementation of many of the proposed strategies and actions within a short timeframe.

There are also a number of documents which will play an integral role in implementing the strategies and actions of the LPS, these include:

- Carnarvon Tourism Strategy
- Fascine Master Plan
- Babbage and Whitlock Islands Structure Plan
- East Carnarvon and Kingsford Structure Plan
- Carnarvon Airport Structure Plan
- Coral Bay Settlement Structure Plan
- Gascoyne Food Bowl District Structure Plan

In addition, the Shire of Carnarvon may adopt a range of local planning policies to guide further decision-making under the Scheme.

There are also a number of strategies and actions identified within this document that raise awareness to key stakeholders of the possible scenarios facing the Shire, sending a clear message about the priority attribute to particular projects within the Shire and the community more generally, and their importance to the Shire of Carnarvon.

### 5.2 REVIEW

It is important that the LPS is a dynamic strategy, responsive to change. It is inevitable, given the timeframe of the Strategy that land use issues and pressures affecting the Shire will evolve and change over time. To ensure the Strategy can recognise and respond to these changes it is important that it is reviewed and identified strategies and actions are monitored.

#### – **Minor Review**

The LPS will be under continual review through the development and review of development plans, structure plans and design guidelines.

Further, the background information will be updated as more detailed information and more up to date information becomes available.

#### – **Major Review**

A major review of the LPS will be undertaken every five (5) years in accordance with statutory requirements, unless the Shire or the WAPC considers an earlier review appropriate

# Shire of Carnarvon

LOCAL PLANNING STRATEGY 2017

## APPENDICES

- APPENDIX A STAKEHOLDER ENGAGEMENT SUMMARY
- APPENDIX B INFRASTRUCTURE DEMAND ANALYSIS
- APPENDIX C DEMOGRAPHIC AND ECONOMIC ANALYSIS
- APPENDIX D RADIO QUIET PROTECTIONS





# Stakeholder engagement summary

## INTRODUCTION

Community engagement is an important aspect of the future planning of any community, not matter what the size. Without community buy-in, a project may never get off the ground or may not be accepted once it is completed. Preliminary stakeholder engagement for the draft Shire of Carnarvon Local Planning Strategy was set out through a Community Engagement Strategy. The Strategy outlined the ways in which the various stakeholders would be engaged on the development of the draft Local Planning Strategy.

As part of the Strategic Community Plan, a significant amount of consultation has already been undertaken with the people of Carnarvon with the outcomes forming the starting point for further consultation. The consultation objectives for the preparation of the Local Planning Strategy include:

- Promote and build awareness of the intent and process involved in the preparation of the Local Planning Strategy;
- Identify community values, aspirations for future development and attitudes to key planning issues;
- Identify key constraints and opportunities afforded to the Shire; and
- Provide opportunities for stakeholders and the broader community to participate and the preparation of the Local Planning Strategy.

This report outlines the results of the Community Engagement Strategy, which was undertaken between August and November 2014. This phase included the following consultation methods:

- Introductory correspondence including background information.
- Face-to-face meetings.
- Telephone and email discussions.
- Presentations to the Carnarvon Aboriginal Reference Group and Elected Members.
- Online Community Survey.

The Community Engagement Strategy recognised that as well as engaging citizens in general, it is important that the wide range of interests represented in the Carnarvon community are included in planning for the future of the area. While none of the specific engagement methods represent the diversity of views which exist in the community, taken together the outcomes of the engagement processes can be considered largely representative of the Carnarvon community as a whole.

## IDENTIFIED STAKEHOLDERS

Stakeholder engagement during the preparation and progression of a Local Planning Strategy is critical. The following is a list of the identified stakeholders for this project that have and will continue to be engaged through the progression of the Local Planning Strategy

Department of Local Government	Carnarvon Chamber of Commerce & Industry
Department of Culture and the Arts	Rotary Club of Carnarvon
Department of Agriculture and Food	Carnarvon Lions Club
Department of Education	Yamatji Bana Baaba Marlpa Land and Sea Council
Department of Housing	Mr Vincent Alexander Catania MLA

Department of Regional Development and Lands	Carnarvon Bushfire Brigade
Department of Planning	Carnarvon Heritage Group
Department of Water	Carnarvon Senior Citizens' Club Inc.
Department of Environment Regulation	Gascoyne Catchments Group
Department of Parks and Wildlife	Gascoyne Food Council Inc.
Department of Mines and Petroleum	North West Agricultural Group
Department of Sport and Recreation	Regional Development Australia Mid West Gascoyne
Department of Fisheries	Small Business Centre Gascoyne
Department of Health	Coral Bay State Emergency Service / Fire Emergency Service
Department of Indigenous Affairs	Carnarvon State Emergency Service
Department of Commerce	Carnarvon Bushfire Brigade
Department of State Development	Baiyungu Aboriginal Corporation Inc.
Department of Transport	Burringurrah Community Aboriginal Corporation
Department of Communities	Carnarvon Growers Association
Department of Corrective Services	Carnarvon Ratepayers and Residents Association
Department of Fire and Emergency Services – Mid West Office	Carnarvon Tourism Alliance
Department of Commerce	Coral Bay Progress Association
Catholic Education Office	Mungullah Community Aboriginal Corporation
State Heritage Office	Kulyamba Aboriginal Corporation
WA Police Services	Carnarvon Volunteer Sea Rescue Group
Horizon Power – Gascoyne and Mid West Office	Coral Bay Volunteer Sea Rescue Group
Synergy	Main Roads WA
Public Transport Authority	Gascoyne Development Commission
Water Corporation	Shire of Upper Gascoyne
Brookfield Rail	Shire of Ashburton
Western Power	Shire of Shark Bay
LandCorp	Volunteer Fire & Emergency Service
Tourism WA	Carnarvon Bowling Club
	Carnarvon Police & Community Youth Centre

This list is intended to be comprehensive but not necessarily exhaustive. In addition, not all stakeholders will have a significant active role at present in the planning for the Shire of Carnarvon. It is, however important that stakeholders are kept informed and provided with at least the opportunity to provide input, if required.

## ENGAGEMENT FINDINGS

A summary of the key issues from the perspective of the community is provided below. This includes issues raised in the meetings with community groups, residents, business owners and responses to the online survey. The key issues raised by the community broadly fall into ten distinct themes:

- Tourism
- Health Services
- Education
- Aged Care
- Community Morale / Spirit
- Horticultural Expansion
- Infrastructure
- Business
- Employment & Training
- Pastoral

### TOURISM

- Promotion of the town and region - perception needs to be addressed both at a local level (community development) and externally (eg campaigns/promotion)
- A lot of people turn right at the T- junction, but limited data available to test (i.e. limited traffic counts)
- Tourism capacity is underappreciated by the community – it hasn't embraced the full tourism potential of Carnarvon
- There's nothing to bring you into town – signage welcoming visitors into town is limited
- Unclear what function HMAS Sydney Drive serves – entry into town needs to improve
- Lack of visual cues along Robertson Drive to indicate that you're approaching town. The entrance along Robertson Drive is predominantly light industrial
- Town lacks 'flair' and there was general consensus that the main street improvements did not meet expectations
- Hard to find something open, particularly hard to find a place for dinner
- Coffee options are limited
- Not enough things are open to make people want to drive the 5km into town
- Carnarvon is incredibly well located to Shark Bay, Kennedy Ranges etc but this isn't promoted sufficiently. Some stakeholders commented Carnarvon provides ready access to Shark Bay.
- Options for a boat to Denham / Monkey Mia were noted, including comments about a hydrofoil that used to operate.
- Marketing of tourism options has been limited in effect and hasn't recognised the particular attributes and location of Carnarvon
- Carnarvon is located within easy access from the highway – this is significant compared to Exmouth or Denham
- Mt Augustus and Kennedy Ranges are under-marketed and signage is limited – Carnarvon is the closest centre and should capitalise on its location.
- Customer service is variable and critical to visitor experience.
- It was queried whether the original rail route from town to the jetty could be reinstated for its tourist potential.



- There were queries about whether tourism was appropriately marketed to all sectors, i.e. was it too focussed on senior travellers, and less on family tourists or adventure tourists?
- There were anecdotal reports that tourists were unhappy with paying some tourism expenses
- Carnarvon's accessibility as a safe haven for yachts could be better promoted and utilised
- Fascine was viewed very favourably but with comments that it could be better utilised with additional eating places

## HEALTH SERVICES

- There aren't many ancillary services, i.e. a hydrotherapy pool
- Many people have to fly to Perth for medical services, but often for quite minor treatment
- Carnarvon doesn't have sufficient medical services to enable it to service other towns in the region
- There was a perception / concern that the hospital's status had changed to a Regional Medical Centre (or similar)

## EDUCATION

- Many people leave town when their children are close to year 6/7 onwards so that they can attend schooling in Perth or Geraldton
- Workers with families will come to town for a job but most won't stay more than 2 to 5 years as they will leave when their children get close to secondary school age. This represents a significant loss of social capital and affects continuity of services, i.e. limited education -> relocation -> loss of expertise / residents / continuity -> reduced population & reduced community and business confidence.
- St Mary's and the Carnarvon Christian College are at capacity or near capacity for many classes – families have moved from the Community College after the amalgamation of the Carnarvon and East Carnarvon schools
- The lack of progress in completing the upper school amalgamation of the Community College is very frustrating.
- The limited secondary school education options are the main reason why families leave town
- It is hard to keep the tertiary educated professionals (doctors, teachers, nurses & other public servants) in town as they will leave because they will likely want their children to pursue an academic schooling option
- It was noted that early childhood education was important and would be beneficial in the town
- There is no out of school care options in the town (either before or after school)

## AGED CARE

- Many elderly Carnarvon residents have to leave town as there is no aged care facility in Carnarvon
- There is a permanent care unit at the Carnarvon Hospital, but that is only available for those people needing high-level care
- There are not options for elderly people who need low-level care, only independent living units
- Silver Chain is available but doesn't enable people with higher needs to keep living independently
- There are no ancillary services like hydrotherapy pools, physio available to the elderly
- There is a view that the 25 beds available for elderly care as part of the hospital expansion will not meet the needs of the town, let alone the region (community groups advised that the Verso report recommended that 65 beds would be needed for the region)
- Aged care responsibility is seen as falling in the gaps between Federal and State governments
- Opportunities for private investment in aged person accommodation have been problematic – left to community based independent living incorporated bodies to organise, government not seen as assisting

## COMMUNITY MORALE / SPIRIT

- There is a sense of pessimism about declining numbers within Carnarvon
- There is some optimism, but also skepticism that anything will change
- Residents were very clear about why they stayed in Carnarvon – they enjoyed the weather, lifestyle, recreation options etc.
- Community Groups have seen too much consultation, planning & studies – they now want action
- Residents are looking for leadership to take Carnarvon forward
- There is a concern that negativity breeds negativity
- There isn't a clear, common goal for Carnarvon, and the town is floundering as a result
- There is a lack of ambition or willingness to try new things
- There was a recognition that a smaller population may limit availability of some services and facilities
- Greater support for events - any events should be supported at the highest level.

## HORTICULTURAL EXPANSION

- There were concerns about the proposed Horticultural expansion and whether existing land would be devalued if you double the land allocation.
- Limited water availability was a significant concern – current water restrictions were at 80%, up from 50% at the beginning of the year. This doesn't allow growers a chance to expand or grow extra produce.
- Queries were raised about how the allocation could be expanded given that there isn't enough water for existing land owners.

- There were also concerns about whether the new owners would have an unfair advantage over existing owners if they get an extra water allocation.
- Market concerns were also raised – growers are negative about the proposed expansion as it will increase competition and could lead to over supply. Not sure where the new market is to justify the expansion
- Some existing owners are struggling and finding it hard to meet their existing water bills
- Existing owners are committed (both historically & financially) to current properties and not likely to consider moving to expanded horticultural areas
- Concern that big, national (or multi-national) companies may begin operations on the expanded areas and push the smaller growers out of the market
- Uncertainty about the governance and ownership of some of the borefields

## INFRASTRUCTURE

- A number of comments were raised about the airport – there was a desire for it to be upgraded so that it could take commercial jets. Linked to that were concerns that once it was expanded it would be harder for it to be moved.
- There was an understanding that the airport expansion would require significant investment, but that the benefits should still be considered
- It was also noted that a de-regulated service would be subject to greater competition pressures and could result in a reduced service. There was no guarantee that the daily service would be maintained.
- There were concerns that Skippers is downgrading the size of the planes – down from 30 to 19 seater, i.e. wouldn't accommodate wheelchairs.
- Costs of return flights was also noted as an issue.
- Water pressure is a concern, particularly in relation to fire hose requirements, which affects opportunities for building expansion and businesses.
- FESA requirements for water pressure and buildings were a concern.
- Slow internet speeds (for residential areas) were also noted by some stakeholders.
- Roads were mentioned and the need to widen some of the roads (parts of the Exmouth / Minilya Road are very narrow)
- Upgrades to the highway were also noted, including the need to widen carriageways, add additional overtaking lanes and improve shoulders.
- Road train services were noted and the potential to improve facilities at the Road Train assembly area.
- Noted that upgrades to the road network (and a reason for people to stop in Carnarvon) could assist to reduce fatigue related accidents.
- The need to define the role, function and appearance of HMAS Sydney Memorial Drive was discussed, and noted that it was currently unclear.
- Dredging activities were noted and seen as important for yachting activities

- Water supply to Babbage & Whitlock Island was raised and there was a suggestion that an increased water supply could be used for feed lotting of stock if the abattoir re-opened
- Bejailing port was also noted in discussions – some stakeholders supported its use and the setting aside of land for that purpose
- Limited growth in traffic volume on road network expected, but upgrade to Robinson Street / Babbage Island Road may be necessary

## BUSINESS

- It was noted that many small businesses struggle within Carnarvon
- Concerns were also expressed about the number of larger businesses who have recently closed down in Carnarvon, i.e. Target Country & Retravision.
- It was noted that some smaller businesses have the potential to moved into the markets left behind by the closure of the larger businesses
- There was support for spending locally and keeping profits within Carnarvon for the benefit of the local community

## EMPLOYMENT & TRAINING

- It was noted by some stakeholders that they found it hard to attract appropriately qualified staff
- It was also noted by some training providers that there were insufficient jobs to place people when they had completed their training. The absence of pathways was seen as a significant factor.
- Not all training is available locally – can be difficult to get trainers to travel to Carnarvon to deliver some training.
- Some stakeholders said that there was an issue of local employers utilising 457 Visa workers and not employing local people
- The importance of an ongoing coordinated approach between service providers was noted.

## PASTORAL

- It was noted that the Pastoral leases will be up for renewal in 2015, which could have an impact on coastal access and ongoing management of coastal reserves
- Carnarvon is the service hub for the pastoral region and serves an important function for station residents coming for health, shopping & education services
- It was noted that station residents would most likely rather come to Carnarvon for aged care then go to Perth

## MISCELLANEOUS

- Recent land release did not appear to reflect local demand

## SUMMARY

In summary, the outcomes of the engagement indicates that the Local Planning Strategy should emphasise the importance of:

- Opportunities and constraints for improving the tourism offer available in the Shire of Carnarvon including marketing efforts, diversification of accommodation, capitalising on underutilised destinations and activities and Shire-wide coordination.
- Realising the locational advantages of the Shire being positioned as the regional centre between two world heritage areas, as well as other key destinations such as the Kennedy Ranges and Mount Augustus.
- The cost of housing in the Shire is seen as a challenge in attracting and retaining new residents. In particular the availability of 3 and 4 bedroom dwellings in the low-mid price range. The affordability of housing in the Shire constrained by the wind rating building standards for cyclone prone areas as well as the lack of local builders, materials and labour.
- The existing gaps in aged care accommodation and the critical issue of future supply of appropriate accommodation and level of care to allow residents to 'age in place'. Attracting investment in the aged care market has proved difficult in the past.
- Though Carnarvon Hospital is the key medical centre servicing the Gascoyne Region it does not have sufficient capacity and facilities to adequately service the region.
- A key factor in the transient nature of the population is the quality and availability of secondary education providers. Generally, families with children will leave once their children reach Year 8/9 to pursue higher quality education providers either in Geraldton or Perth.
- The closure of several retail chains and the view that the population is declining have resulted in negativity and drop in community morale which has stymied local investment and entrepreneurship.
- There is also an opportunity for local small business to fill the market gap left by major retailers and to promote local spending.
- The Gascoyne Food Bowl initiative and horticultural expansion has raised some concerns among growers with regard to water availability, competitive advantage and concern that national or multinational groups will push local, family run plantations out of the market.
- While there are concerns regarding horticultural expansion, the growth of this industry either on existing plantations or new land will provide local economic benefits and opportunities as well as a potential catalyst for continued population growth.
- Infrastructure is seen as a major constraint to development in general including residential expansion, tourism opportunities, and capitalising on commercial positioning of the Shire. In particular, the availability of water and quality of infrastructure represents a key constraint.
- There is a perceived gap between job vacancies and appropriately qualified local people to fill these jobs.
- The future of the pastoral industry was investigated and in particular alternate land use opportunities that could be pursued to supplement pastoral activities.

It is important to note that the above outcomes are preliminary and given the relatively small number of respondents cannot be said to be conclusive. These responses however did provide insight into some of the key issues facing the local residents and it will be important that the local community continue to express their ideas along the course of the Local Planning Strategy process.



# Carnarvon Local Planning Strategy

## Infrastructure Report

April 2015

---

Urbis

---

**Infrastructure**  
Planning and Development

*IP&D Pty Limited  
ABN 90 163 419 716  
Telephone +61 8 6557 8840  
Email enquiries@ipdeng.com*

© IP&D Pty Limited [2014].

Copyright in the drawings, information and data recorded in this document (the information) is the property of IP&D. This document and the information are solely for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by IP&D. IP&D makes no representation, undertakes no duty and accepts no responsibility to any third party who may use or rely upon this document or the information.

Author: T. Vangelovski, D. Luong.....

Reviewer: T. Vangelovski, D. Luong.....

Approved by: T. Vangelovski.....

Date: 02/04/2015 .....

Distribution: Electronic Copies - Urbis; .....



# Contents

	<b>Page Number</b>
<b>1. Introduction .....</b>	<b>1</b>
<b>2. Water .....</b>	<b>1</b>
2.1 Existing Resource	1
2.2 Future Water Supply	2
2.3 Water Infrastructure	2
2.3.1 Potable Water	2
2.3.2 Irrigation	3
<b>3. Wastewater .....</b>	<b>3</b>
3.1 Existing Infrastructure	3
3.1.1 Carnarvon Wastewater Treatment Plant	3
3.1.2 Sewer Reticulation	3
3.2 Ultimate Planning	4
3.2.1 General	4
3.2.2 Babbage and Whitlock Islands Structure Plan	4
3.2.3 East Carnarvon and Kingsford Structure Plan	4
3.2.4 Airport Structure Plan	4
3.2.5 Implementation Considerations	4
<b>4. Drainage .....</b>	<b>5</b>
4.1 Flood Mitigation	5
4.2 Future Development	7
4.2.1 Framework for Integrating Land Use and Water Management Planning	7
<b>5. Roads .....</b>	<b>9</b>
5.1 Existing Roads	9
5.1.1 Regional Roads	9
5.1.2 Local Roads	9
<b>6. Power .....</b>	<b>10</b>
6.1 Existing Infrastructure	10
6.2 East Carnarvon and Kingsford	11
6.3 Carnarvon Airport	11
<b>7. Gas .....</b>	<b>12</b>
7.1 Pipeline Corridor	12
7.2 Gas Reticulation	12
<b>8. Communications .....</b>	<b>12</b>
8.1 Fibre	12

## Contents (continued)

Page Number

### List of tables

Table 2.1 Lower Gascoyne Catchment's Water Allocation (GL per annum)

### List of figures

Figure 1.1 Locality Plan and Key Infrastructure  
Figure 2.1 Groundwater Resource Boundaries  
Figure 2.2 Existing Water Distribution System  
Figures 3.1 Existing Sewer  
Figure 3.2 Ultimate Wastewater Planning  
Figure 4.1 100 year Flood Maps  
Figure 4.2 Carnarvon Flood Mitigation Works  
Figure 4.3 Floodway Mapping prior to Flood Mitigation Works

### List of diagrams

Diagram 4.1 Conventional and Proposed Water Management Framework for Carnarvon

### List of appendices

Appendix A Water Corporation Wastewater Planning

# 1. Introduction

The Shire of Carnarvon has commissioned a Local Planning Strategy (LPS) to guide its strategic land use and decision-making process for the next 10-15 years.

Once completed, the LPS is intended to provide a clear plan for future development across the entire Shire of Carnarvon area, including the settlements of town of Carnarvon and the coastal village of Coral Bay. The Strategy is intended to set out the key aspirations of stakeholders, accommodating the future needs of the community, creating opportunities to enhance and protect local attributes while facilitating the achievement of long term local and regional objectives and goals.

This infrastructure report examines the servicing requirement to support the implementation of the LPS in the Carnarvon area. Figure 1.1 shows the location of key existing infrastructure elements and the boundaries of district structure plans that have been prepared for the area.

## 2. Water

### 2.1 Existing Resource

Carnarvon's water supply is covered under the Lower Gascoyne Plan (Plan) in which all groundwater and surface water has been proclaimed under the *Rights in Water and Irrigations Act 1914*. The three main aquifers within the Plan area are the Birdrong aquifer, Lower Gascoyne Alluvial aquifer, and the Surficial aquifer.

The Lower Gascoyne Alluvial aquifer is the main source for Carnarvon's town supply and horticultural activities. A series of bores located along the lower Gascoyne River are used for abstraction (refer to Figure 2.1). These bores are located within two abstraction areas, the Lower Gascoyne Alluvial Subarea A and the Lower Gascoyne Alluvial Subarea B-L. The allocation limits, licensed entitlement and actual abstraction rate from these areas are summarised in Table 2.1 below. The total licensing entitlement also includes a relatively small surface water component, referred to as the Carnarvon Surface Water Irrigation District.

**Table 2.1: Lower Gascoyne Catchment's Water Allocation (GL per annum)**

	Allocation Limits	Licensed Entitlement	Abstraction Rate	Usage	Ownership
Lower Gascoyne Alluvial Subarea A	6.1	10.7	4.9	Plantation	Privately operated assets
Lower Gascoyne Alluvial Subarea B-L	14.0	1.8* 5.0	1.4 6.2	Town Supply Irrigation	Water Corporation operated assets
Carnarvon Surface Water Irrigation District	Not Set	0.1	-	Irrigation	Privately operated assets

Source: Lower Gascoyne Allocation Methods Report (DOW, 2011)

\* An additional 1.8 GL/yr held in reserve for future use.

\*\* All values quoted are in GL per annum.

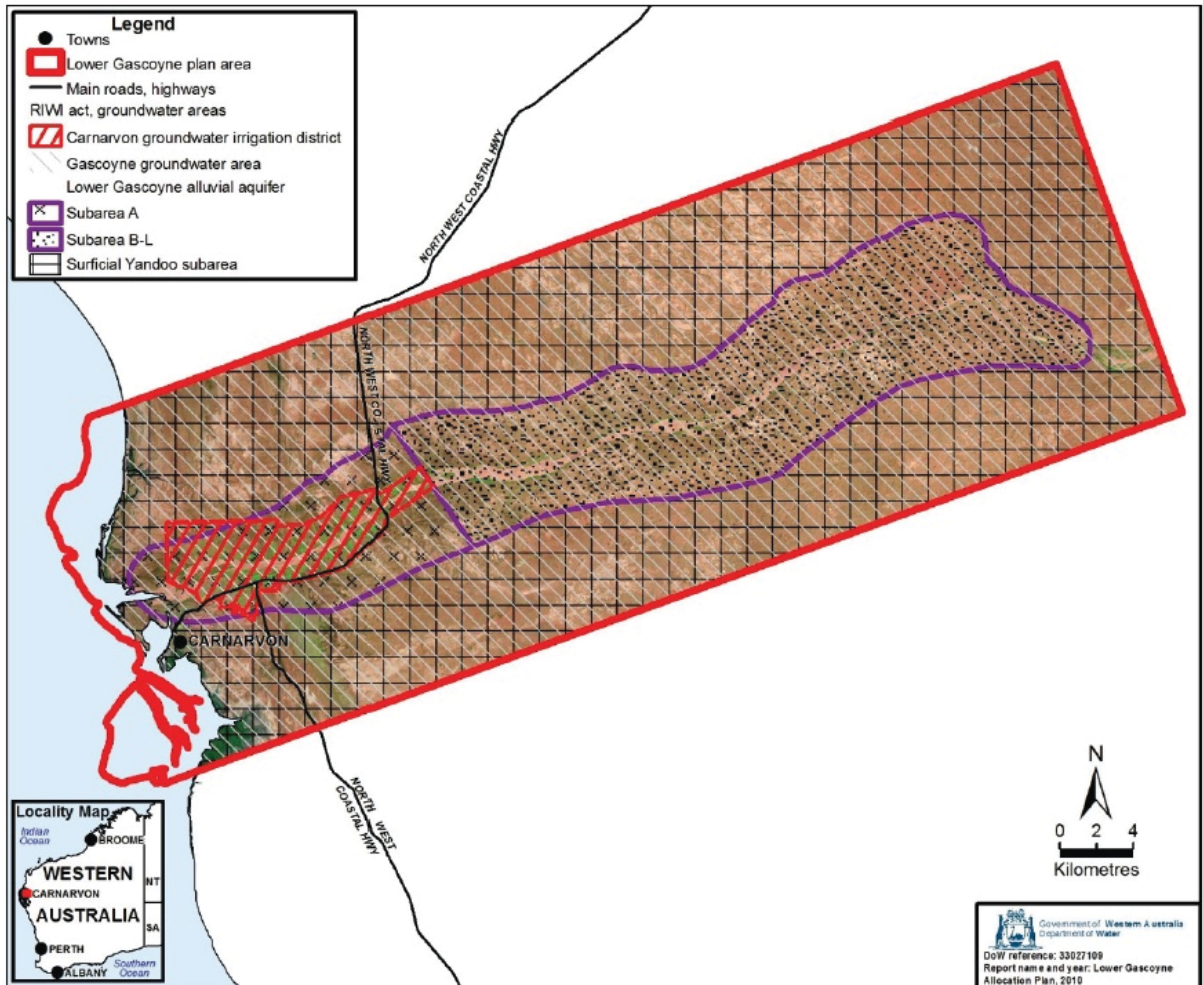


Figure 2.1 Groundwater Resource Boundaries (DoW, 2011)

## 2.2 Future Water Supply

Future growth of the town site as part of the local planning strategy implementation will increase the water demand. Currently there is available capacity within the existing allocation limit of 1.8 GL to accommodate for the town's population growth and an additional 1.8 GL/annum held in reserve. The Department of Water has provided a commitment to ensure adequate supply to cater for future growth scenarios by amending the license entitlement.

## 2.3 Water Infrastructure

### 2.3.1 Potable Water

Potable water for Carnarvon is supplied by the groundwater bores in subarea B-L to the Brickhouse Tanks. From there, the abstracted water is treated with disinfectants and pumped into the storage tanks located at Brown Range. Both the low level and high level storage tanks are 4,500KL in capacity and feed a series of distribution mains. These distribution mains consist of cast iron, lead jointed pipes, asbestos cement, un-plasticised poly vinyl chloride of varying age. From these distribution mains a series reticulation main are connected to provide service connections to the lots.

Figure 2.2 shows the town's potable water supply infrastructure. The distribution main traverses through the East Carnarvon/Kingsford District Structure Plan and the northern portion of the Babbage District Structure Plan. The Carnarvon Airport and the southern Babbage Island District Structure Plan will require mains extension works to enable any future development. The Water Corporation have advised that there are no plans to extend these main or upgrade the storage capacity at this point in time.

