

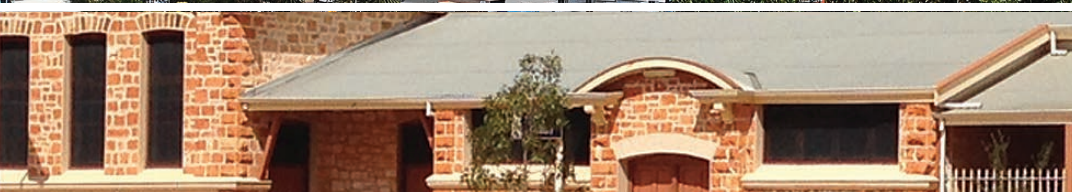


Mid West

Regional Planning and Infrastructure Framework

Part A: Regional Strategic Planning

February 2015



Department of
Planning



Western
Australian
Planning
Commission



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Mid West Regional Planning and Infrastructure Framework – Update Schedule

Update no.	Date	Details
1	16/06/2015	Section 3.3 updated to reflect revised ABS current population estimates and WA Tomorrow forecasts.

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Minister's Foreword

The importance of the Mid West to the nation and Western Australia will increase as the region develops its potential as a popular place to live, work and invest.

The region's location in central Western Australia and its proximity to key Asian markets give it an advantage in an increasingly global competitive world.

To capitalise on the Mid West's natural resources and build upon its diverse economy, it is necessary that a coordinated approach is developed for this exciting region. To achieve this, regional planning and infrastructure decisions need to be integrated. This will promote

an agreed way forward on behalf of the region's key stakeholders, including local communities, that will maximise the opportunities to attract private and public investment.

Within this context, the Mid West Regional Planning and Infrastructure Framework sets out a regional planning approach for the Mid West. It not only seeks to consider the Mid West as a whole, but also to recognise that it has three distinct components: the Batavia Coast, North Midlands and Murchison sub-regions. Together, these form a region that is diverse and interconnected. This advantage will enable the Mid West to continue to develop as a robust economy and respond to the increasing challenges that the global economy, environment and climate change will present.

I extend my congratulations to the Western Australian Planning Commission and the Department of Planning for their collaborative work on this important policy framework that builds on the characteristics and opportunities of one of the State's key economic and cultural regions.

John Day MLA
Minister for Planning





Chairperson's Foreword

Western Australia's Mid West region is shaping up for an era of significant economic growth. Sustained prosperity in the region however, will depend primarily on the development of key infrastructure and diversification of local industries.

The Mid West Regional Planning and Infrastructure Framework will be a critical driver in adjusting the focus of priority to ensure the region's economic potential is maximised through a whole-of-government approach. The Framework sets a regional overview for the Mid West to progress growth among 17 local governments across three sub-regions and a diversity of natural environments, cultural backgrounds and economic opportunities, in the most effective way.

Prepared by the Department of Planning under the guidance of the Western Australian Planning Commission, the Mid West Regional Planning and Infrastructure Framework provides leadership through a shared vision and a common way forward to deal with the development pressures that are being faced by the Mid West.

The Commission will use the Framework to guide regional strategic planning in the Mid West to assist the delivery of coordinated policy and planning solutions. Fundamentally, it will be instrumental in guiding growth in the region according to its specific strengths and constraints and, importantly, the needs of the people that live there.

The Mid West Regional Planning and Infrastructure Framework heralds a new vision for nearly one fifth of the land area of the State that is set to become a strategic region in which to live, work and invest.

A handwritten signature in black ink, appearing to read 'Eric Lumsden'.

Eric Lumsden PSM

Chairman

Western Australian Planning Commission



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1 Introduction

The Mid West region contains a diversity of natural environments, cultural backgrounds and economic opportunities, making it an attractive place to live and work for more than 55,000 people. The *Mid West Regional Planning and Infrastructure Framework* (the Framework) has been prepared for an area that covers approximately 470,000 square kilometres – almost one fifth of the land area of Western Australia (Figure 1). The Mid West comprises 17 local governments and is divided into three sub-regions: the Batavia Coast, North Midlands and the Murchison.

1.1 Vision

Within the above context the vision for the Mid West is for it to:

- be a significant region in Western Australia in which to live, work and invest;
- continue to support vibrant communities that will play a vital role in developing the region as an economic hub and protect its significant environmental attributes while enhancing liveability and promoting diverse employment opportunities; and
- develop as a strategic region in the State through the collaborative effort of its three sub-regions.

In working towards realising the above vision for the Mid West, key themes supported by the Framework include:

- a diverse Mid West region offering the diversity of ecosystems, landscapes, enterprises, people and cultures;
- a liveable Mid West region that is the place of choice for the brightest and best;
- a connected Mid West region that is as connected to the rest of the world as any other place; and
- a collaborative Mid West region enabling alignments that progress the region's sustained prosperity.

These key themes align with the *State Planning Strategy 2050* (Western Australian Planning Commission, 2014) vision for Western Australia¹.

¹ Refer to section 3.1.2 for an overview of the components that form the structure of the *State Planning Strategy 2050*.

1.2 Purpose

1.2.1 Objectives

In order to contribute to a whole-of-government approach to strong and healthy regional communities, the Framework objectives are to:

- provide the regional context for land-use planning in the Mid West;
- provide an overview of major regional issues facing the Mid West including economic, social, cultural and environmental matters;
- identify the priority actions required to enable comprehensive regional and sub-regional planning; and
- indicate regional infrastructure projects that are considered significant from the region's perspective to facilitate further economic and population growth in the Mid West.

1.2.2 Principles

The *State Planning Strategy 2050* identifies the following principles as being interrelated and applicable across all regions, local governments and communities. In this context they are considered strategic in supporting the objectives of this Framework, as well as the broader vision for the Mid West.

Community	Enable diverse, affordable, accessible and safe communities
Economy	Facilitate trade, investment, innovation, employment and community betterment
Environment	Conserve the Mid West's natural assets through sustainable development
Infrastructure	Ensure infrastructure supports development
Regional development	Build the competitive and collaborative advantages of the Mid West
Governance	Build community confidence in development processes and practices



1.3 Strategic goals

With a vision of sustained prosperity for Western Australia, the *State Planning Strategy 2050* identifies five strategic goals and a number of associated priorities for each.

Table 1 presents the Framework's strategic goals for the Mid West region, following a consistent approach to the *State Planning Strategy 2050*. Specifically, these relate to the vision for the Mid West established in the Framework; and are reinforced by the Framework objectives and their supporting principles. These strategic goals underpin the opportunities, strategies and initiatives identified in the Framework.

Table 1: Strategic goals

Strategic goal	Mid West vision themes			
	Diversity	Liveability	Connectedness	Collaboration
A globally competitive region	A diversified economic base	Attraction and retention of human and monetary capital	Global trade and high speed movements	Generating innovative ideas and enterprises
A strong and resilient Mid West region	Embracing diverse economic and social opportunities	Creating places where people want to live and work	Building strong relationships and accessibility	Enabling collaborative advantages across the Mid West and with other regions
Sustainable communities	Community specific development, responsive to diverse needs, places and contexts	Communities with attractive, liveable environments	Providing natural and built connections within and between communities	Collaborative and inclusive planning
Infrastructure planning and coordination	Supporting economic diversity, innovation and resilience	Providing contemporary, effective, resource-efficient services	Linking regional economic opportunities to the movement of people, goods and services; including connectivity with other regions	Sharing new ideas and creating new business and lifestyle opportunities
Conservation	Maintaining and conserving biodiversity, landscapes and environments	Enhances and secures natural environments and resources	Connecting ecosystems, people and resources	Realising opportunities through collaboration for environmental conservation and sustainable communities



1.4 Mid West regional planning approach

The *Mid West Regional Planning and Infrastructure Framework* was prepared under the guidance of the Mid West Regional Planning Committee, which was established by the Western Australian Planning Commission (WAPC) to focus on identifying key regional issues and priorities and undertake strategic planning in consultation with regional stakeholders. It is recognised that fostering effective partnerships between stakeholders with clearly defined roles and responsibilities is key to the future implementation of the Framework.

The Framework is a second tier document (Figure 2) preceded by the WAPC's *State Planning Strategy 2050*, and has a similar level of importance to a regional strategy under the State Planning Framework (State Planning Policy 1).

The Framework does not replace other policies that guide the WAPC's decision-making across the State. It will be taken into account by the Commission when preparing and reviewing strategies and policies that apply to the Mid West region and will inform local governments in the development or review of local planning strategies.

The Mid West Planning Approach (Figure 3) provides strategic direction for regional planning in the Mid West, within the context of the State Planning Framework. The key elements of this approach are:

- regional planning in the Mid West will be guided by the *Mid West Regional Planning and Infrastructure Framework*, and where appropriate recognise the Batavia Coast, North Midlands and Murchison sub-regions;
- to pursue comprehensive regional planning in the Mid West, a number of actions are required. With respect to this, the Framework identifies several regional planning initiatives, a number of which are already underway; and

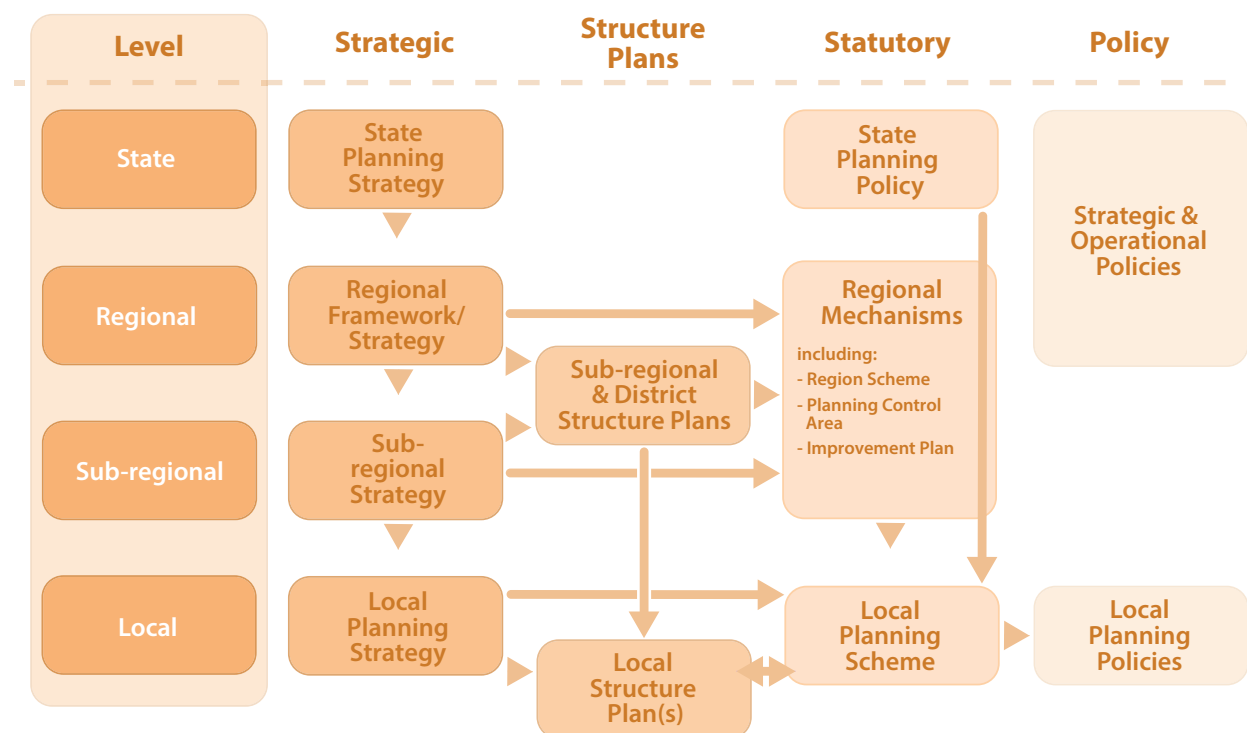


Figure 2: State Planning Framework

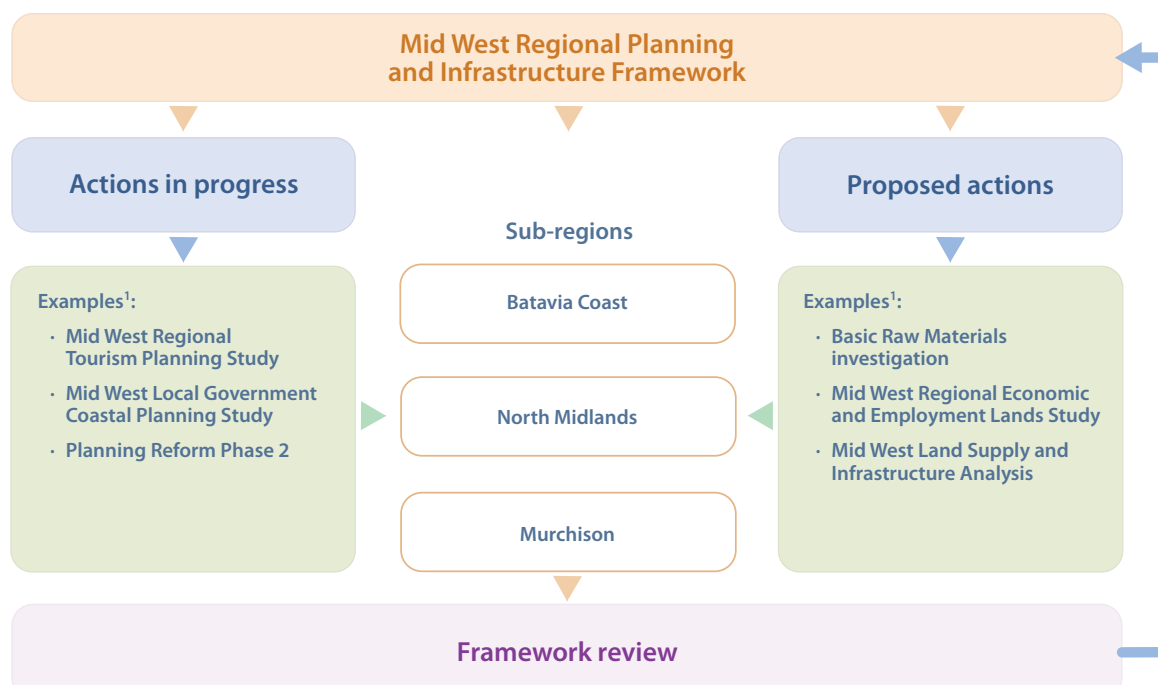
- recognition that the *Mid West Regional Planning and Infrastructure Framework* is a living document that will need to be reviewed to maintain relevance.

Previous planning strategies applicable to the Mid West region include the *Geraldton Region Plan* prepared in 1999, which considers about 20 per cent of the Mid West region's area; and an infrastructure analysis prepared for the region in 2008, which identifies critical infrastructure issues that may arise as a result of direct and indirect impacts of resource industry growth in the region. Both the *Geraldton Region Plan* (Western Australian Planning Commission, 1999) and *Mid-West Infrastructure Analysis* (Western Australian Planning Commission, 2008) were considered when preparing the *Mid West Regional Planning and Infrastructure Framework*.

1.5 State strategic alignment

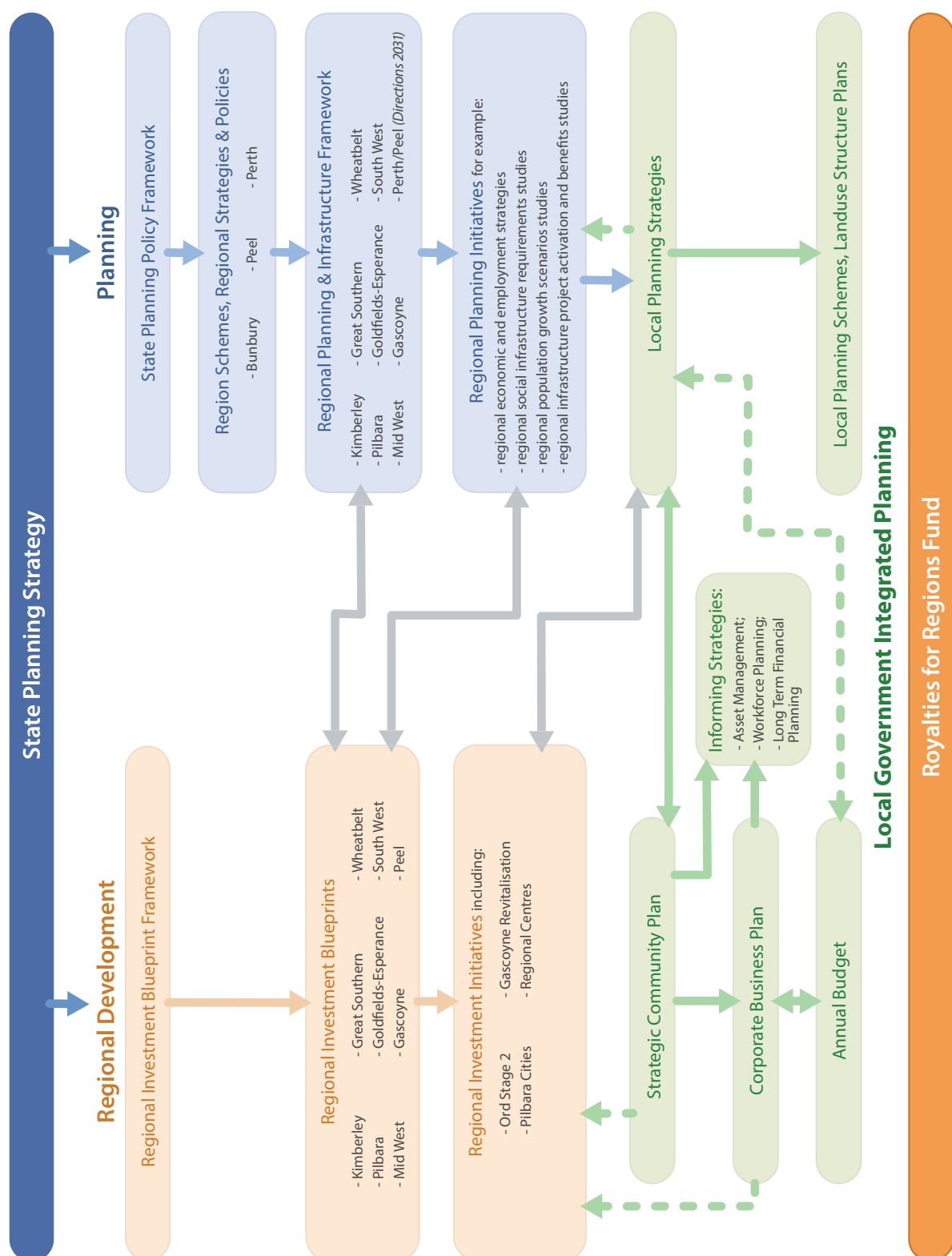
Figure 4 illustrates an integrated State-level strategic approach to planning and regional development, in the context of the State Planning Strategy. Significantly, this approach recognises the complementary nature of a number of strategic activities and initiatives occurring across various State Government portfolios, particularly planning, regional development and local government. As such, it encourages interaction between relevant State Government agencies and local government; and reinforces the importance of a whole-of-government approach to regional planning and development.

