

Pilbara's Port City Growth Plan



A vision for a nationally significant regional city



PILBARACITIES
DEVELOPING THE FUTURE



Town of Port Hedland

Kelly Howlett - Mayor

Paul Martin - Chief Executive Officer

Eber Butron - Director Planning and Development

Russell Dyer - Director Engineering Services

Gordon MacMile - Director Community Development

Steering Group

Paul Martin/Eber Butron - Town of Port Hedland

Chris Adams/Paul Trottman - Office of Pilbara Cities

Matt Read - LandCorp

Phil Woodward - Department of Planning

Consultant Team

Town Planning and Urban Design - RPS (in association with APP Corporation and Dr Fiona McKenzie)

Economic Development - AEC Group

Property - AEC Group

Landscape Architecture - RPS (in association with UDLA)

Civil Engineering - Wood and Grieve

Environment - RPS

Indigenous and Non-Indigenous Heritage - RPS

Stakeholder and Community Engagement - Worley Parsons

Traffic and Transport - AECOM

Sustainability - Parsons Brinckerhoff

With additional input from:

Community Development and Place Making - FORM

3D Images - LandCorp/Last Pixel

ALL ENQUIRIES TO:

TOWN OF PORT HEDLAND
CIVIC CENTRE, MCGREGOR STREET

PO BOX 41
PORT HEDLAND WA 6721

T: (08) 9156 9300
E: council@porthedland.wa.gov.au

VERSION/CONTROL	REVISIONS	DATE
DRAFT A	Preliminary Draft for Council Review	19/8/11
DRAFT B	Final Draft for Council Endorsement (for consent to advertise)	09/9/11
DRAFT C	Final Draft for Advertising	11/10/11
DRAFT D	Post-Advertising Final Draft	02/02/12
DRAFT E	Final Draft for Council Endorsement	28/02/12
DRAFT F	Final Draft for Council Endorsement (V2)	15/03/12
FINAL A	Final for WAPC Endorsement	05/10/12
FINAL B	Final for WAPC Endorsement (V2)	17/12/12

ADVERTISING

The Town of Port Hedland Local Planning Strategy certified for advertising on 27 September 2011.

Signed for and on behalf of the Western Australian Planning Commission

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

27 DEC 2012

Date

ADOPTED

The Town of Port Hedland hereby adopts the Local Planning Strategy, at the Ordinary meeting of the Council held on the 23rd day of 20 MAY, 2012

MAYOR

CHIEF EXECUTIVE OFFICER

ENDORSEMENT

Endorsed by the Western Australian Planning Commission on 5 July 2012.

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

27 DEC 2012

Date



MAYOR'S FOREWORD

The Town of Port Hedland and lead consultants RPS have been working hard and collaborating with industry, business and community to create this document—Pilbara's Port City Growth Plan. This document provides a framework towards achieving Council's vision of transforming Hedland into Pilbara's Port City of 50,000 people. Our City will boast an attractive and vibrant CBD areas with public open spaces, cafes, restaurants, boutiques, offices and residential dwellings. Our Spoilbank Marina will be the highlight of our rugged and picturesque coastline – the marina will include the world's best entertainment, recreation and tourist facilities including boat pens, boardwalk with cafes, fishing and bait stores as well as areas for parks, public swimming and environmental interpretative

opportunities.

Council understands that one of the biggest issues facing Hedland is the lack of accommodation and housing and the rising cost of living. Pilbara's Port City Growth Plan will assist Council in finding solutions to these problems to ensure our City becomes an attractive and sustainable place for families to live in. Since the City Growth Plan forums, short and medium-term solutions have already been identified and implemented – marking a positive direction forwards for Council and Hedland.

Over the next 24 years, Council will work with partners including Federal and State Government, industry, local businesses and community to achieve our vision of transforming from a regional town which is an important export hub, to Pilbara's Port City – a nationally significant friendly City boasting a population of 50,000 and some of the world's best infrastructure, community spirit and our unique North-West coastal lifestyle. Pilbara's Port City - where parents can raise their children, young people can come and make their mark, grandparents can enjoy times with their grandchildren and long term residents chose to retire and live locally.

To each and every one of you it is your involvement, the completion of significant infrastructure projects, the working together as a team and your continued support that will ensure Port Hedland – Pilbara's Port City achieves our vision and is one of the top cities to live in by 2035.

Kelly Howlett

Mayor, Town of Port Hedland



CEO'S FOREWORD

Our vision is clear – by 2035 Port Hedland will be Pilbara's Port City, a nationally significant friendly City where people want to live and are proud to call home.

Pilbara's Port City Growth Plan will help us achieve this vision – it will be Council's key strategic document which will outline key focus themes that are significant to the growth of Port Hedland into a regional City.