### **2.3.2 Irrigation**

Failure rates in the irrigation distribution system reached an unacceptable level during the 2000's and a full replacement was initiated in 2011. A \$19.9M project jointly funded by the State Government, the Federal Government and the Gascoyne Water Cooperative upgraded 31 km of pipeline. The new system opened in April 2012 and provides water security for fruit and vegetable producers in the Carnarvon area and provides the basis for future expansions of the Gascoyne Food Bowl. The system is capable of servicing the proposed 400 hectare expansion in addition to the 1200 hectare Carnarvon horticulture precinct it currently services.

## **3. Wastewater**

### **3.1 Existing Infrastructure**

#### **3.1.1 Carnarvon Wastewater Treatment Plant**

The Carnarvon Wastewater Treatment Plant (WWTP) is operated by the Water Corporation and is located off Babbage Island Road (refer Figure 1.1). It treats wastewater to a secondary standard with primary aeration, oxidation and three stabilisation ponds. It is designed to service a nominal population of 9000 with a licensed treatment capacity of 1800 kL/d. The average effluent flow for 2011 was approximately 738 kL/d. Development has encroached within the designated 500m buffer zone for the WWTP, with some domestic residences being located within 50 metres of the secondary treatment pond in the plant.

The entire volume of treated wastewater effluent is currently pumped into the Shire of Carnarvon's re-use storage facility, where it is chlorinated and pumped to various town locations for irrigation of public open space (total 20 ha). The Shire of Carnarvon's storage ponds and irrigation system are unable to accept an increase in treated wastewater and the Water Corporation is progressing with an Irrigation Management Plan to consider how the irrigation scheme may dispose of more reuse water, including considering expansion of the system.

A potential option being considered by the Corporation for disposing/storing the treated wastewater includes the construction of additional storage/disposal ponds at the future WWTP site. The preferred site is located on Oyster Creek Rd and is currently progressing through the acquisition process which includes finalising approvals. The cost to construct the storage/disposal ponds and to transfer treated wastewater water to the new WWTP site is likely to be significant. The trigger to relocate the treatment ponds depends on growth and the risk of the levee bank erosion due to individual or a combination of events including; high tide, cyclonic activity, storm surge, river flooding and over time increase in sea level.

#### **3.1.2 Sewer Reticulation**

The localities of Morgantown, the town centre, Brockman and parts of South Carnarvon are connected to the town's wastewater system. The Mungullah Village on Boor Street has a private pump station and pressure main

which discharges into No2 Pump Station on Robinson Street. The areas connected to the wastewater system are shown in Figures 3.1.

The Mungullah village sewer was designed to serve a residential load of 110 persons and has ongoing issues due to higher demand.

A large part of the South Carnarvon area is not connected to wastewater system, primarily due to engineering difficulties and high costs associated with high water tables, black swamp (acid sulphate) soils and dewatering problems.

The East Carnarvon and Kingsford area currently have no access to sewer. The nearest access point to the existing deep sewerage system is No.2 Pump Station, which is located to the west of East Carnarvon on Robinson Street.

## **3.2 Ultimate Planning**

### **3.2.1 General**

Figure 3.2 shows the areas that are currently included in the Water Corporation's ultimate wastewater planning for Carnarvon and the preferred location for the new WWTP.

### **3.2.2 Babbage and Whitlock Islands Structure Plan**

Water Corporation wastewater planning includes the Babbage and Whitlock Structure Plan area, however, the low lying areas showing flooding & coastal inundation have not been considered.

The proposed golf course may represent an opportunity to reuse treated wastewater from the existing WWTP. There are a number of golf courses which are irrigated using treated wastewater from WWTP in the state.

### **3.2.3 East Carnarvon and Kingsford Structure Plan**

The Water Corporation has advised that East Carnarvon, Kingsford, Greys Plain and Brown Range areas are included in their wastewater planning. Connection for these areas will require wastewater pump stations and pressure mains that will ultimately discharge into the new WWPT. However, wastewater flows may be directed into the existing scheme until the WWPT is ultimately relocated.

### **3.2.4 Airport Structure Plan**

Consultation with Water Corporation as part of the Airport District Structure Plan concluded that there is no allowance for the expansion of existing wastewater system to service the proposed development. Once the change in land use is considered in the wastewater planning, this area will be considered on the *Infrastructure Planning Branch Statewide Planning Program* as part of rezoning of the area. Water Corporation will then prioritise against other areas that also require planning consideration.

### **3.2.5 Implementation Considerations**

Servicing the East Carnarvon, Babbage Island and Airport District Structure Plans (DSP) is complicated due to timing of development, construction costs and funding arrangements. Under the Water Corporation (WC) framework for development, the developer is obligated to pay headworks charges (on a cost per lot basis) and provide the reticulation infrastructure free of cost to the WC. Once these assets have been vested across to the

WC, they are responsible for its maintenance and replacement to which the properties will be charged a standard rate each year.

Given that land ownership in the structure plans is fragmented, the application of this framework is not only inequitable but also unfeasible and will likely prohibit the effective implementation of the structure plans. For example, a developer undertaking a small 4 to 5 lot subdivision may be required to construct several hundred metres of external sewer at his own cost to service the development. Alternatively, if the current approach in managing wastewater via septic tanks and ATUs is to continue for the implementation of the structure plans, the Water Corporation will incur significantly higher costs when they provide deep sewer for the properties at a later stage.

Discussions with the Water Corporation identified that East Carnarvon/Kingsford Structure Plan (and Carnarvon in general) is not currently considered in their infill program. The key issue with East Carnarvon/Kingsford is that the ultimate wastewater catchment consists of 6 sub-catchments interconnected by separate pump stations which ultimately discharge into the future WWTP (refer Appendix A). From an implementation perspective, it is challenging and costly for the WC to install sewer reticulation as part of their infill program that meets their ultimate planning and send the wastewater back to the existing WWTP as an interim solution.

An alternative interim solution may be install packaged treatment plants at the proposed pump station sites and dispose of the treated wastewater locally (i.e. irrigation of POS etc). By adopting this approach, sewer reticulation design within each subcatchment will be in line with ultimate wastewater planning and can connect into the system following installation of the required pump stations and pressure mains when the future WWTP is commissioned. However, funding for the installation of the reticulation mains and the packaged treatment plants will be an issue and a Licenced Service Provider will be required to operate and maintain the system.

## **4. Drainage**

### **4.1 Flood Mitigation**

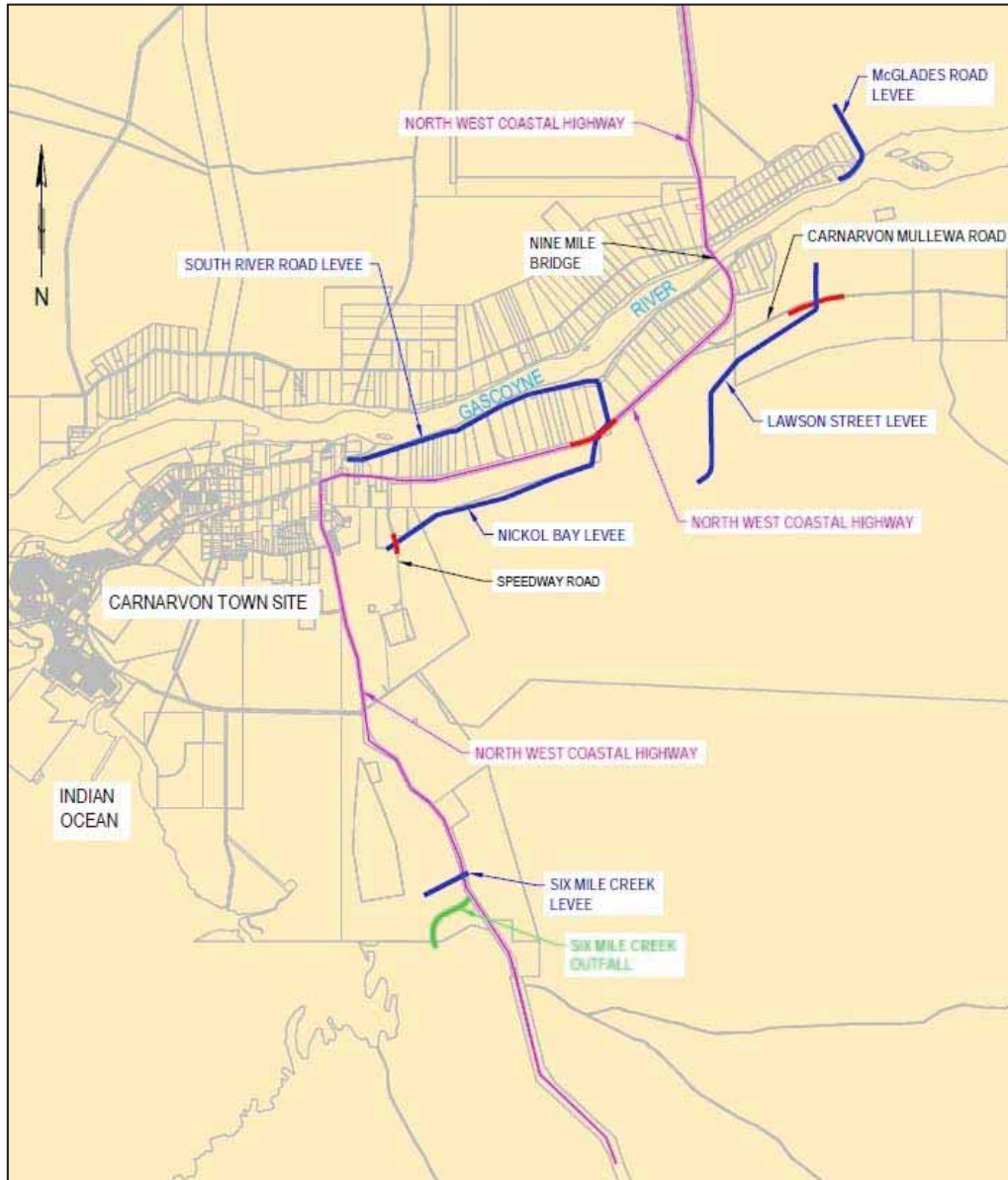
The Carnarvon town site has been well protected from major flooding from the Gascoyne River by an extensive levee bank system. However, the surrounding horticultural areas had minimal flood protection and were prone to severe flood damage as shown in Figure 4.1a.

The importance of the Carnarvon Horticultural District triggered the Lower Gascoyne River – Carnarvon Floodplain Management Study (SKM, 2002) and a subsequent review following the 2010 flood. This ultimately led to the Carnarvon Flood Mitigation Works, which was implemented in two stages to reduce the average annual flood damage in the area and to increase development potential.

Stage one of the Carnarvon Flood Mitigation Works included the acquisition of the Santa Rosa Plantation and upgrade works on two floodways on the North West Coastal Highway (NWCH), located south of Brown Range. Stage two of the project consisted of a series of levees designed to protect the township and parts of the Carnarvon Horticultural District and surrounding areas. Five levees were constructed or extended creating a total of 16 kilometres of levees at heights varying between 1 metre and 6 metres. These levees include (refer Figure 4.2 below):

1. Six Mile levee (completed Dec 12).
2. Lawson Street levee (completed Dec 13).
3. Nickol Bay levee (completed Feb 14).

4. South River Road levee (completed May 14).
5. McGlades Road levee (completed Jun 14).



**Figure 4.2 Carnarvon Flood Mitigation Works (Browns Range Alliance Website)**

The extent of flooding reported by drainage models for the 100 year ARI event following the Carnarvon Flood Mitigation Works is shown in Figure 4.1b. This shows a reduction in the flood levels in the horticultural district (adjacent to the Gascoyne River) and parts of the Kingsford area. However, flood levels to the east of Brown Range and to the area south of Carnarvon are expected to increase.

Department of Water (DoW) floodway mapping for the Carnarvon area is shown in Figure 4.3. The DoW has advised that the extent of the floodways are based on the pre-flood mitigation works scenario (prior to construction of the flood levees in the area). Therefore, it is expected that the floodways, particularly in the



Kingsford area, will reduce in width which will increase development potential and lessen development constraints in the area.

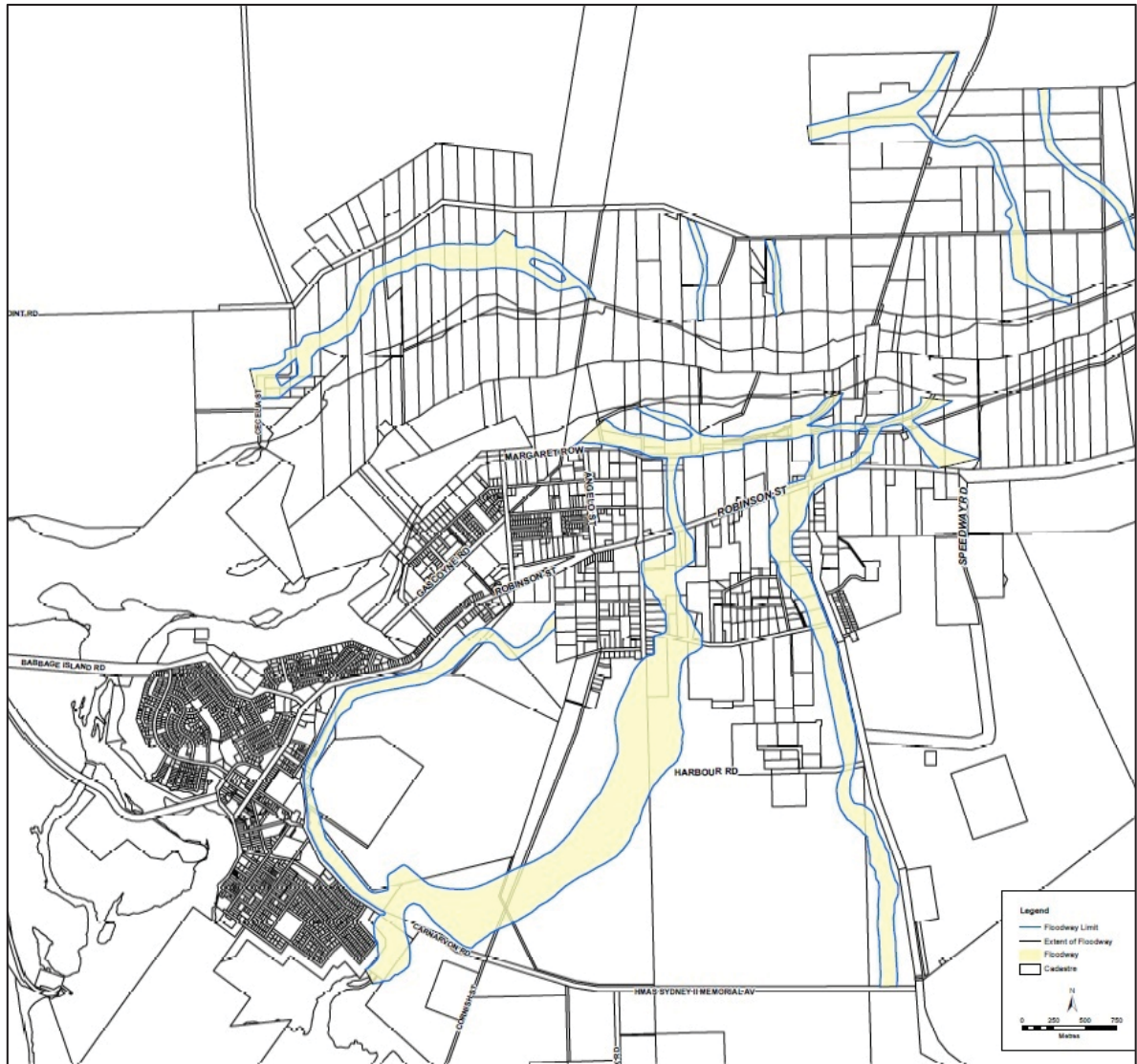


Figure 4.3 Floodway Mapping prior to Flood Mitigation Works (Source: DoW, 2014)

## 4.2 Future Development

### 4.2.1 Framework for Integrating Land Use and Water Management Planning

Better Urban Water Management (WAPC, 2008) provides a framework for how water resources should be considered at each planning stage. It requires water management strategies and plans to be prepared for each phase of the planning process to progressively refine development proposals based on the findings of more detailed investigations.

The planning process outlined in Better Urban Water Management (BUWM) is considered as the ideal process in a more densely populated setting. In the context of Carnarvon however, there are inherent constraints in adopting the BUWM framework. This is due to the following:

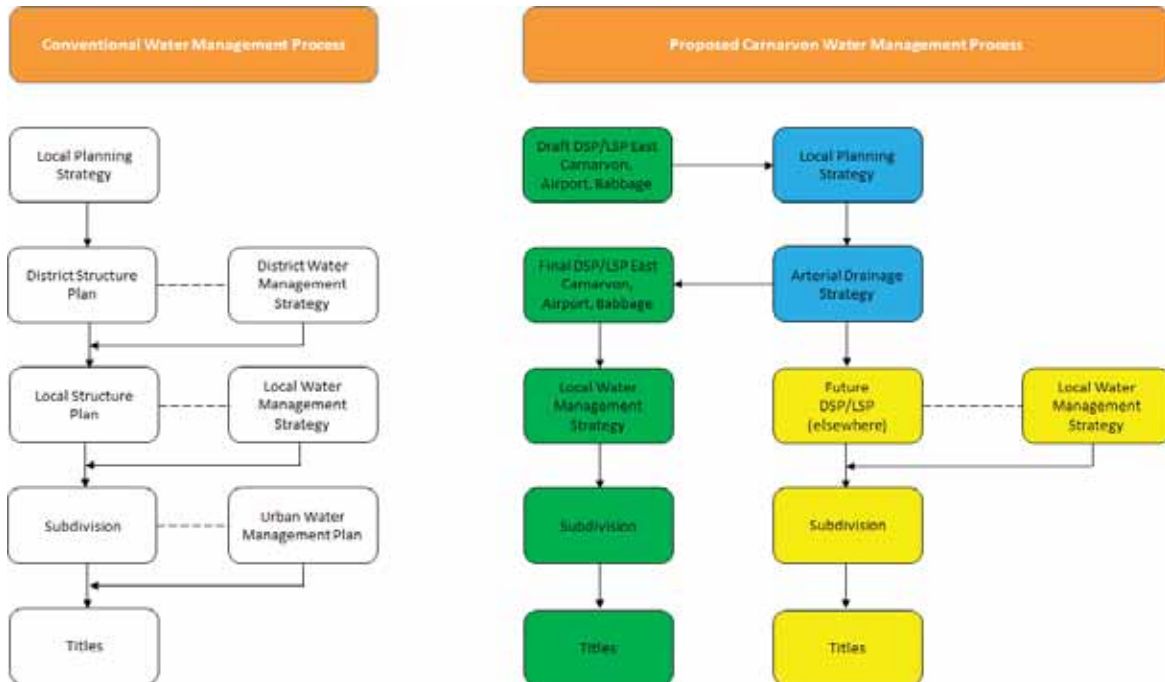
1. Draft Structure Plans are well advanced – A significant amount of work has been undertaken in preparing three structure plans in Carnarvon. At this stage, these documents are not accompanied with a water management plan and are being considered in the preparation of the Local Planning Strategy.

2. Scale of future subdivision projects and fragmented ownership – It is likely that future subdivision applications in the structure plan areas will be for small scale developments. Future developers will be deterred from undertaking projects if they are required to prepare plans and undertake studies for large areas that far exceed the size of their development (due to financial constraints etc). Additionally, it is also likely that future development proposals will be scattered throughout the structure plan areas, requiring more detailed planning upfront to clarify the requirements for a smaller isolated developments.

The formal approach outlined in BUWM would require the East Carnarvon and Kingsford District Structure Plan (DSP) and the Carnarvon Airport Precinct DSP to have an associated District Water Management Strategy (DWMS). Future planning within these areas will then require an LWMS as part of structure planning, and UWMP's will be required as part of the subdivision proposal. However, given that detailed flood studies and groundwater studies have already been undertaken for the Carnarvon area to establish the baseline predevelopment scenario, it is recommended that an alternative approach be adopted. Diagram 4.1 diagrammatically shows the ideal BUWM process and the proposed alternative for Carnarvon. The key differences between the recommended approach and that outlined in Better Urban Water Management is as follows:

- Post-development Arterial Drainage Strategy (ADS) – It recommended that a post-development ADS, which incorporates the draft structure plan areas collectively, be developed. The ADS will address regional flood management issues to ensure that any interface requirements related to flows and flood levels across the structure plan boundaries are understood, so that drainage corridors are sized appropriately (i.e developers located downstream will understand their obligations and provide appropriate corridors to safely convey flows through their site. Equally, upstream developers will need to meet peak flow rates and flood levels to minimise the risk of flooding the downstream landholdings).
- Local Water Management Strategy (LWMS) – It is proposed that detailed Local Water Management Strategy be prepared for the structure plan areas. By providing a greater degree of detail, issues related to fragmented ownership should be easier to manage.
- Urban Water Management Plan (UWMP) – It is proposed that UWMP's be removed from the process in Carnarvon on the basis that more detailed LWMS will be developed and future developments are likely to be small in scale.

Diagram 4.1 Conventional and Proposed Water Management Framework for Carnarvon



## 5. Roads

### 5.1 Existing Roads

#### 5.1.1 Regional Roads

The major road servicing the town is North West Coastal Highway (NWCH). Access roads into the town site include Robinson Street and HMAS Sydney Memorial Drive (refer Figure 1.1).

The NWCH is a primary regional road under the control of Main Roads Western Australia (MRWA) and links Geraldton to Port Hedland. The Highway is constructed as a regional rural highway with a typical 7 to 9 metre sealed carriageway. Intersections are controlled by give way or stop signs and a posted speed limit of 110kph is provided along most of its length.

Traffic data shows that there are on average 510 vehicles per day (vpd) of which 36% are heavy goods vehicles to the north of Blowholes Road. South of the townsite there are 660vpd, of which 32% are heavy goods vehicles. The data suggests an average of approx 200 truck movements per day passing through Carnarvon. Locally to Carnarvon, traffic volumes increase between the townsite and the river crossing with approx. 1,400vpd.

#### 5.1.2 Local Roads

##### 5.1.2.1 Robinson Street

Robinson Street is the main distributor road for the town centre from the North West Coastal Highway. The road falls within the jurisdiction of Main Roads WA (MRWA), although the Shire accepts responsibility for maintaining the road verge through a contractual arrangement.

Robinson Street is generally a single carriageway road with the exception of a section of divided road between Olivia Terrace and Campbell Way. The intersections of Francis Street and Olivia Terrace are controlled with roundabouts to provide traffic management through the commercial centre of the town. Between the two roundabouts a wide boulevard is provided with parking to the centre of the street.

Traffic data supplied by MRWA (June 2010) indicates an average daily volume of 7,900vpd close to the town centre. The daily volume on Robinson Street reduces to about 6,400vpd east of Marmion Street and 3,100vpd to the west of North West Coastal Highway.

#### **5.1.2.2 Babbage Island Road**

The only vehicle access to the Babbage and Whitlock Islands is along Babbage Island Road located at the northern end of the Babbage Island. Babbage Island Road is classified as a Local Distributor Road and has traffic volumes are in the order of 1,150 vehicles per day.

Existing intersections along Babbage Island Road consist of unchannelised standard "T" junctions with the exception of its intersection with the Robinson Road which is channelised. It is anticipated that the current intersections will continue to operate at a satisfactory level of service following development on Babbage and Whitlock Islands.

#### **5.1.2.3 HMAS Sydney II Memorial Avenue**

HMAS Sydney II Memorial Avenue provides a southern connection from the town to the North West Coastal Highway. It is constructed to a rural standard with a pavement width of 7 metres. HMAS Sydney II Memorial Avenue changes in name to Carnarvon Road and is restricted to 80kph as it passes the southern side of the airport. Traffic data supplied by MRWA (July 2009) indicates an average daily volume of 230 vehicles per day.

#### **5.1.2.4 Cornish Street**

Cornish Street runs along the eastern side of the airport. It provides a convenient link between Carnarvon Road and Robinson Street. No traffic data is available, but it is expected to carry less than 500 vehicles per day.

## **6. Power**

### **6.1 Existing Infrastructure**

Power in Carnarvon is principally provided by Horizon Power's new 18MW Mungullah power station which was commissioned in May 2014. There are a total of 10 generators installed at the station: five gas fired generators acting as prime units for base load with 5 additional diesel generators fulfilling peak demands. The station is located near the intersection of HMAS Sydney II Memorial Avenue and North West Coastal Highway (refer Figure 1.1) and is connected to Dampier to Bunbury gas pipeline (via the spur line), which supplies fuel for its gas generators. The existing Carnarvon Power Station (Figure 1.1) is being retained as an emergency standby generation facility for a period of time, after which it will be fully decommissioned. At that time the noise pollution experienced by some of the town's residents will be completely eradicated.

A second power station using solar powered generators is also feeding into the power grid via a power purchase agreement between Energy Made Clean and Horizon Power. This provides an additional 290kW of power to the network.

From the Mungullah Station, two high voltage electricity feeder cables have been installed underground to connect the power station to the Carnarvon distribution switch room. From there it feeds into the existing HV distribution network (overhead and underground) to service approximately 2,500 customers. A series of overhead power lines have been extended to Babbage Island to provide power to homes, the Nor-west Seafood Factory, the campsite and the Beach Canal Retreat accommodation facilities.

## 6.2 East Carnarvon and Kingsford

Assessments undertaken as part of the East Carnarvon and Kingsford DSP indicated the following (Hames Sharley, 2014a):

- Based on the estimated lot yield of between 900 and 1600 lots, a minimum load requirement of approximately 5400 kVA is required.
- For commercial and industrial development, a load requirement of around 15,400kVA is required to cater for an estimated 77ha in commercial, retail and industrial development. These figures include current estimated demand.
- The proposed residential area will utilise approximately 25 percent capacity of the 18 megawatts power station.
- Development of the commercial and industrial areas, in addition to the development of the Carnarvon Airport Precinct Structure Plan, will require further upgrade to the new power station.
- There is currently no formal plan to replace overhead power lines with an underground reticulated network in the Carnarvon region but Horizon Power are retrofitting services where it is possible with available funds. According to Horizon policy, all new subdivisions should be underground developments to ensure security and reliability of power supplies.

## 6.3 Carnarvon Airport

Assessments undertaken as part of the Carnarvon Airport DSP indicated the following (Hames Sharley, 2014b):

- For Stage 1 development, an estimated 400 lot release, the power supply required to cater for this stage would be around 2.4MVA. It is expected the current 22kV network would have some capacity to service the initial stages, however there may be some headworks required in the latter part of the development.
- For Stage 2 development, an estimated 1500 residential lot release would require a power supply of approximately 6MVA. The industrial land demand is complex due to the size of the land proposed for development. Based on 72ha, the Horizon Power supply allocation would yield approximately 14MVA. Due to the large lot sizes it is recommended to reduce the power supply to 100kVA, which would yield a demand for 7MVA.
- Based on the above the supply required for Stage 2 equates to approximately 13MVA which means at least three 22kV feeders are needed.
- For a Stage 3 development with estimated industrial, commercial and composite lot land release over a 50-100 year timeframe, the power supply required to cater for this stage would be anticipated

around 9MVA. It is likely the Mungullah Power Station will require additional generators to be able to service the parts of Stage 2 and Stage 3.

- Any overhead power line that traverses the lots to be developed will need to be converted to an underground type network.

The above was considered as very high level and it was recommended that further investigations with Horizon Power were required.

## **7. Gas**

### **7.1 Pipeline Corridor**

A spur line from the Dampier to Bunbury Natural Gas Pipeline (DBNGP) delivers gas to the existing Carnarvon Power Station. The buffer zone for the existing corridor is 15 m wide with an additional 150m setback zone. The alignment of the pipeline reserve for the spur line is shown in Figure 1.1.

### **7.2 Gas Reticulation**

There is no reticulated gas service provided to Carnarvon and no plans to do so in the future. Gas supply within the town is supplied by bottled gas.

## **8. Communications**

### **8.1 Fibre**

Telstra's Optic Fibre network runs up the North West Coastal Highway less than 3km out of Carnarvon. The Fibre cable branches off and runs into the town's main exchanges.