Within this context, implementation of this Framework and consideration of regional planning issues will require decision making at a State and regional level. The regional planning governance framework for this is outlined in Figure 5. This will be used to guide important decision making on the direction for regional planning issues and may also be used to seek funding to allow regional planning initiatives, such as those identified in this Framework, to be implemented.



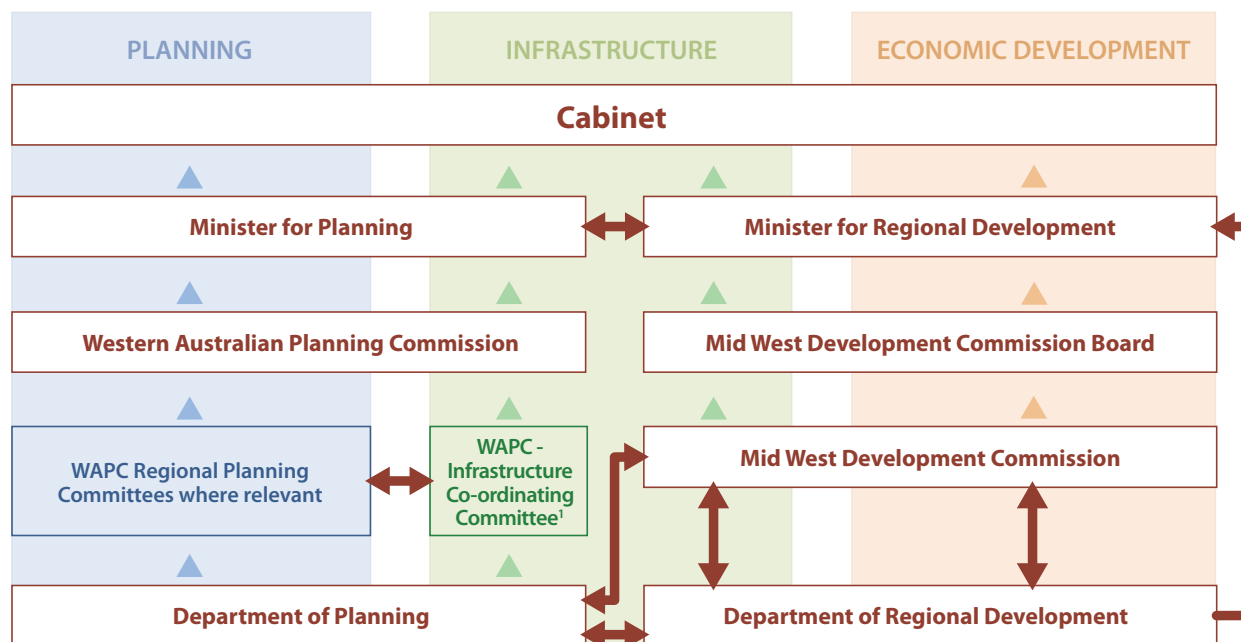
¹ for complete lists of actions, refer to Table 7 for Mid West regional planning initiatives.

Figure 3: Mid West Planning Approach



(source: Western Australian Planning Commission, 2014)

Figure 4: State planning and development context



¹ The WAPC Infrastructure Coordinating Committee membership is comprised of the Chair of the WAPC and representatives from the local government sector; professional sector; Department of Commerce; Department of Education; Department of Education Services; Department of Finance; Department of Health; Department of Housing; Department of Mines and Petroleum; Department of Planning; Department of Premier and Cabinet; Department of Regional Development; Department of State Development; Department of Transport; Department of Treasury; Department of Water; LandCorp; Office of Environmental Protection Authority; Public Utilities Office; and the Water Corporation.

Figure 5: Governance framework

2 Key drivers

Unless otherwise noted, the majority of the statistical data in this chapter is by the Department of Regional Development (DRD). For further information with respect to this and/or the latest available figures, please refer to the DRD's Regional Snapshot series at www.drd.wa.gov.au/publications/Pages/Statistics.aspx.

2.1 Economy and employment

The Mid West region has a diverse economy built around mining, agriculture, fishing, tourism, retail and manufacturing. Mining is the region's most valuable sector (Figure 6). From a geographic perspective, the eastern areas of the region are predominantly focused on mining, whereas the western areas generally tend to be more economically diverse.

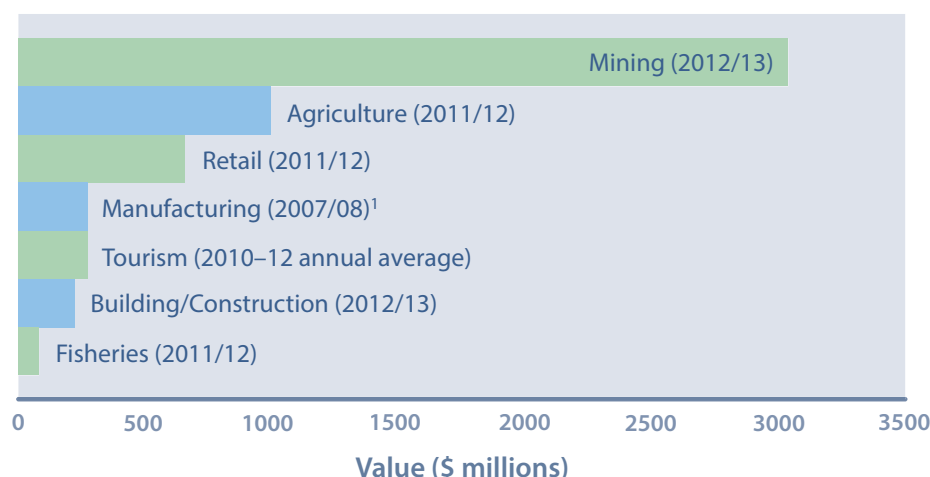
The value of the Mid West gross regional product was estimated at \$6 billion in the 2012/13 financial year, which represents 2.4 per cent of the state total. (Department of Regional Development, 2014).

For the 2013 December quarter, the labour force of the Mid West region was 33,477 persons, of which 31,381 (93.7 per cent) were employed and 2,096 (6.3 per cent) were unemployed (Department of Employment, 2014).

Some sectors of the economy, including service sectors and small-medium enterprises, occur across all major industry sectors. For example, in addition to agricultural production, the broad agriculture industry sector is considered to include of agricultural support services (such as consulting, agronomic and merchandise agents) as well as the supply and development of new farming technologies (Department of Regional Development and Lands, 2011).

The region's economy is the main driver that will influence future growth, the rate at which it occurs and the manner for which it is planned. In order to gain the greatest benefit for the region while minimising any adverse impacts, the planning process should seek to engage affected stakeholders and ideally commence as early as possible.

Growth in the region's economy will invariably require additional workers and particular skills for certain industry sectors. Skilling WA (Department of



(source: Department of Regional Development, 2014)

¹ latest data available from DRD

Figure 6: Value of industry activities

Training and Workforce Development, 2010) provides a workforce development plan for Western Australia to build, attract and retain a skilled workforce; and to ensure that the State has the capacity and capability for continued economic success. It has a particular focus on growing the workforce through increased participation, targeted skilled migration and attracting and retaining a skilled labour force in the State's regions. In addition, a draft regional workforce development plan has been developed for the Mid West which aims to build, attract and retain a skilled workforce and meet the economic needs of the region (Department of Training and Workforce Development, 2012); and further workforce development planning for the region forms an initiative of this Framework identified in Table 7.

2.1.1 Mining

Mining is the Mid West region's most valuable sector, contributing \$3 billion to the region's gross value of industries in 2012/13 (Department of Regional Development, 2014) and providing 14 per cent of its jobs. A range of commodities are mined in the Mid West region, which comprise of at least 30 mineral types including gold, iron ore, copper, lead, zinc, mineral sands, chromite, nickel, cobalt, silver, gypsum, lime sands and garnet. Natural gas and oil reserves also make important contributions to the region's economy.

Iron ore mining is set to become the major driver of the region's resource sector, which now represents about 35 per cent of all mining and petroleum production in the region (Department of Mines and Petroleum, 2014), and includes existing and proposed projects such as those at Jack Hills, Weld Range, Karara, Koolanooka and Extension Hill.

Substantial magnetite and hematite direct shipping ore has been identified in the Mid West region and there are a large number of projects at different stages of development, from exploration through to established production and shipping. The proposed mining and related infrastructure projects, including port expansions at Geraldton and creation of a new port at Oakajee, will require major investment in infrastructure provision including rail networks, power, water and waste.

Early development of the Mid West iron ore industry is already generating an expansion of regional businesses and industrial activities; including growth of the inbound transportation of goods, equipment

and people for the construction of current projects and operation of existing mines. Further development of the industry will continue to boost the regional economy, enhancing prospects for local jobs and for business.

The Mid West region is Western Australia's second most productive gold-producing area after the Eastern Goldfields. After iron ore, gold is the region's most valuable commodity, being worth \$913 million in 2013 (Department of Mines and Petroleum, 2014). Gold potential in the greenstone belts of the Yilgarn Craton still remains high with opportunities for new discoveries.

With the northern extents of the Perth Basin being situated in coastal areas of the region as far north as Northampton along with associated offshore areas, oil and gas exploration in the region has been underway in the region since the 1950s. Operational gas fields located in the region include Dongara, Woodada and Beharra Springs. There have been numerous commercial hydrocarbon fields discovered in the offshore and coastal area south of Geraldton; and there are many untested prospects in the region, including those that contain shale gas resources. The logistics and economics of potential oil and gas discoveries are positive due to the Parmelia and Dampier-to-Bunbury natural gas pipelines, the proximity to the Perth region and the deregulated Western Australian gas markets. While there may be economic returns from such resources, environmental impacts need to be carefully considered.

A ready supply of basic raw materials is important for future urban and industrial development. Potential sources of basic raw materials include sand, gravel and limesand deposits. In areas of rapid growth, land-use conflicts can arise around basic raw material extraction sites; and in these circumstances planning protection may be required to ensure a cost-effective supply of these strategic materials.

Limesand deposits within the dune systems along parts of the Batavia Coast are a valuable resource for the region's agricultural industry. This is particularly so as soil acidification is a significant threat to future farm productivity and the application of limesand is the only practical method to combat this issue. From this perspective, it is important that conflict between existing and potential limesand quarries and future urban expansion is considered through sub-regional and local planning processes.

In recent times there has been an increasing reliance on fly-in fly-out (transient) workforces to service resource projects in Western Australia; including a number of current and proposed projects in the Mid West. Fly-in fly-out workforces help accommodate constantly changing labour requirements, particularly for specialist skills and during the construction stages of projects. However, as those employment opportunities associated with the ongoing operations of resource projects are generally more long-term in nature, it would be preferable from a community building perspective to increase the amount of mine workers living in the region.

2.1.2 Industrial development

The Mid West contains almost 4,900 hectares of industrial zoned land, with almost half of this being the proposed Oakajee Port and Industrial Estate. Oakajee Industrial Estate comprises multiple lots largely under the ownership of LandCorp. It has the potential to accommodate value-adding downstream processing of local minerals and to facilitate use by strategic heavy industry.

The proposed Oakajee Industrial Estate includes:

- a strategic core industrial area (1,134 hectares);
- two general/support industry areas (190 hectares);
- a coastal/port uses zone (1,002 hectares); and
- an industrial buffer (4,071 hectares)

The relevant land is zoned for industrial use under the Shire of Chapman Valley local planning scheme and its development will be guided by the Oakajee Industrial Estate Structure Plan. The Framework recognises a number of regional infrastructure projects that will support the development of the Oakajee Industrial Estate.

Approximately five kilometres south-east of Geraldton lies the Narngulu industrial area. The Oakajee Industrial Estate is to be linked to Geraldton Port and Narngulu industrial area via the proposed Oakajee Narngulu Infrastructure Corridor – a 34 kilometre transport and service corridor that includes provision for road, rail and services. The *Narngulu Industrial Area Strategic Land Use Directions* (Western Australian Planning Commission, 2010) document provides direction and future planning and development for the Narngulu industrial area.

In addition, it is important that townsites throughout the Mid West have sufficient industrial land to cater for ancillary service industries that support primary industries, including mining and agriculture. This issue is most appropriately dealt with through local planning processes, in particular local planning strategies.

2.1.3 Agriculture

Agriculture is a significant industry for the Mid West, with production being worth an estimated \$1 billion in 2011/12 (Department of Regional Development, 2014). In addition to forestry and fishing, agriculture employs 11 per cent of the region's workforce. The majority of the value of the Mid West's agricultural production comes from the North Midlands and Batavia Coast sub-regions, which are dominated by broadacre agriculture. However, pastoralism is the Mid West's most widespread land use, with the pastoral zone covering approximately 92 per cent of the region, including the entire Murchison sub-region.

Cereal, particularly wheat, and legume crops are the Mid West's most valuable agricultural commodity, accounting for 88 per cent of total agricultural production in 2011/12 (Department of Regional Development, 2014). Agricultural production in the region also includes livestock disposals and products and some horticulture. To further increase productivity, effort is being made to investigate more robust production systems and better decision-making tools for farmers. It is also important that pastoral leaseholders consider diversification into other income sources to ensure long-term viability.

Traditional agricultural productivity within the region is potentially threatened by weather variability (particularly in the event that forecast changes in climate are realised), fragmentation of the rural land base and the coastal shift of the region's population. The identification of high quality agricultural land within the Mid West would provide a basis for considering such areas through land-use planning. Mitigating conflicting land uses in the proximity of the Mid West's valuable agricultural areas would assist to maximise the value of agriculture to the region over the longer term.



2.1.4 Fishing and aquaculture

Fishing

The Mid West has the highest value fishing industry in Western Australia, accounting for 33.4 per cent of the State's total catch in 2011/12. By far the most valuable product is western rock lobster, with other significant fisheries including prawns, scallops, abalone and finfish. The fishing industry in the Mid West in 2011/12 was worth an estimated \$88.7 million, with the lobster catch alone worth \$85 million. (Department of Regional Development, 2014)

At a regional level, the fishing industry is relatively small in terms of overall employment. Despite this, it is a significant employer within the Mid West coastal communities where it exists. In addition, there are a number of associated specialised and service industries that are locally based, which generate further employment in the region.

The western rock lobster industry, like agriculture, is going through significant structural adjustment. Changes being implemented will work towards ensuring sustainability of the fishery itself while also supporting fish viability.

Aquaculture

At present, aquaculture is a comparatively minor industry in the Mid West, worth about \$2.2 million in 2011/12; however, it has seen significant expansion over recent years and the region continues to offer opportunities for aquaculture to develop further. Currently, commercial aquaculture production in the Mid West includes finfish, marron, brine-shrimp and pearls. (Department of Regional Development, 2014)

2.1.5 Tourism

The Mid West is a popular tourist destination and visitors to the region make an important contribution to the local economy. The national parks and other natural attractions of the Mid West and adjoining regions are key drivers for tourism. Global economic factors notably influence the industry's prosperity in the region. According to Tourism WA, an average of 415,500 people visited the region annually in the years 2010-12, with about 11 per cent being international visitors. The total annual value of tourism expenditure in the Mid West was estimated to be \$281.6 million over the same period. (Department of Regional Development, 2014)

With population growth expected to place pressure on the region's coastal areas and with overall improved accessibility for tourists to the region (intrastate, interstate and international), it is imperative that potential tourism opportunities are developed in a strategic and sustainable manner. For example, the predicted increase in cruise shipping activity in Western Australia over the coming decade may present opportunities to further diversify the tourism sector in the Mid West. In particular, Geraldton has been identified as a key cruise destination in the *Western Australian Cruise Shipping Strategic Plan 2012-2020* (Tourism WA, 2012).

Priorities for tourism product and infrastructure development in the Mid West are identified in *Australia's Coral Coast Tourism Development Priorities* (Tourism WA, 2010) for all local governments in the Batavia Coast sub-region and the shires of Carnamah, Coorow and Mingenew and Three Springs; and in *Australia's Golden Outback Tourism Development Priorities* (Tourism WA, 2010) for other areas of the region. Analysis has been conducted at a sub-regional level, which includes an examination of each region's strengths and unique selling points. It also includes an analysis of the current status of, and potential gaps in access, accommodation, attractions, activities and amenities.

Regional tourism initiatives and priorities for the Mid West are recognised in this Framework. These are considered to be valuable in facilitating further tourism opportunities in the region.