The Growth Plan takes into consideration previous strategies, plans and consultations including last year's Pilbara Placemaking Series by FORM, the Town of Port Hedland Land Use Master Plan (LUMP) and the Town's Strategic Plan 2010-15. There will be two parts to the Growth Plan: a visioning document and an implementation plan which will draw upon the visioning document.

The Growth Plan will be a detailed document addressing underlying social, economic and environmental issues in a defined area to achieve a 'sustainable city', including increasing economic diversity, private and public sector investment and improved infrastructure co-ordination. Projects need to be delivery focused, and where necessary, delivered through partnerships; and outcomes and benefits will reflect the community's vision for the area and enable stakeholders to coordinate their plans and programs with our vision to achieve an integrated approach to implementation.

The Pilbara's Port City Growth Plan has undergone extensive background work to enable it to reach its current stage. The project has a steering group comprised of the Town of Port Hedland, Pilbara Cities, Department of Planning and LandCorp. A stakeholder reference group has also been formed involving representatives from government, resources, small business and community groups.

Pilbara's Port City Growth Plan has involved extensive consultation with the broader community to incorporate their vision and ideas for the direction and growth of Port Hedland into a City they want to call home. The Town of Port Hedland and their consultants have undertaken a series of focus groups and workshops on a variety of identified themes, followed by a two day forum finalising key points and ideas gained from the consultation.

The Growth Plan also focuses on improving the community in which we live in – this includes providing more facilities and amenities, introducing new community initiatives, supporting community groups and not-for-profit organisations and ensuring all the needs of members of the community are continually addressed to a satisfactory level. Community is the cornerstone of any place and is one of the key foundations to building an attractive City.

I am looking forward to working with our stakeholders, partners and the community in achieving our vision for Hedland and I believe this document is key to ensuring we address all issues which arise on our journey to becoming Pilbara's Port City.

Paul Martin

Chief Executive Officer, Town of Port Hedland

*“A nationally
significant,
friendly, City,
where people
want to live and
are proud to call
home”.*





EXECUTIVE SUMMARY

Western Australia's Pilbara Region, and Port Hedland particularly, have grown to become the economic might of the Australian economy on the back of an internationally significant resource industry. Port Hedland is already the largest bulk commodity port in Australia. Total expansion of the port is expected to increase to a capacity of 895 million tonnes per annum (mtpa) - an impressive 400% increase from today. In 2010/11, the Port Hedland Port Authority exported \$40b worth of exports (199 million tonnes).

Despite this, national and state level re-investment in Port Hedland since the 1960's has not been at a nationally significant level. The resulting growth pressures are acknowledged in the *Western Australian Planning Commission's Pilbara Planning & Infrastructure Framework (2011)*, where severe infrastructure shortages, high living costs, demand for amenity improvement and housing affordability are all identified as major constraints to Port Hedland's sustained growth and development as a Pilbara City.

The Pilbara Planning and Infrastructure Framework provides a blueprint for the long term growth and sustainable development of the Pilbara Region, and identifies both Port Hedland and Karratha as Regional Cities of 50,000 people by 2035.

What is Pilbara's Port City Growth Plan?

Pilbara's Port City Growth Plan ('the Growth Plan') provides a high level strategic blueprint to facilitate the sustained growth of Port Hedland into Pilbara's Port City with a population of 50,000 people. It is being driven by the need to modernise and transform Pilbara towns to support long term economic activity in the region, improve the quality of life for existing residents and to attract and retain new residents. The Growth Plan builds on many of the aspirational themes of previous Port Hedland plans which have sought to guide the future structure and form of growth. It incorporates all land within the municipality of Port Hedland, with primary focus on the settlement areas of South and Port Hedland.

The Growth Plan provides guidance on:

- How we will provide for significant population growth, create local employment and investment and diversify the economy;
- How our city will reflect cultural and landscape values through development of community and sense of place;
- Where will urban and industrial growth be located and what forms of land use, transport and activity centres will support this;
- How Pilbara's Port City will relate to its landscape, protect natural environmental assets and respond to the challenges of climate change; and
- What infrastructure will be necessary to support the growth of Pilbara's Port City.

The Growth Plan has been prepared alongside a second document, Pilbara's Port City Implementation Plan ('the Implementation Plan'). Among other things, the Implementation Plan will provide details on the actions required to 'de-constrain' land in the precincts identified, prioritisation (timing) of those activities, as well as the broad roles and responsibilities of the key stakeholders involved in ensuring a timely delivery of the projects and programs.

What kind of city will Pilbara’s Port City be?

Pilbara’s Port City Growth Plan is based on the vision that:

“A nationally significant, friendly city, where people want to live and are proud to call home”.