Coverage maps for the NBN Co indicate that Carnarvon is to be included in the rollout. Preliminary investigations indicated that fibre construction will commence in 2014 and this phase is likely to be completed over 2014 to 2017. The roll out areas are currently limited to Brockman, Brown Range, Carnarvon, East Carnarvon, Kingsford, Morgantown and South Carnarvon.

Developers of new residential estates have the option to pay an extra fee to Telstra or an alternative service provider for provision of a high speed broadband network. In either case the developer will be responsible for the installation of all pit and pipe infrastructure which will be required to accommodate a future high speed broadband network.

## Figures

---

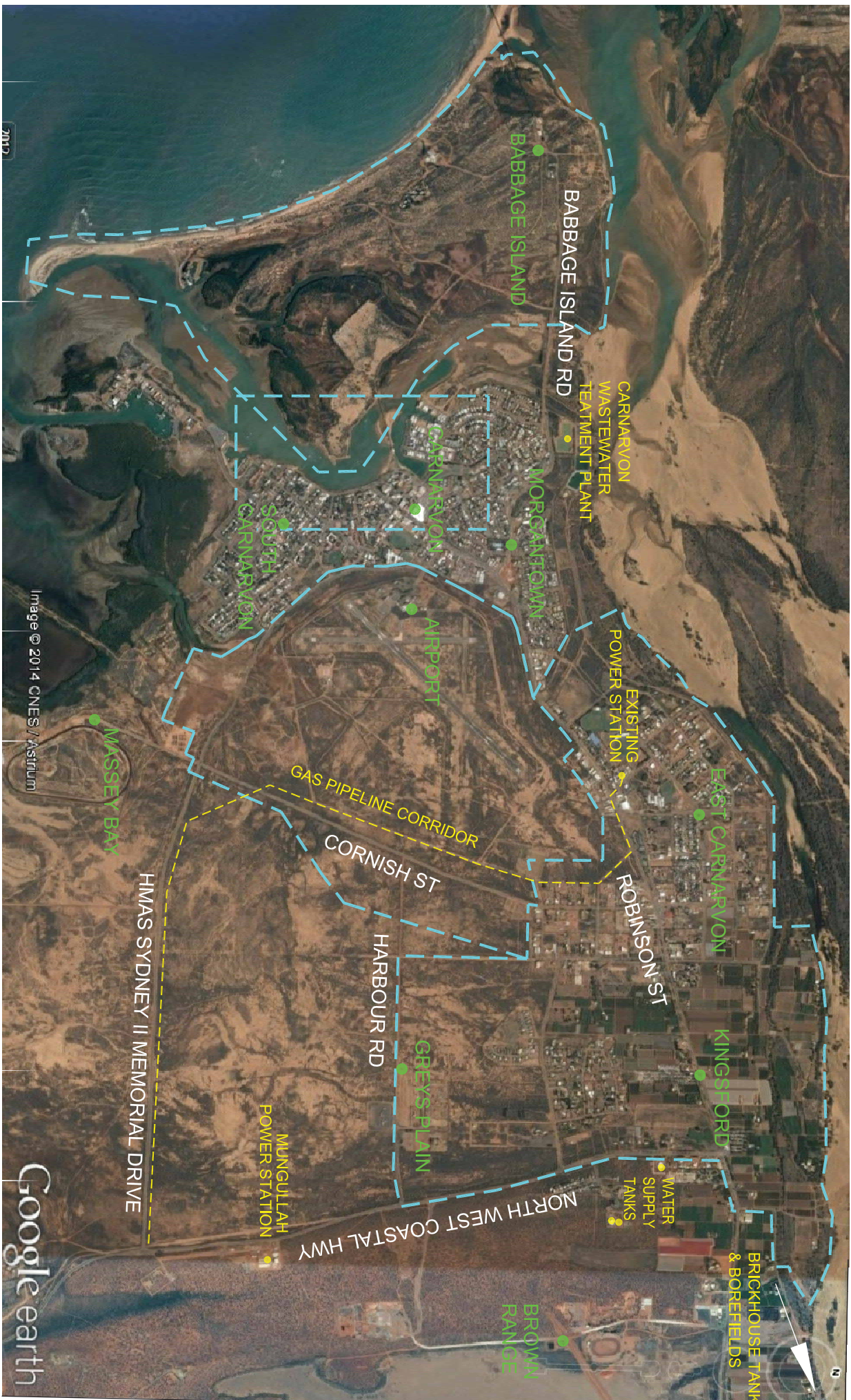


Image © 2014 CNES / Astrium

Google earth

CLIENT	Ushs
REVISION	B
DATE	27/11/14
DRAWN	TV
CHECKED	TV



Carnarvon LPS  
Figure 1-1  
Locality Plan and Key Infrastructure

Infrastructure  
Planning and Development




enquiries@pdeng.com

+61 8 6557 8840





**LEGEND**

	DN450 or Greater
	DN375
	DN300

CLIENT	Uhhls
REVISION	B
DATE	27/11/14
DRAWN	TV
CHECKED	TV



Camravn LPS  
 Figure 2-2  
**Existing Water Distribution Mains**

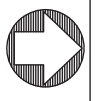
**Infrastructure**  
 Planning and Development

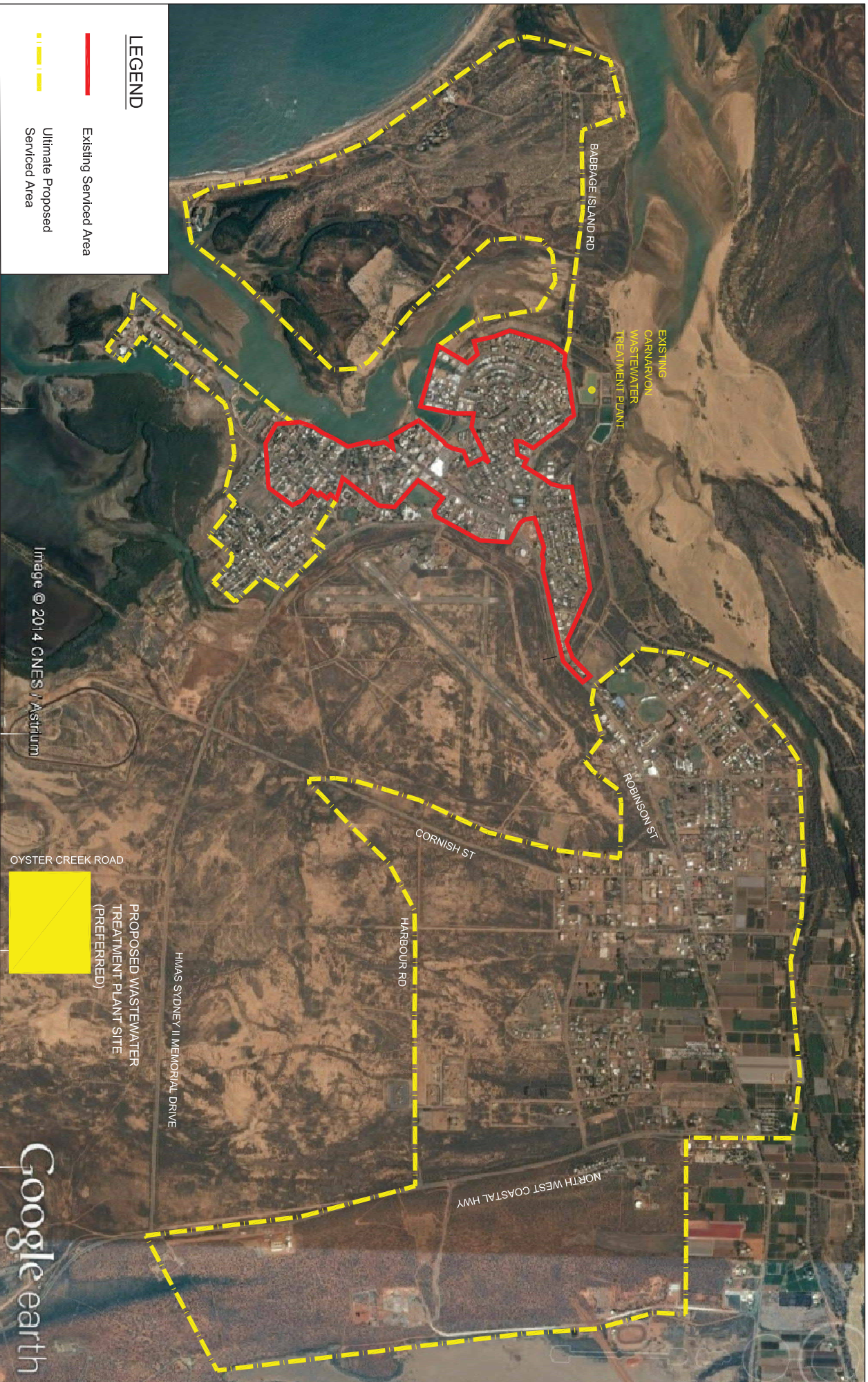
enquiries@pdeng.com

+61 8 6557 8840



CLIENT	Uhhls
REVISION	B
DATE	27/11/14
DRAWN	TV
CHECKED	TV





**LEGEND**

- Existing Serviced Area
- Ultimate Proposed Serviced Area

Image © 2014 CNES/Airbus

OYSTER CREEK ROAD

PROPOSED WASTEWATER TREATMENT PLANT SITE (PREFERRED)

HMS SYDNEY II MEMORIAL DRIVE

Google earth

CLIENT	Ushs
REVISION	B
DATE	27/11/14
DRAWN	TV
CHECKED	TV



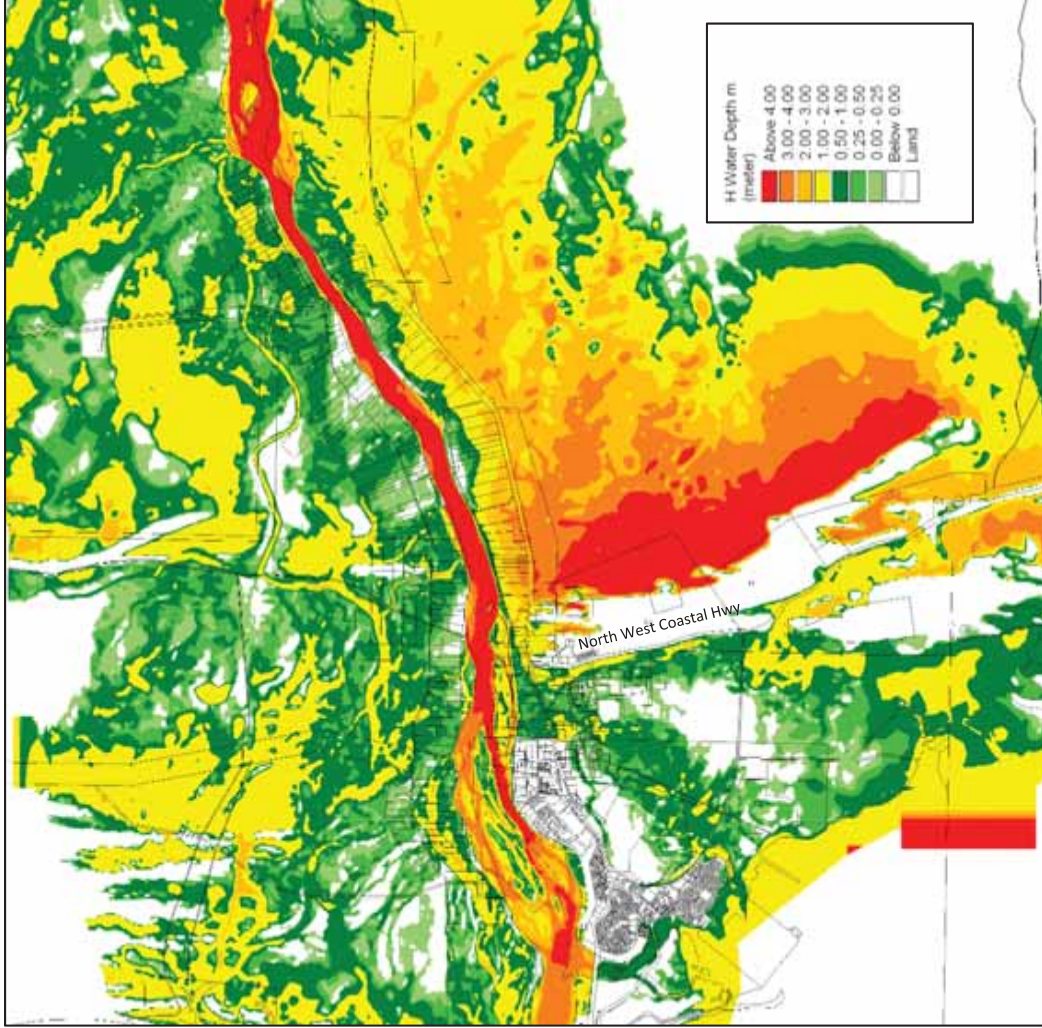
**Water Corporation Ultimate Wastewater Planning**

Carnarvon LPS  
Figure 3-2

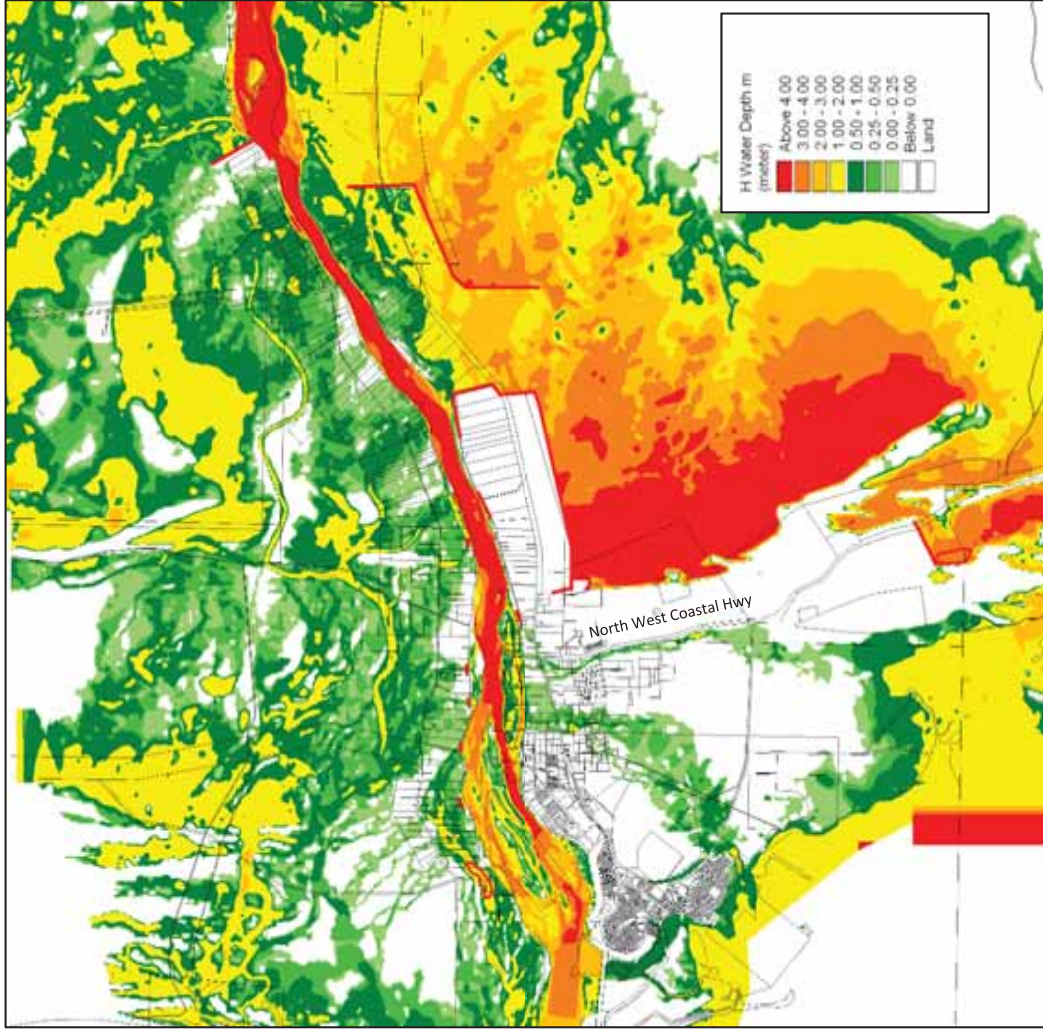
**Infrastructure**  
Planning and Development

✉ [enquiries@pdw.com](mailto:enquiries@pdw.com)

☎ +61 8 6557 8840



**Figure 4.1a**  
Extent of Flooding Prior to Flood Mitigation Works



**Figure 4.1b**  
Extent of Flooding Following Flood Mitigation Works

CLIENT	Urbis
REVISION	B
DATE	27/11/14
DRAWN	TV
CHECKED	TV



Carnarvon LPS

Figure 4.1

**100 year Flood Maps**

**Infrastructure**  
 Planning and Development

enquiries@ipcdg.com

+61 8 6557 8640

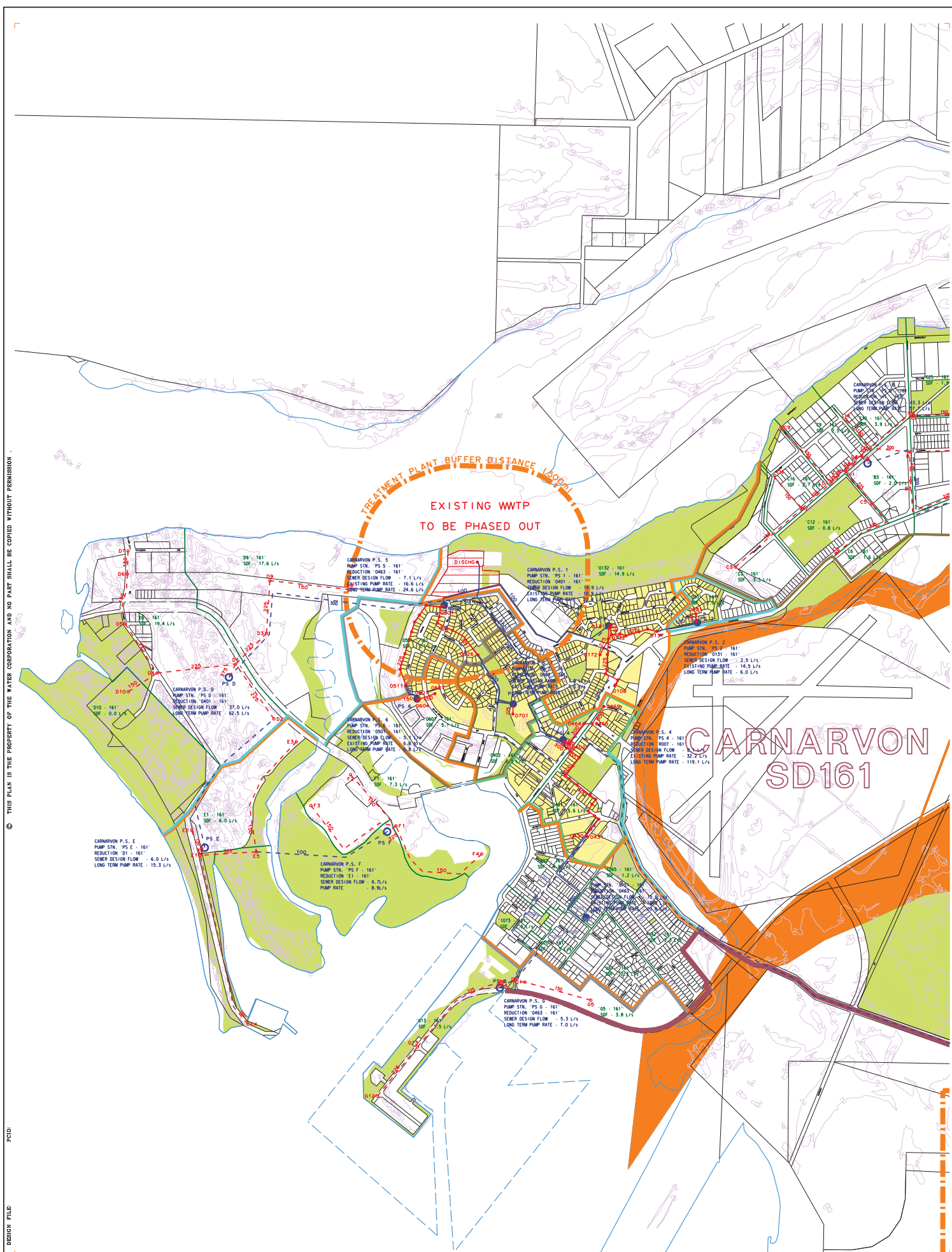
## Appendix A

---

### Water Corporation Wastewater Planning

© THIS PLAN IS THE PROPERTY OF THE WATER CORPORATION AND NO PART SHALL BE COPIED WITHOUT PERMISSION.

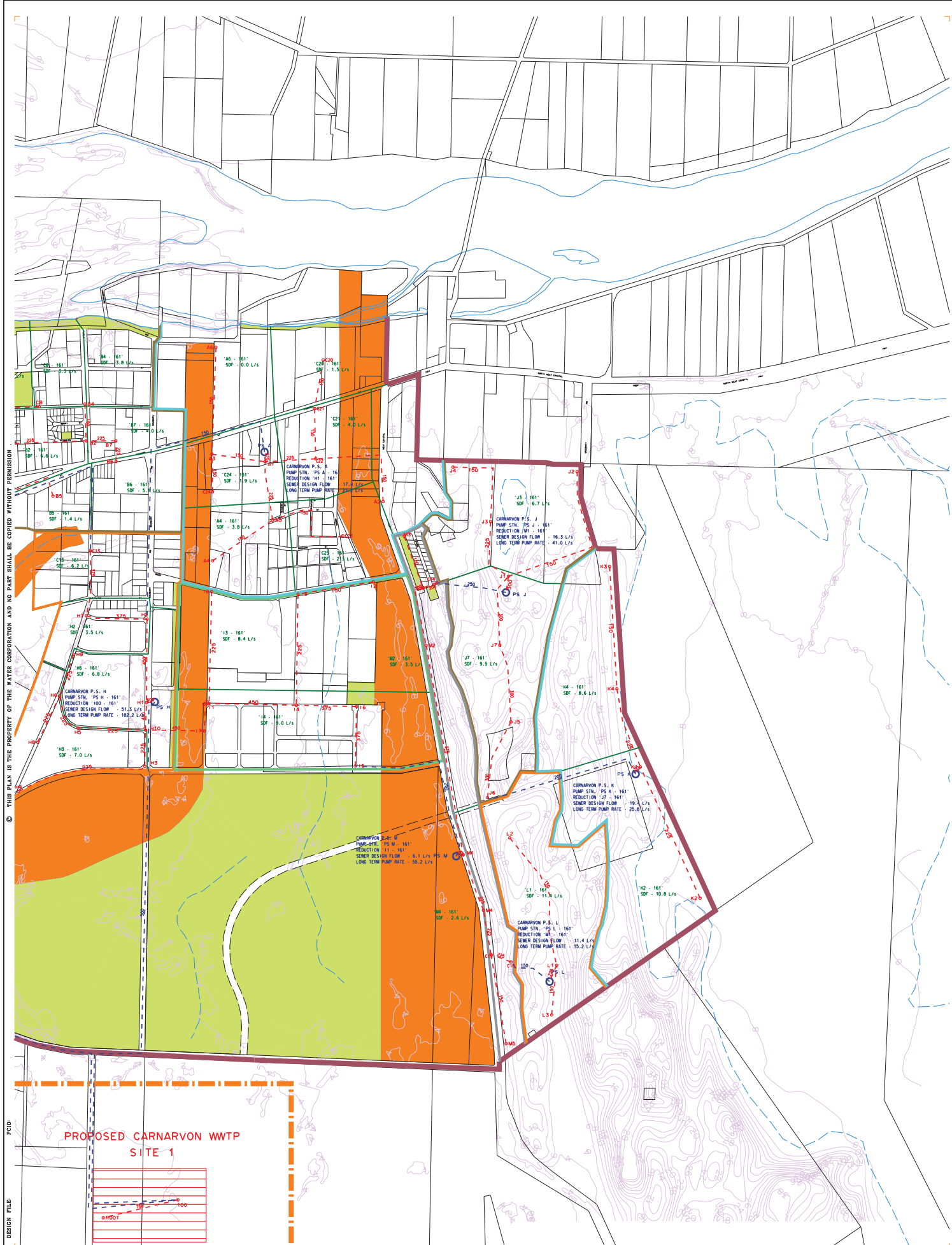
RCID: DESIGN FILE:



THE INFORMATION ON THIS PLAN IS BASED ON THE BEST DATA AVAILABLE AT DATE OF PRINTING AND IS SUBJECT TO ONGOING REVIEW AND AMENDMENT. NO RESPONSIBILITY IS ACCEPTED BY THE WATER CORPORATION FOR ACCURACY OF DATA SUPPLIED BY EXTERNAL AGENCIES.

APPENDIX 2

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">●</span> EXISTING PUMPING STATION</li> <li><span style="color: blue;">—</span> EXISTING PRESSURE MAIN</li> <li><span style="color: red;">—</span> EXISTING GRAVITY SEWER</li> <li><span style="color: blue;">○</span> PROPOSED PUMPING STATION</li> <li><span style="color: blue;">—</span> PROPOSED PRESSURE MAIN</li> <li><span style="color: red;">—</span> PROPOSED GRAVITY SEWER</li> </ul>	<ul style="list-style-type: none"> <li><span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> PARKS AND PUBLIC OPEN SPACE</li> <li><span style="background-color: #FFFF00; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> EXISTING SEWERED AREAS</li> <li><span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> SEWERED BY PRIVATE PS</li> <li><span style="border-bottom: 1px solid green; width: 15px; display: inline-block;"></span> NODE CATCHMENT</li> <li><span style="border-bottom: 1px solid brown; width: 15px; display: inline-block;"></span> PS AND SEWER CATCHMENTS</li> <li><span style="border-bottom: 1px solid red; width: 15px; display: inline-block;"></span> SEWER DISTRICT CATCHMENT</li> <li><span style="border-bottom: 1px solid purple; width: 15px; display: inline-block;"></span> WWTP CATCHMENT</li> </ul>	<p><b>NOTATION</b></p> <p>CATCHMENT NODE</p> <p>SEWER DISTRICT NUMBER</p> <p>7001 - 121</p> <p>SDF - L/S &amp; AVERAGE DAILY FLOW RATE</p>	<p><b>SHEET INDEX</b></p> <p style="text-align: center;">○</p>	<p style="text-align: center;"><b>WATER CORPORATION</b></p> <p style="font-size: small;">ISSUED WITH THE AUTHORITY OF THE MANAGER INFRASTRUCTURE PLANNING BRANCH 659 NEWCASTLE STREET, LEEDERVILLE 6007 WESTERN AUSTRALIA TELEPHONE 081 9430 9430, FAX 081 9430 3179</p>	<p style="text-align: center;"><b>WASTEWATER SCHEME PLANNING SERIES</b></p> <p style="text-align: center;"><b>CARNARVON- SD161 CONCEPTUAL PLANNING LONG TERM PLAN SHEET 1 of 2</b></p> <table border="0" style="width: 100%; font-size: x-small;"> <tr> <td>PLANNING BY <b>R. APOLLONI</b></td> <td>COMPILED BY <b>R. APOLLONI</b></td> <td>ACCEPTED BY <b>T. ZHENG</b></td> </tr> <tr> <td>SCALE <b>1:10000</b></td> <td>VERSION <b>21 APRIL 2010</b></td> <td>FILE NO. <b>A1</b></td> </tr> </table>	PLANNING BY <b>R. APOLLONI</b>	COMPILED BY <b>R. APOLLONI</b>	ACCEPTED BY <b>T. ZHENG</b>	SCALE <b>1:10000</b>	VERSION <b>21 APRIL 2010</b>	FILE NO. <b>A1</b>
PLANNING BY <b>R. APOLLONI</b>	COMPILED BY <b>R. APOLLONI</b>	ACCEPTED BY <b>T. ZHENG</b>									
SCALE <b>1:10000</b>	VERSION <b>21 APRIL 2010</b>	FILE NO. <b>A1</b>									



© THIS PLAN IS THE PROPERTY OF THE WATER CORPORATION AND NO PART SHALL BE COPIED WITHOUT PERMISSION.