2.1.6 Retail and manufacturing

Having grown at an average annual rate of 5.2 per cent in the previous decade, in 2011/12 the Mid West's retail turnover was \$660 million (Department of Regional Development, 2014). Manufacturing was worth \$286 million to the region in 2007/08; with the region's manufacturing establishments predominantly focused on servicing the needs of the agricultural, mining and fishing sectors. Geraldton, being the Mid West's largest population and service hub, is where the majority of the region's retail trade occurs and manufacturing industries exist. (Department of Regional Development and Lands, 2011)



There is significant opportunity for an expanded manufacturing sector within the Mid West to support the development of the region's resources sector and other emerging industries. Expansion of the Mid West's manufacturing capacity may also present opportunities to service the mining industry in other regions, such as the Pilbara.

The challenge will be to determine the multiplier effect of retail and manufacturing within a Mid West regional context.

2.1.7 Knowledge economy

The knowledge economy is seen as an emerging sector of the Mid West economic base. This is best evidenced through the establishment of the Murchison Radio-astronomy Observatory, which is operated by the Commonwealth Scientific and Industrial Research Organisation and houses international radio astronomy projects including the Australian Square Kilometre Array Pathfinder and Square Kilometre Array (SKA) projects; as well as through the establishment of the Separation Point Marine Precinct and the Geraldton Universities Centre.

Australia, together with New Zealand, will continue to have a significant role in the development of the SKA as it has been selected alongside South Africa as a dual-host site for the project, which will form the world's largest radio-astronomy telescope. The core of the SKA activity in Australia will occur in the Mid West region at the Murchison Radio-astronomy observatory. (CSIRO, 2012)

The establishment of the Geraldton Airport Technology Park provides a significant opportunity to grow the Mid West's knowledge economy. The further development of energy technologies and innovative solutions to natural resource management also present additional opportunities.

Appropriate regional infrastructure planning and investment will be instrumental in developing and realising further opportunities for expanding the knowledge economy in the Mid West. For example, fibre-optic connections, including those being developed as part of the National Broadband Network, will provide infrastructure critical to supporting the SKA by enabling the high-speed transfer of data between the Murchison Radio-astronomy Observatory and data-centres in Geraldton and Perth. Additionally,

the continued development of high-level education facilities within the region, such as the Geraldton Universities Centre and Durack Institute of Technology, will assist in enabling the growth of the knowledge economy in the Mid West.

The Department of Commerce has proposed to undertake a regional digital economy strategy for the Mid West, which will identify opportunities associated with the delivery of the National Broadband Network. This may provide further strategic context and direction in relation to the potential of the Mid West's knowledge economy.

2.1.8 Challenges

Economy and employment challenges:

- EE1** Encouraging Mid West and North West mine workers to reside in the region.
- EE2** Attracting and retaining staff in the region.
- EE3** Enabling economic growth of the region while managing the region's natural assets for future generations.
- EE4** Protecting limesand deposits needed to sustain agricultural productivity and combat soil acidification.
- EE5** Providing essential and strategic infrastructure to support resource projects in the Mid West in a timely manner.
- EE6** Establishing an integrated transport network to utilise capacity of Oakajee Port and attract further investment in new resource and downstream processing projects.
- EE7** The uncertainty of the impacts of the timing, scale activity and population growth related to proposed resource projects means that the demonstrated need for government investment is a contentious issue.
- EE8** Investigating best-value use, recycling and efficiency options for water management in the Mid West to assist in delivering sustainable quantities and qualities of water to users.

- EE9** Investigating opportunities to enable agriculture and fishery sectors to meet the potential challenges presented by forecast changes in climate, particularly over the longer term.
- EE10** Determining the appropriate level of infrastructure and service delivery for varying regional populations.
- EE11** Investigating and managing the Mid West's supply of basic raw materials.
- EE12** Identifying and protecting significant agricultural land.
- EE13** Allowing lease-holders on pastoral lands to diversify into other viable uses, and to minimise approval timeframes.
- EE14** The strategic and sustainable development of tourism and recreation infrastructure and services.
- EE15** Determining the need for additional tourism and recreation sites to cater for an expected increase in demand.
- EE16** Capitalising on and developing the emerging knowledge economy.
- EE17** Determining the commercial multiplier effect within a Mid West regional context.
- EE18** Making provision for additional targeted training, up-skilling of existing workers, development and engagement of under-employed sectors (e.g. Indigenous, youth, women, older age group); and encouraging a significant migration intake to facilitate a substantial growth in resident population.
- EE19** Managing changes to fishing regulations to mitigate the impact on small coastal communities of commercial fisheries.

2.2 Transport and infrastructure

Infrastructure is essential in supporting all economic sectors of the Mid West, in addition to its general population. The region's infrastructure services a range of different users who have varying requirements and demands; a consequence of which is that competing demands for infrastructure can occur among users. For example, the increasing demands of servicing the mining industry impacts the region's road and rail networks, which invariably affects the level of service for other users including those involved with other economic sectors including agriculture and tourism, as well as general freight and passenger traffic.

From an economic perspective, inter-regional infrastructure links are vital to ensure strong connectivity between the Mid West and other markets; and to allow for the efficient movement of goods and people into and out of the region. The Mid West's strategic regional and inter-regional connections have been considered in the *Western Australian Regional Freight Transport Network Plan* (Department of Transport, 2013); and in addition, the Portlink Inland Freight Corridor concept will investigate the potential for strengthening the State freight network, including road, rail and port infrastructure, between the Mid West, Goldfields–Esperance and Pilbara regions.

Coordinated infrastructure corridors, which can potentially accommodate multiple types of transport and utility services infrastructure, are considered to be an efficient means of delivering the land requirements for future regional and inter-regional infrastructure, particularly in areas where land is highly constrained. As such, infrastructure corridors should ideally be identified, planned for and secured well in advance of the additional regional infrastructure being required. A number of potential infrastructure corridors in the Mid West region, based on the alignment of existing and proposed infrastructure, are indicated on the Framework map (Figure 11).

2.2.1 Road

The Mid West is serviced by an extensive road network that provides critical linkages within and beyond the region. Roads in the Mid West region carry a large number of freight vehicles, with these outnumbering cars in some instances. It is expected that in the short-term, the volume of freight vehicles on the road is

likely to increase as there will be a need to carry out extensive construction work on mine sites and other infrastructure projects.

It is expected that most transport pressure in the Mid West will be concentrated around the Greater Geraldton area. The City of Greater Geraldton in partnership with the Mid West Development Commission and Main Roads WA are undertaking transport modelling to assist in future planning regarding this issue.

The Oakajee Narngulu Infrastructure Corridor study includes the planning for a services corridor for road, rail and utility services from the existing Narngulu industrial area to the proposed Oakajee Port. This services corridor would also serve as a future route for a Geraldton outer bypass road.

Road safety is an issue for regional areas and the State Government has a road safety strategy for 2008-2020, *Towards Zero*. It is important that regional road planning takes into account these matters.

2.2.2 Rail

The rail network in the Mid West is operated by Brookfield Rail and Aurizon. The rail network of south-western Australia, which includes the Mid West, comprises a combination of standard, narrow and dual gauge railway. Rail haulage in the Mid West region is exclusively made up of bulk products, such as coal, grain, mineral sands and iron ore. It is important to consolidate the rail network within the Mid West to link the Geraldton Port, Narngulu industrial estate and the proposed Oakajee Port and industrial estate with mines located to the east, north and south. This is important for not only assisting in getting products to market, but also to reduce the volume of freight traffic on the Mid West road network. Development of a strategic rail network in the Mid West would require reviews identifying existing and required rail infrastructure.

2.2.3 Ports

Geraldton Port is currently the Mid West's only regional port facility; however, a significant deepwater facility is proposed at Oakajee, about 20 kilometres north of Geraldton.

Geraldton Port is an important piece of regional infrastructure and has been instrumental in enabling the development of the region. The Mid West's export based industries are heavily reliant on the port, with exports comprising over 90 per cent its total throughput volume. Historically Geraldton Port has been Australia's second largest grain export port; however, today more than half the port's exports are generated from minerals and iron ore. Despite considerable constraints, it is expected that Geraldton Port will continue to play a significant role in facilitating the region's economic expansion; and eventually complement proposed port operations at Oakajee.

The proposed Oakajee Port is part of the Oakajee Mid West Development Project that proposes to establish an integrated deepwater port with supporting rail infrastructure and an industrial estate to facilitate the development of the resources sector in the Mid West. Once developed, the Oakajee Port is expected to provide much of the additional capacity to accommodate these requirements.

Furthermore, capacity at Geraldton Port may be increased through greater storage capacity and more efficient incoming transport movements. It is also acknowledged that to fully utilise the capacity of both facilities, additional supporting infrastructure will be required.

Consideration will need to be given to determine what will be shipped through Geraldton and Oakajee in the future. This is likely to occur once construction of the Oakajee Port has received the relevant approvals.

The State Government has announced a proposed reform to the governance structure of ports in Western Australia. This is expected to result in a consolidation of existing regional port authorities and smaller ports controlled by the Department of Transport. The future Mid West Ports Authority, which currently comprises the port of Geraldton, is proposed to ultimately include the proposed Oakajee port in the Mid West, along with the Cape Cuvier and Useless Loop port operations in the Gascoyne region.

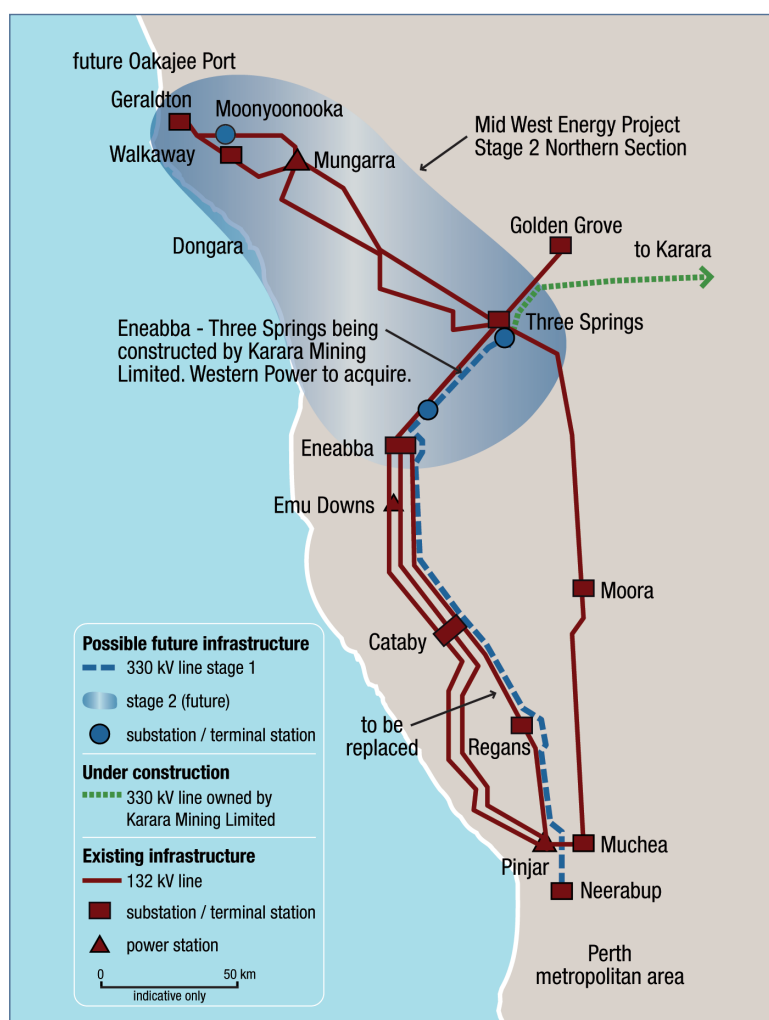
2.2.4 Energy

Electricity transmission and supply in the Mid West is predominantly provided via the South West Interconnected System (SWIS) grid, which services most customers in the Batavia Coast and North Midlands

sub-regions. Areas that are isolated from the SWIS grid, including settlements in the Murchison sub-region, typically rely on locally generated electricity.

At present, the primary SWIS transmission infrastructure in the Mid West is comprised of dual 132 kilovolt lines, which connect the region with the State's main power generators including the Muja and Kwinana power stations. Other SWIS infrastructure in the region includes 132 kV zone substations at Geraldton, Chapman Valley, Golden Grove, Three Springs and Eneabba; and a comprehensive network of 33 kV

distribution lines that service virtually all settlements in the Batavia Coast and North Midlands sub-regions and their respective hinterlands. In particular, the transmission capacity of the SWIS grid in the Mid West is currently considered to be severely constrained. This limits the opportunity to develop new power generation sources within the Mid West and impacts on the ability to service the region.



(source: Western Power, 2010)

Figure 7: Proposed alignment for the Mid West Energy Project

The increase in demand for energy in the Mid West is anticipated to be substantial. This is expected to be driven largely by proposed resource projects, particularly those involving energy intensive magnetite processing. (Chamber of Minerals and Energy, 2011)

To alleviate systems constraints, the State Government has approved funding for the first stage of a new 330 kV transmission line. Stage one of the Mid West Energy Project is from Neerabup to Karara mine site (via Eneabba and Three Springs) (Figure 7). The section between Eneabba and Karara mine site has already been constructed by Karara Mining Ltd and is operated by Western Power under a lease agreement; and construction of the section between Neerabup and Eneabba is currently underway. The second stage, which is proposed to deliver an improved transmission network through to Geraldton, is subject to further funding.

The Dampier to Bunbury Natural Gas Pipeline traverses the region and has a lateral to Mount Magnet; and some southern parts of the Mid West are also serviced by the Parmelia Pipeline. Additionally, the Goldfields Gas Pipeline also passes through the region. These pipelines have some spare capacity, which further upgrades could boost considerably. New laterals could potentially be constructed to service the proposed Oakajee industrial estate and major iron ore projects. There are several known petroleum fields both onshore and near shore that could provide gas to support the energy requirements of the proposed developments. It is also possible that a gas-fired power station with a dedicated supply could be constructed near a gas field or major development.

Other significant gas infrastructure in the region includes the Mondarra Gas Storage Facility near Dongara, which has access to the Dampier to Bunbury Natural Gas Pipeline; and other infrastructure associated with resource developments, such as Red Gully onshore gas and condensate production facility and the Xris Area gas gathering system and processing facility.

The Mid West region has access to abundant energy resources such as solar, wind and geothermal, which also have the benefit of potentially reducing carbon emissions. A current example of this is the Alinta Wind Farm at Walkaway 25 kilometres south east of Geraldton (completed in 2005) produces power that is exported to a 132 kV transmission line which crosses the wind farm site. Consisting of 54 turbines and producing 90

megawatts of power, this is one of the largest wind farms in the State (Department of Local Government and Regional Development, 2006).

The geothermal energy potential of the Mid West region is considerable, however, there has been very little exploration undertaken and so the actual reserves are unquantified at this stage. The market and transmission infrastructure availability will be essential for its development.

Maximising the potential of the Mid West's energy assets requires sufficient transmission capacity to access the significant energy markets located in the south-west of the state, which includes the Perth Metropolitan area. The proposed expansion of the 330 kV transmission line into the region may further develop this industry.

2.2.5 Aviation

The region's principal airport is located approximately 12 kilometres east of the Geraldton town site and currently services around 130,000 passengers per year. Kalbarri, Meekatharra and Mount Magnet also have regional airports that accommodate regular flights to and from Perth. Other airports within the Mid West include Dongara, Morawa, Perenjori, Murchison, Yalgoo, Cue and Wiluna.

A master plan currently under development for Geraldton Airport further recognises the facility's regional significance and role as the gateway to the Mid West. A number of upgrades are proposed for Geraldton Airport to accommodate an anticipated growth in passenger numbers and to facilitate expanded air services to the region, including interstate and/or international services. Other airports may also require upgrades to accommodate fly-in fly-out activity.

State Government support for regional airports through the Department of Transport's Regional Airports Development Scheme (RADS) continues to foster incremental improvements to the regional aviation infrastructure. The Department of Transport is also developing a State Aviation Strategy, which is identified as an initiative of this Framework in Table 7.



2.2.6 Water infrastructure

Water

The Mid West water supply is drawn from groundwater sources with Water Corporation operating water schemes at Geraldton, Kalbarri, Northampton, Horrocks, Nabawa, Yuna, Mullewa, Yalgoo, Mt Magnet, Cue, Meekatharra, Wiluna, Sandstone, Mingenew, Morawa, Perenjori, Carnamah, Coorow, Three Springs, Eneabba, Leeman, Dongara–Denison and Green Head (Department of Local Government and Regional Development, 2006). Broadly, water use is assessed under the *Rights in Water and Irrigation Act 1914* and licences and permits are issued under the Act. Consideration of environmental water requirements may further influence decisions on water allocations.

Mining operations, particularly magnetite ore mining, require security and significant quantities of quality water for processing. A recent escalation in demand for water in the Mid West correlates with the continued growth of the region's resources sector (CME, 2011). Continued high growth in demand for water may exacerbate the situation of competing demands for limited water resources.

The availability of water to support new population growth and industry, business and environmental needs is a major issue for future development and land use within the region. The Department of Water intends to develop a regional water supply strategy in order to review current and project water demand and examine potential water supply options for the Mid West. Other plans provide further guidance for the future management of water resources within the region, including groundwater allocation plans such as those for the Jurien and Arrowsmith groundwater areas.

Wastewater

A number of reticulated wastewater schemes and treatment facilities operate throughout the Mid West region. Anticipated growth in demand for these facilities should be monitored and incorporated into planning for facility upgrades. Notably, the Water Corporation has recently undertaken a review of the operating requirements of its wastewater treatment facilities in Geraldton. Buffer requirements for wastewater treatment sites have implications for land-use planning at a local level.

Stormwater

The quantity and quality of stormwater entering the water resources of the Mid West is also a management issue and requires careful consideration. In this regard, it is important that urban water management issues are taken into account when considering planning for new residential, rural-residential, commercial and industrial areas. *Better Urban Water Management* (Western Australian Planning Commission, 2008) provides guidance on such matters.