The vision is supported by 5 core themes that have informed the Growth Plan’s preparation:

- 1. **Sustained and Diversified Economic Growth** – providing opportunities for regional and local employment generation to address the gaps in employment outcomes within the community and providing the right conditions for robust economic growth to occur across a range of industries.
- 2. **Strengthening Local Communities & Culture** – fostering the development of safe, friendly and inclusive communities that call Port Hedland home. Providing places and space that reflect and enhance the unique character, indigenous and non-indigenous heritage and identity of the area. Building resilience within the community and providing services and facilities for a range of diverse community needs and interests, so as to reduce disadvantage and improve social cohesion.
- 3. **Housing Diversity & Land Supply Capacity** – providing an orderly and adequate supply of affordable land along with increased choice in affordable housing products and tenure options to cater for a diverse and permanent population.
- 4. **Environmental Protection and Change Adaptation** – the protection and enhancement of natural environmental and cultural assets, biodiversity, air and water quality, and building resilience against the long term effects of climate change.
- 5. **Building & Maintaining Infrastructure Capacity** – strategic and urban transport, utilities and communications infrastructure are provided in a timely, sustainable and efficient manner to cater for a growing resident population and increasing economic activity.

Why are we preparing the City Growth Plan?

Port Hedland has a Gross Regional Product of \$3.3b and comprises 1.8% of the Western Australian economy. The Port Hedland economy has grown 61.3% over the last 3 years. If we are to provide for the future of Port Hedland, and achieve our vision, Port Hedland will have grown significantly beyond even its current size. From a current estimated total population of 19,216 it will have reached 50,000 people.

Existing growth pressure has already seen average house prices of \$1.12m (March 2011), which is 2.3 times higher than the average Perth house price (\$480,000 – March 2011). Similarly,

