

# LOCAL PLANNING STRATEGY

Part One

Certified for Advertising: 27 March 2018

# DRAFT

Prepared for **Shire of Ashburton**  
Prepared by **Taylor Burrell Barnett**

Shire of Ashburton  Local Planning Strategy	Revision	Reviewer	Date Issued
	16/028-1	RC	Jan-17
	16/028-2	RC	Sep-17
	16/028-3	RC	Nov-17
	16/028-4	RC	Apr-18

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**In association with:**

**Essential Environmental** – Environment

**Serling Consulting** – Civil Engineering

**Donald Veal Consultants** – Traffic and Transport

## ADVERTISING

The Shire of Ashburton Local Planning Strategy certified for advertising on 27 March 2018.

Signed for and on behalf of the Western Australian Planning Commission

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

Date: \_\_\_\_\_

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## ADOPTED

The Shire of Ashburton hereby adopts the Local Planning Strategy, at the Ordinary meeting of the Council held on the

..... day of ..... 20....

.....  
SHIRE PRESIDENT

.....  
CHIEF EXECUTIVE OFFICER

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## ENDORSEMENT

Endorsed by the Western Australian Planning Commission.

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

Date: \_\_\_\_\_

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# PREAMBLE

This Local Planning Strategy provides the strategic land use and development rationale for delivering the Shire of Ashburton's vision of a vibrant and prosperous place for work, leisure and living. It has a particular focus on the three towns of Onslow, Tom Price and Paraburdoo as the major settlements administered by the Shire of Ashburton. The Local Planning Strategy assumes that these three towns will remain the hubs for population growth and new housing, commerce and employment, community services and facilities, and tourism.

The Strategy forms part of an integrated suite of documents that collectively form the Shire's planning framework, consisting of its Strategic Community Plan, the Local Planning Strategy, and its local planning scheme. The Strategy is a guiding document that can be amended as required, such as when there are significant changes in policy or if other factors emerge that would influence the growth and development of the towns, Aboriginal communities, or rural areas within the Shire. By its nature, it is intended to be dynamic, providing flexibility rather than being prescriptive, so that it is responsive to the Shire's and the community's aspirations.

The Shire of Ashburton experienced unprecedented population growth, infrastructure investment, and economic development during the resources boom, with the towns of Onslow, Tom Price and Paraburdoo particularly affected. Building on this recent growth, it is an opportune time for the Shire to develop and implement its strategic vision for the sustainable and long-term development of the main townsites and Aboriginal communities. This strategic focus and planning direction for the next 15 years will provide guidance to the local government in terms of land use, development control and infrastructure coordination in the context of the Shire's broader environmental, social, and economic goals.

The Shire of Ashburton is embracing the opportunities presented to it as a result of the resources boom, leveraging these to identify and deliver the community's needs and aspirations. As described in its recently adopted *Strategic Community Plan 2017 - 2027*, the Shire is committed to delivering vibrant and active communities, economic prosperity, heritage and environment protection, quality services and infrastructure, and inspiring governance. The Local Planning Strategy contributes to achieving these strategic community goals within the context of the State's planning framework.

The Shire's current local planning scheme, the *Shire of Ashburton Local Planning Scheme No. 7* (LPS 7), is to be revoked and replaced following the preparation of a new local planning scheme, anticipated to occur following the adoption of this Strategy. The Local Planning Strategy is a statutory requirement under the *Planning and Development Act 2005* and forms the strategic basis for preparing a new local planning scheme.

The local governments across the Pilbara region have inherited a legacy from the resources boom through the development of mining and hydrocarbon industries, and services that support the major producers. More recently however, shifts in global market demand for the region's major exports of oil, gas and iron ore have changed the economic landscape, with reduced prices for these commodities reflected in resource companies seeking greater production efficiencies and general spending reductions. Further, the transition of many major projects from labour-intensive construction phases to operational phases has also led to the reduction in the number of temporary workers across the region. A positive response to this new economic environment will be to focus on greater economic diversification as a means towards creating more resilient towns that can better withstand booms and busts within the mining and oil and gas sectors.

The Strategy consists of two parts:

**Part 1 – The Strategy** incorporates the strategic plans and actions required to implement the Strategy.

**Part 2 – Local Profile and Context Report** provides the relevant background to the Strategy, including the analysis of information and the rationale for the Strategy.

During 2016, a number of stakeholder meetings were held and Stakeholder Position Statements were completed, which have been valuable in identifying issues and opportunities relevant to the Local Planning Strategy.

# LIST OF ACRONYMS

AAGR	Average Annual Growth Rate
ABS	Australian Bureau of Statistics
ANSIA	Ashburton North Strategic Industrial Area
BAL	Bushfire Attack Level as defined in SPP 3.7 Planning in Bushfire Prone Areas
BHL	Bushfire Hazard Level as defined in SPP 3.7 Planning in Bushfire Prone Areas
CHRMAP	Coastal Hazard Risk Management and Adaptation Plan
FIFO	Fly-In, Fly-Out
LPS	Local Planning Strategy
OLS	Obstacle Limitation Surface
OMSB	Onslow Marine Support Base
PAN-OPS	Procedures for air navigation services – aircraft operations
PDC	Pilbara Development Commission
R-Codes	Residential Design Codes of Western Australia
SPP	State Planning Policy
LPS 7	Shire of Ashburton Local Planning Scheme No. 7
UCL	Unallocated Crown Land
WA	Western Australia
WAPC	Western Australian Planning Commission
WFA	Workforce Accommodation
WWTP	Waste Water Treatment Plant

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# 1 INTRODUCTION

This is the Shire of Ashburton's first Local Planning Strategy and it represents the land use planning rationale and justification for achieving its strategic planning goals within a regional and state-wide context. The Local Planning Strategy provides a vision for a time horizon of approximately 15 years and is a prerequisite to undertaking a review of the existing Local Planning Scheme No. 7 (LPS 7). The Strategy sets objectives for addressing social, environmental, resource management and economic factors, which would affect land use and development. The Local Planning Strategy has regard to State and regional planning policies, adopted structure plans, and the existing local planning framework.

The Shire of Ashburton is located within the Pilbara region of Western Australia (refer **Figure 1**) and covers an area of 100,816.2 square kilometres. The Shire was formed in 1972 as a result of the amalgamation of the Shires of West Pilbara and Tableland. In 2016, the Shire of Ashburton was home to approximately 13,026 people.

The Pilbara region is a significant economic contributor to the State and National economy by being a major source of natural resource wealth, primarily through its iron ore and hydrocarbon reserves. The State Government has directed significant expenditure into the Pilbara region, primarily focused on Karratha, but with funds also allocated throughout the region. This expenditure has facilitated positive economic and community outcomes guided through the *Pilbara Regional Investment Blueprint* and delivered through the *Pilbara Planning and Infrastructure Framework* and the *Royalties for Regions* programme. It has been calculated that for every \$1 spent through the programme, there has been an equivalent \$1.50 spending of private sector investment. This level of investment within the Pilbara region has helped create a greater level of permanency in the towns, and this is expected to strengthen in the future.

In addition to iron ore and oil and gas, the Shire's other significant economic contributors include its tourism industry, pastoral leases, and indigenous cultural tourism. In order to sustainably maintain the economic strength of the region, key regional towns must be given the opportunity to develop as self-sufficient communities that provide their own character, amenity, services, employment, and other needs of their residents and visitors. The transformation and diversification of local economies will enhance liveability and produce a wider range of opportunities for the community.

## 1.1 PURPOSE OF THE LOCAL PLANNING STRATEGY

The Strategy is not a stand-alone document, but forms part of an integrated suite of documents that collectively form the Shire's planning framework, consisting of the *Strategic Community Plan*; the Local Planning Strategy; and LPS 7. The Strategy is a guiding document that can be amended to respond to changes in policy and other factors that may influence the Shire's growth and development over time. By its nature it is a dynamic document, providing flexibility rather than being prescriptive, in order to achieve the Shire's, and ultimately the community's, aspirations.

The Local Planning Strategy:

- (a) Sets out the long-term planning directions for the local government;
- (b) Applies State or regional planning policies that are relevant to the Strategy; and
- (c) Provides the rationale for zoning or classification of land under the local planning scheme.

The Strategy expresses the strategic vision, policies and proposals for the local government. The Strategy may be used to partner with and/or lobby State and Federal government to implement the strategies and actions, acknowledging that some implementation will need to extend beyond land use planning. Collective and coordinated planning within all levels of government and the private sector will build confidence and assist with prioritising infrastructure and service provision.

## 1.2 FORMAT OF LOCAL PLANNING STRATEGY

The Strategy consists of two parts in accordance with the *Local Planning Manual*.

- **Part One** – The Local Planning Strategy incorporates the strategic plans and actions required to implement the Strategy.
- **Part Two** – Local Profile and Context Report (prepared in conjunction with the Project Consultant Team) provides the relevant background to the strategy, including analysis of information and the rationale for the Strategy.

The Strategy was produced by the Shire of Ashburton's project consultant team:

- Environmental (Essential Environmental);
- Traffic & Transport (Donald Veal Consultants);
- Strategy Report and Economic (Taylor Burrell Barnett); and
- Service Infrastructure (Serling Consulting).

Other significant contributions to the formulation of the Strategy have included:

- *Pilbara Cities*;
- *Pilbara Regional Investment Blueprint*;
- *Pilbara Planning and Infrastructure Framework*;
- *Onslow Townsite Strategy, Onslow Townsite Expansion Structure Plan and Onslow Townsite Expansion Stage 1 Development Plan*;
- *Assessment of Accommodation Need in Tom Price, Onslow and Paraburdoo* (2015 and Onslow Update 2016);
- *Regional HotSpots Land Supply Updates – Newman and Tom Price* (2015); and
- Available information from Rio Tinto in relation to growth and development within Tom Price and Paraburdoo.

## 1.3 STRATEGY AREA

The Shire contains four townsites (Onslow, Paraburdoo, Tom Price and Pannawonica), four recognised Aboriginal Settlements (Bellary Springs (Innawonga), Wakathuni, Youngaleena Bunjima, and Ngurrawaana), one town-based community (Bindi Bindi), as well as a number of Aboriginal communities including Jundaru, Noualla and Yathalla. There are numerous isolated mining workforce accommodation camps throughout the Shire with limited opportunities for interaction or integration with permanent, established communities.

This Strategy outlines the Shire's preferred growth pattern scenario for Onslow, Tom Price and Paraburdoo. It provides strategic objectives and actions that address population growth (in townsites, Aboriginal communities and rural areas), economic development/diversification, traffic and transport, community services and spaces, natural environment and resource protection, infrastructure and utilities. It will guide land use planning over a 15-year period and provide the rationale for land use and development controls established in the local planning scheme and other plans and policies.

The medium-term population forecasts for the Shire indicate population growth could range from 12,200 to 15,400 people by the year 2026. This growth will primarily occur within Onslow, Tom Price and Paraburdoo, maximising opportunities for new and existing residents to interact, and to use existing utilities, retail, commercial, recreational and community facilities. As a company town, Pannawonica is outside the scope of this Strategy, and any population changes in Pannawonica will be directed by Rio Tinto.

The Strategy applies to the Shire of Ashburton local government area, as illustrated in **Figure 1**. The Shire of Ashburton is one of four local governments in the Pilbara Region, sharing borders with the Shires of Exmouth and Carnarvon to the west; Shires of Upper Gascoyne and Meekatharra to the south; Shire of East Pilbara and Town of Port Hedland to the east; and the City of Karratha to the north.

**Figure 1 Location of the Shire of Ashburton**



The Shire of Ashburton is located approximately 1,000 kilometres north of Perth. It stretches approximately 500 kilometres west to east from the coastal beaches, rocky headlands, mudflats and mangroves around Onslow, across the Stewart Hills to Pannawonica, and the Hamersley Ranges to Tom Price and Paraburdoo.

The Shire is best known for mining, agriculture and fishing and is home to some of the world's largest open cut mines and immense pastoral leases. It is also known for its rugged hinterland where its ancient landscape supports a growing tourist industry.

## 2 STRATEGIC COMMUNITY PLAN AND ALIGNMENT TO THE STRATEGY

The Shire's Community Vision is articulated in the *Living Life – Strategic Community Plan 2017-2027*:

*We will embrace our unique Pilbara environment and lifestyle through the development of vibrant, connected and active communities that have access to quality services, exceptional amenities and economic vitality.*

The overall objective of this Local Planning Strategy is to guide growth and development in the towns and rural and rangeland areas over the next 15 years. Strategies and actions have been prepared having regard to the five goals established in the *Strategic Community Plan 2017-2027*, so that planning goals are closely aligned to the community's aspirations and vision for the Shire of Ashburton.

The Strategy vision statements as set in **section 3** of Part 1 of the Strategy give serious consideration to economic growth and diversification, sustainable population growth, protecting the heritage and environment, and the governance of the Shire, reflecting the goals and objectives below as set in the *Strategic Community Plan 2017-2027*.

### Goal 1 – Vibrant and Active Communities

- Objective 1 – Connected, caring and engaged communities
- Objective 2 – Sustainable Services, Clubs, Associations and Facilities
- Objective 3 – Quality education, healthcare, childcare, aged care and youth services
- Objective 4 – A rich cultural life

### Goal 2 – Economic Prosperity

- Objective 1 – Strong local economies
- Objective 2 – Enduring partnerships with industry and government
- Objective 3 – Well-managed tourism

### Goal 3 – Unique Heritage and Environment

- Objective 1 – Flourishing natural environments
- Objective 2 – Leading regional sustainability
- Objective 3 – Celebration of history and heritage

### Goal 4 – Quality Services and Infrastructure

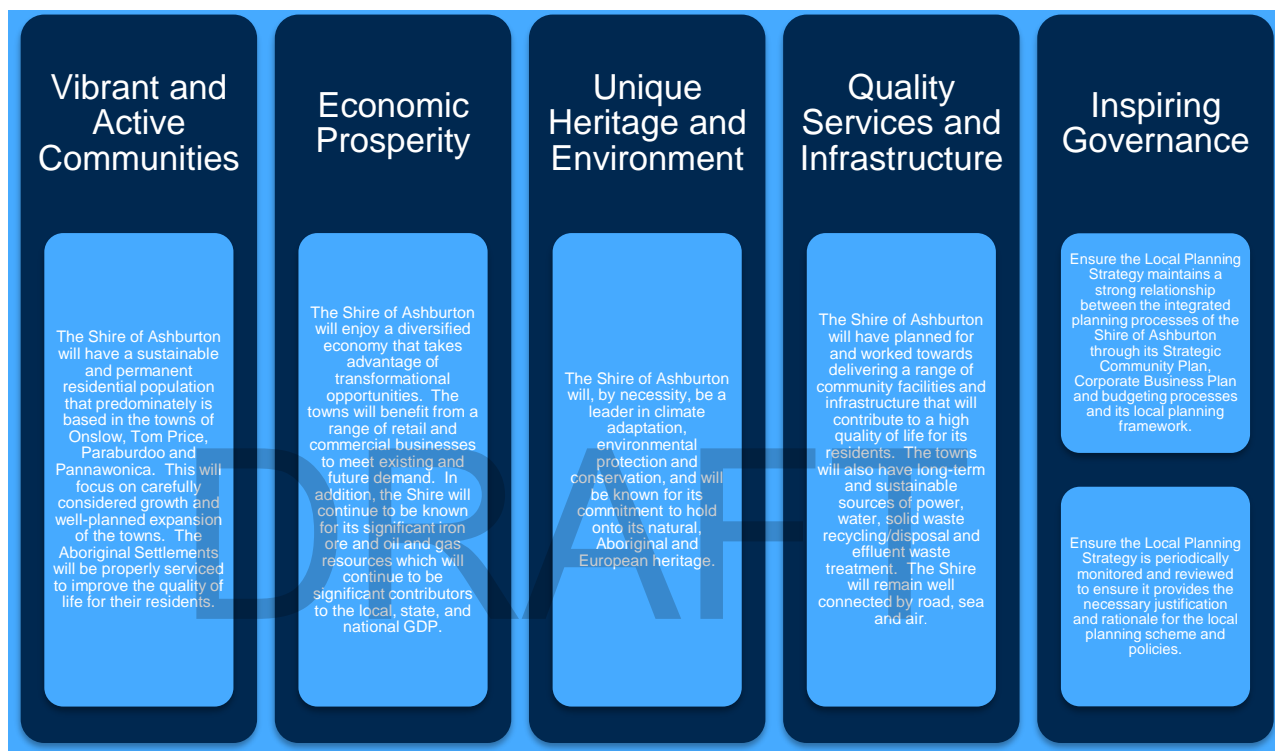
- Objective 1 – Quality public infrastructure
- Objective 2 – Accessible and safe towns
- Objective 3 – Well-planned towns

### Goal 5 – Inspiring Governance

- Objective 1 – Effective Planning for the Future
- Objective 2 – Community ownership
- Objective 3 – Council leadership
- Objective 4 – Exemplary team and work environment

### 3 VISION STATEMENTS

Vision statements have been prepared for the Local Planning Strategy to align with the five goals of the *Strategic Community Plan 2017-2027*, as demonstrated below. The Vision Statements have direct connection to the Strategies and Actions contained in **section 0**.



## 3.1 VIBRANT AND ACTIVE COMMUNITIES

### Vision Statement

**The Shire of Ashburton will have a sustainable and permanent residential population that predominately is based in the towns of Onslow, Tom Price, Paraburdoo and Pannawonica. This will focus on carefully considered growth and well-planned expansion of the towns. The Aboriginal Settlements will be properly serviced to improve the quality of life for their residents.**

### Goal

*Liveable towns that attract permanent residents to live, work, recreate, and socialise together. The towns are the main settlements within the Shire, and will be well planned to predict and provide for the ongoing sustainable provision of services, utilities and other community needs such as housing, retail, and employment options.*

### Vibrant and Active Communities

Key objectives being considered through this Strategy are as follows:

- Tom Price, Paraburdoo and Onslow communities will be liveable, sustainable, with the population having appropriate access to services and facilities;
- Housing supply within towns should be diverse, resilient to climate change, functional and address the needs of youth, young adults, family groups, and aged persons;
- Long-term development opportunities for residential development and growth should only occur where developments will be well-integrated and functional components of the townsites;
- State Government agencies should ensure that appropriate services are delivered within Aboriginal Settlements;
- Encourage workforce accommodation being located within Onslow, Tom Price and Paraburdoo wherever possible, to avoid workforce in camps that have limited access to services and are remote.

### 3.1.1 POPULATION GROWTH

Population growth in the Shire of Ashburton has been examined and interrogated through a range of strategic documents. The *WA Tomorrow* series of population forecasts are based on historical trends and extrapolates these through assumptions and methodology to produce forecast trends. The forecast trends in *WA Tomorrow Population Report No. 10* represents the official State Government forecasts for the years 2014-2026, and are relevant to the Local Planning Strategy's 15-year strategic outlook.

#### Pilbara Regional population

For the period of 2005-2013, population growth rates for the Pilbara were between 3.2-5.4%. The situation has changed due to the recent downturn experienced within the mining sector. Pilbara population grew from 49,413 people in 2006 to 65,062 in 2013 before declining towards 61,435 in 2016. Historical trends demonstrate how fluctuations in market conditions can place pressure on towns to accommodate population growth and demand.

The *Pilbara Regional Investment Blueprint* sets what it calls an 'aspirational yet achievable' population target of 200,000 by 2035, an increase of 135,000 across the region. Tom Price, Paraburdoo and Onslow should grow in a sustainable manner that ensures communities can develop with availability and access to a range of necessary services, employment opportunities, and housing choice.

### Ashburton local government population growth trends

The latest 2016 census data estimates the Shire's population to be 13,026 people. Compared to the national average, demographic analysis (contained in Part 2) indicates: a disproportionate ratio of males to females; a higher ratio of Indigenous Australians; and a relatively low ratio of residents older than 65.

ABS information supports the inference that future population growth is likely to be directly impacted by the growth or contraction of the mining and oil and gas industry sectors. These industry sectors are likely to continue as a significant influence on population growth rates within the local government, highlighting the necessity for the Shire and State Governments to emphasise transformational economic opportunities that will contribute towards a more diversified employment base. Diversification of the economy and a broader employment base may lessen the impacts of mining and oil and gas on population growth/decline rates.

Census data is examined further within Part 2. The average annual growth rate has been calculated for the townsites and the overall Shire showing that between 2006 and 2016:

- Onslow's population has grown an average of 0.52% per annum;
- Tom Price's population on average has grown 2.68% per annum;
- Paraburdoo's population on average has grown 1.43% per annum; and
- Pannawonica's population on average has grown 1.00% per annum.

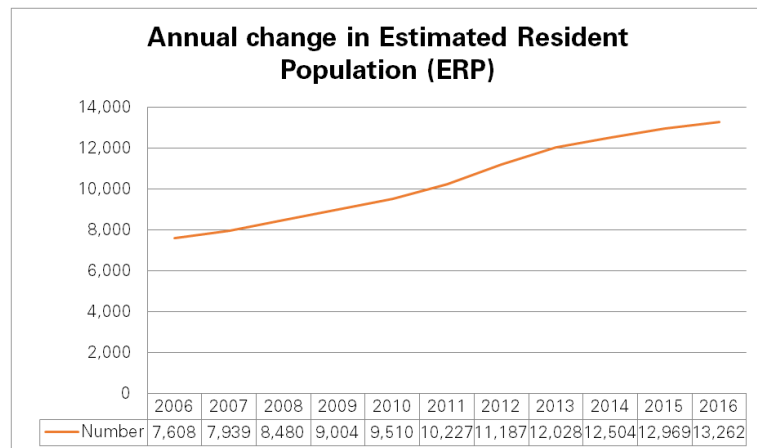
Overall, the total townsite population growth between 2006 and 2016 AAGR was 1.82% per annum, whilst the Shire's 2006-2016 AAGR was 13.11% per annum. This suggests that the census has counted FIFO workforce into the overall numbers for the Shire, and there has been a significant increase in FIFO workforce accommodated outside of townsites.

It will be important for future housing and development to cater for the demographics of the region, taking into account the particular needs of key sectors including youth, young adults, and aged persons. Areas of focus for improving liveability will also contribute towards retaining population in the long term. Identified areas of focus include – safety, health and wellbeing, education and training, lifestyle, the sense of community, and community connectedness.

#### 3.1.1.1 PREFERRED GROWTH PATTERN

The Corporate Business Plan has utilised data sourced from the ABS and compiled by iD, which provides the following contextual pattern of growth (refer **Figure 2**). Anticipated population growth affects the level of service delivery and timing of new services and infrastructure by the local government, state government agencies, and utilities/service providers. It is important to ensure local government services are provided in line with projected population growth.





**Figure 2 Annual Change in Estimate Resident Population (source: Shire of Ashburton; .id; ABS 2017)**

The Strategy has selected Band C as referred to in **Table 1** as a guide for future growth forecasting, as this represents what is considered to be a stable pattern of growth.

**Table 1 Population Bands – Average Annual Growth Rate (Source: WA Tomorrow)**

Year	Band				
	A	B	C	D	E
2016	1.44%	2.12%	2.65%	3.11%	3.86%
2021	1.59%	1.95%	2.23%	2.48%	2.89%
2026	1.19%	1.62%	1.99%	2.25%	2.77%

**Figure 3** shows Band C as a green line. The Band C annual average growth rate is 2.65% in 2016, 2.23% in 2021, and 1.99% in 2026. While these growth rates may be optimistic, they provide a practical guide for anticipated population growth.

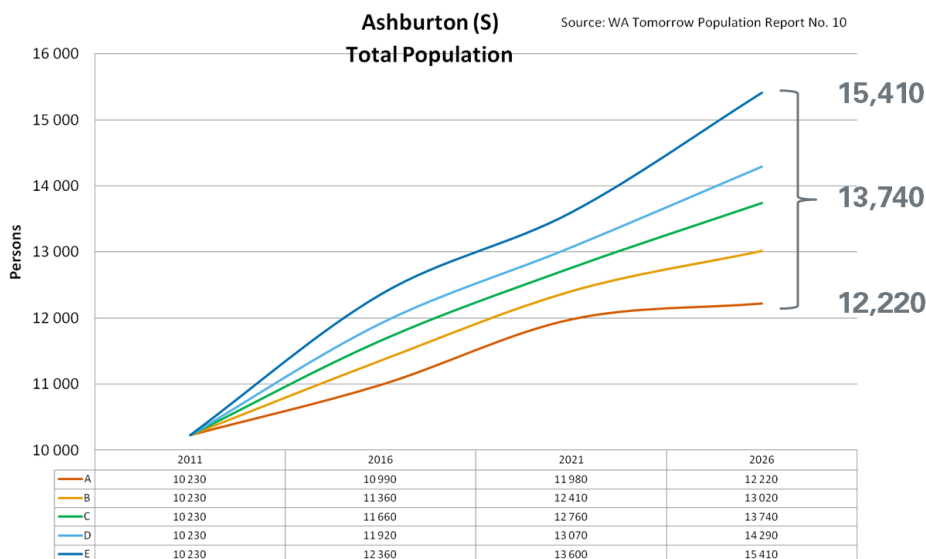
WA Tomorrow indicated that the Shire's population is expected to grow by 3,510 people (from 10,230 to 13,740) over a 16-year period. It is noteworthy that the Band C projection has potentially been met (as per the population counts recorded in the ABS 2016 Census), although it may also be reasonable to consider that transient workers have being counted and included in the census data.