2.2.7 Public transport

At present, Geraldton is the only centre in the Mid West with regular timetabled public transport services; and is currently serviced by eight bus routes operated by Geraldton Bus Services under arrangement from the Public Transport Authority. TransWA also operates a number of scheduled coach services within the Mid West, which provide important public transport connections between towns in the region and beyond including to Perth and other towns along service routes. In addition, numerous school bus services operate within the Mid West, providing an important means for children to get to and from school, particularly those living in rural areas.

Provision of an adequate public transport system in a largely car-dominated region is a challenge. Additional public transport services in the Mid West region may be introduced if demand levels are sufficient to warrant their provision. This will invariably be influenced by future population levels and densities; and is generally considered to be a sub-regional issue.

2.2.8 Social infrastructure and services

It is important that all communities have access to adequate social infrastructure and services, including essential services such as educational and medical facilities. The provision of such infrastructure and services makes a significant contribution to the liveability and attractiveness of a local community, which can play an important role in attracting and retaining staff in the region. The type of social infrastructure and services varies from regional to local. It is important that these are identified through appropriate mechanisms. The Mid West Development Commission, through the Mid West Investment



Plan, is working with Mid West local governments and other key stakeholders to identify local and regional infrastructure priorities with a focus on social infrastructure and services.

Education

Government schools and facilities are generally located within Mid West towns and communities, with schooling generally available up to Year 12. Additionally, private schooling is available in several of the region's larger towns. At some Mid West schools, however, years 8 to 12 are delivered through the School of Isolated and Distance Education, while in smaller towns local schooling may only be available at a primary school level. Residential colleges, such as those at Geraldton and Morawa, play an important role in the supporting the Mid West's education system by providing options for secondary students, usually those from remote locations, to be schooled within the region. Education services to more remote areas of the Mid West are delivered by the Meekatharra School of the Air based at Geraldton.

Specialised education and training in agriculture and related industries is available at the WA College of Agriculture at Morawa for students equivalent to years 10 to 12. Tertiary education is offered through the Geraldton Universities Centre and Durack Institute of Technology, which has its main campus at Geraldton.

In particular, education plays an important role in building the capacity of communities and in this regard is considered to be inherently linked to the economic and social development of the region.

Health

The Geraldton Health Campus offers a regional hospital facility that services the entire Mid West. The regional public hospital at Geraldton currently contains 93 beds (27 of which are day beds), while a 60-bed private hospital is located nearby. In combination, these facilities provide a broad range of secondary and specialist health services as well as region-based community health, mental health and public health facilities and programs. Several smaller district hospitals are located throughout the Mid West region, providing a range of health services to more localised populations. In addition, nursing posts operate at a number of other locations.

The Royal Flying Doctor Service (RFDS) is also of great importance to the Mid West due to the vast distances between facilities. Within the region, the RFDS has aircraft and staff permanently based at Meekatharra.

The Department of Health has commenced the Southern Inland Health Initiative to dramatically improve medical resources and 24 hour emergency coverage within the Southern Inland catchment area, which includes areas within the Mid West. This regional initiative, which is recognised by this Framework in Table 7, is funded by Royalties for Regions and includes six streams:

- District Medical Workforce Investment Program;
- District Hospital and Health Services Investment Program;
- Primary Health Care Demonstration Program;
- Telehealth Investment;
- Residential Aged Care and Dementia Investment Program; and
- Small Hospital and Nursing Post Refurbishment Program.

Further information can be found at www.health.wa.gov.au/southerninland.

Emergency and corrective services

There are currently 16 police stations located throughout the Mid West region. The region is predominantly within the Mid West-Gascoyne police district with the exception of the Shire of Wiluna, which is in the Goldfields–Esperance police district. The Geraldton Police Station is the district police hub for the Mid West-Gascoyne, whereas other stations are patrolling stations only. There are a number of court facilities across the Mid West, with the region's main courthouse being located in Geraldton. Greenough Regional Prison near Geraldton is the Mid West's sole prison facility.

The Department of Fire and Emergency Services (DFES) oversee a range of emergency service providers in the Mid West, including:

- Country Fire and Rescue Services based at Geraldton;
- Volunteer Fire and Rescue Service units at Cue, Dongara, Geraldton, Kalbarri, Meekatharra, Mount Magnet and Mullewa;

- a number of volunteer bush fire brigades operating throughout the region;
- Volunteer Fire Service units at Northampton and Morawa;
- State Emergency Service units based at Eneabba, Geraldton, Kalbarri, Meekatharra and Morawa; and
- Volunteer Sea Rescue units at Geraldton, Kalbarri, Leeman and Port Denison.

Ambulance services are delivered by St John Ambulance WA and ambulance sub-centres are located throughout the Mid West region.

Culture and arts

The Department of Culture and the Arts propose to develop a regional cultural and arts action plan for the Mid West region, which is identified in Table 7 as a Framework initiative. Planning for cultural infrastructure is further supported by their existing policy direction (Department of Culture and the Arts, 2012).

Regional sport and recreation

Sport and recreation is often considered to be the lifeblood for many communities, promoting social and community cohesion, healthier lifestyles and providing economic advantages. There are a number of quality sporting and recreational facilities available within the Mid West region, including substantial facilities in Geraldton that are of regional significance.

Maintenance and upgrading of sporting facilities are often considered to be essential for many regional communities, helping to ensure that adequate opportunities are provided for both individuals and sporting organisations.

There is a range of resourcing and training initiatives provided by the Department of Sport and Recreation, State sporting associations and other organisations to support the upgrading or maintenance of regional sporting facilities. The Royalties for Regions Grants Scheme can also provide funding for upgrading or new facilities.

2.2.9 Telecommunications

Being a vast and isolated region, telecommunications infrastructure performs a vital role in keeping the Mid West region well-connected. A broad range of telecommunications services exists in the Mid

West; with the region's settlements generally having the greatest level of accessibility to networks and services. As large parts of the region are remote, telecommunications services in these areas can be limited or otherwise reliant on delivery through satellite networks.

New and emerging telecommunications technologies may create opportunities for regional economic investment as well as innovation in service delivery, resulting in various economic and social benefits. For example, new and emerging technologies may create opportunities to increase or improve service delivery to remote locations for some services such as health and education. Projects currently proposed to deliver significant improvements to the standard of telecommunications infrastructure in the region include the:

- Regional Mobile Communications Project to increase coverage of the mobile network; and
- National Broadband Network, which is proposed to deliver significant improvements in bandwidth speeds and connection reliability throughout the region through a combination of optic fibre, fixed wireless and satellite technology.

2.2.10 Waste management infrastructure

The three regional council groups in the Mid West; the Batavia Coast Regional Organisation of Councils, the Mid West Regional Council and the Yalgoo Group of Councils; are involved in the statewide waste management planning process.

Each regional council group has a strategic waste management plan that facilitates waste infrastructure planning, and seeks to ensure provision for solid waste management infrastructure at strategic regional locations. Such infrastructure would include transfer stations, resource recovery facilities, recycling process facilities, landfills and requirements for waste related to industrial expansion.

From a statewide perspective, the *Western Australian Waste Strategy* (Western Australian Waste Authority, 2012) provides strategic guidance on waste management issues.



2.2.11 Designing communities

Well-designed communities, transport and infrastructure underpin the attractiveness and liveability of a place, which contributes substantially to the general well-being of its population. The provision of attractive and liveable communities with good social infrastructure may positively influence the attraction and retention of new residents to the Mid West.

It is important that a community's diverse needs are accounted for through good design. In particular, consideration should be given to ensure that communities are designed to be adaptable to future change, encourage a high-quality built environment and promote physical activity.

Numerous strategic State Government documents; including *Liveable Neighbourhoods* (Western Australian Planning Commission, 2007), *Better Urban Water Management* (Western Australian Planning Commission, 2008) and *Active Living for All: A Framework for Physical Activity in Western Australia 2012-2016* (Physical Activity Taskforce, 2011); have been prepared to guide the development of well-designed, active communities. Other resources also reinforce design principles to this effect, such as the Heart Foundation's Healthy Active By Design on-line design resource available at www.healthyactivebydesign.com.au. This tool in particular has been developed in partnership with other stakeholders including State Government agencies.

2.2.12 Challenges

Transport and infrastructure challenges:

- T11** Establishing the role of a regional road network plan.
- T12** Improving safety and efficiency of the road network through minimising the conflict between freight and other traffic.
- T13** Integrating different gauge rail lines into one rail network.
- T14** Identifying and securing rail and infrastructure corridors.
- T15** Developing additional power infrastructure to assist the efficient operation of the Geraldton and proposed Oakajee ports.

- T16** Ensuring connectivity between and identification of the roles of Geraldton and proposed Oakajee ports.
- T17** Ensuring connectivity between Oakajee and Narngulu industrial estates.
- T18** Upgrading the Geraldton airport to accommodate passenger jet services.
- T19** Reducing car dependency by promoting travel alternatives.
- T110** Increasing power transmission capability for the Mid West region including support for energy production and supply.
- T111** Managing the competing demands for water where resources are limited and encouraging fit for purpose use of water, reuse and efficiency technologies.
- T112** The timely execution of processes that enable the delivery of infrastructure, including planning, feasibility studies, land acquisition and detailed design work.
- T113** Ensuring that communities have adequate access to regional and local social infrastructure and services.
- T114** Encouraging efficient and effective regional waste management practices.
- T115** Attracting residents and workforce through the provision of quality social infrastructure, services, affordable housing and well-designed communities.

2.3 Natural and cultural environment

2.3.1 Biodiversity

Interim Biogeographic Regionalisation for Australia (IBRA) classifies major divisions of land defined by distinct assemblages of climate, geology, landform, animals and plants. IBRA bioregions and sub-bioregions are the reporting unit for assessing the status of natural ecosystems and their protection in the National Reserve System. The main priority for the National Reserve System is to address gaps in comprehensiveness on a



national scale. Australia is working towards a target of 10 per cent of our bio-regions to be part of the National Reserve System. There are eight IBRA bioregions represented within the Mid West, some of which are under-represented in the National Reserve System.

While much of its native vegetation has been degraded through clearing, grazing and extraction, the Mid West contains areas of exceptional biodiversity that are well protected (e.g. Kalbarri National Park) or of conservation significance (e.g. Abrolhos Islands).

Some key considerations regarding the region's biodiversity are:

- two IBRA bioregions, the Murchison and the Avon Wheatbelt are under-represented in the National Reserve System. High priority should be given to protecting ecosystems in these areas, for example the establishment of formal conservation reserves;
- the Geraldton Sandplains IBRA bioregion from Kalbarri to Coorow are recognised as a national and international biodiversity hotspot. (A biodiversity hotspot is a region rich in plant and animal ecosystems that has high numbers of endemic species that face immediate threat);
- there are banded iron formation ranges in the Mid West that have significant value in terms of biodiversity and mineral deposits, particularly iron ore;
- the majority of the agricultural zone has been cleared of native vegetation therefore remnant vegetation in good condition is considered of high value; and
- some aspects of biodiversity have identified conservation priorities and some sites have area management plans; and a number of projects and studies have recently been undertaken to build an understanding of regional biodiversity issues, including conservation, natural resource management and regional flora and vegetation surveys. The identification of conservation priorities within the Mid West is constrained by the fact that very few areas have been assessed at a suitable scale resulting in the majority of information on vegetation, flora and fauna for the region being very sparse.

2.3.2 Water

Groundwater

Three groundwater management areas, proclaimed under the *Rights in Water and Irrigation Act 1914*, exist in the Mid West region: the Arrowsmith, Gascoyne and East Murchison. Groundwater is the major, almost sole, source of water for domestic, agricultural, industrial and commercial developments.

The Perth Basin, the Carnarvon Basin, the Northampton Block, and the Yilgarn Craton are the four groundwater provinces in the Mid West region, each with their own distinct characteristics. Of these, Perth Basin is the only major regional aquifer with potable groundwater; although the other provinces contain some localised fresh water in relatively slim sedimentary layers or fractured bedrock.

Surface water

The Mid West's river systems are considered to have regionally significant values in terms of biodiversity, habitat provision, aesthetics, and indigenous and European cultural heritage; however, it is recognised that their condition varies along their length. The region's surface water systems typically discharge into coastal lagoons or wetlands before reaching the coast. The mouths of those that do reach the coast typically have little or no connection to the ocean, with river mouths blocked by sand dunes or bars, sometimes permanently.

There are four main river basins in the Mid West; namely the Greenough, Moore–Hill, Yarra–Yarra and Murchison River basins. The Murchison River is approximately 700 kilometres long and drains the Yilgarn Plateau. The Greenough River and Moore–Hill river basins are made up of a number of small rivers which are not linked; these include the Hutt, Bowes, Greenough, and Arrowsmith within the Greenough River basin, and the Eneabba Creek and within the Moore–Hill basin. The Yarra–Yarra basin is comprised of numerous interconnected small rivers and wetlands which terminate in the Yarra–Yarra salt lakes, which include lakes Nullewa, Weelhamby, Mongers, Goorly, DeCourey and Hillman.

The Mid West contains a diversity of wetlands of which 12 are listed as nationally important in the *Directory of Important Wetlands in Australia* (Department of the Environment, 2013). Many of the region's wetlands,

which include several terminal inland salt lakes and seeps, dry out completely during the summer; however there are some which are continuously fed by groundwater that are particularly important transitory habitats for migrating birds as well as supporting significant permanent ecologies.

The Department of Water has recently prepared a conservation report of waterways in the Mid West. This is intended to provide a fundamental understanding of the status of the planning and management for waterways in the region.

2.3.3 Landscape and geology

A number of broad landscape character types occur in the Mid West, including the:

- Wheatbelt Plateau, including the Geraldton Plains and Dryandra Uplands landscape character sub-types;
- Kalbarri Sandplains;
- Wooramel Plains, including the Talisker Plain sub-type; and
- Meekatharra Plateau.

(Department of Conservation and Land Management, 1994)

The Mid West coastline predominantly includes long stretches of white sand with occasional limestone cliffs, the steepest of which occur near Kalbarri. East of the coast is the sandplain, which includes high scenic quality features such as wildflowers, the Murchison River gorge and the Moresby Range. Further to the east is the Meekatharra Plateau, which is characterised by vast sandplain areas, breakaways and broad saline plains. It is important that distinct landscape features with high natural and scenic quality are retained in order to maintain the Mid West's unique 'sense of place'.

The Mid West region has a diverse geological setting. The majority of the region overlies on the Archean granites and greenstones of the Yilgarn Craton, which are more than 2,500 million years old. Rocks up to 4,000 million years old have been recorded from Mount Narryer and Jack Hills areas. Greenstones in the Yilgarn Craton have high prospectivity for gold, nickel, chromium, iron and base metals. Generally, Yilgarn granites are anomalous in uranium and in some places have provided source material for uranium enriched calcrete deposits. Proterozoic tectonic units (2,500

to 545 million years ago) in the western Mid West include the Northampton Complex and the Pinjarra Orogen. The Northampton Complex has moderate to high prospectivity for lead, zinc and copper. The north eastern Mid West is covered by Proterozoic sedimentary basins, with those occupying parts of the shires of Meekatharra and Wiluna having high prospectivity for gold, iron, base metals, uranium and diamonds.

The diverse geology of the Mid West attracts significant international scientific research. Of particular value are zircon grains within a metamorphosed sandstone conglomerate in the Jack Hills of Narryer Terrane, which at 4,404 million years old, is the world's oldest material of terrestrial origin.

Currently, there are 25 sites recorded in the Mid West on the State's register of geoheritage sites (www.dmp.wa.gov.au/791.aspx). The extraction of mineral resources in the Mid West has an extremely long history. Wilgie Mia is an ancient pre-European ochre mine in the banded iron formations of Weld Range. The mining and trade of ochre have occurred for at least 30,000 years, leading to suggestions that this is the world's oldest mine.

2.3.4 Cultural heritage

The continuing cultural legacy of the region's Aboriginal people and the farming activities of European settlers largely constitute the Mid West's cultural heritage.

The *Aboriginal Heritage Act 1972* lists numerous sites of Aboriginal significance in the region and protects all sites, including those that remain undisclosed by the traditional owners. Numerous places in the Mid West are listed on the State Heritage Database under the *Heritage of Western Australia Act 1990*.

Aboriginal groups with a strong traditional connection to their own country have inhabited the Mid West region for thousands of years. The landscape provides the basis for their spirituality, customs, beliefs and social systems. Aboriginal cultural heritage in the region encompasses archaeological, historical, ceremonial and mythological sites as well as living cultural practices. The Mid West is also home to National Heritage listed site Wilgie Mia, a 30,000-year-old traditional ochre mine located in Weld Range.

Some of the Aboriginal groups whose traditional country is located within the Mid West Region include:

- Nanda;
- Naaguja;
- Wilunyu and Nhanhagardi (Amangu);
- Wajarri;
- Badimia;
- Yugunga-Nya; and
- the Western Desert people who are located further east around Wiluna on the edge of the Gibson and Little Sandy Deserts.

