PROVISION OF HEADWORKS TO TRIGGER WORKER ACCOMMODATION DEVELOPMENTS

BUSINESS CASE

APRIL 2023

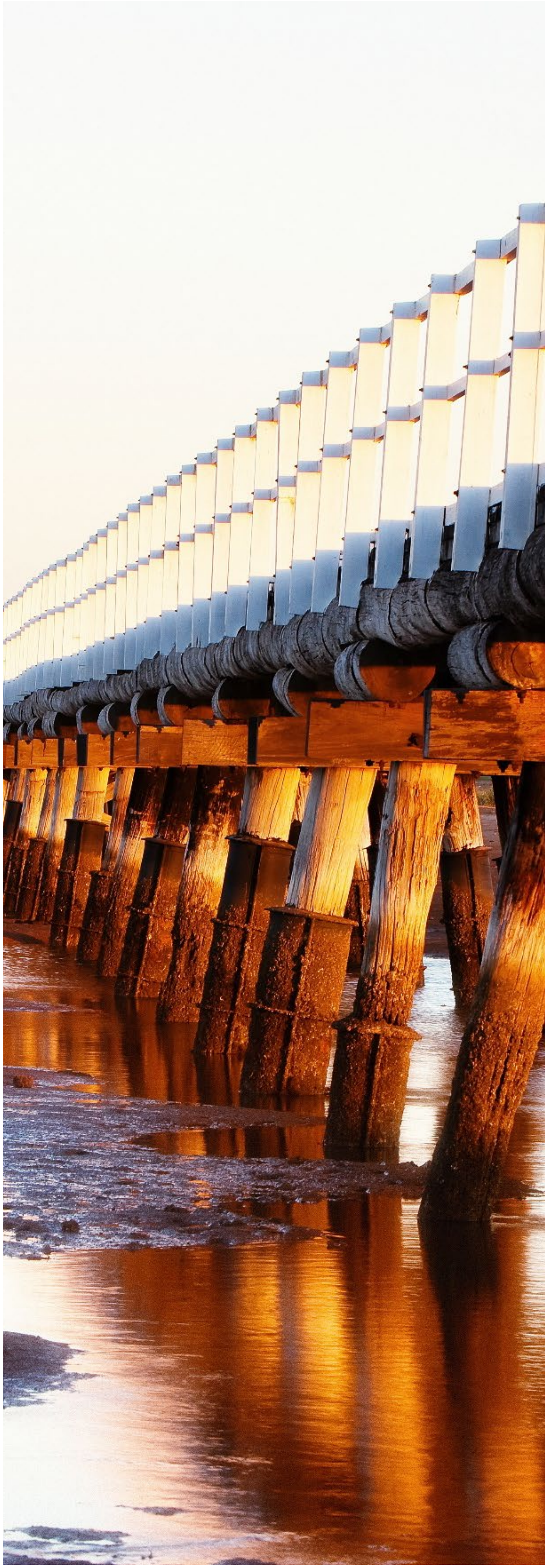


TABLE OF CONTENTS

EXECUTIVE SUMMARY

Carnarvon, like many areas of the Gascoyne, is currently experiencing a critical shortage of essential worker accommodation. This shortage, estimated at up to 350 houses over the next decade, affects the ability of local businesses to attract, and retain workers, limiting not only immediate service delivery, but also long-term business planning. Worker accommodation insecurity is a major barrier to business expansion and future investment.

In 2021 the Shire of Carnarvon commissioned the “On Our Horizon” report by Acil Allen into the impact of identified major projects on issues such as housing. The report concludes that 7,500 jobs will be created annually between 2028 and 2032 during construction phases but that the aggregated and ongoing employment need is equivalent to 3,500 full time jobs per annum from 2032 onwards. Carnarvon currently does not have housing availability for these workers and is working in collaboration with other stakeholders to trigger infill development in Carnarvon. Some areas zoned for higher density residential development in South Carnarvon lack critical infrastructure, which in turn restricts lot yield and therefore the commercial return of new builds on vacant land.

Infill development is ordinarily a high priority for new residential development, as marginal costs are typically lower. Indirect, non-market benefits also arise through infill development, including leveraging existing local community infrastructure, reducing travel distances, and building liveable neighbourhoods. However, the costs associated with construction in remote areas such as Carnarvon, especially site and headworks, are a significant barrier to this.

The property development that would be generated if the costs of site and head works could be reduced would provide a significant opportunity for Carnarvon/Gascoyne regional builders to upscale their businesses. Continuity of contracts or lack thereof has constrained growth for the construction industry business for many years with fewer than two houses per annum being built in the past 10 years. Working on a conservative estimate of a 5-property development, the room for growth for local builders and associated trades and suppliers is significant.

PURPOSE

Carnarvon, like many areas of the Gascoyne, is currently experiencing a critical shortage of essential worker accommodation. This shortage, estimated at up to 350 houses over the next decade, affects the ability of local businesses to attract, and retain workers, limiting not only immediate service delivery, but also long-term business planning. Worker accommodation insecurity is a major barrier to business expansion and future investment.

The Gascoyne Development Commission's Strategic Plan 2022 - 2026 identifies that efforts to improve living standards are central to attracting people to live and work in the region, and that securing and retaining a suitable workforce continues to be critical for most industries and employers. The shortage of residential housing across the region is a major barrier to development in all the Gascoyne's key industry sectors.

In 2021 the Shire of Carnarvon commissioned the "On Our Horizon" report by Acil Allen (see Appendix 1) into the impact of identified major projects on issues such as housing. These projects include:

- The Carnarvon Fruit Bowl
- Yangibana Rare Earth Project
- Ningaloo Reef Resort Upgrade
- Carnarvon Barge Loading Facility
- Babbage Island Upgrade Project
- The Pier Development
- Gascoyne Green Hydrogen Hub Project
- HyEnergy

The report concludes that 7,500 jobs will be created annually between 2028 and 2032 during construction phases but that the aggregated and ongoing employment need is equivalent to 3,500 full time jobs per annum from 2032 onwards. Carnarvon currently does not have housing availability for these workers and is working in collaboration with other stakeholders to trigger infill development in Carnarvon. However, the costs associated with construction in remote areas such as Carnarvon, especially site and headworks, are a significant barrier to this.

This business case outlines the issues that support the application of a grant to be applied towards the costs of provision of headworks including wastewater, ground works, water and electricity for essential worker infill.

1. SHIRE OF CARNARVON DEMOGRAPHICS

The Shire of Carnarvon is a local government authority in the Gascoyne region of Western Australia, approximately 900km north of Perth with a population of just over 5,000 people (ABS 2021). According to the Shire of Carnarvon's Community Strategic Plan 2022 – 2032, its primary industries include agriculture and forestry, fishing, retail, and food and accommodation services, and housing availability is considered a critical issue by the local community. Carnarvon is an area of significant social and economic disadvantage with SEIFA (Socio-Economic Indexes for Australia) Scores around 940 for all determinants, placing the area in the lowest 3rd decile across the country (ABS 2016).

The Gascoyne Housing Review (see Appendix 2) identified a 40% increase in median house prices over the year to December 2020, and a declining rental vacancy rate from 3.8% to 0.5% between May 2020 and May 2021. This is particularly impactful for "essential workers" – those employed in government roles such as health, education or community safety, or working in the tourism and service industries - who often have limited or lower incomes. With an average weekly household income of only $1,400 (ABS 2021), and construction costs at more than 50% higher than in metropolitan areas, there is a critical need for affordable essential worker accommodation.

2. SNAPSHOT OF CURRENT HOUSING SITUATION IN CARNARVON

Unprecedented housing shortages exist across the Gascoyne. Recent construction and housing data for Carnarvon shows continued pressure on property and rental markets, including:

- Low rental vacancies. Carnarvon experienced a 23% decline in the number of rental listings between 2021 and 2022,
- Increasing rental prices. Carnarvon experienced a 2.9% increase in median asking rental price for houses over the 12 months to May 2022 (following a 0% increase over the preceding 4 years),
- 65 property sales in the 12 months to May 2022, representing 6.2% of stock on the market, and a
- 4.3 % increase in median sales price in the 12 months to May 2022.

Regional housing shortages have been further exacerbated by the COVID-19 pandemic, through regional migration, labour market constraints, international supply chain disruptions and increased local demand in the hospitality and tourism sectors. Market failures identified by the Gascoyne Development Commission in its Gascoyne Housing Review, include:

- Elevated construction costs. Construction costs are estimated to be approximately 50 - 60% above Perth averages. Costs have further escalated in response to the state-wide construction industry boom with trades and services being drawn to larger population centres in neighbouring regions, especially the Pilbara. Accommodation shortages compound the shortage of trades and services available to build new accommodation.
- The viability of new builds is affected by low land values in some parts of the region, especially Carnarvon.
- The impact of the Government Regional Officers Housing (GROH) program on availability of rental accommodation for the private market. The program has a total stock of 197 properties across the Gascoyne (at January 2022). At that time, the Department of Communities have identified current and forecast demand for at least 19 houses in Carnarvon (see below).

Unmet GROH requirements in Carnarvon as at Jan 2022	
New properties required	**14**
Department of Communities (Child Protection)	*5*
Department of Education	*3*
Department of Fire and Emergency Services	*1*
Department of Primary Industries and Regional Development	1
WA Police Department	4
Replacement properties required	**5**
Department of Fire and Emergency Services	1
Pathwest	1
WA Police Department	*3*
Total Properties Required	**19**

3. LAND AVAILABILITY

The Gascoyne Development Commission’s Economic Snapshot Housing Overview (2020/21) shows that the there is a significant amount of land available for residential development across the Gascoyne, that house sales have increased by over 30%, and rental prices are rising.

In March 2023, Development WA had 8 residential Lots ready for development in Carnarvon (see Appendix 3), including one Duplex Lot and one Group Housing Lot. However, the Gascoyne Housing Review identified that, despite these residential lots being available, land sales remained low in the

Shire of Carnarvon, and that no sales had occurred in the Northwater Estate since 2014, partly due to high site work and construction costs in regional WA.

4. STRATEGIC LINKAGES

The provision of essential workers housing directly addresses the Gascoyne regional priority for workforce development and accommodation by developing innovative, high-quality housing for essential workers in Carnarvon. The Shire of Carnarvon’s 2022 – 2032 Community Strategic Plan identified housing availability as a key issue for the community.

The Gascoyne Development Commission's Strategic Plan 2022 – 2026 identifies a focus on attracting and retaining skilled and talented people to the region. Strategic Initiative 3.1 advocates "for end user service levels parity with the metropolitan area" by working "with lead agencies to address skills and worker shortages". While the Strategic Plan identifies that focusing on education is one way to achieve this, another shorter-term solution is to provide essential worker accommodation through lead agencies such as the Shire of Carnarvon.

The Strategic Plan further identities that "securing and retaining a suitable workforce will continue to be critical for most industries and employers. The shortage of residential housing across the region is a major barrier to development in all the Gascoyne’s key industry sectors" (page 16). With the GDC’s Economic Snapshot Housing Overview (2020/21) showing that there is a significant amount of land available for residential development, the provision of funding to engage local builders to construct high quality innovative houses that can either be used to attract and retain executive/family workers and/or seasonal backpacker workers is an ideal solution.

In June 2021, the Gascoyne Development Commission engaged Urbis to review residential housing availability and market failure in the Gascoyne. Their final report was released in January 2022 (see Appendix 2) and recommends three priority areas to drive increased worker housing availability and create the conditions for increased private sector investment, these are:

- Unlock private capital – support private sector investment in new construction and renovations.
- Optimise government assets – enhance the utilisation of public and government regional officer housing and land assets.
- Innovate the home – stimulate alternative housing options.

The Urbis report specifically identified that there was a need to "investigate a preferred option for the next 100 houses in Carnarvon to improve liveability, maximize public benefit and reduce the cost of

development." In part this is due to aging of current stock (no new houses have been built for the past 10 years and the average house is now 50 years old), plus housing costs in the Gascoyne are roughly 50% more than a Perth metropolitan build (Gascoyne Worker Housings Action Plan 2022). This makes quality housing unaffordable for many local businesses or families.

5. ANTICIPATED FUTURE HOUSING NEEDS

There is a significant shortage of residential and workers accommodation across all major towns in the Gascoyne region. The issue is a major barrier to industry development and is constraining growth of the $712 million resources sector, the $214 million primary industries sector and the $114 million tourism and hospitality sector.

Recent work by the Shire of Carnarvon has identified a short to medium term need for up to 350 additional homes in Carnarvon over the next 10 years, far exceeding the 15 new homes developed in the previous 10 years. 100 houses is a critical near-term goal to attract people to the region, build capacity and economies of scale in the local building industry, and provide future workers for the region’s major industries.

6. CONSTRAINTS ON HOUSING PROVISION

The Shire of Carnarvon, private sector builders and other stakeholders have already identified a range of potential housing development land development and housing options in Carnarvon, however all identified options are affected by development barriers or constraints that are impacting commercial returns and investment decisions by the private sector.

For example:

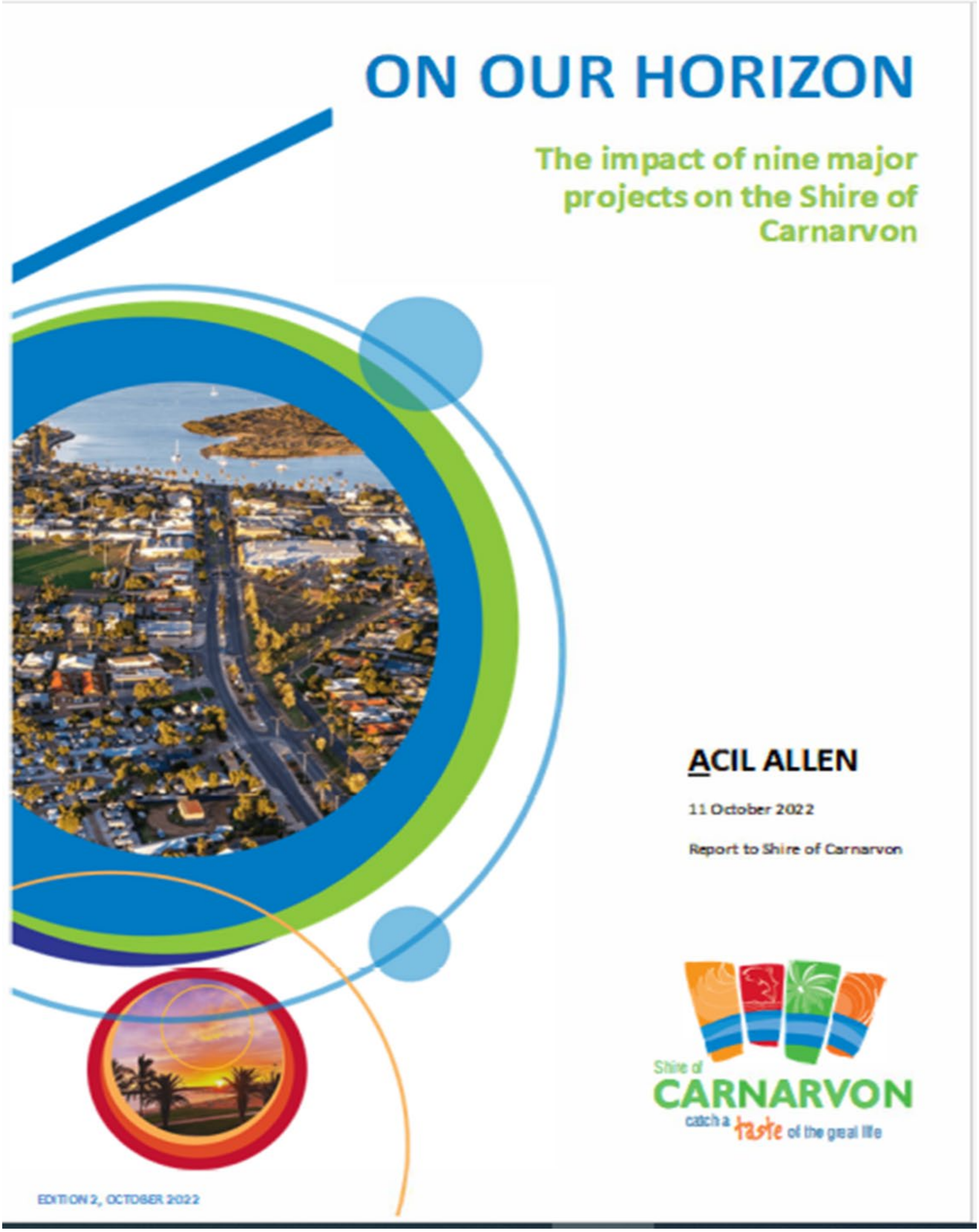
- Some areas zoned for higher density residential development in South Carnarvon lack critical infrastructure, which in turn restricts lot yield and therefore the commercial return of new builds on vacant land. Infill development is ordinarily a high priority for new residential development, as marginal costs are typically lower. Indirect, non-market benefits also arise through infill development, including leveraging existing local community infrastructure, reducing travel distances, and building liveable neighbourhoods.
- Carnarvon's existing housing stock is aging. Poor condition housing is another barrier for attracting workers (and families) to the region. The cost of new builds and renovations exceeds predicted sale prices/financial returns. Subsidized site and head works would help to address this situation.

7. ECONOMIC BENEFIT OF ADDITIONAL HOUSING

Subsiding the cost of head and site works will create an opportunity for several houses to be built either via infill, or on available group housing land. The preference is for local builders to undertake the builds as each house will provide direct employment of a project manager, administration support, architect/draftsman, concreters, plumbers, electricians, painters, landscapers, fencing contractors, labourer's, carpenters, and cabinet makers. As a projection, if 5 houses were built, 47.5 direct jobs would be generated during the construction phase, revitalizing, and re-energizing the construction industry in Carnarvon. With a conservatively estimated weekly spend of $300 a week during construction, 47.5 workers equate to a direct economic benefit of $570,000 during the 10-month construction. Further to this, indirect spending will amount to a further $969,000 during that period, creating an overall economic impact of more than $1.5 million.

The property development that would be generated if the costs of site and head works could be reduced would provide a significant opportunity for Carnarvon/Gascoyne regional builders to upscale their businesses. Continuity of contracts or lack thereof has constrained growth for the construction industry business for many years with fewer than two houses per annum being built in the past 10 years. Working on a conservative estimate of a 5-property development, the room for growth for local builders and associated trades and suppliers is significant.