It is anticipated that the Shire's permanent population will grow comparably to the Pilbara Region, continuing to account for approximately 16.5%-16.6% of the Pilbara's population. The Strategy primarily considers the means to plan for and facilitate population growth as it occurs, and the land use implications for the Shire. The rapid population growth and the accompanying externalities (pressure on housing, availability of land, availability of utilities and services etc.) can be averted through implementing the actions recommended in this Strategy.

The preferred growth pattern places the emphasis on accommodating population growth within Onslow, Tom Price and Paraburdoo. These townsites are most suitable for accommodating population growth as they are established service centres that provide the level of services and facilities expected in small regional towns with Karratha and Port Hedland providing the additional services of higher order towns. Whilst Onslow, Tom Price and Paraburdoo are relatively isolated from one another, in regional terms the towns work well to complement and supplement each other. These towns also provide services and other conveniences for surrounding mining activities, Aboriginal communities, pastoralists and tourists/visitors.



**Figure 3 Medium Term Population Forecast 2016-2026 (Source: WA Tomorrow)**



### 3.1.1.2 RETAIL FLOORSPACE FOR POPULATION GROWTH

Based on Band C Population growth, the Shire requires an estimated 25,593m<sup>2</sup> retail space, comprising 10,160m<sup>2</sup> of retail floorspace and an additional 4,355m<sup>2</sup> for bulky goods retail. This would likely be distributed amongst Onslow, Tom Price and to Paraburdoo as opportunities arise. The land area considers the net leasable area, and additional land for other land requirements such as warehouse/storage space and car parking.

### 3.1.1.3 CONTRIBUTING FACTORS TO POPULATION GROWTH

The Strategy acknowledges a number of factors that may have a bearing on population growth, including:

- Economic conditions for the mining, oil and gas industry sectors, and the subsequent demand for permanent and temporary accommodation within townsites and rural areas;
- Construction workforce accommodation camps for remote projects;
- Operational workforce accommodation for mining, oil and gas ventures; and
- The need to provide suitable housing diversity for a broad range of community needs.

### 3.1.2 TOWNSITE CHARACTER STATEMENTS AND GROWTH IMPLICATIONS

The Shire's populated places include four townships. Onslow is a coastal port town and is the oldest township in the Shire. Tom Price, Paraburdoo and Pannawonica each originated as closed, company-owned mining towns, with Tom Price and Paraburdoo transitioning to predominantly freehold townships through a 'normalisation' process. Tom Price, being the largest of the Shire's towns, is also local government's administrative centre.

The Strategy visually describes a spatial response to the preferred growth pattern through land use options as depicted on:

- **Plan 1 Shire Wide Strategy Plan;**
- **Plan 2 Onslow Town Site Strategy Plan;**
- **Plan 3 Tom Price Town Site Strategy Plan; and**
- **Plan 4 Paraburdoo Town Site Strategy Plan.**

State Agreements carry implications for zoning and compatible land use planning, either by restricting other development or use of burdened land, or by negating the requirement for Local Government development approval. Pannawonica remains a 'closed town' located on a Crown lease and subject to the *Iron Ore (Robe River) Agreement Act 1964* providing housing and other services to Rio Tinto Iron Ore employees and their families. As such, a town site strategy plan has not been prepared for Pannawonica.

It is understood that the majority of State Agreements are not shown on a map, making it difficult to identify affected land across the district. Ongoing collaboration between the Shire, major proponents and the State Government will ensure good governance and understanding of the legislative obligations of the State Agreements while showing due regard to Scheme's land use and development provisions.

Many Aboriginal people reside in Bindi Bindi, Wakathuni, Jundaru, Bellary Springs (Innawonga), Youngaleena Bunjima and Ngurrawaana.

The Local Planning Strategy considers the growth opportunities and issues for Onslow, Tom Price and Paraburdoo, and provides an overall Strategy Plan for the whole of the Shire. It identifies vacant and underdeveloped land with the potential to meet future land requirements to ensure sufficient supply in the event another mining cycle stimulates significant population growth. As Pannawonica is a closed town, population changes would be as directed by Rio Tinto in accordance with its State Agreement and as such, there is no strategy plan prepared for the Local Planning Strategy. The Shire's relative isolation from major manufacturing and supply centres significantly inflates construction costs, creating a challenging housing construction environment. This increases the importance of considering the total lifecycle cost for new development, ensuring that new housing is designed and constructed to suit existing climate, changing household demographics, the ability of different building to resist local conditions (particularly heat and salt), and respond to projected climate change.

#### 3.1.2.1 TOM PRICE TOWNSITE

Tom Price is located approximately 1,600 kilometres from Perth, and is situated on the edge of the Hamersley Ranges. Established in 1967, the town is a picturesque, modern and fully serviced town that has been designed to blend with the natural environment.

Tom Price is the administrative centre for the Shire and has been the location of the local government's administrative offices since 1990.

Tom Price presents a green and pleasant landscape setting which strongly contrasts with the scenic backdrop of hills with iron-rich colouration. Landscaping around homes and within the town generally incorporates lawn with a preference for Pilbara native shrubs and ground covers, whilst palm trees are also notable. It also incorporates tree species that have been proven to be suitable for high wind areas. The extensive landscaping assists with softening the appearance of the town and provides respite, shade and habitat. Landscaping provides visual relief to the surrounding aridity of the landscape, as well as providing dust suppression within the town.

Attractive places and spaces will enhance the liveability and attractiveness of the towns. Guidance through the preparation of local planning policies or scheme provisions should be investigated in order to promote sustainable design principles that are responsive to the Pilbara climate, to address the use of finite resources (such as water), and to enhance the liveability and wellbeing of residents.

The perimeter of the town is generally constrained due to the topographical and rocky characteristics of the land, and has been a consideration and addressed within the **Plan 3 Tom Price Town Site Strategy Plan**. Buildings and housing have high construction costs due to the isolated nature of Tom Price (and Paraburdoo and Pannawonica). Development needs to consider total life-cycle costs of housing, whilst having due regard to existing weather patterns and future climate change.

### Tom Price Town Centre

The town centre offers a range of services to support the local community including retail, commercial, business services, and areas for recreation.

The Tom Price town centre has experienced some revitalisation through upgrades for commercial/retail space and public domain improvements. This promotes the town centre as the commercial and community hub for the town. The amenity of the town centre is enhanced through its attractive landscaping and mature trees, seating, shade structures and playgrounds for children.

Recognising that population and isolation pose risks to business sustainability, Rio Tinto currently provides subsidies to tenancies, contributing to the strengthening and diversification of the retail options.

The Shire owns a 5,000m<sup>2</sup> lot in freehold title in the town centre, with this site proposed for a new Shire administration building. Construction of such a facility in this location would contribute to the sustainable growth of the town centre and this proposal should progress when funds are made available.

### Industry – Tom Price

Major mining projects in vicinity of Tom Price have driven growth and investment within the town. Such projects have included the Marandoo mine expansion, Solomon project and Brockman 4 expansion. Whilst most mining projects are now in operational phases with relatively smaller workforces, there remains a requirement for workforce accommodation to cater for peak employment numbers during future construction phases and shuts/maintenance periods.

There is a limited supply of additional industrial land available within Tom Price, and areas are identified on the **Plan 3 Tom Price Town Site Strategy Plan** and the Tom Price Issues and Opportunities Plan in Part 2 of the Local Planning Strategy.

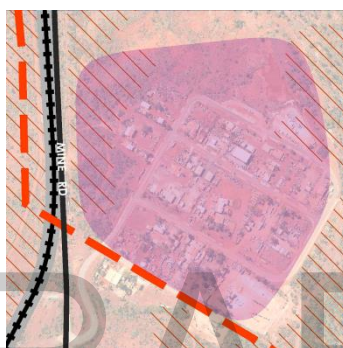
Tom Price's Mixed Business area remains constrained by landform and the railway line to the west. Some expansion has occurred within the last 5-6 years, with the Shire holding a development lease for a portion of Crown land adjacent to the existing 'Mixed Business' zone that is intended for subdivision and development. Future expansion areas may need to be considered in the context of their capability of having viable industrial businesses.

Rio Tinto holds a Crown Lease for land close to its Tom Price mining operation that is zoned 'Industry', sub-leasing lots to businesses and contractors engaged directly or indirectly on its mining operations.

One relatively unconstrained potential industrial development site is located on Nameless Valley Drive, approximately 1.5km north-west of the Tom Price Caravan Park. This land, described as Lot 41 on Plan 184619 is a Crown reserve (Reserve number 38467), created for 'Agricultural Research Station and Gravel'. The site's relatively large size (over 27 hectares), relatively close proximity to Tom Price, yet suitably removed from other sensitive land uses make this a suitable site for further investigation area to meet future industrial land supply needs.



Expansion opportunity adjacent to Tom Price's Mixed Business area, Doradeen Road



Rio Tinto Crown Lease on Lot 19 Mine Road, Plan 241873



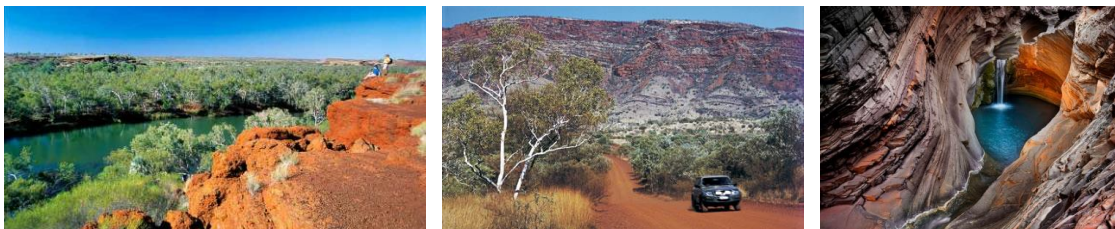
Lot 41 on Plan 184619 (Reserve 38467), Nameless Valley Drive

## Tourism – Tom Price

Tourism is a relatively small industry in Tom Price, providing opportunities for additional diversification and growth within the local economy. Tom Price benefits from its accessibility to nearby highways, Paraburdoo Airport, and its relative proximity to Karijini and Millstream Chichester National Parks. The local government is a strong advocate for the sealing of the Karratha to Tom Price road to improve connectivity, safety, and expansion of economic activities in the vicinity of the road. This road passes by Millstream Chichester National Park and Karijini National Park, so any improvements would have a positive impact on the tourism sector.

The town acts as a service centre for travellers purchasing supplies travelling through the region, particularly for those visiting Karijini National Park. The town can work further on attracting national park tourists and visitors to visit and/or stay longer in town. Tom Price has the potential to capitalise on its proximity to Karijini National Park; however, this requires significant investment in infrastructure and marketing/tourism awareness. Encouraging tourism will be a key factor in creating additional jobs and further diversifying and expanding the Shire's economy.

There are a range of short-stay accommodation available within the town, with the Tom Price caravan park located approximately 3km west of the townsite. Accommodation in Tom Price should be investigated for opportunities to improve the quality and range of options available, including making more mining workforce accommodation available to tourists when not required for workers. Other facilities that support caravans and motor homes can also enhance the appeal of the town for visitors and tourists including large parking bays, sewage drop points, and improved information about available services and facilities.



### Tom Price Social and Community Infrastructure

Tom Price is well serviced with sports and recreation facilities, some of which have experienced recent upgrades, increasing capacity and improving their functionality and use for the community. Upgrades have been completed to the Clem Thompson Memorial Oval and the Area W oval, as well as the completion of a new skate park.

The network of open space fulfils a dual function, providing overland flow paths for drainage purposes. Drainage provides an ongoing challenge in Tom Price due to the heavy summer rainfalls, the resistance to infiltration by the dry, inorganic soils and rock, and the topography of the town being in the lee of surrounding hills. Future subdivision and development will need to consider and cater for drainage.



### Tom Price Townsite Growth

Established as a company town, Rio Tinto remains the predominant landowner and developer in Tom Price. Employment-driven population growth has been the main contributing factor to more recent residential development proposals within the townsite, with recent subdivision and development of land identified through the 'Lazy Lands' project to the north of town, taking advantage of existing services and roads for new housing.

Previous forecasts cited in the *Regional HotSpots Land Supply Update* (WAPC 2015) indicated Tom Price's residential population could reach 4,750 by 2020. However, this is not reflected in population figures, putting population numbers closer to 3,500. Whilst this may be an aspirational growth target for Tom Price, it is recognised that the townsite has the capacity to accommodate infill housing and new residential development that would be supported by the town's existing facilities and services.



The *Regional HotSpots Land Supply Update* (WAPC 2015) considered areas suitable for urban infill and development, identifying sufficient undeveloped land in Tom Price to accommodate the housing required to support any new major mining project or expansionary demands. In addition to larger, undeveloped sites, there are currently more than 40 vacant residential lots available within the townsite for infill housing, with a number of these suitable for development as grouped or multiple dwellings. The Local Planning Strategy supports further investigations into the development capacity of these areas and has identified areas for infill and expansion both in the Issues and Opportunities Plan in Part 2, and the **Plan 3 Tom Price Town Site Strategy Plan**.



The FIFO model has created demand for workforce accommodation in town and within the vicinity of Tom Price. This provides for greater demand in purpose-built workforce accommodation, which would generally not be conducive to converting to family-type housing. This accommodation can in some circumstances be converted or utilised for tourist accommodation.

### 3.1.2.2 PARABURDOO TOWNSITE

Paraburdoo is located 80 kilometres south of Tom Price. It is a small town that accommodates the operational workforce for surrounding mines. Located within a 'saddle' between two drainage lines to the north and south, the town has remarkable views towards the nearby Hamersley Ranges, and provides a relatively flat landscape within town that is easy for residents to walk and cycle. The topography and features surrounding the town have influenced its spatial arrangement, and have been a consideration in the **Plan 4 Paraburdoo Town Site Strategy Plan**.

The local climate can be pleasant during winter days, although nights can be cold, whilst summer daytime temperatures average above 35 degrees. With good rainfall, the area can also experience springtime blooms of seasonal wildflowers that transform the landscape with colour, although this can lead to significantly increased fire fuel loads requiring careful and constant management.

#### Paraburdoo Town Centre

Retail and business services are located in the Paraburdoo Town Centre within a landscaped precinct that is well connected to the surrounding residential areas via a regular road grid. The Paraburdoo Primary School, hospital, police station, child care centre, and the new Community Hub are all centrally located, as is Rio Tinto's Rocklea Palms workforce accommodation facility.

Within the centre of town, the shopping centre contains a supermarket, pharmacy, news agency, café, hairdresser, post office, and other shops. The Shire's administration office and public library is also located within this complex, providing community space and services. Rio Tinto also has office space located near the Town Centre.

Should expansion of the Paraburdoo town centre become necessary, there is extensive managed parkland surrounding the existing buildings that could be developed while retaining sufficient public open space and recreational facilities.



### Industry – Paraburdoo

Paraburdoo is serviced by a small industrial area west of the townsite, with a smaller mixed business zone acting as a light industrial area immediately south of the town. Paraburdoo's industry activity is tied closely to the iron ore mining industry, with businesses depending heavily on work generated directly or indirectly from mining operations. The small industrial area is considered to be suitable for expansion should this be required as shown on the **Plan 4 Paraburdoo Town Site Strategy Plan**. However, as the surrounding land comprises a Crown lease held by Rio Tinto's leasehold, further expansion requires surrender of some land from this lease. Expansion in the short term is unlikely however, as vacant lots remain within the industrial area, suggesting that the town is sufficiently supplied with industrial land. It is recommended that the Shire work with Rio Tinto to investigate land capability and opportunities for expansion of the Paraburdoo Industry Area to ensure sufficient unencumbered land is available should this be required.

In the past, major mining projects in the vicinity have supported local industry whilst Rio Tinto is understood to subsidise some industrial rents in the Paraburdoo light industrial area. However, a number of businesses have since left the townsite due to the downturn in mining activity. Future expansion areas may need to be considered in the context of the town's capability of attracting and retaining viable industrial businesses.



### Tourism – Paraburdoo

Paraburdoo is a gateway to the national parks in the Shire. Paraburdoo Airport is strategically important as it is the main connection from Perth for visitors to gain access to Paraburdoo, Tom Price, Karijini National Park and Millstream Chichester National Park. Paraburdoo also provides outback, scenery and indigenous experiences.

Limited accommodation is available in town for tourists with some accommodation available at the Paraburdoo Inn. Rooms can occasionally become available within Rocklea Palms, and 10 caravan spaces are available at the Caravan Park on Mine Road. Future tourism accommodation could be developed in Paraburdoo that can also be used as workforce accommodation if the need arises.

## Paraburdoo Social and Community Infrastructure

Paraburdoo has a wide range of community facilities in the Town Centre including a primary school, swimming pool, bowling club, ovals, child care centre, skate park, oval, tennis, basketball and squash courts. A number of land parcels are also landscaped and reticulated for open space or public recreation.



The Paraburdoo Golf Course is located on the town's western edge, with the Paraburdoo BMX and Motor Cross tracks located north of the town accessible from Beasley Road and El Caballo Road.

A number of areas could be developed or enhanced for public open space in accordance with the purpose of their reserves, and these could assist in providing greater amenity to residents. These areas of undeveloped land are shown in Part 2 on the Issues and Opportunities Plan for Paraburdoo.

Located in the town centre, the Community Hub (CHUB) is currently under construction and will provide shared-use club facilities for sporting clubs, and an indoor recreation centre with two squash courts. Upgrades to the facilities within the Paraburdoo swimming pool have also under construction, improving this facility.

## Road Improvements

The beautification of entry roads and key neighbourhood roads will contribute to the amenity of the townsite, and landscaping can assist in passive wayfinding to help identify legible routes within the townsite. These have been shown in Part 2 on the Issues and Opportunities Plan for Paraburdoo.

## Paraburdoo Townsite Growth

Originating as a purpose-built mining company town, Paraburdoo's housing stock is generally reflective of the town's 47+ year mining legacy. With its heavy reliance on the mining industry, Paraburdoo will expand or contract along with global market movements and demand for resources. Accordingly, given the town's limited recent growth, there is little impetus to prepare any growth plans without a compelling, regionally significant reason to do so.

There are approximately 40 vacant lots available within the townsite for residential infill. Whilst some new housing is anticipated to replace some existing housing on vacant lots, no further residential expansion is currently proposed in town. In addition to the infill opportunities, there are a number of residential-zoned vacant superlots with existing road frontage, suitable for further residential subdivision or grouped housing development.

The Paraburdoo townsite has extensive areas of 'residential developed' zoned land that has been incrementally developed in response to demand, and these are reflected on the **Plan 4 Paraburdoo Town Site Strategy Plan**. Given the high costs of constructing new houses, this development trend would be expected to only occur in the future if housing demand warrants additional housing stock in the town.



Should Paraburdoo experience significant demand, sufficient serviced land with direct road frontage is already available for development. As such, the Local Planning Strategy has contemplated a number of areas of opportunity for infill housing and urban expansion to capitalise on existing road frontages and access to services, which are reflected on the Issues and Opportunities Plan – Paraburdoo in Part 2 of the Strategy. The Shire can advocate for long-term development opportunities to be investigated for residential purposes as well-integrated and functional components of the townsite.



### 3.1.2.3 ONSLOW TOWNSITE

The Old Onslow townsite was originally established in 1883 at the mouth of the Ashburton River. The original townsite was abandoned in 1925 following repeated cyclone damage as well as siltation and flooding issues. The town was relocated to Beadon Creek, where access to deeper water assisted in establishing a fleet of pearl luggers and a small port facility.

Onslow gained importance as a workforce town due to its proximity to the Ashburton North Strategic Industrial Area (ANSIA). Onslow's accessibility has been progressively enhanced through the opening of the new ring road (Onslow Road) and significant redevelopment of the Onslow Airport. The town has strongly held on to its identity and history following its relocation, with an emphasis on its organic development with a lesser emphasis from the impact of the large mining and petroleum industries that dominate to the south-west at ANSIA.

While it is a relatively small town, Onslow has an extensive range of community facilities as well as commercial, industrial and tourism operations. The Shire maintains a strong presence within Onslow with the development of new Council Chambers and Civic Offices on Second Avenue. The town has matured with notable tree-lined streets, foreshore improvements providing amenity along the coastline, and development of attractive areas of public open space.

The town is situated on Beadon Point close to the coastline, bringing with it a strong cultural connection with the water. The coastal relationship of the town is exemplified through the proximity of development, particularly near the sea wall at First Avenue (refer **Figure 4**). This proximity to the coast also brings with it some level of risk during severe weather events where storm surges and intermittent flooding from stormwater can lead to some areas being temporarily affected or inaccessible by water. The Shire has invested in drainage infrastructure to maintain town access and to reduce the time that water takes to drain. Looking to the future, the Shire will need to consider future modelled coastal processes, including sea level rise from climate change, which will pose some challenges for the townsite.

Bindi Bindi is a town-based Aboriginal community comprising 24 houses and an estimated population of 120<sup>1</sup>. Located on Second Avenue, Bindi Bindi is relatively separate from the overall townsite.



**Figure 4 Sunrise Beach (L); Landscaped land behind the Sea Wall, First Avenue (R)**

Wherever possible, new residential areas should integrate with existing urban development, building new connections to the road, drainage, and public open space network. New residential areas are depicted on the **Plan 2 Onslow Town Site Strategy Plan** and should take account of the well-connected movement network, have regard to the landscape and vegetation patterns in the locality, and maximise opportunities for climate-responsive design (i.e. shade, passive cooling, ventilation and access to sea breezes). New residential areas may be developed to offer a variety of housing options, potentially with a mix of detached houses of various sizes, residential buildings to accommodate a mix of residents, and terrace/town house dwellings to meet changing demographics.

### Onslow Town Centre

The Onslow town centre is oriented to Second Avenue and includes a number of tourism developments, commercial businesses and town services including the Shire of Ashburton's new Council Chambers and Civic Offices.

The town centre is subject to long-term coastal processes as described and discussed in the *Coastal Hazard Risk Management and Adaptation Plan for the Onslow Coast* (CHRMAP). The *Onslow Townsite Strategy* recommends that the commercial / civic centre be gradually transitioned outside the coastal hazard risk area, emphasising the need for the Shire to consider its position on this and other options for compliance with SPP 2.6 and its Guidelines.

### CHRMAP Recommendation Actions

The CHRMAP makes a number of recommendation actions for responding to and mitigating coastal process risks to the Onslow townsite, several of which are relevant to the scope of this Local Planning Strategy including:

#### **Avoid / Retreat Actions**

- R1. A detailed review of current zoning and land use permissibility within zones should be undertaken in light of the results of the risk assessment outcomes.

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<sup>1</sup> <http://regionalservicesreform.wa.gov.au/p/factsheets>

- R2. *Appendix 12 SCA in LPS 7 should be reviewed to reflect the outcomes of the CHRMAP process and, where relevant, include specific clauses for example, to ensure that actions are enforceable.*
- R3. *The existing Conservation, Recreation & Nature zoning should be maintained / extended along the coastline, seaward of 2110 set back line.*
- R4. *Move the Strategic Industry zone near jetty inland of 2110 set back line.*
- R5. *Prior to development of Lot 381 consider adjusting north east boundary to be inland on 2110 setback line.*
- R6. *Consideration should be given to amending the scheme to extend the local scheme reserve for the foreshore area beyond the 2110 coastal hazard line a sufficient distance to accommodate relocation of foreshore assets. Where this may impact on private land, consideration should include risk of claims arising.*
- R7. *The SCA should be extended inland to the 2110 coastal set back line along the length of coastline, from the southern extent of the study area to 4 Mile Creek.*
- R8. *The for the current 100 year planning horizon the SCA extent should be should be defined by the 4.5 m AHD contour.*
- R10. *Review of the CHRMAP every five years is to include a review of the SCA extent and relevant provisions including Appendix 12 of TPS 7 [and the Local Planning Strategy, where appropriate].*
- R12. *Identify areas within the SCA and study area where avoidance of development altogether is the most advisable strategy.*
- R14. *Intensification of development at the Bindi Bindi community should not be permitted. Renewal of existing infrastructure should only be considered with appropriate flood flood-resistant design.*
- R15. *No new development should be contemplated within the defined 2110 setback other than low impact, (relatively) low value and/or removable structures.*
- R16. *Applications in areas identified as being at risk from coastal processes should consider the predicted lifespan of the proposed development and its potential impact on other land during that lifetime. Temporary land uses that can be removed before or when a nominated trigger is reached might be considered.*
- R17. *No further subdivision of land within the 2110 setback should be contemplated, nor further intensification of existing development.*
- R18. *Planning should guide the evolution or migration of the town to less hazardous areas, from a flooding and coastal erosion perspective.*
- R19. *It is recommended that the Shire adopt a policy for relocation of public and Shire owned assets from within the SCA at end of their lifecycle wherever possible, and that the Shire's Asset Management Plan be updated to reflect the relocation policy.*
- R21. *Consideration should also be given to the long term possibility of relocating the Bindi Bindi community to higher ground.*

#### **Accommodate Actions**

- R26. *A detailed review of current zoning within the SCA and land use permissibility within zones is recommended.*

R30. It is recommended that design guidelines be developed to specifically address measures for protection from inundation.

