

THE PILBARA

THE ENGINE-ROOM
OF AUSTRALIA'S
ECONOMY

2015 Special Report

INVESTMENT | DEVELOPMENT | MANAGEMENT

MACRO
REALTY DEVELOPMENTS

The Pilbara

The Engine-Room of Australia's Economy

2015 Special Report

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Agile Wallaby, Broome Western Australia

Executive summary

The world's greatest resource hub, the Pilbara in Western Australia, is home to some of the largest oil and gas deposits, and is the lowest-cost producer of iron ore globally.

While Australia's competitive advantage resides in the global demand for these resources, the economic activity also has repercussions on local communities, being chronically undersupplied with quality accommodation – a matter that the Australian government is now vigorously addressing.

This report details the positive future of two Pilbara towns – Newman and Port Hedland, and how the recent pull back in expansion plans for BHP Billiton (BHPB), Rio Tinto (RIO) and Fortescue Metals Group (FMG) is actually good news for property investors. Contrary to sensationalised headlines, neither China nor the Pilbara are facing economic collapse and the underlying strong fundamentals of their growth remain.

Over AU\$69bn in infrastructure projects are planned and committed for these two towns, with AU\$12.3bn currently under construction in Port Hedland and AU\$6.6bn in Newman. By 2015, it is expected that both these towns will require over 4,000 new dwellings to house thousands of highly-paid workers.



Key findings

- 1** Unprecedented demand for iron ore (the key ingredient for steel production) is being driven by major economic activities across the globe, including the urbanisation of China and other emerging countries such as India.
- 2** Demand for steel in China is expected to double by 2025, which is forecast to increase global exports of iron ore by over 80% within the same period. The Pilbara in Western Australia will remain the leading global source of exports.
- 3** BHP Billiton, Rio Tinto and (to a lesser extent) Fortescue Metal Group are the lowest-cost iron ore producers in the world — despite labour costs being far higher than international competitors. This has seen very enthusiastic expansion plans from Australian iron ore exporters who will dominate global market share of iron ore exports.
- 4** The Pilbara property market is driven by the rapid influx of Australia's highest paid workforce and lucrative mining and construction contracts, which has created a chronic undersupply of housing.
- 5** The shortfall in dwellings in Port Hedland and Newman are forecast to hit approximately 2,950 and 832 dwellings respectively in 2015. Despite ambitious new dwelling targets by the state government, the historic rate of annual dwelling constructions have been far lower than originally projected, making it a difficult task for a balanced market to be achieved.
- 6** The Western Australian government's Pilbara Cities initiative is actively seeking to transform Pilbara communities from frontier towns to liveable cities through massive investment in health, education, utilities and other public amenities. In the short term, AU\$1.1bn has been planned for Port Hedland and AU\$800m for Newman under the Newman Revitalisation Plan, plus further ongoing royalties.



The Pilbara's unique economic environment

Remote and rich in natural resources, two unique factors combine to make the Pilbara a highly charged property market.

To understand why the Pilbara region has Australia's best performing property market and why it presents viable investment opportunities, it is important to first understand a number of important economic and geographic factors. These factors combine to create an economic environment that is unique and that does not conform to data trends from outside the region.

The primary driver that creates these unique opportunities is the existence of large deposits of iron ore. The huge demand for this commodity from around the world then requires a growing workforce to continue to mine the ore and meet the demand.

The secondary driver is created as many of the mines are located in remote areas without infrastructure — this requires workers to live in temporary accommodation, away from their families.

In order to continue to meet the increasing demand and to guarantee a skilled and sustainable workforce for the growing mining industry, the Australian Government is in the process of building a number of modern cities with all the required infrastructure (including retail and leisure facilities) that will provide a suitable option for the relocation of workers and families to the region.

The Government's vision through the programs known as Pilbara Cities and Royalties for Regions, nominate Karratha, Hedland and Newman as the three main cities and service centres for dozens of lucrative mines located between them and across the expansive Pilbara region.

Iron ore – the key ingredient

Iron is the world’s most commonly used metal. It constitutes the key ingredient of steel, a commodity that there really is no substitute for (unlike energy related resources).

Steel is used for construction by the maritime, automotive and industrial industries; and it accounts for approximately 95% of global metal consumption.

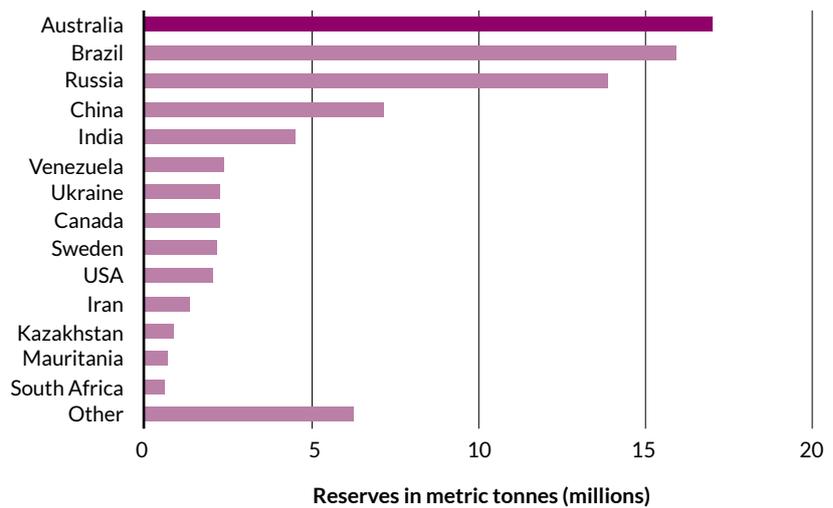
Whilst iron-rich deposits are commonplace worldwide, ore-grade mining operations are dominated by only a few countries and a mere handful of global mining enterprises. The main constraint within the industry is the rising costs required to ship the ore to market.

Although iron ore resources are present in all the Australian states and territories, almost 93% of identified resources (totaling 64 billion tonnes) occur in the Pilbara, Western Australia, making it one of the world’s major iron ore provinces.

While the last three years have seen large movements in the price of iron ore, the mines surrounding Newman belonging to BHP Billiton, Rio Tinto and Fortescue Metals Group still enjoy the lowest production costs in the world and can sustain profitable production comfortably even where iron ore prices halve.

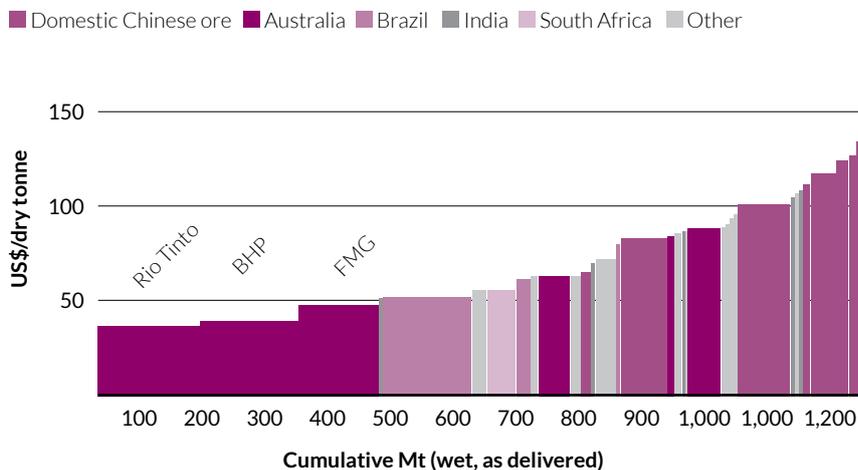
Due to these low production costs, along with the largest iron reserves globally, Australia exports twice the iron ore of any other country.

Fig. 1 Global iron ore reserves, 2012



Source: USGS Mineral Commodity Summaries, January 2013

Fig. 2 Global iron ore producer cost curve (including royalties and freight)



Source: Metalytics Resource Sector Economics

Urbanisation pushes the worldwide demand for steel

Over the next 15 years the primary driving force behind the global economy will be urbanisation.