APPENDIX 1 ON OUR HORIZON



ON OUR HORIZON

The impact of nine major projects on the Shire of Carnarvon

ACIL ALLEN

11 October 2022

Report to Shire of Carnarvon

Shire of CARNARVON catch a taste of the great life

EDITION 2, OCTOBER 2022

ACIL Allen is a leading independent economics, policy and strategy advisory firm, dedicated to helping clients solve complex issues.

Our purpose is to help clients make informed decisions about complex economic and public policy issues.

Our vision is to be Australia's most trusted economics, policy and strategy advisory firm. We are committed and passionate about providing rigorous independent advice that contributes to a better world.

Suggested citation for this report

Hodby, Antonia and Roberts, Marshall (2022), On Our Horizons: the impact of major projects on the Shire of Carnarvon, ACIL Allen

Contents

Figures

Contents

Introduction 1

There is a pipeline of major projects planned for the Shire of Carnarvon in the tourism, mining, agriculture, aquaculture, housing, retail, food and beverage, and infrastructure sectors over the decade from 2022 to 2032. The construction of these projects is expected to get underway mid-2022 and extend through to 2031 providing transformational benefits to the Shire in terms of jobs, business opportunities and the attraction of new permanent population. The On Our Horizon report profiles a selection of nine of the major projects in the pipeline to examine their impact on social services and infrastructure in the Shire of Carnarvon noting that there are other projects which will also provide new employment opportunities in the Shire and place even more pressure on social infrastructure.

1.1 Methodology

Consultation was undertaken with the proponents of the nine major projects to understand their key characteristics in terms of their construction and operation phases including:

— Timing
— Employment
— Spending
— Local content targets for spending and employment.

Where proponent information was not available, it was supplemented by publicly available information or informed estimates.

Box 1.1 Data and information disclaimer

The information contained in this report are best estimates as of July 2022 based on information supplied by proponents, published in the public domain, and assumptions made by stakeholders with some knowledge of the projects. The information may change due to changes in investment decisions by proponents. The information contained in this report should therefore be used as a guide only and should not be relied on.

Source: ACIL Allen

This information describing the major projects was aggregated to form a timeline of projected employment including an estimate of the staff that could be located in Carnarvon during the construction and operation phases of the projects. A standard household profile for Western Australia was applied to understand the likely impact on the population of Carnarvon and its demographic profile.

A review of the key social services and infrastructure in Carnarvon was undertaken to their capacity to cater for additional population demand. This analysis was compared with the projections of population and demographics to identify what additional social services and infrastructure would be required in the town to cater for the additional population.

1.2 Acronyms and definitions

The key acronyms and definitions used in this report are presented in **Table 1.1**.

Table 1.1 Acronyms

Acronym	Meaning
FTE	Full time equivalent employee
ha	hectare
mtpa	Million tonnes per annum
t	tonnes

Source: ACIL Allen

1.3 Report structure

Chapter Two of this report profiles the nine major projects on our horizon and they key characteristics along with a summary of their aggregated impact. Chapter Three profiles the key social services and infrastructure including its current capacity and its ability to absorb additional population.

Major projects on our horizon 2

This chapter describes the pipeline of major projects on the Shire of Carnarvon's horizon including a brief description of the project and its key spending and employment characteristics. Note that all employment in this chapter is presented in full time equivalent jobs unless otherwise stated. A full time equivalent job is the aggregation of all part time and full time jobs expressed as the equivalent of a full time job.

21 Carnarvon Fruit Bowl

The Gascoyne Food Bowl Initiative is a State Government initiative designed to increase horticultural production in Carnarvon by providing new land and water resources for irrigation expansion. An outcome of the project is the development of 278 hectares (ha) of horticultural land known as the Carnarvon Fruit Bowl that will boost the Carnarvon horticulture district by almost one quarter. Three producers have been awarded the rights to develop the land including:

— Fruitico, a large table grape producer based in the Peel region who has plans to spend $25 million to develop 219 ha of land for the production of table grapes. The project is likely to require the hire of up to 25 permanent employees including a Farm Manager, Administrative Assistant, Agronomist and twenty farm labourers. Up to 200 seasonal workers will be required to prune vines and harvest grapes with these workers only required for parts of the year.

— Durmo Quality Produce, a local melon producer based in Carnarvon has plans to expand their production of watermelons and rockmelons by approximately 20 ha. It is assumed that the additional production will result in the employment of six additional full time equivalent staff once the project has reached full operation, as well as seasonal workers required to plant and harvest the melons with two growing seasons assumed.

— 4 Ways Fresh, a South Australian company with horticulture operations in Geraldton has plans to develop 40 ha of land for the production of vegetables including capsicum, eggplant, tomatoes, and zucchini. The company will employ a Farm Manager, six full time employees and around 30 seasonal employees to assist with planting and harvesting once full operation has been reached.

The Carnarvon Fruit Bowl project will represent significant local job creation particularly during the peak times associated with planting, pruning, and harvesting. Once all three projects are operating at full production, it is estimated that around 37 permanent jobs will be created along with 240 jobs that are likely to last for several months during peak planting, pruning, and harvest periods. It is likely that all new employees will represent new population in Carnarvon with project proponents making use of government schemes to address labour shortages in the agriculture industry such as the Pacific Australia Labour Mobility (PALM) scheme, and the Australian Agriculture Visa Program. The estimated labour requirements of the project are presented in **Table 2.1**.

Table 2.1 Key characteristics: Carnarvon Fruit Bowl

	Total	Carnarvon local content	Local content share
Construction workforce	Peak of 35	Peak of 35	100%

	Total	Carnarvon local content	Local content share
Permanent operations workforce	37 per annum	37 per annum	100%
Seasonal workforce	240 per annum during peak periods only	240 per annum during peak periods only	100%

Source: 4 Ways Fresh, DPIRD, WA Business News, ACIL Allen

22 Yangibana Rare Earths Project

The Yangibana Project is a significant rare earths project located 250 kilometres north east of Carnarvon which will produce a mixed rare earths carbonate rich in Neodymium and Praseodymium that are critical materials used in the manufacturing of permanent magnets found in new technology products including electric vehicles, renewable energy wind turbines, and electrical consumer products. The project is designed to mine one mtpa of ore for processing at an on site processing plant producing up to 15,000t of mixed rare earths carbonate per annum.[1]

Construction is planned to commence in late 2022 and will require $658 million of capital spending. It is expected to require a workforce of around 500 personnel over the two year construction period with the peak of construction occurring during 2023 when 250 personnel will be located on site. Hastings Technology Metals as the developer has plans to spend as much as much as possible of the total capital cost with local businesses in the Shire of Carnarvon including on consumables and services. Local employment will be targeted during construction and it is estimated that up to 50 personnel will be employed locally depending on the availability of suitably qualified labour.

During operation, around 250 employees will be required with the company targeting locally based employees. For the purposes of this report, it has been assumed that around 22 employees will be based in Carnarvon whilst others will be housed in an on site accommodation village. Carnarvon will be a charter stop enroute to the Yangibana site during construction and operation providing the opportunity to maximise local employment.

The key spending and employment characteristics of the Yangibana rare earths project are presented in **Table 2.2**.

Table 2.2 Key characteristics: Yangibana rare earths project

	Total	Carnarvon local content	Local content share
Capital spending	$658 million		Less than 10 per cent
Construction workforce	500 over two years	Peak of 18	Working with TAFE to allow workforce to be job ready
Operations spending	More than $200 per annum		Less than 10 per cent
Operations workforce	220 per annum	Around 17 per annum	Less than 10 per cent

Source: Hastings Technology Metals and ACIL Allen

[1] Hastings Technology Metals Ltd (2017), Yangibana Project Definitive Feasibility Study Executive Summary, Hastings Technology

23 Ningaloo Reef Resort and accommodation village

This project is comprised of two parts. The first is the construction of an accommodation village which is designed to house the workforce required to develop the Ningaloo Reef Resort and its workforce once it is operational. The second phase of the project is the upgrade and development of the resort to become a four star family beach resort.

The construction of the accommodation village is expected to cost around $8.5 million and will require a peak workforce of around 100 workers of which around 10 will be sourced from the Shire. The upgrade of the Ningaloo Reef Resort will require $40 million of construction spending over two years and will provide jobs for 250 workers.

Once operational, the resort will require an average of 40 workers with a further 15 staff required during peak times. Most staff are expected to be housed in the accommodation village. It is expected that around 25 permanent staff could be located permanently in Carnarvon.

The key spending and employment characteristics of the Ningaloo Reef Resort and accommodation village project are presented in **Table 2.3**.

Table 2.3 Key characteristics: Ningaloo Reef Resort and accommodation village project

	Total	Carnarvon local content	Local content share
Accommodation village			
Capital spending	$8.5m	$0.63m	Less than 10 per cent
Construction workforce	100 over two years	Peak of 10	10 per cent
Ningaloo Reef Resort			
Capital spending	$40m	$3.00m	Less than 10 per cent
Construction workforce	250 over two years	Peak of 10	10 per cent
Operations workforce	Average 40 per annum	Around 25 per annum	10 per cent

Source: RAC and ACIL Allen

24 Carnarvon Barge Loading Facility

A study to examine the pre-feasibility of a barge loading facility in Carnarvon is currently underway with the aim of providing bulk loading facilities to service major projects proposed or planned for the Shire of Carnarvon and surrounds including renewable hydrogen projects.[2] The facility will provide current and future projects with access to reliable, cost-effective marine infrastructure to facilitate the movement of goods into and out of the Gascoyne region and nearby areas of the Pilbara and Mid West regions.

As the project is currently at pre-feasibility stage, there is no publicly available data describing it. For the purposes of this report, it is assumed that it would be constructed over 24 months commencing in mid-2024 so that it is operational prior to the commencement of major projects including the Gascoyne Green Hydrogen Hub and HyEnergy projects and the Babbage Island tourism development.

[2] https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/02/Carnarvon-barge-loading-study-paves-way-for-future-investment.aspx

It is expected that the facility will require around 20 workers in each year of construction of which around 15 will be employed directly from Carnarvon. In operation, a workforce of around 20 workers will be required who will all be based in Carnarvon.

The key employment characteristics of the Carnarvon barge loading facility project are presented in **Table 2.4**.

Table 2.4 Key characteristics: Carnarvon Barge Loading Facility

	Total	Carnarvon local content	Local content share
Construction workforce	Peak of 20	Peak of 15	75%
Operations workforce	20 per annum	20 per annum	100%

Source: ACIL Allen

2.5 Babbage Island Resort

The phased development of accommodation units, caravan park and camping ground at Babbage Island in Carnarvon will create 332 accommodation sites. The first phase of the project is expected to commence construction in 2023 with the redevelopment of 59 existing accommodation units and other infrastructure at the site that previously housed workers employed at a seafood processing facility. The first phase could also include the development of caravan and camping and built accommodation.[3] The subsequent construction phases of the resort will commence around 2028 with the construction of new accommodation and resort facilities including a swimming pool, water park, playground, amphitheater, and pump track.

It is estimated that the first phase of the project will require around 100 construction workers in each of the two years of construction while the second phase will require 200 construction workers in each year of construction. Once fully operational, the resort could employ as many as 40 staff of whom all will be located in Carnarvon as illustrated in **Table 2.5**.

Table 2.5 Key characteristics: Babbage Island Resort

	Total	Carnarvon local content	Local content share
Construction workforce	Phase 1 = 100 peak Phase 2 = 200 peak	Peak of 8 Peak of 15	7.5%
Operations workforce	40 per annum	40 per annum	100%

Source: ACIL Allen

[3] Halsall and Associates (2021), Shire of Carnarvon Scheme Amendment No. 2 to Local Planning Scheme No. 13 Lots 1044, 1198 and 626 Binning Road Babbage Island, Carnarvon

26 Old Justice Precinct: The Pier

There are plans to revitalise the former justice precinct site as a mixed use development including residential, retail, and other commercial uses. The development to be known as The Pier is expected to take place over stages with the first stage delivering 35 two bedroom two bathroom apartments and associated facilities including a resort style swimming pool. The second phase of the development will result in the development of a microbrewery and retail offering while the final phase will focus on the construction of conference facilities and office space.

It is expected that the project will require $12.2 million of capital spending over a 12 to 24 month period with the first phase becoming operational after around 12 months. It is expected that the construction will require a peak of 100 jobs while there will be around 40 jobs created once the project is fully operational with most jobs employed by the microbrewery, conference facilities, and apartment complex. The estimated labour requirements of the project are presented in **Table 2.6**.

Table 2.6 Key characteristics: The Pier

	Total	Carnarvon local content	Local content share
Construction workforce	Peak of 100	Peak of 8	7.5%
Operations workforce	40	40	100%

Source: Shire of Carnarvon and ACIL Allen

27 Gascoyne Green Hydrogen Hub

Fortescue Future Industries is currently investigating a potential green energy and hydrogen project near Carnarvon including a renewable energy generation hub comprising wind turbines and infill solar arrays, and port facilities.

The project is currently in its early stages and no publicly available information was available to inform the spending and employment estimates. It is estimated that the project could commence construction as early as mid-2027 with operation commencing around mid-2031. During the peak of construction, the project could employ as many as 4,000 personnel while in operations as many as 1,500 workers per annum could be required.

It is likely that the majority of workers required for the project will be employed on a fly in – fly out basis however the project will be located in proximity to the town of Carnarvon allowing workers and their households to move to the town to take up the long term job opportunities it offers. For the purposes of this report, a local content estimate of 7.5 per cent has been assumed for employment in the construction and operation phases as presented in **Table 2.7**.

Table 2.7 Key characteristics: Gascoyne Green Hydrogen Hub

	Total	Carnarvon local content	Local content share
Construction workforce	Peak of 4,000	Peak of 3,000 in 2029	Less than 10 per cent
Operations workforce	113 per annum	113 per annum	Less than 10 per cent

Source: ACIL Allen

28 HyEnergy™

Province resources has plans to develop the HyEnergy green hydrogen project adjacent to the north side of the town of Carnarvon. The $1.5 billion[4] project has been recognised by the Western Australian Government as a significant project which is in the State's interest. It will be developed in phases totalling up to eight gigawatts in installed renewable energy capacity generated from solar and wind farms. The project is proposed to generate 550,000 tonnes of renewables-based hydrogen per annum from an onshore hydrogen gas production facility for sale to the domestic market via the Dampier to Bunbury Natural Gas Pipeline, and to the export market via an offshore ship loading buoy.[5]

The project which is currently in feasibility stage could commence construction in 2025 and take place over an approximate seven year period with the peak construction period extending for around three years when 4,000 workers per annum are required. As many as 300 of these workers could relocate to Carnarvon. Production is expected to commence in around 2032 and will require a workforce of around 1,500 workers per annum once fully operational. Around 113 of these workers are expected to move to Carnarvon.

Table 2.8 Key characteristics: HyEnergy project

	Total	Carnarvon local content	Local content share
Construction workforce	Peak of 4,000	Peak of 300	7.5%
Operations workforce	1,500 per annum	113 per annum	7.5%

Source: Province Resources and ACIL Allen

29 Aggregated demand for employment

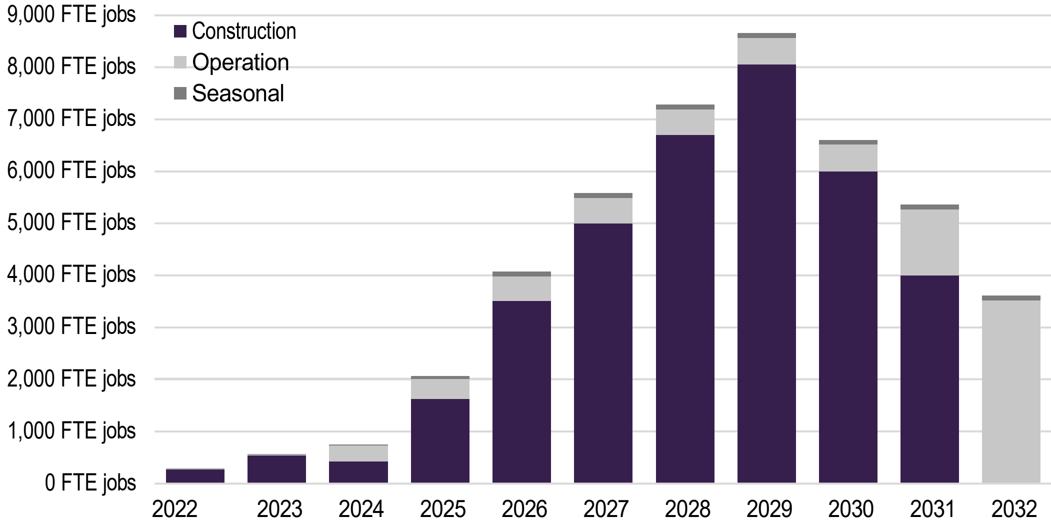
The aggregated demand for employment from the nine major projects in the construction and operation phases are presented in **Figure 2.1**. The majority of the workforce is required for construction activities associated with the development of the major projects however, the operation phases of these projects also provide significant enduring job opportunities of around an additional 3,500 full time equivalent jobs per annum from 2032 onwards as well as around 90 full time equivalent seasonal jobs per annum. On a jobs basis, the seasonal jobs are equivalent to a combined total of around 255 jobs required for short periods of time during the peak planting, pruning, and harvesting periods and during peak the peak tourism season.

The peak demand for employment is expected to occur over the period from 2028 to 2030 inclusive when an average of nearly 7,500 workers are required each year. This is when both hydrogen projects are under construction along with the second phase of the Babbage Island Resort.