The majority of the region is known collectively as Yamatji country. (Yamatji Marlpa Aboriginal Corporation, 2010)

The Dutch were the first Europeans to make an impact on the Mid West, most famously in 1629 when the Dutch trading ship Batavia ran aground at the Houtman Abrolhos Islands off the Mid West Coast. European exploration and settlement of the region began in the early 1800s following the settlement of Perth. Lieutenant George Gray explored and named many of the coastal geographical features on a voyage to the Shark Bay region and subsequent trek south to Perth. Several early explorers and surveyors followed him including Robert Austin, Augustus and Francis Gregory. The region has many examples of homesteads and

Table 2: Mid West historic heritage places

Sub-region	Local government	No. registered places
Batavia Coast	City of Greater Geraldton (part – former City of Geraldton–Greenough)	60
	Shire of Irwin	16
	Shire of Northampton	18
	Shire of Chapman Valley	4
North Midlands	Shire of Carnamah	1
	Shire of Coorow	0
	Shire of Mingenew	1
	Shire of Morawa	2
	City of Greater Geraldton (part – former Shire of Mullewa)	8
	Shire of Perenjori	3
	Shire of Three Springs	1
Murchison	Shire of Cue	13
	Shire of Meekatharra	3
	Shire of Mount Magnet	2
	Shire of Murchison	1
	Shire of Sandstone	2
	Shire of Wiluna	2
	Shire of Yalgoo	5
Total		142

(source: State Heritage Office, 2014)



stations that provide an insight into the significant role that agriculture and mining played in the region. Early settlements in the region included Champion Bay (Geraldton), Northampton and Mullewa. By the late 1880s gold prospectors were also seeking their fortune in the region with Cue, Mt Magnet and Yalgoo the focus areas. The substantial value of other commodities including local rock lobster, petroleum and other minerals were recognised later in the 1900s.

It is important that both the Aboriginal and historic heritage of the region is identified, protected and managed.

The State Register of Heritage Places lists 142 places within the Mid West, recognising their value and importance to the State (Table 2). Listings include a range of places located across townsites, rural and remote locations; and include historic buildings, rural homesteads, minesites and ruins. Each place is unique and has its own combination of values, which together shows its cultural heritage significance.

Local planning schemes are one planning mechanism that allows local governments to provide statutory protection to heritage places. Scheme provisions can stipulate special planning approval requirements for identified heritage places.

2.3.5 Challenges

Natural and cultural environment challenges:

- NC1** Seeking a balance between future development and resource utilisation with conservation in the Mid West region.
- NC2** Promoting the availability of natural resource management information to assist strategic regional planning.
- NC3** Mitigating and adapting to the potential impacts of forecast climate change.
- NC4** Utilising places of heritage value to support further growth and development of the region.
- NC5** Management of significant geoheritage sites in the region.





3 Strategic directions

3.1 Governance

In recognition of a number of broad issues and challenges associated with the governance structure currently operating, the Framework identifies the following governance strategies:

- G1** Provide regional planning support for implementing the broader strategic context of the Framework and guiding the development of local planning strategies.
- G2** Communicate the relationship and roles of government, legislation and policy.
- G3** Promote a whole-of-government approach to regional planning and coordination.

Commonwealth, State and local governments are represented in the Mid West region through regional government offices and local government authorities. These are supplemented by cross-government and cross-agency committees and commissions, which promote whole-of-government responses to the planning challenges presented by the region. In some instances, these committees may also include private and non-government stakeholders to promote cooperative and deliberative governance outcomes.

With the complex policy framework that exists, where several different agencies within three tiers of government administer a multitude of legislation, it is inevitable that some of the actions recommended in this Framework will fall outside of the direct jurisdiction of planning. This also demonstrates the complexity and difficulty of implementing a whole-of-government approach.

This document will therefore serve as a means to give advance notice to relevant agencies and authorities of future actions that may be required.

3.1.1 National framework

There are a range of Commonwealth statutes and policies that have influence or control over land use, infrastructure development and overall economic development. One such example that has implications for land use in the Mid West is the *Environmental*

Protection and Biodiversity Conservation Act 1999, which provides a legal framework to protect and manage nationally and internationally significant flora, fauna, ecological communities and heritage places.

The Council of Australian Governments (COAG) may also provide guidance with regard to the implementation of State-level policies and legislation; and this can include where such instruments relate to economic development and associated land-use planning matters. For example, a Multiple Land Use Framework has recently been developed by the COAG's Standing Council on Energy and Resources as an approach to address challenges arising from competing land use, land access and land-use change; and this is designed to operate within established regulatory and policy frameworks relating to land ownership, usage and access.

Beyond the spheres of legislation and policy, the Commonwealth Government supports a number of nationwide initiatives to facilitate regional development which are relevant in the context of the Mid West region.

Regional Development Australia is one such initiative that, through collaboration with State and local governments, provides a framework for reporting to the Commonwealth Government on a range of issues facing the regions, including regional planning and regional development. A regional plan has been developed by Regional Development Australia Mid West Gascoyne that recognises pertinent regional issues and identifies goals and priorities for the betterment of the Mid West and Gascoyne regions.

Desert Knowledge Australia is another such initiative supported by the Commonwealth, in addition to the Northern Territory Government. A number of programs run by this organisation are focused on innovation and capacity building in regional and remote Australia in order to facilitate beneficial business and social outcomes for these areas.





3.1.2 State and regional framework

Planning

The State Planning Framework is set out in State Planning Policy 1 (Variation No 2) (2006). It informs the Western Australian Planning Commission (WAPC), local government and others involved in the planning process to ensure integrated decision-making across all spheres of planning.

The State Planning Framework unites the State Planning Strategy, State Planning Policies, regional strategies (including regional planning and infrastructure frameworks), regional and sub-regional structure plans, strategic policies and operational policies within a central framework to provide a context for land-use planning decision making in Western Australia. Broad relationships between these various planning instruments are indicated in Figure 2. For further information on the State Planning Framework, refer to the Department of Planning website, www.planning.wa.gov.au.

The *State Planning Strategy 2050* provides the basis for long-term State and regional land-use planning. The Strategy's structure, presented in Figure 8 below, outlines its core elements including its vision, principles, strategic goals and strategic directions.

The Strategy aims to facilitate a whole-of-government approach in order to deliver sustained prosperity for land-use planning and development. Within this context, regional planning and infrastructure frameworks (such as this document) are strategic land-use plans focused at a regional level that outline a structure for sustainable land use; provide guidance for future planning; and address broad planning considerations across local government areas. Significantly, regional planning provides a relevant context for other local level planning processes.

An important consideration for planning at a State level is that of collaboration across regions. As such, interregional issues are an important focus for the *State Planning Strategy 2050*; and where these relate to the Mid West region, they are acknowledged as being relevant in the context of this Framework.

Planning reform

In 2009 the Department of Planning and the Western Australian Planning Commission (WAPC) began a comprehensive reform program *Planning Makes it Happen: a blueprint for planning reform* to improve the land use planning and development approvals system in Western Australia.

The State Government launched the second phase of the planning reform program in August 2014, the details of which are outlined in *Planning makes it happen: phase two – Blueprint for planning reform* (WAPC, 2014). Phase two builds on the first phase of reforms — which have now been substantially implemented — and identifies further opportunities to improve planning and decision-making processes and reduce timeframes, duplication and associated costs. The reform program continues to improve the planning system in Western Australia to give it better operational capacity and strategic capability.

A key of Phase Two is to reaffirm the strategic focus of the WAPC as a statutory authority with statewide responsibilities for urban, rural and regional integrated land-use planning. In particular, priority reforms are aimed at ensuring the capacity of the WAPC and the Department of Planning to deliver a systematic approach to the coordination and integration of land-use and transport planning, economic and infrastructure development, environmental assessment, remote settlements, and urban and regional development. This will, in large part, involve ensuring appropriate integration of powers and responsibilities across State agencies and local governments.

Further information on the current status of planning reform can be obtained at www.planning.wa.gov.au/planningreform.

State development

The Department of State Development, as the lead agency for major resource and industry infrastructure projects, has developed an Infrastructure and Services Assessment Framework to provide a consolidated approach to the identification of potential impacts on communities, and local regional infrastructure and services directly associated with major resource and infrastructure projects at a local, regional and State level. The Infrastructure and Services Assessment Framework outlines the State's requirements for proponents to manage their infrastructure and service impacts.



This standardised approach to impact assessment is intended to simplify the planning process for new or significantly expanded projects and to help the Government improve the coordination of infrastructure planning and service delivery.

Regional development

Regionally-based regional development commissions, each of which have their own board, and the Department of Regional Development, are currently the key State agencies for regional development.

The Mid West Development Commission is a State Government statutory authority that encourages the sustainable development of the Mid West region. The Commission has regionally based staff and reports to a board of regional community representatives. The Mid West Development Commission operates across a range of areas within the region and specifically supports planning and coordination in response to major projects through its Mid West Strategic Infrastructure Group.



(source: Western Australian Planning Commission, 2014)

Figure 8: State Planning Strategy 2050 structure

A review into the functions and responsibilities of regional development commissions was conducted. One of the resulting recommendations from this review is that regional investment blueprints be developed for each region to set future directions from a regional development perspective. It is intended that blueprints are developed with input from all levels of government and the community in the region (Department of Regional Development and Lands, 2010). Importantly, they are expected to inform State Government investment in each region, including the allocation of future Royalties for Regions funding. The Mid West Development Commission is currently developing a Mid West Regional Investment Blueprint.

Royalties for Regions

The Royalties for Regions initiative has several streams of funding designed to deliver infrastructure, services and projects of State significance to regional Western Australia, including:

- the Regional Community Services Fund;
- the Regional Infrastructure and Headworks Fund; and
- the Country Local Government Fund.

The funds support strong and vibrant regional communities by improving infrastructure and headworks, establishing across-government strategic and community service projects, providing a range of contestable grant opportunities and building capacity in local communities.

The current allocation of Royalties for Regions funding is determined through various initiatives and processes, including those administered by the Department of Regional Development and Regional Development Commissions.

A key Royalties for Regions Initiative in the Mid West region is the *Mid West Investment Plan 2011-2021*, which is a project-based plan that aims to progress the delivery of infrastructure priorities within the Mid West's three sub-regions. The Plan has been developed by the Mid West Development Commission, with the assistance of the Department of Regional Development; involving a process to document the range of infrastructure needs within the region and periodically reporting on the delivery of those

items recognised as being a high priority. Through its implementation the Plan has been instrumental in facilitating the allocation of Royalties for Regions funding toward a number of priority projects delivered by State agencies, local government and non-government organisations. It is expected that the Plan will inform the Mid West Regional Investment Blueprint.

The Regional Centres Development Plan (SuperTowns) is a Royalties for Regions initiative currently being implemented, that encourages regional communities in the southern half of the State to plan and prepare for the future so they can take advantage of opportunities created by Western Australia's population growth to 2050. The initiative seeks to create the new business opportunities required to attract investment and generate the jobs required to attract more people to live in those towns.

In the Mid West region, Morawa, in the North Midlands sub-region, was selected for the Regional Centres Development Plan (SuperTowns) for 2011/12. As part of the Regional Centres Development Plan's implementation, a SuperTown Growth and Implementation Plan has been developed for Morawa, which recognises opportunities for population and economic growth and how these can potentially be realised. In particular, it identifies infrastructure projects to support Morawa's development, such as a main street revitalisation project, an industry training centre and accommodation and a solar thermal power project.

Further information can be found at www.drd.wa.gov.au.

Transport

The Department of Transport is developing transport network plans under the 'Moving Freight' and 'Moving People' themes. These documents define the transport response to the growth and development profiles outlined in the State Planning Strategy.

Under these plans, the Department of Transport and relevant stakeholders have developed the *Western Australian Regional Freight Transport Network Plan* to guide the future development of the regional freight transport network to successfully respond to the needs of the growing Western Australian economy and population, while protecting the environment and quality of life aspirations valued by the community. (Department of Transport 2013)

This plan defines the Principal Freight Network as part of the larger Western Australian transport network over which the movement of heavy freight will be supported and gradually concentrated. It seeks to optimise the productivity of intensively utilised mixed-traffic networks, allowing the efficient operation of more, and increasingly productive, regional freight movements. The plan identifies the network development and investment priorities over the next two decades, and planning and policy review priorities.

The Department of Transport is also developing a State Aviation Strategy in consultation with relevant stakeholders to support the State's economic and social development through aviation infrastructure and services. The Strategy is intended to provide a framework for policy setting; and future planning and investment in Western Australian international and domestic air services and airport infrastructure.

Conservation

The management of the conservation estate is administered under the *Conservation and Land Management Act 1994*, through management plans prepared by the Department of Parks and Wildlife for the Conservation Commission of Western Australia and the Marine Parks and Reserves Authority. In

order to effectively manage the estate, it is important that management plans are contemporary. Current management plans as they relate to the conservation estate in the Mid West are presented in Table 3 below.

Fisheries

The islands of the Houtman Abrolhos are encompassed by the Houtman Abrolhos Nature Reserve, which is currently vested with the Minister for Fisheries for the purposes of 'Conservation of Flora and Fauna, Tourism and for Purposes Associated with Fishing and Aquaculture Industries' under the *Land Administration Act 1997* (Department of Fisheries, 2012). To guide their future management, the Department of Fisheries recently developed strategic and management plans for the Houtman Abrolhos Islands.

State lands

The Department of Lands plays an important role in managing Crown land and native title across the State. These are important issues in the Mid West where extensive crown land exists. Crown land, including pastoral leases, is generally managed through the *Land Administration Act 1997*.

Table 3: Current status of Mid West conservation estate management plans

Park or reserve	Management plan
Alexander Morrison National Park	–
Collier Range National Park	–
Kalbarri National Park	<i>Draft Kalbarri National Park and Adjacent Proposed Conservation Reserves Management Plan in preparation</i>
Lesueur National Park	Lesueur National Park and Coomallo Nature Reserve Management Plan 1995-2005
Tathra National Park	–
Watheroo National Park	–
Jurien Bay Marine Park	Jurien Bay Marine Park Management Plan 2005-2015 No. 49
other State managed conservation parks and reserves	miscellaneous

For example, managing Crown land deals with pastoral leases; and the ongoing management of vacant Crown land to deal with issues such as coastal shacks. In recognition of the importance of such issues to the Mid West, the Framework identifies relevant initiatives in Table 7. One such example is the Rangelands Reform Program, which is investigating opportunities regarding the diversification of activities on pastoral leases.

Native title

The Commonwealth *Native Title Act 1993* provides for the recognition and protection of Aboriginal and Torres Strait Islander peoples' native title rights and interests. Certain government actions, such as grants of freehold or other exclusive tenures to other parties, have been found to extinguish native title. Claims for native title generally do not affect areas where native title has been extinguished, for example, land held in freehold or exclusive tenure in developed areas.

The resolution of native title claims can provide Aboriginal communities with greatly improved opportunities for cultural, social and economic development; and greater certainty over land management. Prior to settlement being reached, negotiation generally occurs between the State Government and relevant claim groups. One recent example is the State Government's progression of the South West Settlement, which involves a number of Noongar claim groups. The proposed settlement area includes a small portion of the Mid West region in its far southern extent, within the Shire of Coorow. For further information please refer to www.dpc.wa.gov.au/lantu/Claims/Pages/SouthWestSettlement.aspx.

Tourism

Tourism Western Australia is the State Government agency responsible for promoting tourism in Western Australia. Its focus is on marketing the State; developing, attracting and promoting major sporting, cultural and business events; and developing significant tourism infrastructure and projects.

In this regard, Tourism WA undertakes strategic planning – which can have implications for regional areas, including the Mid West – such as, but not limited to, the:

- *Government Strategy for Tourism in Western Australia 2020*, which highlights partnerships and a whole-

of-government approach to increasing the value of tourism to the State to \$12 billion by 2020;

- *Western Australian Cruise Shipping Plan 2012-2020*; and
- *Western Australian Caravan and Camping Action Plan 2013-2018*, which has subsequently been successful in securing Royalties for Regions funding for a number of regional projects.

Further information is available from www.tourism.wa.gov.au.

Mining

The Department of Mines and Petroleum (DMP) is the lead agency for the management of an equitable and secure titles system for the mining, petroleum and geothermal industries. DMP, in partnership with the Department of the Premier and Cabinet, has also been leading the State's implementation of the Multiple Land Use Framework approach which was endorsed by the Standing Council on Energy and Resources in December 2013.

Exploration and extraction of mineral and petroleum resources are regulated under the *Mining Act 1978* and the *Petroleum and Geothermal Energy Resources Act 1967*. All proposed resource projects are assessed under these acts and where appropriate they can also be assessed under the *Environmental Protection Act 1986* and the Commonwealth *Environment Protection and Biodiversity Act 1999*. For these activities, there is generally no requirement for planning approval under the *Planning and Development Act 2005*.

Basic raw material extraction on Crown land is regulated by the *Mining Act 1978*, while local government regulates quarrying basic raw materials on private land.

For more information on the legislation and policy framework applicable to the Department of Mines and Petroleum, in addition to the latest statistics on mining in Western Australia, refer to their website at www.dmp.wa.gov.au.

Housing

Affordable Housing Strategy 2010–2020: Opening Doors to Affordable Housing (Department of Housing, 2010) is the State Government's affordable housing strategy. From a State-wide perspective, the strategy contains a number of broad strategic actions and initiatives in response to general challenges pertaining to the provision of affordable housing.

To understand housing issues in the Mid West, other region-specific investigations are proposed or underway, to provide an evidence base to ultimately assist decision-makers to plan and provide optimal housing allocation for the region. The Department of Housing's Social Housing Demand Model and Mid West Housing Affordability Study, which are identified in Table 7 as Framework initiatives, are examples of such investigations.

From a planning perspective, housing availability can be influenced by residential land supply. To better understand the current situation with regard to the availability of relevant zoned land in the Mid West region, the Department of Planning is proposing to undertake a land supply and infrastructure analysis. This is identified in Table 7 as a Framework initiative.

Emergency services

The emergency management environment is diverse and involves a coordinated effort from volunteers, the community, local and State authorities and, on occasions, also mutual support from other states and at the national level.

An annual report on Western Australia's preparedness for emergencies is prepared by the State Emergency Management Committee for the Minister for Emergency Services. In particular, it provides a broad view on the State's capacity to deal with large-scale emergencies; reports progress in the emergency management sector; and highlights work underway to enhance capacity. Significantly, this process serves as an objective assessment of the State's preparedness for emergencies and examines how much has been done as well as the need for continuing work. (State Emergency Management Committee, 2012)

Utilities

Various utilities services are delivered via a range of providers, which can include Government Trading Enterprises such as Western Power and Water Corporation; local governments; and private companies.

