

GOAL: ECONOMY

We value a healthy thriving economy that provides diverse employment opportunities while protecting the environment and enhancing social and cultural outcomes.



10 ECONOMY & EMPLOYMENT

10.1 ECONOMIC ANALYSIS

10.1.1 CURRENT ECONOMIC CONDITIONS

A summary of the City's economy is provided for below in **Table 13**, extracted from REMPLAN.

Table 13 Summary – City of Greater Geraldton Economy (REMPLAN, 2017)

Summary	Output \$M	Employment Jobs	Wages and Salaries \$M	Local Sales \$M	Regional Exports \$M	Local Expenditure \$M	Regional Imports \$M	Value-Added \$M
Agriculture, Forestry & Fishing	\$161.34	478	\$14.81	\$33.35	\$113.85	\$52.93	\$36.84	\$71.57
Mining	\$555.77	446	\$59.23	\$48.79	\$489.09	\$126.98	\$89.39	\$339.40
Manufacturing	\$725.34	736	\$87.40	\$258.03	\$329.50	\$171.94	\$418.71	\$134.69
Electricity, Gas, Water & Waste Services	\$168.38	183	\$24.60	\$75.32	\$42.74	\$64.13	\$22.16	\$82.10
Construction	\$708.33	1,320	\$113.54	\$256.26	\$102.10	\$363.92	\$130.77	\$213.65
Wholesale Trade	\$220.58	500	\$65.50	\$91.56	\$39.19	\$72.70	\$41.70	\$106.18
Retail Trade	\$247.87	1,894	\$97.39	\$33.20	\$31.35	\$62.75	\$33.09	\$152.03
Accommodation & Food Services	\$157.35	898	\$40.80	\$25.08	\$43.69	\$36.54	\$56.18	\$64.63
Transport, Postal & Warehousing	\$371.85	949	\$82.54	\$113.35	\$174.57	\$130.10	\$71.64	\$170.11
Information Media & Telecommunications	\$67.90	120	\$11.64	\$38.53	\$5.31	\$16.84	\$21.55	\$29.51
Financial & Insurance Services	\$206.80	285	\$46.88	\$135.77	\$3.53	\$42.15	\$28.36	\$136.28
Rental, Hiring & Real Estate Services	\$577.42	299	\$30.65	\$118.89	\$49.83	\$127.68	\$63.46	\$386.29
Professional, Scientific & Technical Services	\$195.50	624	\$63.58	\$163.04	\$7.40	\$64.83	\$39.51	\$91.16
Administrative & Support Services	\$98.67	350	\$45.17	\$80.41	\$9.17	\$31.21	\$17.06	\$50.40
Public Administration & Safety	\$246.36	1,098	\$120.85	\$26.42	\$28.77	\$63.80	\$36.42	\$146.14
Education & Training	\$218.39	1,487	\$147.25	\$5.25	\$48.09	\$33.28	\$18.58	\$166.53
Health Care & Social Assistance	\$248.42	1,827	\$152.43	\$3.93	\$13.02	\$41.99	\$26.01	\$180.41
Arts & Recreation Services	\$20.66	97	\$4.56	\$4.48	\$1.38	\$7.59	\$5.37	\$7.71
Other Services	\$123.60	730	\$43.08	\$37.57	\$31.42	\$37.90	\$22.61	\$63.08
Total	\$5,320.53	14,321	\$1,251.90	\$1,549.25	\$1,564.00	\$1,549.25	\$1,179.40	\$2,591.88

The majority of the region’s population resides in the Batavia Coast communities (84%), with 8% living in North Midlands and 8% in Murchison. In particular, Geraldton is home to 70% of the Mid West’s population, however most of the region’s major economic drivers are based inland (mining, farming etc). This creates an important symbiotic relationship between Geraldton and the Mid West hinterland; with significant co-dependence between Geraldton and the economic and trade activity that occurs inland. The capacity of Geraldton to service and support this economic activity is important.

The total number of businesses in Greater Geraldton in June 2016 was 2,955, which represents a -1.27% decrease from June 2014 where there were 2,993 businesses (REMPPLAN, 2017). This is demonstrated below in **Figure 19** which shows relatively consistent range of businesses within individual turnover brackets. This count only includes businesses which actively traded in goods or services.