Like industrialisation before it, urbanisation is producing a tidal wave of economic growth and driving the booming commodities industry. Expected to double in size over the next two decades, the global economy is predicted to grow by around US\$50 trillion by 2025.

Leading this growth is China; a country that is urbanising so fast it is forecast

to capture 28% of all future economic growth – triple the growth of the United States and Canada combined, and seven times that of Western Europe.

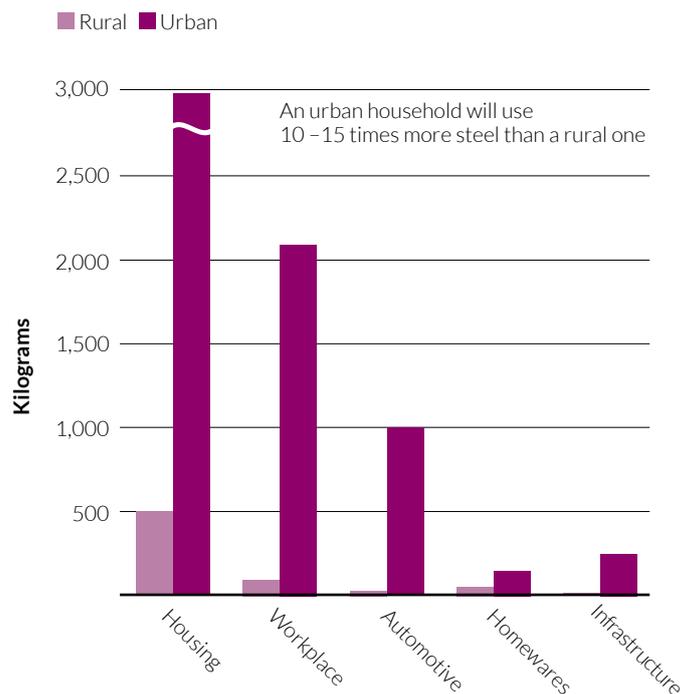
The rapid urbanisation of China, India and other Asian economies will see the population of urban dwellers rise by over one billion by 2030. This dramatic growth in urbanisation is forecast by global management consultants McKinsey

Fig. 3 China's population shift



Source: Rio Tinto

Fig. 4 China's urban steel demand



Source: Rio Tinto



Lujiazui financial & Trade Zone in Shanghai, China - in the foreground the beginning of construction of a new office building

& Company, to see nearly 255 million Chinese migrate from rural regions into cities by 2025.

This mass migration is expected to see approximately 17 million people become urban dwellers each year and will require the creation of 37 new cities to accommodate this growth over the next 10 years. This urbanisation in turn is driving the sustained demand for steel, and therefore iron ore.

It is also widely reported that India alone wants to produce 300 million tonnes of steel per annum until at least 2025, meaning 450 million tonnes of iron ore per year will need to be imported during this period.

Fig. 5 The spread of Chinese cities

China 2010
106 Tier 1-3 Cities



China 2020
143 Tier 1-3 Cities



- Tier 1: 5m+ population
- Tier 2: 1.7-5m population
- Tier 3: 1.7-5m (<GDP/capita than Tier 2)

Source: BHP Billiton



The view of Juzizhou Bridge in Changsha City, China, obscured by pollution

China's need for Australian ore

China is currently home to 16 of the 20 most-polluted cities in the world, according to World Bank estimates.

As a result, a US\$1.6bn fund to control air pollution was established by the Chinese government in February 2014. The fund will aid efforts to cut fossil-fuel use and control consumption of coal, the country's largest source of energy.

In order to comply with the new air pollution standard, mills in China's key

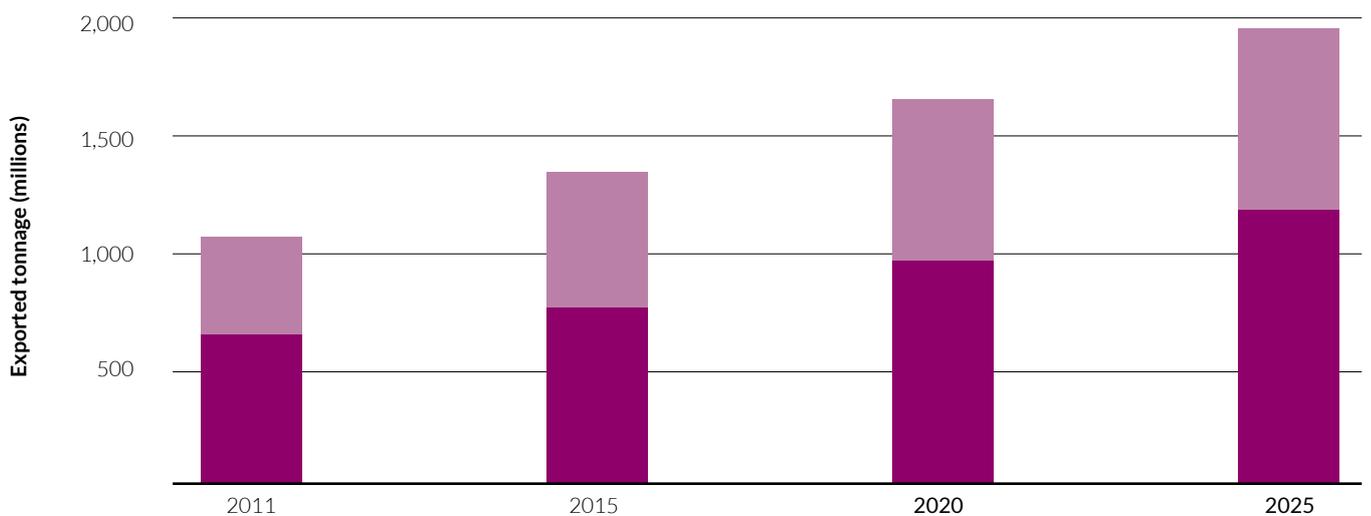
steel-making provinces of Hebei and Jiangsue are buying higher quality ore that can be loaded directly into blast furnaces without the need for sintering, a process that is a major source of pollution and sulphur dioxide.

The Pilbara produces the world's highest iron content ore at the lowest cost per

tonne. For this reason it is thought that the global demand for iron ore would need to halve before Pilbara miners reduced their export volumes.

Fig. 6 Destination of global iron ore exports

■ China ■ Other countries



Source: Bureau of Resources and Energy Economics

The Pilbara region – an overview

The Pilbara is described as the engine-room of Australia due to its significant contribution to national wealth.

Its immense reserves of natural resources provide massive direct-export sales and fuel a thriving economy of support services.

As a truly unique economic environment, it is essential to understand how the Pilbara region works both now, and for its undeniably positive future.