Service providers generally undertake strategic planning, for example Water Corporation's *Water Forever Whatever the Weather: A 10-year plan for Western Australia* (Water Corporation, 2012). This planning may occur as part of their general business planning; and may also have implications for land-use planning in regional areas.

Local government and communities

Encouraging better collaboration between government agencies, not-for-profit organisations and local governments in the delivery of all services is one of the general roles of the Department of Local Government and Communities. The Department is focused on the delivery of a more collaborative and coordinated range of community services at the local level.

3.1.3 Local framework

The Mid West region has 17 local governments, including the City of Greater Geraldton and shires of Carnamah, Chapman Valley, Coorow, Cue, Irwin, Meekatharra, Mingenew, Morawa, Mt Magnet, Murchison, Northampton, Perenjori, Sandstone, Three Springs, Wiluna, and Yalgoo.

Table 4 identifies relevant local planning strategies and schemes as they relate to the Mid West's local governments, including those currently in operation and others in draft form. Opportunities exist to incorporate key regional planning initiatives into these planning tools as they are reviewed.

Layout plans provide another important local planning instrument. These are generally used to guide land-use planning in Aboriginal settlements (see section 3.2.6), many of which fall outside of, or are not recognised or zoned within local planning schemes. The Department of Planning's Planning for Aboriginal Communities Program, which is identified as a regional planning initiative in Table 7, has been instrumental in developing many layout plans in consultation with the affected communities and other stakeholders.

Table 4: Local planning framework for the Mid West region

Sub-region	Local government	Local planning strategy	Local planning scheme	Layout plans
Batavia Coast	City of Greater Geraldton (part – former City of Geraldton–Greenough)	2008 Greenough New Strategy in preparation	TPS No 1 A (Greenough River) (1986) TPS No 3 (Geraldton) (1998) LPS No 5 (Greenough) (2010) New Scheme in preparation	
	Shire of Northampton	2008 (excluding Kalbarri Town Planning Scheme 9 area) Kalbarri Townsite Strategy 2012	TPS No 9 (Kalbarri) (2005) LPS No 10 (2012) New Scheme in preparation (Kalbarri)	Draft Barrel Well LP No 1 (2013)
	Shire of Chapman Valley	2008	LPS No 2 (2013)	
	Shire of Irwin	2007 New Strategy in preparation	LPS No 5 (2008)	
	Shire of Carnamah	Draft 2013	LPS No 2 (2014)	
North Midlands	Shire of Coorow	Leeman and Green Head Townsite 2012 Coorow Townsite 2013 Draft 2014	TPS No 2 (2001) Draft LPS No 3 (2014)	
	Shire of Mingenew	2006 Draft Mingenew Townsite 2013	LPS No 3 (2008)	
	Shire of Morawa	In preparation	LPS No 2 (2007) New Scheme in preparation	
	City of Greater Geraldton (part – former Shire of Mullewa)	Draft 2010	LPS No 2 (Mullewa) (2012)	Draft Wandanooka LP No 1 (2013)
	Shire of Perenjori	2011	LPS No 2 (2011)	
Murchison	Shire of Three Springs	Draft 2013	TPS No 1 (1988) Draft LPS No 2 (2013)	
	Shire of Cue	In preparation	TPS No 1 (2003) New Scheme in preparation	
	Shire of Meekatharra		TPS No 3 Townsite (1993)	Buttah Windee LP No 1 (2007) Karatundi LP No 1 (2007) Yulga Jinna LP No 1 (2007)
	Shire of Mount Magnet	2013	LPS No 2 (2013)	
	Shire of Murchison	In preparation	In preparation	Pia Wajari LP No 3 (2003)
	Shire of Sandstone	In preparation	TPS No 1 (1996) New Scheme in preparation	
	Shire of Wiluna	2013	LPS No 2 (2013)	Bondini LP No 1 (2004) Kutkabubba LP No 1 (2012)
	Shire of Yalgoo	2010	LPS No 2 (2011)	

LPS – Local Planning Scheme; TPS – Town Planning Scheme; LP – Layout Plan

Through the Northern Planning Program, the Department of Planning is currently undertaking a program to build planning capacity in Mid West local governments. The program aims to facilitate local planning processes; and is also acknowledged as a regional planning initiative in Table 7. Since its inception, assistance has been given to several Mid West local governments to progress projects including:

- townsite expansion strategies for the shires of Coorow (including Leeman, Green Head and Coorow), Mingenev and Three Springs;
- townsite revitalisation plans for Eneabba and Carnamah in the Shire of Carnamah;
- new local planning strategies and schemes/ scheme reviews for numerous local governments including the City of Greater Geraldton, Shire of Coorow, Shire of Sandstone and Shire of Three Springs;
- a district structure plan for Dongara and Port Denison for the Shire of Irwin; and
- Buller Development Zone Constraints Analysis and Concept Plans and the Richard Road Structure Plan for the Shire of Chapman Valley.

An important consideration in reviewing local planning instruments and practices is the opportunity to better align and integrate local planning strategies and schemes with broader local government operational plans, such as corporate business plans that are required under the *Local Government Act 1995*. Any future local government reform should seek to capitalise on this opportunity as well as increase the capacity of local governments in the Mid West to undertake regular local planning reviews. This will ensure that when development opportunities arise, local governments can respond quickly to proactively influence investment decisions and direct development to the most appropriate areas.

3.2 Activity centres

This Framework identifies the role and function of activity centres based on current community focal points for people, services, employment and leisure.

The Activity Centres Framework and Settlement Hierarchy described in this section of the Framework and illustrated in Figure 9 are expected to provide the core focus of growth for the region over the next 20

years. It is important to note that the role a centre plays in the future may vary dramatically from the function it serves now, however it is anticipated that this will not significantly change without planning intervention and/or considerable investment. Current population levels of Mid West settlements are presented in Table 5.

The growth of centres should be managed in accordance with the identified hierarchy. A centre is considered to have or should have the potential to develop into the level that they are identified within the hierarchy. The following strategies have been developed in response to the Mid West's key drivers and challenges.

Activity Centres strategies:

- AC1** Accommodate future Mid West population growth in general accordance with the Activity Centres Framework and Settlement Hierarchy.
- AC2** Determine the commercial multiplier effect within a Mid West regional context.
- AC3** Ensure the provision of additional targeted training, upskilling of existing workers and a significant migration intake to encourage a substantial growth in residing population.
- AC4** Improve the attractiveness of Mid West activity centres as places to live, work and invest.
- AC5** Encourage fly-in fly-out workers to reside in the region.
- AC6** Locate workers accommodation within the Settlement Hierarchy to maximise local economic benefit and to enable its ultimate conversion for local purposes.

3.2.1 Regional City

Geraldton is considered to be the Mid West's Regional City. From a regional perspective, regional cities are typically dominant centres for population, economic activity and employment; and are considered to offer the most extensive and diverse range of high-order services and functions. These often service a catchment that includes the majority of the regional population; and include industrial, retail, commerce, administration, government and social services. Importantly, regional cities contain substantial regional health, education and recreation infrastructure.

In the case of Geraldton, the city offers the most diverse set of activities within the region. It has a large and growing population, a wide range of comparative retail and is the cultural and entertainment hub for the region. Geraldton also plays a significant role in developing much of the region's industry and employment. Geraldton provides civic administration through its role as the seat of the region's most populous local government; and also contains regional and branch offices of several government departments. From an economic and employment perspective, regionally significant precincts and infrastructure within the Geraldton activity centre include the Geraldton City Centre (which includes a regional health and education precinct), existing Geraldton Port, Geraldton Airport and the Narngulu industrial area. The city's considerable existing hard and social infrastructure, combined with its location on the coast, will ensure that its primacy as the region's import and export hub will remain unchallenged for some time to come.

3.2.2 Regional Centre

Regional centres typically offer a diverse range of high-order services and functions, but to a lesser degree than a Regional City. They are also distinguished from regional cities as they generally service a smaller population. At a regional level, regional centres are significant centres of economic activity, employment and population; and form important hubs for regional industry, commerce and civic administration functions, including government offices and services. In addition, regional centres typically provide comparative retail as well as higher-order education, recreation and health services.

Based on existing population levels and services offered, it is considered that there are currently no true regional centres in the Mid West. Examples of comparable centres in other regions include Carnarvon in the Gascoyne and Esperance in the Goldfields–Esperance region.

3.2.3 Sub-regional Centre

The Mid West's six sub-regional centres are considered to be Dongara–Denison, Kalbarri, Northampton, Morawa, Meekatharra and Mount Magnet. Through the provision of goods and services, sub-regional centres support the population and economic activities within their surrounding hinterlands. The catchment areas

of sub-regional centres usually extend beyond the immediate centre to include surrounding centres and districts; and as such their services are utilised by a broader population.

Retail services offered in sub-regional centres largely focus on the day-to-day needs of their populations; however some comparative and specialty retail does occur, particularly in larger centres. Other commercial and light industrial activities, which generally exist to service the local economies, are important functions of these centres. Sub-regional centres often provide local government administrative functions; in addition to a range of social infrastructure and services, including local recreation, primary health services, secondary education and further training facilities.

3.2.4 Local Centre

Local centres offer a level of service that generally deals with the daily needs of their service population, but with a lower level of choice than sub-regional centres. Some local centres may also be the seat of local government. Major local centres are identified in instances where particular settlements are considered to service a larger population catchment and/or offer a greater number of services relative to other local centres. The eight Mid West Aboriginal settlements are considered to function within as local centres (see section 3.2.6).

3.2.5 Service Centre

Service centres are generally located on a major State arterial road and offer the basic 'roadhouse' facilities, including minor vehicle repair and servicing. Service centres may play an important role in inter and intra-regional travel.

3.2.6 Aboriginal settlements

Aboriginal settlements are often remote from service and economic centres; however, they can provide a number of urban functions and amenities such as housing, health, education, retail and recreation. *State Planning Policy 3.2 Aboriginal Settlements* defines an Aboriginal settlement as a discrete place that is not contiguous with a gazetted town; is inhabited or intended to be inhabited wholly or principally by persons of Aboriginal descent, as defined under the *Aboriginal Affairs Planning Authority Act 1972*, and which

has no less than five domestic dwellings and/or is supported by essential services that are provided by one or more State agency(s).

In this context, Aboriginal settlements are considered to fit within the Settlement Hierarchy of the Mid West's Activity Centres Framework. Currently, each of the eight Mid West Aboriginal settlements is considered to function as local centres.

3.2.7 Specialised Centre

Specialised centres are centres of employment that concentrate on a specific type of activity. These centres can play an important part in regional development as they are often key drivers of innovation, education, economic growth and industrial development. They generally do not provide functions similar to those provided in other Mid West activity centres and are therefore considered to sit outside the Settlement Hierarchy. They can be, but are not necessarily, located in relatively close proximity to other activity centres that contain permanent populations and other typical urban functions.

The individual roles of the Mid West's specialised centres are diverse and include:

- the proposed regional port and strategic industrial area at Oakajee;
- the Murchison Radio-astronomy Observatory, which includes the primary Australian host site for the Square Kilometre Array;
- the specialist education centre of the Western Australian College of Agriculture at Morawa; and
- operating mine sites in the region.

With particular regard to the Murchison Radio-astronomy Observatory Specialised Centre, a number of radio quiet zones are associated with the Square Kilometre Array site; and the boundaries for the inner and outer ones are indicated on the Framework map (Figure 11). For a full range of radio quiet zones in this area please refer to www.acma.gov.au. As radio quiet zones may have implications for certain types of land uses and activities occurring within prescribed areas, they may be a relevant consideration for affected local governments when reviewing their local planning frameworks including local planning strategies.

3.2.8 Conservation areas

State managed conservation parks and reserves (which include national parks, marine parks and other State managed conservation reserves) are distinguished from other activity centres as they purposely provide a conservation function and as such are considered to sit outside the Settlement Hierarchy. They are considered to be influential to activity within the Mid West and are therefore recognised as being important to the Mid West's Activity Centres Framework.

The Mid West region's five national parks, one marine park and other conservation reserves are acknowledged as places where important activity occurs. They are important from an economic perspective as, through the promotion and conservation of some of the region's standout natural and landscape assets, they attract visitors from outside the region to the Mid West. State managed conservation parks and reserves are administered through management plans prepared by the Department of Parks and Wildlife.

State managed conservation parks and reserves in the Mid West generally contain numerous attractions and provide basic visitor facilities, which can include visitor information centres, campsites, picnic areas, walk trails, interpretation of natural and cultural values and boat launching facilities. As such, a single park or reserve can often contain several individual sites that provide amenity. The process for planning recreation and tourism use in these sites is considered through management plans (Table 3) and this is outside the scope of this Framework. Refer to individual management plans for specific locations and details on the concentration of particular activities, including camping and day-use sites, within State managed conservation parks and reserves.

In particular, the islands of the Houtman Abrolhos are recognised as having regional environmental significance in addition to their important economic function; with the Houtman Abrolhos Nature Reserve being an A-class reserve managed by the Department of Fisheries.

3.2.9 Local day-use sites

There are numerous day-use sites within and outside other Mid West activity centres. These sites offer various visitor amenities and facilities but generally contain extremely limited or no formal provision for overnight

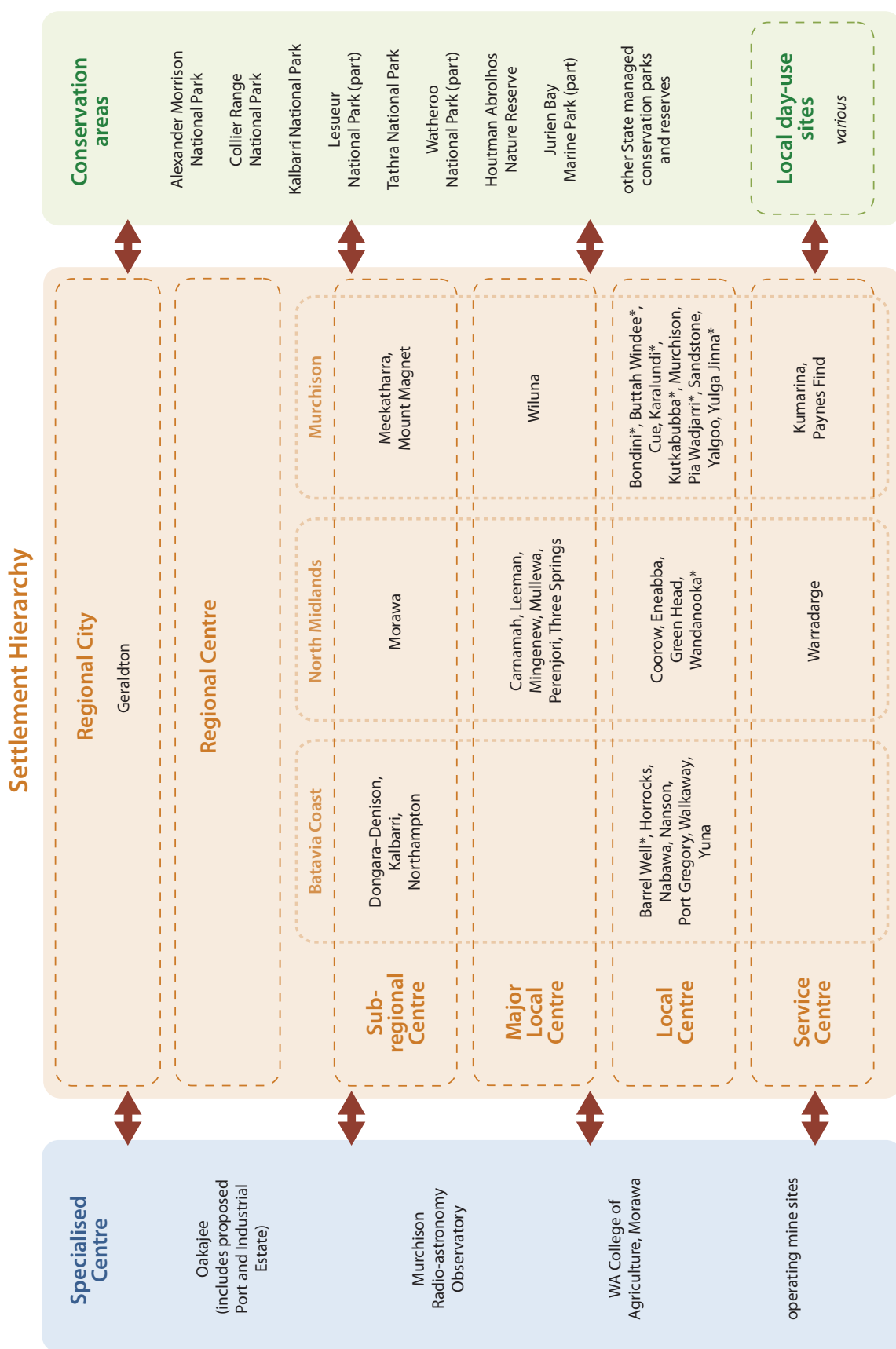


Figure 9: Mid West Activity Centres Framework

Table 5: Population of Mid West settlements

		Centre	2011 population ¹			Centre	2011 population ¹	
Regional City		Geraldton	35,749		Murchison	Cue	228	
Sub-regional Centre	Batavia Coast	Dongara–Denison	2,766			Murchison	n/a	
		Kalbarri	1,467			Sandstone	n/a	
		Northampton	868			Yalgoo	n/a	
						Bondini*	76	
	North Midlands	Morawa	655			Buttah Windee*	n/a	
	Murchison	Meekatharra	732			Karalundi *	77	
Mount Magnet		532	Kutkabubba*			n/a		
Major Local Centre	North Midlands	Carnamah	288			Pia Wadjarri*	n/a	
		Leeman	356			Yulga Jinna*	n/a	
		Mingenew	275					
		Mullewa	358					
		Perenjori	184					
		Three Springs	391					
		Murchison	Wiluna	291				
	Local Centre	Batavia Coast	Horrocks	131	Service Centre	North Midlands	Warradarge	n/a
			Nabawa	n/a		Murchison	Paynes Find	n/a
Nanson			n/a	Kumarina			n/a	
Port Gregory			n/a					
Walkaway			n/a					
Yuna			n/a					
Barrel Well*			n/a					
North Midlands		Coorow	161					
		Eneabba	118					
		Green Head	256					
		Wandanooka*	n/a					

* denotes Aboriginal settlements

¹ Each settlement's population has been derived from 2011 ABS Census where applicable. Due to very low population densities in parts of the Mid West, the smallest geographic areas in which Census data is released (Statistical Areas Level 1) often extend over a very large geographical area much broader than a single settlement; and in some cases encompass several Mid West settlements. In these instances, where accurate 2011 Census data relating specifically to individual Mid West activity centres is unavailable, the table is denoted with n/a.

accommodation. It is considered that the planning and management of individual sites constitute a local level issue and as such individual sites are not recognised as part of this Framework. Notwithstanding this, collectively day-use sites are acknowledged broadly as being important nodes for tourism activity at a regional level.