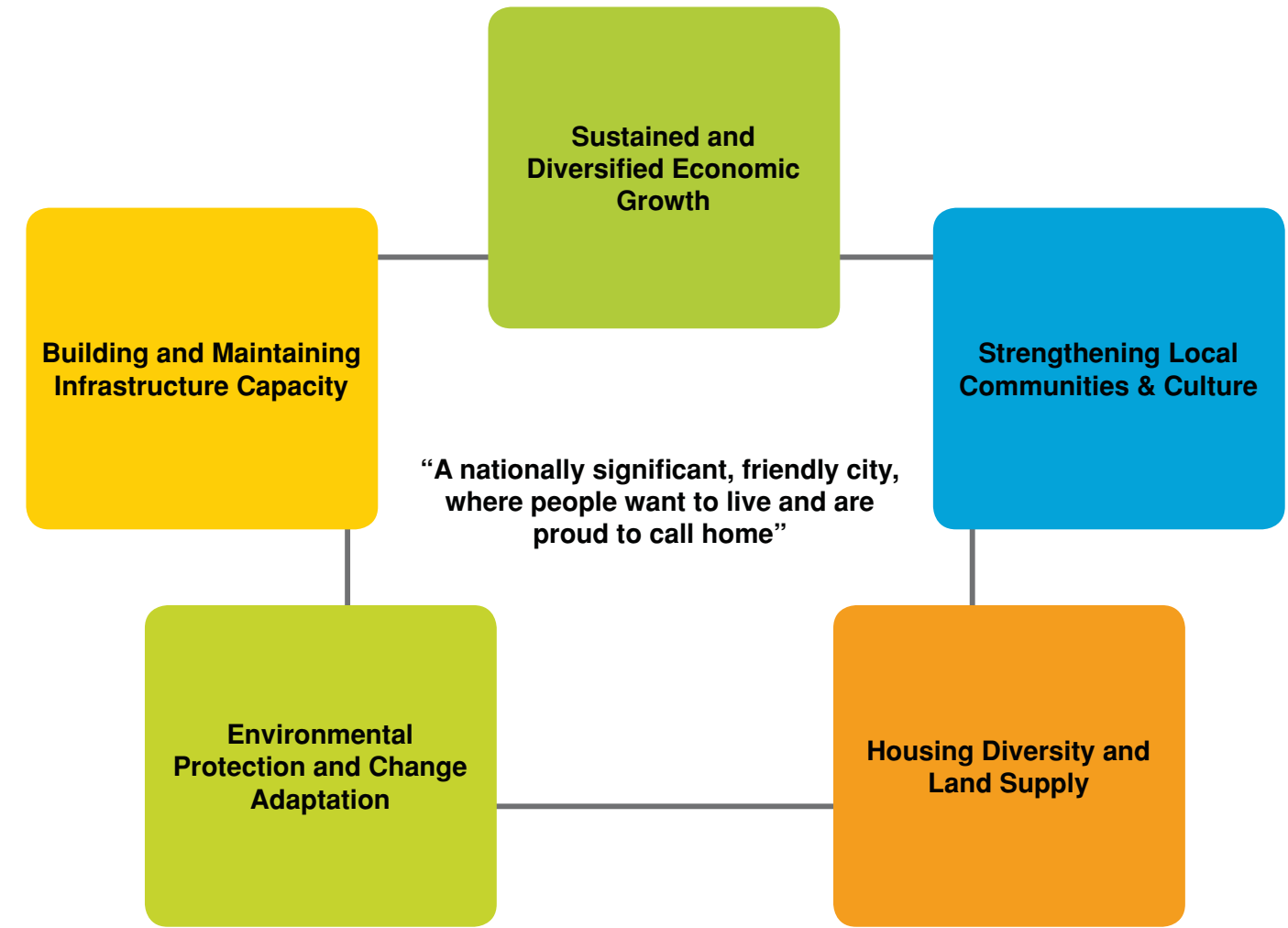


Figure i : City Growth Plan Core Themes

average rental rates are \$1,772 per week (March 2011) some 4.6 times higher than average rental rates in Perth (\$380 per week – March 2011). Median house prices have already increased 14% over the last two years, with rental rates also increasing 14% during that period. The resultant issues of housing affordability and land supply are already highly prevalent and will increase unless a coordinated land release program and accompanying affordability measures are undertaken.

These types of steps must be taken in a coordinated way, though. The principles of ‘responsible growth’ must be used to ensure the primacy of Port Hedland’s port and resource infrastructure is protected and enhanced for the longer term. Similarly environmental attributes and coastal vulnerability must be considered before developing new areas. Infrastructure and transport must be planned to coincide with new urban or industrial land; and most importantly, the strong cultural and landscape values that typify Port Hedland must be captured as the city grows through new community and cultural facilities and programs.

The Growth Plan has also been prepared to satisfy the core

recommendations of the State Government’s Port Hedland Dust Taskforce. Among other matters, these require the preparation of a plan which:

- Identifies sites for new development in the entirety of Port Hedland;
- Identifies appropriate locations in the West End of Port Hedland for redevelopment such as additional commercial premises, entertainment complexes and short stay accommodation facilities;
- Prescribes additional planning controls to address amenity issues associated with living in an area with elevated levels of noise and dust.

Preferred Scenario for Growth

The Growth Plan examined several scenarios for growth and adopted an approach most aligned with a ‘Rapid City Growth’ scenario, which recognises the importance of expansion in both existing urban settlement areas of South and Port Hedland in the

“Pilbara’s Port City Growth Plan identifies land and housing capacity for some 23,000 dwellings and a population of over 54,000 people - providing certainty for city growth confidence in the local housing market”

short and medium term. It recognises that South Hedland will support the City Centre as the primary regional centre, while the East End of Port Hedland will be developed as a high amenity coastal community with a Neighbourhood Centre serving local needs.

The West End will be a commercial/cultural hub recognising the primacy of the Port, while offering entertainment and cultural experiences to residents and visitors. This approach offers the basis for strengthening the connectivity between South and Port Hedland through the early development and expansion of Wedgefield and Airport land. It is based on having a balance of urban infill and immediate new land development.

An important legacy of the Growth Plan will be to provide certainty for all stakeholders as Pilbara’s Port City grows to 50,000 and beyond. The Growth Plan identifies land capacity to accommodate 54,000 people, while also identifying longer term urban land bank requirements for continued growth.

Figure ii below illustrates the spatial distribution of total dwellings under the preferred scenario.

Strategies for Growth

Pilbara's Port City Growth Plan identifies land and housing capacity for some 23,000 new dwellings (allowing also for normalised vacancy rates within the market) and a population of over 54,000 people - providing certainty for city growth and confidence in the local housing market. For the first time, Pilbara's Port City will have clear strategies to map and implement growth across five core themes. Spatially, the Growth Plan identifies 16 Growth Precincts, broadly setting out how land should be used and developed – and protecting the primacy of the Port and resource infrastructure and operations. In addition to non-spatial strategies, these precincts provide the foundations for the following:

- Significant new residential development capacity (in excess of demand for a population of 54,000), including:
 - 23,043 new dwellings (28,577 total including existing stock);
 - 17,440 new dwellings in South Hedland;
 - 5,643 new dwellings in Port Hedland;
 - No additional dwelling capacity in West End.
- Providing housing diversity and housing choice to cater for future growth of both permanent and temporary accommodation;
- Approximately 125,000 sq/m of additional retail/commercial floor space;
- A cultural hub in the West End of Port Hedland and a new retail centre in the East End;
- Delivery of a regional City Centre for South Hedland; and

- Approximately 2,161ha of additional strategic industrial land and 450ha of additional general/light industrial land.

To meet the needs of a growing population, the Growth Plan also identifies a range of strategies and initiatives required to address the core themes. In particular, housing has been identified as by far the most critical impediment to economic growth and a range of strategies have been articulated to address this issue; failure to address this issue in a pro-active and robust fashion could impair all future growth.