[4] www.abc.net.au/news/2021-08-17/gascoyne-green-hydrogen-twiggy-forest-gnaraloo/100366480

[5] https://research.csiro.au/hyresource/hyenergy-project/

Figure 2.1 Major projects: demand for employment: construction, operation, and seasonal workforces: full time equivalent jobs (FTE)

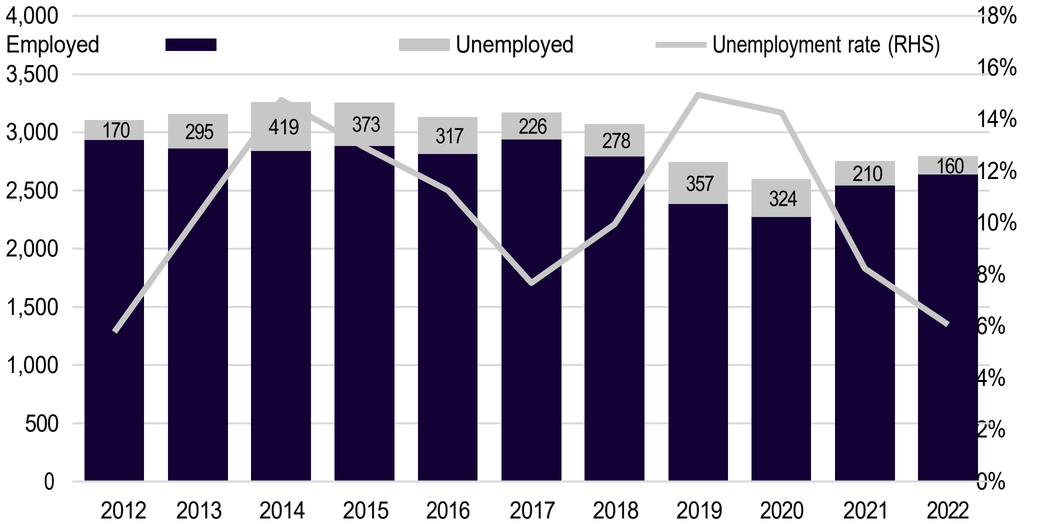


Source: ACIL Allen

210 Impact on the workforce in the Shire of Carnarvon

There is currently a workforce of around 2,800 people in the Shire of Carnarvon of which 200 are seeking employment. Over the past decade, there has been an average of 300 job seekers in each year and unemployment has remained above six per cent as illustrated in **Figure 2.2**.

Figure 2.2 Employment and Unemployment: Shire of Carnarvon: number of persons

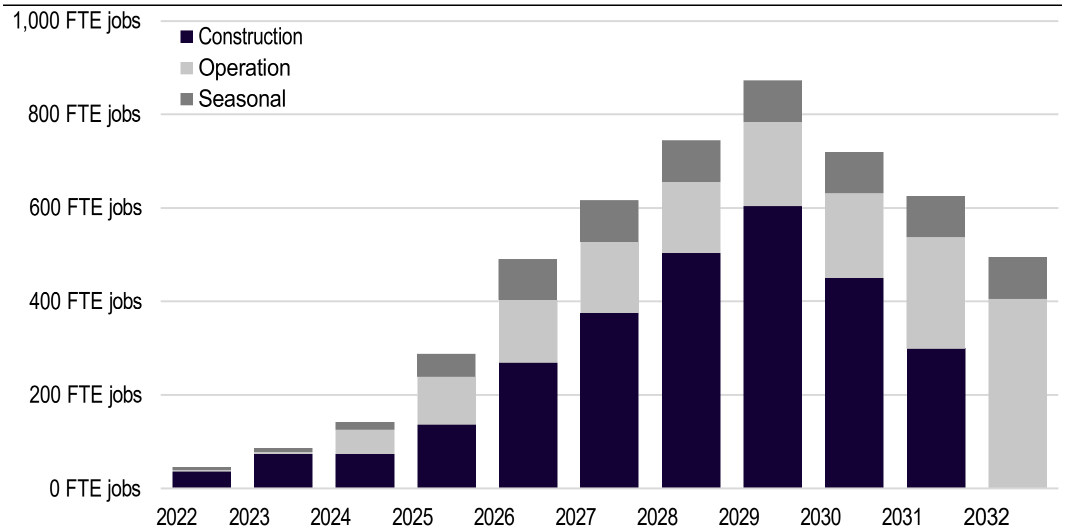


Source: Department of Employment

The proponents of the major projects identified in the Shire of Carnarvon indicate a potential to source employees from the Shire particularly during their operations phases. This is especially so for those projects in the agriculture and tourism sectors. Whilst there is a high number of unemployed people in the Shire, it is likely that the majority of the workers required by the major projects will need to move to the Shire because of the skill sets and work experience required by the project proponents.

The major projects indicate a potential net increase in the workforce from 2022 when the first of the projects commence construction with the first operations jobs coming on line in the second half of 2022 as illustrated in **Figure 2.3** which shows the potential workforce that will move to the Shire of Carnarvon to take up the work opportunities presented by the major projects. All projects are expected to be constructed by the end of 2031 resulting in an enduring permanent (excluding seasonal workers) operations workforce of around 400 full time equivalent workers from 2032 onwards. The two hydrogen projects result in the largest increases in permanent workforce accounting for around 225 permanent jobs and the remainder of the projects accounting for 180 permanent jobs in additional to seasonal workforces.

Figure 2.3 Demand for locally based workforce: major projects: construction, operation, and seasonal workforces: full time equivalent jobs (FTE)



Source: ACIL Allen

211 Impact on demographics

Some of the workforce attracted to relocated to the Shire of Carnarvon to work on the nine major projects will bring additional household members including spouses and dependent children. An analysis was undertaken of the demographic profile of the working age population in Western Australia in order to determine the total impact on the population of the Shire of Carnarvon from the relocation of workers from elsewhere to the Shire.

It is assumed that 60 per cent of new employees moving to the Shire of Carnarvon will be aged between 25 and 44. A further 15 per cent of new employees will be aged between 18 and 24 and 25 years and 25 per cent between 45-64 years of age. The assumptions for new employees in presented in **Table 2.9**.

Table 2.9 Assumed age profile of new employees

Age group	Share (%)
18-24	15.0
25-44	60.0
45-64	25.0
65+	0.0
Total	**100.0**

Source: ACIL Allen

Population multipliers were derived using 2021 Australian Bureau of Statistics Census data for Western Australia relating to relationships, family composition, education, and dependent children. For more detail explaining the steps in this derivation, see **Appendix B**.

The population multipliers are presented in **Table 2.10**. They imply that for every worker employed by the nine major projects that move to the Shire of Carnarvon, there will be on average a net inflow of between 1.26 and 1.97 people (including partners, and dependent children) depending on the age of the employee. The analysis implies that for every new employee aged between 25 and 64 years of age, there will be an average of a further 0.95 people including dependent children and/or partners.

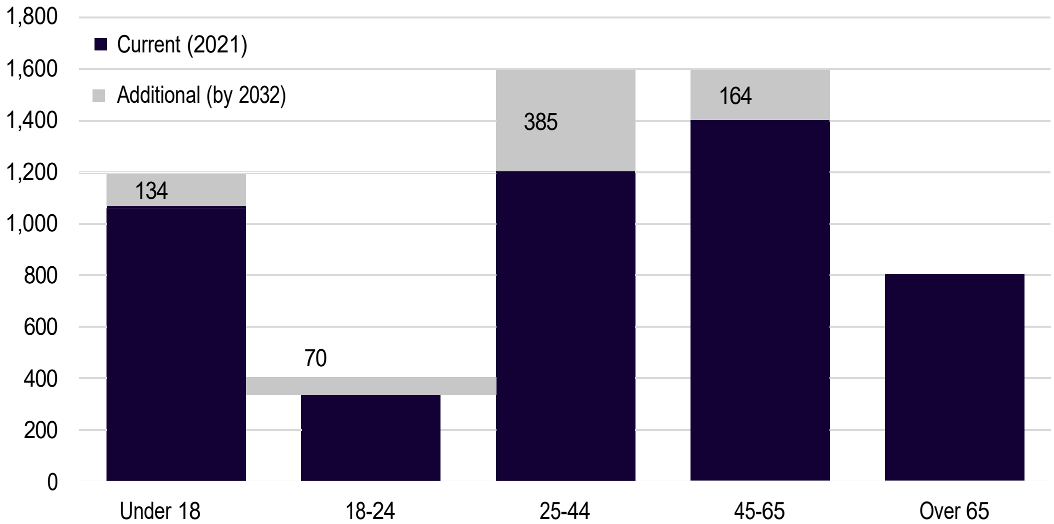
Table 2.10 Population multipliers, by age group

Age	Population multiplier
18-24	1.26
25-44	1.95
45-64	1.97
65+	1.71

Source: ACIL Allen

Applying a standard demographic profile for the population of working age people and their families in Western Australia indicates an additional 619 adults and 134 dependent children in the Shire including 88 school aged children in kindergarten to year 12, 28 children of child care age, and 25 post school aged children. The demographic profile of the residents of the Shire of Carnarvon combined with the additional population created by the nine major projects is presented in
Figure 2.4.

Figure 2.4 Current and future demographic profile: Shire of Carnarvon: number of persons



Source: Australian Bureau of Statistics

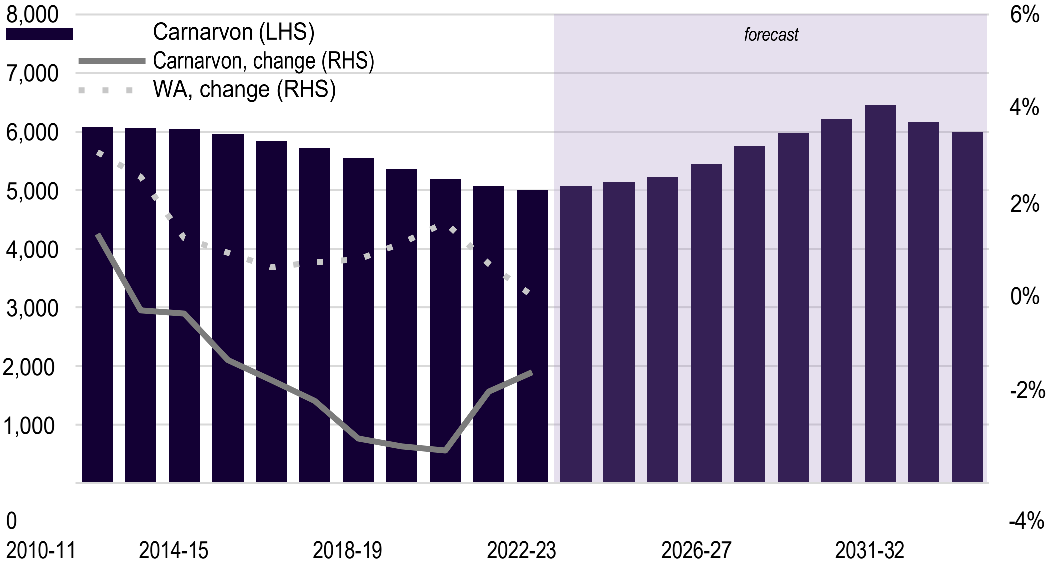
2.12 Impact on population

The population of the Shire of Carnarvon has experienced decline since 2010-11 and whilst rates of decline have slowed, they remain at 1.6 per cent which represents a loss of nearly 100 people per year. Assuming an average household size in Western Australia of 2.5 persons would indicate a loss of around 40 families per year from the Shire.

Assuming the existing residential population in the Shire remains constant into the future, the major projects will result in the population increasing from around 5,000 people in 2021 to a peak of 6,450 people in 2029-30, before softening to around 6,000 people by the end of the estimates period (**Figure 2.5**). The increase over the estimates period reflects an increase of around 1.9 per cent per annum.

The forecast increase in population over the decade to 2032 includes the construction and operational employees associated with the nine major projects and their partners and dependent children that are expected to relocate to the Shire of Carnarvon. The analysis excludes seasonal workers.

Figure 2.5 Population and population growth: Shire of Carnarvon



Source: Australian Bureau of Statistics Cat 3218.0, ACIL Allen

Social services and infrastructure 3

This chapter sets out the key current social services in the Shire of Carnarvon and makes estimates as to the resulting impact that the potential additional population that is attracted to the Shire because of the major projects will have. This analysis includes the **permanent operations workforce as of 2032** only and does not include the impact of the seasonal workers who are likely to be housed in temporary accommodation such as youth hostels and caravan parks.

.1 Assumptions

The following assumptions have been made when calculating the impact on social services and infrastructure presented in this report.

.1.1 Best estimates

The analysis uses best estimates provided by the proponents of the major projects, through publicly available information, or estimates provided by professionals with knowledge of the nine major projects. It is likely that market conditions may result in differences in some or all assumptions particularly as they relate to project timing, the size of the workforce, and the ability to source workers from the Shire of Carnarvon.

.1.2 Nine major projects only

The analysis takes into account the projected workforces of the nine major projects only and does not take into consideration other projects that may also be in the pipeline.

.1.3 Population projections

Population projections assume that the current residential population base will remain steady into the future and will not continue to decline (as observed between 2010-11 and 2020-21). The projected trend in future population projections only reflect the impact of major projects.

.1.4 Enduring operations workforce as of 2032

Figure 2.3 presents the projected construction and operations workforces that could be located in Carnarvon given the local content aspirations of the major projects noting that there are currently infrastructure limitations in the Shire that will impact the ability of the major projects to attract workers to the Shire. It shows that a permanent operations workforce of around 400 workers residing in the Shire is possible from 2032. If all projects proceed at the rate assumed in this report and local employment targets are achieved, the demand for social services will be realised as early as 2026 when a combined construction and permanent operations workforce of around 400 workers is required, and will peak in 2029 when a combined locally based construction and permanent operations workforce of around 780 workers is required. Further to these estimates are the seasonal workers and the employment requirements of other projects in the Shire which will place further demand on social services and infrastructure.

The information contained in this chapter refers to the impact of the enduring operations workforce of the nine major projects of around 400 workers on the social infrastructure and services in the

Shire of Carnarvon that is required from 2032 onwards, noting that if construction workforces also relocate to Carnarvon then a similar level of demand will be present from 2026.

.1.5 Social services and infrastructure ratios

The report makes use of social services and infrastructure ratios based on the current structure of the population in the Shire of Carnarvon and the level of service and infrastructure provision. Future demand for social services and infrastructure is based on current ratios

.2 Infrastructure limitations

The ability to attract new population to the Shire of Carnarvon will be limited by the ability of social infrastructure to attract and maintain new population. Some of the nine major projects on the horizon go towards addressing these shortfalls including The Pier which will provide contemporary office and retail space, a micro brewery, and modern apartment style housing.

Key impediments to population attraction and retention in the Shire of Carnarvon include the availability of a suitable quality of housing with supporting infrastructure including roads, streetscapes, sewerage, communications. This issue of inadequate social infrastructure impacting the ability of a regional town to attract workers is supported by CEDA which found there is a identified a widening gap in services and outcomes outside in regional areas of Australia and that in some parts of the country, the provision of infrastructure services remains below what is acceptable for a highly developed nation. The most pervasive issue is connectivity, in both a physical and a digital sense. Access to telecommunications and transport links are key factors influencing business decisions to invest in regional areas because of the limitation it places on people's capacity to communicate, innovate, and embrace data-reliant technologies. The article concluded that Innovative and adaptive infrastructure can unlock opportunities for growth and employment.[6]

The Australia Institute also found that the total absence of available housing for incoming workers to a regional area contributed toward:

— Higher labour costs as firms need to pay more to attract staff into localities with limited housing options
— Elevated staff turnover in enterprises as staff relocate to find more affordable housing
— Reduced living standards as some households pay unaffordable rents to secure a home of the standard they are seeking
— Lost business opportunities that enable existing businesses to grow and attract new firms as investors, whilst also being confronted by the absence of an available labour force.[7]

The availability of a high standard of housing in the Shire of Carnarvon is therefore key to the ability of the Shire to maximise the economic benefits of the major projects in terms of local employment, spending, and population growth.

.3 Housing

The Australian Bureau of Statistics reports that in 2021 there were 1,583 houses and apartments in the Shire of Carnarvon of which 1,561 are located in the town and Carnarvon. A further 35 dwellings are planned for construction as part of The Pier development which is one of the major projects on our horizon.

---

[6] CEDA (2019), Addressing The Infrastructure Gap Between Our Cities And Regions, opinion article by Romily Madew

[7] Regional Australia Institute (2022), Building the Good Life: Foundations for Regional Housing

The current housing market in Carnarvon is limited with very few houses available for sale or rent. There are blocks of residential land available at NorthWater Estate including ten single dwelling, one duplex, and one grouped housing lot. Furthermore, the standard of housing available in the town that is suitable to accommodate employees of the major projects is a key limitation in attracting new population to the town.

Assuming the local employment content targets of the proponents of the major projects will require houses for an additional 405 permanent workers from 2032. In order to meet these local employment targets, around 370 new houses would be required which allows for the new accommodation at The Pier as well as an assumption that more than one resident of some new households will be employed by the major projects. For the purposes of this report, it is assumed that 15 per cent of households will include more than one resident employed by a major project.

New housing solutions will need to cater for a range of households as described in Section 2.11 which shows that the workforce attracted to the Shire will be a mix of single person, couple or share housing, and family households.

Further housing will also be required to house the additional social services and infrastructure employees that are required to cater for the additional population. There are two GROH houses currently under construction to accommodate police and education employees[8] and it is likely that a further 12 will be required as a result of the increase in demand for government services created by the major projects. In total, it is estimated that around 350 dwellings will be required.

Key Finding 1 Key Finding: housing

A further 370 dwellings of a suitable standard are required to house the additional population in the town assuming the local employment content targets during the operations phases of the major projects in 2032. A further 12 will be required to accommodate additional social service and infrastructure employees resulting in a total housing demand of around 350 dwellings.

Source: ACIL Allen

.4 Health

The primary health facilities in the Shire of Carnarvon are located at the Carnarvon Health Campus which includes hospital facilities and a GP clinic. The hospital comprises of 30 beds[9] indicating a bed to 1,000 population ratio of 6.01 which is above the average for very remote hospitals in Western Australia of 2.76 beds per 1,000 population and compared to a State average of 2.34 beds per 1,000 population. There are five practitioners at the GP clinic and five nurses indicating a ratio of 1,000 people for every GP and every nurse.

An increase in the population of Carnarvon will result in a decrease in the ratio of beds to population to 5.2 beds per 1,000 population. This ratio remains favourable compared to the State and very remote average however, in order to maintain the current level of service in the Shire of Carnarvon, an additional 4.5 beds will be required.

In order to maintain the current level of service at the GP clinic, an additional 0.75 GPs and 0.75 nurses will be required.