The management of day-use sites varies throughout the region and can often depend on the tenure of the subject land. Where relevant, the responsibility for the management of sites can include the:

- Department of Parks and Wildlife, particularly for those sites within World Heritage Areas and State managed conservation parks and reserves, including national parks. The management of these sites are usually administered by management plans, which are outside the scope of this Framework;
- local government; or
- pastoral leaseholder.

3.3 Population planning

According to the 2014 Preliminary Estimated Residential Population, the current Mid West population is approximately 58,183 people (Australian Bureau of Statistics, 2015), with the vast majority (41,087 or 71 per cent living within the City of Greater Geraldton). There has been ongoing debate on the potential population for the Mid West region. It is expected that the majority of the Mid West's future population growth will occur in the City of Greater Geraldton. The remainder of the growth is likely to be spread throughout the region.

3.3.1 Western Australia Tomorrow

Western Australia Tomorrow (Western Australian Planning Commission, 2015) contains population forecasts produced by the State Demographer. These are considered to be the State's official population forecasts. Forecasts have been produced for each local government area and planning region in Western Australia to the year 2026; and provide comprehensive demographic information about the age and sex structure of future population.

Table 6 summarises several forecasts applicable to the Mid West region, including those that are indicative of the low (Band A), median (Band C) and high growth (Band E) forecasts. For further information on how these forecasts were derived, including the full range of forecast bands, please refer to the Department of Planning website, www.planning.wa.gov.au. The WA Tomorrow forecasts are regularly reviewed so please refer to the above website for the latest status of the forecasts.

3.3.2 Future scenarios

Past trends indicate a strong correlation between the rate of population growth in the Mid West and that of the region's economic growth and development. Given the considerable potential for future economic development in the Mid West, the region's population growth prospects are often a controversial issue.

The rate of future population growth in the Mid West will be dependent on a range of factors, including the development of key industries such as mining and the provision of regional infrastructure to service economic development. As a result, the population growth rate is likely to vary depending on the level of economic investment and when this investment occurs.

To provide an alternative to the population forecasts, population scenarios would have to be developed. Scenarios are not an official population forecast, but allow the investigation of opportunities over and above the historical trends, which may lead to alternative population futures. In addition, scenario population planning allows for greater timeframes to be considered as they are not expected to be as accurate as a forecast model. The development of scenarios may consider the possible population impacts of seasonal population influxes and additional economic activity and investment that may occur in the region.

The development of population growth scenarios is anticipated to commence through the regional investment blueprints that are under development by the regional development commissions.

Table 6: Mid West population projections

Local government		Band	Current pop'n ¹	Population forecast (median value) ²		
			2014	2016	2021	2026
Batavia Coast	Greater Geraldton ³	A	41,087	40,740	43,680	46,620
		C	41,087	41,430	44,810	48,020
		E	41,087	42,100	45,930	49,400
	Irwin	A	3,764	3,870	4,120	4,350
		C	3,764	3,970	4,270	4,550
		E	3,764	4,060	4,430	4,760
	Northampton	A	3,296	3,320	3,440	3,570
		C	3,296	3,410	3,580	3,760
		E	3,296	3,500	3,720	3,950
	Chapman Valley	A	1,247	1,270	1,520	1,820
		C	1,247	1,330	1,620	1,980
		E	1,247	1,380	1,720	2,150
Total Batavia Coast ³		A	49,394	49,200	52,760	56,360
		C	49,394	50,140	54,280	58,310
		E	49,394	51,040	55,800	60,260
North Midlands	Carnamah	A	540	600	540	490
		C	540	640	600	570
		E	540	680	660	640
	Coorow	A	1,064	1,100	1,020	950
		C	1,064	1,160	1,110	1,060
		E	1,064	1,210	1,190	1,160
	Mingenew	A	477	430	390	350
		C	477	470	440	410
		E	477	500	490	480
	Morawa	A	889	800	740	690
		C	889	850	810	780
		E	889	900	880	880
	Perenjori	A	906	580	510	460
		C	906	630	570	540
		E	906	670	630	610
	Three Springs	A	620	580	520	500
		C	620	630	580	570
		E	620	670	640	640
Total North Midlands ⁴		A	4,496	4,090	3,720	3,440
		C	4,496	4,380	4,110	3,930
		E	4,496	4,630	4,490	4,410

(continued overleaf)

Table 6: Mid West population projections (cont.)

Local government		Band	Current population ¹	Population forecast (median value) ²		
			2014	2016	2021	2026
Murchison	Cue	A	285	340	350	350
		C	285	390	420	430
		E	285	440	480	520
	Meekatharra	A	1,453	1,370	1,420	1,450
		C	1,453	1,530	1,580	1,620
		E	1,453	1,700	1,750	1,790
	Mount Magnet	A	678	740	770	780
		C	678	830	870	890
		E	678	930	970	1,010
	Murchison	A	121	110	100	100
		C	121	150	160	170
		E	121	190	220	240
	Sandstone	A	111	100	100	90
		C	111	140	160	170
		E	111	180	210	240
	Wiluna	A	1,221	1,010	1,040	1,050
		C	1,221	1,130	1,160	1,180
		E	1,221	1,260	1,300	1,320
	Yalgoo	A	424	350	360	350
		C	424	400	420	430
		E	424	460	490	520
Total Murchison		A	4,293	4,020	4,140	4,170
		C	4,293	4,570	4,770	4,890
		E	4,293	5,160	5,420	5,640
Mid West Planning Region		A	58,183	57,310	60,620	63,970
		C	58,183	59,090	63,160	67,130
		E	58,153	60,830	65,710	70,310

¹ 2014 Preliminary Estimated Residential Population (Australian Bureau of Statistics, 2015)

² WA Tomorrow (Western Australian Planning Commission, 2015)

³ as available population figures relate only to entire local government areas, this total includes the population of the City of Greater Geraldton (part – former Shire of Mullewa). The City of Greater Geraldton (part – former Shire of Mullewa) is considered elsewhere in the Framework to be within the North Midlands sub-region

⁴ as available population figures relate only to entire local government areas, this total excludes the population of the City of Greater Geraldton (part – former Shire of Mullewa). The population of this area is included as part of the Batavia Coast sub-region in this particular table.

3.4 Economic and regional infrastructure development

The following economic and regional infrastructure development strategies have been developed in response to the Mid West's key drivers and challenges:

- E11** To encourage a whole-of-government approach to providing advice on regional infrastructure requirements to support the activation and development of the Mid West regional economy.
- E12** Encourage the diversification of the Mid West regional economy.

For the purpose of the Framework, regional level infrastructure is broadly considered to enable or support the development of the regional economy; and/or perform a function that caters for a regional catchment. Hence, regional infrastructure provision generally results in economic and/or social benefits for the region. This distinguishes it from sub-regional and local infrastructure, where the benefits predominantly extend to a more localised area.

The expansion of economic activity in the Mid West will underpin prosperity and population growth in the region. Opportunities for economic expansion have been recognised across various sectors of the regional economy including mining, industrial, agriculture and tourism sectors. However, the expansion of these sectors and further economic diversification is reliant on key infrastructure including water, power, roads, rail, port and airport facilities. The provision of supporting infrastructure and essential services, particularly at a regional level, must be coordinated in order to support economic development and capitalise on opportunities for growth.

The Mid West region's role in the world's resources market is projected to increase significantly. As a result, it is anticipated that the level of economic activity within the region will lead to an increase in population and commercial activity. The provision of supporting infrastructure, particularly at a regional level, needs to occur in a coordinated manner if the economic benefits of growth scenarios for the region are to be maximised and sustained.

The provision of regional infrastructure can lead to the activation or stimulation of multiple sectors of the regional economy; and also provide opportunities for economic diversification within the region. The benefits of a strong, prosperous and more diversified regional economy extend to the communities and residents within the region; and more generally to the State.

Planning for regional infrastructure is important to support future regional development and growth. The undertaking of investigations and planning projects that specifically examine regional infrastructure requirements is often an essential first step in infrastructure delivery. Infrastructure planning at this targeted level allows potential solutions to be considered well in advance of when actual built infrastructure is required. It allows the consideration of numerous options, potentially including an evaluation of benefits, future demand, limitations and obstacles that may impact on the efficient delivery of future infrastructure. This helps justify any measures required to secure or protect necessary land and resources to facilitate the future efficient and effective delivery of regional infrastructure.

The provision of additional regional infrastructure and the replacement or upgrading of existing infrastructure that has either aged or has inadequate capacity is likely to contribute to the development of the Mid West's economy. The State Government has already invested in a number of regional infrastructure projects that may contribute to the region's development. For example, a range of Mid West regional infrastructure projects have been recently undertaken or committed to, including:

- Mid West Energy Project Stage 1 (Southern Section) – 330 kV transmission line from Neerabup – Three Springs via Eneabba and a new 330/132 kV terminal substation at Three Springs;
- new and upgraded rail lines from southern Mid West mines to Geraldton, including:
 - new railway from Tilley to Karara Hill;
 - upgrade to existing rail line Morawa to Mullewa; and
 - upgrade to existing rail line Mullewa to Geraldton;
- Geraldton Port upgrades – including port rail upgrade and upgrades to existing train unloader;

- Brand Highway upgrades including replacement of the bridge at Greenough River¹;
- sealing of overtaking opportunities and floodways at strategic locations on the Goldfields Highway between Meekatharra and Wiluna¹;
- Wubin–Mullewa Road upgrades;
- Geraldton Senior College engineering and laboratory trade training centre;
- expansion of residential college at Morawa;
- Allanooka–Casuarinas Groundwater Drilling Investigation;
- Regional Mobile Communications Project;
- Durack Institute of Technology upgrades and new facilities, including:
 - Centre for Resources Sector Workforce Training; and
 - Centre for Health Industries Training and Workforce Development;
- regional trade training centre at WA College of Agriculture – Morawa;
- new Geraldton Fire Station for Geraldton Career and Volunteer Fire and Rescue Services;
- Mumbida Wind Farm;
- Greenough River Solar Farm;
- Geraldton Regional Visitor Information Centre; and
- Kalbarri National Park Tourism Enhancement Stage 1.

In addition, potential regional infrastructure projects may encompass a breadth of different infrastructure types including hard infrastructure (e.g. transport and energy projects), social infrastructure (e.g. health and education projects) and infrastructure planning. It needs to be recognised that any potential Mid West regional infrastructure projects will need to compete with infrastructure projects in other regions for funding and resources; and funding for individual infrastructure projects will be subject to normal budgetary and Treasury processes. In this regard, Figure 10 illustrates the considerations for identifying infrastructure requirements throughout the State.

¹ Project is identified as a *Freight Transport Priority to 2031* from the Department of Transport's *Western Australian Regional Freight Transport Network Plan*.

3.5 Environmental and heritage planning

The natural resources of the Mid West encapsulate the region's sense of place, as well as underpin its economy. To ensure the region's future sustainability, in both economic and environmental terms, the management of these natural resources is imperative. The Northern Agricultural and the Rangelands natural resource management (NRM) regions both occur within the Mid West.

The following environmental and heritage strategies have been developed in response to the Mid West's key drivers and challenges:

- EH1** Investigate means to enable land uses such as agriculture to meet the possible challenges presented by forecast long-term weather trends.
- EH2** Manage the changes to fishing regulations to mitigate the impact on small coastal communities of commercial fisheries.
- EH3** Investigate more equitable ways to manage a balance between natural resource demands and environmental values.
- EH4** Protect and manage the region's cultural heritage and arts, including significant indigenous places, historic places and landscapes of significance.
- EH5** Determine the need for additional tourism and recreation sites to cater for an expected increase in demand, particularly given the opportunity for increased nature-based tourism in the region.
- EH6** Identify, protect and manage the region's natural environmental diversity.
- EH7** Encourage the regeneration of rangeland (pastoral country) for improved biodiversity and biosecurity outcomes; and improved productive capacity including carbon sequestration.

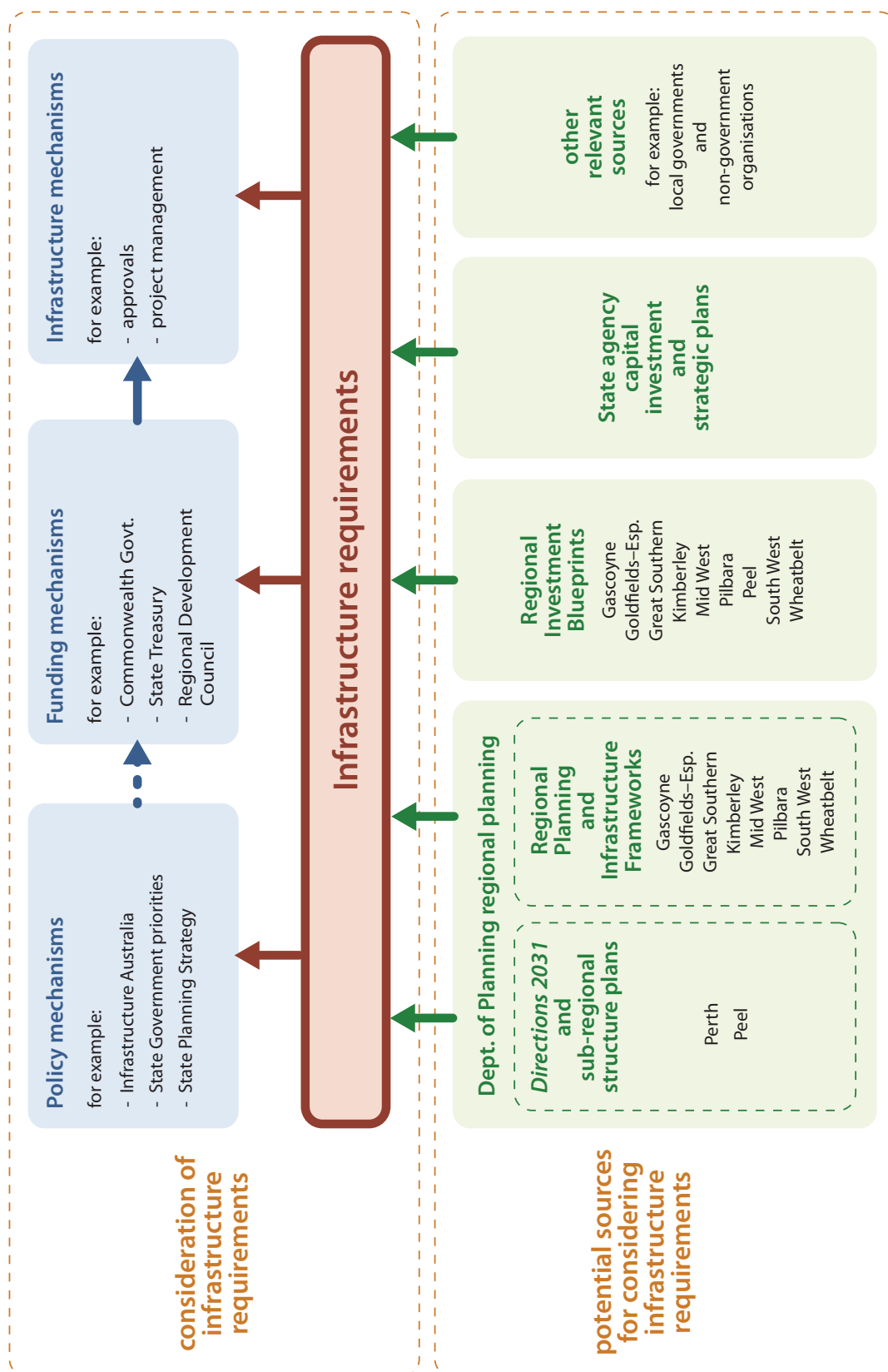


Figure 10: Considerations for identifying infrastructure requirements throughout the State



Through controlling the impacts of land uses in areas containing significant natural resources and cultural assets and directing development away from these areas, land-use planning has an important role in helping protect and manage these resources and assets. Strategic planning at regional and sub-regional scales are particularly important as it allows the consideration of natural resources and heritage early in the land-use planning process; and in particular, at a scale that is consistent with the extent of natural resource assets. It also allows greater effectiveness in dealing with possible cumulative impacts of individual planning proposals. Strategic regional planning also provides a context for planning by local governments, which are encouraged to integrate natural resource management considerations into local planning strategies and schemes.

Numerous government and non-government agencies undertake natural resource planning and projects in the Mid West. For example, non-government organisations such as the Northern Agricultural Catchment Council and Rangelands NRM Western Australia have a number of strategic initiatives and priorities to support and encourage the sustainable use of natural resources. Between them, they are responsible for many natural resource management activities and projects within the Mid West.