Having regard to the SPP 2.6 hierarchy of risk adaptation and mitigation options (Avoid, Retreat, Accommodation and Protect), it is important to determine the long-term future of the Town Centre. **Plan 2 Onslow Town Site Strategy Plan** outlines possible locations to transition town centre uses and services, should they become affected by future coastal processes and/or modelled sea level rise. Further investigation and detailed design and community/stakeholder engagement would be necessary to determine the most appropriate long-term solution for addressing climate change and coastal processes on the town centre. It is likely that the long-term considerations of the townsite are beyond the lifespan of this *Local Planning Strategy*. However, it also needs to be considered now to avoid deferring a more costly and significant issue to future generations.

## Industry – Onslow

### Beadon Creek Boat Harbour

Beadon Creek Boat Harbour is strategically important as it contributes to safe mooring for boats associated with marine services, fishing and tourism. The Beadon Creek Boat Harbour is the gateway to the many islands off the Onslow coast and an important supply base supporting offshore oil and gas operations. A new marine support base is currently under construction that will significantly increase Onslow's capacity and importance as an offshore support facility.

The Department of Transport manages the Beadon Creek waterfront as a Crown reserve, leasing land within the reserve to businesses for a variety of port-related industry. Whilst the overall site is not fully developed, the Beadon Creek Boat Harbour will provide for some additional industrial land. However, the water body and flood plain present physical barriers constraining any significant expansion of this area. The close proximity of a tourist accommodation facility also requires careful consideration when planning for any intensification of the harbour facility.

The Department of Transport prepared a *Land Use Framework* as the basis for future land use and development within the harbour and whilst Council has not considered this planning framework for any official status, it is a valuable assessment tool given due regard when the Shire assesses applications for development approval.



### Onslow Salt

The *Onslow Solar Salt Agreement Act 1992* regulates Onslow Salt's operations and future expansion. Specifically, this State Agreement ensures that mining leases and lands the subject of any Crown Grant lease, licence, or easement granted to Onslow Salt be zoned for use or otherwise protected, so that Onslow Salt can undertake and carry out its activities in accordance with the State Agreement. In practical terms, this means that Onslow Salt's development and land use activities are exempt from local government planning control where they relate to actions pursuant to the Agreement.



The operations of Onslow Salt are taken into account by the ANSIA, which also has its buffers in place via the Improvement Scheme No. 1. The long-term growth of the Onslow townsite will have to consider the impacts of growth on the operations of Onslow Salt.



### General Industry

Onslow's General Industry Area is bound by Beadon Creek Road and McAullay Road. The General Industry Area is limited in its ability to expand due to proximity of short-stay accommodation to the north, Beadon Creek to the east, residential development to the west, and native title, drainage, and waterways to the south.

Should an agreement with the native title holders result in these rights and interests being extinguished, a limited eastern expansion of the Onslow General Industry Area towards Beadon Creek Boat Harbour may be possible, with potential road extensions to Cornish Way and Shanks Road. Opportunities for industry to expand southwards along the eastern side of McAullay Road can be investigated, depending on drainage studies and the ability to fill land to achieve suitable finished floor levels.

An area of undeveloped land within the Shire's Common Reserve (Reserve 19291) is zoned 'Industry' on the LPS 7 scheme maps. This zoned land could be investigated, subject to the management order, for future industrial development. It would be preferable to transition general industry uses from the existing General Industry Area to the 'Industry' zoned land as general industry uses would then be further away from sensitive land uses. The Shire's Common Reserve presents an opportunity to develop new industry with sufficient buffers from residential areas. The Onslow General Industry Area on Beadon Creek Road can be investigated for transitioning to a light or service industry area given its proximity to other sensitive land uses.

### Onslow Airport Mixed Business Precinct

The Shire owns the land associated with the Onslow Airport Mixed Business Precinct in freehold title. This land is being offered for sale or lease. This land, comprising 34 hectares, will provide for a range of mixed business, light and service industries.

The Shire is currently in the process of reviewing LPS 7 to include the model scheme provisions introduced in the *Planning and Development (Local Planning Schemes) Regulations 2015*. The Shire intends to rezone the Onslow Airport Mixed Business Precinct to 'Light Industry' in line with the zone and objectives contained in the *Regulations*. It is not anticipated that land use permissibility will significantly change from what currently is permissible on the land.

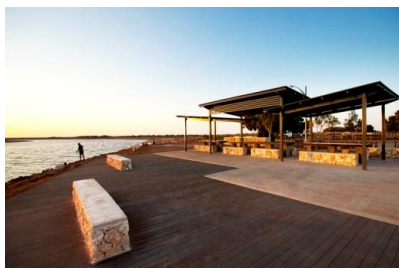
Further expansion to the north and south of the existing Onslow Airport Mixed Business Precinct could be considered and investigated further, should further land be necessary to meet future demand for light industry developments. Other areas for investigation could be land fronting McAullay Road, and land within the WWTP buffer (between Onslow Road and McAullay Road) for mixed business, light and service industry.



## Tourism – Onslow

Onslow is a hub for tourism that has a coastal or island focus, with industrial tourism as a growing sector. A range of tourism activities are within proximity to Onslow, including the Old Onslow townsite, Four Mile Creek and Onslow Salt industrial-style tourism experiences, the Ashburton River, termite mounds, Mackerel Islands (operators of Thevenard Island and Direction Island), Monte Bello Islands, Sunrise, Sunset and Four Mile beaches. Onslow has two caravan parks with units and caravans for hire, as well as hotels and other short-stay accommodation options.

Swimming, snorkelling and fishing are all tourist activities that are easily accessible from Onslow. Tourism is an important sector to investigate and identify what activities, attractions, and accommodation could be developed within and leveraged from Onslow. Access to Onslow is enhanced by the recently expanded Onslow Airport offering daily flights from Perth, and has road connections to North West Coastal Highway, through to other regional cities and towns. Longer term, it will be important to ensure sufficient seats on flights to/from Onslow can be retained for tourists.



## Onslow Social and Community Infrastructure

Onslow has a number of popular recreational facilities that include the community garden, oval, swimming pool and the beach foreshore areas. A new skate park and basketball court have also been completed. The Barrarda Estate includes areas of public open space, providing walkable access to all houses, and creating amenity and a sense of place.



## Road Improvements

Improvements to the road network into Onslow have provided a hierarchical focus for tourism and visitor traffic to travel more directly into town along Onslow Road. McAullay Road is intended to take freight and other heavier traffic for the General Industrial Area, Beadon Creek Boat Harbour and the Onslow Airport Mixed Business Precinct. Other road improvements in town may be undertaken as a result of resolving internal legibility issues or for flood/drainage mitigation.

## Onslow Townsite Growth

The previous planning goal was to ensure sufficient developable land be available to facilitate a town that can accommodate up to 3,500 people. Given the revised estimates is that the population should stabilise around 950-1,000 people through the medium term, and assuming that no new major projects commence within the Strategy's timeframe, this previous population growth forecast is unlikely to occur. It should be noted that the accommodation capacity of 3,500 people was considered in the context of a forecasted population of 12,000 people residing in the Shire in 2013.



The *Onslow Townsite Expansion Development Plan* identified areas that were potentially suitable for urban development but required more detailed planning. Under the base case projections assumed in this Strategy, 68 out of 100 additional dwellings required have already been constructed within the Barrarda Estate.

Urban development and growth within Onslow will need to have regard to coastal processes and hazards, and physical, infrastructure and industrial considerations. Having regard to the CHRMAP, future urban infill and development will consider coastal processes, climate change and the impacts on the existing town centre and urban development in low lying areas from flood events, tidal inundation and sea level rise.



The gazettal of the *ANSIA Improvement Scheme No. 1* considered the accommodation of construction and operational workforce within the ANSIA. The latest planning decision relating to the ANSIA permits Chevron Australia to house the Wheatstone operational workforce in the existing construction camp until 2032. This decision will significantly reduce pressure for housing demand in Onslow and is a lost opportunity for town-based population growth. Notwithstanding, this Strategy will not prejudice the potential for the Wheatstone workforce to eventually be relocated into Onslow, and accordingly the Strategy identifies sufficient land for additional housing demand.

LandCorp's Barrarda Estate has contributed to housing stock in town. The decision not to construct the Wheatstone Operations Accommodation Village in the Barrarda Estate, and the multiplier effect this would have created in Onslow will be delayed at least 15 years, at which time the State's planning approval for the accommodation village in the ANSIA will expire.

The Shire will continue to advocate for long-term development in the townsite for workforce accommodation as an integrated part of the urban fabric. The Local Planning Strategy recognises that future industry upturns could again trigger a rise in housing demand. As a result, the townsite will remain capable of bringing land online for urban infill or urban expansion, should it be warranted.

#### 3.1.2.4 PANNAWONICA TOWNSITE

Gazetted in 1972 as a closed town, Pannawonica's growth is dependent upon Rio Tinto's workforce requirements. In the 2016 Census, Pannawonica had a population of 695 people and 305 dwellings. This represents an increase from the 2011 Census, where Pannawonica had a population of 651 and 269 private dwellings. It is also understood the population can reach towards 800 people. Whilst it remains a closed town, Pannawonica is exempt from the Shire of Ashburton's planning control, and therefore its direction of growth is dependent upon Rio Tinto's requirements.

##### Pannawonica Townsite Growth

As a means of extending the lifespan of dwellings, Rio Tinto has previously undertaken a programme of refurbishments to ensure a modernised range of accommodation is available to workforce and families.

The residents of Pannawonica are served by a primary school, police service, medical centre, day-care centre, post office, library, supermarket, milk bar, tavern and hotel, sportsmen's club, bank agencies, service station swimming pool and an open-air cinema.

The Strategy recognises that, whilst outside of the Shire's planning control, Pannawonica is an important townsite within the Pilbara region and should be carefully considered by Rio Tinto for long-term viability and sustainable growth.

#### 3.1.3 ABORIGINAL SETTLEMENTS

The Wakathuni, Youngaleena Bunjima, Bellary Springs (Innawonga) and Ngurrawaana communities are currently being rezoned to 'Settlement' under LPS 7 and are considered to be Aboriginal Settlements under SPP 3.2. Wakathuni, Youngaleena Bunjima, Bellary Springs (Innawonga) and Ngurrawaana are subject to the preparation of Layout Plans by the Department of Planning, Lands and Heritage.

The SPP 3.2 does not consider a number of communities (including Wirrlu Murra, Bindi Bindi, Jundaru, Yalathala and Westside) to be Aboriginal Settlements and it is understood that the Department of Planning, Lands and Heritage will not be preparing Layout Plans or applying a 'Settlement' zone to these.



At a State level there is recognition of the challenges faced by remote Aboriginal communities. State government agencies remain responsible for delivering existing services. It will remain important to work with stakeholders, service providers and State Government agencies to ensure appropriate services are adequately planned and delivered for Aboriginal Settlements.

The Shire is an advocate for the State government and service providers to deliver standards of living and services to the Aboriginal Settlements that are comparable to what's experienced in the towns. The appropriate identification of facilities will be necessary for providing appropriate facilities for health, education, childcare, community meeting places, sporting and recreation. Waste management in particular can be an ongoing issue and requires appropriate siting of wastewater and solid waste facilities.

### 3.1.4 WORKFORCE ACCOMMODATION

The Shire acknowledges the WAPC's *Position Statement – Workforce Accommodation*, dated January 2018, and supports the fundamental position that, wherever possible, workers are housed in established towns where they are able to both contribute to and benefit from local social and economic opportunities. Accommodating workers in the towns is critical to improving their viability, vitality, and resilience, while addressing many of the mental health issues identified in the West Australian Parliament's Education and Health Standing Committee's discussion Paper on FIFO mental health (2014). The Shire also acknowledges that s.120 of the *Mining Act 1978* limits the Shire's ability in determining land use and development associated with mining operations, including workforce accommodation.

Accordingly, for the purpose of this Strategy, FIFO workforce types are broken down into two main categories: construction and operational. These categories correspond to the construction and production phases of resource projects, with the most notable difference being the workforce size and length of employment.

The Shire has recently experienced the construction workforce requirements for a single project exceeding 7,000 workers, with the corresponding operational workforce requiring approximately 300 workers. The construction phase for such projects will typically last from 2-5 years, with individual employees often engaged for short periods of between 6 and 12 months. Examples of projects with construction phases (and workforce requirements) are railways, mines, LNG facilities and major infrastructure (roads, power, water, public works).

In contrast, operational workforces are relatively smaller than construction workforces, and are required for the lifetime of the project, tending to be employed on a permanent basis.

In addition to the construction and operational workers, 'Specialist' workforces may also be periodically engaged during the operational phase of projects, for example, for management, technical expertise or plant maintenance ('shut-down') purposes. Similar to the construction workforce, this specialist workforce is often large (up to or in excess of 1000 workers for a major maintenance project) and only engaged for a short period of time, often only days or weeks.

While the Shire generally does not support the FIFO employment model, it does acknowledge the need to engage construction and specialist workers on a temporary basis for large and/or highly technical construction and maintenance projects, with these workers being housed in purpose-built facilities that may be remote from townsites and suited for short-term accommodation. For development within reasonable proximity to an established town, it is the Shire's preference that associated accommodation facilities be constructed in or in close proximity to the town, provided the camps can be appropriately located and screened and that workers be managed so as to not overwhelm existing services and facilities. This will encourage these workers to make use of existing social, recreational, and retail facilities. It is accepted that for practical and safety reasons, workers engaged in remote areas (e.g. greater than 50 km travel from town), are more appropriately located closer to their workplace.

With regard to operational workers however, the Shire strongly opposes the FIFO model and the housing of permanently employed staff in short-term accommodation, preferring that such workers be employed on a residential basis, contributing to the growth and development of towns within the Shire.

Accordingly, whilst continuing to acknowledge legislative confines, the Shire will remain a strong advocate for resource companies to pursue residential development opportunities for operational workforce accommodation in Tom Price, Paraburdoo and Onslow. Conditional support of construction workforce accommodation in townsites may be considered for specific projects, with such accommodation constructed and operated to a high standard. In this regard, Shire support will be contingent on written commitments from resource companies that construction workforce accommodation will not convert to 'operational camps'.

It is acknowledged that the mining and oil and gas sectors have in place a range of harm minimisation strategies and support in place for their workforces, but that these are not standardised across the industry sectors and the Shire sees this land use planning strategy as an integral component to improving the health impacts created by stressors of working in the resource industries while also addressing the Shire's strategic goals as described in its *Strategic Community Plan 2017 – 2027*.

#### 3.1.4.1 WORKFORCE ACCOMMODATION – ONSLOW AND ANSIA

Chevron Australia's construction and operational workforce reside in its Wheatstone Construction Village located in the ANSIA, with the Western Australian Planning Commission recently approving use of the Village until 2032. Third parties are prohibited from accessing this accommodation facility, although there is land available in the Improvement Scheme No. 1 Area for construction of additional construction workforce accommodation. However, it is considered unlikely that additional workforce accommodation would be constructed during the term of this Strategy.

As the Wheatstone project transitions from a construction to an operational phase, the required workforce will decline significantly. With the recent development approval from the WAPC for the operational workforce to reside in the existing construction camp, there is no identified short or medium-term use for the nine-hectare site in the Barrarda Estate initially created as the site for the Wheatstone Operations Accommodation Village.

The Shire advocates for the provision of higher quality, more permanent accommodation within the Onslow townsite to take in workforce engaged in major construction or maintenance projects. A number of privately owned accommodation facilities within Onslow are currently utilised for this purpose. The Shire is a strong advocate for workforce being in town, and this can be encouraged at a company level through the delivery of workforce accommodation in Onslow that is of a higher quality than in the campsites.

As noted, there is no apparent need for Chevron Australia's site at this time. It is therefore important to consider scenarios for the short and long-term development of Chevron Australia's Lot 4001 as a well-integrated component of the townsite. Development that would prejudice the development of the land for workforce accommodation beyond Chevron Australia's 15-year approval to utilise the ANSIA facility for operational workforce should not be considered.

## 3.2 ECONOMIC PROSPERITY

### Vision Statement

The Shire of Ashburton will enjoy a diversified economy that takes advantage of transformational opportunities. The towns will benefit from a range of retail and commercial businesses to meet existing and future demand. In addition, the Shire will continue to be known for its significant iron ore and oil and gas resources which will continue to be significant contributors to the local, state, and national GDP.

### Goal

*Have a diverse local economy that promotes and supports growth in a range of sectors including mining, oil and gas, tourism, industry, retail and commerce, agriculture, aquaculture, and small business.*

### Economic Prosperity

Key objectives being considered through this Strategy are as follows:

- Ensure heavy and general industrial development is appropriately directed towards the Ashburton North Strategic Industrial Area, and general industry zoned areas in proximity to the Onslow, Tom Price and Paraburdoo townsites.
- Support the appropriate diversification of the local economy having regards to transformational opportunities in the sectors of tourism, industry, retail and business, and agricultural and aquaculture pursuits within the rural and rangeland areas.
- Retail and commercial development within Tom Price and Paraburdoo remain focused on the existing town centres to meet existing and future demand.
- Further investigations are required to consider the long-term transition of the Onslow town centre and its services and facilities to areas outside the coastal hazard risk area.

### 3.2.1 TOURISM AND SHORT-STAY ACCOMMODATION

#### Attractions and Amenities

The North West is recognised for its outback, scenery and indigenous experiences. In the economic context, tourism is a very small contributor to current economic activity, however its value can be sustainable over time and opportunities are available for its increased contribution. Increased promotion of tourist attractions, particularly for Karijini National Park and other natural assets, would assist in drawing visitors to the Shire.

Aboriginal culture, heritage and experiences are significant tourism assets and engagement with traditional owners should be considered to ensure that cultural heritage values are not lost. Arts and cultural programs with the local Indigenous communities would work to further attract national and international recognition.

The Pilbara Regional Council has recently completed a feasibility study into developing mountain biking trails through and close to Tom Price.

A number of pastoral leaseholders are developing farm-stay and camping elements that are contributing to the types of authentic tourism experiences available in the region. An example is the recently completed 'camping with custodians' facility at Peedamulla Station.

In Onslow, diversification of the visitor experience depends on a broad range of tourism products related to islands, fishing tourism, national parks, indigenous art and culture, and the increasing market potential for industrial tourism. There are opportunities to leverage from nature based tourism and heritage and Aboriginal tourism development. Management and planning of sustainable tourism activities such as camping, boating, swimming, fishing, and 4WDing, and development around sensitive coastal environments such as beaches, river mouths (Beadon Creek), and seagrass meadows, will be critical with population and industry growth, development of tourism, and townsite expansion.

## Accommodation

Onslow accommodation is becoming more accessible as occupancy rates normalise, due to lower accommodation demand from construction workforce. As accommodation becomes more affordable, it will be more appealing or accessible for greater number of visitors. Accommodation options in Onslow include self-contained units and motel rooms, two caravan parks, and a free camping facility at the mouth of the Ashburton River.



Tom Price is acknowledged as a tourism destination for visitors to Karijini National Park and there is an opportunity for in-town mining accommodation to transition to short-stay accommodation if there is demand (i.e. Windawarri Lodge, Marandoo Annex) or additional land to the north of Karijini Lodge could be considered for expansion. Accommodation in Paraburdoo is currently limited, with some options available at the caravan park and the Paraburdoo Inn.

New tourism accommodation would need to be considered in the context of the broadened tourism experiences and products that would have a competitive advantage within the Shire. It would be important, from a land use and planning perspective, to consider mechanisms such as flexible utilisation between short stay accommodation, workforce accommodation, and permanent residential development. Other incentives may include the provision of land for iconic tourism use at reduced or no cost and government underwriting of portions of some strategic tourism developments.

## Accessibility

The Shire has the ability to capitalise on its airport infrastructure. Some seats are available on flights from Perth to Onslow and Paraburdoo. Broadly, the airports in the Pilbara and Kimberley would struggle to attract sufficient passenger numbers to warrant international flight connections, thus, the emphasis would remain on flights from Perth and potentially between some of the regional airports.

Tom Price has no airport, with access to Paraburdoo Airport via a private bus service provided for the mining industry but made available as a fee-paying service to the public. The bus service meets each flight into or out of Paraburdoo Airport and takes approximately 45 minutes.

A helicopter tour business has recently commenced operation in Tom Price, providing another means for exploring and experiencing the local area.

Mackerel Islands Resort (Direction Island and Thevenard Island) and Montebello Islands are accessible from Beadon Creek Boat Harbour (and proposed marina). Once the proposed marina expansions are completed, it will open up additional benefits for increasing access to islands and the coastline for tourism and recreation.

The Shire of Ashburton advocates sealing of the Karratha - Tom Price Road. The improvement and sealing of the Karratha - Tom Price Road is considered an ideal opportunity to generate substantial economic benefits for the Pilbara and the State through both increased tourism and improved freight traffic movement. This route will provide for a more legible connection between Karratha and Tom Price. Further, the Shire strongly advocates the improvement of the access to Mount Augustus.

### Awareness

The economic contribution of tourism is affected by seasonality of visitation, geographical isolation, and the (real or perceived) shortage of adequate accommodation and facilities.

Tourism within the region is an under-utilised resource that has the ability to provide many economic benefits, particularly for the major towns. The promotion of tourism in the region requires significant investment in the marketing of tourism opportunities, upgrading of infrastructure and consideration of accommodation options. A tourism strategy would need to focus on product development, marketing and promotions, and training and support. The groups to target would be older couples, backpackers, international couples, nature-based visitors and cruise ship passengers.

## 3.2.2 INDUSTRY

As outlined in greater detail in Part 2, industry and particularly mining and oil and gas industry sectors, are the predominant economic generators within the Shire. Industrial development has also been described in earlier detail for each townsite. The larger oil and gas and mining proponents are generally addressed through State Agreements.

LandCorp and the WAPC are responsible for administering the ANSIA. Land is available for heavy industry and general industry. Land remains available in ANSIA for complementary industrial development. The Shire will support heavy industry and general industry that are compatible with existing uses being located within the ANSIA, where buffers are already taken into consideration.

## 3.2.3 RETAIL AND COMMERCIAL CENTRES

The Shire was reported in 2015 to have the lowest number of advertised commercial leases, and one of the highest advertised retail and office average annual lease costs in Western Australia.

Future population growth can increase demand for retail and bulky goods trade, although Karratha is likely to absorb much of this demand given the demonstrated willingness of residents to travel to this centre for major shopping. The overall distribution of additional retail and bulky good floorspace would be dependent upon the population growth experienced within the individual town sites. The Strategy needs to identify appropriate land available for future retail and commercial development, to predict and provide for forecasted population growth.

## 3.2.4 RURAL AND RANGELANDS

The rural and rangelands areas of the Shire are under a range of tenure arrangements, whether unallocated Crown Land, pastoral leases, mining tenements and leases, or leases for Aboriginal communities. The Shire's rural and rangeland areas are home to the Millstream Chichester and Karijini National Parks, Barrow Island 'A Class' Nature Reserve and an extensive number of Conservation Parks and Nature Reserves.

The rangeland and rural areas of the Shire are characterised by their red earth ranges, the great Pilbara rivers that flow across the landscape, the range of flora and fauna, and several land uses including pastoralism, agriculture, tourism, mining and indigenous activities.

The untapped value of the rangeland and rural areas will progressively be unlocked through opportunities in appropriate natural resource management, future protection of remnant vegetation and areas of significant value, and the emergence of new economic sectors.

Whilst mining and petroleum will dominate for decades to come, the Shire's rangelands and rural areas will continue to deliver long-term positive and sustainable economic opportunities in pastoralism, agriculture, tourism, aquaculture, and traditional land and cultural practices.

## Pastoralism

Pastoral activities are likely to continue throughout the majority of the Shire. There appears to be a correlation between the worst areas of degradation and erosion, and the most valuable pasture lands. Pastoral activities have an impact on native vegetation, flora and fauna, erosion and other factors that need to be adequately addressed and managed by pastoral landowners. Pastoralism can be ecologically sustainable with appropriate management in place.

The cattle industry sector has been identified as a transformational economic opportunity. A number of town planning considerations can be taken into account for the benefit of encouraging further pastoral and agricultural pursuits within the Shire, including:

- Consideration of natural resource management and land management practices to minimise negative impacts and contribute towards sustainable pastoralism.
- Protection and maintenance of remnant vegetation and areas with significant values.
- Directing agricultural pursuits so that they minimise impacts such as clearing, bushfire management, uncontrolled access, weeds, pests and feral animals.



## Agriculture

The Pilbara climate is in a similar zone to other countries that produce and export high value products. Asia and the Middle East are attractive markets that demand products capable of being grown in the Pilbara. 22 countries are identified as 'high potential' target markets for new agricultural products.

Legislation currently allows for irrigation of a range of crops on a pastoral lease. A number of irrigated agricultural developments could be possible on a medium-to-large scale. Success will depend on products that are robust, mechanically harvested, can thrive in the heat, and can be achieved at a globally competitive scale.

Expansion of projects like Rio Tinto's Hamersley Agricultural Project may prove to be viable opportunities. Mine-sourced dewater surplus can be reinjected for reuse for agricultural and other purposes.