[8] Minister for Housing; Lands; Homelessness; Local Government (March 2022), Two homes for teachers and police underway in Carnarvon, https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/03/Two-homes-for-teachers-and-police-underway-in-Carnarvon.aspx

[9] Hospital Resources 2020–21: Australian hospital statistics

Key Finding 2 Key Finding: health

In order to maintain the current level of health services in the Shire of Carnarvon, an additional 4.5 hospital beds, 0.75 GPs, and 0.75 GP clinic nurses will be required.

Source: ACIL Allen

.5 Education

Public education in the Shire of Carnarvon is provided by Carnarvon Community College which caters for students from kindergarten to year 12. Private education is provided by Carnarvon Christian School which caters for children from kindergarten to year six while St Mary Star of the Sea caters for students from kindergarten to year 12.

Applying a standard demographic profile to the approximately 400 permanent workers required by the major projects from 2032 indicates that there will be an additional 42 kindergarten to year six students and 46 year seven to year 12 students. An analysis of the current ratio of students to teachers at the Carnarvon Community College and the maximum allowable class sizes set out in the School Education Act Employees' General Agreement [10] estimates that an additional four kindergarten to year six teachers and two year seven to year twelve teachers will be required assuming all children attend the College.

Key Finding 3 Key Finding: education

An additional four kindergarten to year six teachers and two year seven to year twelve teachers will be required in order to meet the class size requirements of the School Education Act Employees' General Agreement.

Source: ACIL Allen

.6 Child care

There is one child care facility in Carnarvon that has a licence for 58 children. It is assumed that children attend day care from the age of birth up to aged four years as children are able to attend kindergarten at school once they have turned 4 years and six months. There are 259 children aged 4 and under in the Shire of Carnarvon which indicates a ratio of 0.22 childcare places per child.
This is well below the average for Western Australia of 0.39[11].

It is expected that the additional families that move to the Shire of Carnarvon because of the major projects will result in an additional 28 children of child care age. An additional six childcare places will be required in the Shire of Carnarvon in order to maintain the current number of childcare places to children. If the ratio of childcare places to children in Western Australia is to be achieved, a further 55 childcare places would be required in the Shire of Carnarvon to cater for the current and projected population.

---

[10] Western Australian Industrial Relations Commission, School Education Act Employees' General Agreement Section 12. Class sizes

[11] Based on data from the Department of Education, Skills and Employment showing the number of children attending centre based day care in Western Australia in June 2021 compared to the number of children aged less than four years as of the 2021 Australian Bureau of Statistics Census.

Key Finding 4 Key Finding: child care

An additional six childcare places will be required in the Shire of Carnarvon in order to maintain the current number of childcare places to children. A total of 55 places are required to bring the Shire up to the average childcare service provision ratio in Western Australia.

Source: ACIL Allen

.7 Policing

In 2020-21, there were 920 people for every police officer in the Perth Metropolitan Area. In regional areas of the State, the ratio was 373 people for each police officer.[12] In Carnarvon, the ratio was more favourable with around 150 to 180 people per police officer. The addition of a further 750 workers and their families in the Shire as a result of the additional employment created by the major projects would increase this ratio to 170 to 210 people per police officer. In order to maintain the current ratio of police officers to population, a further 4.5 full time equivalent police officers will be required.

Key Finding 5 Key Finding: policing

A further 4.5 full time equivalent police officers will be required in the Shire of Carnarvon to maintain the current ratio of police officers to population.

Source: ACIL Allen

.8 Air services

Carnarvon Airport is owned and operated by the Shire of Carnarvon. It hosts flights that operate between Carnarvon and Perth as well as flights to Monkey Mia. A comparison of the number of inbound passengers to the population of the Shire of Carnarvon shows that there is a fairly constant long term ratio of around 1.9 passengers per head of population[13]. If this ratio is applied to the population of the Shire in 2032, it implies an additional 900 inbound passengers each year.

Assuming a capacity of 34 passengers per flight[14] indicates that an additional 26 flights will be required between Perth and Carnarvon each year to maintain the current level of air services in the Shire.

Key Finding 6 Key Finding: air services

An additional 26 flights carrying an additional 900 inbound passengers will be required between Perth and Carnarvon each year to maintain the current level of air services in the Shire.

Source: ACIL Allen

[12] WA Police (2022), Western Australia Police Force 2021 Annual Report

[13] Average over 16 years from 2006 to 2021 inclusive

[14] Rex Airlines operates a Saab 340 aircraft between Carnarvon and Perth which has a passenger capacity of 36 seats https://www.rex.com.au/AboutRex/OurCompany/fleet.aspx with an assumption that not all seats are taken by passengers

Image sources A

The images used in this report are sourced from the following:

Yangibana - Hastings Technologies

Carnarvon Food Bowl – Business News

Ningaloo Reef Resort – Shire of Carnarvon

Gascoyne Green Hydrogen Hub – iStock

Babbage Island Resort – Shire of Carnarvon

Old Justice Precinct – Shire of Carnarvon

Carnarvon Barge Loading Facility – Google maps

HyEnergy – Fortescue Future Industries

Front Cover – Shire of Carnarvon

Methodology: Population multipliers B

B.1.1 Objective

The objective is to determine the net impact on the Shire of Carnarvon's permanent residential population as a result of new employees who move to the region. It excludes those employees on a fly-in fly-out, or drive-in drive-out basis. The analysis will consider the expected number of new employees plus their:

— Spouses or de facto partners; and

— Dependent children.

B.1.2 Age categories

The first step was to profile potential employees by age, with the categories including **0-17**, **18-24**, **25-44**, **45-64**, and **over 65**. In doing so, the analysis can be more tailored to the expected profile of new employees who are expected to move to Carnarvon, and also enable the analysis to perform scenario testing. For example, the analysis will be able to assign a higher weight to people who are aged between 25-44 years of age, as they may be more likely to move to the region (from Perth, or another regional centre) compared to someone aged over 45.

B.1.3 Data sources

The following data sources presented in were used in ACIL Allen's analysis. The aim of this analysis is to determine (on average), how many spouses/ partners, and dependent children an individual may have for each age bracket (as defined in the previous section). We can then determine the total expected inflow of people for a given number of employees (i.e. a population multiplier for every one employee in the Shire).

Table B.1 List of data sources

Item	Data source	Data points
A	ABS Census 2016 Age by MDCP Social Marital Status Western Australia	Married in a registered marriage Married in a de facto marriage Not married Not applicable Overseas visitor
B	ABS Census 2016 Age by FMCF Family composition (1 Digit Level) Western Australia	Couple family with no children Couple family with children One parent family Other family Not applicable
C	ABS Census 2016 Age by CDCF Count of Dependent Children in Family	Couple family with: No dependent children Couple family with: One dependent child Couple family with: Two dependent children Couple family with: Three dependent children

Source: ACIL Allen

B.1.4 Methodology

The following steps were applied to determine the residential population impact.

— **Step 1**: Profile the WA population into age categories of 0-17 (children and youth), 18-24 (young adults), 25-44 (young adults and middle age), 45-64 (middle age and older adults), over 65 (senior);

— **Step 2**: Identify the share of the population who are partnered and non partnered, by age category (Item A)

— **Step 3**: Determine the share of partnered and non partnered population who have children, by age category (Item B)

— **Step 4**: Determine the average number of dependent children that partnered and non partnered people have, by age category (Item C)

— **Step 5**: Determine the average distribution of children who attend an educational institution (assumed by ACIL Allen)

— **Step 6**: Multiply the relevant items above to determine the population multipliers and expected number of individuals, partners, and dependent children per employee.

ACIL Allen has determined the population multipliers for each age category based on 100 new employees moving to the Shire of Carnarvon (assumed to be 100 for each age category). Rounding has not been applied to this data until the end of the analysis.

B.1.5 Results

Table B.2 presents the distribution of employed individuals by 'partnered' and 'non partnered', and having 'dependent children' and 'not having dependent children'.

Table B.2 Distribution of employed individuals, per 100 new employees, no rounding applied

Age	Individuals, Partnered, Dependents	Individuals, Partnered, No dependents	Individuals, Not partnered, Dependents	Individuals, Not partnered, No dependents	Total
18-24	2.91	10.61	9.23	77.25	**100.00**
25-44	16.05	42.22	5.98	35.75	**100.00**
45-64	26.19	36.08	4.18	33.55	**100.00**
65+	44.98	7.09	0.62	47.31	**100.00**

Source: ACIL Allen

Table B.3 presents the distribution of the expected number of employee partners, per 100 new employees.

Table B.3 Distribution of partners, by age, per 100 new employees, no rounding applied

Age	Partners, Partnered, Dependents	Partners, Partnered, No dependents	Partners, Not partnered, Dependents	Partners, Not partnered, No dependents	Total
18-24	2.91	10.61	0.00	0.00	**13.52**
25-44	16.05	42.22	0.00	0.00	**58.27**
45-64	26.19	36.08	0.00	0.00	**62.27**
65+	44.98	7.09	0.00	0.00	**52.07**

Source: ACIL Allen

Table B.4 presents the distribution of the expected number of employee dependent children, per 100 new employees.

Table B.4 Distribution of dependent children, by age, per 100 new employees, no rounding applied

Age	Children, Partnered, Dependents	Children, Partnered, No dependents	Children, Not partnered, Dependents	Children, Not partnered, No dependents	Total
18-24	3.60	0.00	8.98	0.00	**12.58**
25-44	29.06	0.00	7.82	0.00	**36.89**
45-64	32.02	0.00	3.15	0.00	**35.17**
65+	18.74	0.00	0.14	0.00	**18.87**

Source: ACIL Allen

The following two tables represent the distribution of the expected number of dependent children for partnered, and not partnered families across educational types (ie. figures in **Table B.5** and **Table B.6** sum to figures in **Table B.4**). The figures in these tables reflect ACIL Allen assumptions (for example, an employee aged over 65 is not likely to have a pre-school, primary or secondary school aged child).

Table B.5 presents a distribution of dependent children of partnered parents, per 100 new employees.

Table B.5 Distribution of children by education stage, children of partnered families, by age, per 100 new employees, no rounding applied

Age	Children, Partnered, Dependents, pre-school	Children, Partnered, Dependents, primary	Children, Partnered, Dependents, secondary	Children, Partnered, Dependents, post-school	Total
18-24	3.24	0.36	0.00	0.00	**3.60**
25-44	8.72	8.72	8.72	2.91	**29.06**
45-64	0.00	3.20	14.41	14.41	**32.02**
65+	0.00	0.00	0.00	18.74	**18.74**

Source: ACIL Allen

Table B.6 presents a distribution of dependent children of non partnered parents, per 100 new employees.

Table B.6 Distribution of children by education stage, children of unpartnered families, by age, per 100 new employees, no rounding applied

Age	Children, Not partnered, Dependents, pre-school	Children, Not partnered, Dependents, primary	Children, Not partnered, Dependents, secondary	Children, Not partnered, Dependents, post-school	Total
18-24	8.08	0.90	0.00	0.00	**8.98**
25-44	2.35	2.35	2.35	0.78	**7.82**
45-64	0.00	0.32	1.42	1.42	**3.15**
65+	0.00	0.00	0.00	0.14	**0.14**

Source: ACIL Allen

A summary of the results is presented in **Table B.7** and shows:

- For every 100 new employees aged between 18 and 24, there will be a net inflow of 126 people including partners and dependent children (multiplier 1.26);
- For every 100 new employees aged between 25 and 44, there will be a net inflow of 195 people including partners and dependent children (or a multiplier of 1.95)
- For every 100 new employees aged between 45 and 64, there will be a net inflow of 197 people including partners and dependent children (or a multiplier of 1.97)
- For every 100 new employees aged over 65, there will be a net inflow of 171 people (or a multiplier of 1.71).

A summary of population inflows (per 100 new employees) is presented in **Table B.7**.

Table B.7 Summary of population inflows, per 100 new employees, by age category

Age	Individuals	Partners	Children, pre-school	Children, primary	Children, secondary	Children, post-school	Total (rounded)
18-24	100.00	13.52	11.32	1.26	0.00	0.00	**126**
25-44	100.00	58.27	11.07	11.07	11.07	3.69	**195**
45-64	100.00	62.27	0.00	3.52	15.83	15.83	**197**
65+	100.00	52.07	0.00	0.00	0.00	18.87	**171**

Source: ACIL Allen

B.1.6 Population multipliers

A summary of the population multipliers is presented in **Table B.8**.

Table B.8 Summary of population multipliers, by age category

Age	Individuals	Partners	Children, pre-school	Children, primary	Children, secondary	Children, post-school	Total
18-24	1.00	0.14	0.11	0.01	0.00	0.00	**1.26**
25-44	1.00	0.58	0.11	0.11	0.11	0.04	**1.95**
45-64	1.00	0.62	0.00	0.04	0.16	0.16	**1.97**
65+	1.00	0.52	0.00	0.00	0.00	0.19	**1.71**

Source: ACIL Allen

B.2 Source data

Table B.9 Age by MDCP Social Marital Status, Western Australia (1.00 = 100%)

Age	Married in a registered marriage	Married in a de facto marriage	Not married	Not applicable	Overseas visitor	Total
18-24	0.03	0.11	0.71	0.13	0.02	1.00
25-44	0.43	0.16	0.26	0.14	0.01	1.00
45-64	0.54	0.08	0.23	0.13	0.01	1.00
65+	0.49	0.03	0.30	0.17	0.01	1.00

Source: ABS Census 2016, Counting Persons, Place of Enumeration (MB), STATE by AGEP Age by MDCP Social Marital Status; ACIL Allen

Table B.10 Age by FMCF - 1 Digit Level, Western Australia (1.00 = 100%)

Age	Couple family with no children	Couple family with children	One parent family	Other family	Not applicable	Total
18-24	0.11	0.40	0.14	0.03	0.32	1.00
25-44	0.17	0.45	0.07	0.01	0.29	1.00
45-64	0.27	0.37	0.08	0.01	0.28	1.00
65+	0.46	0.07	0.04	0.01	0.41	1.00

Source: ABS Census 2016, Counting Persons, Place of Enumeration (MB), STATE by AGEP Age by FMCF - 1 Digit Level; ACIL Allen

Table B.11 Age by CDCF Count of Dependent Children in Family, Couple family, Western Australia (1.00 = 100%)

Age	Couple family with: No dependent children	Couple family with: One dependent child	Couple family with: Two dependent children	Couple family with: Three dependent children	Couple family with: Four dependent children	Couple family with: Five dependent children	Couple family with: Six or more dependent children
Children	0	1	2	3	4	5	6
18-24	0.29	0.35	0.24	0.08	0.02	0.01	0.01
25-44	0.08	0.29	0.42	0.16	0.04	0.01	0.00
45-64	0.31	0.30	0.28	0.09	0.02	0.00	0.00
65+	0.75	0.14	0.08	0.03	0.01	0.00	0.00

Source: ABS Census 2016, Counting Persons, Place of Enumeration (MB), STATE by AGEP Age by CDCF Count of Dependent Children in Family; ACIL Allen

Table B.12 Age by CDCF Count of Dependent Children in Family, One parent family, Western Australia (1.00 = 100%)

Age	One parent family with: No dependent children	One parent family with: One dependent child	One parent family with: Two dependent children	One parent family with: Three dependent children	One parent family with: Four dependent children	One parent family with: Five dependent children	One parent family with: Six or more dependent children
Children	0	1	2	3	4	5	6
18-24	0.39	0.36	0.17	0.06	0.02	0.01	0.00
25-44	0.29	0.31	0.26	0.10	0.03	0.01	0.00
45-64	0.50	0.30	0.15	0.04	0.01	0.00	0.00
65+	0.85	0.09	0.04	0.01	0.00	0.00	0.00

Source: ABS Census 2016, Counting Persons, Place of Enumeration (MB), STATE by AGEP Age by CDCF Count of Dependent Children in Family; ACIL Allen

To determine the distribution of children

Table B.13 Distribution of children by educational institution attendance, assumed for Western Australia (1.00 = 100%)

Age	Partnered, children, pre- school	Partnered, children, primary school	Partnered, children, secondary school	Partnered, children, post school
18-24	0.90	0.10	0.00	0.00
25-44	0.30	0.30	0.30	0.10
45-64	0.00	0.10	0.45	0.45
65+	0.00	0.00	0.00	1.00

Source: ACIL Allen

Antonia Hodby
Principal
a.hodby@acilallen.com.au
0404 822 301

Marshall Roberts
Analyst
m.roberts@acilallen.com.au

Melbourne
Suite 4, Level 19; North Tower
80 Collins Street
Melbourne VIC 3000 Australia
+61 3 8650 6000

Sydney
Suite 603, Level 6
309 Kent Street
Sydney NSW 2000 Australia
+61 2 8272 5100

Brisbane
Level 15, 127 Creek Street
Brisbane QLD 4000 Australia
+61 7 3009 8700

Canberra
Level 6, 54 Marcus Clarke Street
Canberra ACT 2601 Australia
+61 2 6103 8200

Perth
Level 12, 28 The Esplanade Perth
WA 6000 Australia
+61 8 9449 9600

Adelaide
167 Flinders Street Adelaide SA
5000 Australia
+61 8 8122 4965

ACIL Allen Pty Ltd
ABN 68 102 652 148

acilallen.com.au

APPENDIX 2 GASCOYNE WORKER HOUSING ACTION PLAN

GASCOYNE WORKER HOUSING ACTION PLAN

Final Report

Prepared for Gascoyne Development Commission February 2022

CONTENTS

EXECUTIVE SUMMARY

This action plan outlines initiatives to support the adequate provision of worker housing in the Gascoyne over the short and long term.

When COVID-19 hit, the Gascoyne region's communities experienced a significant reduction in the availability of appropriate housing for workers. This was partly influenced by an increase in visitor and population levels but was exacerbated by longer term market failures that have led to historically low levels of housing investment.

This action plan details immediate initiatives and recommendations for sustained prosperity in the medium and long term. The focus of the action plan is explicitly on worker housing – both rental and owner occupier housing for government and non- government workers.

This plan was developed through a targeted consultation process with state and local government and housing industry stakeholders. It was complemented by desktop analysis of housing market attributes and trends.

Key Challenges

This study identified the following key challenges which are affecting worker housing availability.