**PROPOSED CARNARVON WWTW SITE 1**

0 50 100

THE INFORMATION ON THIS PLAN IS BASED ON THE BEST DATA AVAILABLE AT DATE OF PRINTING AND IS SUBJECT TO ONGOING REVIEW AND AMENDMENT. NO RESPONSIBILITY IS ACCEPTED BY THE WATER CORPORATION FOR ACCURACY OF DATA SUPPLIED BY EXTERNAL AGENCIES.

**APPENDIX 3**

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">●</span> EXISTING PUMPING STATION</li> <li><span style="color: blue;">—</span> EXISTING PRESSURE MAIN</li> <li><span style="color: red;">—</span> EXISTING GRAVITY SEWER</li> <li><span style="color: blue;">○</span> PROPOSED PUMPING STATION</li> <li><span style="color: blue;">—</span> PROPOSED PRESSURE MAIN</li> <li><span style="color: red;">—</span> PROPOSED GRAVITY SEWER</li> </ul>	<ul style="list-style-type: none"> <li><span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> PARKS AND PUBLIC OPEN SPACE</li> <li><span style="background-color: #FFFF00; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> EXISTING SEWERED AREAS</li> <li><span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> SEWERED BY PRIVATE PS</li> <li><span style="border-bottom: 1px solid green; width: 15px; display: inline-block;"></span> NODE CATCHMENT</li> <li><span style="border-bottom: 1px solid brown; width: 15px; display: inline-block;"></span> PS AND SEWER CATCHMENTS</li> <li><span style="border-bottom: 1px solid purple; width: 15px; display: inline-block;"></span> SEWER DISTRICT CATCHMENT</li> <li><span style="border-bottom: 1px solid purple; width: 15px; display: inline-block;"></span> WWTW CATCHMENT</li> </ul>	<p><b>NOTATION</b></p> <p>□ CATCHMENT NODE</p> <p>○ SEWER DISTRICT NUMBER</p> <p>7001 - 121</p> <p>SDP - L/S &amp; AVERAGE DAILY FLOW RATE</p>	<p><b>SHEET INDEX</b></p>	<p><b>WATER CORPORATION</b></p> <p>ISSUED WITH THE AUTHORITY OF THE MANAGER INFRASTRUCTURE PLANNING BRANCH 659 NEWCASTLE STREET, LEEDERVILLE 6007 WESTERN AUSTRALIA TELEPHONE 081 9430 2420, FAX 081 9430 3179</p>	<p><b>WASTEWATER SCHEME PLANNING SERIES</b></p> <p><b>CARNARVON - SD161</b></p> <p><b>CONCEPTUAL PLANNING</b></p> <p><b>LONG TERM SCHEME SHEET 2 of 2</b></p> <table border="0"> <tr> <td>PLANNING BY <b>R. APOLLONI</b></td> <td>COMPILED BY <b>R. APOLLONI</b></td> <td>ACCEPTED BY <b>T. ZHENG</b></td> </tr> <tr> <td>SCALE 1:10000</td> <td>VERSION 21 APRIL 2010</td> <td>FILE NO. <b>A1</b></td> </tr> </table>	PLANNING BY <b>R. APOLLONI</b>	COMPILED BY <b>R. APOLLONI</b>	ACCEPTED BY <b>T. ZHENG</b>	SCALE 1:10000	VERSION 21 APRIL 2010	FILE NO. <b>A1</b>
PLANNING BY <b>R. APOLLONI</b>	COMPILED BY <b>R. APOLLONI</b>	ACCEPTED BY <b>T. ZHENG</b>									
SCALE 1:10000	VERSION 21 APRIL 2010	FILE NO. <b>A1</b>									







# Shire of Carnarvon

DEMOGRAPHIC AND ECONOMIC ANALYSIS

MARCH 2015



**URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:**

Associate Director	Simon Wilkes
Senior Consultant	Anna Garvey
Job Code	PA1044
Report Number	1

© Urbis Pty Ltd  
ABN 50 105 256 228

All Rights Reserved. No material may be reproduced without prior permission.

You must read the important disclaimer appearing within the body of this report.

**URBIS**  
**Australia Asia Middle East**  
urbis.com.au

## TABLE OF CONTENTS

<b>Executive Summary .....</b>	<b>i</b>
<b>Introduction.....</b>	<b>1</b>
<b>1 Demographic and Housing Analysis .....</b>	<b>2</b>
1.1 Population and Demographics .....	2
1.1.1 Population.....	2
1.1.2 Forecast Population.....	3
1.1.3 Age .....	4
1.1.4 Birthplace.....	6
1.1.5 Indigenous Population .....	6
1.1.6 Education.....	7
1.1.7 Income.....	9
1.2 Housing and Accommodation.....	10
1.2.1 Dwelling Stock .....	10
1.2.2 Housing Tenure .....	12
1.2.3 Cost of Housing .....	13
1.2.4 Household Composition .....	13
1.2.5 Car Ownership.....	14
1.3 Inter-Shire Comparison .....	14
<b>2 Economic Profiling .....</b>	<b>16</b>
2.1 Background.....	16
2.2 Labour Force .....	16
2.2.1 Participation and Employment.....	16
2.2.2 Occupation and Industry.....	16
2.3 Employers.....	19
2.3.1 Major Local Employers .....	19
2.3.2 Major Regional Employers .....	20
2.4 Inter-Shire Comparison .....	21
2.5 Local Socio-Economic SWOT Analysis.....	22
<b>3 Tourism and Visitors .....</b>	<b>23</b>
3.1 Existing Tourism Offer .....	23
3.2 Analysis of Visitors.....	25
3.2.1 Domestic Arrivals.....	25
3.2.2 International Arrivals .....	25
3.3 Tourism’s Economic Contribution.....	26
3.4 Forecasts.....	27
3.4.1 Domestic Arrivals.....	27
3.4.2 International Arrivals .....	28
3.5 Tourism SWOT Analysis .....	29
<b>4 Commercial Land Uses .....</b>	<b>31</b>
4.1 Existing Commercial Activity .....	31
4.1.1 Township Functions.....	32
4.2 Commercial Trends .....	33
4.3 Carnarvon Airport .....	33
4.3.1 Future Airport.....	33
4.4 Commercial SWOT Analysis .....	33
<b>5 Key Economic Considerations.....</b>	<b>36</b>

5.1	Commercial and Retail .....	36
5.2	Residential .....	36
5.3	Open and Recreational Space.....	36
5.4	Coastal and Tourism.....	36
5.4.1	Promoting Investment Opportunities .....	37
5.5	Horticulture and Plantation .....	38
5.6	Transport Infrastructure .....	38
5.7	Civil Engineering Services Overlay.....	38
<b>Disclaimer.....</b>		<b>39</b>

**Appendix A    Audit of Commercial and Community Activity (November 2014)**

# Executive Summary

## STUDY PURPOSE

The purpose of this report is to assess the current socio-economic situation locally in Carnarvon township, as well as the demographic and economic profile of the wider Carnarvon region, to inform the drafting of the Local Planning Strategy and assist in creating a 15-year development vision for the community.

## STUDY AREA

The Shire of Carnarvon covers an area of approximately 53,000 square kilometres. The township of Carnarvon, the Shire's main service centre and home to the majority of the Shire's population, is located approximately 900 kilometres to Perth's north, on the Indian Ocean. Along with the Shires of Exmouth, Shark Bay and Upper Gascoyne, Carnarvon is situated within the Gascoyne Development Commission area. The administrative centre for the Gascoyne region is Carnarvon township.

## DEMOGRAPHIC AND HOUSING PROFILE

A demographic analysis of Carnarvon was undertaken, largely based on information sourced from the Australian Bureau of Statistics. A summary of this analysis is provided below. Unless stated otherwise, figures are sourced from the most recent Census (2011).

- The Shire's population was 5,787 persons, the majority of which were counted in Carnarvon township (79%). The remaining population was located in Coral Bay (4%) and non-urban pastoral areas (17%).
- While some projections for the Shire forecast a declining population in coming years, it is interesting to note that Carnarvon township's estimated population grew between 2006 and 2011 (by 10%).
- The average age of Shire residents increased slightly between the 2006 Census (35.2 years) and that of 2011 (37.0 years). A significant 37% of Coral Bay residents were aged between 25 and 39 years (largely attributed to the peak tourism season's temporary workers).
- The vast majority (81%) of persons present in the Shire were Australian-born. The top three foreign birth countries were the United Kingdom (4.1%), Vietnam (2.6%) and New Zealand (1.7%).
- Carnarvon township (24%) and Shire (19%) were home to larger proportions of indigenous Australians than both the wider state of Western Australia (3.1%) and Coral Bay (1.2%).
- Fewer Shire residents (36%) completed year 12 than the equivalent proportion recorded across the state (54%). While every person in Coral Bay had some level of schooling to their name, the Shire (1.2%) recorded a larger proportion of persons with no schooling than the state figure (0.7%).
- The Shire's average household income was 10% lower than that recorded across non-metropolitan Western Australia. Coral Bay (lower by 41%) and Carnarvon township (lower by 11%) recorded even higher variances.
- The proportion of Shire home owners (31%) was on a par with the non-metro Western Australian equivalent. However the geographies differed among renters (44% of households in the Shire versus 36% across non-metro WA) and mortgagors (24% across the Shire and 31% across non-metro WA).
- The Shire's average weekly rent was 41% lower than the state's result. Around 2.8% of Shire households experienced rental stress in 2011, compared with 5.9% throughout the state. Average monthly mortgage repayments in the Shire, too, were notably lower than those across the state.
- The Shire was home to a lower proportion (9%) of families with children (aged 15-18 years) compared with the equivalent for Western Australia (14%). The comparatively lower proportion could indicate a propensity among families to move to larger centres for wider educational opportunities.

- Lone persons accounted for 29% of households across the Shire. Considering the Shire's significant stock of dwellings with three or more bedrooms (70%), there is an argument for the construction of more, higher density dwellings (or dwellings with fewer bedrooms).

## ECONOMIC PROFILE

The Shire's economic position remains firmly centred around the agricultural, fisheries' and horticultural industries. In recent years, there has been a particular trend towards diversifying horticultural enterprises to include a more varied range of produce and explore areas of ecotourism and wildflower production. It will be important for this industry to continue to diversify into the future to keep up with market trends and to allow for production to become less reliant on seasonal factors.

According to the 2011 Census, the unemployment rates of Carnarvon township, Shire and Western Australia were on a par at 5%. At 42% and 38% respectively, larger proportions of Carnarvon township and Shire residents were employed in blue collar roles than the state-wide proportion (34%). However interestingly, Carnarvon township and Shire's blue collar results were lower than that for non-metropolitan Western Australia (44%).

Different predominant employment industries exist in the townships of Carnarvon and Coral Bay. As at 2011, around 12.5% of employed Carnarvon township residents classified their employment industry as Health Care and Social Assistance, while one third (or 33.3%) of Coral Bay's working population was employed in the Accommodation and Food Services sector. While the ABS does not classify tourism as an employment sector in its own right, it is likely that this sector is indirectly responsible for the employment of people in hospitality and food and beverage roles, such as managing accommodation, restaurants or pubs, and working in retail/service positions.

Carnarvon township is located 870 kilometres south-west from Port Hedland and 640 kilometres south-west from Karratha. Major employers in surrounding regions (namely to the north) are mining-related and Carnarvon is well-positioned to capitalise. According to the Bureau of Resources and Energy Economics (October 2014), committed mining, oil and gas and infrastructure projects in Western Australian have a combined project value of \$115.9 billion. This represents 50.9% of the total value of all such projects across Australia.

## TOURISM AND VISITORS

The Shire forms part of Australia's Coral Coast tourism region, extending for 1,100 kilometres from Cervantes in the south to Exmouth in the north. Ranking as the state's third most visited region outside of Perth, key attractions include the Ningaloo Reef, Shark Bay World Heritage Area, Pinnacles Desert, Kalbarri National Park and Abrolhos Islands. As a destination, Carnarvon township offers a somewhat limited range of attractions. However geographically, it is well placed to access a number of significant and varied tourism drawcards.

Tourism Western Australia estimates that an average of 50,000 Australian residents (from intra- or inter-state) visited Carnarvon, and stayed for at least one night, each calendar year from 2011 to 2013. Their average length of stay was 3.6 nights. While information on international visitor nights or average length of stay is unavailable, Tourism WA estimates that an average of 12,700 foreigners visited Carnarvon each year from 2011 to 2013.

According to Tourism Research Australia, domestic visitor nights' growth across non-metropolitan Western Australia (1.3% p.a. compound) is expected to fare better than the equivalent growth rate for metropolitan Perth (0.8% p.a. compound) between 2011 and 2022. Over the same period, international visitor nights' growth across non-metropolitan Western Australia (4.4% p.a. compound) is forecast to outperform the equivalent growth rate for metropolitan Perth (4.2% p.a. compound).

Tourism makes a significant contribution to the economy of the Coral Coast. However potential exists for the sector to expand and become a more sustainable economic driver for the Shire. Any campaigns, initiatives or new infrastructure (including short-stay accommodation) which increase overnight visitor numbers (both domestic and international) should be encouraged, as wide-ranging economic benefits are very likely to ensue. Over the 2012/13 financial year, the average international visitor's stay saw \$1,183 spent in the Coral Coast region, while the equivalent figures for domestic overnight and domestic day visitors were \$604 and \$105 respectively.

## COMMERCIAL LAND USES

As the seat of government for the Shire, Carnarvon township constitutes the region's major commercial hub. It caters to not only township residents, but also pastoral and indigenous Australian communities based in regional Shire areas. Commercial uses include service and trade providers, retailers, entertainment and hospitality venues, short-stay accommodation options, child and aged care service providers and recreational venues. Key retail precincts in the township include:

- **Carnarvon Central:** opened in 1985, Carnarvon Central is a neighbourhood centre anchored by Woolworths (4,002 sqm). Other tenancies include eight specialty stores (1,027 sqm) and four offices. Parking for over 50 vehicles is available on site;
- **Carnarvon Business Centre:** comprising seven specialty shops (934 sqm), tenants are mainly service providers (accountants, lawyers, estate agents and civil servants); and
- **Detached tenancies in the vicinity of Robinson Street:** including food and beverage offers, petrol stations, grocery and liquor retailers and other general discretionary/specialty retailers. One of the larger examples is the former Target Country tenancy (1,000 sqm) on Alexandra Street.

In mid 2014 Carnarvon township's only department store, Target Country, closed its store on Alexandra Street. Its lease expired in June and although the contract included a five year option, the business chose to vacate. There have been a few other recent examples of retailers closing their stores in Carnarvon township. Such actions may be attributed to a stagnant or declining population, limited or stagnant local industry/employment growth, high operating costs and the emergence of online shopping.

With its rapidly expanding agricultural sector, fisheries' industry, tourism operations and resources and mining industry, the Gascoyne region plays a growing role as an economic driver of the state's economy. This growth is set to continue with the imminent release of additional irrigated agricultural land and further mining and petroleum projects in the pipeline. Investigations are being undertaken in relation to the Gascoyne Food Bowl Initiative, which identifies a further 400 hectares of land along the Gascoyne River for horticultural purposes.

Several issues have arisen regarding the current location and state of Carnarvon Airport. These include the main runway being unable to accommodate jet aircraft and the Airport's location beside the centre of Carnarvon (impacting on the township's ability to expand to the east). While the relocation of the Airport is understood to be unlikely, it has been mooted that the existing airstrip could be moved to the landholding's east. According to the Shire of Carnarvon (May 2014), this would allow for up to 1,400 residential lots to be created in the west, along with industrial and commercial land releases, over a 20 year timeframe.

# Introduction

## STUDY PURPOSE

In mid 2014, the Shire of Carnarvon appointed Urbis to provide consultancy services for the development of a new Local Planning Strategy. The purpose of this particular report is to assess the current socio-economic situation locally in Carnarvon township, as well as the demographic and economic profile of the wider Carnarvon region, to inform the drafting of the Local Planning Strategy and assist in creating a development vision for the community.

The Local Planning Strategy will provide the planning direction for the sustainable growth and development of the Shire for the next 15 years. It will apply state and regional planning policies, provide the rationale for land use planning and development within the township and broader Shire and inform a review of the Shire's Town Planning Scheme No. 13.

## METHODOLOGY

This report is largely based on information obtained through desktop investigations (including literature reviews). The following sources have been used:

- Australian Bureau of Statistics
- Bureau of Resources and Energy Economics
- Gascoyne Development Commission
- Landgate and Nearmap
- Property Council of Australia
- Tourism Research Australia, Tourism Forecasting Committee and Tourism WA
- Western Australian Department of Education
- Western Australian Department of Planning

## STUDY AREA

The Shire of Carnarvon covers an area of approximately 53,000 square kilometres. The township of Carnarvon, the Shire's main service centre and home to the majority of the Shire's population, is located approximately 900 kilometres to Perth's north, on the Indian Ocean. The Shire comprises several other towns and localities including Babbage Island, Whitlock Island, Coral Bay and Gnarlou.

Other centres in surrounding areas include Gascoyne Junction in the Shire of Upper Gascoyne (174 kilometres east), Exmouth in the Shire of Exmouth (366 kilometres north) and Denham in the Shire of Shark Bay (329 kilometres south).

Carnarvon is located within the Gascoyne Development Commission area, along with three other local government areas (Exmouth, Shark Bay and Upper Gascoyne). The administrative centre for the Gascoyne region is Carnarvon. Carnarvon's economy is largely driven by mining (salt at Lake MacLeod), agriculture, fishing and tourism. The region also comprises a number of large pastoral leases.



# 1 Demographic and Housing Analysis

This chapter provides a demographic profile for the Shire of Carnarvon. It should be noted that the Australian Bureau of Statistics' Census data for Carnarvon are complicated by the relatively small population base in the area outside Carnarvon township. It nonetheless remains a useful source in understanding the current demographic characteristics of the Shire.

## 1.1 POPULATION AND DEMOGRAPHICS

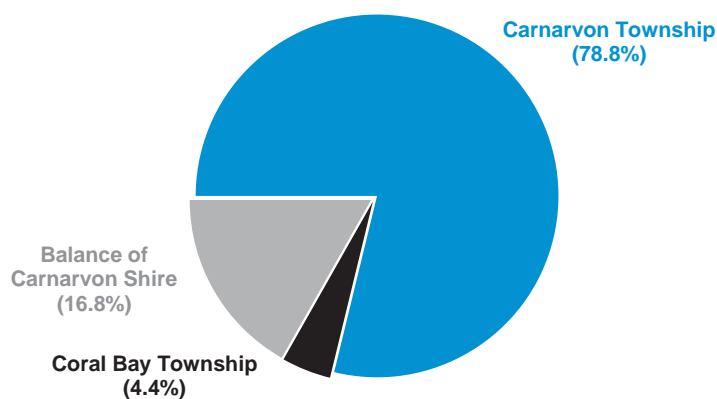
### 1.1.1 POPULATION

The Shire of Carnarvon's population was 5,787 persons on Census night 2011, comprising a slightly higher share of males (51.2%) than females (48.8%). The majority of the Shire's population was counted within Carnarvon township (78.8%), with the remaining population located in Coral Bay township (4.4%) and pastoral land outside of urban areas (16.8%).

#### Population (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP AND CARNARVON SHIRE

FIGURE 1.1



Source: ABS, Urbis

Notwithstanding the above, the ABS estimated that the 2011 resident population of the Shire of Carnarvon was a slightly higher 6,076 persons (including usual residents who were away from home on Census night).

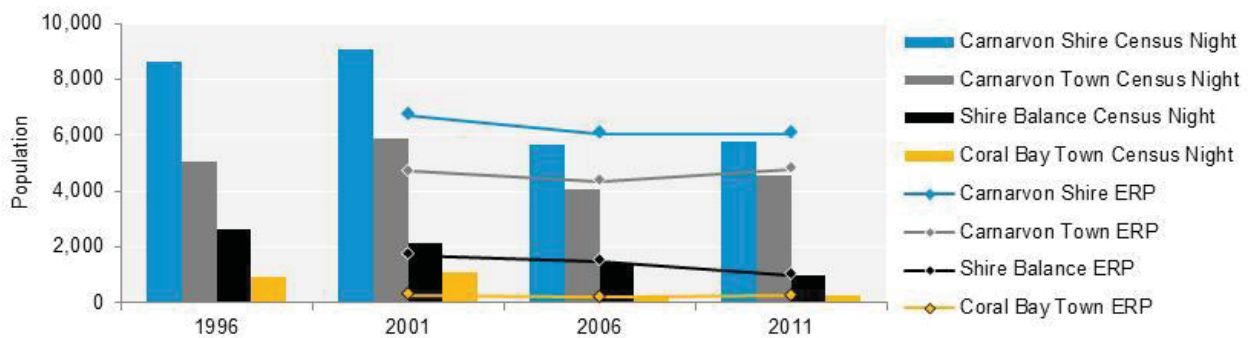
Figure 1.2 charts historical population figures across the four Census years between 1996 and 2011. The bars reflect the population on Census night (including persons not usually resident in the various geographies), while the lines chart the estimated resident populations of each geography (counting people usually resident, including those away from home on Census night). Key observations include:

- The Shire Balance (all areas excluding Carnarvon township and Coral Bay township) was the one geography to consistently record quadrennial population declines;
- The population of Coral Bay township on Census night is highly variable. For example, the difference between 2001 and 2006 was a fall of 82.3%;
- While some sources forecast a declining population in Carnarvon township (see section 1.1.2), it is interesting to note that the township's population grew between 2006 and 2011. Over the five year period, the estimated resident population increased by 10.0%, while the Census night population rose by 11.9%; and
- The Shire recorded a pronounced fall of 37.6% in Census night populations between 2001 and 2006. This is likely to be attributable to boundary realignment.

## Population (1996-2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, SHIRE BALANCE AND CARNARVON SHIRE

FIGURE 1.2



Source: ABS, Urbis

### 1.1.2 FORECAST POPULATION

Some projections for the Shire expect the total population will decline in coming years, assuming a status quo scenario. Forecasts prepared by the Australian Bureau of Statistics (figures 1.3 and 1.4) are one such example. According to the Bureau, the Shire's population could decline by 12.2% between 2007 and 2021, while Carnarvon township's population may decrease by 16.5% over the same period.

## Population Forecasts (ABS)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP AND CARNARVON SHIRE

FIGURE 1.3

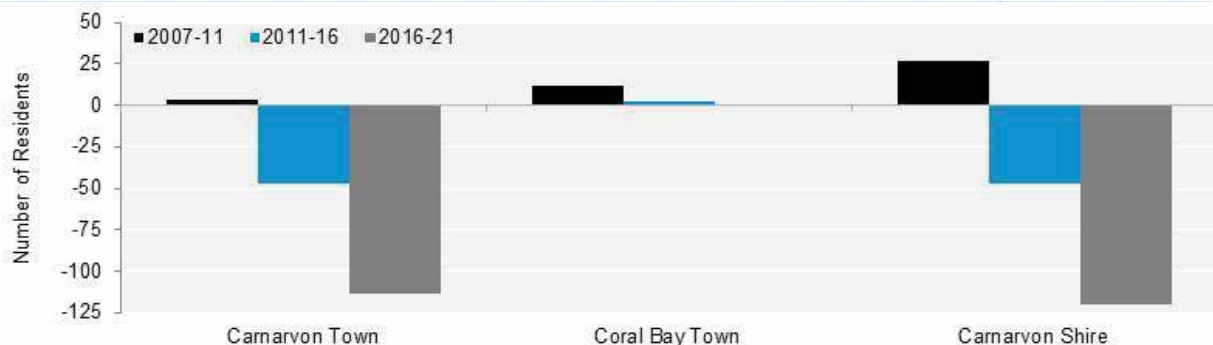
	Population				Annual Population Growth (no.)			Annual Population Growth (%)		
	2007	2012	2016	2021	2007-12	2012-16	2016-21	2007-12	2012-16	2016-21
Carnarvon Town	4,786	4,804	4,566	3,997	4	-60	-114	0.1%	-1.3%	-2.6%
Coral Bay Town	216	273	275	275	11	1	0	4.8%	0.2%	0.0%
Carnarvon Shire	5,968	6,096	5,839	5,239	26	-64	-120	0.4%	-1.1%	-2.1%

Source: ABS, Urbis

## Population Forecasts: Growth and Decline (ABS)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP AND CARNARVON SHIRE

FIGURE 1.4



Source: ABS, Urbis

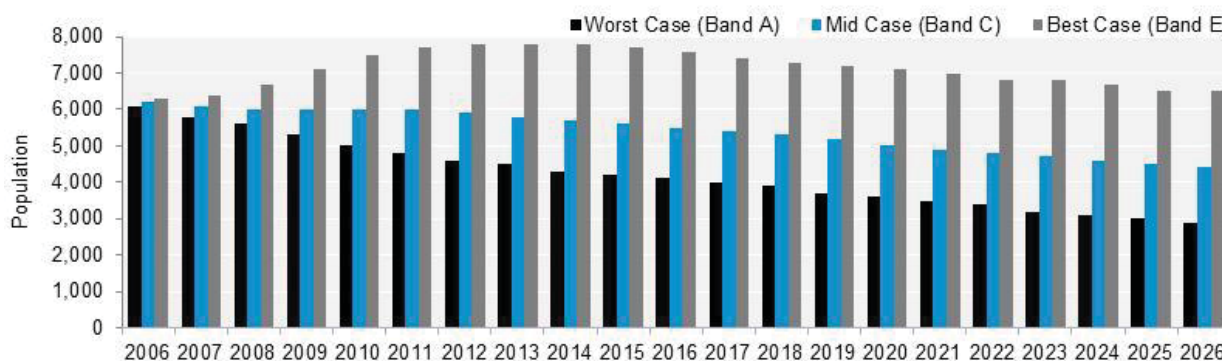
An alternative source of population forecasts are those prepared by the Department of Planning, titled *Western Australia Tomorrow 2012*. The data for each municipal area comprise five forecast scenarios, ranging from worst case (Band A) to best case (Band E) and three possibilities in between (Bands B, C and D). Band C is generally the scenario favoured by property economists.

In the case of the Shire of Carnarvon, all scenarios other than best case (Band E) predict a declining population. While Band E forecasts annual declines from 2015, the population figure for 2026 (6,500 persons) is 3.2% higher than the starting figure in 2006 (6,300 persons). The difference between the Department of Planning's worst case scenario in 2026 and the best case equivalent is a sizeable 3,600 persons.

## Population Forecasts: Growth and Decline (Department of Planning)

CARNARVON SHIRE

FIGURE 1.5



Source: Department of Planning, Urbis

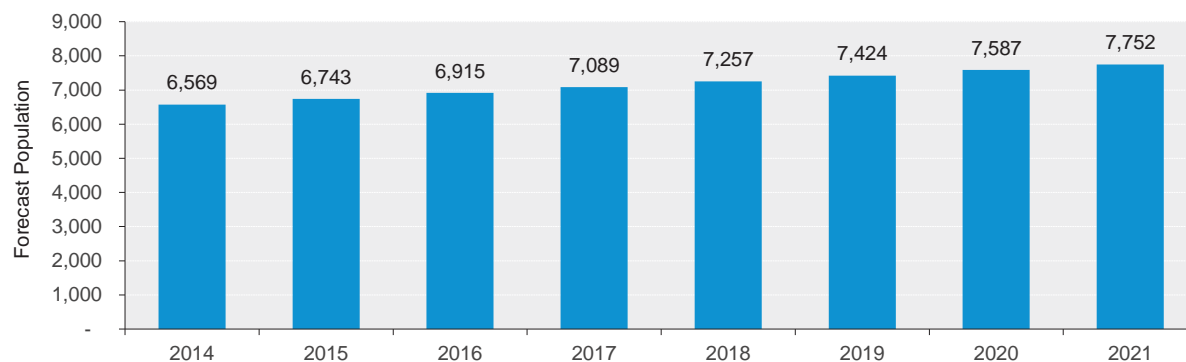
It is important to note that population projections can be impacted by a number of external factors that do not reflect previous trends. Factors could include mining or industrial growth in the Gascoyne region, the completion of major infrastructure such as roads, the implementation of state programmes and the success of local initiatives such as the Gascoyne Food Bowl. These factors need to be taken into account when considering the above projections.