The Pilbara Hinterland Agricultural Development Initiative (PHADI) provides for the future of irrigated agricultural development, through Royalties for Regions, by supporting public and private sector investment decisions for new irrigated agricultural developments. There are opportunities for investigating the capability and suitability for irrigated agriculture. A wide range of agricultural products have been identified, some which have proven experience and others which will require new skills, new investment, new systems and capital.

The Shire is an advocate towards investigations into export market opportunities for crops/food products that could be grown in the Pilbara. It will be important to collaborate with the Pilbara Development Commission, government agencies, leaseholders, Traditional Owners and the pastoral industry for delivering projects and other outcomes, through demonstration and prospective projects. It will be important to ensure intensive agricultural proposals are appropriate to the sustainable capability of the land.

### Aquaculture

Aquaculture is an emergent industry sector. It requires development of the sector to a level where it is of a sustainable scale to be economically viable and internationally competitive. Aquaculture projects (R&D etc) present opportunities that can contribute towards investment and ultimately, employment. The Shire is an advocate for investigations into market opportunities for aquaculture products. A number of investigations have already been undertaken through the Pilbara Development Commission, including through its inaugural Aquaculture WA State Forum held in 2016.

The emergence of new sectors such as aquaculture may require particular consideration of the industry's land requirements, environmental management, and export logistics. Onshore areas within 10km of Onslow near McCann Well, and some land in Tom Price has previously been identified to be of interest. Thevenard Island was identified for possible offshore/nearshore aquaculture.

Aquaculture requirements warrant appropriate risk management to address bio-security, water use, and wastewater management.

### 3.3 UNIQUE HERITAGE AND ENVIRONMENT

#### Vision Statement

**The Shire of Ashburton will, by necessity, be a leader in climate adaptation, environmental protection and conservation, and will be known for its commitment to hold onto its natural, Aboriginal and European heritage.**

#### Goal

*Protect and maintain environmental, heritage and natural values now and into the future.*

*Proactively plan for, manage and mitigate against environmental hazards and other risks that have the potential impact on the health of the community and on the built and natural environment.*

#### Unique Heritage and Environment

Key objectives being considered through this Strategy are as follows:

- To ensure that environmental, heritage and natural values are protected and maintained into the future.
- To ensure that the physical and natural environment supports the needs of the community, in terms of parks, recreation, conservation and natural areas.
- To support the ongoing protection and conservation of terrestrial, marine and aquatic biodiversity.
- To ensure that the towns and Aboriginal settlements within the Shire are designed and planned to address hazards and risks.
- To ensure that matters of natural, Aboriginal and European heritage value are protected, maintained and celebrated.

#### 3.3.1 HERITAGE

##### 3.3.1.1 ABORIGINAL, EUROPEAN AND NATURAL HERITAGE

A number of Aboriginal, European and natural heritage sites are identified on various heritage lists. Opportunities exist to protect and promote both Aboriginal and European cultural heritage through joint management arrangements and tourism opportunities with traditional owners, and optimise opportunities for Indigenous training, employment and businesses. It would be appropriate to review and update the Municipal Heritage Inventory to be used as the Heritage list in the Scheme.

A number of Aboriginal, European and natural heritage sites are identified on various heritage lists (national, state and local) that are identified in the Environmental Profile (refer **Appendix A** – section 2.8 of the Environmental Profile). Protection of heritage is an ongoing commitment at all levels of government.

##### 3.3.1.2 CULTURAL HERITAGE

A number of Registered Aboriginal Heritage Sites are located within the Shire (refer **Appendix A** – section 2.8 of the Environmental Profile).



Whilst heritage is primarily managed through State and Commonwealth legislation, opportunities exist to protect and promote both Aboriginal and European cultural heritage through joint management arrangements and tourism opportunities with Traditional Owners. The Shire is an advocate for opportunities in Indigenous training, employment and businesses. This should include effective engagement with the appropriate Traditional Owners depending on the location of heritage sites and business opportunities, to support protection of cultural values.

There is an opportunity for working with Traditional Owners as part of protecting Aboriginal heritage and Aboriginal culture. This can include involvement of Traditional Owners in a range of cultural, eco-tourism and environmental management and cultural/eco-tourism. The Pilbara has many opportunities which should be supported and developed.



### 3.3.2 COASTAL PROCESSES AND FLOODPLAINS

Coastal recreational activity should be considered in the context of its cumulative impacts on sensitive environments, in terms of minimising impacts. Expansion of tourism, commercial fishing, aquaculture and resource industry activity will increase pressure on sensitive and productive coastal marine environments which provide habitats and breeding grounds (seagrass meadows, turtles nesting on beaches, river mouths/intertidal mud flats) for marine life. Recreational activity (camping, boating, fishing, swimming and 4WDing) around sensitive coastal environments associated with population growth and industry development will also impact upon local biodiversity and environmental values.

Sea level rise and coastal vulnerability will increase along the coastline in the near future. Management of existing infrastructure and planning future development will require consideration of vertical allowances and setback distances.

Increases in rainfall event intensity may result in greater localised flooding and increased pressure on stormwater systems. Stormwater systems should be designed with contingency for increased rainfall intensity.

### 3.3.3 CLIMATE CHANGE

Increases in temperature and extreme weather events are projected to occur as a result of climate change. This would have the potential to impact on the health of the environment and the community, as well as the maintenance of public lands and capacity of infrastructure systems including those managed by the Shire.

Increases in extreme weather events, particularly bushfires as well as rainfall/tropical cyclones, may require development to be located away from areas of risk and/or improved emergency management responses and plans. Infrastructure would need to be designed adequately to manage extreme weather conditions.

### 3.3.4 ACID SULPHATE SOILS

Declining soil and land quality can occur as a result of activity where acid sulphate soils are disturbed. This leads to the release of acid and heavy metals which can cause significant harm to the environment and infrastructure. Appropriate management of acid sulphate soils, particularly in areas of high risk where changes in groundwater are likely or mining is proposed, is required, consistent with current best practice.

### 3.3.5 BUSH FIRE RISK

The majority of the Shire is indicated as being located within a Bush Fire Prone Area as designated by the Fire and Emergency Services (FES) Commissioner. A Bushfire Hazard Level assessment (BHL) has been prepared in consultation with the Department of Planning, Lands and Heritage and the Department of Fire and Emergency Services (refer Appendix C in Part 2). It was prepared to focus on areas within the vicinity of the Onslow, Tom Price and Paraburdoo townsites, in order to identify infill and expansion areas that can be developed where there is low or moderate bushfire risk.

Some clearing of land would be required for areas identified for urban expansion. No biodiversity issues have been identified that would preclude clearing land for urban expansion, thereby this would remove much of the bushfire hazard in these locations. The existing and proposed road network, as shown in Part 2 of the Local Planning Strategy can provide accessibility between townsites and can provide accessibility from peripheral development exposed to residual bushfire risk, to areas of low bushfire hazard and exposure within urban areas.

It is noted that the Shire has a separate emergency management plan in place, that considers and plans for necessary actions and investment to manage the risk of bushfire to its community, including strategic emergency evacuation plans. Other management responses may also be required. Dust generated from bushfires should be monitored and management responses developed to inform the public regarding health risks during bushfire events. Management of fuel loads without exceeding threshold air quality standards should also be considered through the development of an Air Quality Management Plan, and a program of regular fuel reduction which minimises air quality impacts on townsites and sensitive environments, on advice from the Bushfire and Natural Hazards Cooperative Research Centre.

### 3.3.6 CONSERVATION AREAS

The Shire is well known for its impressive terrestrial, marine and aquatic biodiversity. The level of reservation (in terms of percentage of area) within the Shire of Ashburton is greater than the rest of the Pilbara region. A significant proportion of the Shire's biodiversity is protected in a number of conservation areas. A number of new reserves are proposed, including Mulgalands Conservation Park and West Hamersley Range Conservation Park. The proposed new additions within the conservation areas may be supported by the Shire of Ashburton.

Whilst the management of public access and visitor numbers is through the Department of Biodiversity Conservation and Attractions, the Shire can also contribute some local support in endeavours such as the active management of weeds, uncontrolled access, and feral animals. Overall, management of public access and visitor numbers would be undertaken in a manner that balances tourism, visitation and conservation values.

### 3.3.7 OPEN SPACE

Significant areas within the townsites are within managed Crown reserves for public recreation. Based on forecasted population, it is predicted through the Shire's Strategic Asset Management Plan for the same level or slight increase of younger families is expected (which use parks, playgrounds and recreation space).

The Shire would carefully consider population growth and demographic changes in towns, and the consequential supply and quality of public open space. Notwithstanding projected changes in climate, the Shire would promote landscaping where appropriate to be of low-water use, drought tolerant, and resilient to high winds or cyclonic events.

Increases in temperature are likely to result in increased needs for cooling and/or impacts on environmental and public health. Consideration should be given to mitigate heat impacts in regional towns and the need for green infrastructure and shade in public and private places in the built environment. This may also result in an increase in water demands, and thus adequate water sources. Development should also incorporate passive solar design and breezeways.

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### 3.4 QUALITY SERVICES AND INFRASTRUCTURE

#### Vision Statement

**The Shire of Ashburton will have planned for and worked towards delivering a range of community facilities and infrastructure that will contribute to a high quality of life for its residents. The towns will also have long-term and sustainable sources of power, water, solid waste recycling/disposal and effluent waste treatment. The Shire will remain well connected by road, sea and air.**

#### Goals

*A robust local government portfolio of community and infrastructure assets that can be maintained for their total lifecycles.*

*Movement and freight networks that are maintained and managed by the relevant stakeholders/government agencies that accommodate the existing and future requirements of industry, residents and tourism.*

*Appropriate placement of utilities and infrastructure, and their ongoing protection through buffers and other land use controls.*

#### Quality Services and Infrastructure

Key objectives being considered through this Strategy are as follows:

- To ensure that appropriate community infrastructure is appropriately planned for, provided in a timely manner and thereafter maintained having regard to total lifecycle costs.
- To ensure that the local road network is, within the capacity of the local government, well maintained and enhanced through appropriate design, construction and maintenance.
- Ensure that the Shire has air freight and carrier connections to Perth and other regional destinations.
- Ensure that the marine facilities within the Shire are appropriately planned for, having regard to community and industry expectations.
- Ensure that long-term sustainable sources of power, water, solid waste recycling/disposal and effluent waste treatment are considered and planned for.
- Protect industry, utilities and other strategically important infrastructure and facilities through the use of buffers and other land use controls to avoid inappropriate encroachment by sensitive land uses and development.

#### 3.4.1 COMMUNITY SERVICES

##### Community Facilities and Infrastructure Assets

The Shire of Ashburton has analysed the number of assets across the local government district for ongoing maintenance and management. Advancements in technology and materials can assist in reducing maintenance costs or offset asset replacement. A *Map and Gap Analysis* conducted in 2012 identified a high level of investment. Chevron Australia, Rio Tinto and BHP Billiton have also introduced funding programs to support a range of community-based projects and activities. Priorities were identified in the *Strategic Community Plan* for Onslow, Pannawonica, Paraburdoo, Tom Price and remote Aboriginal Communities. Careful consideration of population growth in towns, with the supply of services, will be an essential part of the Shire's administration in the future in order to balance community infrastructure with budgeting requirements.



The Shire will continue to review the need for new and existing community facilities, and analyse the whole-of-lifecycle costs to ensure facilities are capable of being maintained to an acceptable community standard. It will maintain and review its *Strategic Asset Management Plan*. Where practical and reasonable, the Shire will advocate the co-location of facilities and services in proximity to town centres.

### Education Facilities

Within the Shire, 1,123-1,155 students were recorded in 2016 to attend local schools, including:

- Onslow Primary/Secondary School (100-103 students);
- Pannawonica Primary School (113 students);
- Paraburdoo Primary School (195-205 students);
- North Tom Price Primary School (207-214 students);
- Tom Price Primary School (222-231 students); and
- Tom Price Senior High School (286-289 students).

The Tom Price Primary School, North Tom Price Primary School, Tom Price Senior High School and Paraburdoo Primary School have combined to form the Ashburton School Alliance (ASA). Combined schools student activities are organised through the ASA.

The Onslow Primary/Secondary School on Simpson Street has a student population between 95-125, aged between 4-17 years, with approximately 52% of the students from Thalanyji, Yindjibarndi and Banyjima Aboriginal groups.

As the *Onslow Townsite Expansion Structure Plan* provided for an additional 3,500 people, it also identified a future High School site indicatively within the Urban Expansion Area. This is reflected on **Plan 2 Onslow Town Site Strategy Plan**. Future planning for the expansion of the Onslow Townsite will ensure that a future 6 hectare school site will be appropriately identified and set aside for future acquisition by the Department of Education.

### Government Services

Whilst Tom Price serves as the administrative centre for the Shire, Onslow provides a number of satellite office functions for the Shire of Ashburton. The delivery of the new Shire Complex within Onslow provides the community with a modern, multi-purpose civic facility that incorporates Council Chambers, hall, library and workspace for local government officers. This ensures that there remains a presence of the local government within the town, providing a key connection for the community.

### 3.4.2 TRAFFIC AND TRANSPORT AND EXISTING AND PROPOSED MAJOR TRANSPORT ROUTES

Given the low population levels throughout the Shire, traffic flows on most roads are well within capacity. The levels of growth expected within the planning horizon of this Strategy are not expected to change any great extent.

A number of traffic and transport issues have been identified in Part 2 of the Local Planning Strategy. There are a number of avenues open to local governments for accessing additional funding for various purposes, including Federal and State Blackspot programmes etc. In the case of black spot funding, it is not always necessary for a project to be based on a cost benefit analysis, and sites with no significant crash history may be eligible for funding if potential safety issues have been identified within a formal Road Safety Audit report.

The Shire needs to identify all such opportunities, and develop a strategy for maximising the amount of funding that can be accessed. In most cases, this will involve the early identification of projects in order to ensure that a robust case can be presented.

### 3.4.3 AIR AND MARINE INFRASTRUCTURE

#### 3.4.3.1 ONSLOW AIRPORT

Onslow Airport is the key gateway for FIFO workers and for visitors to Onslow by providing direct flights to/from Perth. It provides a significant contribution to the local community. The Onslow Airport incorporates the airport terminal building and associated airside and landside infrastructure.

Onslow Airport is owned and operated by the Shire of Ashburton and its long-term direction and framework is guided by the *Airport Master Plan Onslow Airport* (February 2016) and the Obstacle Limitation Surface that is in place. The Strategy acknowledges the important consideration of a future extension for the existing main runway which will allow the Airport to accommodate larger jet aircraft and rotary wing aircraft.

The *Master Plan* establishes a long-term framework for the Onslow Airport and facilities, and protects future development against the effects of current decisions. The Shire of Ashburton will aim to prepare ANEF contours for the Onslow Airport. Long-term, Airport Future Obstacle Limitation Surfaces and Onslow Airport's flight paths may constrain building heights. It would be important to reflect the current Obstacle Limitation Surface as a special control area within the local planning scheme.

In addition to the Obstacle Limitation Surface, Onslow Airport utilises an instrument controlled approach system called PANS-OPS, a system of rules for designing instrument approach and departure procedures. Such procedures are used to allow aircraft to land and take off when instrument meteorological conditions impose instrument flight rules. In order for this critical safety system to remain effective, any intrusion into the airspace surrounding the airport greater than 50 metres in height, including physical objects, smoke, or other particulate matter must be introduced into the computer modelling. This could also be reflected in the local planning scheme.

#### 3.4.3.2 PARABURDOO AIRPORT

Paraburdoo Airport provides accessibility for workers to be transferred by bus to the nearby towns of Paraburdoo (9km away) and Tom Price (71km away), and to FIFO camps. Bus transfers and car hire assist visitors and locals in accessing the airport to and from Tom Price.



### 3.4.3.3 PORTS

Pilbara Ports Authority (PPA) is responsible for common-user marine assets and port-vested land at the Port of Ashburton in accordance with the *Port Authorities Act 1999*, and the PPA has released its *Port of Ashburton Master Plan*.

The Port of Onslow is managed and operated by the Department of Transport. It is managed in accordance with the *Shipping and Pilotage Act 1967* and the *Marine and Harbours Act 1981*. It has a Land Use Framework for the boat harbour.

The Barrow Island port is a Restricted Port due to the vessel activity associated with Gorgon, and permission must first be obtained from the Barrow Island Marine Controller.



### 3.4.4 WATER

#### Potable Water

Public Drinking Water Source Areas are provided by existing groundwater supplies. The Strategy will require statutory protection of public drinking water supply areas in accordance with relevant water source protection plans, Department of Water and Environmental Regulation's Water Quality Protection Note 25, and SPP 2.7. Groundwater is available for allocation in many aquifers, however, declining rainfall in coastal areas may result in reduced recharge and consequently availability in these areas in the future, particularly as population and industry expands. Public drinking water is supplied predominately from groundwater.

Water supplies are provided by Water Corporation. Water supplies and wastewater management for Tom Price, Paraburdoo and Pannawonica are supplied by Rio Tinto. The intent is to develop a water desalination plant in the ANSIA Improvement Scheme area. This service is intended primarily for Onslow town usage, with potential for ANSIA users to connect thereafter. This will lower the reliance on water supplied from the Cane River bore field once the desalination plant is constructed.

The use of mine run-off and water extraction may be a difficult yet potentially viable water supply option. There are opportunities for expanding irrigation for investigation in the Pilbara hinterland, from using excess water from mine dewatering. The Shire is an advocate for the sustainable abstraction of potable water sources and water reuse/recycling associated with mines and townsites.

#### Water Management

Rainfall data indicates that average annual rainfall has declined around Onslow, yet has increased in inland areas. It will be important for adequate consideration of the management of flood risk, and associated sediment transport in townsites and industrial areas.

*Better Urban Water Management* has been designed to facilitate better management of urban water resources, ensuring an appropriate level of consideration to the total water cycle. It is recognised that the Shire is a Waterwise Council, and it should continue to investigate and expand water efficiency opportunities, such as irrigation of public open space and sports ovals where practical. The Shire will be responsible for reviewing existing townsite drainage systems and ensure appropriate water quality of stormwater and runoff is addressed.

The Shire could also investigate partnerships to establish water recycling and reuse schemes to provide fit-for-purpose sources of water where practical, as an alternative to groundwater use to support future development.

### Wastewater

Appropriate sewage facilities for all towns and adequate systems in place for smaller scale settlements and Aboriginal communities.

Onslow wastewater treatment plant capacity was doubled, funded by the Wheatstone Project, and provides for the long-term future growth of Onslow. The odour buffer area applies to the upgraded WWTP. The Shire is an advocate for the ongoing delivery of sewage infrastructure in towns and adequate systems for smaller scale settlements and Aboriginal communities.

## 3.4.5 ENERGY

Onslow town power supplies are provided by Horizon Power. Undergrounding of power lines has been undertaken for Onslow. Town power supplies for Tom Price, Paraburdoo and Pannawonica are supplied by Rio Tinto.

A gas fired power plant will be soon completed within the ANSIA Improvement Scheme area. This facility is intended primarily for Onslow town usage, with potential for ANSIA users to connect thereafter. The scale of the gas power plant is potentially affected by the proposed renewable energy microgrid by Horizon Power.

There is some presence of renewable energy sources in the local government area including a renewable energy microgrid for Onslow, proposed by Horizon Power. The global microgrid market is experiencing transformational growth, which tend to combine conventional and renewable sources, and battery storage technology. As technological advancements continue, renewable energy solutions and microgrids will become more cost competitive, more reliable and better understood to be alternative approaches to electricity generation, distribution and storage. Renewable energy sources and microgrids can help to build resilience and reliability in the electricity network, through stabilising energy supply to demand, and also work to offset carbon emissions. Microgrids may assist with delivering reliable and viable energy solutions.

## 3.4.6 WASTE MANAGEMENT

Federal funding has been secured for a Class IV waste facility for Onslow. Landfills operate outside of Paraburdoo and Tom Price. The State Government will be responsible for ensuring Aboriginal communities have effective waste management to minimise pollution and risks to human health and water sources. A joint dirty Material Recovery Facility is recognised as an opportunity for Newman and Tom Price.

There are limited opportunities to divert recyclable material from landfills. Infrastructure and market opportunities could arise in relation to recycling. There are a number of opportunities for Pilbara regional waste processing facilities and recyclable products. The Shire is an advocate for a State Government comprehensive waste recycling and disposal plan for strategic waste transfer, collection, treatment, recycling and disposal facilities. This will ensure the future diversion of waste from landfills through reduction, reuse and recycling opportunities.

### 3.4.7 BUFFERS

It is crucial for economic and public health purposes to ensure buffers around industry and infrastructure are appropriately identified and secured from inappropriate land uses, and the safety and amenity of surrounding land uses is addressed. Buffer areas should be investigated for all industrial categories; major infrastructure; waste water treatment plants and power generation facilities. Planning for future industrial development and provision of appropriate buffers to existing and new industries will be implemented through the scheme review. Buffers are then to be shown as special control areas on the Scheme Maps.

### 3.4.8 SERVICE CORRIDORS AND SITES FOR UTILITIES

High pressure gas transmission pipelines do not require development approval. The Shire may have a role in approving the construction of facilities in the initial stages, i.e. the construction camps, waste water treatment facilities, and road usage. The Shire will have regard to DC Policy 4.3 Planning for High-Pressure Gas Pipelines policy measures to assess proposals that in the vicinity of any high-pressure gas pipelines in the Shire.

### 3.4.9 TELECOMMUNICATIONS

Broadcast Australia operates a number of townsite-based telecommunication facilities.

Existing mobile phone coverage is generally limited to townsites, mines, camps and sections of the North West Coastal Highway. Greater mobile phone coverage will improve convenience and safety for all towns, district roads, highways, and areas frequented by the community, workers and visitors. This will require planning for appropriate servicing and delivery of infrastructure, including telecommunications.

Proposed telecommunication links to South East Asia will improve bandwidth within the Shire, and its connections to neighbouring markets. Future mine sites will benefit from telecommunications as companies roll-out automated systems (i.e. Rio Tinto's "Mine of the Future" program and its automated drilling and haulage systems).

The Shire is supportive of the ongoing improvement of availability, coverage, and reliable accessibility to telecommunications services (telephone, mobile network, broadband) and TV/radio broadcasting. The Shire will advocate for an effective state-wide telecommunications network.

## 4 IMPLICATIONS, ISSUES AND OPPORTUNITIES

The following tables 2-13 provide a summary of the implications, issues and opportunities that are derived from the analysis and background research contained in Part 2 of the Local Planning Strategy.

**Table 2 Implications, issues and Opportunities – State and Regional Planning Context**

State and Regional Planning Context	Implications	Issues	Opportunities
<b>State Planning Strategy</b>	Six inter-related principles of community, economy, environment, infrastructure, regional development and governance	Balancing natural resource and landscape values with industrial pursuits (mining, energy, ecotourism, pastoralism). Ensuring sustainable development is supported by infrastructure and service investment. Recognising the valuable contributions of Aboriginal culture within the Pilbara region.	Maintaining the region's significant contribution to Australia's GDP. Advocating State government investment into strengthening resilience in the Pilbara Region through attracting and retaining people and businesses. Embracing and celebrating Aboriginal culture to instil a strong sense of place, belonging and community spirit. Native Title information being recognised and reflected in the Local Planning Strategy plans.
<b>Pilbara Cities</b>	Vision to build Karratha and Port Hedland as 'Pilbara Cities' supported by other towns.	Requires public and private investment in amenity and liveability in towns.	Drive investment into towns through the Royalties for Regions programme.
<b>Pilbara Regional Investment Blueprint</b>	A plan for investment, economic transformational opportunities, priority actions and investment opportunities.	Ensuring a prosperous and secure future for the Pilbara region. Recognising opportunities to diversify the economy. Recognising mining and energy sectors will dominate for decades to come.	Planning for anticipated population growth with an emphasis and focus on the three main settlements of Onslow, Tom Price and Paraburdoo, and recognised Aboriginal Settlements. Ensuring the land use planning framework within the Shire is able to readily respond to changes in the economy that can rapidly affect the growth, stabilisation and decline in population numbers within the towns as well as remote communities and camps. Target investment for retaining permanent residents in towns and settlements. Link the transformational opportunities in the Blueprint with aims and goals within the Local Planning Strategy.