A. Three-phase commodities boom

B. Mining projects and infrastructure

C. The Pilbara region's population growth

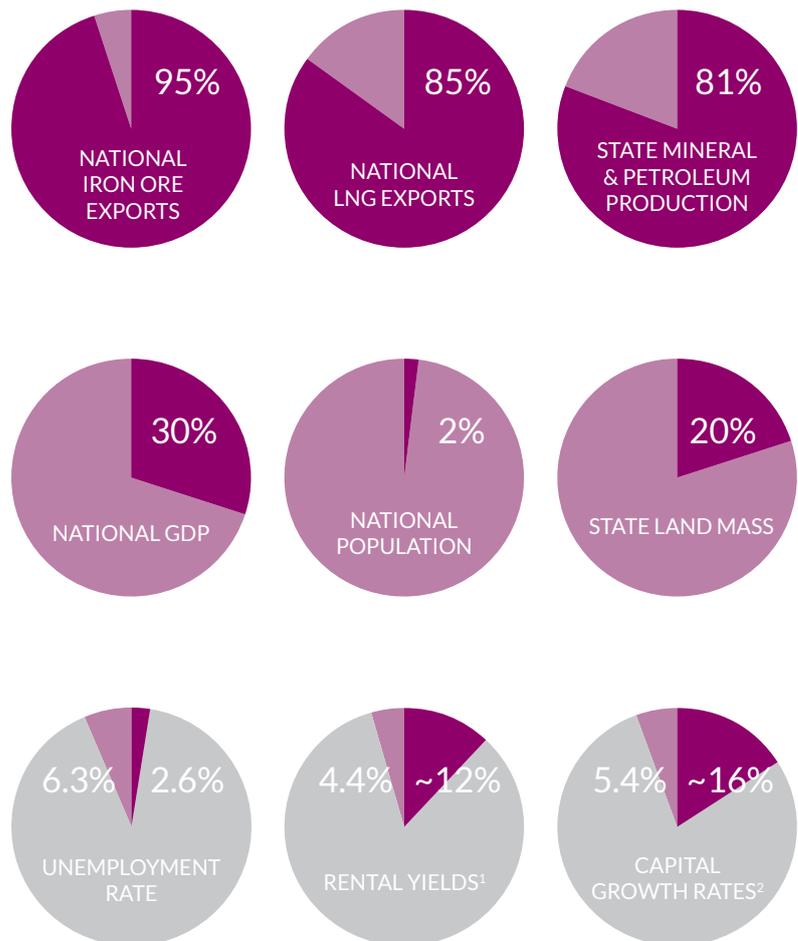
D. Future growth projections

E. Australia's wealthiest workforce

F. Australia's highest property rental yields

It should be evident to anyone looking at the statistics that not only is the global demand for iron on a steady rise, but the corporations who supply it are keeping pace with new projects; and the infrastructure and population to support it (which will need housing), are not far behind.

Fig 7. The Pilbara's contribution to the Australian economy



¹Rental yields of 8–12% per annum (of the purchase price, before leverage) compared to 4.4% for Australian capital cities.

²Capital growth rates of 11–16% per annum as the last 10 year average compared to 5.4% for Australian capital cities.

A. Three-phase commodities boom

While investors may be wary of the recent drop in the iron ore price, the commodities boom is anything but over. In fact, it is now only just underway.

Mainstream media may be peddling fear with their reporting on a moderation in Chinese growth, but according to Former Federal Treasurer Wayne Swan, China's growth is doing anything but stalling.

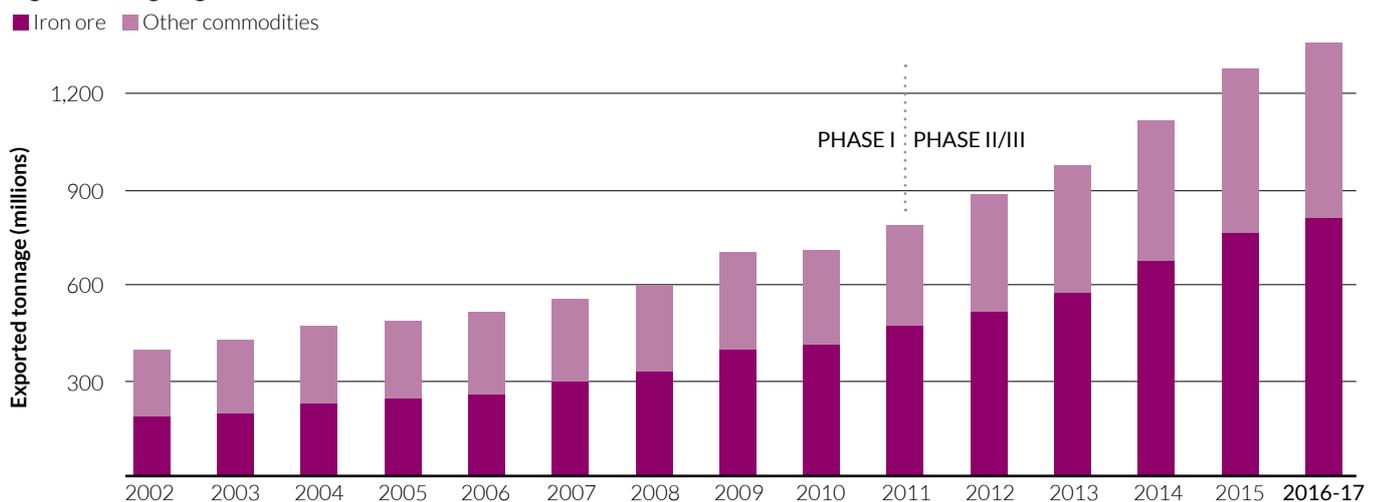
"China is now 40% larger than in 2008 so it's growth rate can be 20% lower for it

to make the same contribution to global GDP growth" says Mr Swan "We are only part of the way through the current mining boom, which can be characterised as three overlapping phases. A boom in prices, then investment, and then in exports." While Mr Swan says we have passed the peak in prices, the second and third phases still have a way to run.

According to Mr Swan, the "industrialisation and urbanisation of China is a long-term trend, as powerful as any the global economy has ever seen."

"The peak steel requirement for Chinese residential construction is not expected to be reached until around 2023".

Fig. 8 The ongoing commodities boom



Source: Bureau of Resources and Energy Economics/Australian Bureau of Statistics

B. Mining and infrastructure projects

In 2011, global iron ore mining giants – Rio Tinto, BHP Billiton and Fortescue Metals Group – apportioned significant capital investment into the development of both existing and new mines as well as associated infrastructure (rail and port) in the Pilbara, facilitating a practical doubling of production levels to satisfy export demands.

Table 1. Major iron ore infrastructure projects in the Pilbara

Project	Project Type	Status	Capital expenditure (AU\$)	Committed capital (AU\$)	Peak workers	Operational workers
Outer Harbour	New	Feasibility	20,000,000			
Roy Hill	New	Feasibility	9,500,000		3,600	2,000
Sino Iron Project	New	Committed	7,570,000	7,570,000	4,500	800
West Pilbara	New	Feasibility	7,400,000			
Jimblebar mine and rail (WAJO)	New	Committed	5,180,000	5,180,000		
Jinidi	New	Announced	5,000,000			
Cape Lambert magnetite project	New	Feasibility	3,700,000		3,300	1,000
Balmoral South magnetite project (stage 1)	Expansion	Feasibility	3,300,000			
Solomon Hub (stage 1)	New	Committed	3,100,000	3,100,000		
Balmoral South magnetite (2)	New	Announced	2,500,000			
Ridley magnetite project	New	Announced	2,500,000		1,100	750
Solomon Hub (stage 2)	Expansion	Announced	2,500,000			
Nammuldi expansion	Expansion	Committed	2,140,000	2,140,000		
Hope Downs 4	New	Committed	2,040,000	2,040,000		1,500
Marillana	New	Feasibility	1,900,000			
Yandicoogina	Expansion	Committed	1,700,000	1,700,000	800	200
Hardey	New	Announced	1,500,000			
Horizon 2	New	Announced	1,500,000			
Wiluna West (stage 1.3)	New	Announced	1,500,000			
Chichester Hub (55-95)	Expansion	Committed	1,260,000	1,260,000		
Pilbara Project	New	Feasibility	1,100,000			
Hammersley Iron Brockman 4 project (stage 2)	Expansion	Committed	1,070,000	1,070,000		
Marandoo	Expansion	Committed	1,070,000	1,070,000	700	
Yogi Mine project	New	Feasibility	1,060,000			
Balla Balla project (phase 1)	New	Feasibility	1,000,000			
Robertson Range and Davidson Creek	New	Feasibility	960,000			
Orebody 24	Expansion	Committed	822,000	822,000		
Irvine Island	New	Feasibility	700,000		500	200
Balla Balla project (phase 2)	New	Announced	500,000			
Mt Webber	New	Feasibility	420,000			
Horizon 1 (phase A)	New	Committed	252,000	252,000		
Buckland project	New	Announced	250,000			
Iron Valley project	New	Announced	250,000			
Yilgarn iron ore project (2)	New	Feasibility	152,000			
Western Turner Syncline II	Expansion	Committed				
Totals			95,396,000	26,204,000	14,500	6,450

C. The Pilbara region's population growth

The massive boost in the global demand for iron ore has been closely tied to a very significant increase in the Pilbara's population.