4 Elevated construction costs (approximately 50-60% above Perth averages).

5 Limited viability for new builds due to low land value.

6 Impact of GROH program on availability of rental accommodation for private market.

7 Increasingly more lucrative short stay returns (approximately double long-term rental returns).

8 Declining housing quality due to declining dwelling values.

Key Priorities

Three key priorities are identified to drive increased worker housing availability and create the conditions for increased private sector investment.

C **Unlock private capital** – support private sector investment in new construction and renovations.

D **Optimise government assets** – enhance the utilisation of public and government regional officer housing and land assets.

E **Innovate the home** – stimulate alternative housing options.

Under these priorities there are 20 actions across the immediate, medium and long term for the Gascoyne Development Commission to deliver themselves, collaborate with others and advocating for change.
The 10 high priority actions are summarised over the
page.

EXECUTIVE SUMMARY (CONT.)

Focus Area	Action	GDC Role	Timing	Priority
Unlock Private Capital	Identify short, medium and longer term housing supply opportunities (for each local government) and status (servicing requirements, zoning, tenure etc.).	Partner	Short-Term	High
	State Government worker rental affordability scheme to incentivise investors to provide eligible worker households (e.g. low income essential workers) with long- term rentals in the Gascoyne.	Advocate	Short-Term	High
	Adopt short-term empty homes incentive (e.g. through rates concession) to encourage investors to offer housing to workers.	Advocate	Immediate	High
Optimise Government Assets	Department of Communities to identify future GROH needs and prioritise new build lease-back arrangements.	Advocate	Immediate	High
	Re-purpose or sell vacant Department of Communities public housing stock	Advocate	Immediate	High
	Repurpose under-utilised GROH stock to support increase in housing for private owner-occupation / rental.	Advocate	Short-Term	High
Innovate the Home	"Homes for workers" campaign and register of need website (to match homes with households).	Partner	Immediate	High
	Implement market-led proposal pathway for innovative worker housing with fast-track approvals pathway.	Advocate	Short-Term	High
	Apply leniency and flexibility regarding enforcement of informal accommodation (e.g. setting up caravan in car park, keeping toilets open longer etc.)	Advocate	Immediate	High
	Provide grants to local government to support development of residential land in areas with no appropriate land availability (e.g. Shire of Upper Gascoyne)	Advocate	Short-Term	High

INTRODUCTION

Study Background and Purpose

Housing markets in the Gascoyne are influenced by a range of factors similar with those present in the capital city. These include (but are not limited to): population growth; the structural ageing of the population; the timely availability of serviced land; the balance between supply and demand for housing; and the impact of housing finance costs and availability.

However, the Gascoyne's housing markets are additionally influenced by a diverse range of factors not present or significant in capital city housing markets. These include issues such as scale, geography, spatial differentiation, land availability, demand for holiday/second homes and localism.
These factors have influenced rapid changes in the level of housing affordability, choice and supply which have been exacerbated by more recent economic trends through the Covid-19 pandemic.

These challenges are leading to a significant under- supply of appropriate worker housing across the Gascoyne region and – without intervention –
constrain the economic potential of the region's communities.

As such, Urbis was engaged to develop a worker housing action plan. This plan is intended to:

- Provide stakeholders with an understanding of housing trends and attributes in region and across the region's individual markets;
- Provide an understanding of the existence of market failures and the drivers / causes of these;
- Identify strategies and actions to address housing issues and support discussions with government and industry; and
- Be informed by data collation and targeted engagement with stakeholders.

Study Approach

The development of this action plan was informed by a targeted consultation process with state and local government and housing industry stakeholders. It was complemented by desktop analysis of housing market attributes and trends.

The plan is structured in line with below.

3 **Housing Market Analysis**: Summary of key trends and attributes across the region's local government areas and identification of key short- and long-term market failures and drivers.

4 **Key Priorities and Actions**: Recommended focus areas and associated initiatives to address market failures.

Case studies of initiatives implemented by other regional councils and detailed housing trends by local government authority are appended to this document.

01

HOUSING MARKET ANALYSIS

REGIONAL CONTEXT

Regional Overview

The Gascoyne, in the North West of Western Australia, captures more than 600km of Indian Ocean coastline and stretches about 500km inland. The coastal area incorporates internationally recognised features such as the Ningaloo Coast and Shark Bay World Heritage Areas, Monkey Mia, and Coral Bay. The hinterland includes the outstanding features of the Kennedy Ranges and Mount Augustus.

The Gascoyne is rich in resource and investment opportunities with an economy founded on quality horticulture, pastoral and fishery production, resources and tourism

The resident population of approximately 9,300 is concentrated in the key centres of Carnarvon, Exmouth, Denham, Gascoyne Junction, Burringurrah and Coral Bay.

There are four local government areas which form the Gascoyne region: Shire of Carnarvon, Shire of Exmouth, Shire of Shark Bay and Shire of Upper Gascoyne.

The Gascoyne region's housing markets are characterised by larger urban areas such as Carnarvon and Exmouth, small established towns, small coastal tourism destinations, rural properties and remote Aboriginal communities.

Economic Overview

The Gascoyne region supports approximately 4,600 jobs and produces an annual economic output of $2.4 billion (based on REMPLAN data for 2020).

The tourism industry is the largest employing industry sector and it contributes approximately 667 jobs (14.4%) to the region's total employment. Other important industries are mining, agriculture / fishing and retail services.

The successful management of COVID-19 in Western Australia, high commodity prices, government stimulus measures and strengthening population growth in 2019 and early 2020 have translated to improving household and business confidence across Western Australia and this flowed through to the Gascoyne region.

Unemployment levels in the Gascoyne region have been declining in recent years, with the unemployment rate falling from 9.1% to 7.5% over June to December 2020. In the Exmouth, Shark Bay and Upper Gascoyne local government areas, unemployment rates sit at approximately 4.5% (Carnarvon's unemployment remains elevated at 10.2% albeit down from 13.4% as of mid-2020).

Alongside declining unemployment levels, businesses are reporting significant challenges attracting and accommodating staff in the region. The labour market is expected to tighten further based on increasing job advertisement levels.

Whilst population estimates are only available for the period to June 2020, activity indicators suggest that population and workforce levels have been steadily increasing in this region. Other timely datasets such as traffic volumes and payroll employment notifications increased over the 2020 and early 2021 period.

SALES TRENDS

Key Findings

Overall, the region's established housing market strengthened in the second half of 2020.

In the second half of 2020, transactions for houses increased to the highest levels in recent history and the median house price for the region increased by 49% over the year to December 2020.

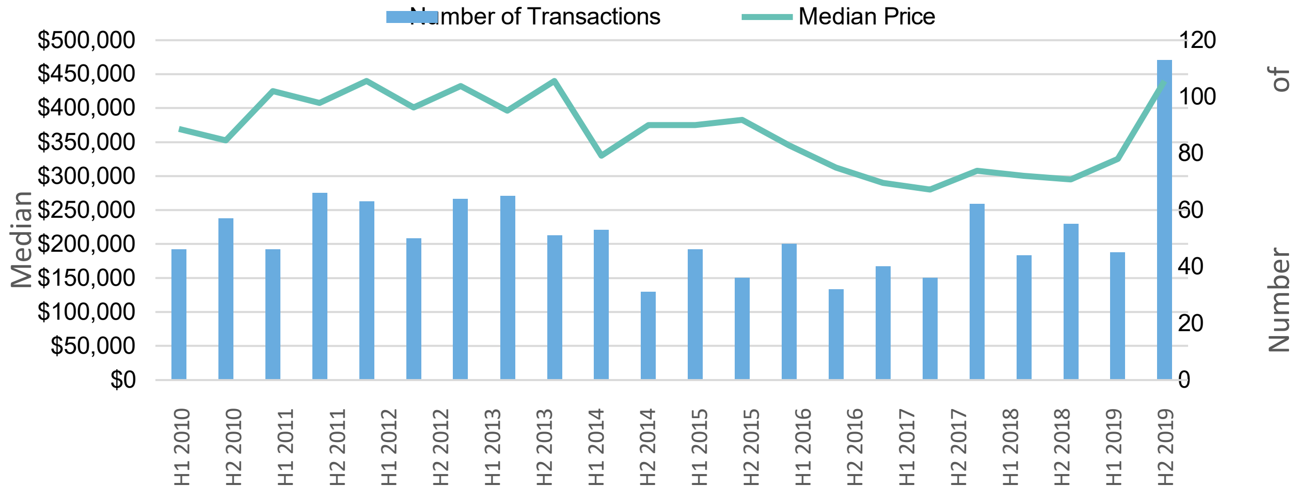
There is a relatively low level of multi-unit dwellings in the region's towns however sales volumes and prices additionally increased in this market.

Whilst settled sales for the first half of 2021 were not complete, preliminary data suggested that sales volumes and prices remained elevated.

Much stronger sales volumes in the Shire of Exmouth contributed significantly to the increased market activity (sales volumes of 72 houses for H2 2020 compared to ten-year average of 22 house sales). The Carnarvon and Shark Bay localities experienced more moderate increases in volumes and prices.

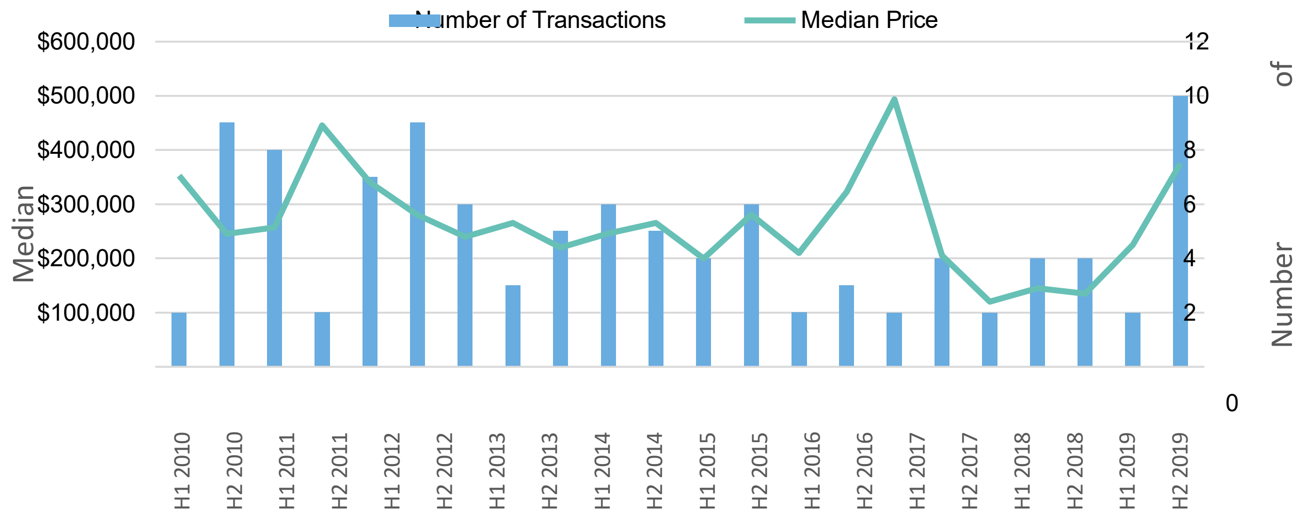
A key challenge for regional housing markets in Western Australia has been a prolonged period of declining housing values. Whilst the median house price growth is a positive for supporting the viability of new housing, price levels remain in line with levels 10 years ago.

Detached Houses, Gascoyne, 2010-20



Source: PriceFinder; Urbis

Multi-Unit Dwellings, Gascoyne, 2010-20



Source: PriceFinder; Urbis

RENTAL MARKET TRENDS

Key Findings

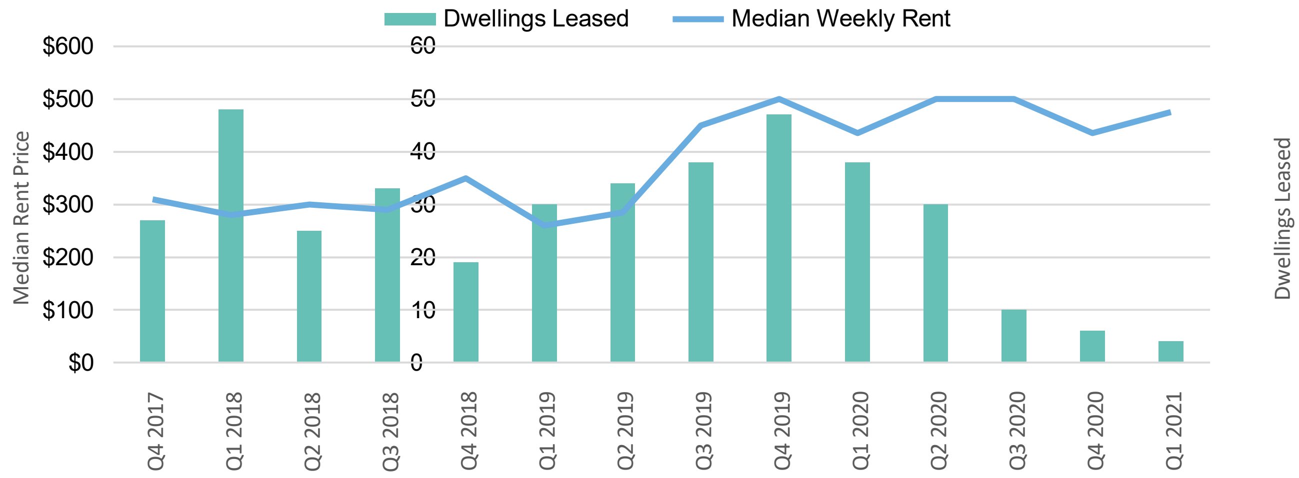
Improving labour market and economic conditions have coincided with tightening rental market conditions.

The rental vacancy rate declined significantly to effectively 0% in the Exmouth region as of mid-2021. Vacancy levels additionally declined in the Carnarvon region from 3.8% to 0.5% over the year-to-May 2021.

Whilst leasing volumes declined in late 2020 and early 2021, this is largely attributable to the moratorium on rental increases which discouraged tenants from moving houses. Whilst data for rents for the post-moratorium period was not available at time of publication, it is common to see dwellings listed for $80-$120 (per week) above their previous listing. Stakeholder liaison indicates that the lack of rental stock is having a strong negative effect on worker attraction and retention.

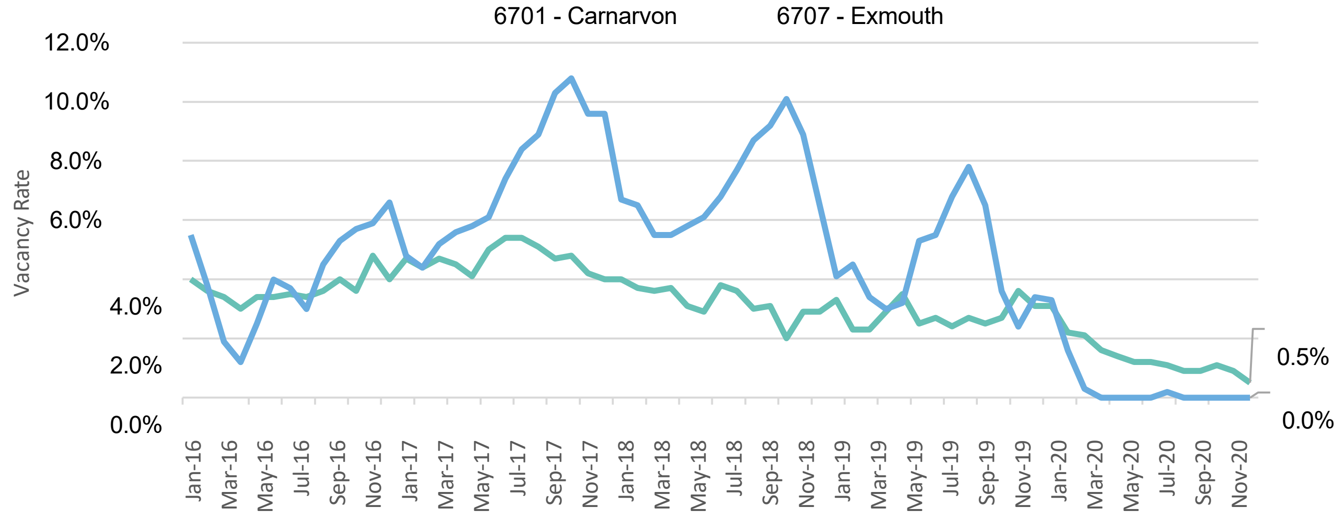
It is important to note that many communities in the region do not have a formal rental market and rely on State Government provided social and government officers accommodation and rental accommodation through friends and family (or informal tenancy agreements).

Rental Activity, Gascoyne, 2017-21



Source: SQM Research; Urbis

Rental Vacancy Rate by Postcode, Carnarvon & Exmouth, 2016-21



Source: SQM Research; Urbis

RENTAL MARKET TRENDS (CONT.)

Key Findings

Alongside low rental vacancy levels, the median time a property is on the rental market has declined significantly to just 12 days as of the March quarter 2021.

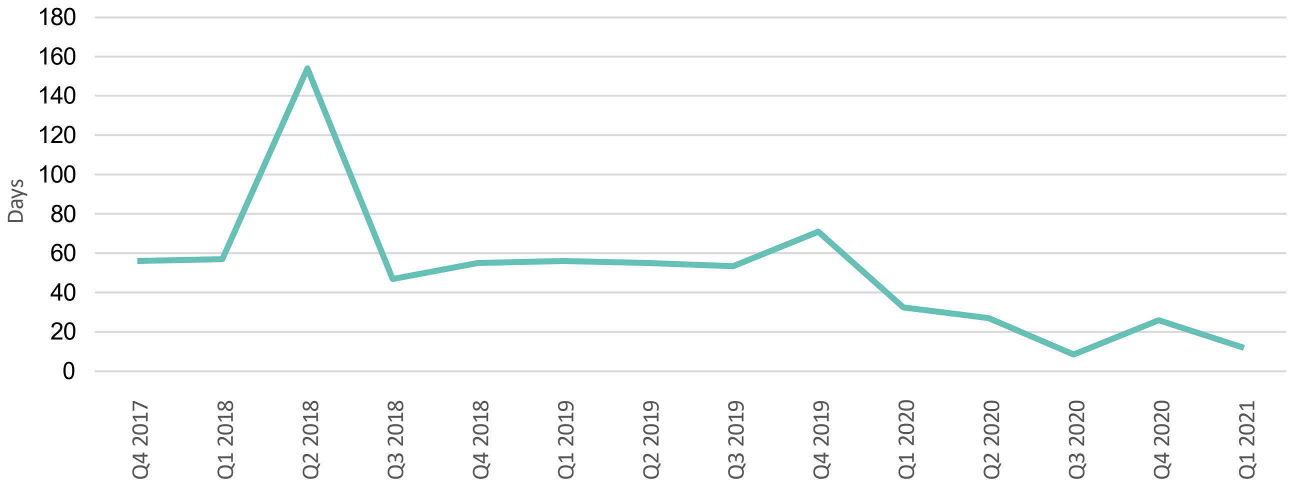
Anecdotally, the decline in rental availability has been attributable to a shift in stock from the rental market to the short-stay market which is perceived as more lucrative. For instance, in Exmouth, the average daily rate of $410 / night and average occupancy of 39% imply a gross return of $58,000 per annum (equating to $1,120 per week).