State and Regional Planning Context	Implications	Issues	Opportunities
<b>Pilbara Planning and Infrastructure Framework</b>	Regional framework for identifying land, sites and corridors for major industries.	Have regard to the Framework in the preparation of local planning strategies and schemes.	Update the infrastructure priorities within the Shire of Ashburton to ensure population forecasts are supported by appropriate infrastructure and services.
<b>SPP 2 Environment and Natural Resources Policy</b>	Defines principles and considerations that represent good and responsible planning in terms of environment and natural resource issues.	<p>Integrate environment and natural resource management with broader land use planning and decision-making.</p> <p>Protect, conserve and enhance the natural environment.</p> <p>Promote and assist in the wise and sustainable use and management of natural resources.</p>	<p>Improve and promote best-practice natural resource management at a local government level.</p> <p>Areas for focus include: weed management, soil stabilisation and dust, groundwater, extraction of basic raw materials, illegal dumping, protecting wetlands and water courses.</p>
<b>SPP 2.5 Rural Planning</b>	Guides decision-making on rural land and for rural living purposes.	<p>Identify areas for rural or agricultural purposes.</p> <p>Recognise significant basic raw materials.</p> <p>Appropriately identify waste facilities in rural areas within local planning schemes.</p> <p>Manage and improve environmental and landscape attributes.</p>	<p>Promote flexibility within 'Rural' zoning to cater for a wide range of land uses that may support primary production, small-scale tourism, regional facilities, environmental protection and cultural pursuits.</p> <p>Promote landscape protection and ecological biodiversity within rural areas.</p>
<b>SPP 2.6 State Coastal Planning Policy</b>	Guidance for the coastal zone including managing development and land use change; establishment of coastal foreshore reserves; and to protect, conserve and enhance coastal values.	<p>Development setbacks for coastal processes.</p> <p>Risks to people and property from storm surge and severe storm inundation.</p> <p>Consideration of sea level rise, vertical allowances and setback distances will be required when managing existing infrastructure and planning future development, as per IPCC and CSIRO modelling and coastal vulnerability studies. Ensure that any substantial future development is supported by a current storm surge and flood inundation study consistent with the most current predictions for sea level rise and coastal processes, consistent with SPP 2.6.</p>	<p>Recognising development as variations to clause 7.4 of SPP 2.6: industrial and commercial development that is demonstrably dependent on a foreshore location.</p> <p>Planning for coastal processes and future risk management and adaptation, particularly within Onslow, which has several areas affected by future predicted sea level rise and storm surge.</p> <p>The CHRMAP and available report (MP Rogers &amp; Associates, 2011) regarding coastal processes and inundation for the Onslow Townsite, to be recognised and addressed in the Local Planning Strategy and future Scheme Review.</p>
<b>SPP 2.7 Public Drinking Water Source Policy</b>	Ensure land and development is compatible with the long-term protection and management of water resources.	<p>There are a number of important water sources which provide water for public supply within the region. Priority source protection areas to be identified in local planning strategies.</p> <p>Land use and development to consider management of priority source protection areas.</p>	<p>Identify priority source protection areas in local planning schemes. Adopt scheme provisions for protection of public drinking water source areas.</p> <p>Consideration should be given to the reservation and/or use of a special control area to improve the level of</p>

State and Regional Planning Context	Implications	Issues	Opportunities
		<p>Planning decision-making should be consistent with the Department of Water and Environmental Regulation's Water Quality Protection Note: Land Use Compatibility within Public Drinking Water Source Areas (2016) in the vicinity of any drinking water borefields, including the requirements for well-head protection zones.</p> <p>Although allocation currently remains in some aquifers and investigations into available groundwater supplies are continuing, declining rainfall in coastal areas may result in reduced recharge and consequently availability in these areas in the future, particularly as population and industry expands.</p> <p>Dewatering/over-abstraction has also impacted local groundwater levels, potentially affecting groundwater-dependent pool ecosystems and wetlands through drying up and loss of habitat. This in turn can impact wildlife and cultural and social values. This is especially critical given the presence of nationally important wetlands in the Shire.</p>	<p>protection of public drinking water sources in future, particularly in relation to Bungaroo Creek water reserve.</p>
<b>SPP 2.9 Water Resources</b>	<p>Develop and protect water resources in an economically and environmentally responsible way.</p>	<p>Promote the management and sustainable use of water resources.</p> <p>Maintaining or improving the quality and quantity of water resources.</p> <p>It is recognised that the Shire is a Waterwise Council, and it should continue to investigate and expand water efficiency opportunities, such as irrigation of public open space and sports ovals where practical.</p> <p>Due to increasing demand for water associated with residential growth and industrial expansion, it is considered that water recycling and reuse to provide fit-for-purpose sources of water should continue to be investigated in Onslow and other townsites where practical, as an alternative to groundwater use. This will require cooperation with the Water Corporation and Rio Tinto.</p> <p>Landfill sites are a potential source of pollutants to ground and surface waters. These land uses, and</p>	<p>Promote the objectives of SPP 2.9 in considering water availability, water quality and water efficiency for ecological, mining, industrial and domestic potable purposes.</p> <p>Townships and communities associated with waterways in the Shire may be subject to risk of flooding. Any proposed development should be consistent with SPP 2.9, and in Onslow, consistent with the <i>Local Water Management Strategy</i>, and address flood risk appropriately.</p> <p>Adequately manage the risk of flooding, and consequences particularly associated with sediment transport management, in townsites and industrial areas through application of SPP 2.9. The Shire may also need to review existing townsite drainage systems and ensure appropriate levels of service will be maintained as development occurs (such as at Onslow Airport).</p>



State and Regional Planning Context	Implications	Issues	Opportunities
		others with the potential to pollute ground and surface waters must be carefully located, designed, managed and monitored to avoid impacts.	
<b>SPP 3 Urban Growth and Settlement</b>	Sets out the principles and considerations that apply planning urban growth and settlement.	Manage urban growth and settlement, planning for liveable neighbourhoods. Coordination of services and infrastructure. Planning for Aboriginal communities.	Planning for well-located and serviced town centres that provide the needs of the community. Planning for managed urban expansion of towns having regard to population forecasts. Planning for and coordinating appropriate servicing and delivery of infrastructure. Advocate the preparation of Layout Plans for the Shire's Aboriginal settlements.
<b>SPP 3.1 Residential Design Codes</b>	Residential development requirements for a range of housing types and densities, character and amenity, conservation of heritage values, environmentally sensitive design.	Application of appropriate residential densities to address projected housing demand. Justification for local variations to the R-Codes.	Planning for residential development that has due regard to the local climate, natural hazards, and local community expectations for housing typologies. Outline local variations through scheme provisions or local planning policy. Consider the impact of workforce accommodation within towns, with a focus on development integrating with neighbourhood character and amenity.
<b>SPP 3.2 Aboriginal Settlements</b>	Sets out a process for ensuring the planning needs of large permanent Aboriginal communities are accommodated through the preparation and approval of layout plans, and that they are appropriately zoned in local planning schemes.	Prepare Layout Plans for Aboriginal Settlements – Ngurrawaana, Bellary Springs (Innawonga), and Youngaleena Bunjima.	Recognise Wakathuni Layout Plan as a local planning policy. Advocate preparation of Layout Plans for all Aboriginal settlements. Coordinate services and infrastructure to Aboriginal settlements.
<b>SPP 3.4 Natural Hazards and Disasters</b>	Planning for natural disasters as a fundamental element in the preparation of all statutory and non-statutory planning documents.	Take into account natural elements (climate, soils, hydrology etc) that may create hazards. Consider long-term changes to risk such as climate change and land use change.	Incorporate hazard mitigation and other measures into the local planning scheme. Such matters may relate to cyclone events, contaminated sites, floodplains, bush fire, industrial risks. Guidance should be sought from environmental agencies with regards to appropriate separation distances to manage noise and dust for new industrial areas. Odour from industries and waste water treatment plants should be considered as part the location of any new development.

State and Regional Planning Context	Implications	Issues	Opportunities
<b>SPP 3.5 Historic Heritage Conservation</b>	Sets out the principles of sound and responsible planning for the conservation and protection of Western Australian historic heritage.	A number of national, state and local heritage sites are within the local government area.  Heritage is a consideration for assessing and determining development applications.	Identify significant sites within the local planning scheme through the Municipal Heritage Inventory.
<b>SPP 3.7 Planning in Bushfire Prone Areas</b>	Guides the implementation of effective risk-based land use planning and development.	Majority of the Shire of Ashburton is within a bushfire prone area.  The majority of the Shire is identified as being Bush Fire Prone. Future planning and development within Bush Fire Prone areas will need to meet the requirements of SPP 3.7 and the <i>Guidelines for Planning in Bushfire Prone Areas</i> (WAPC, 2015).	Consideration for bushfire risk based planning in bushfire prone areas.  Consideration also should be given to the location of firebreaks in semi-rural areas around townsites and emergency management including access routes.
<b>SPP 4.1 Industrial Interface (draft)</b>	Ensure buffers around industry and infrastructure are appropriately identified and secured from inappropriate land uses, and the safety and amenity of surrounding land uses is addressed.	Buffer areas for all industrial categories; major infrastructure; waste water treatment plants and power generation facilities.	Planning for future industrial development and provision of appropriate buffers to existing and new industries.  Buffers shown as special control areas on the Scheme Maps.
<b>SPP 5.2 Telecommunications Infrastructure</b>	Facilitate an effective state-wide telecommunications network.	Due regard to SPP 5.2 during the preparation of the local planning strategy.  Limited telecommunications coverage across the Shire.	Advocate expansion of telecommunications coverage beyond towns and some sections of highways.  Planning for appropriate servicing and delivery of infrastructure, including telecommunications.
<b>SPP 5.4 Road and Rail Noise (Draft 2017)</b>	Protect people from unreasonable levels of transport noise.	Use assessment criteria in the SPP 5.4 and Guidelines.	Protect major transport corridors and infrastructure from encroachment of incompatible uses, through a range of means in the local planning scheme (zoning, special control areas, and development provisions).
<b>SPP 7 Design of the Built Environment (draft)</b>	Sets out the principles, processes and considerations which apply to the design of the built environment.	Consider local design issues when assessing proposals.  Application of <i>Liveable Neighbourhoods</i> in design of urban development, structure planning and subdivision.	Have regard to the 10 design principles contained in SPP 7 for the assessment of proposals.  Promote character and amenity through local design vernacular.  Advocate development to have due regard to local design guidelines.
<b>Development Control Policies</b>	A range of operational policies to guide the WAPC's decision making on subdivision and development.	Consider the provisions of DC Policies in considering applications for subdivision and development.	Development to respond to the local planning scheme and have due regard to applicable DC Policies.

**Table 3 Implications, Issues and Opportunities – Local Planning Context**

Local Planning Context	Implications	Issues	Opportunities
<b>Shire of Ashburton 10 Year Strategic Community Plan 2017-2027</b>	<i>Living Life</i> is the Shire's 10-year <i>Strategic Community Plan</i> and articulates its vision for the towns of Onslow, Tom Price and Paraburdoo.	Embed the community goals within the strategic planning for the local government area.	Over time, the Local Planning Strategy may need to be reviewed and updated to maintain the close relationship between the Vision, goals and objectives of the <i>Strategic Community Plan</i> and this Local Planning Strategy.
<b>Corporate Business Plan 2013-2017</b>	The Corporate Business Plan implements the first four years of the <i>Living Life Strategic Community Plan</i> .	Identifies priorities for six theme areas.	Utilise the Local Planning Strategy for addressing priorities outlined in the Corporate Business Plan.  The Shire will undertake a review of its Corporate Business Plan and the Local Planning Strategy may need to be reviewed and updated.
<b>Shire of Ashburton Strategic Asset Management Plan 2016-2020</b>	Provides a comprehensive overview of the assets to be maintained to an appropriate level of service, or replaced.	There is an identified renewal expenditure and funding gap.  Assets to be replaced/disposed may identify land of buildings for re-use.	Strategic planning should consider the most appropriate growth scenarios for the population, to maximise the level of accessibility of existing and future residents and business to relevant infrastructure assets.
<b>Onslow Airport Master Plan</b>	Long-term framework for the Onslow Airport and facilities, and protects future development against the effects of current decisions.	Shire of Ashburton will prepare ANEF contours for the Airport.  Airport Future Obstacle Limitation Surfaces and Onslow Airport's flight paths may constrain building height.  Consider flight paths, ANEF and Obstacle Limitation Surface for the future extension of the runway.	Reflect the current Obstacle Limitation Surface as a special control area within the local planning scheme.
<b>Shire of Ashburton Local Planning Scheme No. 7 (LPS 7)</b>	Provides the statutory planning framework for decisions made by the local government.	This Local Planning Strategy provides the rationale and justification for the preparation of a new local planning scheme, or amendments.  Incorporation of the Model Provisions and integration of the Deemed Provisions contained in Schedules 1 and 2 of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i> .  The Shire has an extensive local planning policy manual.	The Shire intends to review the LPS 7 in order to incorporate the Deemed Provisions and align its zones and reserves with those contained in the Model Provisions of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i> .  The Shire will need to undertake a review of its Municipal Heritage Inventory.  Undertake a broad review of the local planning policy manual and undertake modifications to adopted policies, to align with the amended LPS 7 and Scheme Review.

Local Planning Context	Implications	Issues	Opportunities
		<p>Structure Planning is likely to continue to be undertaken to guide certain land use and development.</p> <p>The current Municipal Heritage Inventory is old (1999) and considered places that required further research or reconsideration before being added to the Inventory. The Municipal Heritage Inventory can be used the Heritage List in the local planning scheme.</p>	<p>Investigate opportunities to guide townsite expansion through broad-scale structure plans.</p> <p>Review extent of existing development and facilitate new development in appropriate locations to support the Shire's objectives.</p>
<b>Ashburton North Strategic Industrial Area (ANSIA)</b>	<p>Improvement Plan No. 41 provided the head of power for the Improvement Scheme No. 1.</p> <p>The Improvement Scheme No. 1 and Guide Plan is the operational scheme for the ANSIA.</p>	<p>Western Australian Planning Commission (WAPC) operates and implements the Improvement Scheme No. 1. The WAPC is the decision-maker for development applications.</p> <p>Under the Improvement Scheme No. 1, the 'Workforce Accommodation' and 'Special Use No. 1' zones are provided and would allow operational workforce to be based within the ANSIA, which will have an impact on Onslow's population and growth.</p>	<p>Shire of Ashburton will advocate and plan for workforce to be accommodated within the Onslow townsite wherever possible. This enables workforce to have access to town facilities and social cohesion.</p>
<b>Onslow Townsite Strategy</b>	<p>A response to the opportunities and challenges facing Onslow in the context of recent major industrial development and the potential for significant population growth.</p>	<p>Maintain the town's character and lifestyle values of town residents.</p> <p>Fulfil the 3 objectives of sustainable living, economic vitality and community wellbeing.</p>	<p>Incorporate these objectives into the local planning scheme and local planning policies.</p> <p>Appropriately plan for ultimate development scenarios for Onslow.</p>
<b>Onslow Townsite Expansion Structure Plan</b>	<p>Provides the overall structure for accommodating 3,500 people in the townsite.</p>	<p>Identified areas subject to future investigation, which are reflected in the Issues and Opportunities Plan.</p> <p>Large live-work lots to McAullay Road to have regard to SPP 5.4 Road and Rail Noise provisions.</p>	<p>Identified non-residential land uses within the area bound by the Waste Water Treatment Plant odour buffer.</p> <p>Provision of 6 hectare School site as per Department of Education requirements.</p> <p>Long-term development of Lot 4001 as an integrated component of the townsite.</p> <p>Review of the future transition of the town centre towards a location that is not affected by predicted sea level rise and inundation.</p>
<b>Onslow Townsite Expansion Stage 1 Development Plan</b>	<p>Enabled delivery of residential land in Onslow in response to mounting housing pressure due to the development of ANSIA.</p>	<p>Chevron Australia's operations village site is retained for workforce accommodation development.</p> <p>Shire of Ashburton expects well-integrated development with the existing townsite.</p>	<p>Apply the relevant planning principles and objectives of the Onslow Townsite Strategy in any future modifications to the Development Plan.</p> <p>Support investigations in to the ultimate use of Chevron Australia's landholding.</p>

Local Planning Context	Implications	Issues	Opportunities
<b>CHRMAP for the Onslow Coast</b>	Some infrastructure and low lying areas of the Onslow townsite are at risk of steadily rising sea levels, combined with storm events.	The CHRMAP has identified key strategies and actions for planning for future adaptation in the immediate (<5 years) and short term (5-10 years).	Have regard to the recommendations contained in the CHRMAP for the planned adaptation and management of risk for the Onslow townsite.
<b>Onslow Townsite Planning Coastal Setbacks &amp; Development Levels</b>	Report accounted for coastal processes and investigated severe storm inundation	Have regard to the coastal inundation scenarios for determining appropriate response for urban development.	Incorporate modelling from the report on coastal vulnerability for planning in Onslow.
<b>Living in the Regions 2013 State Report</b>	To understand barriers to living in regions; measure quality of life in regions; and guide regional development initiatives.	Acknowledge the aspects of regional living that could influence people moving, living and continuing to live in the Pilbara.	Have regard to the findings of the 2013 report and future survey reports.

**Table 4 Implications, Issues and Opportunities – Land Tenure and Local Environmental Profile**

Land Tenure and Local Environmental Profile	Implications	Issues	Opportunities
<b>Land Tenure</b>	<p>Overall land tenure is Crown land.</p> <p>Crown land is unallocated, or is subject to reserves, or to leases.</p> <p>Freehold land is more typical within the three townsites of Onslow, Tom Price and Paraburdoo.</p>	<p>Pastoral leases are issued by the Department of Planning, Lands and Heritage.</p> <p>Amendments to the <i>Land Administration Act 1997</i> propose to introduce rangeland leases. These will have a broader range of uses than the more limited scope of pastoral leases.</p> <p>While conservation reserves are managed by the Department of Biodiversity, Conservation and Attractions, the Shire may consider active management of the following issues to assist in conservation and protection of biodiversity regarding uncontrolled access, weeds and feral animals.</p>	<p>While heritage is primarily managed through State and Commonwealth legislation, opportunities exist to protect and promote both Aboriginal and European cultural heritage through joint management arrangements with traditional owners and optimise opportunities for Indigenous training, employment and businesses. Consideration should also be made to native title and ILUAs where applicable, when considering any planning or development proposals, in discussion with appropriate traditional owners.</p>
<b>Native Title</b>	<p>A number of native title determination areas and native title claim areas cover the Shire of Ashburton.</p> <p>Pastoral leases and the proposed rangeland leases (under the Land</p>	<p>Urban expansion within townsites should be alienated from Crown land as freehold land. There may be implications associated with addressing native title and Aboriginal heritage.</p>	<p>Engagement with traditional owners is required to meet legislative requirements of native title. Increased benefits may be observed through an elevated level of involvement of the traditional owners within the Shire in terms of land and cultural heritage management.</p>

Land Tenure and Local Environmental Profile	Implications	Issues	Opportunities
	Administration Act 1997) do not extinguish native title, and are able to co-exist.		<p>Identify Crown land for urban expansion or other uses and work with agencies and the representative Traditional Owners to address native title and Aboriginal heritage within Onslow, Tom Price and Paraburdoo.</p> <p>Ensure that land is ready for future/anticipated housing supply within townsites.</p>
Local Environmental Profile	<p>Environmental Profile contained in Appendix A provides a thorough analysis of the natural environment.</p>	<p>Increases in temperature and extreme weather events are projected to occur as a result of climate change. This would have the potential to impact on the health of the environment and the community, as well as the maintenance of public lands and capacity of infrastructure systems including those managed by the Shire.</p> <p>Sea level rise and coastal vulnerability will increase along the rangelands coastline in the near future. Management of existing infrastructure and planning future development will require consideration of vertical allowances and setback distances.</p> <p>Expansion of tourism, commercial fishing, aquaculture and resource industry activity will increase pressure on sensitive and productive coastal marine environments which provide habitats and breeding grounds (seagrass meadows, turtles nesting on beaches, river mouths/intertidal mud flats) for marine life. Recreational activity (camping, coating, fishing, swimming and 4WDing) around sensitive coastal environments associated with population growth and industry development will also impact upon local biodiversity and environmental values.</p> <p>Coastal spaces which support recreational activity should consider cumulative impacts on sensitive environments and minimise impacts through appropriate management.</p> <p>The majority of the Shire is indicated as being located within a Bush Fire Prone Area of Western Australia as designated by the Fire and Emergency Services (FES) Commissioner - this is addressed through the Bushfire Hazard Level Assessment prepared for the Local Planning Strategy.</p>	<p><b>Temperature</b> – Increases in temperature are likely to result in increased needs for cooling and/or impacts on environmental and public health. Consideration should be given to heat island impacts in regional towns and the need for green infrastructure and shade in public and private places to mitigate heat increases in built environments. This may also result in an increase in water demands, and thus adequate water sources. Development should also incorporate passive solar design and breezeways.</p> <p><b>Extreme weather</b> – Increases in extreme weather events, particularly bushfires as well as rainfall/tropical cyclones, may require development to be located away from areas of risk and/or improved emergency management responses and plans. Infrastructure adequate to manage extreme weather conditions will also require consideration.</p> <p><b>Rainfall change</b> – Increases in rainfall event intensity may result in greater localised flooding and increased pressure on stormwater systems. Stormwater systems should be designed with contingency for increased rainfall intensity.</p> <p><b>Dust</b> – Dust generated from bushfires should be monitored and management responses developed to inform the public regarding health risks during bushfire events. Management of fuel loads without exceeding threshold air quality standards should also be considered through the development of an Air Quality Management Plan, and a program of regular fuel reduction which minimises air quality impacts on townsites and sensitive environments, on advice from the Bushfire and Natural Hazards Cooperative Research Centre. Dust from localised extraction and production of minerals, particularly near townsites, should be monitored and</p>



Land Tenure and Local Environmental Profile	Implications	Issues	Opportunities
		<p>The Shire is well known for its impressive terrestrial, marine and aquatic biodiversity. A significant proportion of the Shire's biodiversity is protected in a number of conservation areas.</p>	<p>infringement notices issued where necessary, consistent with the Extractive Industries Local Law 2013.</p> <p><b>Greenhouse gas emissions</b> – Emissions which result from Shire operations may be reduced through increased use of renewable energy and implementation of actions to improve energy efficiency.</p> <p><b>Asbestos</b> – The Shire should maintain advice with regards to potential for health risks from the former mine sites and associated communities.</p> <p><b>Resource extraction</b> – Clearing of the land for resource extraction results in a loss of biodiversity and can lead to erosion. Mining activities impact on the visual landscape of the Shire; can result in off-site impacts on nearby land uses including dust, noise and light; and can also lead to the lowering of groundwater tables.</p> <p><b>Acid sulphate soils</b> – Declining soil and land quality can occur as a result of activity where acid sulphate soils are disturbed. This leads to the release of acid and heavy metals which can cause significant harm to the environment and infrastructure. Appropriate management of acid sulphate soils, particularly in areas of high risk where changes in groundwater are likely or mining is proposed, is required, consistent with current best practice.</p> <p><b>Contaminated sites</b> – Given that contaminated sites within the Shire are located within operational oilfield facilities, and within the Wittenoom abandoned townsite, consideration should be given to processes established under the Contaminated Sites Act 2003, particularly in coordination with the Department of Planning, Lands and Heritage with respect to Wittenoom. In addition, any unsewered residential and industrial areas within the Shire have the potential to lead to contamination of land and groundwater and alternative treatment units should be used in areas of high environmental risk.</p> <p><b>Waste management</b> – Consideration should be given to opportunities to establish local or regional waste management and/or recycling facilities as population in the region increases, as well as opportunities to subsidise recycling schemes. This should include industries with multiple benefits such as waste to energy plants.</p>

Land Tenure and Local Environmental Profile	Implications	Issues	Opportunities
			<p>Soil and vegetation condition – Vegetation retention assists in the maintenance of soil health. Soils and vegetation (grasslands and shrublands) in good condition are also associated with higher agricultural productivity. Supporting the development and planning process of Ecologically Sustainable Rangeland Management (ESRM) Plans for land managers in coordination with the Pastoral Lands Board and DAFWA should also be considered.</p>
			<p><b>Commercial activity</b> – Planning for and management of activities associated with the resources industry, commercial fishing and aquaculture must consider impacts on sensitive coastal environments which provide habitat for coastal and marine life. Consideration should be given to the location of supporting industrial areas, which adequately manage any potential off-site or environmental impacts. In addition, coastal spaces which are shared with recreational activity should be planned to ensure multiple, cumulative impacts on sensitive environments are considered and impacts are appropriately managed.</p>
			<p><b>Tourism</b> – management and planning of sustainable tourism activity such as camping, boating, swimming, fishing, and 4WDing, and development around sensitive coastal environments such as beaches, river mouths (Beadon Creek), and seagrass meadows, will be critical with population and industry growth, development of tourism, and townsite expansion. Engagement with traditional owners should be considered to ensure that cultural heritage values are not lost, particularly within the native title area for the Thalanyji community.</p>

**Table 5 Implications, Issues and Opportunities – Population and Housing**

Population and Housing	Implications	Issues	Opportunities
<b>Pilbara regional population</b>	Within the period of 2005-2013, population growth rates were between 3.2-5.4%, down to 0.2% in 2013-2014 and -0.7% in 2014-2015.	The <i>Pilbara Regional Investment Blueprint</i> sets what it calls an aspirational yet achievable population target of 200,000 by 2035, an increase of 135,000 across the region.  Population growth rates have more recently stabilised, however historical trends indicate that fluctuations in market conditions can place pressure on towns to accommodate population growth and demand.	Tom Price, Paraburdoo and Onslow should grow in a sustainable manner that ensures communities can develop with availability and access to a range of necessary services, employment opportunities, and housing choice.
<b>Ashburton local government population growth trends</b>	ABS data indicates within Ashburton that there is a stabilisation of the population.  Demographic analysis indicates a disproportionate ratio of males to females, a lower than national average median age, a higher ratio of Indigenous Australians, and a low ratio of residents older than 65.	ABS information supports the inference that future population growth is likely to be directly impacted by the growth or contraction of mining and oil and gas industry sectors. These industry sectors will likely continue to have a significant influence on population growth rates within the local government.  It will be important for future housing and development cater for the demographics of the region, taking into account the particular needs of key sectors including all youth, young adults, and aged persons.	Diversification of the economy and a broader employment base may lessen the impacts of mining and oil and gas on population growth/decline rates.  Areas of focus for improving liveability – safety; health and wellbeing; education and training; lifestyle; sense of community; community connectedness.
<b>Ashburton demographics</b>	At the following census periods, the percentage of the Shire population recorded within towns (Onslow, Tom Price, Paraburdoo, Pannawonica) was as follows:  2001 – 89%.  2006 – 92%.  2011 – 60%.  2016 – 45.6%	Current population estimates from official sources at the town level can be potentially unreliable or not available.  The census data in 2011 and 2016 show a disconnect from previous census periods, as a lower ratio of Ashburton's population was counted within the townsites. This may be related to the census also picking up respondents in workforce camps.	In 2017, the ABS released the first packages of the 2016 Census data. Subsequent release of data may provide a more accurate snapshot of population and other demographic trends for the townsites and the Shire overall.  Further information can be sought in relation to the ratio of townsite population and workforce campsite population trends.
<b>Aboriginal Settlements</b>	DPLH considers that, under SPP 3.2, the following are considered to be Aboriginal Settlements:  Wakathuni  Youngaleena Bunjima	There is State level recognition of challenges for remote Aboriginal communities.  State government agencies remain responsible for delivering existing services.	Advocate the Shire's position, that the State Government agencies should ensure appropriate services are adequately planned and delivered for Aboriginal Settlements.