Furthermore, the above projections are based on previous trends that have occurred in recent decades with the aim of providing accurate population projections. It is noted that other projections have been undertaken by the Australian Bureau of Statistics on behalf of the federal Department of Health (figure 1.6) and independent estimates have been prepared for the Shire which project a neutral to positive growth scenario.

## Forecast Population Alternative (ABS for Department of Health)

CARNARVON SHIRE

FIGURE 1.6



Source: Unofficial ABS projections commissioned in 2008 by the Australian Department of Health, Urbis

Planning for the Shire needs to focus on population retention and attraction. This is achievable by setting realistic and modest targets to facilitate sustainable growth.

### 1.1.3 AGE

The average age of residents in the Shire of Carnarvon increased slightly between the 2006 Census (35.2 years) and that of 2011 (37.0 years). The most recent result is generally in line with the average age of Western Australians (36.9 years). Some interesting observations can be drawn from figure 1.7:

- The townships of Coral Bay (13%) and Carnarvon (11%) were home to higher proportions of persons aged between 65 and 79 years than the state-wide proportion (9%);
- The township of Carnarvon (16%) was home to a lower proportion of persons aged between 20 and 34 years than the Coral Bay township (30%) and state-wide (22%) equivalents; and

- The township of Coral Bay (11%) was home to a lower proportion of persons aged between zero and 14 years than the Carnarvon township (24%) and state-wide (20%) proportions.

## Age Distribution (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.7

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Aged 0-14	24%	11%	23%	21%	20%
Aged 15-19	5%	0%	5%	6%	7%
Aged 20-34	16%	30%	17%	19%	22%
Aged 35-49	22%	26%	22%	22%	22%
Aged 50-64	20%	19%	21%	19%	18%
Aged 65-79	11%	13%	10%	9%	9%
Aged 80+	2%	1%	2%	3%	3%
Average Age	36.6	41.1	37.0	36.7	36.9
Dependency Ratio <sup>1</sup>	37%	25%	35%	33%	32%

1. Dependency ratio refers to the proportion of the population aged between 0-14 and over 65 years

Source: ABS, Urbis

There is a perception that young adults and families with teenage children tend to leave Carnarvon Shire for wider employment and educational opportunities in areas such as Perth. Indeed Urbis notes in section 1.1.6 that only one local school teaches years 11 and 12.

Figure 1.8 illustrates that Carnarvon township's age proportions roughly correlate with the equivalent figures for the wider state. However were Urbis to apply the state-wide proportion of residents aged between 15 and 19 years (7%) to the Shire's population on Census night 2011 (5,787 persons), the result would be approximately 405 people. Applying the actual 5% (of Shire residents aged 15 to 19 years) to 5,787 persons equals 289 people. The theoretical shortfall of around 116 persons (nearing full-time employment and child-bearing life stages) has implications for the Shire, due to its relatively small population.

Further discrepancies are apparent when comparing Coral Bay township with the other four geographies. Key observations include:

- At 24%, Carnarvon township was home to a higher proportion of residents aged between zero and 14 years than non-metropolitan Western Australia (21%);
- Coral Bay township was home to a significantly lower proportion of residents aged up to 19 years (11%) than any of the other geographies. In comparison, the next lowest proportions were recorded in non-metropolitan Western Australia and the whole of Western Australia (27% apiece); and
- A significant 37% of Coral Bay township residents were aged between 25 and 39 years, compared with 20% of residents across the Shire and 22% of persons residing throughout Western Australia. Considering Census night was in August and Coral Bay's peak tourism season is May to October, many of those present, aged between 25 and 39 years, are likely to have been seasonal workers or tourists (looking to relax and/or partake in a variety of water activities).

## Age Distribution of Youths (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.8

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Aged up to 14	24%	11%	23%	21%	20%
Aged 15-19	5%	0%	5%	6%	7%
Aged 20-24	5%	5%	5%	6%	7%
Aged 25-29	6%	15%	6%	7%	8%
Aged 30-39	14%	22%	14%	14%	14%
Aged 40 or over	47%	48%	48%	46%	45%

Source: ABS, Urbis

### 1.1.4 BIRTHPLACE

As highlighted in figure 1.9, the vast majority (81%) of persons present in the Shire of Carnarvon on Census night 2011 were Australian-born (excluding "not stated" Census survey responses). The same proportion (81%) for the same demographic was recorded across Western Australia (minus the Perth metropolitan area). The top five foreign birth countries across the Shire were the United Kingdom (4.1%), Vietnam (2.6%), New Zealand (1.7%), Croatia (0.7%) and South Africa (0.6%).

As discussed in section 1.1.3, the Census occurred during Coral Bay's peak tourism season (May to October). Unsurprisingly, 24% of the township's population on Census night was born overseas. The European continent accounted for 19% of people's origins, specifically the United Kingdom, Germany, Greece, Ireland and Italy. This further supports the theory that seasonal workers (on working holidays) and tourists comprised a significant proportion of persons present on Census night.

## Birthplace (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.9

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Australian Born	84%	76%	81%	81%	67%
Overseas Born	16%	24%	19%	19%	33%
• Asia	3%	0%	5%	2%	7%
• Europe	7%	19%	8%	9%	15%
• Other	6%	5%	7%	8%	11%

Source: ABS, Urbis

### 1.1.5 INDIGENOUS POPULATION

Aboriginal people from the Gascoyne region are collectively known as the Yamatji. There are five different language groups across the region: Yinggarda, Bayungu, Malgana, Thadgari and Thalanyji.

In 2011, Carnarvon township (23.6%) and Shire (19.1%) were home to larger proportions of indigenous Australians than the wider state of Western Australia (3.1%) or Coral Bay township (1.2%). While the predominant demography in each geography was non-indigenous, the state-wide proportion (91.1%) was notably high. Another anomaly was the 20.3% of persons in Coral Bay township who did not state their indigenous status. As discussed in sections 1.1.3 and 1.1.4, this is likely explained by the number of overseas-born, transient persons present on Census night.

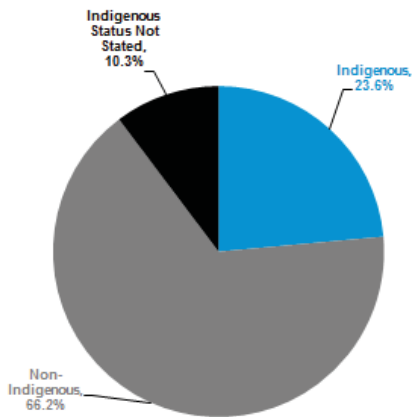
As a proportion of persons present on Census night (19.1%), the Shire of Carnarvon's indigenous population remained unchanged between the 2006 and 2011 Census years.

# Indigenous Populations (2011)

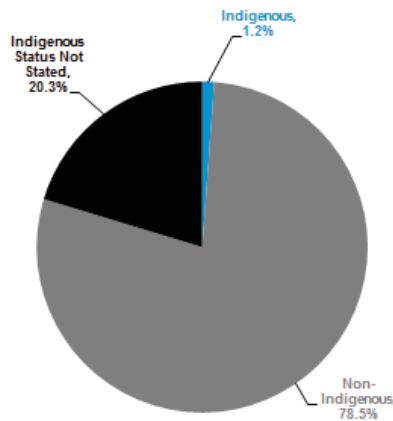
CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.10

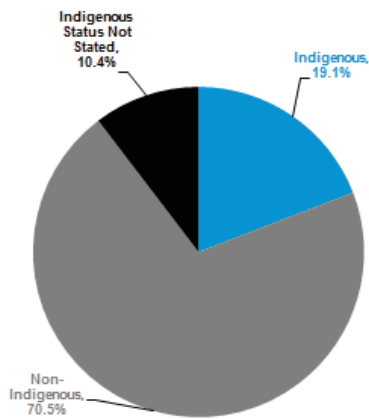
CARNARVON TOWNSHIP



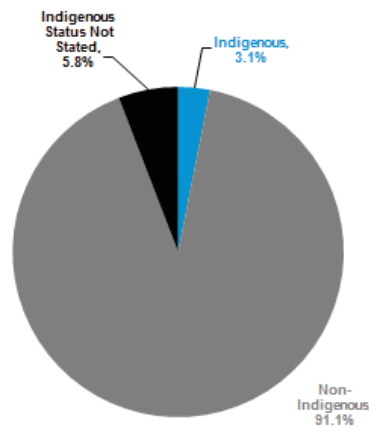
CORAL BAY TOWNSHIP



CARNARVON SHIRE



TOTAL WESTERN AUSTRALIA



Source: ABS, Urbis

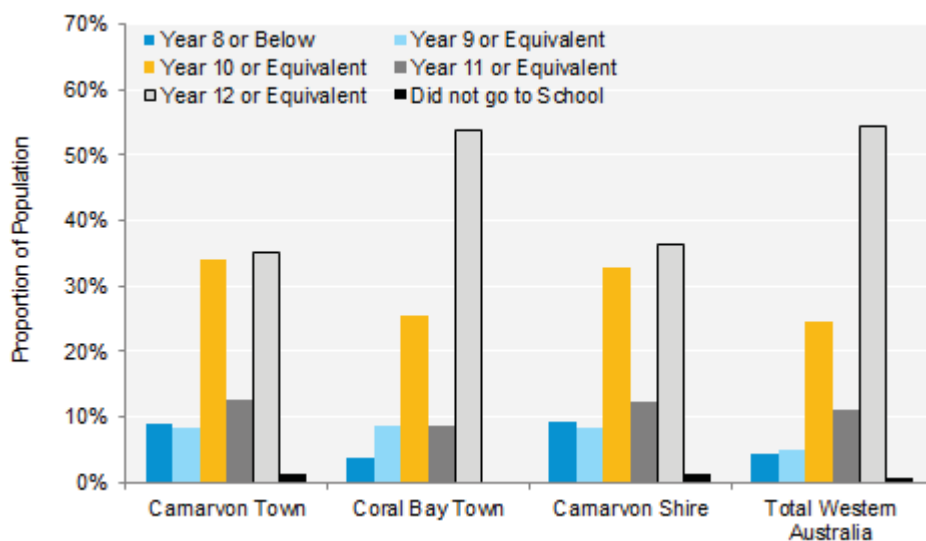
## 1.1.6 EDUCATION

The 2011 Census figures revealed that a lower proportion of Shire residents (36.2%) completed year 12 than the proportion recorded across Western Australia (54.3%). Coral Bay township's result (53.9%) was roughly on a par with the state-wide figure. While every person in Coral Bay township had some level of schooling to their name, Carnarvon Shire (1.2%) recorded a larger proportion of persons who did not attend any level of school than the state average (0.7%).

## Primary and Secondary Education (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.11



Source: ABS, Urbis

The Shire of Carnarvon offers four primary school options to residents: two government and two independent. The equivalent of one and a half high schools exist, with St Mary Star of the Sea teaching students up to year ten and Carnarvon Community College teaching students to year 12. In 2013, three government schools (Carnarvon Senior High School, East Carnarvon Primary School and Carnarvon Primary School) amalgamated to form Carnarvon Community College.

Figure 1.12 provides an overview of the schools, as at 2014. All are located (or based) in Carnarvon township and together, are currently teaching around 1,200 students.

## Carnarvon's Primary and Secondary Schools (2014)

CARNARVON SHIRE

FIGURE 1.12

SCHOOL	ADDRESS	OFFER	AFFILIATION	STUDENT NUMBERS
Carnarvon Christian School	Babbage Island Road, Carnarvon	Pre-primary, years one to seven	A Christ-centred, fee-paying school	150
St Mary Star of the Sea	Johnston Street, Carnarvon	Pre-kindergarten to year ten	A Catholic, fee-paying school	300
Minoo Malgoo Aboriginal Pre-School	Saw Street, Carnarvon	Pre-school	Government, for Aboriginal children	Unconfirmed
Carnarvon School of the Air	Carnarvon Road, Carnarvon	Kindergarten to year seven	Government	34
Carnarvon Community College (including Clontarf Academy for Boys)	Cleaver and Marmion Streets, Carnarvon	Kindergarten to year 12	Government	700

Source: Department of Education, Carnarvon School of the Air, St Mary Star of the Sea, Carnarvon Christian School, Urbis

Regarding local tertiary education, the Durack Institute of Technology has a campus in Carnarvon. In addition to local short courses (Worksafe accreditation, recreational skippers' ticket, Auschem accreditation, Responsible Service of Alcohol and barista training), various certificates are offered in:

- Community: including services, aged care, education support;

- General education: including spoken and written education, gaining access to training and employment;
- Agriculture: including conservation and land management, rural operations, vertebrate pest management;
- Business: including administration, accounts, information technology, retail services, tourism, hospitality, training and assessment; and
- Other: such as automotive servicing, visual arts, clothing production, engineering, resources and infrastructure work, make-up and skin care.

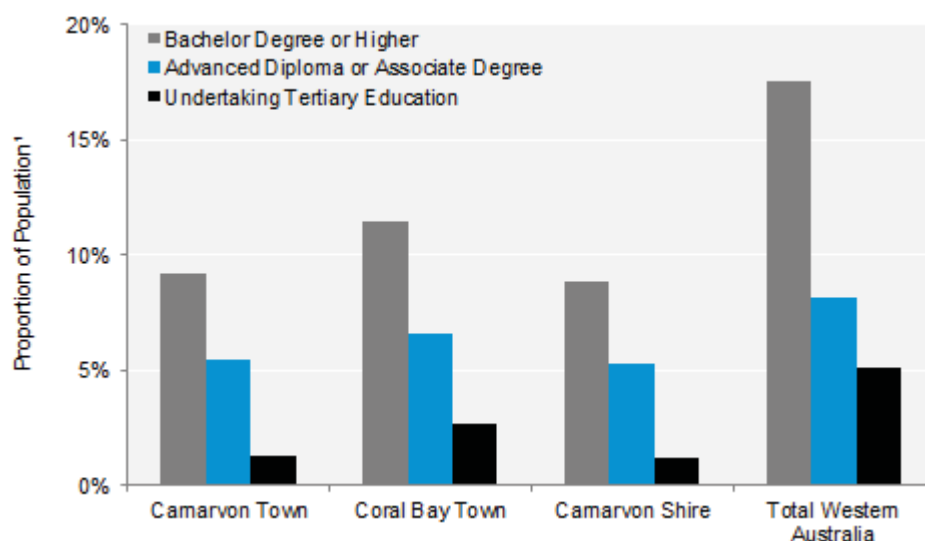
While there are no university campuses within the Shire of Carnarvon, the University of Western Australia's Rural Clinical School has a physical presence in the township (in addition to 13 other regional centres). The office and student house (with three bedrooms) are both close to Carnarvon township's centre. Tertiary education is also possible for people based in Carnarvon via Open Universities Australia (OUA). OUA consists of 12 Australian universities offering undergraduate and postgraduate qualifications from a range of faculties, with tuition largely occurring online.

An analysis of Census data from 2011 reveals 15.3% of Shire residents had some form of tertiary education (completed or underway), compared with 30.8% of persons across the state and 20.6% of persons in Coral Bay township. Within the Shire, 8.9% of people had a bachelor degree or higher and 5.3% of persons held an advanced diploma or associate degree. Furthermore, 1.2% of people were undertaking tertiary education.

## Tertiary Education (2011)

CARNARVON TOWN, CORAL BAY TOWN, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.13



1. As a percentage of the total population aged over 18 years. Not all qualification and education options have been stated, therefore the percentages are of a range much larger than shown and will not add up to 100%.

Source: ABS, Urbis

### 1.1.7 INCOME

Average household and per capita incomes in the Shire of Carnarvon were notably lower than those in other parts of the state in 2011. Carnarvon Shire's average household income (\$74,571 per annum) was 10% lower than that recorded across non-metropolitan Western Australia (\$83,018 p.a.). Coral Bay township (lower by 41%) and Carnarvon township (lower by 11%) recorded even higher variances.

Regarding annual per capita incomes, it is interesting to note that the averages recorded for Carnarvon Shire, Carnarvon township, Coral Bay township and in particular, Western Australia (including Perth), were lower than the equivalent for non-metropolitan Western Australia (excluding Perth). This is attributed to the strength of the state's mining sector, particularly in post-Global Financial Crisis years.



## Household and Per Capita Income (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.14

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
<b>Household Income</b>					
\$Nil	2%	0%	2%	2%	2%
\$1-\$20,800	15%	0%	14%	12%	10%
\$20,800-\$52,000	29%	69%	30%	28%	25%
\$52,000-\$78,000	17%	12%	17%	16%	16%
\$78,000 - \$130,000	20%	19%	19%	21%	22%
\$130,000-\$208,000	15%	0%	15%	18%	20%
\$208,000 plus	2%	0%	2%	4%	5%
Average Household Income	\$73,757	\$49,314	\$74,571	\$83,018	\$90,933
Var'n from Non-Metro WA Avg.	-11%	-41%	-10%	0%	+10%
Average Household Size	2.5	1.9	2.5	2.5	2.5
<b>Per Capita Income (Persons aged 15 - 64)</b>					
\$Neg/Nil	7%	4%	8%	9%	10%
\$1 - \$20,800	24%	18%	23%	22%	21%
\$20,800 - \$41,600	25%	47%	26%	22%	20%
\$41,600 - \$78,000	27%	24%	27%	25%	27%
\$78,000 +	17%	7%	16%	22%	21%
Avg. Per Cap. Income (aged 15-64)	\$46,772	\$37,924	\$45,843	\$52,500	\$51,550
Var'n from Non-Metro WA Avg.	-11%	-28%	-13%	0%	-2%

Source: ABS, Urbis

## 1.2 HOUSING AND ACCOMMODATION

### 1.2.1 DWELLING STOCK

There were 1,949 occupied dwellings in the Shire of Carnarvon on Census night 2011. Of these, 76.0% were separate or detached houses (as opposed to semi-detached, unit or apartment dwellings). Around 13.1% of occupied housing stock was classified as "other" dwelling, largely comprised of tourism-style accommodation (caravan, camper and cabin). In addition to occupied dwelling stock, there were a further 294 unoccupied dwellings. These vacant homes accounted for 13.1% of total residential stock.

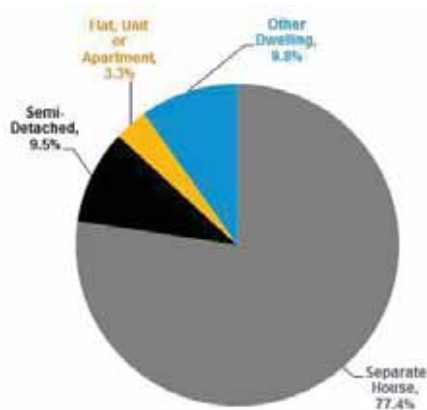
As illustrated in figure 1.15, the residential compositions of Carnarvon township and the Shire of Carnarvon were fairly similar. However Coral Bay township, where 89.2% of stock was classified as "other", differed significantly.

## Composition of Housing Stock (2011)

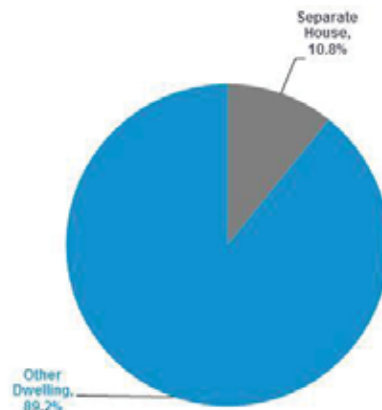
CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.15

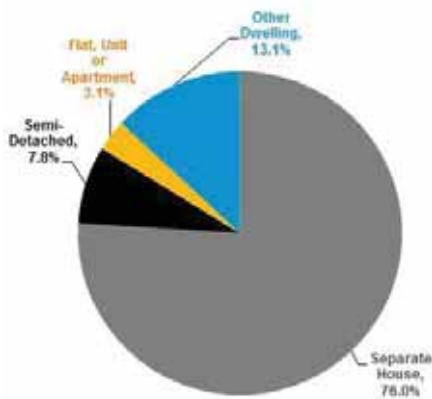
CARNARVON TOWNSHIP



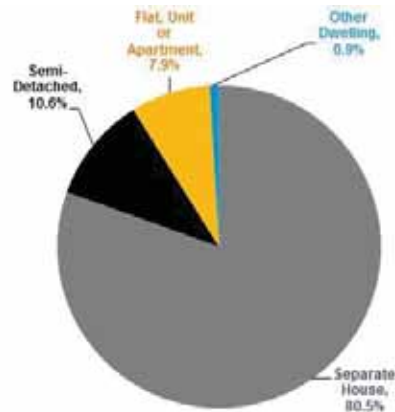
CORAL BAY TOWNSHIP



CARNARVON SHIRE



TOTAL WESTERN AUSTRALIA



Source: ABS, Urbis

In October 2013, consultancy firm Pracsys undertook a housing needs report for the Gascoyne Development Commission. In relation to Carnarvon township, its key findings were:

- The largest housing shortage lies within the one and two bedroom public housing category;
- The largest housing surplus lies within the four or more bedroom category (houses which are also highly priced); and
- A shortage of 70 dwellings is expected over the next five to ten years (assuming low, but positive, population growth and largely unchanged economic conditions). However if the Gascoyne Food Bowl initiative is successful, a shortage of 400 to 700 dwellings is anticipated over the next ten years.

Regarding Coral Bay township, the report's key findings were:

- The largest housing shortage lies within the (well-priced) one to three bedroom category;
- The largest housing surplus lies within the four or more bedroom category (houses which are medium to highly priced); and
- "Other" dwellings (caravans and holiday cabins) dominate local housing stock.

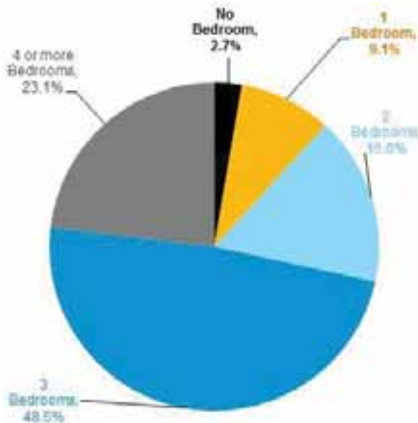
Figure 1.16 illustrates the bedroom configurations of dwellings in various geographies. Carnarvon township and the Shire of Carnarvon recorded similar proportional compositions, with three bedrooms dominating in each. In comparison, Coral Bay township recorded a more even split between all varieties (although three bedrooms was again predominant) and the wider state largely consisted of three (40.0%) and four or more (42.8%) bedroom dwellings.

### Number of Bedrooms (2011)

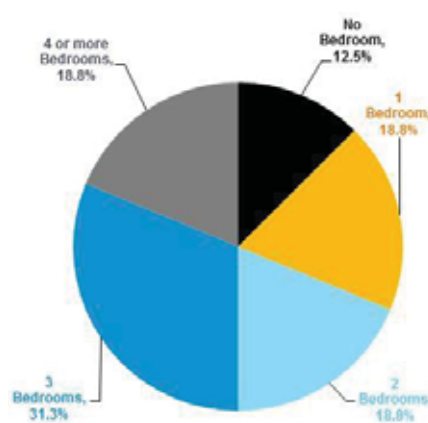
CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.16

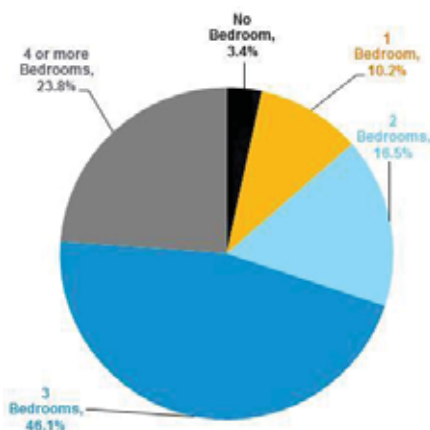
CARNARVON TOWNSHIP



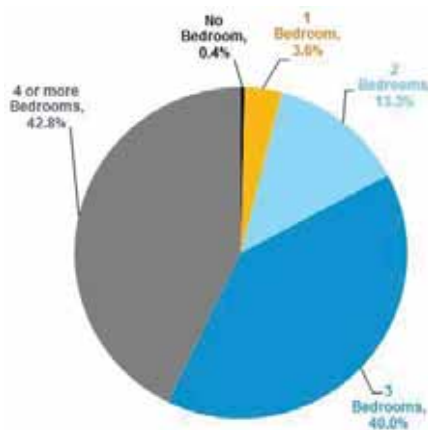
CORAL BAY TOWNSHIP



CARNARVON SHIRE



TOTAL WESTERN AUSTRALIA



Source: ABS, Urbis

### 1.2.2 HOUSING TENURE

In 2011, the proportion of home owners in Carnarvon Shire (31%) was on a par with the non-metro Western Australia equivalent. However the geographies differed among renters (44% of households in the Shire versus 36% across non-metro WA) and mortgagors (24% across the Shire and 31% across non-metro WA). Continuing the trends noted in section 1.2.1, Coral Bay township presented unique characteristics: no dwellings were owned subject to mortgage, yet 62% of dwellings were owned outright.

### Housing Tenure (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.17

	Carnarvon Township	Coral Bay Township	Carnarvon Shire	Non-Metro WA	Total Western Australia
Owner	28%	62%	31%	31%	30%
Purchaser	24%	0%	24%	31%	39%
Renter	47%	38%	44%	36%	30%

1. 'Other' Tenure Types have not been included  
Source: ABS, Urbis

### 1.2.3 COST OF HOUSING

As at the 2011 Census, the Shire of Carnarvon's average weekly rent (\$181) was around 40.5% lower than the state-wide average weekly rent (\$304). Urbis calculates that 2.8% of Carnarvon Shire households were experiencing rental stress in 2011, compared with 5.9% throughout Western Australia.

Similarly, average monthly mortgage repayments in the Shire (\$1,849) were notably lower than those across the state (\$2,116). Urbis calculates that 4% of Carnarvon Shire households were experiencing mortgage stress in 2011, compared with 8% throughout Western Australia.

#### Cost of Housing (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.18

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Loan Mortgage Repayments (monthly \$)	\$1,698	\$0	\$1,849	\$1,836	\$2,116
% Households in Mortgage Stress <sup>1</sup>	1%	0%	1%	2%	2%
Rent Payments (weekly \$)	\$188	\$94	\$181	\$221	\$304
% Households in Rental Stress <sup>1</sup>	4.1%	0.0%	2.8%	4.1%	5.9%
% Households in Housing Stress	5%	0%	4%	6%	8%

1. The Affordable Housing Taskforce (established by the ACT Government) has defined people as having difficulty in accessing affordable housing if they are in the lowest two quintiles (lowest 40%) of income distribution and pay 30% or more of their gross household income in housing costs. This group is referred to as being in housing stress.

Source: ABS, Urbis

### 1.2.4 HOUSEHOLD COMPOSITION

In 2011, the Shire of Carnarvon was home to a lower proportion (9%) of families with children (aged 15-18 years) compared with the equivalent for Western Australia (14%). This dependant age group potentially attends year ten, 11 or 12 of high school. The comparatively lower proportion could be indicative of a propensity among qualifying families to move to larger centres for wider education opportunities.

It is also interesting to consider lone person households. In 2011 they accounted for 29% of households across the Shire, 30% within Carnarvon township and 32% within Coral Bay township. These compared with 24% of households across Western Australia. Considering the significant stock of dwellings with three or more bedrooms throughout the Shire (69.9%, see section 1.2.1), there is perhaps an argument for the construction of more, higher density dwellings (or dwellings with fewer bedrooms).