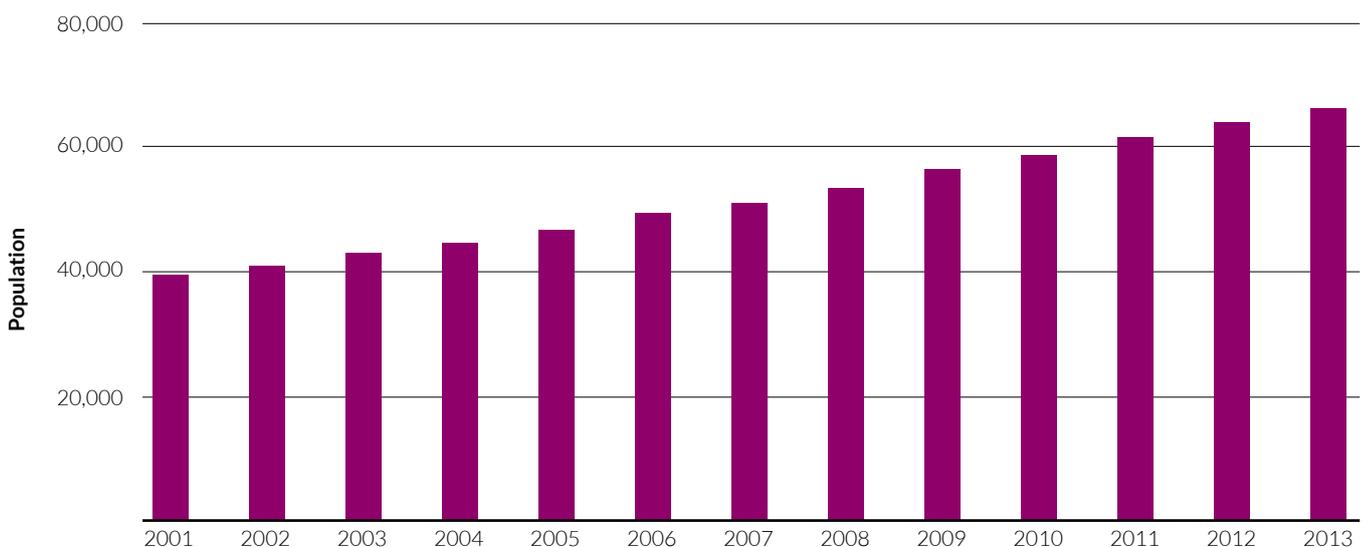
After 20 years of a marginally declining population, some AU\$20bn in major infrastructure projects in the Pilbara has resulted in a permanent population growth of around 53% over the last 10 years.

While the residential population of the Pilbara has risen from 43,191 to

66,298 over the 10 years to 2013, the region's total population is actually closer to 83,000 once the fly-in/fly-out (FIFO) workforce is included. As FIFO workforces have not been a prominent feature of the Pilbara until the commencement of the early 2000s commodities boom, the total growth

of the Pilbara's population has been approximately 92% over the last 10 years, compared to a national population growth of 17% over the same period.

Fig. 9 Pilbara population – historic permanent population growth



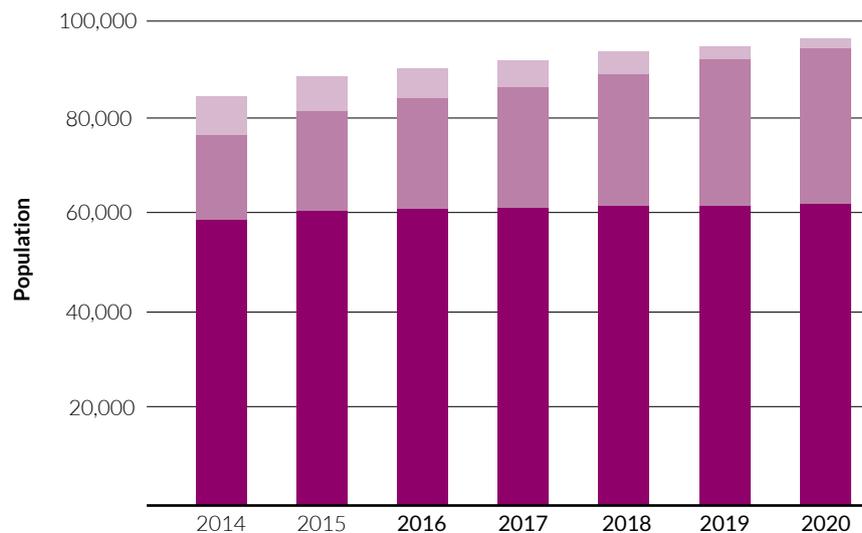
D. Future growth projections

While the last 10 years has seen the Pilbara region's population increase significantly, there is currently AU\$95bn in committed and planned infrastructure projects to keep driving the population forward.

According to the Western Australia State Government's Pilbara Planning and Infrastructure Framework 2012 report, the seven years from 2013 to 2020 will see Pilbara's population rise by approximately another 30% to reach 95,000.

Fig. 10 Pilbara population – forecast growth

■ Resident ■ Fly-in/Fly-out ■ Construction



Source: Pilbara Planning and Infrastructure Framework 2012



Karratha City Centre, Travis Hayto

E. Australia’s wealthiest workforce

Thanks to soaring global demand for commodities, salaries in the Australian mining industry are continuing to rise.

A recent report by the Australian Bureau of Statistics has found that miners salaries surpass all other industries, with the annual median wage in the Pilbara at AU\$160,000.

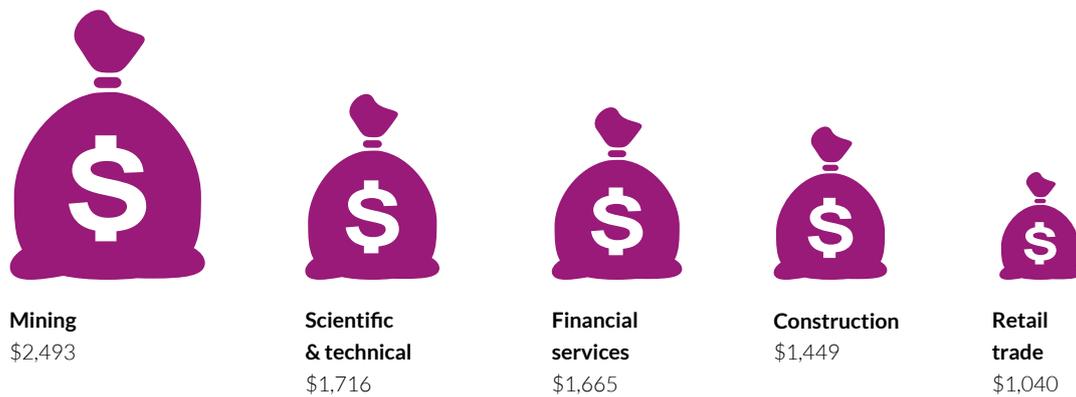
These ‘fluoro-collar’ workers, alongside their blue-collared companions, have

overtaken their white-collar counterparts in the wages war. Among them, the FIFO miners are now known as the highest paid workers in Australia.

As the mining sector has increased production, it has raised its employment levels and wages to attract new workers.

In the last decade there has been a 340% rise in export volumes and a 1,245% rise in worker numbers.