Whilst datasets are unable to confirm this shift, there are notable short stay listings in the Shire of Exmouth of approximately 125, on average, over the March quarter. This compares to a total rental stock of approximately 600 homes. An increase of, for example, 25 homes from the long-term rental market to short-term rental market can have a significant impact on rental availability.

Further, the Department of Communities advised that demand for Government Regional Officer Housing (GROH) has had to be increasingly met by the private rental market. This creates additional competition with non-government workers.

Further demonstrating the unmet need for rental properties, the Exmouth Service Worker Accommodation is at 100% capacity and has a waitlist of approximately 50 applicants.

Rental Market, Median Days on the Market, Gascoyne, 2017-21



Source: SQM Research; Urbis

CONSTRUCTION TRENDS

Key Findings

The Homebuilder and Building Bonus stimulus measures for new home construction helped increase land sales activity in parts of the Gascoyne region (primarily Exmouth and Denham).

The number of land sales increased to 74 in the second half of 2020 from an average of approximately 16 sales over the previous five years.

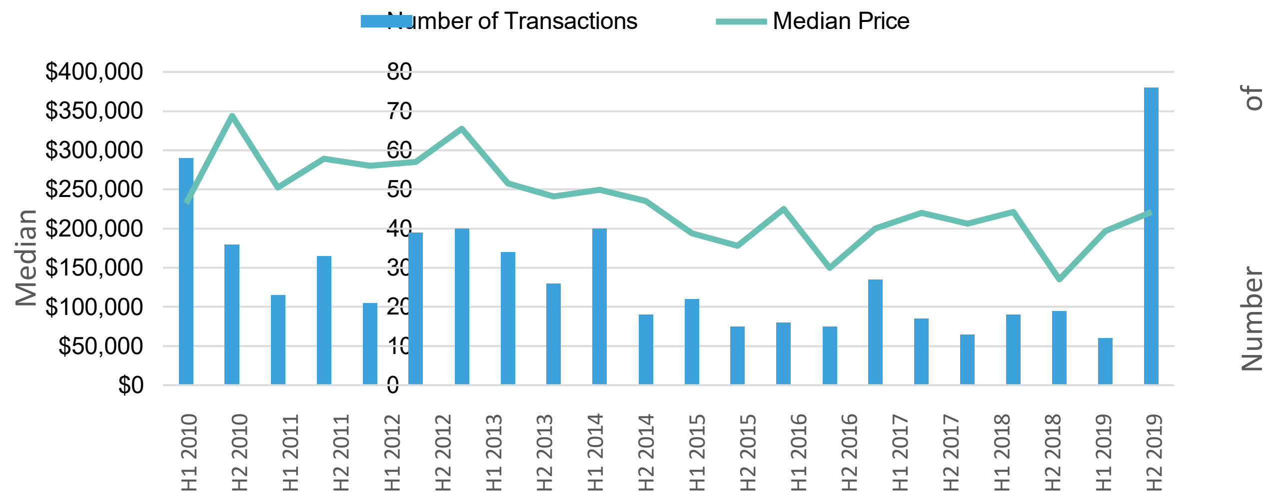
The Shire of Exmouth recorded 59 land sales over this period at a median price of $245,000. The Shire of Shark Bay experienced sales increase to 11 lots at a median price of $84,000 (including the first lot sales at DevelopmentWA's Denham estate for around a decade.

Land sales volumes remained low in the Shire of Carnarvon (at 4 sales in H2 2020) despite residential lots being available at Northwater Estate. It is understood that a sale has not transacted in this estate since 2014.

There have been only 4 residential land sales in the Shire of Upper Gascoyne over the period from 2010-2020, most recently in 2020.

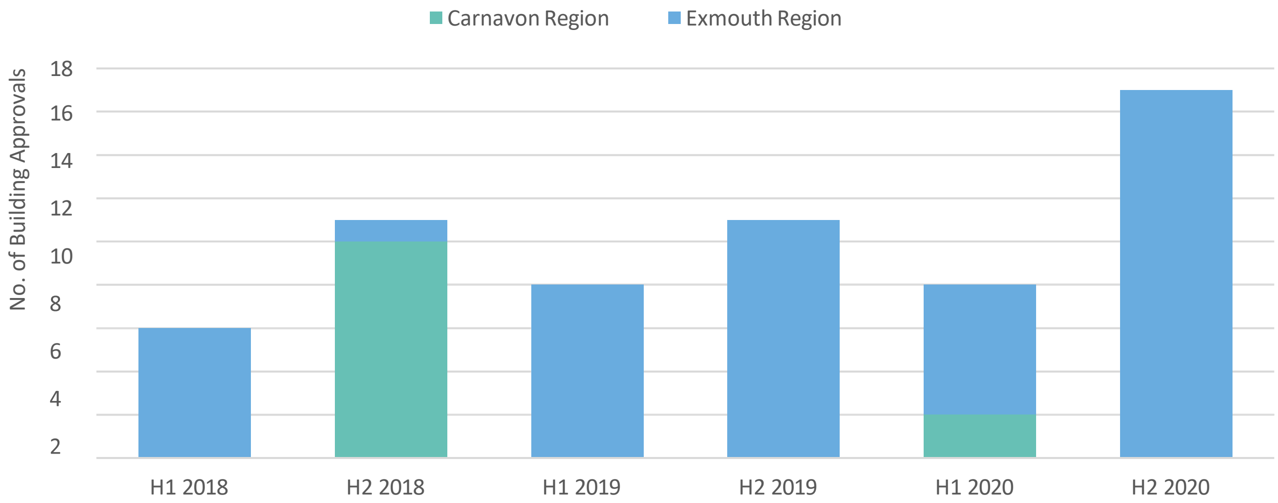
Building approval levels additionally demonstrate that Exmouth and Denham are experiencing increased housing construction levels, yet new housing construction volumes in Carnarvon and Upper Gascoyne are limited to non-existent.

Vacant Land Prices, Gascoyne, 2010-20



Source: PriceFinder; Urbis

Dwelling Approvals, Gascoyne, 2018-2020



**Building Approvals Based on SA2 Boundaries. Exmouth Region incorporates Exmouth,*

DWELLING CHARACTERISTICS

Key Findings

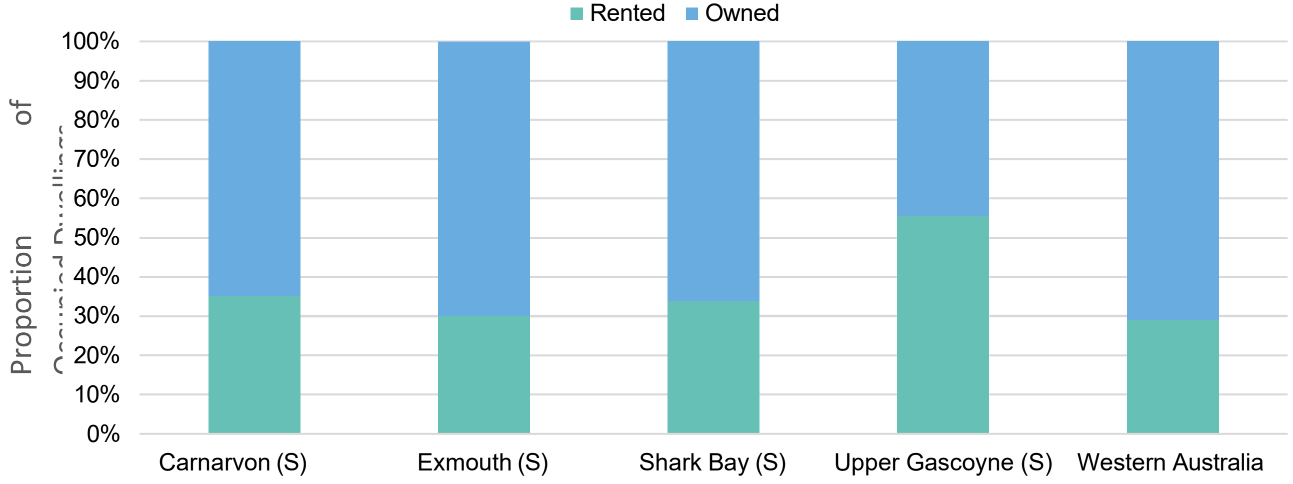
A key attribute of the Gascoyne region's housing markets is the high level of informal rental accommodation. This is rental dwellings through friends / families, informal tenancy agreements, employer provided housing and short stay accommodation.

As a result, there is a relatively low level of housing in the region's communities that is available through a real estate agent and this exacerbates rental shortages.

There is additionally a relatively high level of semi-permanent residents in caravan parks.

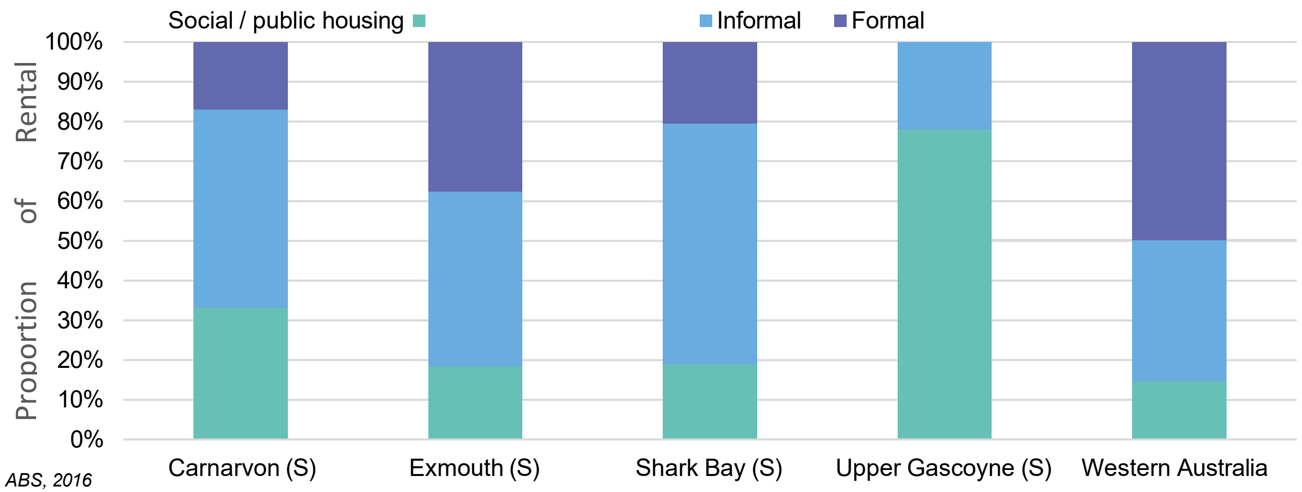
The dwelling stock is limited primarily to three and four bedroom homes, with few options for residents to downsize or for singles / couples seeking a smaller home.

Rental versus Owner Occupied Dwellings by LGA, Gascoyne, 2016



Source: ABS, 2016

Rental Tenure Type by LGA, Gascoyne, 2016



Source: ABS, 2016

n.b. Formal market implies rental through real estate agent

MARKET CHALLENGES

Key Findings

The above analysis was complemented by a targeted consultation process with state and local government and housing industry stakeholders.

This informed the identification of key challenges to the provision of appropriate worker housing.

- Elevated construction costs (approximately 50-60% above Perth averages).
- Limited viability for new builds due to low land value.
- Impact of GROH program on availability of rental accommodation for private market.
- Increasingly more lucrative short stay returns (approximately double long-term rental returns).
- Declining housing quality due to declining dwelling values.

Key Challenges / Market Failures

Challenge	Description
Construction Costs	The average value of new homes approved in the Gascoyne was approximately $430,000 over the 12 months to April. This compares to $283,000 in Perth over the same period. This is in line with liaison with builders and Rawlinson's construction cost handbook which estimate costs are typically 50-60% higher than Perth averages. Liaison indicated that labour availability and costs are influenced by competition from the mining sector and building standard requirements for cyclone affected areas. A relatively small level of home construction workforce further influences costs.
Housing Feasibility	The cost of bringing a serviced lot to the market in the region varies from approximately $80,000 to in excess of $200,000 (excluding land value) – and the extension and upgrade of trunk infrastructure can be prohibitive for small-scale developments (particularly sewage). As such, it is generally not viable to develop new vacant lots by the private sector and there is thus a reliance on DevelopmentWA which is reliant on a subsidy to bring lots to the market at below cost. The additional of the high cost of building means that new house construction is primarily only viable in more affluent locations in parts of Exmouth.
GROH Program Impact	There is considerable concern targeted at the management of GROH – exacerbated by the current low rental housing availability. Stakeholders identified numerous houses that have remained vacant for up to 10 years due to either agencies holding onto stock not required or the housing requires renovation / maintenance. Additionally, the GROH program has increasingly competed with the private sector for rental housing to meet agency needs and other state government agencies (e.g. Horizon) are actively competing in the market outside of the GROH program. Whilst there is limited transparency as to the level of GROH vacancies, the Department advised that it is taking a more proactive role in managing current / future needs and utilisation. The Department identified that there are future needs across the region, such as 1 unmet and 2 needed next year in Exmouth, 4 unmet and 4 needed next year in Carnarvon, 8 unmet in Denham and 1 unmet in Gascoyne Junction.
Short Stay Markets	Stakeholders indicated that investors have shifted housing from the long-term rental market to short stay (e.g. Airbnb) and this is exacerbating needs for worker housing. Whilst there is limited data to support this view, a review of visitation suggests that there has been a shift to short-stay rentals (particularly, Exmouth).
Housing Quality	The age and quality of housing stock has deteriorated significantly in some areas of the Gascoyne region. In Carnarvon, for instance, only 20 homes have been built in the past 10 years. As such, the median age of the housing stock is 50 years. Whilst the challenge is less pronounced in other towns (e.g. median age of 30 years in Shark Bay and Exmouth), housing stock quality has been affected by declining land values and population levels. The housing stock quality has implications on values and desirability of housing.

Source: Urbis, Rawlinsons, AirDNA, PriceFinder

02

KEY PRIORITIES AND ACTIONS

KEY PRIORITIES

Key Findings

Three key priorities are identified to drive increased worker housing availability and create the conditions for increased private sector investment.

- **Unlock private capital** – support private sector investment in new construction and renovations.
- **Optimise government assets** – enhance the utilisation of public and government regional officer housing and land assets.
- **Innovate the home** – stimulate alternative housing options.

Under these priorities there are 20 actions across the immediate, medium and long term for the Gascoyne Development Commission to deliver themselves, collaborate with others and advocating for change.

This plan prioritised initiatives as follows:

- ***High priority initiatives*** are essential for the future prosperity of the region's communities and need to be progressed substantially or completed within the near term;
- ***Medium priority initiatives*** will provide significant benefits to a local community and can demonstrate broader regional benefits; and
- ***Low priority initiatives*** will provide valuable benefits to a local community.

Summary of High Priority Initiatives

categories	High Priority Initiatives
Unlock Private Capital	— Identify short, medium and longer term housing supply opportunities (for each local government) and status (servicing requirements, zoning, tenure etc.). — State Government worker rental affordability scheme to incentivise investors to provide eligible worker households (e.g. low income essential workers) with long-term rentals in the Gascoyne. — Adopt short-term empty homes incentive (e.g. through rates concession) to encourage investors to offer housing to workers.
Optimise Government Assets	— Department of Communities to identify future GROH needs and prioritise new build lease-back arrangements. — Re-purpose or sell vacant Department of Communities public housing stock — Repurpose under-utilised GROH stock to support increase in housing for private owner-occupation / rental.
Innovate the Home	B "Homes for workers" campaign and register of need website (to match homes with households). C Implement market-led proposal pathway for innovative worker housing with fast-track approvals pathway. D Apply leniency and flexibility regarding enforcement of informal accommodation (e.g. setting up caravan in car park, keeping toilets open longer etc.) E Provide grants to local government to support development of residential land in areas with no appropriate land availability (e.g. Shire of Upper Gascoyne)

RECOMMENDED INITIATIVES

Focus Area	Action	GDC Role	Timing	Priority
Unlock Private Capital	Identify short, medium and longer term housing supply opportunities (for each local government) and status (servicing requirements, zoning, tenure etc.).	Partner	Short-Term	High
	Undertake housing construction / land development feasibility benchmarking study to explore opportunities for incentives and alternative construction methods to deliver worker housing.	Deliver	Short-Term	Medium
	Develop a 6-monthly housing and land snapshot which provides stakeholders and potential investors with an understanding of housing market attributes and trends.	Deliver	Immediate	Medium
	Develop a site opportunity prospectus / EOI process for key government-owned sites that could be offered to the market to support worker housing.	Partner	Immediate	Medium
	Develop a business case to expand the water / sewer infrastructure in priority redevelopment areas (identifying alternative funding / financing mechanisms).	Deliver	Medium-Term	Medium
	State Government 'worker housing development grants' for priority locations to support the viability of multi-unit / group housing development in the Carnarvon and Exmouth.	Advocate	Medium-Term	Low
	State Government worker rental affordability scheme to incentivise investors to provide eligible worker households (e.g. low income essential workers) with long-term rentals in the Gascoyne.	Advocate	Short-Term	High
	Adopt short-term empty homes incentive (e.g. through rates concession) to encourage investors to offer housing to workers.	Advocate	Immediate	High
Optimise Government Assets	Department of Communities to identify future GROH needs and prioritise new build lease-back arrangements.	Advocate	Immediate	High
	GROH policy review – particular attention to the appropriateness of specifications of stock and expectations from agencies.	Advocate	Immediate	Medium
	Re-purpose or sell vacant Department of Communities public housing stock	Advocate	Immediate	High
	Repurpose under-utilised GROH stock to support increase in housing for private owner-occupation / rental.	Advocate	Short-Term	High

RECOMMENDED INITIATIVES (CONT.)