Other strategies and initiatives have also been identified to facilitate enhancement of the quality of life for Port Hedland's residents, including the creation of safe, friendly and inclusive

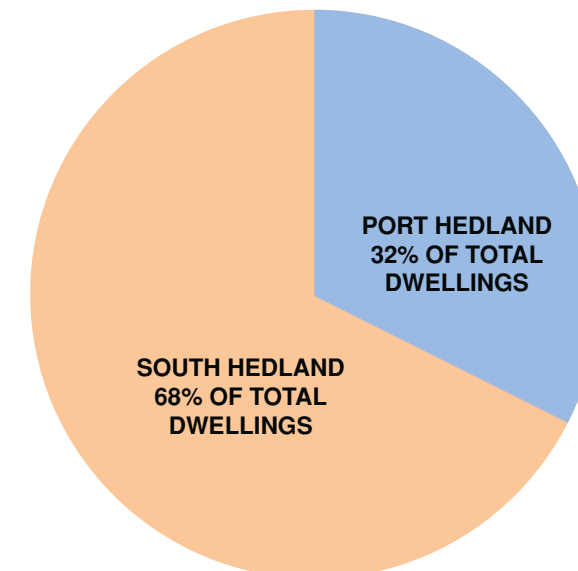


Figure ii: Spatial Distribution of Dwellings under the preferred growth scenario

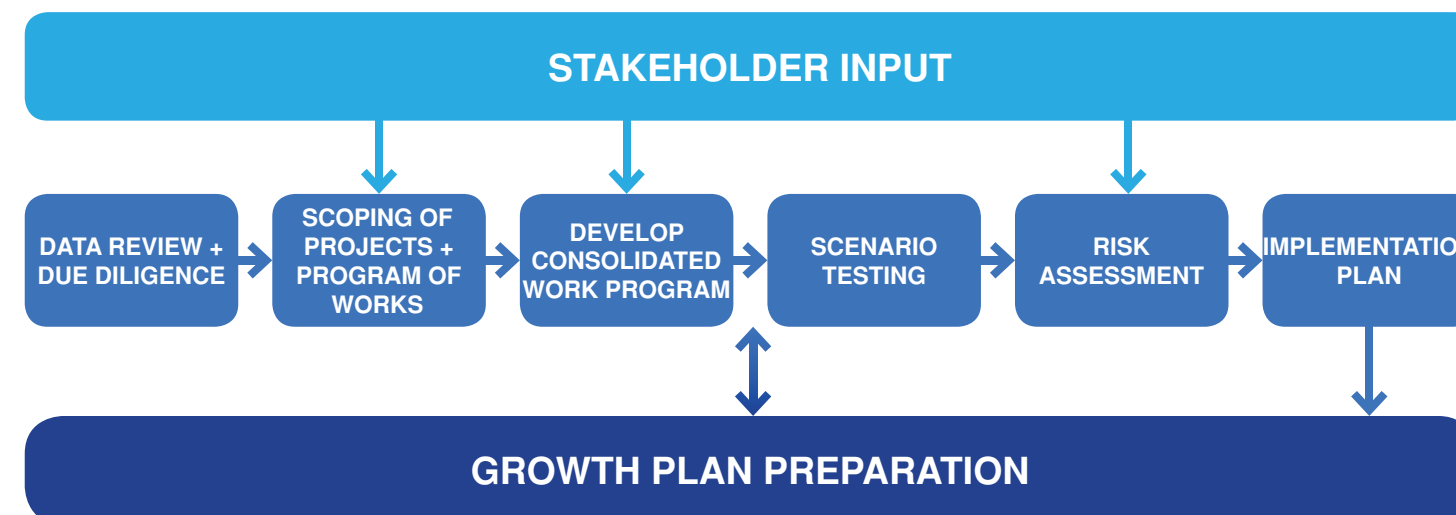


Figure iii: Implementation Plan

communities; expanding job and related opportunities for current and future residents; addressing infrastructure, including public transport, services; and ensuring that current and future developments are built in a manner which respects and preserves the region's indigenous and non-indigenous heritage, and meets the challenges of the climatic conditions and environmental constraints.

Making it Happen. Delivering on the Growth Plan

Supporting the Growth Plan is a separate document entitled Pilbara's Port City Implementation Plan ('the Implementation Plan'). The Implementation Plan sets out programs for the delivery of all recommended work across each of the five core themes – comprising economic, community, environmental, housing/land and infrastructure projects and programs. It will include a broad set of actions, roles and responsibilities, timing, and other information required to inform the delivery plans and programs of project partners.

Delivering the outcomes required to meet the Growth Plan vision will require a 'whole of Government' approach and commitment by many stakeholders across the region and the state – with sustained levels of support and resourcing. Critically, this transformation will need to be led at the local level by a strong and well resourced Local Government, playing a central role in the coordination of activities, investment initiatives and the development of strong and effective delivery partnerships.