Fig. 11 Australian average weekly earnings (AU\$)



Source: Australian Bureau of Statistics

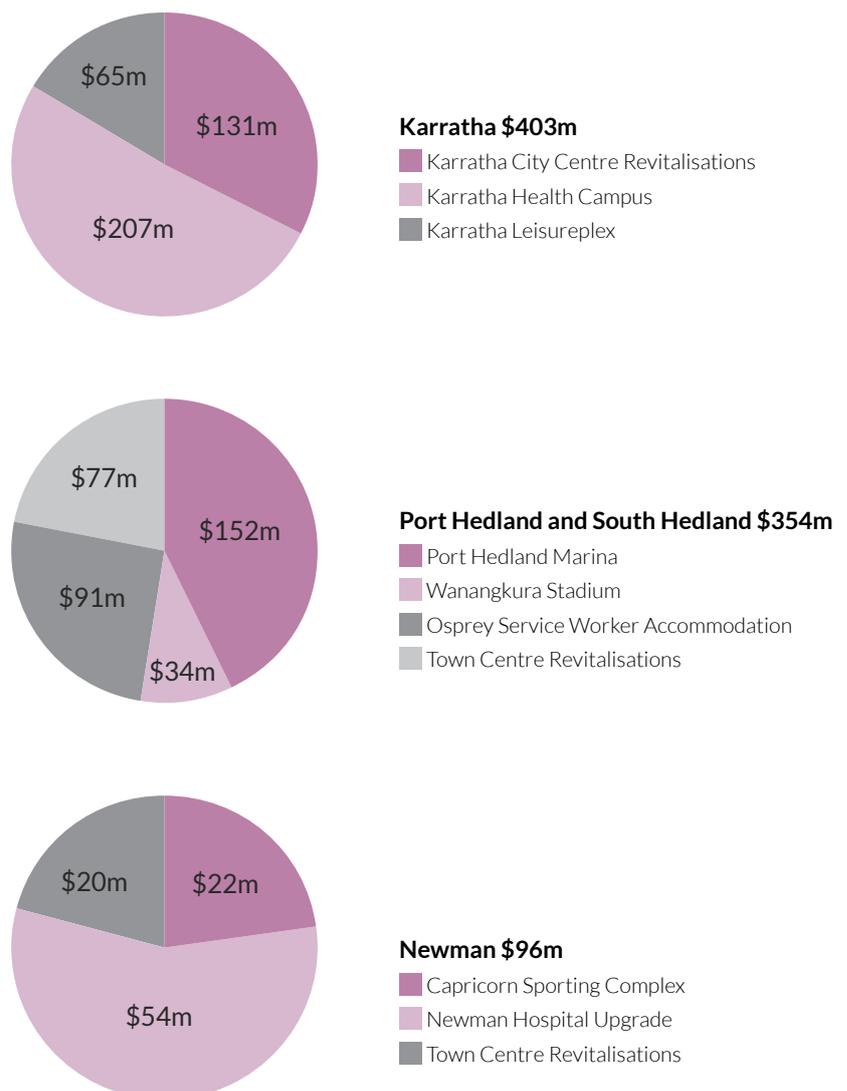
The Pilbara Cities vision

Pilbara Cities was established in April 2010 by the State Government of Western Australia to address the issues associated with growth in the region.

It aims to fulfil the vision of building the population of Karratha and Port Hedland into cities of 50,000 people and Newman to 15,000 people by 2035, with other Pilbara towns growing into more attractive, sustainable local communities.

Royalties for Regions is a political policy formulated by the National Party of Western Australia in 2008 which involves the redirection of government spending from major population centres, in particular Perth, into the rural areas of the state. This policy is funded by 25% of the state's mining and petroleum royalty revenue, with the vast majority being allocated to the creation of Pilbara Cities.

Fig. 12 Committed Pilbara Cities projects (AU\$)



F. Australia's highest property rental yields

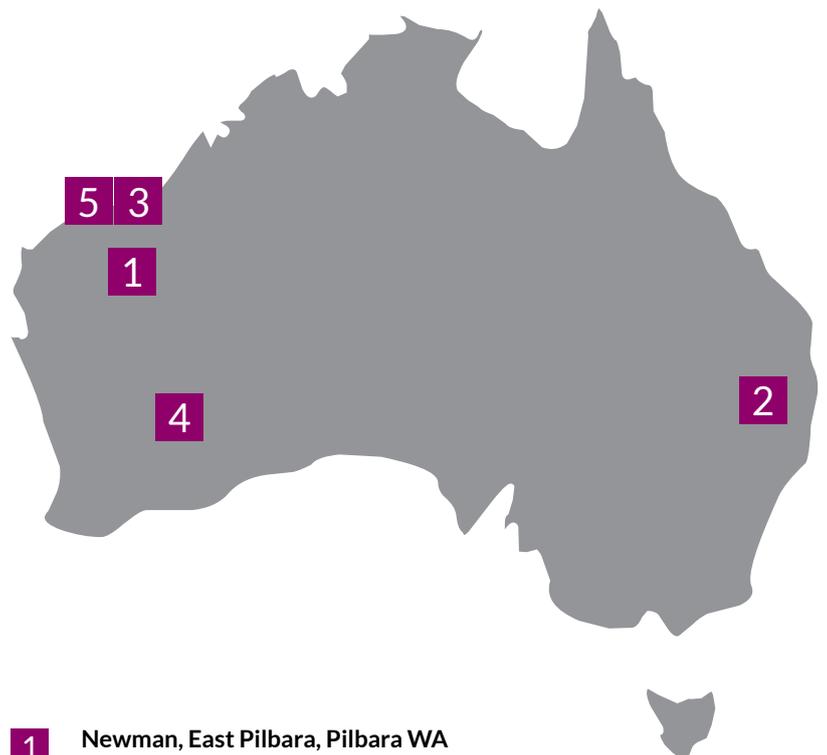
The top 5 locations for rental yield are all located within regional mining precincts.

RP Data's top five towns in Australia for 2014 contained three locations within the Pilbara – with the town of Newman in the top spot. Sustainable cities with strong growth prospects are also expected to have capital growth rates well above 8%.

The transition from regional towns to cities is expected to see rents return to more normalised rates that will enable small to medium sized businesses an opportunity to establish themselves, in turn delivering choice to local residents.