Focus Area	Action	GDC / LGA Role	Timing	Priority
Innovate the Home	"Homes for workers" campaign and register of need website (to match homes with households).	Partner	Immediate	High
	Explore opportunities for modular housing development within under-utilised government sites which can cater to workers and tourists.	Partner	Medium-Term	Low
	Implement market-led proposal pathway for innovative worker housing with fast-track approvals pathway.	Advocate	Short-Term	High
	Support interim alternative housing solutions with sunset clause (e.g. shed conversions)	Advocate	Immediate	Medium
	Apply leniency and flexibility regarding enforcement of informal accommodation (e.g. setting up caravan in car park, keeping toilets open longer etc.)	Advocate	Immediate	High
	Expand provision of service worker accommodation (similar to Exmouth Service Worker Accommodation) at key locations.	Advocate	Medium-Term	Medium
	DevelopmentWA to demonstrate innovative approaches to reducing the cost of building in regional areas	Advocate	Medium-Term	Medium
	Provide grants to local government to support development of residential land in areas with no appropriate land availability (e.g. Shire of Upper Gascoyne)	Advocate	Short-Term	High

APPENDIX A

CASE STUDIES

CASE STUDIES

Broome

The Shire of Broome has proactively set-up a housing taskforce with stakeholders to address near-term housing needs.

As an outcome of this taskforce, the Council endorsed opening of overflow caravan park facilities such as:

- Broome Pistol Club
- 7th day Adventist Church
- Broome Surf Club Carpark at Cable Beach (max. 3 nights)

The key policies include:

- Operation of Temporary Caravan and Camping Facilities
- Approval to Camp for up to 3 months in Areas other than Caravan Parks and Camping Grounds

Esperance

The Shire of Esperance has supported the conversion of backpackers into short-term workers accommodation.

For example, The Blue Waters Lodge, a joint initiative of Shire of Esperance and GEDC, is aimed at workers required by local businesses due to increased local tourism.

The Shire has additionally supported the 6450 Job Connection campaign. This campaign is targeted as staff shortages going into summer tourism season and asks locals to consider offering housing to casual workers.

Karratha

The City of Karratha is currently pursuing a $35 million investment into new apartment housing stock. DevelopmentWA has assisted with the land supply and the housing is expected to provide a mix of public / social, GROH and private dwellings.

Augusta Margaret River

The Shire of Augusta Margaret River is updating its holiday home policy to:

- Provide flexibility for short stay accommodation to be used for 6 month leases; and
- Limit short-stay accommodation within 500 metres of town centre.

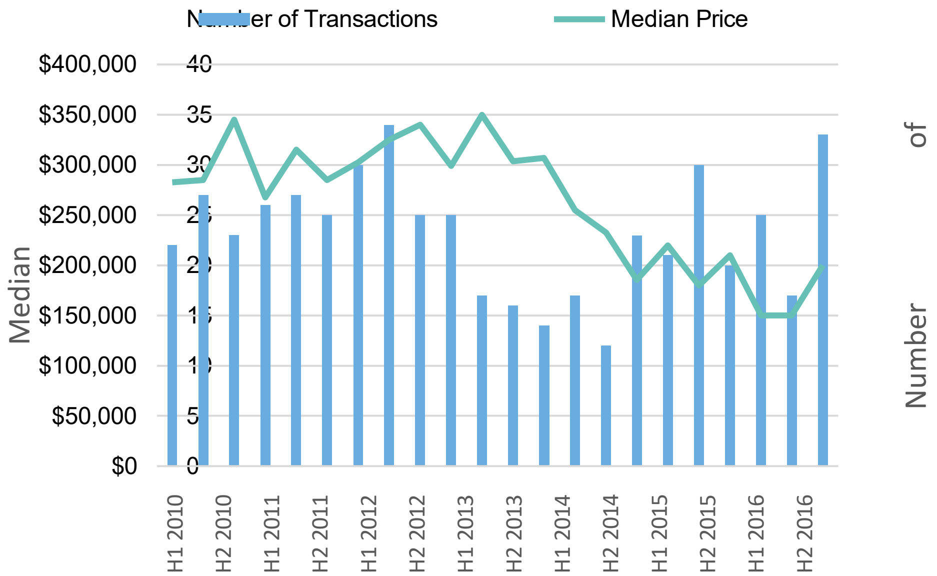
Further, a media campaign to open homes to tenants in crisis has been launched.

APPENDIX B

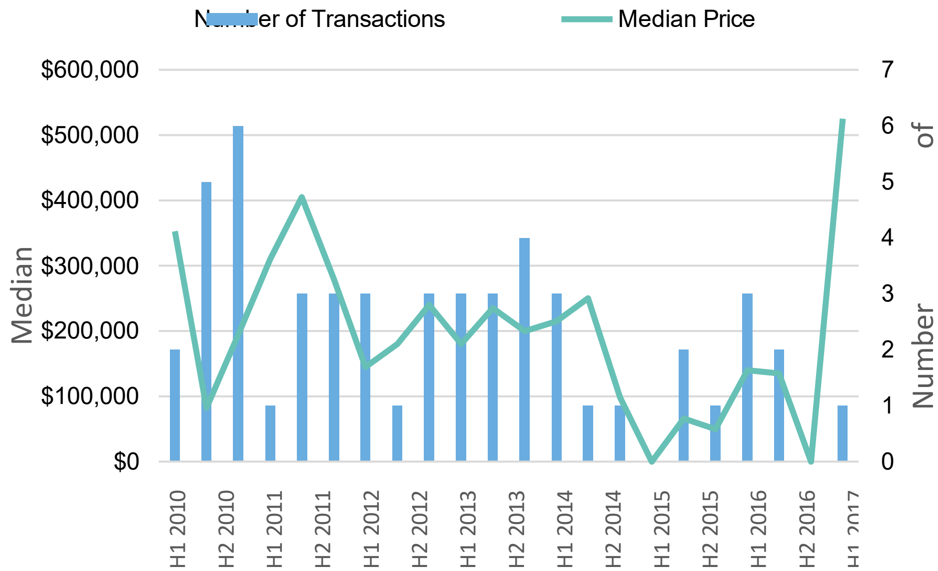
DETAILED HOUSING MARKET TRENDS

SHIRE OF CARNARVON

House Sales, 2010-2020



Multi-Unit Sales, 2010-2020



Reporting Period	**H2 2020**
Total Transactions	38
Variation from Previous Half Year Ave	90%
Days to Sell	147
Average Discount on Original Listin	

Land Use Summary Tables

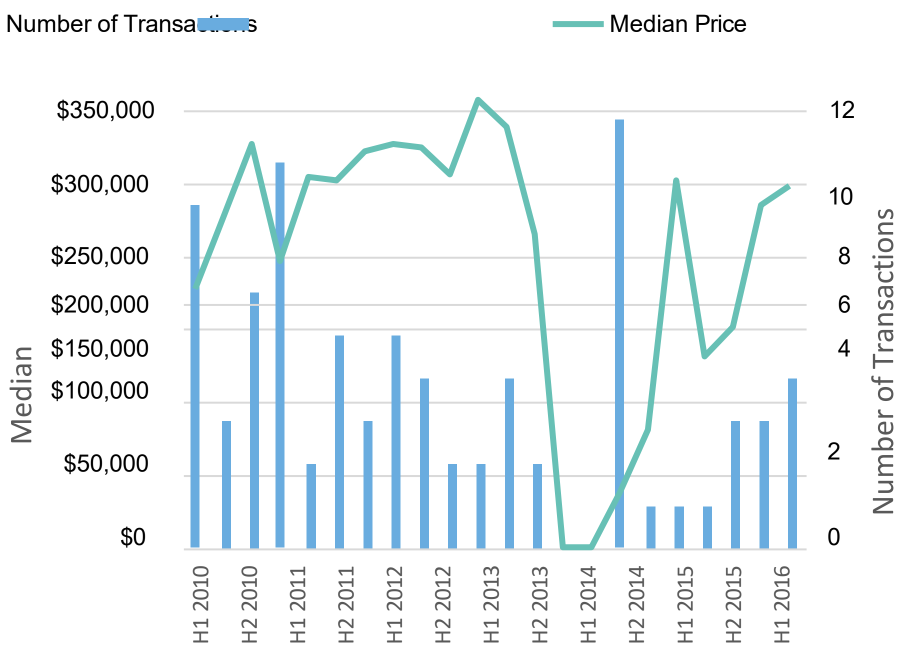
	House	**Unit**	**Vacant Land**
Median Price	$200,000	$525,000	$246,250
10-Year Average	$262,262	$206,884	$221,075
Variation from Avg.	-23.7%	153.8%	11.4%
Number of Transactio	33	1	4

Median Price Growth Rate p.a.

	House	**Unit**	**Vacant Land**
1-year	33%	289%	64%
3-year	3%	No Data	89%
5-year	-8%	21%	-3%
10-year	-3%	20%	1%

SHIRE OF CARNARVON (CONT.)

Vacant Land Sales, 2010-2020



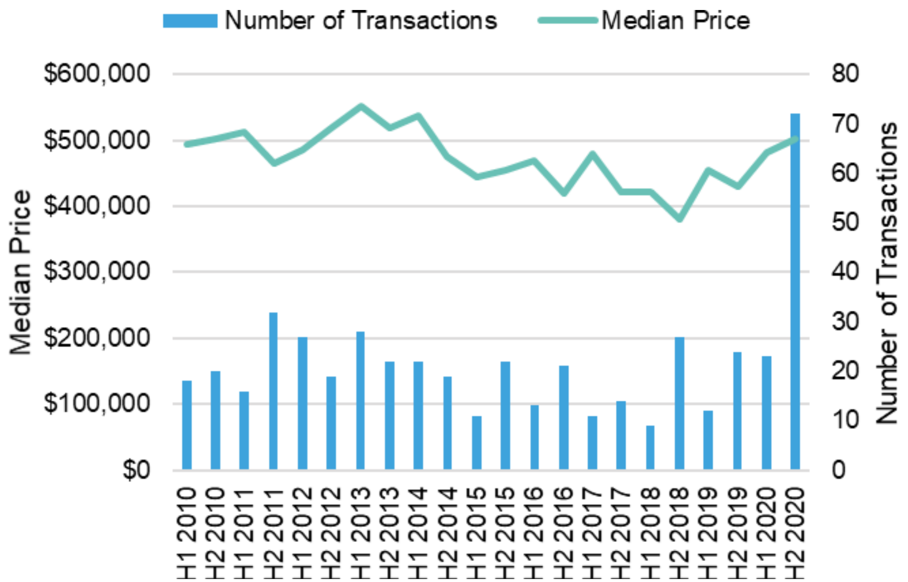
Market Sentiment, 2010-2020

Market Sentiment

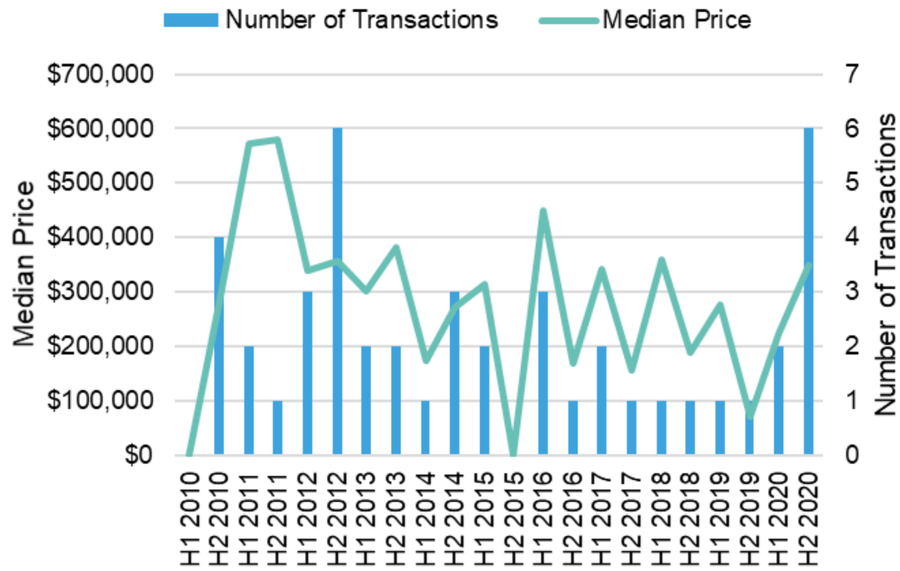
	Average Discount on O	Number of Di	Average Days to Sale	10-year
H1 2010	-6.7%	106	128	
H2 2010	-5.7%	102	141	
H1 2011	-11.6%	77	212	
H2 2011	-11.5%	101	1	
H1 2012	-9.0%	91		
H2 2012	-7.4%	98		
H1 2013	-8.1%	110		
H2 2013	-9.8%	102		
H1 2014	-9.7%	82		
H2 2014	-8.0%	9		
H1 2015	-11.4%			
H2 2015	-11.5%			
H1 2016	-14.5%			
H2 2016	-15.3			
H1 2017	-			
H2 2017				
H1 2018				
H2 2018				
H1 2019				
H2 2019				
H1 20				
H				

SHIRE OF EXMOUTH

House Sales, 2010-2020



Multi-Unit Sales, 2010-2020



Land Use Summary Tables

Reporting Period	H2 2020
Total Transactions	137
Variation from Previous Half Year	303%
Average Days to Sell	147
Average Discount on Original Listing Price	-8.1%

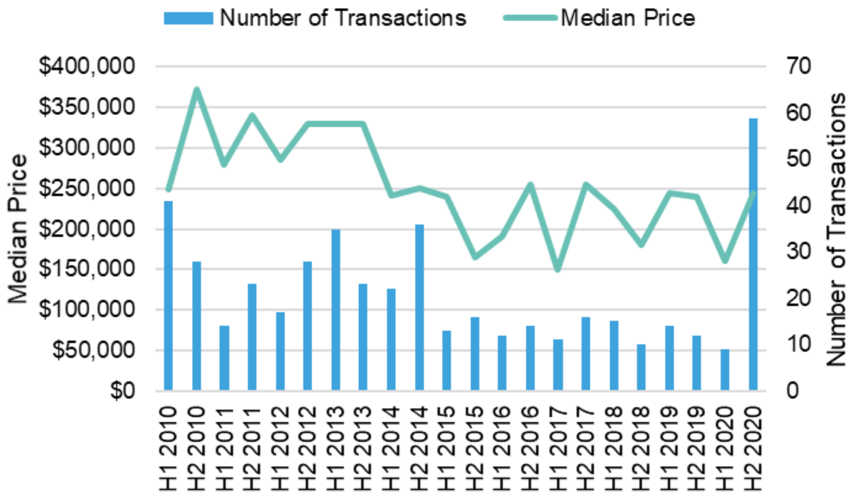
	House	Unit	Vacant Land
Median Price	$502,500	$348,500	$245,000
10-Year Average	$473,071	$308,350	$252,690
Variation from Avg.	6.2%	13.0%	-3.0%
Number of Transactions	72	6	59

Median Price Growth Rate p.a.

	House	Unit	Vacant Land
1-year	17%	384%	3%
3-year	6%	30%	-1%
5-year	2%	No Data	8%
10-year	0%	2%	-4%

SHIRE OF EXMOUTH (CONT.)