Figure iv: Front covers of Growth Plan and Implementation Plan documents.

A vision of Pilbara's Port City



“A place of ‘northern Australian life’, Pilbara’s Port City Centre is a dynamic, accessible and inclusive place that is the heart of the South Hedland community and the major regional centre for the City of 50,000 people. It is an exciting destination for visitors, business people and residents. It has great public spaces, friendly streets, landmark buildings and architecture. There are many visual cues through public art and spaces, and a strong association with indigenous heritage and the natural landscape. Like the many other destinations throughout Pilbara’s Port City, culture and social destinations are woven into the fabric of the City Centre.”





Quality Design

“The East End Urban Village is Port Hedland’s primary residential area. The area, encompassing Cooke Point and Pretty Pool, offers significant housing density and diversity together with sport and recreation opportunities, and school and community facilities. At its core is a retail and mixed use village offering a range of local convenience as well as dining and entertainment choices. Strong links to the coast and mangrove environs have been established offering residents and visitors alike a closer connection with the landscape.”



Coast

“The West End is the Port City’s soul – perhaps like Fremantle to Perth, it is a unique and interesting place. It supports the growing port activity, yet remains people friendly and accessible. It is busy with day time workers, many of whom leave their offices to enjoy lunch in outdoor cafes and bars. As evening arrives, the West End transforms into a place popular with tourists observing Australia’s largest tonnage port and the coastline, while travellers and the wider city population enjoy the many cultural, dining and entertainment activities.”