Population and Housing	Implications	Issues	Opportunities
	Bellary Springs (Innawonga) Ngurrawaana		
<b>Population Growth Forecasts</b>	<p>Aspirational population growth forecasting appears to have been based on historical growth rates seen during 2005 and 2013, in lieu of more recent trends of population stabilisation.</p> <p><i>WA Tomorrow</i> (2015) population forecasts consider lower growth rates (2.65% in 2016, 2.23% in 2021, 1.99% in 2026). These growth rates may be currently optimistic, however provide a good guide on anticipated population growth.</p>	Anticipated population growth may affect the ultimate direction of service delivery by local government, government agencies, and utilities/service providers.	<p>Ensure local government services are in line with projected population growth.</p> <p>Cater for growth for approximately 3,500 additional people to 2026.</p> <p>Identify land to ensure sufficient supply is available, should significant population growth demand occur in another mining cycle.</p>
<b>Onslow Housing Stock</b>	<p>There have been considerable additions to housing stock in Onslow during 2014-2017.</p> <p>Urban development and growth within Onslow will need to have regard to coastal processes and hazards, and physical, infrastructure and industrial considerations.</p> <p>Native title and Aboriginal heritage will need to be addressed for Crown land identified for new development or expansion.</p>	<p>The resident population should stabilise around 950-1,000 persons through the medium term without any additional significant projects beyond those operating or planned.</p> <p>68 new dwellings have been completed within the Barrarda Estate, with additional vacant lots available. Some future demand could be absorbed by available vacant lots.</p>	<p>The Onslow Townsite Expansion Structure Plan identified some areas for future planning. Consider options for these and whether the Local Planning Strategy should recommend land uses for these areas. Check future planning areas on the Structure Plan.</p> <p>Ensure future urban infill and development suitably considers coastal processes, climate change and the impacts on the existing town centre and urban development in low lying areas from flood events, tidal inundation and sea level rise.</p>
<b>Paraburdoo Housing Stock</b>	Paraburdoo will expand or contract as mining activity does. There is little impetus to intervene in any growth plans unless there is a compelling, regionally significant reason to do so.	<p>There are approximately 41 vacant lots available within the townsite for infill housing. Preference for new housing would be towards available vacant lots.</p> <p>Development investigations for new expansion should consider land with direct road frontage and service availability. Clearing permits may be required in some cases. Aboriginal Heritage matters would need to be addressed as part of any investigations.</p>	<p>Support post-mining diversification of the economic sectors in town, including Aboriginal services, and tourism.</p> <p>Prepare and present scenarios for the long-term development opportunities for residential purposes in Paraburdoo, and to seek agreement on the planned development of land as well-integrated and functional components of the townsite.</p>

Population and Housing	Implications	Issues	Opportunities
<b>Tom Price Housing Stock</b>	<p>The WAPC <i>HotSpots Update</i> considers Tom Price could reach a resident population of 4,750 however this is not reflected in population figures, putting population numbers closer to 3,500.</p> <p>Sufficient land has been identified to accommodate new project or expansionary demands. The Shire is undertaking Scheme Amendments that will make identified land available for future development within Tom Price, including Area W.</p>	<p>There are approximately 46 vacant lots available within the townsite for infill housing. A number of lots may be large enough to accommodate grouped or multiple dwelling development.</p> <p>The <i>HotSpots Update</i> considered areas for urban infill and development and the Local Planning Strategy supports further investigations into their development capability.</p>	<p>Support amendments to the local planning scheme that contribute towards bringing de-constrained land forward for consideration as urban infill or urban development.</p> <p>Prepare and present scenarios for the long-term development opportunities for residential purposes in Tom Price, and to seek agreement on the planned development of land as well-integrated and functional components of the townsite.</p>
<b>Workforce Accommodation – Onslow and ANSIA</b>	<p>Chevron Australia operates its workforce accommodation campsite within the ANSIA.</p> <p>A number of properties within Onslow are used for workforce accommodation, whether for Government Regional Officer Housing, or housing for workforce for Chevron Australia, Onslow Salt, BHP Billiton and others.</p> <p>There is high demand for workforce accommodation for the Wheatstone project construction period. Workforce demand is expected to fall away through 2017.</p>	<p>The Wheatstone project is transitioning from construction to operational phases. As construction activity moves towards completion, workforce numbers will decline.</p> <p>Other proponents do not have access to Chevron's workforce accommodation site within the ANSIA.</p> <p>BHP Billiton may require workforce accommodation within the ANSIA should the Macedon Wet Gas Compression project proceed.</p> <p>There is no short-term plan to develop the 'Operational Village' Lot 4001 within the Onslow townsite.</p>	<p>Provide and plan for the development of the 'Operational Village' on Lot 4001 within the Onslow townsite, as a well-integrated component of the townsite.</p> <p>Promote the provision of higher quality, more permanent accommodation within the Onslow townsite.</p>
<b>Workforce Accommodation – Tom Price and Paraburdoo</b>	<p>Workforce camps are considered to have legacy issues for the local government. When they are located beyond the townsites, the result is a lack of integration with the local communities, and limited opportunities for social interaction.</p>	<p>As iron ore prices decline, iron ore producers are anticipated to find cost reduction strategies or solutions, including reducing reliance on human labour to undertake some parts of operations. Technological advancement, the use of automated technology and drove vehicles, can contribute towards a reduction in operational workforce.</p> <p>There are concerns at a State level that FIFO work could lead to a heightened risk of mental health issues.</p>	<p>The Shire of Ashburton maintains its position on requiring operational workforce to be directed towards existing townsites.</p> <p>Prepare scenarios for the short and long-term development opportunities of land and buildings for Workforce Accommodation in Tom Price, Paraburdoo and Pannawonica, as well-integrated and functional components of townsites.</p>
<b>Aged Care</b>	<p>Whilst there are some limited aged person dwellings within the Shire, there</p>	<p>There is an urgent need for aged care accommodation and respite facilities, particularly for the Indigenous community.</p>	<p>Consider demand for aged care sites within the towns.</p>

Population and Housing	Implications	Issues	Opportunities
	are no purpose-built dwellings to accommodate their particular needs.	It is understood that Regional Development Australia is conducting an aged care housing strategy across the Pilbara region.	

**Table 6 Implications, Issues and Opportunities – Economy and Employment**

Economy and Employment	Implications	Issues	Opportunities
<b>Economic Growth</b>	<p>Forecasts show a gradual recovery in global, national and state economic growth, domestic economic activity and growth in exports.</p> <p>There appears to be resilience in the number of businesses within the Shire.</p> <p>The Shire of Ashburton has a higher than average SEIFA score, indicating lower levels of disadvantage. However, disadvantage is still pronounced within the Indigenous community.</p>	<p>The Pilbara Region is exporting unprecedented levels of iron ore, whilst experiencing weaker iron ore prices.</p> <p>Business growth may be leveraged from mining, or growth in other industry sectors (agriculture, tourism, construction, etc.).</p>	<p>The Local Planning Strategy can facilitate future urban and industrial development through identifying land areas suitable for town growth, should it be required.</p> <p>Support diversification of the economy to broaden the scope of its regional export potential.</p> <p>Support government initiatives to reduce socio-economic disadvantage within the Indigenous community.</p>
<b>Building Activity</b>	Shire reports indicated an approximate growth rate of 1.2%, based on creation of new lots.	New lots may be required to address projected population increase within the townsites.	Identify land for urban infill and urban investigation, with a view to ensure that capable land is de-constrained and available, should demand warrant growth to occur.
<b>Oil and Gas Resources</b>	Significant economic benefits are generated from oil and gas, particularly from Gorgon and Wheatstone.	<p>Commitments have been made by Chevron Australia for critical and social infrastructure within Onslow, as part of its State Development Agreement.</p> <p>The major oil and gas development are located within the ANSIA. The Shire has limited scope given it has no authority over the ANSIA.</p>	<p>Liaison and coordination with the Western Australian Planning Commission and State Agencies in relation to major proposals and developments occurring, that may have an impact on social, economic or environmental factors within the Shire.</p> <p>Ongoing liaison with the State Government in sourcing funding commitments to critical and social infrastructure.</p>
<b>Mining</b>	<p>Iron Ore is the most significant resource (in export terms) within the Shire of Ashburton.</p> <p>Global competition; mining company decision making; costs of extraction; access; infrastructure; and</p>	Iron ore reserves across Australia may last for another 65 years, noting that the majority of iron ore is located in the Pilbara Region.	<p>Work with mining companies and State Agencies in relation to ensuring the community's needs and expectations are being considered and met through ongoing mining activity within the Shire.</p> <p>Work with Department of Planning, Lands and Heritage, State Agencies, and service providers to ensure that</p>



Economy and Employment	Implications	Issues	Opportunities
	<p>environmental, social and political factors all play a role in the viability of iron ore projects.</p> <p>Recognition that the Mining Act is not subject to the Planning and Development Act.</p> <p>Recognise that State Agreements exist and grant particular rights to mining companies.</p> <p>Development of worker accommodation can fall under the scheme.</p>	<p>Agreements can leverage the provision of critical and social infrastructure for supporting the liveability and sustainability of towns.</p> <p>Issuing of mining leases and tenements can have a bearing on the use of land.</p> <p>Mining projects are supported by workforce accommodation (i.e. construction camps), which can be isolated from communities and services.</p>	<p>appropriate infrastructure is in place to minimise bottlenecks for projects.</p> <p>Ongoing liaison with the State Government in sourcing funding commitments to critical and social infrastructure.</p> <p>Advocate for workforce accommodation to be located in close proximity of construction project sites, to minimise impacts on land; support worker accommodation within gazetted townships.</p>
<b>Salt</b>	<p>Onslow Salt is an established operation, with a local workforce based in Onslow.</p> <p>A more recently announced proposal by K+S is still in planning phase. Future employees may be housed in Exmouth or Onslow.</p>	<p>Onslow has the capacity and facilities available for accommodating employees for the proposed salt operations.</p> <p>The Asian market is in proximity and is experiencing growth in demand for industrial salt.</p>	<p>Ensure that Onslow is the town of choice for housing of employees for projects in proximity to the town.</p> <p>Work with Onslow Salt and K+S to maintain a good working relationship between the salt operations and the town.</p>
<b>Economic Transformational Opportunities</b>	<p>Government investment is occurring into a range of economic transformational opportunities.</p> <p>The Shire is in proximity to Asian markets, other international markets such as the Middle East, and domestic markets.</p>	<p>Opportunities have been identified in sustainable commercial-scale algae; bio-fuels; irrigated agriculture; beef; high-tech greenhousing; aquaculture; tourism.</p> <p>Diversification of the economy can help to build robust communities, diversify employment choices, and encourage a greater spread of skill sets and knowledge.</p>	<p>Facilitate and encourage new, emerging or growth industry sectors to consider establishing themselves within the local government area.</p> <p>Work with State Agencies and service providers to ensure the Shire and the region is ready for economic transformation projects, whether through appropriate education and training, infrastructure, services, or other business needs.</p>
<b>Employment</b>	<p>Employment is heavily oriented to mining and construction, followed by accommodation and food services; and transport, postal and warehousing.</p> <p>The emphasis of mining and construction work is represented by 65% of labour force working more than 49 hours per week.</p>	<p>Significant employment growth can be anticipated in professional, scientific and technical services; and transport, postal and warehousing.</p> <p>Long work weeks and FIFO employment is noted to have detrimental health impacts on individuals, relationship impacts on their networks, and socio-economic impacts on communities.</p>	<p>Economic transformational opportunities could improve the ability to broaden employment, and potentially lead to growth in other professional occupations.</p> <p>Variety in job types and employment choice may assist in bringing in a broader demographic group, including women.</p>
<b>Workforce Development</b>	<p>Projections anticipate a more diverse employment distribution in the Pilbara Region by 2035. Actions need to be</p>	<p>Occupations experiencing critical workforce shortages include trade, education, professional services, health care, mining, hospitality, and community service workers.</p>	<p>Support government initiatives to identify future workforce development and skills and ensure that these can be addressed.</p>

Economy and Employment	Implications	Issues	Opportunities
	<p>taken in advance to facilitate growth in other employment sectors.</p> <p>At a State level, education and training providers will work harder to predict and provide more relevant vocational courses that will be valued by industry, and also help deliver skill sets that will future-proof the workforce to future economic changes / transformational opportunities.</p>	<p>Most post-school qualifications attained in the Pilbara are insufficient to meet the requirements of the employment market.</p> <p>Low attendance is recorded at the education and training institutions that are available in the Pilbara region (i.e. primary schools, high schools, community schools, State Training Provider campuses, college campuses, education outlets).</p> <p>Attendance rates and Literacy and numeracy results for Pilbara Students are below State averages, which have an impact on local capacity for graduates to meet industry demand at the working age. Schools also have difficulties attracting staff.</p> <p>Accurately characterising the Pilbara Aboriginal population is difficult; however the above issues are broadly applicable. Literacy and numeracy levels are low, which can create barriers to gaining employment. Pilbara Aboriginal residents have a lower average schooling (19.4%) completed relative to the Western Australian Aboriginal population (20.6%).</p>	<p>Vocational education and training is likely to be an important means of providing post-school qualifications for the workforce. Apprenticeships and traineeships assist in up-skilling the workforce; however the State has identified that more work is required to ensure an appropriate number of participants are in training.</p> <p>All levels of government, education stakeholders and industry all actively collaborate to increase participation, workforce development and training outcomes.</p>

**Table 7 Implications, Issues and Opportunities – Retail and Commerce**

Retail and Commerce	Implications	Issues	Opportunities
<b>Lease and Sale Data</b>	<p>The Shire was reported in 2015 to have the lowest number of advertised commercial leases, and one of the highest advertised retail and office average annual lease costs.</p> <p>The Shire had the lowest reported number of industrial/warehouse properties advertised for sale.</p>	<p>Project population growth and more residents living permanently in towns will help to sustain more retail activity and potential expansion of retail and commercial.</p>	<p>Identify the Town Centres for Onslow, Tom Price and Paraburdoo within the Strategy. Zone the Town Centres in the Scheme with the aim to encourage and facilitate a compatible range of retail, commercial, mixed use, community/civic, entertainment and hospitality uses.</p> <p>Ensure the Town Centres are accessible by walking, cycling and vehicles.</p>

Retail and Commerce	Implications	Issues	Opportunities
	Growth in non-residential building approvals peaked and since declined.		
Relocation of commercial/civic centre Onslow	Modelling identifies risks of inundation and coastal processes that would impact on the Onslow commercial/civic centre.	The Onslow Townsite Strategy recommends relocation of the commercial / civic centre outside of the coastal hazard risk area, and the need for the Shire to consider its position on this and other options for compliance with SPP 2.6 and its Guidelines.	Identify alternative locations for accommodating the relocation of the Onslow commercial / civic centre, to ensure that future growth and adaptation of the town is not prejudiced by short-term development decisions.
Modelled Floor Space Demand – Shire-wide	<p>Future population growth can increase demand for retail and bulky goods trade.</p> <p>The overall distribution of additional retail and bulky good floorspace would be dependent upon the population growth experienced within the individual town sites.</p>	<p>The Strategy needs to identify appropriate land available for future retail and commercial development, to predict and provide for forecasted population growth.</p> <p>Based on Band C Population growth, a total land area of 25,593m<sup>2</sup> may be required to service the requisite growth of 10,160m<sup>2</sup> of retail floorspace and 4,355m<sup>2</sup> in bulky goods retail. The land area considers the net leasable area, and additional land for other land requirements such as warehouse/storage space and car parking.</p>	<p>Identify land within the town centres of Tom Price and Paraburdoo for supporting future retail and commercial development, commensurate with population growth.</p> <p>Undertake a retail sustainability assessment for the three townsites to confirm future land and floorspace requirements, based on projected population growth.</p> <p>Support the incubation of retail and small business.</p>

**Table 8 Implications, Issues and Opportunities – Industry**

Industry	Implications	Issues	Opportunities
ANSIA	LandCorp and WAPC are responsible for administering the ANSIA. Land is available for heavy industry and general industry.	Land remains available in ANSIA for complementary industrial development.	Support heavy industry and general industry that are compatible with existing uses, being located within the ANSIA, where buffers are already taken into consideration.
Industry – Onslow	<p>Onslow's General Industry Area, near Beadon Creek, is limited in its ability to expand due to proximity of short-stay accommodation, the waterways and unknown capability for drainage.</p> <p>The Beadon Creek Boat Harbour will provide for some additional industrial</p>	Industrial development and growth may be investigated within Onslow, having regard to the coastal processes and hazards, drainage implications, minimum floor level requirements, height limitations, infrastructure, native title, heritage and environmental matters.	<p>Consider investigations for an eastern expansion of the Onslow General Industry Area towards Beadon Creek Boat Harbour, with potential road extensions made to Cornish Way and Shanks Road.</p> <p>Expansion for future industrial development can be investigated, potentially along McAullay Road, between</p>

Industry	Implications	Issues	Opportunities
	<p>land, and is a working boat harbour and port facility.</p> <p>The Onslow Airport Mixed Business Precinct provides for light and service industry and mixed business. It may be enhanced with road access to Onslow Road, and possible expansion.</p>	<p>Coastal processes, climate change and the impacts on the existing town centre and urban development in low lying areas from flood events, tidal inundation and sea level rise.</p> <p>Onslow Salt operations associated with its evaporation and crystalliser ponds, stockpiles, conveyor system and jetty. As part of the State Agreement, sensitive land uses may be impacted by the operations. Technical studies may be required to determine appropriate buffer requirements, or for structural treatments for new development, to minimise potential impacts. Development within the hydrological catchment for Onslow Salt must ensure there are no adverse impacts.</p> <p>Port facilities at Beadon Creek Boat Harbour, as public works, are exempt from development control. Beadon Creek waterbody and floodplain are physical barriers to expansion of industry.</p>	<p>the existing Onslow General Industry Area and Onslow Airport Mixed Business Precinct.</p> <p>Other land for investigation could be land within the WWTP buffer (between Onslow Road and McAullay Road) for mixed business, light and service industry.</p> <p>Longer-term expansion of the Onslow Airport Mixed Business Precinct over land held in freehold by the Shire of Ashburton may be investigated, if land demand exceeds supply.</p>
Industry – Tom Price	<p>Tom Price's Mixed Business area is constrained by landform, and the railway line to the west. Some expansion has happened within the last 5-6 years.</p>	<p>Expansion of the Tom Price Mixed Business area may be investigated for land fronting Doradeen Road.</p> <p>Rio Tinto subsidises rents within the Tom Price Mixed Business area. Future expansion areas may need to be considered in the context of their capability of having viable industrial businesses.</p>	<p>Consider land capability investigations to confirm whether land fronting Doradeen Road for industry/mixed business. Investigate opportunities for connecting the road network, should land gradients allow.</p> <p>Investigate options for industrial development within Reserve 38467.</p>
Industry – Paraburdoo	<p>Paraburdoo's Industry Area is within Rio Tinto's lease holding, with lots in freehold or leased to operators. Major mining projects in the vicinity have supported local industry in the past</p>	<p>Vacant land is available within the townsite boundary and surrounding the Paraburdoo Industry Area.</p> <p>Rio Tinto subsidises rents within the Paraburdoo Industry Area. Future expansion areas may need to be considered in the context of their capability of having viable industrial businesses.</p>	<p>Investigate land capability and opportunities for expansion of the Paraburdoo Industry Area.</p> <p>Consider future land use direction for the existing Drive-In.</p>

**Table 9 Implications, Issues and Opportunities – Rural and Rangeland Areas**

Rural and Rangeland Areas	Implications	Issues	Opportunities
<b>Pastoralism</b>	<p>Pastoral activities may continue throughout the majority of the Shire.</p> <p>There appears to be a correlation between the worst areas of degradation and erosion, and the most valuable pasture lands.</p>	<p>Pastoral activities have an impact on native vegetation, flora and fauna, erosion and other factors that need to be adequately addressed and managed by pastoral landowners. Pastoralism can be ecologically sustainable with appropriate management in place.</p> <p>Cattle from Minderoo station is live exported, with potential for exports through Port Hedland.</p>	<p>Cattle industry sector has been identified as a transformation economic opportunity.</p> <p>A number of planning considerations can be taken into account for the benefit of encouraging further pastoral and agricultural pursuits within the Shire:</p> <ul style="list-style-type: none"> <li>• Consideration of natural resource management and land management practices to minimise negative impacts and contribute towards sustainable pastoralism.</li> <li>• Ensuring that remnant vegetation and areas with significant values are protected and maintained.</li> <li>• Agricultural pursuits should be directed such that they minimise impacts as a result of clearing, bushfire management, uncontrolled access, weeds, pests and feral animals.</li> </ul>
<b>Agriculture</b>	<p>The Pilbara Hinterland Agricultural Development Initiative (PHADI) provides for future of irrigated agricultural development, through Royalties for Regions, supporting public and private sector investment decisions for new irrigated agricultural developments.</p> <p>22 countries are identified as 'high potential' target markets for new agricultural products that could be grown in the Pilbara.</p>	<p>Legislation currently allows for irrigation of a range of crops on a pastoral lease.</p> <p>A number of irrigated agricultural developments could be possible on a medium-to-large scale.</p> <p>There are opportunities for large areas of soils to be investigated for capability and suitability for irrigated agriculture.</p> <p>Mine dewater surplus can be reinjected for reuse for agricultural and other purposes.</p>	<p>Work and collaborate with the partnerships held between DAFWA, PDC, DRD, Aboriginal groups and the pastoral industry for delivering projects and other outcomes, through demonstration and prospective projects.</p> <p>Ensure intensive agricultural proposals, are appropriate to the sustainable capability of the land.</p> <p>Expansion of projects like Rio Tinto's Hamersley Agricultural Project may arise as future opportunities.</p>
<b>Future Growth in Agriculture</b>	<p>Asia and Middle East are attractive markets that demand products that the North of WA can produce.</p> <p>The Pilbara climate is in a similar zone to other countries that produce and export high value products.</p>	<p>Success will depend on products that are robust, mechanically harvested, can thrive in the heat, and can be achieved at scale to be globally competitive.</p> <p>A wide range of agricultural products have been identified, some have proven experience and others will require new skills, new investment, new systems and capital.</p>	<p>Encourage investigations into export market opportunities for crops/food products that could be grown in the Pilbara.</p>
<b>Aquaculture</b>	<p>Aquaculture is an emergent industry sector. It requires development of the sector to a level where it is of a</p>	<p>Aquaculture projects (R&amp;D etc) present opportunities that may contribute to investment, employment.</p>	<p>Encourage investigations into market opportunities for aquaculture products that could be grown in the Pilbara.</p> <p>The emergence of new sectors such as aquaculture may require particular consideration of the industry's land</p>

Rural and Rangeland Areas	Implications	Issues	Opportunities
	<p>sustainable scale to be economically viable and internationally competitive.</p> <p>Thevenard Island was identified for possible offshore/nearshore aquaculture.</p> <p>Onshore areas within 10km of Onslow, near McCann Well, and some land in Tom Price were identified as inland areas of interest.</p>	<p>Aquaculture requirements appropriate risk management to address biosecurity, water use, wastewater management.</p>	<p>requirements, environmental management, and export logistics.</p>
Conservation Areas	<p>The level of reservation within the Shire of Ashburton is greater than the rest of the Pilbara region.</p>	<p>Management of conservation reserves under the Department of Biodiversity Conservation and Attractions.</p> <p>A number of new reserves are proposed, including Mulgalands Conservation Park and West Hamersley Range Conservation Park.</p> <p>Management of public access and visitor numbers in a manner that balances tourism, visitation and conservation values.</p>	<p>Shire could consider active management of weeds, uncontrolled access, and feral animals.</p> <p>There are proposals for new additions within the Conservation areas, which can be supported by the Shire of Ashburton.</p>