Responding to an evolving environment, including through adapting management practices, is an important economic and environmental consideration for the Mid West. For example, recent trends in the temperature, wind and rainfall experienced in the region have progressively been departing from historical weather patterns; and forecasts indicate that these tendencies are set to continue. Climate change potentially has implications for land-use activities in the Mid West such as:

- fishery production;
- water availability;
- suitability of areas for land uses such as agriculture;
- settlement patterns affected by changes in land use and environmental constraints; and
- coastal development setbacks and acceptable shoreline stabilisation techniques in response to sea level rise, storm events and changes in wave and wind patterns.

A number of initiatives to investigate such matters are occurring at a Federal, State and local level. It is important that these are given due consideration as they may have implications for future land-use planning in the Mid West.

The protection and management of the Mid West's natural resources and heritage assets can be assisted through ensuring that future development to support population growth occurs in a manner that has minimal adverse impacts on these resources. Based on this premise, several regional initiatives have been undertaken recently to build an understanding of associated natural resource management issues, including the conservation of biodiversity and waterways; regional flora and vegetation surveys; protection and management of the Moresby Range; and coastal vulnerability issues. For example, the Department of Agriculture and Food has conducted a study identifying high quality agricultural land in the Batavia Coast sub-region, through the consideration of natural resource assets, including land and water.

In addition, the Framework also supports a number of current and proposed initiatives, including the:

- the preparation of a natural resource management plan report for the Mid West to assist strategic regional land use planning for the region;
- investigation of basic raw materials needs and resources for the Mid West region;
- preparation of a regional supply strategy to manage the supply and demand of future potable and non-potable water uses;
- identification of high quality agricultural land in the North Midlands sub-region;
- adaptation planning for economic activities and land uses that may be affected in the event that forecast climatic changes are realised; and
- review of sites identified in Mid West local government municipal inventories.

The Framework also supports the ongoing implementation of current practices and programs that aim to manage natural resource assets, including the:

- incorporation of *Better Urban Water Management* framework principles in new development such as residential, rural residential and industrial areas;



- protection of public drinking water source areas through appropriate strategies, reservations and special control areas in local planning strategies and schemes; and
- preparation and/or implementation of management plans for national parks and marine parks.

3.6 Sub-regional planning

The Framework has identified three sub-regional planning areas that will form the basis of future planning and policy development for the Mid West:

- Batavia Coast;
- North Midlands; and
- Murchison.

The following sections briefly outline the key characteristics, challenges and planning implications for each of the sub-regional areas. It is essential that the regional implications are identified and understood.

3.6.1 Batavia Coast

The Batavia Coast sub-region comprises four local governments including the City of Greater Geraldton (part – former City of Geraldton–Greenough) and the shires of Northampton, Irwin and Chapman Valley.

Key characteristics

The Batavia Coast includes the Primary Centre of Geraldton and the two Regional Centres of Dongara–Denison and Kalbarri. The sub-region has a high level of natural amenity due to its close proximity to the coast, Moresby Range and the Murchison, Chapman, Greenough, Buller and Irwin Rivers and includes major tourism experiences along the length of the coastline. It also contains 84 per cent of the region's population and consequently the majority of the region's significant services and infrastructure are located within the sub-region.

Challenges

The City of Greater Geraldton has a vision to transform Geraldton into a world-class regional city of 100,000 residents over the next two decades. Major projects proposed for the sub-region, such as the Oakajee Port and Oakajee Industrial Estate, are expected to stimulate

economic growth and employment, as will the further development and expansion of resource and other projects.

As the population of the Batavia Coast has increased over time, the rural land base has become more fragmented, something that is particularly evident in the City of Greater Geraldton and the Shire of Irwin. This has resulted in a tendency toward an increased number but a decrease in size of rural lots (Department of Agriculture and Food, unpublished report 2010). Fragmentation of the rural land base and decreased rural lot sizes constrains the rural land base to adapt to a changing climate and reductions in rainfall.

Planning implications

This sub-region will have the greatest pressure for development and will therefore require careful growth management. For example, the sub-region and more specifically the City of Greater Geraldton, currently has enough undeveloped residential land to support a population increase of over 70,000 people at a moderate residential density of R20 (Western Australian Planning Commission, 2011).

Addressing land assembly processes, servicing and the requirement for further planning are issues that will need to be resolved to facilitate development of existing zoned residential land.

Similarly, careful consideration will need to be given to the growth management of both commercial and industrial land uses.

3.6.2 North Midlands

The North Midlands sub-region comprises seven local governments including the City of Greater Geraldton (part – former Shire of Mullewa) and the shires of Carnamah, Coorow, Mingenew, Morawa, Perenjori and Three Springs.

Key characteristics

The North Midlands contains 10 per cent of the Mid West's population and provides a diversity of natural environments and land uses from the Coolimba coast and the coastal towns of Green Head and Leeman to the inland town of Perenjori. Notably, the sub-region contains significant areas of prime dry land cereal cropping.



Challenges

A challenge for the North Midlands sub-region will be to retain and grow its population share.

There are a number of iron ore projects in close proximity to towns such as Morawa and Perenjori that in the next few years are expected to proceed to construction and operation phases. Careful consideration of the infrastructure requirements, including provision of water, power and social services, will be required to ensure these towns can service and benefit from the economic growth expected to be generated from the nearby iron ore projects. With Morawa also being identified as a SuperTown this will enable long-term planning to capitalise on these opportunities.

The recent completion of Indian Ocean Drive has increased potential for further development pressure and increased tourist numbers in the coastal areas of the sub-region.

Planning implications

There has been pressure in the past to develop new settlements along the coast near Green Head and Leeman. It is important that planning for the area continues to focus on expansion and consolidation of existing settlement nodes rather than the creation of new settlements.

3.6.3 Murchison

The Murchison sub-region comprises seven local governments including the shires of Cue, Meekatharra, Mount Magnet, Murchison, Sandstone, Wiluna and Yalgoo.

Key characteristics

The Murchison sub-region contains only six per cent of the region's population. It is predominantly made up of pastoral land uses and has the greatest number of existing and proposed resource projects out of any Mid West sub-region. The sub-region is also home to the Murchison Radio-astronomy Observatory, which has been selected as a dual-host site for the Square Kilometre Array radio telescope project. This will invariably lead to the development of associated infrastructure, which is expected to be significant for the Murchison along with the entire Mid West region.

Challenges

One of the key challenges for the Murchison sub-region is associated with its low and dispersed population over large distances. Servicing the sub-region from major centres such as Geraldton, and sometimes Kalgoorlie–Boulder, is problematic due to the great distances involved. This situation is further exacerbated for Wiluna due to the unsealed state of the Goldfields Highway section Meekatharra to Wiluna, which is in need of an upgrade.

An additional challenge for the Murchison sub-region will be to retain and grow its population share.

The extent to which shires within the sub-region can grow their population from activity resulting from resource projects will be largely dependent on influencing a change to the prevalent fly-in fly-out workforce approach.

Planning implications

Based on historic population trends and the continued migration of inland populations to coastal areas it can be reasonably expected that most towns in the Murchison sub-region will continue to experience decline which will impact on community numbers, school enrolments and health services.

Conversely if population growth did occur as a consequence of resource projects, there would appear to be adequate amounts of undeveloped zoned residential land in the Murchison sub-region to accommodate population growth. However, some of this undeveloped zoned residential land, particularly in the shires of Yalgoo, Cue, Wiluna and Meekatharra exists on unallocated crown land and therefore may require resolution of native title issues before any development can proceed. It is also important that sufficient infrastructure capacity is available to support further development.



Table 7: Implementation Actions

No	Initiative	Details	Lead agency	Status	Sub-region	SPS ¹
Planning and Governance						
1	Mid West Sub-regional Planning	Determine the form and priority for sub-regional planning in the Mid West.	DoP	Proposed	All	Ec, PI, SI, Env
2	Planning Reform	Ongoing implementation of strategic priorities and actions for the reform of the planning system as a result of Phase 1: <i>Planning Makes It Happen – a blueprint for planning reform</i> , and the development of Phase 2.	DoP	Underway	All	Ec, PI, SI, Env
3	Planning for Aboriginal Communities Program	Implementation of the DoP Planning for Aboriginal Communities Program within the Mid West region.	DoP	Underway	All	Ec, PI, SI
4	Regional Population Scenarios for the Mid West	To advise on population growth scenarios and/or aspirations for the Mid West.	MWDC	Proposed	All	Ec, PI, SI
5	Mid West Land Supply and Infrastructure Analysis	Undertake a residential and industrial land supply analysis of relevant Mid West settlements including an investigation into infrastructure requirements to service possible demand.	DoP	Proposed	All	Ec, PI, SI
6	Mid West Local Government Coastal Planning Study	Undertake a Mid West Coastal Planning Study to inform regional and local government planning.	DoP	Underway	Batavia Coast	Ec, Env
7	Local Government Assistance Program	Implementation of program, which is currently funded to 2014, to provide assistance to local governments within the Mid West to facilitate local planning processes including reviews and amendments to local planning strategies and schemes, structure plans and environmental assessment.	DoP	Underway	All	Ec, PI, SI, Env
8	Southern Inland Health Initiative	To dramatically improve medical resources and 24 hour emergency coverage within the Southern Inland catchment area, including areas within the Mid West.	WA Health	Underway	All	SI
9	Draft Country Sewerage Policy	Review the draft Country Sewerage Policy 2002.	WA Health	Underway	All	PI
10	WA Port Reform	Refine the governance structure of WA ports, including the consolidation of existing regional port authorities, in response to the recent WA ports review.	DoT	Underway	Batavia Coast	Ec, PI
11	Portlink	Portlink Inland Freight Corridor Development Plan. The concept aims to ultimately link Port Hedland, Kalgoorlie–Boulder, Esperance and Geraldton; and has the potential to build a more robust and flexible freight network.	DoT	Underway	Batavia Coast	Ec, PI
12	Social Housing Demand Model	To assist with policy, planning implementation and demand for the public, social and affordable housing sectors in the Mid West.	DoH	Underway	All	SI

No	Initiative	Details	Lead agency	Status	Sub-region	SPS ¹
Planning and Governance (cont.)						
13	Mid West Housing Affordability Study	Undertake an analysis of housing affordability in the Mid West region.	DoH	Underway	All	SI
14	City of Greater Geraldton Sustainable Future Cities Project 2029 & Beyond	Develop a sustainable planning framework around a revitalised city centre, supported by key activity centres that support employment, increased densities and multi model transport linkages.	CGG	Underway	Batavia Coast	Ec, Pl, SI, Env
15	Regional Waste Management planning	To investigate the need for comprehensive strategic regional waste management planning in alignment with the WA Waste Authority's <i>Western Australian Waste Strategy</i> , including strategic waste management plans and associated landfill environmental management plans.	DER, MWDC, LGAs	Proposed	All	Pl, Env
Economy and employment						
16	Mid West Regional Economic and Employment Lands Study	Undertake a regional economic and employment lands study for the Mid West to inform regional and local planning.	DoP	Proposed	All	Ec
17	Mid West Regional Tourism Planning Study	To understand current and potential tourism demand and investigate the need for additional tourism initiatives and requirements in the Mid West.	MWDC	Underway	All	Ec, Env
18	Mid West-Gascoyne Resources Development Strategy	Produce a high-level resources development strategy that identifies future work to support a situational analysis and facilitate economic transition in the Mid West and Gascoyne.	RDA-MWG	Underway	All	Ec
19	Mid West Regional Workforce Development planning	Further develop workforce strategies for the Mid West with respect to the direction contained in the State Government's framework <i>Skilling WA – a workforce development plan for Western Australia</i> , including those identified in the draft Mid West Workforce Development Plan.	DTWD	Underway	All	Ec
20	Mid West Regional Digital Economy Strategy	Establish a strategy to guide the development of the Mid West's telecommunications infrastructure to adequately service the region's economic and social requirements, including consideration of the impacts of new and emerging communications technologies.	DoC	Proposed	All	Ec
21	Rangelands Reform Program	Review land tenure arrangements in the Rangelands including diversification of uses in pastoral lands.	DoL	Underway	All	Ec
22	AgriFood 2025+	Scenarios based initiative to examine future opportunities for a globally competitive agriculture and food industry in WA.	DAFWA	Underway	All	Ec

No	Initiative	Details	Lead agency	Status	Sub-region	SPS ¹
23	Pathways to Resilience	Contribute to building profitable, innovative and sustainable farm businesses in lower rainfall environment.	DAFWA	Underway	Batavia, North Midlands	Ec
24	Future Horticulture	Aims to improve planning and policy outcomes that support the continuing development of fresh food in southern WA (>26°S), as well as identify new and alternative water supply options to support future growth opportunities for irrigated agriculture.	DAFWA	Proposed	Batavia, North Midlands	Ec
25	More Sheep	More Sheep is a partnership initiative of the Department of Agriculture and Food Western Australia (DAFWA) and the Sheep Industry Leadership Council (SILC) to address the critical issue of the decline in the Western Australian flock. Its primary focus is Western Australian producers, to assist them become more profitable by producing more sheep for the investment in their current flocks.	DAFWA	Underway	All	Ec
Transport and infrastructure						
26	Mid West Regional Investment Blueprint	Development of a Regional Investment Blueprint to inform State Government investment, that from a regional development perspective outlines the future direction of the Mid West region, including the identification of infrastructure priorities within the Mid West's three sub-regions.	MWDC	Underway	All	Ec, PI, SI
27	Mid West Investment Plan 2011-2021	Implementation of the project-based plan to inform investment (local, State and Commonwealth governments) and progress the delivery of infrastructure priorities within the Mid West's three sub-regions.	MWDC	Underway	All	PI, SI
28	State Aviation Strategy	Development of a State Aviation Strategy to support the economic and social development of Western Australia through aviation services and infrastructure; and to provide a sound framework for policy setting; and future planning and investment in Western Australian international and domestic air services and airport infrastructure.	DoT	Underway	All	Ec, PI
29	Mid West Regional Infrastructure Corridor Planning	Ongoing planning for the Oakajee Narnungu Infrastructure Corridor and to investigate wider regional corridor planning for the Mid West.	DoP	Underway	All	PI
30	Mid West Social Infrastructure Requirements Study	Undertake the Mid West Social Infrastructure Requirements Study to investigate social infrastructure requirements within the Mid West to inform regional and local government planning.	DoP	Underway	All	SI

No	Initiative	Details	Lead agency	Status	Sub-region	SPS ¹
Transport and infrastructure (cont.)						
31	Mid West Energy Planning Study	Undertake a study of the Mid West's regional energy infrastructure requirements, including transmission and generation, to meet demand and support regional development.	MWDC	Underway	All	PI
32	Mid West Wastewater Provision investigations	Identify and secure land suitable for development of sewerage treatment plants where required in the Mid West.	Water Corp	Underway	All	PI
Natural and cultural environment						
33	Basic Raw Materials Study	To investigate basic raw material needs and resources for the Mid West region.	DMP	Proposed	All	Ec, Env
34	Rock Lobster Fisheries Management Plan	Development of a long-term consultative fisheries management plan that considers sustainability of fish stocks and impacts that regulation has on fishing communities and peripheral businesses.	DoF	Proposed	Batavia Coast, North Midlands	Ec, Env
35	Natural Resource Management Land Use Plan Report	Prepare a natural resource management land use plan report to investigate the integration of natural resource management into strategic regional land use planning for the region.	DoP	Underway	All	All
36	Identification of High Quality Agriculture Land	Determine state and regional areas of High Quality Agriculture Land following identification and mapping of agricultural land quality for dryland and irrigated agriculture.	DAFWA	Underway	North Midlands	Ec
37	Mid West Regional Water Supply Strategy	Develop a water supply strategy to provide an outlook of future water demand for mining, industry, agriculture and urban expansion and the water supply options available to support the long-term growth of these sectors.	DoW	Underway	All	PI, Env
38	Mid West regional water planning	Coordination of regional water planning issues including groundwater allocation planning, drinking water source protection planning and rural water planning.	DoW	Underway	All	Env
39	Paleochannel and alluvial aquifer project investigations in the East Murchison and Gascoyne groundwater areas	Investigation of paleochannel and alluvial aquifer systems in the East Murchison and Gascoyne groundwater areas.	DoW	Underway	All	Env
40	Risk Management Strategy	Minimise vulnerability to agricultural industries seasonal variability through mitigation and adaptation strategies.	DAFWA	Underway	All	Ec

No	Initiative	Details	Lead agency	Status	Sub-region	SPS ¹
41	Review of Mid West Local Government Municipal Heritage Inventories	Conduct a review of municipal heritage inventories in the Mid West to identify conservation priorities and inform subsequent updates to inventories.	LGAs	Proposed	All	SI
42	Mid West Regional Cultural and Arts Action Plan	Development of an action plan to focus on cultural and arts activity outcomes for the Mid West region.	DCA	Underway	All	SI

¹ This column indicates an initiative's alignment with the strategic directions as presented in the *State Planning Strategy 2050* (Western Australian Planning Commission, 2014). The abbreviations for relevant strategic directions are explained in the list following this table.





List of acronyms

Lead agencies

CGG	City of Greater Geraldton
DAFWA	Department of Agriculture and Food WA
DoC	Department of Commerce
DCA	Department of Culture and the Arts
DER	Department of Environment Regulation
DoF	Department of Fisheries
WA Health	Department of Health
DoH	Department of Housing
DoL	Department of Lands
DMP	Department of Mines and Petroleum
DoP	Department of Planning
DTWD	Department of Training and Workforce Development
DoT	Department of Transport
DoW	Department of Water
LGAs	Local Government Authorities
MWDC	Mid West Development Commission
RDA-MWG	Regional Development Australia Midwest Gascoyne
Water Corp	Water Corporation

Strategic directions from the *State Planning Strategy 2050*

Ec	Economic development
PI	Physical infrastructure
SI	Social infrastructure
Env	Environment
Sec	Security







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Figure 11: Mid West Regional Planning and Infrastructure Framework

see A3 map