Vacant Land Sales, 2010-2020

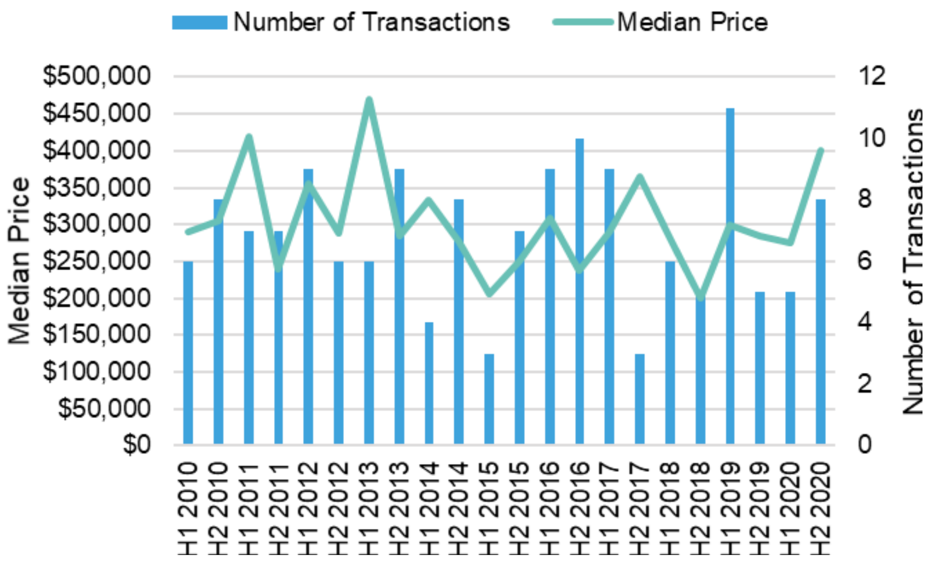


Market Sentiment, 2010-2020

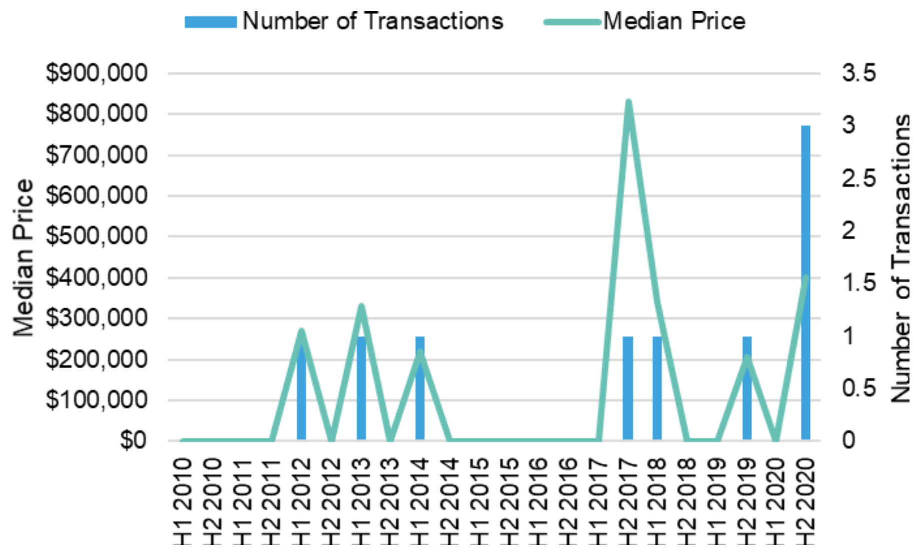
Average Discount on O	Number of D	Average	Days to Sale	10-y ear Average
H1 2010	-6.7%	106	128	-12.1%
H2 2010	-5.7%	102	141	-12.1%
H1 2011	-11.6%	77	212	-12.1%
H2 2011	-11.5%	101	160	-12.1%
H1 2012	-9.0%	91	217	-12.1%
H2 2012	-7.4%	98	214	-12.1%
H1 2013	-8.1%	110	153	-12.1%
H2 2013	-9.8%	102	175	-12.1%
H1 2014	-9.7%	82	186	-12.1%
H2 2014	-8.0%	99	165	-12.1%
H1 2015	-11.4%	54	202	-12.1%
H2 2015	-11.5%	72	205	-12.1%
H1 2016	-14.5%	57	198	-12.1%
H2 2016	-15.3%	66	244	-12.1%
H1 2017	-16.5%	50	174	-12.1%
H2 2017	-21.6%	69	234	-12.1%
H1 2018	-16.9%	57	184	-12.1%
H2 2018	-16.5%	77	118	-12.1%
H1 2019	-14.0%	65	120	-12.1%
H2 2019	-18.9%	78	137	-12.1%
H1 2020	-14.0%	59	127	-12.1%
H2 2020	-8.1%	197	147	-12.1%

SHIRE OF SHARK BAY

House Sales, 2010-2020



Multi-Unit Sales, 2010-2020



Reporting Period	**H2 2020**
Total Transactions	22
Variation from Previous Half Year Average	340%
Days to Sell	147
Average Discount on Original Listing	-8.1%

Land Use Summary Tables

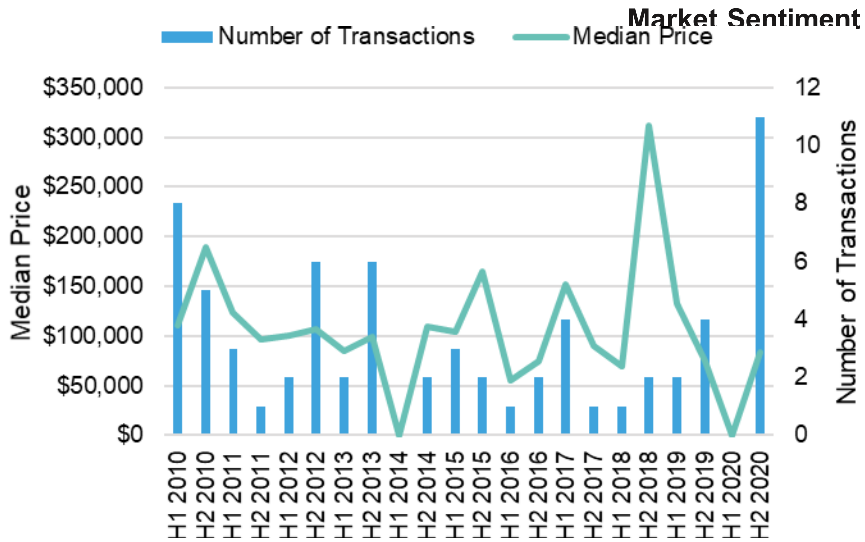
	House	Unit	Vacant Land
Median Price	$400,000	$400,000	$84,000
10-Year Average	$303,476	$371,000	$117,224
Variation from Avg.	31.8%	7.8%	-28.3%
Number of Transacti	8	3	11

Median Price Growth Rate p.a.

	House	Unit	Vacant Land
1-year	40%	93%	12%
3-year	3%	-22%	-2%
5-year	10%	No Data	-13%
10-year	3%	No Data	-8%

SHIRE OF SHARK BAY (CONT.)

Vacant Land Sales, 2010-2020

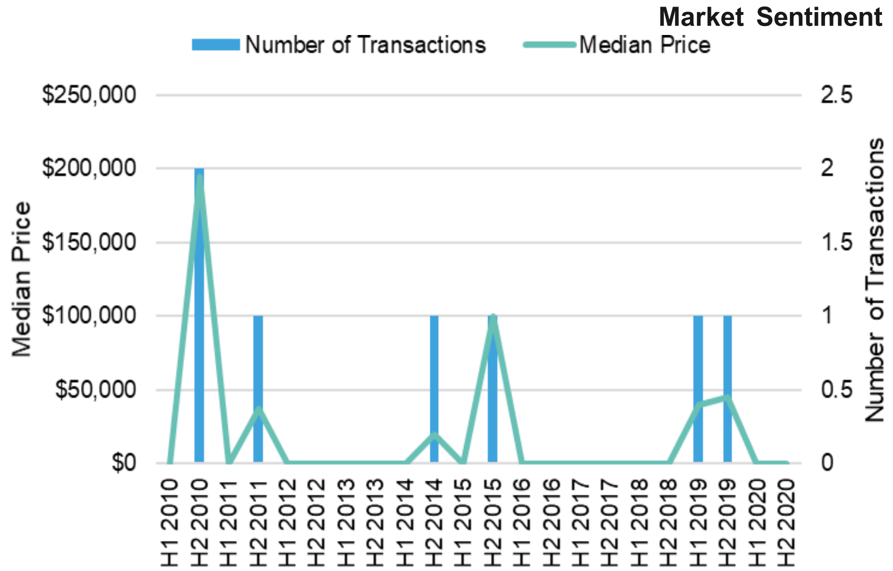


Market Sentiment, 2010-2020

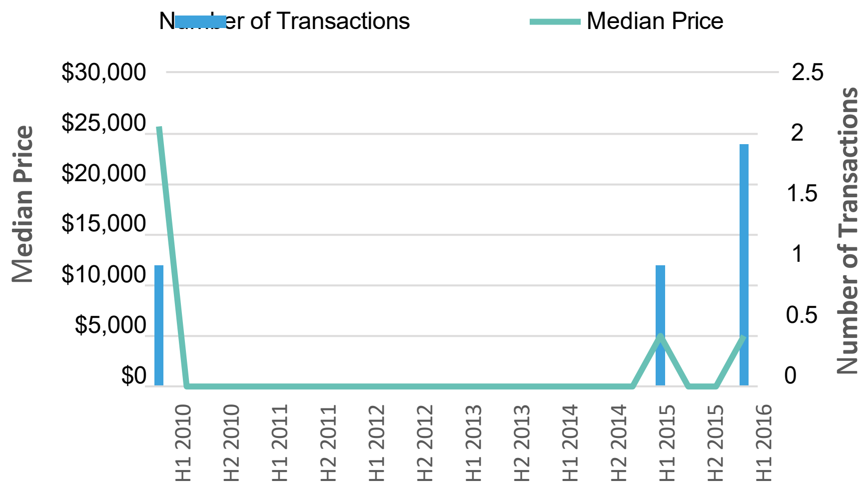
Average Discount on O	Number of D	Average Days to Sale	10-year Ave
H1 2010	-6.7%	106	128
H2 2010	-5.7%	102	141
H1 2011	-11.6%	77	212
H2 2011	-11.5%	101	16
H1 2012	-9.0%	91	
H2 2012	-7.4%	98	
H1 2013	-8.1%	110	
H2 2013	-9.8%	102	
H1 2014	-9.7%	82	
H2 2014	-8.0%	9	
H1 2015	-11.4%		
H2 2015	-11.5%		
H1 2016	-14.5%		
H2 2016	-15.3		
H1 2017	-1		
H2 2017			
H1 2018			
H2 2018			
H1 2019			
H2 2019			
H1 20			
H			

SHIRE OF UPPER GASCOYNE

House Sales, 2010-2020



Vacant Land Sales, 2010-2020



Market Sentiment, 2010-2020

Average Discount on O	Number of D	Average Days to Sale	10-year Average	H1
2010	-6.7%	106	128	-
12.1%				
H2 2010	-5.7%	102	141	-12.1%
H1 2011	-11.6%	77	212	-12.1%
H2 2011	-11.5%	101	160	-12.1%
H1 2012	-9.0%	91	217	-12.1%
H2 2012	-7.4%	98	214	-12.1%
H1 2013	-8.1%	110	153	-12.1%
H2 2013	-9.8%	102	175	-12.1%
H1 2014	-9.7%	82	186	-12.1%
H2 2014	-8.0%	99	165	-12.1%
H1 2015	-11.4%	54	202	-12.1%
H2 2015	-11.5%	72	205	-12.1%
H1 2016	-14.5%	57	198	-12.1%

COVID-19 AND THE POTENTIAL IMPACT ON DATA INFORMATION

The data and information that informs and supports our opinions, estimates, surveys, forecasts, projections, conclusion, judgments, assumptions and recommendations contained in this report (Report Content) are predominantly generated over long periods, and is reflective of the circumstances applying in the past. Significant economic, health and other local and world events can, however, take a period of time for the market to absorb and to be reflected in such data and information. In many instances a change in market thinking and actual market conditions as at the date of this report may not be reflected in the data and information used to support the Report Content.

The recent international outbreak of the Novel Coronavirus (COIVID-19), which the World Health Organisation declared a global health emergency in January 2020 and pandemic on 11 March 2020, is causing a material impact on the Australian and world economies and increased uncertainty in both local and global market conditions.

The effects (both directly and indirectly) of the COVID-19 Outbreak on the Australian real estate market and business operations is currently unknown and it is difficult to predict the quantum of the impact it will have more broadly on the Australian economy and how long that impact will last. As at March 2020, the COVID-19 Outbreak is materially impacting global travel, trade and near-term economic growth expectations. Some business sectors, such as the retail, hotel and tourism sectors, are already reporting material impacts on trading performance now and potentially into the future. For example, Shopping Centre operators are reporting material reductions in foot traffic numbers, particularly in centres that ordinarily experience a high proportion of international visitors.

The Report Content and the data and information that informs and supports it is current as at the date of this report and (unless otherwise specifically stated in the Report) necessarily assumes that, as at the date of this report, the COVID-19 Outbreak has not materially impacted the Australian economy, the asset(s) and any associated business operations to which the report relates and the Report Content.

However, it is not possible to ascertain with certainty at this time how the market and the Australian economy more broadly will respond to this unprecedented event. It is possible that the market conditions applying to the asset(s) and any associated business operations to which the report relates and the business sector to which they belong could be (or has been) materially impacted by the COVID-19 Outbreak within a short space of time and that it will have a lasting impact. Clearly, the COVID- 19 Outbreak is an important risk factor you must carefully consider when relying on the report and the Report Content.

Any Report Content addressing the impact of the COVID-19 Outbreak on the asset(s) and any associated business operations to which the report relates or the Australian economy more broadly is (unless otherwise specifically stated in the Report) unsupported by specific and reliable data and information and must not be relied on.

To the maximum extent permitted by law, Urbis (its officers, employees and agents) expressly disclaim all liability and responsibility, whether direct or indirect, to any person (including the Instructing Party) in respect of any loss suffered or incurred as a result of the COVID-19 Outbreak materially impacting the Report Content, but only to the extent that such impact is not reflected in the data and information used to support the Report Content.

This report is dated **February 2022** and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (Urbis) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of **Gascoyne Development Commission** (Instructing Party) for the purpose of a **Worker Housing Study** (Purpose) and not for any other purpose or use. Urbis expressly disclaims any liability to the Instructing Party who relies or purports to rely on this report for any purpose other than the Purpose and to any party other than the Instructing Party who relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events including wars, civil unrest, economic disruption, financial market disruption, business cycles, industrial disputes, labour difficulties, political action and changes of government or law, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or made in relation to or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

Urbis has made all reasonable inquiries that it believes is necessary in preparing this report but it cannot be certain that all information material to the preparation of this report has been provided to it as there may be information that is not publicly available at the time of its inquiry.

In preparing this report, Urbis may rely on or refer to documents in a language other than English which Urbis will procure the translation of into English. Urbis is not responsible for the accuracy or completeness of such translations and to the extent that the inaccurate or incomplete translation of any document results in any statement or opinion made in this report being inaccurate or incomplete, Urbis expressly disclaims any liability for that inaccuracy or incompleteness.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the belief on reasonable grounds that such statements and opinions are correct and not misleading bearing in mind the necessary limitations noted in the previous paragraphs. Further, no responsibility is accepted by Urbis or any of its officers or employees for any errors, including errors in data which is either supplied by the Instructing Party, supplied by a third party to Urbis, or which Urbis is required to estimate, or omissions howsoever arising in the preparation of this report, provided that this will not absolve Urbis from liability arising from an opinion expressed recklessly or in bad faith.

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

Urbis staff responsible for this report were:

Director	Tim Connoley

Project code	P0034147
Report number	Version 2

URBIS

URBIS.COM.AU

APPENDIX 3 COASTAL LIVING IN CARNARVON

COASTAL LIVING IN CARNARVON

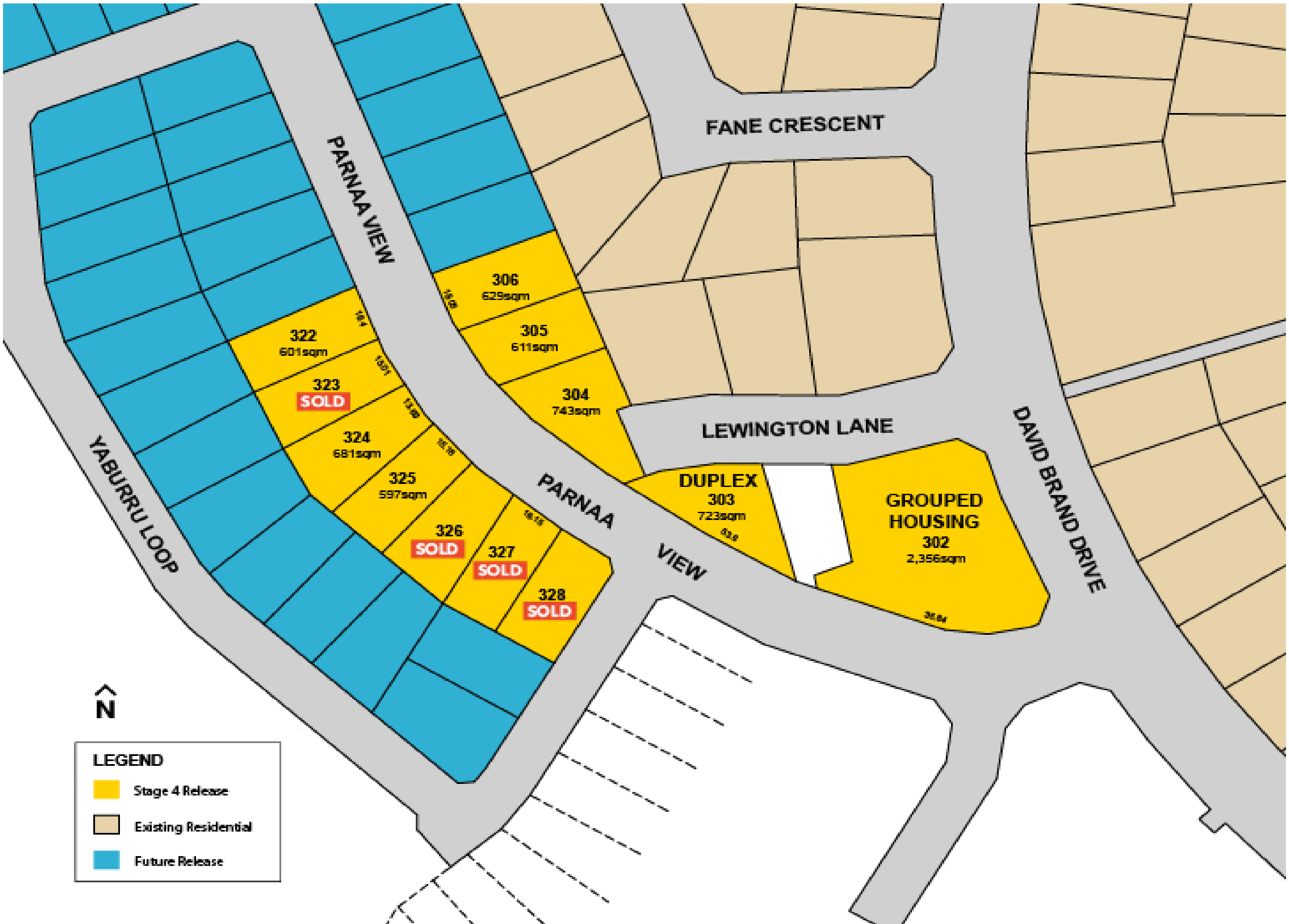
STAGE 4 AT NORTHWATER NOW AVAILABLE

NorthWater Estate is a modern residential development in the seaside town of Carnarvon, on Western Australia's Coral Coast 904km north of Perth.

The estate has transformed the Carnarvon foreshore, providing new living and lifestyle options with public parkland and boardwalk areas within walking distance of the town centre and the fascine.

Now is the time to become a part of this emerging estate.

developmentwa.com.au



LOT	AREA (sqm)	PRICE (inc GST)
302	2,356*	$150,000
303	723*	$65,000
304	743*	$65,000
305	611*	$60,000
306	629*	$60,000
322	601*	$60,000
324	681*	$65,000
325	597*	$60,000

ENQUIRE TODAY

Contact Burke Maslen, Outback Coast Property on 0409 265 156 or visit developmentwa.com.au

*All dimensions subject to survey.

LC 4409 06/2022