#### Household Composition (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.19

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Couples with no children	27%	49%	28%	30%	28%
Family with children <15	30%	10%	30%	31%	29%
Family with children >15	9%	0%	9%	11%	14%
<i>Total Family (with children)</i>	<i>39%</i>	<i>10%</i>	<i>39%</i>	<i>41%</i>	<i>43%</i>
Group Household	3%	8%	3%	3%	4%
Lone Person	30%	32%	29%	24%	24%
Other	1%	0%	1%	1%	1%

Source: ABS, Urbis

## 1.2.5 CAR OWNERSHIP

Car ownership rates, throughout the Shire as at 2011, were generally lower than those recorded across Western Australia. Carnarvon township (11%) and the Shire of Carnarvon (10%) were home to more households with no car(s), than non-metropolitan Western Australia and Western Australia as a whole (both 6%). While 62% of non-metropolitan households owned two or more cars, the equivalent figure across the Shire was a lower 55% (including 53% throughout Carnarvon township).

### Household Car Ownership (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 1.20

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
% 0 Cars	11%	0%	10%	6%	6%
% 1 Car	36%	42%	35%	32%	34%
% 2 Cars +	53%	58%	55%	62%	60%

Source: ABS, Urbis

## 1.3 INTER-SHIRE COMPARISON

In sections 1.3 and 2.4, Urbis benchmarks the Shire of Carnarvon with comparable local government areas across Australia. The following have been selected for comparison:

- Cassowary Coast Regional Council: located in far north Queensland, Innisfail is Cassowary Coast's Council seat. Innisfail's key industries include sugar and bananas and its climate is tropical rainforest.
- Rockhampton Regional Council: located on the Tropic of Capricorn, around 630 kilometres north from Brisbane, Rockhampton township is the Council's administrative seat. Key local industries include livestock, tourism and transport (with the township being an important regional hub).
- City of Coffs Harbour: located on the mid north coast of New South Wales, Coffs Harbour township is the City's administrative seat. Key local industries include tourism and bananas.
- City of Port Augusta: located at the northern end of the Spencer Gulf, Port Augusta township is the City's administrative seat. Key local industries include tourism, transport (with the township being an important regional hub) and power generating.
- Shire of Wyndham-East Kimberley: located in far north Western Australia and bordering the Northern Territory, Kununurra is the Shire of Wyndham-East Kimberley's administrative seat. Key local industries include mining, tourism and cattle.

In figure 1.21, Urbis excludes ABS Census respondents who failed to respond to a particular question, or inadequately described their response, from analysis. In comparison, the ABS' QuickStats website includes these responses (resulting in lower average percentages across the various categories).

The data analysis indicates that the Shire of Carnarvon is home to a comparatively smaller population residing across a larger geographical area (resulting in low population density). A higher proportion of its residents identify with Australian Aboriginal ancestry compared with interstate local government areas, while a lower number of households are classified as "under housing stress" compared with the Cassowary Coast, Rockhampton and Coffs Harbour.

## Comparison of Key Demographic Indicators (2011)

CASSOWARY COAST, ROCKHAMPTON, COFFS HARBOUR, PORT AUGUSTA, WYNDHAM EAST-KIMBERLEY

FIGURE 1.21

	Census Population (persons)	Average Age (years)	Population Density per Square Kilometre	Australian Born	Australian Aboriginal Ancestry	Completed Year 12	Average Annual Household Income*	Separate Dwellings (proportion of all stock)	Dwelling Ownership (as a share of all tenure types)	Households in Mortgage Stress#	Households with Two or More Cars
Carnarvon (S)	5,797	37.0	0.1	80.9%	4.19%	36.2%	\$74,571	76.0%	31.3%	0.98%	55.4%
Cassowary Coast (RC)	27,711	40.2	6.1	85.8%	1.29%	37.6%	\$63,342	85.7%	39.4%	1.13%	54.9%
Rockhampton (RC)	109,382	37.4	6.0	90.1%	0.51%	43.0%	\$76,644	87.8%	32.4%	1.48%	56.5%
Coffs Harbour (C)	68,476	40.5	59.4	86.4%	0.41%	40.4%	\$61,448	76.1%	36.6%	2.99%	50.1%
Port Augusta (C)	13,968	37.8	12.1	91.7%	2.91%	29.9%	\$67,219	86.4%	31.2%	0.86%	50.3%
Wyndham-East Kimberley (S)	7,819	31.6	0.1	86.5%	16.1%	43.3%	\$96,318	71.7%	17.7%	0.00%	49.8%

Over 10% Variance (plus or minus) from Carnarvon's result

Within 10% Variance (plus or minus) from Carnarvon's result

\* Calculated using mid points for household income ranges then dividing by number of occupied private dwellings. Therefore figure will not equal personal income multiplied by household size.

# ACT's Affordable Housing Taskforce classifies people as being in housing stress if in the lowest two income distribution quintiles and spending 30% or more of gross household income on housing.

Source: ABS, Urbis

## 2 Economic Profiling

This chapter provides an economic and labour force profile for the Shire of Carnarvon. It is largely based on data from the Australian Bureau of Statistics.

### 2.1 BACKGROUND

The Shire's economic position remains firmly centred around the agricultural industry and in particular, horticulture. The majority of this horticultural activity is carried out along the Gascoyne River, where the fertile soils and sub-tropical climate make the Carnarvon region suitable for growing a range of fruit and vegetables. In recent years, there has been a trend towards diversifying horticultural enterprises to include a more varied range of produce and to explore areas of ecotourism and wildflower production. It will be important for this industry to continue to diversify into the future to keep up with market trends and to allow for production to become less reliant on seasonal factors.

Beyond horticulture, employment is also concentrated around fishing and seafood processing, contributing significantly to the local and wider economy. Over the years, local producers have capitalised on the region's proximity to the Asian market with increasingly more produce being exported to discerning customers in Japan, Hong Kong and Singapore.

### 2.2 LABOUR FORCE

#### 2.2.1 PARTICIPATION AND EMPLOYMENT

According to the 2011 Census, the unemployment rates of Carnarvon township, Carnarvon Shire and Western Australia were on a par at 5%. At 42% and 38% respectively, larger proportions of Carnarvon township and Shire of Carnarvon residents were employed in blue collar roles than the state-wide proportion (34%). However interestingly, Carnarvon township and Shire's blue collar results were lower than that for non-metropolitan Western Australia (44%).

#### Labour Force (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 2.1

	Carnarvon Town	Coral Bay Town	Carnarvon Shire	Non-Metro WA	Total Western Australia
Labour Force Participation	66%	76%	68%	69%	69%
% Unemployed	5%	0%	5%	4%	5%
% Managers and Professionals	27%	31%	34%	29%	33%
% Other White Collar	31%	38%	28%	27%	33%
% Blue Collar Occupations	42%	31%	38%	44%	34%

Source: ABS, Urbis

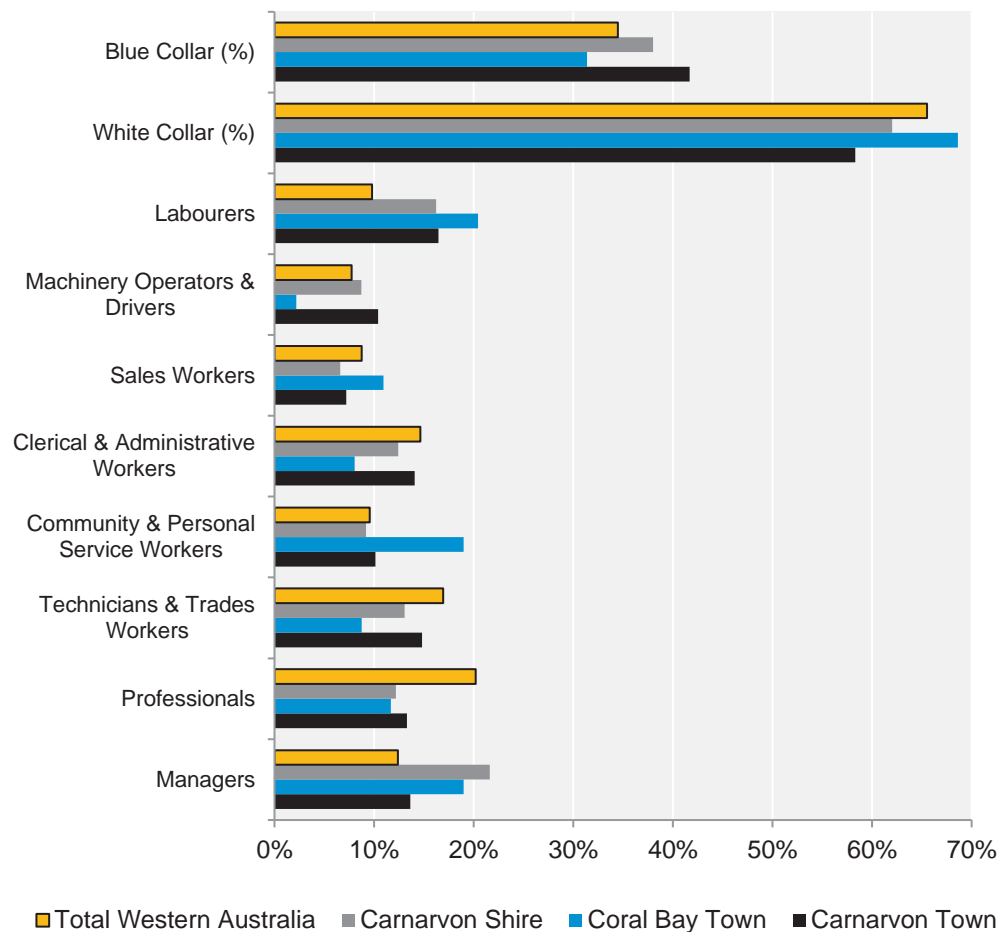
#### 2.2.2 OCCUPATION AND INDUSTRY

As illustrated in figure 2.2, prominent occupations in the Shire of Carnarvon included Managers (21.6%), Labourers (16.2%) and Technicians and Trades Workers (13.1%). These compare with the top three state-wide responses of Professionals (20.2%), Technicians and Trades Workers (16.9%) and Clerical and Administrative Workers (14.6%).

## Occupation (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 2.2



Source: ABS, Urbis

Closer analysis of Census 2011 data highlights different predominant employment industries in the townships of Carnarvon and Coral Bay. Around 12.5% of employed Carnarvon township residents classified their employment industry as Health Care and Social Assistance, while one third (or 33.3%) of Coral Bay township's working population was employed in the Accommodation and Food Services sector. Transport, Postal and Warehousing (20.7%) also rated highly in the settlement at Coral Bay, while Retail Trade (10.7%) was the second largest industry of employment in Carnarvon township.



## Top Six Industries of Employment (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 2.3

	CARNARVON TOWN		CORAL BAY TOWN		CARNARVON SHIRE		TOTAL WESTERN AUSTRALIA	
1	Health Care and Social Assistance	12.5%	Accommodation and Food Services	33.3%	Agriculture, Forestry and Fishing	14.7%	Health Care and Social Assistance	10.6%
2	Retail Trade	10.7%	Transport, Postal and Warehousing	20.7%	Retail Trade	10.2%	Construction	10.4%
3	Construction	9.7%	Retail Trade	15.6%	Health Care and Social Assistance	9.6%	Retail Trade	10.3%
4	Education and Training	9.3%	Administrative Services	10.4%	Construction	8.7%	Manufacturing	8.4%
5	Public Administration and Safety	8.9%	Agriculture, Forestry and Fishing	6.7%	Accommodation and Food Services	8.0%	Education and Training	8.2%
6 (or equal 5)	Mining	7.8%	Manufacturing	6.7%	Education and Training	8.0%	Professional and Scientific	7.4%

Source: ABS, Urbis

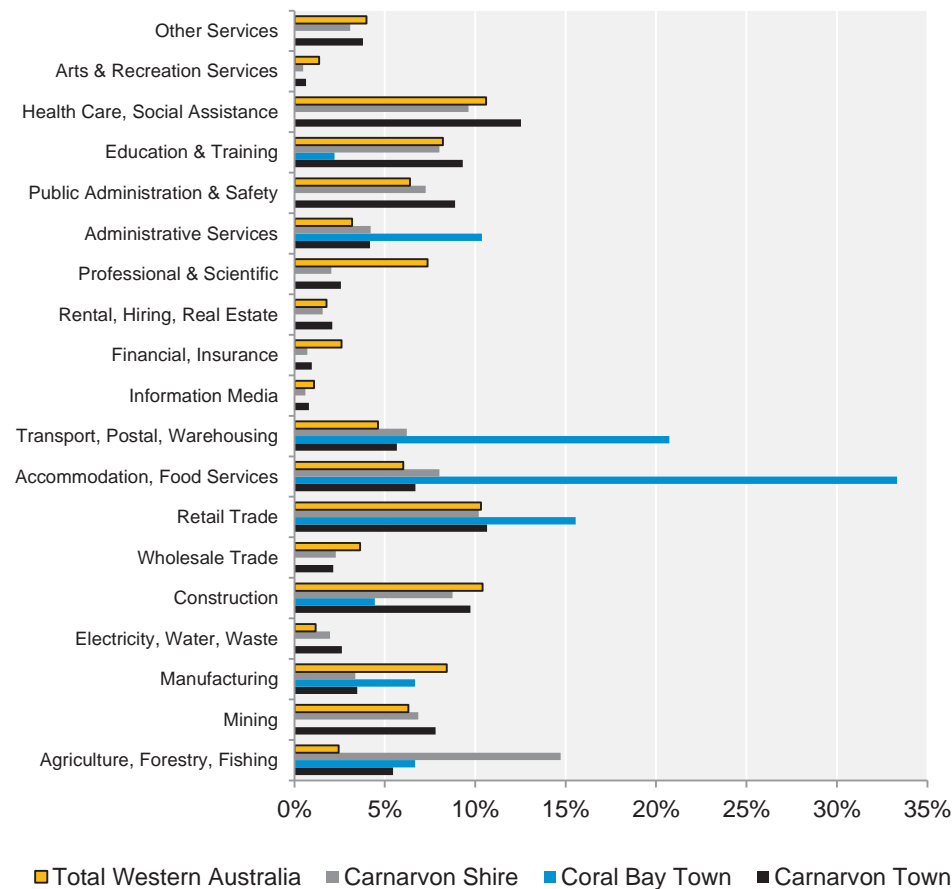
Overall, the Agriculture, Forestry and Fishing employment sector within the Shire declined from 17.8% in 2006 to 14.7% in 2011. This is likely a reflection of the reduced catch limits and tighter licensing arrangements within the fishing industry and the expansion of other industries such as the mining of salt and gypsum at Lake McLeod and the construction of housing in new residential areas such as LandCorp's Carnarvon NorthWater Estate. Notwithstanding the decline, the state government has identified an untapped potential for the growth of the horticultural industry within the Gascoyne region.

While the ABS does not classify tourism as an employment sector in its own right, it is likely that this sector is indirectly responsible for the employment of people in hospitality and food and beverage roles, such as managing accommodation, restaurants or pubs, and working in retail/service positions.

## All Industries of Employment (2011)

CARNARVON TOWNSHIP, CORAL BAY TOWNSHIP, CARNARVON SHIRE AND WESTERN AUSTRALIA

FIGURE 2.4



Source: ABS, Urbis

## 2.3 EMPLOYERS

### 2.3.1 MAJOR LOCAL EMPLOYERS

The Australian Bureau of Statistics reports there were 665 registered businesses located within the Shire of Carnarvon in 2012. The profile was dominated by micro and small businesses, with just 159 businesses (or one in four) employing at least five people. With a share of 14.8%, Agriculture, Forestry and Fishing was the dominant employment industry in 2011.

Included in Appendix A is a list of local businesses in Carnarvon township. According to Urbis' count, there are approximately:

- **75 service and trade providers** (including five car/truck rental businesses, two travel agencies, four freight/courier businesses, two real estate agencies, at least four allied health service providers and over ten vehicle-related sales and servicing businesses);
- **50 retail stores** (including two "big four" banks, an IGA supermarket, Woolworths, three petrol stations, Australia Post and two pharmacies);
- **30 government and educational service providers** (such as five pre-school, primary and/or secondary schools; Durack Institute of Technology; UWA Rural Clinical School; Centrelink and the Gascoyne Development Commission);
- **14 entertainment or hospitality venues** (including one video rental store and 11 café, restaurant and fast food premises);

- **13 short-stay accommodation options** (several caravan parks, backpackers' accommodation, motels and apartments);
- **Ten places of worship** (various denominations);
- **Seven child, aged care and hospital service providers** (such as Silver Chain and Carnarvon Hospital); and
- **Six recreational venues** (including the Carnarvon Bowling Club, Golf Club, Race Club and Speedway).

### 2.3.2 MAJOR REGIONAL EMPLOYERS

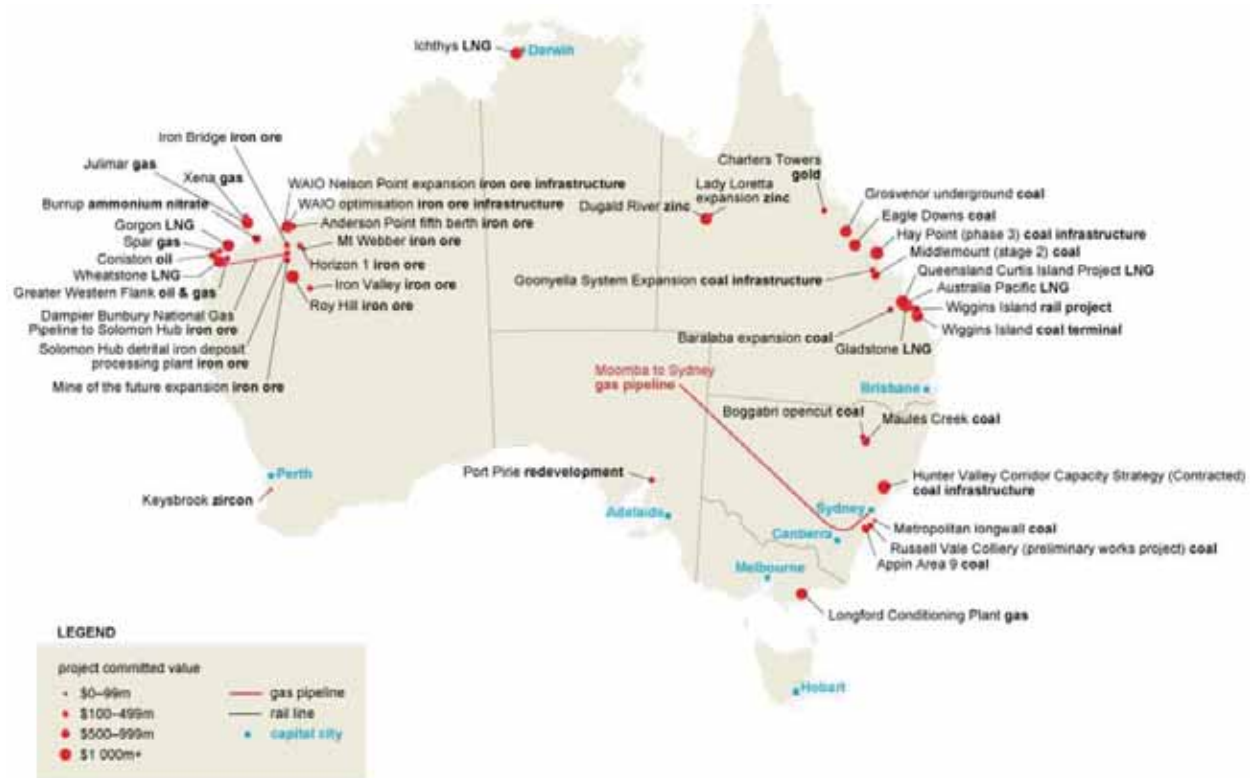
Carnarvon township is located 870 kilometres south-west from Port Hedland and 640 kilometres south-west from Karratha. Major employers in surrounding regions (namely to the north) are mining-related.

According to the Bureau of Resources and Energy Economics' *Resources and Energy Major Projects October 2014*, committed mining, oil and gas and infrastructure projects within the Western Australian jurisdiction have a combined project value of \$115.9 billion. This represents 50.9% of the total value of all such projects across Australia (\$227.7 billion). The following map illustrates the locations of all major committed projects. The Pilbara, to Carnarvon's north, boasts a major project cluster.

### Major Committed Australian Mining, Oil and Gas Projects

AS AT OCTOBER 2014

FIGURE 2.5



Source: Bureau of Resources and Energy Economics

In addition to the committed pipeline, mining, oil and gas and infrastructure projects with a combined value of \$55.5 billion are at the feasibility stage in Western Australia. This figure represents 37.8% of the total value of feasibility stage projects across Australia (second to Queensland which accounts for 43.8%).

Major companies associated with projects in Western Australia (not limited to those illustrated in figure 2.6 and including projects that are under construction or in production mode) include:

- Australia's Woodside (Pluto, Xena), Hancock Prospecting (Roy Hill), Fortescue Metals Group (Chichester, Solomon), Atlas Iron (Mt Webber), BHP Billiton (Nelson Point) and Rio Tinto (Paraburdoo, Hope Downs, Brockman, West Angelas);
- Norway's Yara (Burrup);
- America's Apache Corporation (Balnaves, Julimar, Coniston) and Chevron Corporation (Gorgon, Wheatstone);
- Holland's Shell (Prelude); and
- China's CITIC Pacific (Sino Iron Ore).

## 2.4 INTER-SHIRE COMPARISON

As discussed in section 1.3, Urbis has selected the following areas for comparison with the Shire of Carnarvon:

- Cassowary Coast Regional Council: located in far north Queensland, local industries include sugar and bananas.
- Rockhampton Regional Council: located on the Tropic of Capricorn, local industries include livestock, tourism and transport.
- City of Coffs Harbour: located on the mid north coast of New South Wales, local industries include tourism and bananas.
- City of Port Augusta: located at the northern end of the Spencer Gulf, local industries include tourism, transport and power generating.
- Shire of Wyndham-East Kimberley: located in far north Western Australia, local industries include mining, tourism and cattle.

In figure 2.6, Urbis excludes ABS Census respondents who failed to respond to a particular question, or inadequately described their response, from analysis. In comparison, the ABS' QuickStats website includes these responses (resulting in lower average percentages across the various categories).

The data analysis indicates that the Shire of Carnarvon enjoys comparatively low unemployment and high labour force participation rates. Like Cassowary Coast, Carnarvon's top industry of employment is Agriculture, as opposed to Health Care (in each of the remaining geographic areas). As a proportion, white colour workers outnumber their blue collar counterparts in each of the local government areas.

### Comparison of Key Economic Indicators (2011)

CASSOWARY COAST, ROCKHAMPTON, COFFS HARBOUR, PORT AUGUSTA, WYNDHAM EAST-KIMBERLEY

FIGURE 2.6

	Unemployment Rate	Labour Force Participation Rate	Top Occupation	Top Industry of Employment	Blue Collar Workers	White Collar Workers
Carnarvon (S)	4.6%	68.1%	Manager (21.6%)	Agriculture (14.7%)	38.0%	62.0%
Cassowary Coast (RC)	6.1%	63.6%	Labourer (19.6%)	Agriculture (17.5%)	45.4%	54.6%
Rockhampton (RC)	5.0%	65.8%	Technician (17.7%)	Health Care (13.0%)	40.0%	60.0%
Coffs Harbour (C)	8.3%	58.1%	Professional (18.0%)	Health Care (15.3%)	31.5%	68.5%
Port Augusta (C)	6.2%	60.5%	Technician (17.2%)	Health Care (15.3%)	38.3%	61.7%
Wyndham-East Kimberley (S)	4.6%	75.0%	Technician (16.4%)	Health Care (11.8%)	38.5%	61.5%
Over 10%	Variance (plus or minus) from Carnarvon's result					
Within 10%	Variance (plus or minus) from Carnarvon's result					
	N/A					

Source: ABS, Urbis

## 2.5 LOCAL SOCIO-ECONOMIC SWOT ANALYSIS

In this section, Urbis has prepared a “Strengths, Weaknesses, Opportunities and Threats Analysis” for the local economy and resident population in the Shire of Carnarvon. Key points are listed in no particular order.

### Economic SWOT Analysis

SHIRE OF CARNARVON

FIGURE 2.7

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Varied existing industries and employment opportunities, including white collar to mining, agriculture, fisheries and tourism.	A below average proportion of residents aged between 15 and 34 years	Introduction of modern, medium density residential stock, supported by sizeable proportions of lone person households and prevalence of detached dwellings with three or more bedrooms.	A potentially stagnant or declining population
Housing affordability, lower cost of living	A decreasing retail offer (for example, Target Country did not renew its lease upon expiry in mid 2014).	Implementing key priority projects to provide a catalyst for economic development	Cyclonic activity and the threat of flooding in selected months
Availability of land	Only one local school teaches years 11 and 12	Regional tourism opportunities/expansion	Airport located close to centre of town: a barrier to development in the township's east
Strong history and identity, both indigenous and European. Also home to noteworthy Vietnamese (2.6%) and New Zealander (1.7%) populations.		Improved promotion and marketing of the Shire and its industries	A transient, seasonal population (namely in Coral Bay township)
A local Durack Institute of Technology campus		Organising events that facilitate trade and economic development in the Shire	Vulnerability in regional industries (especially pastoral and mining)
		Potential for new industries and wider economic diversification	Infrastructure constraints
		Developing and supporting partnerships and networks	Truancy, particularly among primary school students
		Increased retention of economic activity, retail spending and jobs	

Source: Urbis

## 3 Tourism and Visitors

### 3.1 EXISTING TOURISM OFFER

Tourism Western Australia, the state government agency responsible for promoting tourism in Western Australia, places the Shire of Carnarvon within the Coral Coast tourism region. The Coral Coast extends for 1,100 kilometres from Cervantes in the south to Exmouth in the north. Ranking as the state's third most visited region outside of Perth, key attractions include the Ningaloo Reef, Shark Bay World Heritage Area, Pinnacles Desert, Kalbarri National Park and Abrolhos Islands. Figure 3.1 provides a map of the attractions, with a special focus on Carnarvon township.

Tourism Western Australia's *Coral Coast Destination Development Strategy (2007-2017)* and the Carnarvon Tourism Alliance and Shire of Carnarvon's *Tourism Development Strategy (2010)* provide the basis for tourism development and planning within the Shire of Carnarvon. The purpose of the Shire's Strategy, in particular, is to realise Carnarvon's tourism potential and identify which enhancements, additions, actions and messages are required in the short- to medium-term to achieve this. Outlining the issues facing the current approach to tourism in Carnarvon, the Strategy identifies a lack of cohesion between industry groups. Promotion, signage and accommodation provisions are areas for improvement.