Fig. 13 The top five locations for rental yields, 2014

Based on gross estimated value rental yield



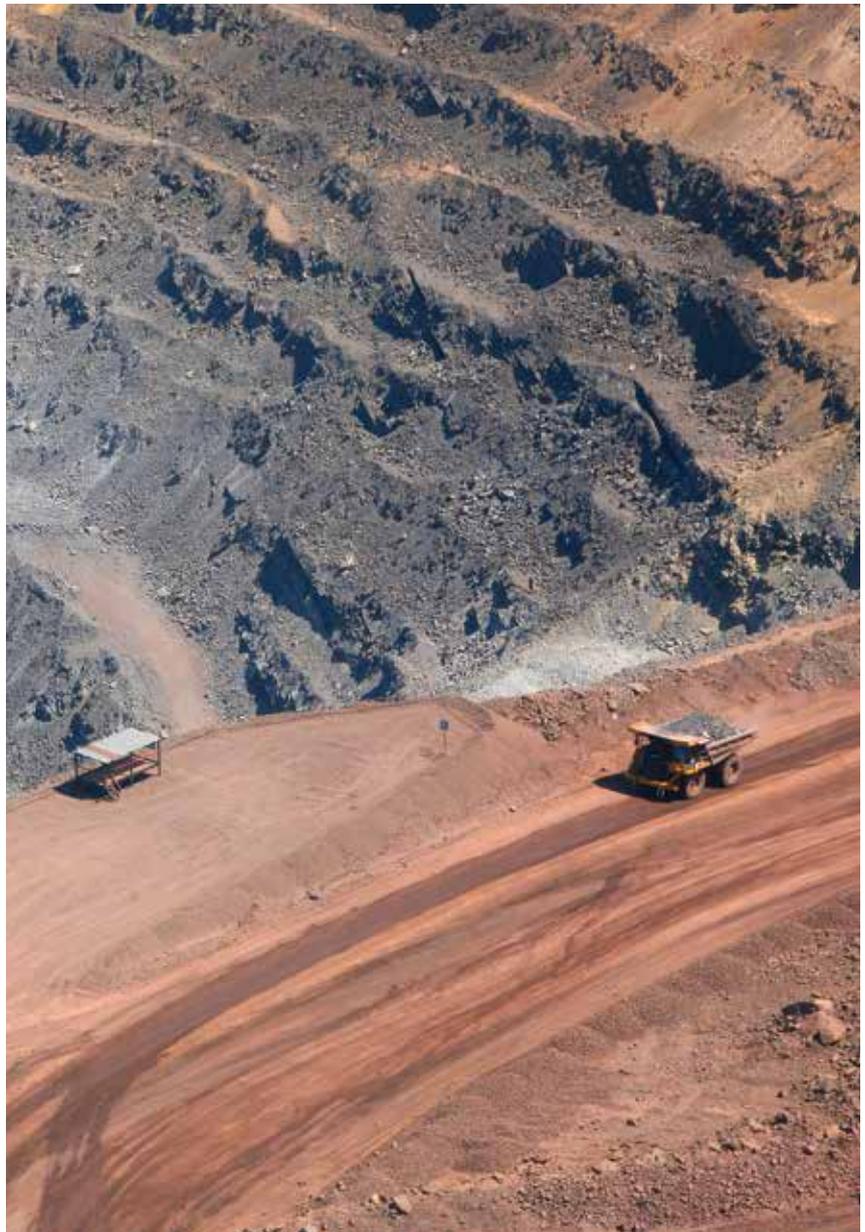
- 1 Newman, East Pilbara, Pilbara WA**
Rental Yield: 14%
- 2 Miles, Dalby, Darling Downs QLD**
Rental Yield: 10%
- 3 South Hedland, Pilbara WA**
Rental Yield: 9.5%
- 4 Kambalda West, Coolgardie WA**
Rental Yield: 9%
- 5 Port Hedland, Pilbara WA**
Rental Yield: 9%

Newman — the little town with the biggest mine

The Mount Whaleback mine is located 6km from Newman; produces 100 million tonnes of iron ore a year, and is 5km long.

About 1,186km north of Perth and 456km south of Port Hedland lays Newman, an inland mining town of the Pilbara region — originally established in 1968 by a subsidiary of BHP Billiton to support the Mount Whaleback mine, Newman has become the epicentre of the iron ore industry within the Pilbara.

As the location of Australia's first iron ore mine and the world's largest single-pit, open cut iron ore mine, Mount Whaleback (also called the Newman Hub); Newman has dramatically benefited from the increase in global iron ore demand, which has resulted in the town directly supporting four major iron ore mines.



Mount Whaleback mine, Newman

Mining and infrastructure projects

A solid economy and a bright future.

Newman has a very strong economy and a bright financial future. Its economy is solid, based on the profitability of four major iron ore mines and an assortment of smaller mines throughout the East Pilbara region, for which Newman acts as a service centre.

Currently there are AU\$19.6bn of major infrastructure projects committed and

planned for the Newman region, led by the AU\$10m Roy Hill Project which includes a newly constructed railway and port facility at Port Hedland.

As part of the Western Australian Government's multi-billion dollar Pilbara Cities initiative, there are AU\$124m in civil infrastructure projects underway or planned for Newman. These amenities

will add to the growing list of civil and recreational precincts around the township.

Table 2. Planned and committed infrastructure projects

Project	Proponent	Location	Status	Capital expenditure (AU\$)	Peak workers	Operational workers
Roy Hill Mine, rail and port	Hancock Prospecting	115km N of Newman	Commenced	10,000,000	3,600	2,000
Jimblebar Mine and rail	BHP Billiton	Pilbara	Commenced	3,300,000		
Hope Downs 4	Rio Tinto/Hancock Prospecting	30km N of Newman	Commenced	2,000,000	600	600
Marillana	Brockman Resources	100km NW of Newman	Feasibility	1,900,000		
Jimindi Iron Ore Mine Project	BHP Billiton	55km N of Newman	Pre-feasibility	1,000,000		
Orebody 24	BHP Billiton	9km N of Newman	Commenced	806,000		
Yarnima Power Station	BHP Billiton	Newman	Commenced	590,000		
Totals				19,596,000	4,200	2,600

Major projects underpin housing demand

Accommodation struggles to keep up with the pace of progress in Newman.

Over the last decade, the billions of dollars invested into the Newman region by BHP Billiton, Fortescue Metals Group, and Rio Tinto to develop their iron ore assets has created unprecedented demand for housing, with median rents currently at AU\$1,440 per week according to the Real Estate Institute of Western Australia (REIWA).

The Western Australian Government's Pilbara Planning and Infrastructure Framework 2012 report concluded that between 2010 and 2015 the required

number of dwellings for Newman is expected to rise by 1,180 dwellings (Table 3). This translates to a forecast demand of 236 dwellings per annum.

Data from the Western Australian Department of Regional Development and Lands (DRDL) in August 2012 estimates the number of dwellings required by 2015 to be even higher, at 2,895.

The DRDL also estimated that by the end of 2012, there would be 1,930 dwellings

in Newman – therefore implying a future demand to 2015 of between 860 and 965 new dwellings (an average of between 287 to 322 new dwellings per annum).

Table 3. Indicative future dwellings required 2020–2035

Location	Past levels	Current levels	Additional dwellings required (cumulative)			
	2010	2015	2020	2025	2030	2035
Karratha-Dampier	4,950	9,320	11,170	13,390	16,050	19,230
Port Hedland	4,450	7,660	9,650	12,140	15,280	19,230
Newman	1,610	2,790	3,350	4,020	4,820	5,770
Other	1,935	4,270	5,250	6,440	7,880	9,620
Totals	12,945	24,040	29,420	35,990	44,030	53,850



Port Hedland – Australia’s iron ore export hub

The Town of Port Hedland is the local government authority responsible for administering the twin towns of Port Hedland and South Hedland as well as the surrounding area of more than 10,000 square kilometres.

The Town is in the north west of Australia, 1,600km north of Perth. As well as the two major population centres of Port Hedland and South Hedland, there is an industrial precinct known as Wedgefield. Karratha is the next closest urban centre, located around 250km southwest of Port Hedland.

Port Hedland has coastal frontage and stretches across a narrow peninsula around 8km long. The western end of the town site is the historical town centre and residential precinct. It directly adjoins the Port operations.

To the eastern end of Port Hedland is the town’s distinguished location of Pretty Pool, which has a significant beach frontage.

South Hedland is located about 15km south of Port Hedland and 10km from the Port Hedland International Airport. South Hedland was established in the 1960s during the pioneering days of Western Australia’s iron ore industry, to support future population growth associated with this new economic drive.