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**Table 10 Implications, Issues and Opportunities – Tourism and Visitors**

Tourism and Visitors	Implications	Issues	Opportunities
<b>Attractions and Amenities</b>	<p>The North West is considered for its outback experiences, scenery experiences and indigenous experiences.</p> <p>In the economic context, tourism is a very small contributor to current economic activity, however its value can be sustainable over time and opportunities are available for its increased contribution.</p> <p>Mackerel Islands Resort (Direction Island and Thevenard Island) and Montebello Islands are accessible from Beadon Creek Boat Harbour (and proposed marina).</p> <p>Attractions around Onslow include the Old Onslow historical townsite, Onslow Salt, the Ashburton River, termite mounds and Sunrise, Sunset and Four Mile beaches.</p> <p>Tom Price is considered to be the gateway to Karijini National Park. The town acts as a service centre for people to purchase necessary supplies in anticipation of staying within the National Park. Tom Price has the potential to capitalise on its proximity to Karijini National Park; however this requires significant investment in infrastructure and marketing/tourism awareness.</p> <p>Aboriginal culture, heritage and experiences are significant tourism assets.</p>	<p>Onslow is a hub for tourism that has a coastal or island focus.</p> <p>Tom Price and Paraburdoo can provide outback, scenery and indigenous experiences.</p> <p>Some attractions or activities (such as fishing and island-based tourism) are perceived to be expensive for the general public.</p>	<p>Develop the breadth and range of tourism products related to islands, fishing tourism, national parks, and indigenous art and culture.</p> <p>Increased promotion of tourist attractions including increased promotion and marketing, particularly for Karijini National Park and other natural attractions.</p> <p>Opportunities to leverage from nature based tourism and heritage and aboriginal tourism development.</p> <p>Arts and cultural programs to attract national and international recognition.</p>
<b>Accommodation</b>	<p>Accommodation options in Onslow include two caravan parks, free camping facility, self-contained units and motel rooms.</p> <p>Onslow accommodation is becoming more accessible as occupancy rates</p>	<p>Tom Price is acknowledged as a tourism destination for visitors to Karijini National Park and there is an opportunity for in-town mining accommodation to transition to short-stay accommodation if there is demand (i.e. Windawarri Lodge, Marandoo Annex) or additional area to the</p>	<p>Consider mechanisms such as flexibility between short stay accommodation and permanent residential development, provision of land for iconic tourism use at reduced or no cost and government underwriting of portions of some strategic tourism developments.</p>

Tourism and Visitors	Implications	Issues	Opportunities
	normalise, due to lower accommodation demand from construction workforce.	north of Karijini Lodge to be considered for expansion purposes.	
<b>Accessibility</b>	<p>Some seats are available on flights from Perth to Onslow and Paraburdoo.</p> <p>Tom Price is accessible by road to Paraburdoo Airport.</p>	<p>Regional airports to expand to cater for increased passenger flights to increase visitation.</p> <p>The improvement and sealing of the Karratha - Tom Price Road is considered an ideal opportunity to generate substantial economic benefits for the Pilbara and the State through both increased tourism and improved freight traffic movements.</p>	<p>Capitalise on proximity to Asia and its airport infrastructure.</p> <p>The RFDS airstrip near Tom Price could be investigated for upgrading to an airport.</p> <p>Shire of Ashburton advocates sealing of the Karratha - Tom Price Road.</p>
<b>Awareness</b>	Tourism within the region is regarded as an under-utilised resource that has the ability to provide many economic benefits, particularly for the major towns of Onslow, Tom Price and Paraburdoo.	<p>Seasonality of visitation, geographical isolation, the shortage of adequate accommodation and facilities.</p> <p>The promotion of tourism in the region requires significant investment in the marketing of tourism opportunities, upgrading of infrastructure and consideration of accommodation options.</p>	<p>Product development, marketing and promotions, and training and support, targeting older couples, backpackers, international couples, nature-based visitors and cruise ship passengers.</p> <p>Opportunities for increased promotion of tourist attractions including increased promotion and marketing of industrial tourism experiences (e.g. visitors to ANSIA and Onslow Salt), conference and training location.</p> <p>Preparation of a Tourism Strategy as identified in the Strategic Community Plan.</p> <p>Upgrade and expand Visitor Centre facilities and services, tourism accommodation, camping grounds and associated facilities.</p>

**Table 11 Implications, Issues and Opportunities - Community, Recreation and Open Space**

Community, Recreation and Open Space	Implications	Issues	Opportunities
<b>Community Facilities</b>	<p>The Shire of Ashburton has analysed the number of assets across the local government district for ongoing maintenance and management.</p> <p>Advancements in technology and materials can assist in reducing maintenance costs or offset asset replacement.</p>	<p>A <i>Map and Gap Analysis</i> conducted in 2012 identified a high level of investment. Chevron and BHP Billiton have also introduced funding programs to support a range of community-based projects and activities.</p> <p>Priorities were identified in the <i>Community Strategy Plan</i> for Onslow, Pannawonica, Paraburdoo, Tom Price and remote Aboriginal Communities.</p> <p>Careful consideration of population growth in towns, with the supply of services.</p>	<p>Review the need for new and existing community facilities and analyse the whole-of-lifecycle costs to ensure facilities are capable of being maintained to an acceptable community standard.</p> <p>Maintain the <i>Strategic Asset Management Plan</i> which reflects the community facilities and assets for ongoing maintenance and management.</p> <p>Where practical and reasonable, encourage the development of new community facilities within co-located facilities, or in proximity to town centres.</p>
<b>Schools</b>	<p>Department of Education's Pilbara Education Regional Office is responsible for public schools. 6 public schools are identified in the Shire of Ashburton.</p>	<p>Four schools have combined as the Ashburton School Alliance, which organise combined schools student activities.</p> <p>6ha site in Onslow for future school.</p>	<p>Support local government use of facilities and open spaces in relation to school student activities.</p>
<b>Public Open Space</b>	<p>Significant areas within the townsites are within managed Crown reserves for public recreation.</p>	<p>Prediction for the same level or slight increase of younger facilities is expected (which make use of parks, playgrounds and recreation space).</p>	<p>Careful consideration of population growth and demographic changes in towns, with the supply and quality of public open space.</p> <p>Promote landscaping where appropriate to be of low-water use, drought tolerant, and resilient to high winds or cyclonic events.</p>

**Table 12 Implications, Issues and Opportunities – Urban Design, Character and Heritage**

Urban Design, Character and Heritage	Implications	Issues	Opportunities
<b>Urban Design</b>	Buildings and housing have high construction costs due to the isolated nature of the towns. Development needs to consider a total life-cycle cost to ensure that built form is most appropriate having regard to existing weather patterns and climate, future projected climate change.	Guidance that promotes sustainable design principles, is responsive to the Pilbara climate, address the use of finite resources (such as water) and enhance the liveability and wellbeing of residents.  Attractive places and spaces will enhance the liveability and attractiveness of the towns.	Implement Design Guidelines for Onslow.  Prepare local planning policy for climate change.  Prioritise higher quality landscaping along gateway entrances into the townsites, and along Neighbourhood Roads.
<b>Aboriginal, European and Natural Heritage</b>	A number of Aboriginal, European and natural heritage sites are identified on various heritage lists.	Consider ability to use land for Aboriginal purposes, including Native Title, Aboriginal Heritage, and other pursuits including Aboriginal tourism.  Work closely with Traditional Owners in terms of getting their involvement in environmental management and cultural/eco-tourism (running the caravan park, organising tours in places such as Millstream etc.). Focus of this development/industry has been in the Kimberley, and that the Pilbara has many such opportunities which should be supported and developed.	Review and update the Municipal Heritage Inventory to be used as the Heritage list in the Scheme.  Require, where appropriate, that heritage matters are addressed in structure plans and design guidelines.  Consider opportunities for the protection and enhancement of identified sites as part of any assessment of development and/or subdivision applications.  Opportunities exist to protect and promote both Aboriginal and European cultural heritage through joint management arrangements and tourism opportunities with traditional owners, and optimise opportunities for Indigenous training, employment and businesses.

**Table 13 Implications, Issues and Opportunities – Infrastructure Services**

Infrastructure Services	Implications	Issues	Opportunities
<b>Power</b>	<p>Onslow town power supplies are provided by Horizon Power.</p> <p>Town power supplies for Tom Price, Paraburdoo and Pannawonica are supplied by Rio Tinto.</p> <p>There is some presence of renewable energy sources in the local government area including a renewable energy microgrid for Onslow, proposed by Horizon Power.</p>	<p>Intent is to develop a gas fired power plant within the ANSIA Improvement Scheme area. This service is intended primarily for Onslow town usage, with potential for ANSIA users to connect thereafter. The scale of the gas power plant is potentially affected by the proposed renewable energy microgrid by Horizon Power.</p> <p>Underground power has been completed for Onslow.</p> <p>Global microgrid market is experiencing transformational growth, which tend to combine conventional and renewable sources, and battery storage technology.</p>	<p>Growth/expansion of towns will need to consider the capacity of existing power supplies, proposed/future power supplies, and the required transmission infrastructure.</p> <p>Microgrids may assist with delivering reliable and viable energy solutions.</p>
<b>Gas Transmission Pipelines</b>	<p>High pressure gas transmission pipelines do not require development approval.</p>	<p>The Shire may have a role in approving the construction of facilities in the initial stages, i.e. the construction camps, waste water treatment facilities, and road usage.</p>	<p>Apply DC Policy 4.3 <i>Planning for High-Pressure Gas Pipelines</i> policy measures to assess proposals that in the vicinity of any high-pressure gas pipelines in the Shire.</p>
<b>Potable Water</b>	<p>Public Drinking Water Source Areas are predominately groundwater supplies.</p>	<p>Long term utility intent is to develop a water desalination plant in the ANSIA Improvement Scheme area. This service is intended primarily for Onslow town usage, with potential for ANSIA users to connect thereafter. However, abundance of water supplied from the Cane River bore field may lead to a deferral of the water desalination plant being constructed.</p> <p>The use of mine run-off and water extraction may be a difficult yet potentially viable water supply option.</p> <p>There are opportunities for expanding irrigation for investigation in the Pilbara hinterland, from using excess water from mine dewatering.</p>	<p>Support the sustainable abstraction of potable water sources.</p> <p>Support water reuse/recycling associated with mines and townsites.</p> <p>Protect public drinking water supply areas in accordance with relevant water source protection plans, Department of Water and Environmental Regulation's Water Quality Protection Note 25, and SPP 2.7.</p>
<b>Water Management</b>	<p>Rainfall data indicates that average annual rainfall has declined around Onslow yet has increased in inland areas.</p> <p>Adequate management of flood risk, and associated sediment transport in</p>	<p><i>Better Urban Water Management</i> has been designed to facilitate better management of urban water resources, ensuring an appropriate level of consideration to the total water cycle.</p> <p>It is recognised that the Shire is a Waterwise Council, and it should continue to investigate and</p>	<p>Review existing townsite drainage systems and ensure appropriate water quality of stormwater and runoff is addressed.</p> <p>The Shire could also investigate partnerships to establish water recycling and reuse schemes to provide fit-for-purpose sources of water where practical, as an</p>

Infrastructure Services	Implications	Issues	Opportunities
	townsites and industrial areas requires consideration.	expand water efficiency opportunities, such as irrigation of public open space and sports ovals where practical.	alternative to groundwater use to support future development.
<b>Wastewater</b>	Appropriate sewage facilities for all towns and adequate systems in place for smaller scale settlements and Aboriginal communities.	Onslow wastewater treatment plant capacity was doubled, funded by the Wheatstone Project, providing long-term future growth of Onslow. The odour buffer area applies to the upgraded WWTP.	Support ongoing delivery of sewage infrastructure in towns and adequate systems for smaller scale settlements and Aboriginal communities.
<b>Solid Waste Management</b>	There are limited opportunities to divert recyclable material from landfills.  Infrastructure and market opportunities will arise in relation to recycling and diverting resources from landfills.	There are a number of opportunities for Pilbara regional waste processing facilities and recyclable products.  A joint dirty Material Recovery Facility is recognised as an opportunity, for Newman and Tom Price.  A feasibility study recommended a new waste management facility for Onslow be capable of accepting Class 3 and Class 4 waste.	Support a State Government comprehensive waste recycling and disposal plan for strategic waste transfer, collection, treatment, recycling and disposal facilities.  Support diversion of waste from landfills through reduction, reuse and recycling opportunities.  Ensure Aboriginal communities have an effective waste management programme to minimise pollution and risks to human health and water sources.
<b>Telecommunications</b>	Broadcast Australia operates a number of townsite-based telecommunication facilities.  Existing mobile phone coverage is generally limited to townsites, mines, camps and segments of the North West Coastal Highway.	Greater mobile phone coverage for all towns, district roads and highways, and areas frequented by the community, workers and visitors will improve convenience and safety.  Future mine sites will benefit from telecommunications as companies roll-out automated systems (i.e. Rio Tinto's "Mine of the Future" program and its automated drilling and haulage systems).  Proposed telecommunication links to South East Asia will improve bandwidth within the Shire, and its connections to neighbouring markets.	Support the ongoing improvement of availability, coverage, and reliable accessibility to telecommunications services (telephone, mobile network, broadband) and TV/radio broadcasting.



## 5 STRATEGIES AND ACTIONS

The following strategies and actions have application across the Shire of Ashburton. For driving a strong connection between the *Strategic Community Plan* and the Local Planning Strategy, vision statements have been prepared under the five goals, as demonstrated in **section 3**, which underpin the strategies and actions for implementation.

### 5.1 VIBRANT AND ACTIVE COMMUNITIES

INFILL HOUSING AREAS	
Strategies	Actions
<p><b>Infill Housing Areas</b></p> <ol style="list-style-type: none"> <li>1. Prioritise infill development over urban investigation areas for new housing development, except for Onslow where the CHRMAP shall take precedence in identifying areas for urban growth.</li> <li>2. Promote a range of housing types and densities to accommodate a range of community needs.</li> <li>3. Promote infill housing to maximise the uptake of existing vacant lots.</li> <li>4. Encourage opportunities for infill housing that would benefit from direct existing road frontage and the ability to readily connect to existing services.</li> </ol>	<p><b>Infill Housing Areas</b></p> <ol style="list-style-type: none"> <li>1. Where appropriate, increase the residential density codes to support new residential development on existing lots in town or adjacent to existing development where services are readily available, in preference to new residential expansion areas on the periphery of towns.</li> <li>2. Consider the Residential Infill Areas, as shown on Strategy Plans, for short-term infill development in order to facilitate higher dwelling yields.</li> <li>3. Support subdivision applications that rationalise existing lots so as to increase the potential dwelling yield.</li> <li>4. Advocate for the provision of affordable housing product for key workers and low income earners.</li> <li>5. Prepare a local planning policy for guidance that promotes sustainable design principles, is responsive to the Pilbara climate, addresses the use of finite resources (such as water) and enhance the liveability and wellbeing of residents.</li> <li>6. Support projects that provide the replacement of ageing dwelling stock, minor lot area adjustments to create additional lots, or development of existing vacant lots.</li> <li>7. Identify and rezone land to provide for a variety of housing types, with a consideration of medium-range densities around:             <ol style="list-style-type: none"> <li>a. Residential Buildings that support workforce accommodation;</li> <li>b. Public Open Space;</li> <li>c. Schools (future or proposed);</li> <li>d. Town Centres; and/or</li> <li>e. Elevated land that avoids areas subject to flooding or coastal hazards.</li> </ol> </li> </ol>

## URBAN INVESTIGATION AREAS

Strategies	Actions
<b>Urban Investigation Areas</b> <ol style="list-style-type: none"> <li>Promote a range of housing types and densities to accommodate a range of community needs.</li> <li>Encourage the orderly expansion of the townsites of Onslow, Tom Price and Paraburdoo in a manner that provides for appropriate diversity in housing types, availability of open space, safe and legible movement networks, and access to existing shopping, businesses, services and community facilities.</li> <li>Consider development of urban investigation areas once infill land has been developed.</li> </ol>	<b>Urban Investigation Areas</b> <ol style="list-style-type: none"> <li>Rezone Urban Investigation Areas as shown on Strategy Plans to 'Urban Development' in the local planning scheme. This zone will require the preparation of structure plan(s) to guide development and land use, drainage, public open space, movement network, to address the bushfire protection criteria set out in the Guidelines for Bushfire Prone Areas, and staging.</li> <li>Within the Scheme Review, rezone surplus 'Residential' zoned land in the Paraburdoo Townsite to the 'Urban Development' zone, to enable structure planning.</li> <li>Advocate for the delivery of project-ready land to accommodate growth in the townsites.</li> <li>Support subdivision and development which has regard to local climatic factors and contributes to the character and identity of the towns.</li> <li>Request an amendment to the Onslow Townsite Boundary to reflect the development footprint that is envisaged through the Onslow Townsite Expansion Structure Plan.</li> </ol>

## AGED CARE FACILITIES

Strategies	Actions
<b>Aged Care</b> <ol style="list-style-type: none"> <li>Encourage the introduction of aged care facilities that are suitable within the existing community.</li> <li>Support the development of dwellings within the community that are robust and adaptable to address universal access requirements for ageing in place.</li> </ol>	<b>Aged Care</b> <ol style="list-style-type: none"> <li>Land for existing and/or future aged care accommodation / facilities being protected under the local planning scheme, such as the 'Civic and Community' reserve, having regard to the objectives of the reserve under the Model Provisions of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> </ol>

## ABORIGINAL SETTLEMENTS

Strategies	Actions
<b>Aboriginal Settlements</b> <ol style="list-style-type: none"> <li>1. Support the appropriate planning of Aboriginal Communities that have regard to the needs of residents.</li> <li>2. Plan for sustainable and resilient Aboriginal settlements within the Shire.</li> <li>3. To recognise Aboriginal Settlements through the Local Planning Strategy and local planning scheme.</li> <li>4. Collaboratively plan for the orderly and coordinated development of Aboriginal Settlements.</li> </ol>	<b>Aboriginal Settlements</b> <ol style="list-style-type: none"> <li>1. Aboriginal Settlements recognised under SPP 3.2 and located within the local government area shall be zoned 'Settlement' having regard to the objectives of the zone in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>2. Collaborate with the Department of Planning, Lands and Heritage during their preparation of Layout Plans for Aboriginal Settlements.</li> </ol>

## WORKFORCE ACCOMMODATION

Strategies	Actions
<b>Workforce Accommodation</b> <ol style="list-style-type: none"> <li>1. Acknowledge the important role of Workforce Accommodation for contributing towards project viability, workforce convenience being in proximity to project sites, and the economic stimulus benefits to the local government district as a result.</li> <li>2. Consult with proponents to ensure a balanced approach is fostered for the appropriate and reasonable accommodation of workers.</li> <li>3. Encourage construction workforce in proximity to project sites, and operational workforce within the existing townsites of Onslow, Tom Price, Paraburdoo and Pannawonica.</li> </ol>	<b>Workforce Accommodation</b> <ol style="list-style-type: none"> <li>1. Actively pursue the provision of construction workforce accommodation associated with major projects within established townsites wherever possible.</li> <li>2. Retain the long-term development option of Chevron Australia's 'Operational Village' on Lot 4001 within the Onslow townsite, as a well-integrated workforce accommodation development within town.</li> <li>3. Where Development Approval for workforce accommodation is necessary under the local planning scheme, require proponents to demonstrate how they will mitigate the potential social impacts and health issues associated with remote accommodation camps, impacts on existing communities, and how they will provide quality accommodation, support services and facilities.</li> <li>4. Include the Workforce Accommodation land use definition and permissibility in the Zoning Table for the appropriate zones in the local planning scheme.</li> </ol>

## 5.2 ECONOMIC PROSPERITY

### SHORT-STAY ACCOMMODATION

Strategies	Actions
<p><b>Short-Stay Accommodation</b></p> <ol style="list-style-type: none"> <li>1. Provide specific infrastructure that will encourage and facilitate short-stay accommodation development and other types of tourism development.</li> <li>2. Develop new investment through business development and support, and marketing opportunities with relevant stakeholders.</li> </ol>	<p><b>Short-Stay Accommodation</b></p> <ol style="list-style-type: none"> <li>1. Prepare a Strategy to identify land for strategic tourism development, and seek State Government intervention and assistance to secure land.</li> <li>2. As part of the Scheme Review zone Worker Accommodation &amp; Short Stay Accommodation areas as shown on Strategy Plans, as 'Tourism' having regard to the zone objectives under the Model Provisions of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>: <ol style="list-style-type: none"> <li>a. Lot 381 on Plan 205462, Onslow;</li> <li>b. No. 3 Second Avenue, Onslow;</li> <li>c. No. 6 Second Avenue, Onslow (Ocean View Caravan Park);</li> <li>d. Lot 100 on Plan 403216, Onslow (Discovery Holiday Park);</li> <li>e. Lots 551, 552, and 533 on Plan 181876, Parsley Street, Onslow;</li> <li>f. No. 66 Nameless Valley Drive, Tom Price (Tom Price Tourist Park);</li> <li>g. No. 841 Stadium Road, Tom Price (Windawarri Lodge);</li> <li>h. Lots 3010, 3011, 3013, 3014, 3016 and 3017 on Plan 51300, Tom Price;</li> <li>i. Lot 1 Camp Road, Paraburdoo (Paraburdoo Caravan Park);</li> <li>j. Lot 61 on Plan 215305, Paraburdoo (Rocklea Palms);</li> <li>k. Lot 622 McRae Avenue, Paraburdoo (Paraburdoo Inn);</li> <li>l. Lot 623 McRae Avenue on Plan 14726, Paraburdoo;</li> <li>m. Lot 603 Rocklea Road on Plan 15080, Paraburdoo;</li> <li>n. Lots 605, and 606 on Diagram 80075, Paraburdoo;</li> <li>o. Lot 604 Rocklea Road on Diagram 72499, Paraburdoo; and</li> <li>p. Eastern portion of Lot 61 on Plan 215305, Paraburdoo.</li> </ol> </li> </ol>

## SHORT-STAY ACCOMMODATION

Strategies	Actions
	<ol style="list-style-type: none"> <li>3. Insert appropriate tourism land use definitions and permissibility in the Zoning Table for the 'Tourism' zone and other appropriate zones in the local planning scheme.</li> <li>4. Allow a mix of land uses and use of innovative/modular construction methods for tourism developments.</li> <li>5. Increase supply of short-stay accommodation to ensure availability for tourists and short-term workforce demands.</li> <li>6. Provide meeting facilities, dump points for caravans, infrastructure for arrivals by sea or air.</li> </ol>
<b>Ecotourism and Heritage Tourism</b> <ol style="list-style-type: none"> <li>1. Support ecotourism and heritage tourism opportunities which celebrate the unique natural beauty, biodiversity and cultural values of the Shire.</li> </ol>	<b>Ecotourism and Heritage Tourism</b> <ol style="list-style-type: none"> <li>1. In the 'Rural' zone, support the introduction of low impact, nature-based, eco-tourism or cultural tourism uses, with guidance through provisions in the Scheme and a local planning policy.</li> </ol>

## INDUSTRY

Strategies	Actions
<b>Industry</b> <ol style="list-style-type: none"> <li>1. Identify areas for industrial expansion in proximity to townsites.</li> <li>2. Promote the appropriate location of industrial development that supports strategic industry, general industry, and light/service industry sectors.</li> <li>3. Support the diversification of industrial services available within the Shire to assist in providing viable industrial land for expansion.</li> <li>4. Promote multiple users of infrastructure, services, and networks to minimise duplication and inefficiency.</li> </ol>	<b>Industry</b> <ol style="list-style-type: none"> <li>1. Consider the Future Industry / Mixed Business areas as shown on the Strategy Plans to be zoned 'Industrial Development' in the local planning scheme. This zone will require the preparation of structure plan(s) to guide development and land use, drainage, movement network, and staging.</li> <li>2. Support heavy industry and general industry uses that are compatible with existing uses to be located within the ANSIA.</li> <li>3. Promote the transition towards light industrial development along Beadon Creek Road where there is an interface to urban development.</li> <li>4. Allow light/service industry and mixed business development within the Onslow Airport Mixed Business Precinct.</li> </ol>

## INDUSTRY

Strategies	Actions
	<ol style="list-style-type: none"> <li>Investigate the viability for future expansion of light/service industrial and general industrial uses to the immediate south of the Onslow Airport Mixed Business Precinct.</li> <li>Rezone land within the Reserve 19291 on Onslow Road as 'General Industry' as shown on the Strategy Plans as an extension to the industrial zone, having regard to the zone objectives under the Model Provisions of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>. This land area requires a road connection to Onslow Road and any such road will be located outside of the Onslow Salt State Agreement area.</li> <li>Allow for expansion of light industry adjacent to existing industry areas within Paraburdoo and Tom Price.</li> </ol>

## RETAIL AND COMMERCIAL CENTRES

Strategies	Actions
<b>Retail and Commercial Centres</b> <ol style="list-style-type: none"> <li>Encourage compact, walkable, comfortable, attractive and safe Town Centres.</li> <li>Promote Town Centres as hubs for government services, business services, community services, and public recreation.</li> <li>Promote the Town Centres as the principal places to shop, do business, socialise, relax and recreate.</li> </ol>	<b>Retail and Commercial Centres</b> <ol style="list-style-type: none"> <li>Identify the Town Centres within Onslow, Tom Price and Paraburdoo within the Strategy.</li> <li>Zone the Town Centres in the Scheme to accommodate a compatible range of retail, commercial, mixed use, community/civic, entertainment and hospitality uses.</li> <li>Ensure Town Centres are accessible to all age groups and persons, through the adequate provision of footpaths, cycling, and public transport (where feasible).</li> </ol>



## RURAL AND RANGELANDS

Strategies	Actions
<b>Rural and Rangelands</b> <ol style="list-style-type: none"> <li>1. Protect rural land from incompatible land uses and protect high quality land for cattle, agriculture or pastoral purposes.</li> <li>2. Support compatible uses in the hinterlands of the townsites of Onslow, Tom Price and Paraburdoo, where these contribute to quality of life, recreation and liveability.</li> <li>3. Recognise the rights and customs of Traditional Owners in relation to their ability to access and use lands and waterways.</li> </ol>	<b>Rural and Rangelands</b> <ol style="list-style-type: none"> <li>1. Allow for incidental and discretionary land uses in the 'Rural' zone to be inserted into the Scheme recognising that rural land is intended to be a highly flexible zone for a range of land uses, and the zone can also accommodate natural landscape values and environmental considerations.</li> <li>2. Insert aquaculture as a land use in the 'Rural' zone and include provisions to consider appropriate measures including bio-security, water use, wastewater management and buffers if required.</li> <li>3. Advocate development of higher capability land suitable for agriculture and agriculture-related projects, as mapped for the Pilbara Hinterland Agricultural Development Initiative by the Department of Primary Industries and Regional Development.</li> </ol>

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### 5.3 UNIQUE HERITAGE AND ENVIRONMENT

HERITAGE	
Strategies	Actions
<b>Heritage</b> 1. Support the protection of sites of natural heritage, Indigenous cultural heritage significance, and European cultural heritage within the district.	<b>Heritage</b> 1. Review and update the Municipal Heritage Inventory to be used as the Heritage list in the Scheme. 2. Require, where appropriate, that heritage matters are addressed in structure plans and design guidelines. 3. Protect identified sites as part of any assessment of development and/or subdivision applications.