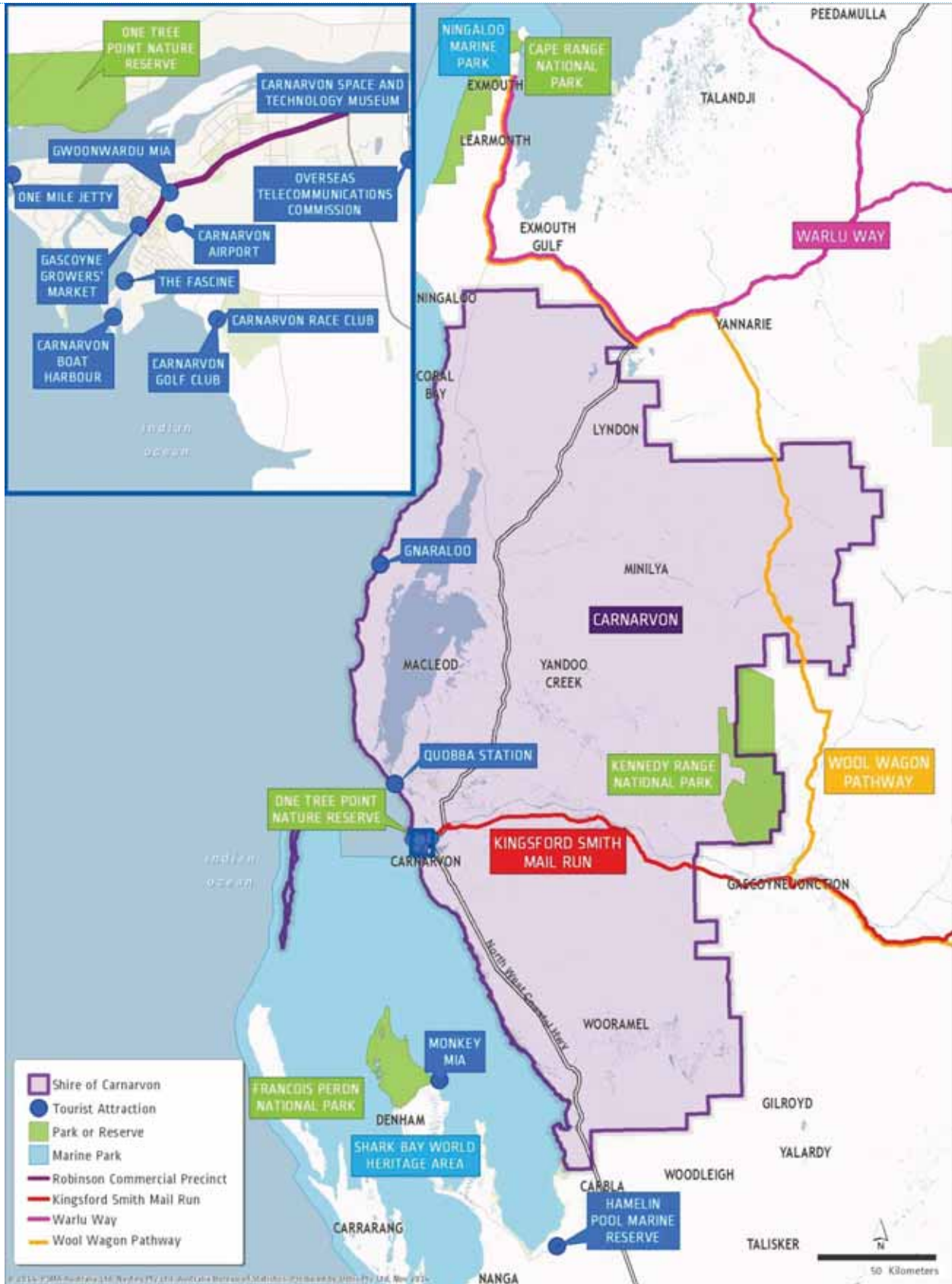
As a destination, Carnarvon township offers a somewhat limited range of heritage, cultural, natural and built attractions. However geographically, it is well placed to access a number of significant tourism drawcards including the Ningaloo Coast, Outback Pathways and the Warlu Way. These tourist attractions are varied in their nature and attract a range of tourists and visitors all seeking different experiences. Regarding Coral Bay township, Urbis understands that authorities are undecided about whether to protect or open up the area for economic sustainability reasons. Existing short-stay accommodation in both townships is largely comprised of caravan parks and campsites, with less than 30% of stock classified as hotel, motel or apartment/unit.

Although tourism has made a clear economic contribution to the Gascoyne region, there is potential for the sector to strengthen and expand to become a more sustainable economic driver for the Shire of Carnarvon, in particular. The Shire's place on the tourism map can be established by improving access and information for visitors, expanding the accommodation offer and broadening Carnarvon's product offering and experiences to promote Carnarvon as a unique destination of its own standing.

# Existing Tourist Attractions

SHIRE OF CARNARVON AND SURROUNDING AREAS

FIGURE 3.1



Source: various tourism websites, Urbis

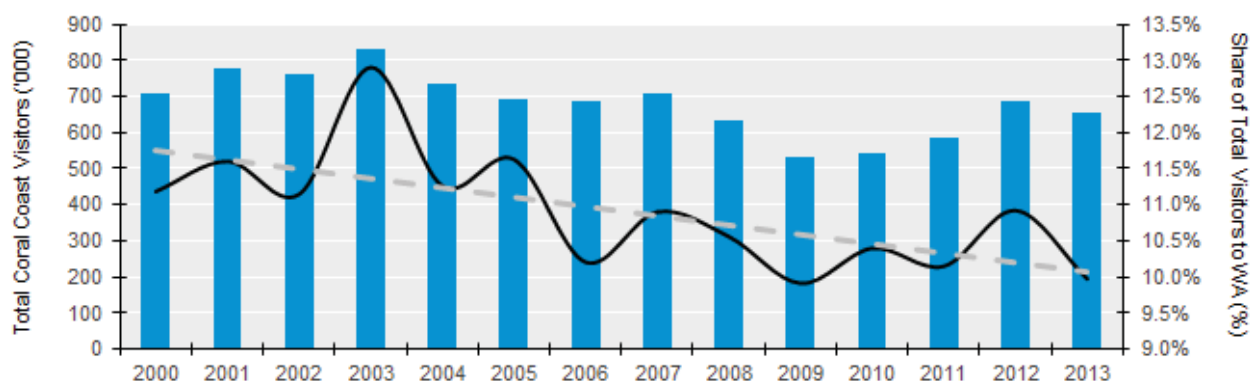
## 3.2 ANALYSIS OF VISITORS

Figure 3.2 charts the number of annual overnight trips (domestic in origin) made to Australia's Coral Coast between 2000 and 2013. Also included (as line charts) are the Coral Coast's percentage share of the total number of annual domestic overnight visitors to and within Western Australia, and the corresponding trend line (in grey). Key observations include a) a downwardly-trending share of state-wide visitors to the Coral Coast, and b) the Coral Coast recording a peak in visitor numbers every fourth or fifth year (2003, 2007, 2012).

### Overnight Trips in Australia by Residents

AUSTRALIA'S CORAL COAST

FIGURE 3.2



Source: Tourism Research Australia, Urbis

### 3.2.1 DOMESTIC ARRIVALS

#### 3.2.1.1 AUSTRALIA'S CORAL COAST

Tourism Research Australia does not publish data on the domestic origins (by state or territory) of visitors to the Coral Coast due to reliability concerns. Notwithstanding this, data for financial year 2012/13 indicate that 91% of overnight Australian visitors came from other parts of Western Australia. The top three destinations visited by domestic overnight tourists to the Coral Coast were Gin Gin/Dandaragan (34% of visitors went there), Geraldton (to which 25% of visitors went) and Exmouth (attracting 20% of all visitors).

Over the same 12-month period, the top three domestic overnight visitor origins to Western Australia were Western Australia (82%), New South Wales (6%) and Victoria (5%).

Overnight visitors largely came on holiday (60%), while the purpose of visit for a further 22% was to see friends or relatives. Business travel accounted for 14% of the overnight tourism market, with the remainder of visitors' trips (4%) motivated by various other factors.

#### 3.2.1.2 CARNARVON

Tourism Western Australia's *Carnarvon Overnight Visitor Fact Sheet for Years Ending December 2011/12/13* estimates that an average of 50,000 Australian residents (from intra- or inter-state) visited Carnarvon, and stayed for at least one night, each calendar year from 2011 to 2013. Their average length of stay was 3.6 nights. Around 57% came on holiday, 13% were business travellers and 11% were visiting friends or relatives. The remaining 19% came for various other reasons.

### 3.2.2 INTERNATIONAL ARRIVALS

#### 3.2.2.1 AUSTRALIA'S CORAL COAST

Data from Tourism Research Australia indicate that over financial year 2012/13, the top three visitor origins to the Coral Coast (as proportions of total international visitors to the region) were the United Kingdom (17%), Germany (15%) and New Zealand (7%). The 10,000 British visitors stayed an average of 15 nights per person, the 9,000 Germans visited for 11 nights per person and the 4,000 New Zealanders averaged a stay of 24 nights per person. The top three destinations visited by international tourists to the



Coral Coast were Exmouth (60% of visitors went there), Geraldton (to which 37% of visitors went) and Northampton/Mullewa/Greenough (attracting 35% of all visitors).

Over the same 12-month period, the top three international visitor origins to Western Australia were the United Kingdom (18%), New Zealand (11%) and Singapore (9%).

International visitors largely came on holiday (78%), while the purpose of visit for a further 9% was to see friends or relatives. Business travel accounted for 5% of the international tourism market, with the remainder of visitors' trips (7%) motivated by various other factors.

### 3.2.2.2 CARNARVON

Tourism Western Australia's *Carnarvon Overnight Visitor Fact Sheet for Years Ending December 2011/12/13* does not include information on international visitor nights or average length of stay, due to data reliability concerns. The publication does, however, estimate that an average of 12,700 foreigners visited Carnarvon each calendar year from 2011 to 2013. Around 91% came on holiday, 3% were visiting friends or relatives and 6% came for various other reasons.

## 3.3 TOURISM'S ECONOMIC CONTRIBUTION

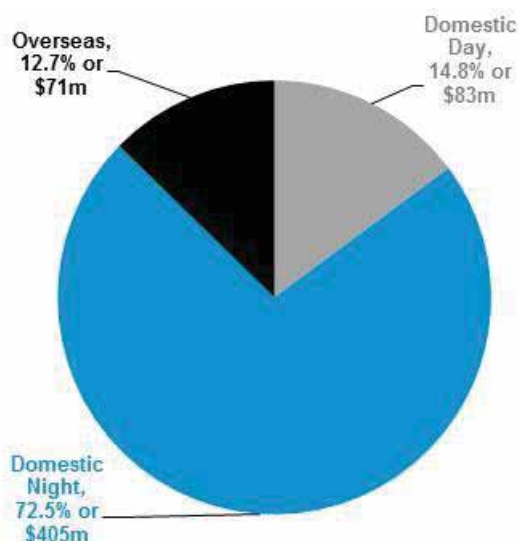
The tourism sector makes a significant contribution to the economy of Australia's Coral Coast. Over the 2012/13 financial year, domestic day, domestic overnight and international visitors spent \$559 million throughout the region on goods and services including accommodation, food and drink, transport, fuel, retail and entertainment. The average international visitor's stay saw \$1,183 spent in the Coral Coast region in 2012/13, while the equivalent figures for domestic overnight and domestic day visitors were \$604 and \$105 respectively.

### Tourism Expenditure (2012/13)

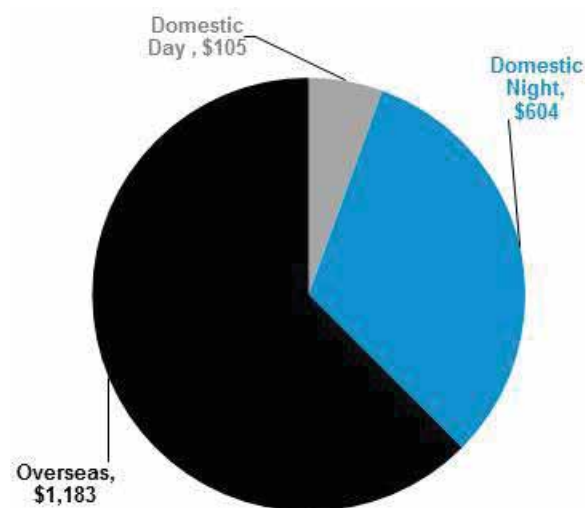
AUSTRALIA'S CORAL COAST

FIGURE 3.3

OVERALL SPENDING BY VISITOR TYPE



AVERAGE TRIP EXPENDITURE



Source: Tourism Research Australia, Urbis

As Tourism Research Australia did not release a spending breakdown profile for international visitors to Australia's Coral Coast in 2012/13, an analysis of spending categories is only possible for domestic day and overnight visitors (figure 3.4). The top three spending categories among day visitors in 2012/13 were 'fuel' (37% of money spent or \$31 million), 'food and drink' (23% or \$19 million) and 'transport fares and packages' (20% or \$17 million). Among domestic overnight visitors, 'food and drink' accounted for the largest portion of spending (29% or \$117 million), followed by 'fuel' (24% or \$99 million) and 'accommodation' (24% or \$95 million).

Figure 3.4 highlights two significant benefits brought by overnight visitors to Australia's Coral Coast (compared with daytrippers):

- Larger spends across all categories, compared with amounts spent by day visitors; and
- A greater diversity of spend (across more categories), compared with amounts spent by day visitors. This benefits a wider range of local businesses.

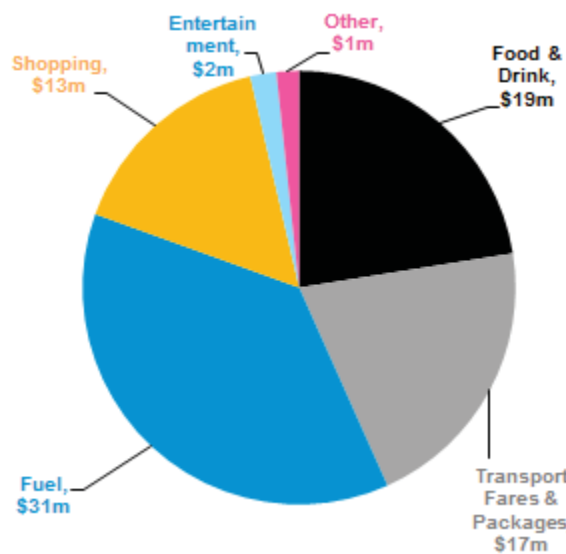
Therefore, any campaigns, initiatives or new infrastructure (including short-stay accommodation) which increase overnight visitor numbers (both domestic and international) should be encouraged, as wide-ranging economic benefits are very likely to ensue.

## Expenditure Breakdown for Domestic Tourists (2012/13)

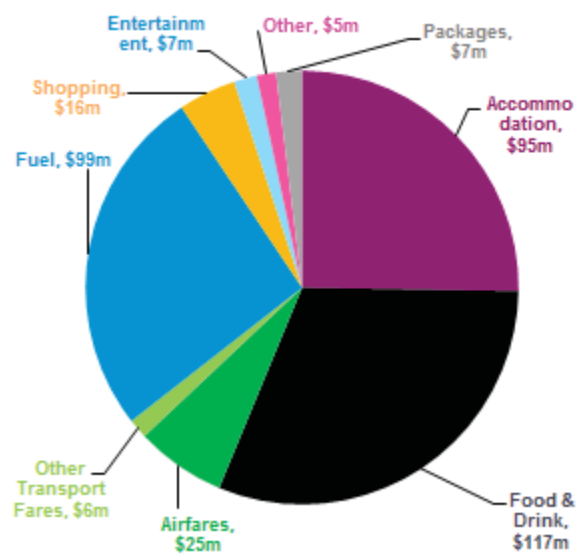
AUSTRALIA'S CORAL COAST

FIGURE 3.4

### DAY VISITORS



### OVERNIGHT VISITORS\*



\* In the format that TRA supplies this information, the categories illustrated in the pie chart total a different figure (\$378 million) from the overall figure domestic overnight visitors are said to have spent (\$405 million)  
Source: Tourism Research Australia, Urbis

## 3.4 FORECASTS

Tourism Research Australia's Tourism Forecasting Committee (TFC) produces regional tourism forecasts for a variety of geographies (including states, territories and capital cities). However its latest release, *Regional Forecasts (Tables) June 2013*, does not offer sub-regional breakdowns (for example, for the Coral Coast). Therefore section 3.4 considers broader, state-wide trends and expectations.

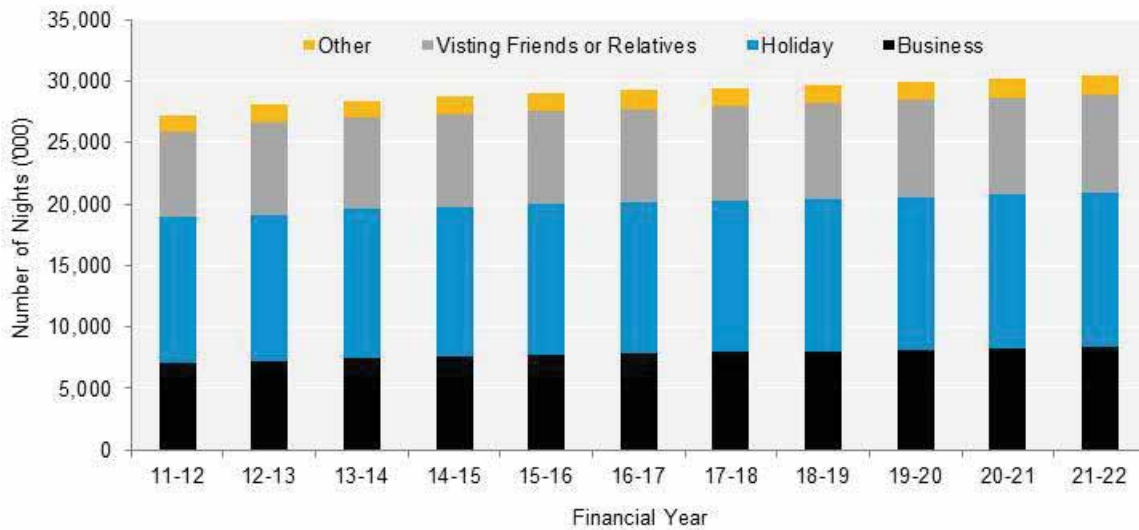
### 3.4.1 DOMESTIC ARRIVALS

The TFC projects annual domestic visitor nights in Western Australia to surpass 30 million by 2021, reflecting annual growth of 1.1% (compound). As illustrated in figure 3.5, business travel is expected to grow by 1.7% per annum over the ten-year period, while the 'visiting friends or relatives' segment is forecast to rise by 1.6% per annum. Annual growth of 0.5% is projected among holidaymakers.

## Forecast Domestic Visitor Nights by Purpose of Visit

WESTERN AUSTRALIA (2011-2022)

FIGURE 3.5



Source: Tourism Forecasting Committee, Urbis

Between 2011 and 2022, domestic visitor nights' growth across non-metropolitan Western Australia (1.3% p.a. compound) is expected to fare better than the equivalent growth rate for metropolitan Perth (0.8% p.a. compound).

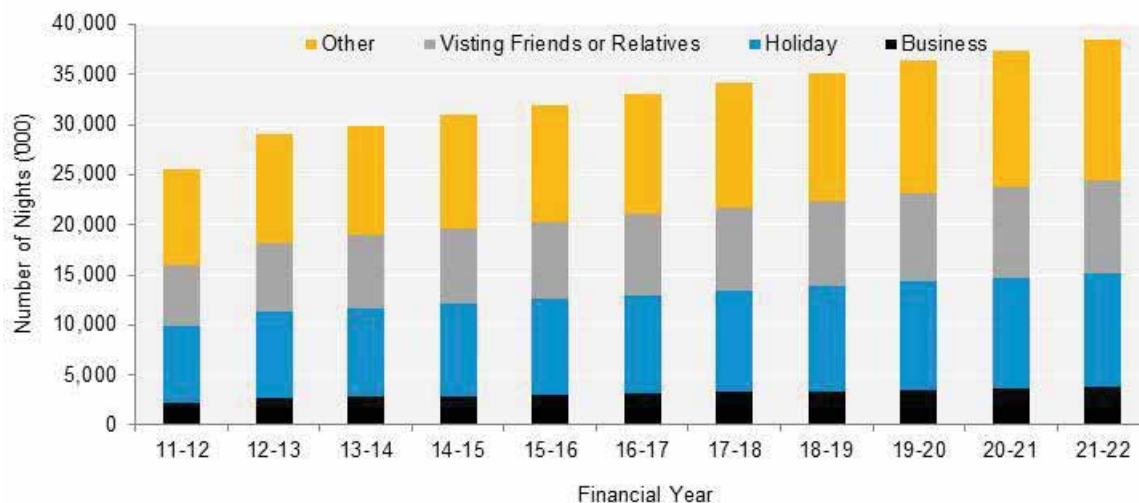
### 3.4.2 INTERNATIONAL ARRIVALS

International visitor nights in Western Australia are projected to increase at a notably higher annual rate of 4.2% (compound), between 2012 and 2022, to 38.6 million nights (figure 3.6). Business travel is expected to grow by 5.5% per annum over the ten-year period (however from the lowest of bases), while the 'visiting friends or relatives' segment is forecast to rise by 4.4% per annum. Annual growth of 4.1% is projected among holidaymakers.

## Forecast International Visitor Nights by Purpose of Visit

WESTERN AUSTRALIA (2011-2022)

FIGURE 3.6



Source: Tourism Forecasting Committee, Urbis

Between 2011 and 2022, international visitor nights' growth across non-metropolitan Western Australia (4.4% p.a. compound) is expected to outperform the equivalent growth rate for metropolitan Perth (4.2% p.a. compound).

### 3.5 TOURISM SWOT ANALYSIS

In this section, Urbis has prepared a “Strengths, Weaknesses, Opportunities and Threats Analysis” for the tourism industry in the Shire of Carnarvon. Key points are listed in no particular order. In Urbis’ view, strengths and opportunities far outweigh any weaknesses.

#### Tourism SWOT Analysis

SHIRE OF CARNARVON

FIGURE 3.7

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Proximity to Coral Bay and the Ningaloo Reef World Heritage Area (240 km)	Distance from Perth (900 km)	‘Foodie Capital’ of northern Western Australia (fresh local produce, markets and expanded food and beverage offer).	Affordability (fuel or flights, plus accommodation), including exchange rates.
Proximity to Monkey Mia, Hamelin Pool Marine Reserve and the wider Shark Bay World Heritage Area (circa 120 km).	Limited diversity among short-stay accommodation offer	Carnarvon Airport (additional services and connections with new destinations)	Other established tourist destinations within 900 km from Perth including Rottnest Island, Esperance, Albany, the Margaret River region, Kalgoorlie and Kalbarri.
Fishing industry	Perceptions around anti-social behaviour	Short-stay accommodation development, offering visitors different options for different budgets. Converting more day visitors into overnight visitors will mean a significantly larger tourism spend in the Shire.	The Great Barrier Reef: a more commercialised, competing destination (compared with Ningaloo).
Warm, semi-arid climate, similar to the Mediterranean (ideal for outdoor venues, cafés and restaurants).	Tourism seasonality	Actively market the Carnarvon Space and Technology Museum to target groups	Global, national and local tourism activity (booms and downturns)
Accessibility: Carnarvon Airport and Highway 1	Existing tourism offer not well-marketed to potential visitors	A ‘Highway 1’ version of ‘Highway 20’. Highway 20 covers 140 km between the Perth CBD and Harvey. Towns on the route have come together to market the region as an enjoyable drive offering plenty to see and do. Carnarvon and settlements including Yanchep, Lancelin, Geraldton and Kalbarri could work together to create a similar marketing and tourism initiative.	Lost economic opportunities in general (potential tourists spending their travel budget visiting other markets)

Western Australia's 'Food Bowl'		Dedicated tourism-related municipal staff	Cyclonic activity and the threat of flooding in selected months
Spring-time wildflower displays		Attracting more visitors from interstate and overseas (Broome is a successful case study)	Climate change (and the erosion of attractions)
Affordability (compared with other destinations in Western Australia)		Babbage and Whitlock Islands: an opportunity for future tourism uses	Strains on existing infrastructure, when attractions like Coral Bay are operating at 100% occupancy during peak periods.
		Attract cruise ship visits from Fremantle (P&O, Princess Cruises)	
		Expanded Aboriginal cultural offer	
		Promotional activities to enhance "Brand Carnarvon"	
		Untapped marine attractions (humpback whales, dugongs, mangrove creeks)	

Source: Urbis

## 4 Commercial Land Uses

### 4.1 EXISTING COMMERCIAL ACTIVITY

The Australian Bureau of Statistics reports there were 665 registered businesses located within the Shire of Carnarvon in 2012. The profile was dominated by micro and small businesses, with just 159 businesses (or one in four) employing at least five people. With a share of 14.8%, Agriculture, Forestry and Fishing was the dominant employment industry in 2011.

The Gascoyne region of Western Australia has a growing role as an economic driver of the state with its rapidly expanding agricultural sector, fisheries' industry, tourism operations and resources and mining industry.

This growth is set to continue with the imminent release of additional irrigated agricultural land and further mining and petroleum projects in the pipeline. Urbis is aware that investigations are being undertaken in relation to the Gascoyne Food Bowl Initiative, which identifies a further 400 hectares of land along the Gascoyne River for horticultural purposes. However fragmented land ownership, encroaching residential development and other inappropriate land uses could prove potential barriers to the success of the Initiative (or any horticultural expansion).

Appendix A comprises a comprehensive list of local businesses in Carnarvon township. As noted in section 2.3.1, the list includes:

- **75 service and trade providers** (including five car/truck rental businesses, two travel agencies, four freight/courier businesses, two real estate agencies, at least four allied health service providers and over ten vehicle-related sales and servicing businesses);
- **50 retail stores** (including two "big four" banks, an IGA supermarket, Woolworths, three petrol stations, Australia Post and two pharmacies);
- **30 government and educational service providers** (such as five pre-school, primary and/or secondary schools; Durack Institute of Technology; UWA Rural Clinical School; Centrelink and the Gascoyne Development Commission);
- **14 entertainment or hospitality venues** (including one video rental store and 11 café, restaurant and fast food premises);
- **13 short-stay accommodation options** (several caravan parks, backpackers' accommodation, motels and apartments);
- **Ten places of worship** (various denominations);
- **Seven child, aged care and hospital service providers** (such as Silver Chain and Carnarvon Hospital); and
- **Six recreational venues** (including the Carnarvon Bowling Club, Golf Club, Race Club and Speedway).

Key retail precincts in Carnarvon township include:

- **Carnarvon Central:** opened in 1985 and owned by Charter Hall, a listed Australian property group, Carnarvon Central is a neighbourhood centre anchored by Woolworths (4,002 sqm). Other tenancies include eight specialty stores (1,027 sqm) and four offices. Parking for over 50 vehicles is available on site;
- **Carnarvon Business Centre:** comprising seven specialty shops (934 sqm), tenants are mainly service providers (accountants, lawyers, estate agents and civil servants); and

- **Detached tenancies in the vicinity of Robinson Street:** including food and beverage offers, petrol stations, grocery and liquor retailers and other general discretionary/specialty retailers. One of the larger examples is the former Target Country tenancy (1,000 sqm) on Alexandra Street.

In figures 4.1 and 4.2, Urbis estimates the improved area of selected predominantly commercial blocks in Carnarvon township. The base aerial image is the latest available from Nearmap (September 2009). A footprint of approximately 30,400 sqm, across the four precincts, has been calculated. However Urbis notes that it is likely a few properties were used for non-commercial uses (other than retail and office).

### Selected Commercial Precincts (September 2009)

CARNARVON TOWNSHIP

FIGURE 4.1



Source: Nearmap, Urbis

### Estimated Improved Areas

CARNARVON TOWNSHIP

FIGURE 4.2

	RED PRECINCT	YELLOW PRECINCT	ORANGE PRECINCT	BLUE PRECINCT
<b>Precinct Definition</b>	Bounded by Robinson Street (to the east), Olivia Terrace (north and west) and Camel Lane (south)	Bounded by Robinson Street (to the west), Egan Street (north), Rushton Street (east) and Stuart Street (south)	Fronting eastern side of Robinson Street, between Olivia Terrace and Francis Street	Bounded by Robinson Street (to the east), Camel Lane (north) and Olivia Terrace (west and south)
<b>Estimated Improved Area</b>	14,400 sqm	4,500 sqm	3,800 sqm	7,700 sqm

Source: Urbis

#### 4.1.1 TOWNSHIP FUNCTIONS

As the seat of government for the Shire of Carnarvon, Carnarvon township forms the region's commercial hub. It caters to not only township residents, but also pastoral and indigenous Australian communities based in regional Shire areas.