Pilbara coastline, Travis Hayto

Population trends

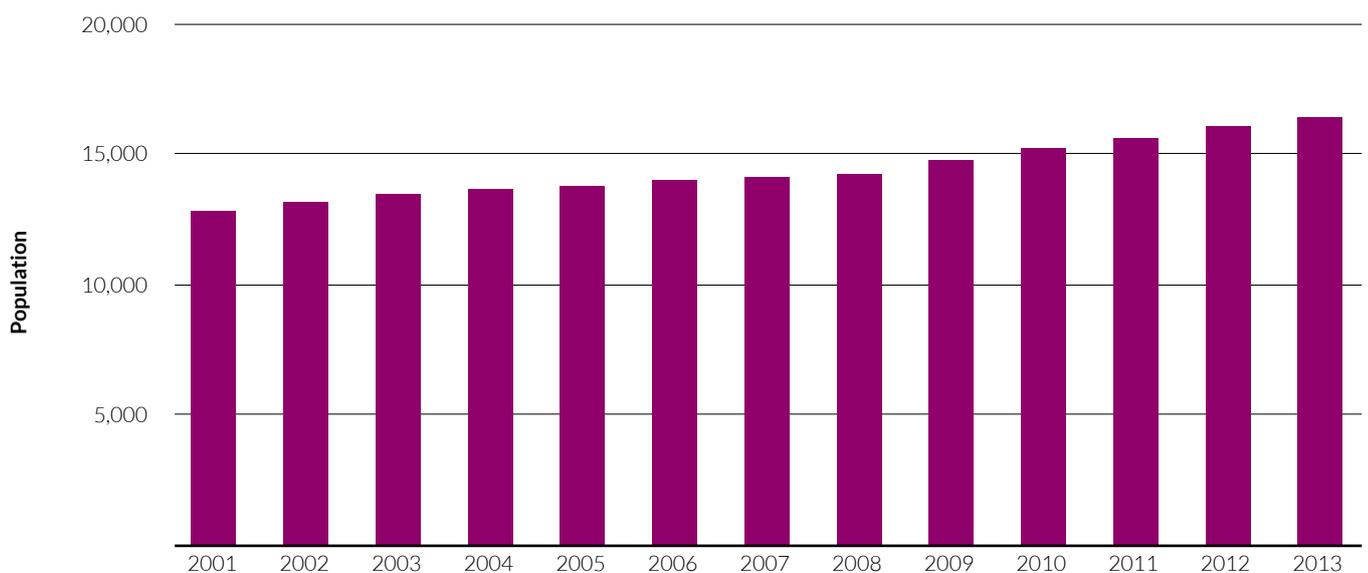
According to the Australian Bureau of Statistics, as of June 2013, there were an estimated 16,472 permanent residents within the Town of Port Hedland.

This figure underestimates the true total population total in the area, as it does not take into account the high proportion of FIFO workers.

Almost two-thirds of permanent residents live in South Hedland, with most of the remaining population (around 30%) living in Port Hedland.

The increase in population of the Town has been historically associated with strong local growth and expansion of the mining and resource industries. Over the last 10 years the Town's permanent population growth rate has been 21% per annum, compared to 17% for the rest of Australia over the same period.

Fig. 14 Town of Port Hedland historical permanent population trend



The world's largest bulk export port

Port Hedland is the largest export terminal in the Pilbara; with an annual output of 372 million tonnes (2013-14), making it the largest bulk export port in the world.

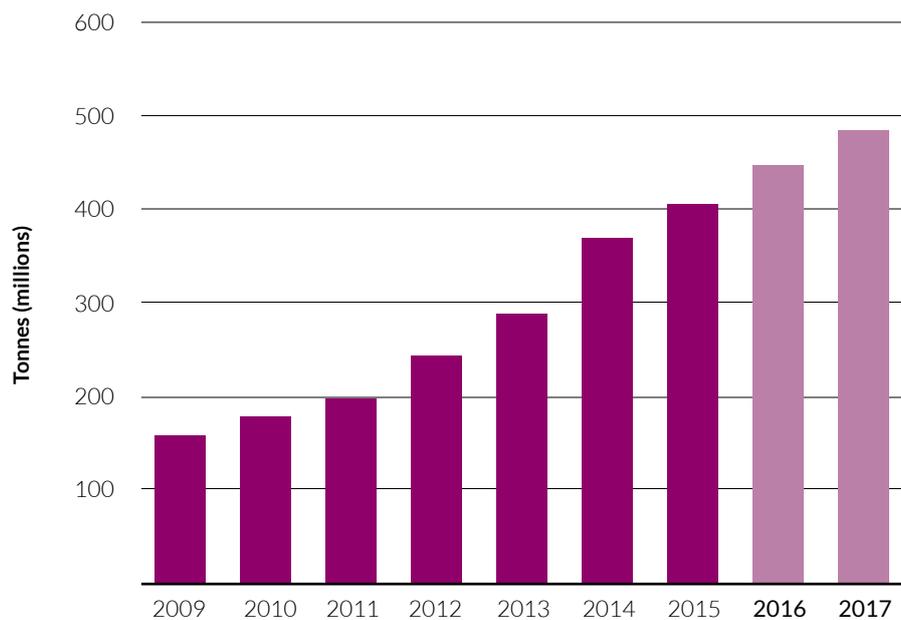
Over the last five years, the Port has experienced rapid growth with exports rising by a staggering 120%.

According to the Port Hedland Ports Authority, the inner harbour is expected to have the capacity for 495 million tonnes and once this is met, a future outer harbour is expected to add an additional 400 million tonnes.

Over the five years to June 2014, the Port has experienced significant growth in its volumes, with the future growth in exports expected to see volumes rise by around 30% in the three years to June 2018.

BHP Billiton is also fast-tracking approved expansion projects with a view to increasing export tonnage to 350 million tonnes per annum through inner harbour improvements. BHP Billiton will commission two new berths at Nelson Point (Berths C and D) within the Inner Harbour and install a fifth rail car dumper at its Finucane Island facility.

Fig. 15 Annual Exports for Port Hedland



Significant restrictions to new supply

Unlike metropolitan regions of Western Australia, Port Hedland has significant restrictions limiting the delivery of new dwelling supply particularly within the Town itself. Port Hedland based town planners RFF Australia (RFF) examined these constraints in a Housing Supply Report from September 2014, from which the following commentary has been extracted.

- A. Environmental constraints I – flood plains and fill costs
- B. Environmental constraints II – dust pollution
- C. Environmental constraints III – development impact on natural environment
- D. Post financial crisis funding environment
- E. Native title and Freehold delays



A. Environmental constraints I

Flood plains and fill costs.

A large amount of identified future development areas in Port Hedland and South Hedland are vulnerable to coastal erosion and storm surges in addition to being very low lying and therefore flood prone. This was identified recently through the completion of the Port Hedland Coastal Vulnerability Study (2011). Furthermore, the soil profiles of many project sites are unstable or recognised as potentially collapsible.

The Western Australian Planning Commission employs some strict compliance requirements to ensure residential development is not at risk to the impacts of such environmental issues.

To achieve compliance with the State Planning Policy requirements, these larger sites may require fill placement ranging from 2–4 metres across the site. Furthermore, due to the ground instability significant settlement periods

may be associated with the placement of fill on such sites.

The cost to import fill to site in the Pilbara is often substantially higher than supplying metropolitan Perth. As a consequence project delivery is challenging, and affected low lying areas are less likely to be developed in the short to medium term.

Pilbara coastline



B. Environmental constraints II

Dust pollution from port operations.

The western area of Port Hedland directly adjoins a large area of BHP Billiton's operations within the port. Approximately one third of Port Hedland is located within this area, commonly referred to as the 'West End'. This is recognised as the area of greatest conflict with port operations.

In 2010, the Port Hedland Noise and Dust Taskforce released the *Port Hedland Air Quality and Noise Management Plan* (endorsed by State Cabinet).

To date, the key element of the report which has been implemented is referred to as Amendment 22. This amendment created the West End Residential zone which includes:

- provisions recommending that a large number of families, young people and old people do not live in the area on an ongoing basis;
- limitations on the size of dwellings to two bedrooms; and
- design requirements which ensure developments limit resident's exposure to dust.

The intent of this land use planning framework is to encourage all future residential supply in Port Hedland to be located in the East End of Port Hedland. The driver behind the plan is based on a potential health risk from noise and dust

exposure to those people who have lived in close proximity to the port operations.

In addition to the potential health risk, BHP Billiton has made public its opposition to continued high-density development in the West End. This position has been supported by the balance of the port users through the Port Hedland Industries Council and the Pilbara Ports Authority (BHP Billiton 2014, Port Hedland Industries Council 2014).

The basis of these objections is that continued residential infill adjoining the port displaces the 'primacy' of the port operations by creating further conflict between residential and industrial land uses.