COASTAL PROCESSES AND FLOODPLAINS	
Strategies	Actions
<b>Coastal Processes and Floodplains</b> 1. Adopt a long-term development approach for the Onslow townsite as a result of forecasted sea level rise and storm surge events. 2. Ensure that appropriate risk management and adaptation planning assessments are undertaken in known areas that are at risk of tidal inundation, storm surge, coastal processes, and/or flooding.	<b>Coastal Processes and Floodplains</b> 1. Implement the land use planning recommendations of the <i>Coastal Hazard Risk Management and Adaptation Plan</i> for the Onslow Coast as part of the Scheme Review. 2. Review and update as required the Special Control Areas in the local planning scheme to ensure finished floor levels are appropriate, and that development is supported by an assessment of the impact of potential coastal processes, flood and storm surge events: <ol style="list-style-type: none"> <li>Onslow coastal hazard;</li> <li>Onslow floodplains;</li> <li>Areas of tidal inundation risk.</li> </ol>

## NATURAL RESOURCE MANAGEMENT AND ENVIRONMENTAL PROTECTION AREAS

Strategies	Actions
<p><b>Natural Resource Management and Environmental Protection Areas</b></p> <ol style="list-style-type: none"> <li>1. Recognise the contribution the natural environment values provide to liveability, health, lifestyle and economy.</li> <li>2. Support conservation, protection and management of natural resources, where possible, to enhance land quality, resilience to erosion, water quality, fauna and flora, and ecosystem function.</li> </ol>	<p><b>Natural Resource Management and Environmental Protection Areas</b></p> <ol style="list-style-type: none"> <li>1. Classify existing and/or proposed areas of environmental importance within the 'Environmental Conservation' reserve, having regard to the objectives of the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>2. Prepare provisions in the Scheme that aim to address objectives of natural resource management, water quality, and environmental protection.</li> </ol>

## ACID SULPHATE SOILS

Strategies	Actions
<p><b>Acid Sulphate Soils</b></p> <ol style="list-style-type: none"> <li>1. Promote the appropriate identification and management of acid sulphate soil risks to avoid potential adverse impacts on the natural and built environment.</li> </ol>	<p><b>Acid Sulphate Soils</b></p> <ol style="list-style-type: none"> <li>1. Require development in areas of moderate to high risk of acid sulphate soils meet the requirements of the Western Australian Planning Commission's <i>Acid Sulfate Soils Planning Guidelines</i>.</li> </ol>

## BUSH FIRE RISK

Strategies	Actions
<p><b>Bush Fire Risk</b></p> <ol style="list-style-type: none"> <li>1. Promote the appropriate management of bush fire risks to Townsites and Aboriginal communities.</li> <li>2. Promote appropriate management of bush fire risks to remote camps, tourism sites and pastoral homesteads.</li> <li>3. Identify improvements to the road network to ensure that vehicle access and egress is available and safe during a bushfire event.</li> </ol>	<p><b>Bush Fire Risk</b></p> <ol style="list-style-type: none"> <li>1. Ensure future planning and development within Bush Fire Prone Areas meets the requirements of State Planning Policy 3.7: <i>Planning in Bushfire Prone Areas</i> and the <i>Guidelines for Planning in Bushfire Prone Areas</i>.</li> <li>2. Structure Plans for investigation areas should develop a bushfire attack level (BAL) contour map to determine the residual bushfire exposure risk to future development and identify the need for any future construction standards in line with AS 3959 and bushfire protection criteria.</li> </ol>

## BUSH FIRE RISK

Strategies	Actions
	3. Consider the location of fire service access routes in semi-rural areas around townsites and emergency management though the preparation of emergency management plans for these areas.

## CONSERVATION AREAS

Strategies	Actions
<b>Conservation Areas</b> <ol style="list-style-type: none"> <li>1. Reinforce the objectives for environmental protection and biodiversity conservation, tourism and recreational values of the National Parks, Marine Parks Nature Reserves and Conservation Parks.</li> <li>2. Support and encourage the State Government implementation of best management practices for its Conservation Areas.</li> <li>3. Support proposals additional land being included in Conservation Areas.</li> <li>4. Manage public access, visitor numbers, and appropriate management where increased human activity may potentially impact on conservation values.</li> </ol>	<b>Conservation Areas</b> <ol style="list-style-type: none"> <li>1. Classify existing and/or proposed Conservation Areas within the 'Environmental Conservation' reserve, having regard to the objectives of the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>:               <ol style="list-style-type: none"> <li>a. Karijini National Park;</li> <li>b. Millstream-Chichester National Park;</li> <li>c. Cane River Conservation Park;</li> <li>d. West Hamersley Range Conservation Park (proposed);</li> <li>e. Mulgalands Conservation Park (proposed);</li> <li>f. Mungaroona Range Nature Reserve;</li> <li>g. Barlee Range Nature Reserve;</li> <li>h. Barrow Island Nature Reserve;</li> <li>i. Tent Island Nature Reserve;</li> <li>j. Thevenard Island Nature Reserve;</li> <li>k. Boodie, Double Middle Islands Nature Reserve;</li> <li>l. Serrurier Island Nature Reserve;</li> <li>m. Little Rocky Island Nature Reserve;</li> <li>n. Burnside &amp; Simpson Island Nature Reserve;</li> <li>o. Bessieres Island Nature Reserve;</li> <li>p. Y Island Nature Reserve;</li> <li>q. Locker Island Nature Reserve;</li> <li>r. Airlie Island Nature Reserve;</li> <li>s. Great Sandy Island Nature Reserve;</li> <li>t. Victor Island Nature Reserve;</li> <li>u. Gndaroo Island Nature Reserve;</li> <li>v. Round Island Nature Reserve;</li> <li>w. Rocky Island Nature Reserve;</li> <li>x. Whalebone Island Nature Reserve; and</li> <li>y. Ex-Wanna Station.</li> </ol> </li> </ol>

## CONSERVATION AREAS

Strategies	Actions
	<ol style="list-style-type: none"> <li>Identify compatible uses in the scheme or a local planning policy for the 'Environmental conservation' reserve, in consultation with Department of Biodiversity, Conservation and Attractions.</li> </ol>

## OPEN SPACE

Strategies	Actions
<p><b>Open Space</b></p> <ol style="list-style-type: none"> <li>Recognise the differences in function of public open space for sport, recreation, natural landscape/amenity, and drainage.</li> <li>Support the development and maintenance of public open space and landscaping in a manner that is reflective of the climate, and low maintenance.</li> <li>Promote and improve the visual appearance of the townsites to have references to cultural heritage, the historical emergence of the towns, their character and sense of place.</li> <li>Appropriately use hard and soft landscaping treatments, tree planting to improve the visual appearance and relief of the townsites.</li> </ol>	<p><b>Open Space</b></p> <ol style="list-style-type: none"> <li>Classify existing and/or proposed public open space within the 'Public Open Space' reserve, having regard to the objectives of the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>Require higher quality landscaping along gateway entrances into the townsites, and along Neighbourhood Roads.</li> <li>Require local endemic vegetation within landscaping of public domain, where appropriate.</li> <li>Planting of vegetation in areas under the Shire's care and control shall be low-water use, drought tolerant, and resilient to high winds or cyclonic events.</li> </ol>

## 5.4 QUALITY SERVICES AND INFRASTRUCTURE

### COMMUNITY SERVICES

Strategies	Actions
<b>Community Services</b> <ol style="list-style-type: none"> <li>1. Recognise that community infrastructure and services can encourage community cohesion and create a sense of belonging in the townsites.</li> <li>2. Promote and support the ongoing and sustainable delivery of community infrastructure and services that are suitable for the resident population.</li> <li>3. Encourage the organised co-location of community facilities to optimise efficient delivery of services.</li> </ol>	<b>Community Services</b> <ol style="list-style-type: none"> <li>1. To maximise efficient use of facilities, seek to have co-located community facilities within townsites or close to residents.</li> <li>2. Classify land within local planning scheme reserves for community facilities within 'Civic and Community' reserve or the 'Public Purposes' reserves, as appropriate, having regard to the objectives for the reserves in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> </ol>

### TRAFFIC AND TRANSPORT

Strategies	Actions
<b>Traffic and Transport</b> <ol style="list-style-type: none"> <li>1. Ensure road and rail infrastructure incorporate appropriate public safety requirements and can accommodate mining and freight demands.</li> <li>2. Maximise the amount of funding that can be accessed for traffic and transport upgrades and projects.</li> <li>3. Advocate the improvement and sealing of the Karratha-Tom Price Road to provide a safe and efficient link to higher order services and facilities provided in Karratha for the residents of the Shire of Ashburton.</li> <li>4. Support means of improving road safety and minimising issues associated with maintenance, fatigue, and other environmental or behavioural aspects.</li> </ol>	<b>Traffic and Transport</b> <ol style="list-style-type: none"> <li>1. Identify appropriate road projects to submit for funding for various purposes.</li> <li>2. Identify primary transport corridors (road and rail) in the Strategy and Scheme.</li> <li>3. Advocate or undertake Road Safety Audits for sites that have been identified by the Local Government to have potential safety issues.</li> <li>4. Advocate the sealing of Karratha-Tom Price Road to generate substantial economic benefits for the Pilbara and the State through both increased tourism and improve freight traffic movements.</li> <li>5. Advocate Main Roads to investigate and construct Road Train assembly points to provide necessary facilities to ensure that these vehicles can be safely operated on the appropriately designated roads.</li> <li>6. Support the development of roadhouses to provide essential facilities for both tourist and freight traffic, including fuel, water, food and rest areas.</li> </ol>



## AIR AND MARINE INFRASTRUCTURE

Strategies	Actions
<b>Air and Marine Infrastructure</b> <ol style="list-style-type: none"> <li>1. Recognise the main airports (Onslow and Paraburdoo) and ports (Barrow Island, Ashburton and Beadon Creek) as strategic infrastructure that requires protection from incompatible use and development.</li> <li>2. Protect the existing and future airspace requirements for Onslow Airport to meet the relevant requirements of the Civil Aviation Safety Authority (CASA).</li> <li>3. Recognise the importance of Beadon Creek Boat Harbour to accommodate the growing marine servicing industry.</li> <li>4. Develop a strategy to improve and maintain air transport connections to the Onslow and Paraburdoo Airports, including the expansion of airport infrastructure.</li> </ol>	<b>Air and Marine Infrastructure</b> <ol style="list-style-type: none"> <li>1. Have regard to the Port of Ashburton Master Plan, including any recommendations of the Plan that may be relevant to the Scheme.</li> <li>2. Implement the land use planning recommendations from the Onslow Airport Master Plan based on the extension of the runway to 2,200m total length.</li> <li>3. Update the Onslow Airport OLS on the Scheme map to account for the realigned runway.</li> <li>4. Plan for future upgrade opportunities to Onslow Airport for airside and landside facilities and infrastructure. Protect the drainage requirements of the Airport from stormwater flowing from neighbouring development areas.</li> <li>5. Classify the following facilities within the 'Strategic Infrastructure' reserve, having regard to the objective of the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>: <ol style="list-style-type: none"> <li>a. Onslow Airport;</li> <li>b. Beadon Creek Boat Harbour;</li> <li>c. Paraburdoo Airport.</li> </ol> </li> <li>6. Include Special Control Areas in the local planning scheme for the: <ol style="list-style-type: none"> <li>a. Onslow Airport Obstacle Limitation Surface (as amended);</li> <li>b. Onslow Airport Aircraft Noise Exposure Forecast N70 contour (when prepared).</li> </ol> </li> </ol>

## UTILITIES

Strategies	Actions
<b>Utilities</b> <ol style="list-style-type: none"> <li>1. Recognise that the private sector funds a significant number of services, including electricity generation and distribution, sewer (waste water) and water supply.</li> </ol>	<b>Utilities</b> <ol style="list-style-type: none"> <li>1. Support the long-term delivery of sustainable water supplies to Onslow through the Cane River bore field and the delivery of a water desalination plant within the ANSIA Improvement Scheme area.</li> <li>2. Support the long-term delivery of sustainable electricity generation and distribution to townsites.</li> </ol>

## UTILITIES

Strategies	Actions
<ol style="list-style-type: none"> <li>2. Support the delivery of town utility services to promote population growth, based on demand, scale, timing and funding.</li> <li>3. Promote the coordination of the supply of utility infrastructure and services between the Federal, State and Local Government and the private sector.</li> </ol>	<ol style="list-style-type: none"> <li>3. Support investment and development of projects for renewable energy and microgrid technology, to provide sustainable alternative sources of electricity generation.</li> </ol>

## WATER

Strategies	Actions
<p><b>Water</b></p> <ol style="list-style-type: none"> <li>1. Reflect the importance of Priority 1 (P1), Priority 2 (P2) and Priority 3 (P3) Public Drinking Water Source Areas (PDWSAs) and ensure their protection where necessary through classification under local planning scheme reserves.</li> <li>2. Encourage and promote the responsible consumption of water by industry and consumers.</li> <li>3. Identify water re-use options and opportunities.</li> <li>4. Promote the use of wastewater recycling.</li> <li>5. Support innovation leading to the creation of new ways to address water scarcity and optimised delivery of services and infrastructure.</li> <li>6. Advocate for townsites and Aboriginal Communities to be supported with appropriate drainage infrastructure.</li> </ol>	<p><b>Water</b></p> <ol style="list-style-type: none"> <li>1. Existing and/or proposed PDWSAs be protected in the scheme in the 'Public Purposes' reserve having regard to the objectives for the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>2. Support the sustainable abstraction of potable water from the Cane River borefields and the future ANSIA desalination plant to service Onslow.</li> <li>3. Support water reuse/recycling programmes or schemes associated with mine sites and townsites.</li> <li>4. Upgrade existing townsite drainage systems and ensure appropriate levels of service can be maintained as development occurs and water quality including sediments in stormwater is addressed.</li> </ol>

## WASTE MANAGEMENT

Strategies	Actions
<p><b>Waste Management</b></p> <ol style="list-style-type: none"> <li>1. Reduce resource consumption and move towards more community acceptance for smaller ecological footprints, including optimising reuse and recycling of waste materials.</li> </ol>	<p><b>Waste Management</b></p> <ol style="list-style-type: none"> <li>1. Investigate options for the Shire's waste collection practices to incorporate recycling.</li> </ol>

## WASTE MANAGEMENT

Strategies	Actions
<ol style="list-style-type: none"> <li>2. Monitor and upgrade existing waste management facilities and practices.</li> <li>3. Promote appropriate waste management practices in Aboriginal Communities.</li> <li>4. Investigate potential opportunities for improved access to markets for recycled products.</li> </ol>	<ol style="list-style-type: none"> <li>2. Classify waste management facilities in proximity to Onslow, Tom Price and Paraburdoo in the 'Public Purposes' reserve, having regard to the objectives for the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>3. Advocate for Aboriginal communities to have effective waste management programme to minimise pollution and risks to human health and water sources.</li> </ol>

## BUFFERS

Strategies	Actions
<p><b>Buffers</b></p> <ol style="list-style-type: none"> <li>1. Ensure that appropriate buffers for strategic industry and essential infrastructure are identified to avoid land use conflict and/or unacceptable risk from encroachment by people and development.</li> </ol>	<p><b>Buffers</b></p> <ol style="list-style-type: none"> <li>1. Recognise that the ANSIA Improvement Plan No. 1 includes industrial buffers that are required to preserve the integrity of the ANSIA.</li> <li>2. Include Special Control Areas in the local planning scheme to reflect the buffers required for the following: <ol style="list-style-type: none"> <li>a. Onslow Waste Water Treatment Plant;</li> <li>b. Public Drinking Water Supply Areas – Priority 1, Priority 2 and Priority 3 proclaimed areas and wellhead protection zones, within the local government district;</li> <li>c. Onslow Waste Transfer Site, Tom Price Landfill and Paraburdoo Landfill; and</li> <li>d. High pressure gas pipeline licence areas.</li> </ol> </li> <li>3. Allow for compatible uses to be developed, where appropriate, within buffer areas.</li> </ol>

## SERVICE CORRIDORS AND SITES FOR UTILITIES

Strategies	Actions
<b>Service Corridors and Site for Utilities</b> <ol style="list-style-type: none"> <li>1. Reflect the importance of essential physical infrastructure and its provision to serve the local communities.</li> <li>2. Protect essential services corridors and facilities.</li> <li>3. Protect people from unacceptable levels of risk from high-pressure gas pipelines.</li> </ol>	<b>Service Corridors and Site of Utilities</b> <ol style="list-style-type: none"> <li>1. Classify existing and/or proposed sites for utilities within the 'Public Purposes' reserve having regard to the objectives for the reserve in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>2. Apply DC Policy 4.3 <i>Planning for High-Pressure Gas Pipelines</i> policy measures to assess proposals that are in the vicinity of any high-pressure gas pipeline within the local planning scheme area. Such measure can include identification of pipeline licence areas on scheme maps and with appropriate provisions located in schedules of the scheme provided for in the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>, or through a Special Control Area.</li> </ol>

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## TELECOMMUNICATIONS

Strategies	Actions
<b>Telecommunications</b> <ol style="list-style-type: none"> <li>1. Promote the extension of telecommunications mobile phone coverage for all towns, district roads, and areas frequented by the community, workers and visitors.</li> <li>2. Promote the roll-out of the National Broadband Network to support innovation and knowledge development, e-commerce, e-learning, communication between isolated transient workers and their family/friend networks.</li> </ol>	<b>Telecommunications</b> <ol style="list-style-type: none"> <li>1. Classify land within local planning scheme reserves for telecommunications within 'Public Purposes – Infrastructure Services' reserve, including broadcasting facilities, having regard to the objectives for the reserves in the Model Provisions <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>.</li> <li>2. Advocate the ongoing improvement of availability, coverage and accessibility to telecommunications services (telephone, mobile network, broadband) and TV/radio broadcasting.</li> </ol>

## 6 IMPLEMENTATION, MONITORING AND REVIEW

### Inspiring Governance

- Ensure the Local Planning Strategy maintains a strong relationship between the integrated planning processes of the Shire of Ashburton through its *Strategic Community Plan*, *Corporate Business Plan* and budgeting processes and its local planning framework.
- Ensure the Local Planning Strategy is periodically monitored and reviewed to ensure it provides the necessary justification and rationale for the local planning scheme and policies.

### 6.1 IMPLEMENTATION

The means of implementing the Strategy will primarily be through a review of the local planning scheme. The Strategy is to be used not only as a guide to assist the Shire and the WAPC in planning and decision making capacities, but should also be used by the community and other stakeholders (including State Government agencies) to inform themselves on relevant matters and to inform Council's budget preparation and corporate business planning.

The Shire prepared a 'health check' report to the Council on 9 December 2015 which made recommendations that:

- a. The existing LPS 7 be amended to comply with the *Regulations*; and
- b. That officers would work towards the ultimate preparation of a new local planning scheme.

The Shire is reviewing the local planning scheme with the aim to bring it into conformity with the *Regulations*.

### 6.2 MONITORING AND REVIEW OF THE LOCAL PLANNING STRATEGY

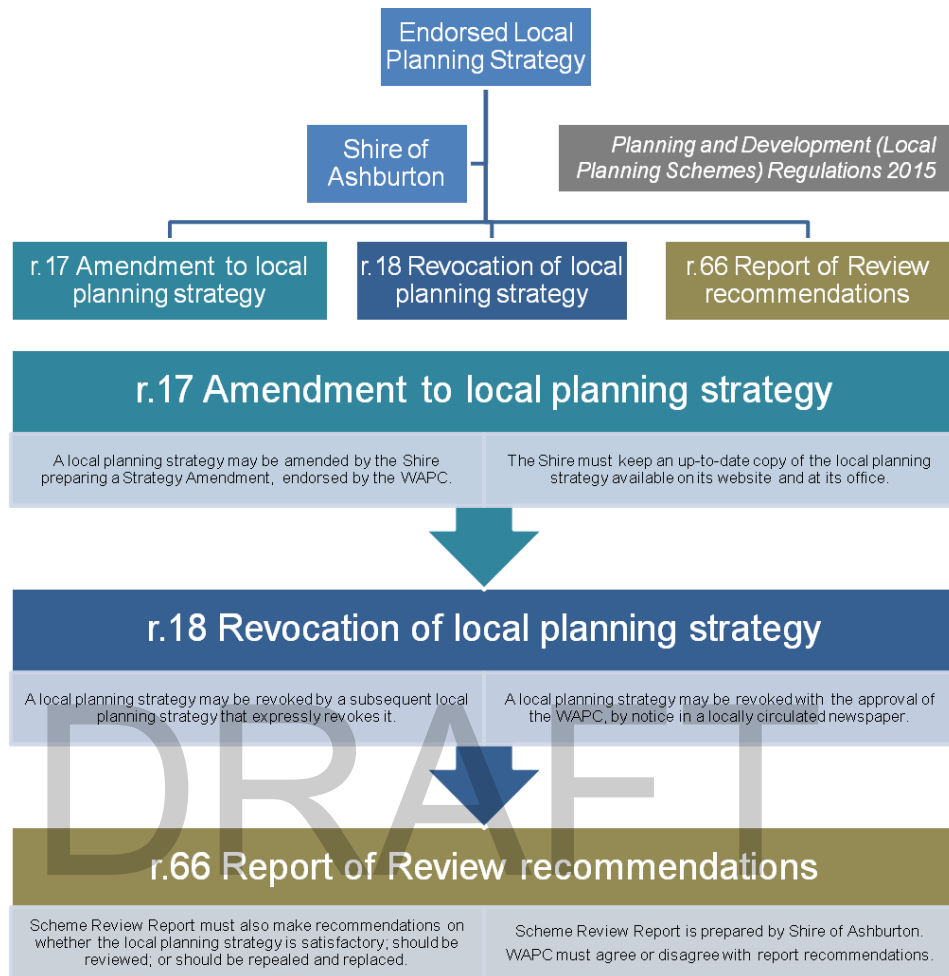
Once endorsed, the Strategy is a live document. **Figure 5** summarises the three main processes under the *Planning and Development (Local Planning Schemes) Regulations 2015* that would deal with how the endorsed Local Planning Strategy should be reviewed, amended, or revoked.

#### 6.2.1 AMENDMENT TO LOCAL PLANNING STRATEGY

The Strategy is designed to achieve the community's vision for anticipated land use and development within the Shire. The Strategy was also designed to offer a time horizon of 15 years, depending on growth and the development or emergence of key industrial or resource projects.

Future challenges and issues to address within the Shire may not necessarily be predictable or able to be initially covered in sufficient detail in the Strategy. It is foreseeable that as new issues or information becomes available, the Strategy can be amended as required.

**Figure 5 Process for Monitoring and Review**





# STRATEGY PLANS

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