## 4.2 COMMERCIAL TRENDS

In mid 2014 Carnarvon township's only department store, Target Country, closed its store on Alexandra Street. Its lease expired in June and although the contract included a five year option, the Wesfarmers-owned company chose to vacate. Urbis understands there have been a few other recent examples of retailers closing their stores in Carnarvon township. Such actions may be attributed to:

- A stagnant or declining population. In Urbis' experience, a full-line supermarket requires a catchment population of 8,000 to 10,000 people. With an estimated resident population of 6,076 persons in 2011, the Shire's population is below this threshold, let alone the higher customer bases preferred by retailers of discretionary goods;
- Limited or stagnant local industry/employment growth. This impacts on consumer confidence and residents' propensity to spend on discretionary items;
- High operating costs. Urbis understands that Target Country's outgoings in Carnarvon were among the highest the business was paying anywhere in Australia; and
- The emergence of online shopping. Limited local options or a minimum 500-odd kilometre drive to Geraldton or Karratha are likely to increase the appeal of shopping from home for Shire residents.

## 4.3 CARNARVON AIRPORT

Carnarvon Airport (CVQ) is a triple runway airport located directly to the east of Carnarvon township's commercial centre. The airport lot has a site area of around 330 hectares, however sits within a wider 510 hectare precinct. Flights link Carnarvon with regional tourism and commercial destinations including Geraldton, Kalbarri, Paraburdoo (and other mining operations in the Pilbara), Monkey Mia and Perth. Skippers Aviation is the main carrier to use the Airport, largely landing Bombardier Dashes 8-300 and 8-100 and Embraer Brasilia EMB 120 aircraft. These aircraft seat 50, 30 and 36 passengers respectively.

In May 2014, the Shire of Carnarvon adopted a draft structure plan for Carnarvon Airport. The plan is now awaiting final endorsement from the Western Australian Planning Commission (expected in April 2015).

Urbis understands that industrial land is available for sale (LandCorp's Cornish Street industrial estate where lots range from 2,880 sqm to 8,970 sqm) and lease (40 hectares advertised by the Shire of Carnarvon) at Carnarvon Airport. Larger landholdings could be potentially of interest to a company like Chevron, were it looking to establish a base or hub to service its operations at the North West Shelf.

### 4.3.1 FUTURE AIRPORT

Several key issues have arisen regarding the current location and state of Carnarvon Airport. These include the main runway being unable to accommodate jet aircraft (a runway extension is required) and the Airport's location beside the centre of Carnarvon (impacting on the township's ability to expand to the east).

Urbis understands that the relocation of the Airport, to an outer north-eastern, inner eastern or outer south-eastern township landholding, is unlikely. This is due to reasons including the existing precinct being best-placed to form economic, aviation-related synergies with the township, and the landholding not being impacted by flood risk. However it has been mooted that the existing airstrip could be moved to the landholding's east. According to the Shire of Carnarvon (May 2014), this would allow for up to 1,400 residential lots to be created in the west, along with industrial and commercial land releases, over a 20 year timeframe.

## 4.4 COMMERCIAL SWOT ANALYSIS

In this section, Urbis has prepared a "Strengths, Weaknesses, Opportunities and Threats Analysis" for commercial land uses in the Shire of Carnarvon. Key points are listed in no particular order and some share similarities with the analysis undertaken in section 2.5 (local economy and resident population).



## Commercial Land Use SWOT Analysis

SHIRE OF CARNARVON

FIGURE 4.3

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Carnarvon Airport (highly accessible, close to the centre of town)	A decreasing retail offer (for example, Target Country did not renew its lease upon expiry in mid 2014).	Mining (operations' expansions in the vicinity of Carnarvon, also servicing mining operations in the Pilbara and Carnarvon Basin).	Environmental restrictions on industries like fishing and mining
Farming and agriculture: Western Australia's 'Food Bowl'	A notably lower level of discretionary spend by residents (compared with non-metro WA)	Carnarvon Airport (additional services and connections with new markets)	Cyclonic activity and the threat of flooding in selected months
Varied existing employment opportunities, including white collar to mining, agriculture and fishing.	Tourism seasonality	Short-stay accommodation development, offering visitors different options for different budgets	Climate change
Availability of affordable land	A below average proportion of residents aged between 15 and 34 years (who would ordinarily fill key employment positions)	Growing and exporting dragon fruit (a 'superfood' and particularly popular among the Chinese). The potential for new industries and economic diversification.	A potentially stagnant or declining population
Mining (Lake MacLeod, Dampier Salt) and pastoral sectors		Enhancements to the local retail offer	Airport located close to centre of town: a barrier to development in the township's east (but also a potential opportunity for additional flights and expansion of industrial uses).
A local Durack Institute of Technology campus, training students in skills of relevance to Carnarvon's economy.		Industrial growth and development including positioning Carnarvon as a transport and logistics hub	Infrastructure constraints
		Gascoyne Food Bowl Initiative (which identifies a further 400 hectares of land adjacent to the Gascoyne River for horticultural uses)	Vulnerability in regional industries (especially pastoral and mining)

		Implementing key priority projects will provide a catalyst for economic development	
		Expansion or enhancement of existing regional tourist attractions	
		Increased retention of economic activity, retail spending and jobs.	

Source: Urbis

## 5 Key Economic Considerations

### 5.1 COMMERCIAL AND RETAIL

As the seat of government for the Shire of Carnarvon, Carnarvon township forms the region's commercial hub. It caters to not only township residents, but also pastoral and indigenous Australian communities based in regional Shire areas.

In mid 2014 Carnarvon township's only department store, Target Country, closed its store on Alexandra Street. Urbis understands there have been a few other recent examples of retailers closing their stores in Carnarvon township. Such actions may be attributed to:

- A stagnant or declining population. With an estimated resident population of 6,076 persons in 2011, the Shire's catchment population is below the threshold required by a full-line supermarket (8,000 to 10,000 people), let alone the higher customer bases preferred by retailers of discretionary goods;
- Limited or stagnant local industry/employment growth, impacting on consumer confidence;
- High business operating costs (including rent, outgoings and wages); and
- The emergence of online shopping. Limited local options or a minimum 500-odd kilometre drive to Geraldton or Karratha are likely to increase the appeal of shopping from home.

### 5.2 RESIDENTIAL

The Carnarvon Structure Plan identifies the largest single constraint for the Carnarvon region as flood risk. The Structure Plan seeks to ensure all future development is directed into areas with flood protection features or is designed to accommodate flood levels in line with a "once in 100 year" flood event.

Urbis understands that living costs in the Shire have increased substantially since 2001. Therefore, it will be important that the population in future years is catered for in terms of housing supply and different dwelling typologies. Forward planning can minimise construction costs and provide for a broad demographic profile.

The efficient use of land will be required, ensuring that all household types, with careful consideration of climate sensitive design and quality built form outcomes, are adequately catered for in the development process. It will be important for the Strategy to provide the overarching framework for this to occur at the more detailed planning stages.

Babbage and Whitlock Islands offer an opportunity for future residential and tourism uses. It is noted that a fish processing plant may constrain future planning for the Islands. The Shire of Carnarvon generally considers the Islands to not be flood prone, although acknowledges they are exposed to storm surge and cyclonic events.

### 5.3 OPEN AND RECREATIONAL SPACE

The Shire of Carnarvon is considering the development of a new golf course on Babbage or Whitlock Islands. Such new facilities, potentially in addition to others, will have the capacity to host large events, drawing people to the township and encouraging them to linger or stay overnight.

### 5.4 COASTAL AND TOURISM

As a destination, Carnarvon township offers a somewhat limited range of heritage, cultural, natural and built attractions. However geographically, it is well placed to access a number of significant tourism drawcards including the Ningaloo Coast, Outback Pathways and the Warlu Way. These tourist attractions are varied in their nature and attract a range of tourists and visitors all seeking different experiences.

Although tourism has made a clear economic contribution to the Gascoyne region, there is potential for the sector to strengthen and expand to become a more sustainable economic driver for the Shire of Carnarvon, in particular. The Shire's place on the tourism map can be established by improving access and information for visitors, expanding the accommodation offer and broadening Carnarvon's product offering and experiences to promote Carnarvon as a unique destination of its own standing.

Any campaigns, initiatives or new infrastructure (including short-stay accommodation) which increase overnight visitor numbers (both domestic and international) should be encouraged, as wide-ranging economic benefits are very likely to ensue.

#### 5.4.1 PROMOTING INVESTMENT OPPORTUNITIES

New investment into the Shire is essential in expanding the local supply of accommodation. New entrants to the market are likely to not only increase the number of rooms available but also the types of accommodation provided in the region. In addition to meeting the needs of existing demand, increased diversity of stock may assist in attracting new visitor segments to the Shire.

Key activities to assist in promoting new investment in the Shire include:

- Developing marketing materials for investment opportunities for short-stay accommodation. Ensuring that key investment opportunities across the region can be communicated to the market through both web-based and printed materials is important. It is recommended that marketing materials highlight:
  - Regional and economic overview;
  - Existing and proposed infrastructure;
  - Tourism attractions and major events;
  - Visitation and tourism statistics;
  - Potential development sites; and
  - Incentive schemes.
- Engaging with prospective investors and proponents is vital in the process. Market research is required to identify potential investors, developers and operators. Developing an ongoing programme of engagement and discussion with potential investors will help to build strong relationships and foster an opportunity to promote accommodation investment in Carnarvon. On-going engagement with potential investors can also provide feedback on perceived/real barriers to investment, which can then be addressed further.
- Engaging with stakeholders is valuable as it can assist in identifying potential investors and provide information to other stakeholders that could assist in investment attraction. Meeting with stakeholders on a regular basis will facilitate a valuable two-way exchange of information that can increase the reach of investment attraction activities. Potential stakeholders include:
  - Tourism WA
  - Tourism Council WA
  - Department of State Development
  - Landholders
  - Real estate agents
  - Builders
  - Local businesses

## 5.5 HORTICULTURE AND PLANTATION

The Shire's economic position remains firmly centred around the agricultural industry and, in particular, horticulture. The majority of this horticultural activity is carried out along the Gascoyne River, where the fertile soils and sub-tropical climate make the Carnarvon region suitable for growing a range of fruit and vegetables.

Investigations are being undertaken in relation to the Gascoyne Food Bowl Initiative, which identifies an additional 400 hectares of land along the Gascoyne River for horticultural purposes. However it is understood that fragmented land ownership, encroaching residential development and other inappropriate land uses could prove potential barriers to the success of the Initiative (or any horticultural expansion).

## 5.6 TRANSPORT INFRASTRUCTURE

Carnarvon township is located approximately ten hours' drive north from Perth, and nine hours' drive south-west from Port Hedland. Potential exists for Carnarvon to play a greater role in transport and logistics, potentially as a trucking interchange location.

## 5.7 CIVIL ENGINEERING SERVICES OVERLAY

Urbis understands that property developers in the Shire of Carnarvon are largely local residents with no or limited project experience. Standard risks associated with development are amplified, due to some of the closest professional service providers (engineers and surveyors, for example) being based in Geraldton (480 kilometres south).

## Disclaimer

This report is dated March 2015 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of the Shire of Carnarvon (**Instructing Party**) for the purpose of a demographic and economic analysis (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

RETAIL	SERVICE/TRADE
<ul style="list-style-type: none"> <li>▪ Norwest Craft Supplies</li> <li>▪ Carnarvon Newsagency</li> <li>▪ Repco</li> <li>▪ Ampol Service Station Carnarvon</li> <li>▪ BP Carnarvon</li> <li>▪ Caltex Carnarvon</li> <li>▪ Gascoyne Computers</li> <li>▪ Carnarvon Electronics</li> <li>▪ Carnarvon Communications</li> <li>▪ Blacks Menswear</li> <li>▪ Al's Liquor Store</li> <li>▪ Carnarvon Quality Fruit &amp; Veg</li> <li>▪ Liquorland</li> <li>▪ Amcal Carnarvon</li> <li>▪ Tropics Hardware</li> <li>▪ Homestead Hardware</li> <li>▪ Gascoyne Tropical Nursery</li> <li>▪ Carnarvon Timber &amp; Hardware Pty Ltd</li> <li>▪ Carnarvon Building Supplies</li> <li>▪ Carnarvon Tackle &amp; Marine</li> <li>▪ Gascoyne Music Services</li> <li>▪ Gascoyne Office Equipment</li> <li>▪ Friends of Citizens Under Stress Opp Shop</li> <li>▪ Carnarvon Pet Meat Supplies</li> <li>▪ Norwest Pet Meats</li> <li>▪ Tel-O-Mac Tackle Shop</li> <li>▪ Payless Discounts</li> <li>▪ Electronics Plus</li> <li>▪ Stephanie's Flowers &amp; Baskets</li> <li>▪ Barry Evans Carpet Hotline</li> <li>▪ Northbound News &amp; Lotto</li> <li>▪ Carnarvon Central Shopping Centre</li> <li>▪ Carnarvon Sports</li> <li>▪ Woolworths Carnarvon</li> <li>▪ IGA Carnarvon</li> <li>▪ Carnarvon New &amp; Used Goods</li> <li>▪ Abacus Fisheries Co Pty Ltd</li> <li>▪ Kai Fresh Fish</li> <li>▪ Dorre Island Fishing Co</li> <li>▪ Gascoyne Wholesalers</li> <li>▪ Carnarvon Florist and Gifts</li> <li>▪ Four Season's Wool</li> <li>▪ Jewels By the Sea</li> <li>▪ Morel's Orchard</li> <li>▪ Commonwealth Bank</li> <li>▪ Chemart Pharmacy</li> <li>▪ ANZ Bank</li> <li>▪ Australia Post Shop</li> <li>▪ Carnarvon Bakery</li> <li>▪ Carnarvon Hot Bread and Patisserie</li> </ul>	<ul style="list-style-type: none"> <li>▪ Beaurepaires Tyres Carnarvon</li> <li>▪ North West Autos</li> <li>▪ Dellbar Motors</li> <li>▪ Toyota Carnarvon</li> <li>▪ Carline Mufflers Carnarvon</li> <li>▪ Carnarvon Mechanical Service</li> <li>▪ Carnarvon Motor Wreckers</li> <li>▪ Coral Coast Windscreens</li> <li>▪ Carnarvon Smash Repairs</li> <li>▪ Gascoyne Window Tint &amp; Windscreens</li> <li>▪ Novus Autoglass Repair &amp; Replacement</li> <li>▪ Carnarvon Cleaners Pty Ltd</li> <li>▪ Northern Guardian</li> <li>▪ Gascoyne Printers</li> <li>▪ Coral Coast Digital Print</li> <li>▪ Carnarvon Mini Storage Units</li> <li>▪ Workbase</li> <li>▪ Skill Hire</li> <li>▪ Gascoyne Funeral Directors &amp; Monumentals</li> <li>▪ Gascoyne Computer Systems</li> <li>▪ KN Building &amp; Maintenance</li> <li>▪ Castle Concrete Services</li> <li>▪ Sweet-As Concrete</li> <li>▪ G &amp; L Bobcat &amp; Truck Hire Carnarvon</li> <li>▪ Scougall's Prestige Tiling</li> <li>▪ Jorgensen Agribusiness</li> <li>▪ Belb-b Beauty Therapy</li> <li>▪ House Of Joyce</li> <li>▪ Heddis Beauty Salon</li> <li>▪ Where Healing Begins</li> <li>▪ Gascoyne Chiropractic</li> <li>▪ Victim Support Service</li> <li>▪ Carnarvon Dental Surgery</li> <li>▪ Carnarvon Medical Centre</li> <li>▪ Gascoyne Health Service</li> <li>▪ Carnarvon Medical Service Aboriginal Corporation</li> <li>▪ Tidman Optical</li> <li>▪ Carnarvon Physiotherapy</li> <li>▪ Norwest Refrigeration</li> <li>▪ Paterson Group Architects</li> <li>▪ Outdoorworld Carnarvon</li> <li>▪ Highway Joinery &amp; Cabinetmaking</li> <li>▪ Carnarvon Cabinet Makers</li> <li>▪ Carnarvon Carpet Cleaners</li> <li>▪ Askevold Contracting</li> <li>▪ Carr Civil Contracting</li> <li>▪ Carnarvon Electrics</li> <li>▪ Fascine Electrics</li> <li>▪ Carnarvon Pest Control</li> <li>▪ Carnarvon Pest Control</li> <li>▪ Carnarvon Plumbing Service</li> <li>▪ Gascoyne Waste Services</li> <li>▪ Westerly Contractors</li> <li>▪ Midwestern Corrosion Protection</li> <li>▪ Cunningham E N &amp; M B Refrigeration</li> <li>▪ Arkco Engineering</li> <li>▪ Schipp-Shape Steel Fabrication</li> <li>▪ Craig's Marine Boat Building</li> <li>▪ Coral Coast Veterinary Hospital</li> <li>▪ Gascoyne Veterinary Clinic</li> <li>▪ Carnarvon Veterinary Clinic</li> <li>▪ Ray White Carnarvon</li> <li>▪ Elders Real Estate Carnarvon</li> <li>▪ The Overnighters Courier Carnarvon</li> <li>▪ Centurion Transport</li> <li>▪ Toll West Transport</li> </ul>





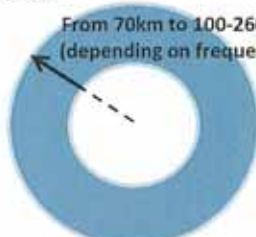


	<ul style="list-style-type: none"> <li>▪ Wilson R A &amp; S A Transport</li> <li>▪ Jetset Carnarvon</li> <li>▪ Travelworld Carnarvon</li> <li>▪ The Tax Shop</li> <li>▪ Carnarvon Signs</li> <li>▪ Avis Car Rental Carnarvon</li> <li>▪ Carnarvon Auto Rentals</li> <li>▪ Chippies Hire Cars</li> <li>▪ Budget Rent A Car</li> </ul>
<b>ENTERTAINMENT/HOSPITALITY</b>	<b>GOVERNMENT/EDUCATIONAL SERVICES</b>
<ul style="list-style-type: none"> <li>▪ Hits Radio</li> <li>▪ Carnarvon Café</li> <li>▪ The Coffee Cup</li> <li>▪ Fascine Coffee Lounge</li> <li>▪ The Old Post Office Cafe &amp; Accommodation</li> <li>▪ Sherdan's Kitchen</li> <li>▪ Galleon Café</li> <li>▪ Wendy's Supa Sundaes</li> <li>▪ Eagle Boys Pizza</li> <li>▪ Chicken Treat Carnarvon</li> <li>▪ Triniti Chinese &amp; Vietnamese Take Away</li> <li>▪ Westcoast Fish &amp; Chips</li> <li>▪ Civic Video Carnarvon</li> <li>▪ Carnarvon Tavern &amp; Drive-in Bottle Shop</li> </ul>	<ul style="list-style-type: none"> <li>▪ Carnarvon Christian School</li> <li>▪ St Mary Star of the Sea Catholic School</li> <li>▪ Carnarvon Community College &amp; Clontarf Academy</li> <li>▪ Minoo Malgoo Aboriginal Pre-School</li> <li>▪ Carnarvon School of the Air</li> <li>▪ Carnarvon Community Patrol</li> <li>▪ Carnarvon Aboriginal Corporation</li> <li>▪ Carnarvon Family Support Services</li> <li>▪ Durack Institute of Technology</li> <li>▪ UWA Rural Clinical School</li> <li>▪ Carnarvon Public Library</li> <li>▪ The Apprentice And Traineeship Company</li> <li>▪ Gascoyne Small Business Centre</li> <li>▪ Department of Environment &amp; Conservation</li> <li>▪ Department of Fisheries</li> <li>▪ Gascoyne Development Commission</li> <li>▪ State Emergency Service</li> <li>▪ Centrelink</li> <li>▪ Department of Child Protection</li> <li>▪ Main Roads WA</li> <li>▪ Mental Health</li> <li>▪ Department of Water</li> <li>▪ WA Police</li> <li>▪ Horizon Power</li> <li>▪ Family Support Service</li> <li>▪ Roadwise</li> <li>▪ Carnarvon Hospital</li> <li>▪ Women's Refuge</li> <li>▪ Population Health</li> <li>▪ Department of Housing</li> </ul>
<b>ACCOMMODATION</b>	<b>CHURCH</b>
<ul style="list-style-type: none"> <li>▪ Carnarvon Fascine Lodge</li> <li>▪ Carnarvon Seachange Apartments</li> <li>▪ Carnarvon Winter Sun Caravan Park and Accommodation</li> <li>▪ Big 4 Plantation Caravan Park</li> <li>▪ Carnarvon Backpackers</li> <li>▪ Capricorn Holiday Park</li> <li>▪ Coral Coast Tourist Park</li> <li>▪ Port Hotel-Motel</li> <li>▪ Best Western Hospitality Inn</li> <li>▪ Carnarvon Caravan Park &amp; Gateway Motel</li> <li>▪ Gascoyne Hotel Motel</li> <li>▪ Carnarvon Beach Holiday Resort</li> <li>▪ Fishtales Carnarvon Family Holiday Accommodation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aboriginal Outreach</li> <li>▪ Anglican Church</li> <li>▪ Baptist Church</li> <li>▪ Catholic Church</li> <li>▪ City of Palms Fellowship</li> <li>▪ Living Waters Church</li> <li>▪ Seventh Day Adventist</li> <li>▪ Uniting Church</li> <li>▪ Jehovah's Witness</li> <li>▪ Church of Christ</li> </ul>
<b>RECREATIONAL</b>	<b>CHILD, AGED AND HOSPITAL SERVICES</b>
<ul style="list-style-type: none"> <li>▪ Carnarvon Bowling Club</li> <li>▪ Carnarvon Golf Club</li> <li>▪ Carnarvon Race Club</li> <li>▪ Carnarvon Speedway</li> <li>▪ Gascoyne Football Association</li> <li>▪ Gascoyne Offroad Racing Club</li> </ul>	<ul style="list-style-type: none"> <li>▪ Granny Glasgow Day Care Centre</li> <li>▪ Multicultural Bridge Care Centre</li> <li>▪ Carnarvon Playgroup</li> <li>▪ Carnarvon Toddler Jam</li> <li>▪ Silver Chain</li> <li>▪ Carnarvon Hospital</li> <li>▪ Olive Laird Memorial Hostel</li> </ul>





# Snapshot of Radio Quiet Protections

\*diagrams not to scale

Instrument / zone*	Covered	Description of instrument	
<b>Band Plan – inner zone</b> 	<ul style="list-style-type: none"> <li>Activities requiring apparatus licences eg. transmission towers for mining, infrastructure, industry, emergency services, TV, radio broadcasting etc</li> </ul>	Type	Legislative
		Start date	2011
		Legislation	<i>Radio Communications Act 1992</i>
		Agency	ACMA
		Description	<ul style="list-style-type: none"> <li>Radioastronomy has primacy for using 70MHz–25.25GHz; all other services secondary</li> <li>No new apparatus licences <u>likely</u> to be compatible with radioastronomy</li> </ul>
<b>Band Plan – outer zone</b> 	<ul style="list-style-type: none"> <li>Activities requiring apparatus licences eg. transmission towers for mining, infrastructure, industry, emergency services, TV, radio broadcasting etc</li> </ul>	Type	Legislative
		Start date	2011
		Legislation	<i>Radio Communications Act 1992</i>
		Agency	ACMA
		Description	<ul style="list-style-type: none"> <li>Applies to 70MHz–25.25GHz</li> <li>Licence applicant to consult with MRO entity</li> <li>RALI MS 32 describes those consultation process and thresholds</li> </ul>
<b>Class licences</b> 	<ul style="list-style-type: none"> <li>Use of CB radios, SAT phones and Low Interference Potential Devices (eg. wireless microphones, WLAN)</li> </ul>	Type	Legislative (Class Licence Variation)
		Start date	2011
		Legislation	<i>Radio Communications Act 1992</i>
		Agency	ACMA
		Description	<ul style="list-style-type: none"> <li>Licences with conditions preventing harmful interference to radioastronomy</li> </ul>
<b>Spectrum licences</b>  (in and around the RQZ)	<ul style="list-style-type: none"> <li>Use of frequency bands near RQZ eg. by mobile telephone companies</li> </ul>	Type	Legislative (Spectrum Licence)
		Start date	Whenever new licence granted
		Legislation	<i>Radio Communications Act 1992</i>
		Agency	ACMA
		Description	<ul style="list-style-type: none"> <li>Condition on spectrum licences near RQZ to prevent harmful interference to radio astronomy</li> <li>Licences not to be granted in central area of RQZ</li> </ul>
<b>RALI MS 32 – restricted zones</b> 	<ul style="list-style-type: none"> <li>Activities requiring apparatus licences eg. transmission towers for mining, infrastructure, industry, emergency services, TV, radio broadcasting etc</li> </ul>	Type	Policy
		Start date	2007 (revised 19 December 2014)
		Legislation	<i>Radio Communications Act 1992</i>
		Agency	ACMA
		Description	<ul style="list-style-type: none"> <li>Covers frequency range 70MHz–25.25GHz</li> <li>No new apparatus licences <u>likely</u> to be compatible with radio astronomy</li> </ul>
<b>RALI MS 32 – coordination zones</b> 	<ul style="list-style-type: none"> <li>Activities requiring apparatus licences eg. transmission towers for mining, infrastructure, industry, emergency services, TV, radio broadcasting etc</li> </ul>	Type	Policy
		Start date	2007 (revised 19 December 2014)
		Legislation	<i>Radio Communications Act 1992</i>
		Agency	ACMA
		Description	<ul style="list-style-type: none"> <li>Covers frequency range 70MHz–25.25GHz</li> <li>If signals from apparatus devices <u>located in coordination zone</u> do not meet thresholds at MRO centre (and less stringent thresholds out to 50km) licence applicants must coordinate with MRO entity to try to find solutions to minimise RFI to acceptable levels</li> </ul>
<b>RTMRMA (FNA 7618)</b> 	<ul style="list-style-type: none"> <li>Mining and exploration on tenements granted post 2006</li> <li>Covers mining-related incidental emissions</li> <li>Covers mining-related licensed emissions</li> </ul>	Type	Policy
		Start date	2006
		Legislation	<i>Mining Act 1978 (WA)</i>
		Agency	DMP
		Description	<ul style="list-style-type: none"> <li>Activities to comply with an REMP approved by the DG of DMP</li> </ul>
<b>Section 19 (157-158) exemptions</b> 	<ul style="list-style-type: none"> <li>Mining and exploration</li> <li>Covers mining-related incidental emissions</li> <li>Covers mining-related licensed emissions</li> </ul>	Type	Instrument of exemption of land
		Start date	2001 (modified since)
		Legislation	<i>Mining Act 1978 (WA)</i>
		Agency	DMP
		Description	<ul style="list-style-type: none"> <li>Mining and exploration titles cannot be granted</li> </ul>

## Accompanying notes to chart

### Interpretation

The chart is intended to provide a snapshot of current radio quiet protection mechanisms for the Australian Radio Quiet Zone (WA), also known as the Mid West Radio Quiet Zone. The aim of the chart is to help facilitate discussion regarding the activities and devices covered by the existing mechanisms. As the chart provides a high level overview, it

should be read in conjunction with the relevant legislation and policy documents.

Note that the Embargo 41 is not included in the table as it has effectively been superseded by the Band Plan and RALI.

### Types of radio communications licences

**Apparatus licences** are for individual radio communications transmitters/devices (eg. transmission towers for communications within pits for mining, communications along high-pressure gas pipelines and railways, TV broadcasting, communications for emergency services etc) at specified locations. Applied for individually.

**Class licences** are for common radio communications devices and equipment such as CB radios, SAT phones, cordless door openers. Not applied for individually.

**Spectrum licences** are for use of certain frequency bands in specified geographical areas eg. telephone providers.

### Abbreviations

ACMA = Australian Communications and Media Authority

DG= Director General

DMP = Department of Mines and Petroleum

FNA = File Notation Area

MRO = Murchison Radio-astronomy Observatory

RALI = Radio Assignment and Licensing Instruction

REMP = Radio Emissions Management Plan

RFI = Radio Frequency Interference

RQZ = Radio Quiet Zone

RTMRMA = Radio Telescope Mineral Resource Management Area

# Shire of Carnarvon

LOCAL PLANNING STRATEGY 2017

MARCH 2017