The increasing industry pressure to prevent further long term residential development, along with a heightened risk-adverse approach from major State Government agencies, places future major residential infill projects in the West End of Port Hedland at risk of not proceeding despite the permissible uses in the Town Planning Scheme.

At a minimum, any major development decision in the West End will be delayed, pending the outcome of the Health Risk Assessment that is not due until the end of 2016. These approvals are also likely to be limited to mainly short term accommodation.



C. Environmental constraints III

Development impact on natural environment.

The impact of any development on the natural environment requires careful consideration to ensure a project's approval.

A number of potential development sites, particularly in Port Hedland include a pristine coastal environment and a high level of biodiversity. State and Federal Environmental regulations are therefore very relevant to the success of projects, and can also affect the cost or management measures that can be applied to projects.

Specific issues affecting Port Hedland projects include potential impacts on the

Pretty Pool mangrove system and the Port Hedland turtle rookeries.

Such environmental issues have significantly reduced development footprints for planned projects in Port Hedland when they have reached the approval stages.

Pretty Pool Stage 3 Development was more than halved in area following the initial rezoning proposal (and subsequently delayed again) due to environmental concerns.

The development and rezoning of the Pretty Pool area has also been scaled

back from the original development plans due to potential impacts on the creek system, the mangrove habitat and community sentiment.

Port Hedland



D. Post financial crisis funding environment

Australia's banking institutions have typically held a conservative view towards developments in the State's north-west.

Following the 2008 global financial crisis, there has been even more of a marked retreat by traditional banking institutions with funding Pilbara development projects, despite buyers of the end product being able to finance up to 95% of the property's value.

High labour costs and more stringent building requirements have created a conservative lending environment for 'untested' developers in the Pilbara.

In many cases development finance has been reliant on a minimum 30% equity with this extending up to 50%. A requirement for more than 100% of debt coverage in presales is also often a condition precedent.

This lending environment has held back or restricted projects from proceeding in the past, however some developers who

have demonstrated the skill and capacity to deliver product on the ground do have more flexible working relationships with financial institutions.

For larger projects, Pilbara-focused developers have often had to rely on raising foreign private equity and finance to deliver projects.



Road train, the Pilbara

E. Native Title and Freehold delays

The majority of land located in the Pilbara and around Port Hedland is identified as Crown Land (i.e. owned by the state) and is subject to a number of additional regulatory hurdles before it can become available for development.

The key legislation which affects Crown Land includes the Native Title Act 1993 and Land Administration Act 1997. The issues which can affect the transfer of land into Freehold include the following:

- Negotiating an agreement with the Traditional Owners of the land to extinguish Native Title over the site (including any compensatory element).
- Allocation of the land for a specific purpose, identification of the person who will obtain it 'freehold' and agreed conditions of sale as determined with the Valuer General and Minister for Lands.
- Following the 'Taking Orders' process including addressing any objections to the taking of land to create Freehold Title.
- Final approval by the Minister for Lands and Gazettal of the Final Taking Order.
- The transfer of land from Crown Land to Freehold generally has a minimum wait-period of 18 months with issues extending out to beyond five years.
- In addition to Native Title issues in the actual transfer of Crown Land to Freehold, issues associated with due process, fairness and probity can often further delay the ability for the State to effectively develop land when demand increases. These may include the following:
 - An obligation for an open and transparent process by the state for any proposal to undertake a land transaction with a private organisation. This generally includes a long tender process, assessment period, final negotiations and approval by either senior government officials or a Minister.
 - Where land is developed by the state (i.e. LandCorp), the legislation which created it requires it to return a reasonable profit to the state. As such, projects that might be in the public interest often do not occur, or are delayed until alternative state funding is secured to underwrite the project.
- A right by LandCorp or state government to retain the right to approve/refuse the final proposed development of the land, increasing the project risk.
- A reluctance of the state to immediately transfer land into Freehold unconditionally. The use of special agreements under the Land Administration Act 1997 or contractual arrangements is often used to prevent 'loss of control' of the land by the state. This however limits the private sector's capacity to leverage the land to raise debt; complicating the financial model of the project and further delaying actual delivery.

Port Hedland and South Hedland new dwelling supply forecasts

With a history of issues with land availability in the Town, considerable planning has gone into ensuring residential land is available for future development.

While over 9,700 new dwellings are planned in Port Hedland and South Hedland combined, the many restrictions to delivery of these dwellings (see previous section), means that actual construction will be substantially delayed.

Table 4 and 5 summarise the projected housing supply into the Port Hedland and South Hedland market for the next five years.

Based on the Town of Port Hedland's new dwelling supply forecasts, over the next

five years the Town is expected to see a significant undersupply of 727 dwellings, with both Port Hedland (122 new dwellings short) and South Hedland (605 new dwellings short).

Note that the substantially smaller number of dwellings forecast to be constructed in Port Hedland is due to the very tight constraints on available developable land, rather than 'buyer' preference.

Table 4. Forecast new residential supply, Port Hedland

Development	2015	2016	2017	2018	2019	2015-19	2020+
Port Hedland Marina	0	0	0	0	0	0	0
Telstra site	0	0	0	0	0	0	400
Athol Street	0	0	0	0	80	80	270
Port Hedland Enterprises	0	0	0	0	0	0	500
Old Hospital site, Port Hedland	0	0	0	120	0	120	0
Pretty Pool Stage 3	0	0	0	0	50	50	70
Moore Street, Port Hedland	0	0	0	0	0	0	0
Smaller projects	23	24	0	0	0	47	0
Total	23	24	0	120	130	297	1,240

Source: RFF

Table 5 Forecast new residential supply, South Hedland

Development	2015	2016	2017	2018	2019	2015-19	2020+
Western Edge	0	0	0	0	50	50	2,350
Hamilton Precinct	0	0	0	0	0	0	1,892
Osprey Rural	0	0	0	0	0	0	1,000
Town Centre (inc. The Concorde)	0	0	0	0	0	0	44
Osprey (Multiple stages)	100	100	100	0	0	300	190
Forrestville	0	0	0	0	0	0	350
Trumpet	0	0	0	0	50	50	213
Koombana (The Enclave)	0	0	38	20	20	78	92
Area K (BHP housing)	0	56	0	0	0	56	0
Elements	70	70	30	0	0	170	0
Somerset Crescent (TAFE site)	14	0	0	0	0	14	141
Gateway Village	0	0	0	0	0	0	113
Cottler/Somerset	44	0	0	0	0	44	68
The Junctions	0	104	0	0	0	104	0
Banksia/Moorling/Paton	27	0	0	0	0	27	0
Scadden Road	0	0	0	0	0	0	59
Roberts Street	0	0	0	0	0	0	40
Pedlar	29	0	0	0	0	29	0
McDonald Place	0	0	0	0	0	0	19
Eastern Gateway	0	0	0	0	0	0	2,500
Total	284	330	168	20	120	922	9,071

Source: RFF

Table 6 Forecast new residential dwelling demand and supply by 2019, Town of Port Hedland

Region	5 years to 2019		5 years to 2019	
	New demand	New supply	Under supply	
Port Hedland	419	297	122	
South Hedland	1,527	922	605	
Total	1,946	1,219	727	

Source: RFF

About MACRO Realty Developments

Established in 2002, MACRO Realty Developments specialises in the strategic acquisition, development and management of Australian investment property, particularly highly cash flow positive property in the Pilbara.

This unique market is MACRO's niche with development projects aligned to the resources industries that have proven longevity, by committed expansion plans, population growth and ongoing government spending.

Opportunities with MACRO extend from purchasing cash flow positive property; funding or co-funding development projects, through to joint venture partnerships with property developments and/or rental management portfolios.

MACRO offers investors and fund managers of all levels, a reliable, turnkey solution to achieving a high return on their investment; through strategic in-house finance, leasing and property management divisions.

Bespoke debt and equity structures (including REITs) can accommodate most investors.



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