Art



CONTENTS

1.0	INTRODUCTION	13			
1.1	PILBARA'S PORT CITY	14			
1.2	SCOPE	16			
1.3	CONTEXT AND ROLE	17			
1.4	METHODOLOGY	19			
	1.4.1 PROJECT APPROACH AND DECISION MAKING	19			
	1.4.2 PROJECT ELEMENTS	20			
	1.4.3 STRUCTURE OF THIS DOCUMENT	20			
	1.4.4 COMMUNITY ENGAGEMENT	21			
	1.4.5 SUSTAINABILITY FRAMEWORK	22			
	1.4.6 INTEGRATED GROWTH MODEL	22			
2.0	VISION FOR PILBARA'S PORT CITY	23			
2.1	CITY GROWTH PRINCIPLES	26			
2.2	CITY GROWTH THEMES	26			
3.0	CHALLENGES AND OPPORTUNITIES FOR GROWTH	33			
3.1	POPULATION AND DEMOGRAPHICS	34			
3.2	ECONOMY	35			
3.3	HOUSING AND LAND SUPPLY	38			
3.4	LOCAL COMMUNITIES, CULTURAL HERITAGE AND LANDSCAPE CHARACTER	40			
3.5	CLIMATE AND ENVIRONMENT	46			
3.6	INFRASTRUCTURE	49			
4.0	CITY GROWTH SCENARIOS	53			
4.1	SCENARIO 1: IN-LAND CITY GROWTH	55			
4.2	SCENARIO 2: COASTAL CITY GROWTH	56			
4.3	SCENARIO 3: RAPID CITY GROWTH	57			
4.4	OTHER SCENARIOS FOR GROWTH	58			
4.5	PREFERRED SCENARIO FOR GROWTH	59			
4.6	PLANNING BEYOND 50,000	59			
5.0	CITY GROWTH STRATEGY	61			
5.1	FRAMEWORK FOR GROWTH	62			
	5.1.1 URBAN DEVELOPMENT AREAS	62			
	5.1.2 ACTIVITY CENTRES	62			
	5.1.3 INDUSTRIAL DEVELOPMENT	65			
	5.1.4 RECREATION, ENTERTAINMENT AND COMMUNITY FACILITIES	65			
	5.1.5 SUMMARY OF GROWTH FRAMEWORK	66			
5.2	STRATEGIES FOR SUSTAINING AND DIVERSIFYING ECONOMIC GROWTH	67			
	5.2.1 BEING PREPARED FOR GROWTH	67			
	5.2.2 AFFORDABILITY AND ACCESSIBILITY	67			
	5.2.3 TRANSIENT WORKFORCE ACCOMMODATION	68			
	5.2.4 DEVELOPING UNIQUE CAPABILITIES	68			
	5.2.5 ASSISTING LOCAL BUSINESSES	69			
	5.2.6 MARKETING AND ATTRACTING INVESTMENT	69			
5.3	STRATEGIES FOR STRENGTHENING LOCAL COMMUNITIES & CULTURE	70			
	5.3.1 FRAMEWORK FOR COMMUNITY DEVELOPMENT AND PLACE-MAKING	70			
	5.3.2 ATTACHMENT TO PLACE AND LIVABILITY	72			
	5.3.3 ENABLING COMMUNITY INFRASTRUCTURE	72			
	5.3.4 CELEBRATING CULTURAL ASSETS	72			
5.4	HOUSING DIVERSITY AND LAND SUPPLY	72			
	5.4.1 LAND SUPPLY CAPACITY	72			
	5.4.2 HOUSING DIVERSITY	72			
	5.4.3 ARCHITECTURAL VERNACULAR	74			
5.5	ENVIRONMENTAL PROTECTION AND CHANGE ADAPTATION	76			
	5.5.1 CONSERVING BIODIVERSITY AND ECOSYSTEMS	76			
	5.5.2 PROTECTING FLORA AND FAUNA	76			
	5.5.3 SUSTAINABLE NATURAL RESOURCE MANAGEMENT	76			
	5.5.4 CLIMATIC CHANGE AND ENVIRONMENTAL RISK MANAGEMENT	76			
	5.5.5 LOCAL ENVIRONMENTAL AMENITY AND POLLUTION REDUCTION	77			
	5.5.6 ADDITIONAL MANAGEMENT ACTIONS	77			
	5.5.7 WATER SUPPLY	77			
	5.5.8 WASTEWATER	78			
	5.5.9 STORMWATER AND EARTHWORKS	78			
	5.5.10 POWER	78			
	5.5.11 GAS SUPPLY	78			
	5.5.12 TELECOMMUNICATIONS	79			
	5.5.13 RECYCLING AND WASTE MANAGEMENT	79			
	5.5.14 PEDESTRIAN AND CYCLE NETWORKS	79			
	5.5.15 ROAD NETWORKS	80			
	5.5.16 PUBLIC TRANSPORT NETWORKS	80			
	5.5.17 FREIGHT AND LOGISTICS	81			
	5.5.18 SAFEGUARDING AND ENHANCING STRATEGIC ASSETS	81			
5.6	GROWTH PRECINCTS FOR PILBARA'S PORT CITY	82			
	5.6.1 PRECINCT 1 – WEST END	84			
	5.6.2 PRECINCT 2 – EAST END URBAN VILLAGE	88			
	5.6.3 PRECINCT 3 – PORT AUTHORITY & FINUCANE ISLAND	92			
	5.6.4 PRECINCT 4 – REDBANK	94			
	5.6.5 PRECINCT 5 – DAMPIER SALT & SURROUNDS	96			
	5.6.6 PRECINCT 6 – WEDGEFIELD INDUSTRY & LOGISTICS	98			
	5.6.7 PRECINCT 7 – AIRPORT & SURROUNDS	100			
	5.6.8 PRECINCT 8 – PIPPINGARRA	102			
	5.6.9 PRECINCT 9 – WESTERN GATEWAY	104			
	5.6.10 PRECINCT 10 – SOUTH HEDLAND WEST	106			
	5.6.11 PRECINCT 11 – CITY CENTRE	108			
	5.6.12 PRECINCT 12 – SOUTH HEDLAND EAST	112			
	5.6.13 PRECINCT 13 – EASTERN GATEWAY	114			
	5.6.14 PRECINCT 14 – SOUTHERN	116			
	5.6.15 PRECINCT 15 - BOODARIE	118			
	5.6.16 PRECINCT 16 – PORT & SOUTH HEDLAND SURROUNDS	120			
6.0	SUMMARY AND IMPLEMENTATION	123			
6.1	SUMMARY AND IMPLEMENTATION	124			
	APPENDIX A: STATE, REGIONAL AND LOCAL PLANNING CONTEXT	127			
	APPENDIX B: TECHNICAL SUMMARIES	135			
	APPENDIX C: REFERENCE / SOURCE MATERIAL	161			

FIGURES

Figure i :	City Growth Plan Core Themes	6	Figure 3.20	Port Activity, 2006-2010 (Source - Port Hedland Port Authority 2010)	49
Figure iii:	Implementation Plan	7	Figure 3.21	Existing Primary Road and Rail Networks (Source - AECOM, 2011)	49
Figure ii:	Spatial Distribution of Dwellings under the preferred growth scenario	7	Figure 3.22	Port Hedland Existing Bus Network (Source - AECOM, 2011)	50
Figure iv:	Front covers of Growth Plan and Implementation Plan documents.	7	Figure 3.23	South Hedland Existing Bus Network (Source - AECOM, 2011)	50
Figure 1.1	Gross Regional Product and Share of National Economy, Port Hedland, 2009/10 (Source: ABS 5206.0 National Accounts and AEC group)	14	Figure 3.24	South Hedland Existing Path Network (Source - AECOM, 2011)	50
Figure 1.2	Aerial Context Plan	15	Figure 3.25	Port Hedland Existing Path Network (Source - AECOM, 2011)	51
Figure 1.3	Port Hedland Regional Context	16	Figure 3.26	Water Supply and Demand for Forecast Population (Source - WGE. 2011)	51
Figure 1.4	Town of Port Hedland Boundaries	16	Figure 4.1	Spatial Distribution of Total Dwellings by Growth Scenario (Source: RPS 2011)	54
Figure 1.5	Port and Key Infrastructure	17	Figure 4.2	In-Land City Growth	55
Figure 1.6	Project Approach	19	Figure 4.3	Coastal City Growth	56
Figure 1.7	Decision Making.	19	Figure 4.4	Rapid City Growth	57
Figure 1.8	Project Elements	20	Figure 4.5	Comparison of Growth Scenarios against Growth Plan Core Themes	58
Figure 1.9	Core City Growth Plan Documents	20	Figure 4.6	Medium Term Spatial Distribution of Dwellings Under Preferred Scenario (Source: RPS 2011)	59
Figure 1.10	Sustainability Framework	22	Figure 4.7	Longer Term Spatial Distribution of Total Dwellings (Beyond 50,000 people) (Source: RPS)	59
Figure 2.1	Sustained and Diversified Economic Growth	27	Figure 5.1	Growth Framework Flowchart.	62
Figure 2.2	Strengthening Local Communities and Culture	28	Figure 5.2	Urban Expansion Framework.	62
Figure 2.3	Housing Diversity and Land Supply	29	Figure 5.3	New Dwelling Supply Capacity, 2016-2031 (Source: RPS)	63
Figure 2.4	Environmental Protection and Change Adaption	30	Figure 5.4	New Dwelling Supply and Demand (Source: RPS)	63
Figure 2.5	Building and Maintaining Infrastructure Capacity	31	Figure 5.5	Activity Centre Framework.	63
Figure 3.1	Historical Population Growth, Port Hedland, 1996 -2010 (Source - ABS 2011, AEC group, 2011)	34	Figure 5.6	Pilbara’s Port City Growth Plan Activity Centre Role and Function.	64
Figure 3.2	Composition of Total Service Population, 2010 (Source - AEC group, 2011)	34	Figure 5.7	Industrial Framework	65
Figure 3.3	Future Population Growth, 2011 - 2031 (Source - AEC group, 2011 and RPS, 2011)	35	Figure 5.8	Distribution of Recreation and Community Facilities (indicative only)	65
Figure 3.4	Gross Regional Product (\$b), 2006-7 to 2009-10 (Source - AEC group, 2011)	35	Figure 5.9	Net additional demand for community infrastructure/facilities, 2011-2031	66
Figure 3.5	Percentage of Gross Regional Product by Industry, 2009-10 (Source - AEC group, 2011)	36	Figure 5.10	Framework for Community Development and Place Making Strategies.	70
Figure 3.6	Gross Regional Product by Industry, 2031-32 (Source - AEC group, 2011)	36	Figure 5.11	Overall Growth Plan Spatial Framework	73
Figure 3.7	Gross Regional Product and employment by Industry, 2009-10 (Source - AEC group, 2011)	37	Figure 5.12	Port Hedland Coastal Vulnerability Study Map (Cardno, 2011)	77
Figure 3.8	Labour Force and Unemployment, 2004 to 2010 (Source - AEC group, 2011)	37	Figure 5.13	Port Hedland Proposed Path Network.	79
Figure 3.9	Current estimated population and dwelling requirements for 50,000 target. (Source - AEC group, RPS, 2011)	38	Figure 5.14	South Hedland Proposed Path Network.	79
Figure 3.10	Retail Floor Space Demand 2010 - 2031 (Source - AEC group, 2011)	38	Figure 5.15	Road Upgrades	80
Figure 3.11	Commercial Office Floorspace Demand, 2010 to 2031 (Source - AEC group, 2011)	39	Figure 5.16	South Hedland Proposed Bus Network.	81
Figure 3.12	Industrial Land Demand 2010 - 2031(Source - AEC group, 2011)	39	Figure 5.17	Precinct Location Plan	83
Figure 3.13	Age and Gender, Port Hedland LGA 2009 (Source - ABS 2010a)	40	Figure 5.18	Precinct 1 Dwelling Capacity Scenarios	86
Figure 3.14	Wages and Salaries, Port Hedland LGA, 2004 and 2008 (Source - ABS 2010b)	40	Figure 6.1	Plan to ‘Make it Happen’.	124
Figure 3.15	Heritage and Indigenous Registered Sites.	41			
Figure 3.16	South Hedland Native Title Agreement Area	42			
Figure 3.17	Port Hedland Coastal Vulnerability Study Model Results(Cardno, 2011)	46			
Figure 3.18	Threatened Flora and Fauna (Source - DEC, 2011)	47			
Figure 3.19	Contaminated Sites (Source - DEC, 2011)	48			