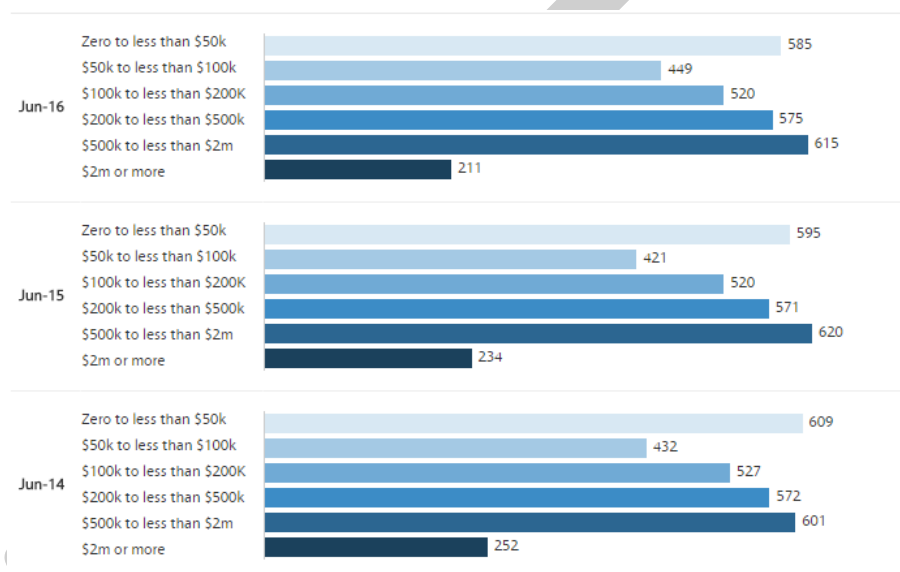


Figure 19 Total number of businesses in Greater Geraldton 2014-2016 (REMPPLAN, 2017)

It is regarded that Geraldton has significant capacity for further growth, with high levels of land availability, reasonably affordable housing, and well-established and robust infrastructure (CGG, 2017). At an economic level, there has been an analysis that has found a number of advantages (CGG, 2017):

- Comparative advantages: access to port infrastructure; well-developed road and industrial rail infrastructure; well developed industry activity fishing, water transport, transportation and logistics); local industry activity; and strong social capital.
- Competitive advantages: dominance of resources and agricultural sectors as a regionally significant cluster; strong alignment with Mid West regional competitive advantages and nationally identified growth opportunities (such as food and agribusiness).
- Collaborative advantages: evidence of collaborative models used; stakeholders have the opportunity to work together; businesses have responded to clustering initiatives.

10.1.2 EMPLOYMENT OVERVIEW

The Mid West recorded its highest level of employment at around 32,000 persons in 2012-13, and unemployment was at its record low of 2.7% in 2011-12 (DRD, 2014). Within the City of Greater Geraldton, unemployment was recorded at the census periods as 5.9% in 2006, 5.5% in 2011, and 8.8% in 2016 (ABS, 2017). With relatively high unemployment, there is capacity in the workforce.

The following numbers indicate that between 2011 and 2016, the total number of businesses in the City of Greater Geraldton reduced from 3,463 to 3,233 businesses (ABS, 2018). Notably, 58% of businesses do not employ additional employees; 26% employ 1-4 employees; 12.5% employ 5-10 employees; and 3% employ 20+ employees.

Table 14 Number of Businesses, City of Greater Geraldton (ABS, 2018)

Number of Businesses (as at 30 June)	2011	2012	2013	2014	2015	2016
Number of non-employing businesses (i.e. owner operator)	2,033	2,009	1,947	1,937	1,881	-
Number of employing businesses: 1-4 employees	939	900	813	811	842	-
Number of employing businesses: 5-10 employees	400	402	397	418	407	-
Number of employing businesses: 20+ employees	91	100	116	113	103	-
Total number of businesses	3,463	3,411	3,273	3,279	3,233	-

The 2016 Census recorded 16,701 employed persons within the City of Greater Geraldton, which corresponds to 71.6% of the total employed persons working in the Mid West region (ABS, 2017). The following **Table 15** identifies the types of occupations for employed persons within the City of Greater Geraldton, in comparison to the Mid West region and Western Australia.

Table 15 Occupation of Employed Persons aged 15 years and over (ABS, 2017)

Occupation	City of Greater Geraldton	Percent	Mid West Region	Percent	Western Australia	Percent
Managers	1,838	11%	3,328	14.3%	139,350	12%
Professionals	2,688	16.1%	3,423	14.6%	237,230	20.5%
Technicians and Trades Workers	2,838	17%	3,837	16.5%	187,396	16.2%
Community and Personal Service Workers	1,921	11.5%	2,444	10.5%	122,889	10.6%
Clerical and Administrative Workers	2,066	12.4%	2,680	11.5%	150,408	13%
Sales Workers	1,612	9.7%	1,948	8.4%	102,337	8.8%
Machinery Operators and Drivers	1,492	8.9%	2,348	10%	86,392	7.5%
Labourers	1,933	11.5%	2,864	12.3%	112,599	9.7%
Inadequately Described/Not Stated	311	1.9%	447	1.9%	19,132	1.7%
Total	16,701	100%	23,322	100%	1,157,735	100%

The *Mid West Workforce Development Plan 2015-2018* (DTWD, 2015) aims to build, attract and retain a skilled workforce to meet the economic needs of the Mid West region. It contains a range of priority actions which were identified by local stakeholders, to address local workforce development challenges. Importantly the *Workforce Development Plan* aligns with *Skilling WA* and the *Mid West Regional Blueprint*, which in turn through the Regional Development Council, is supported by the Federal Government's *Regional Education, Skills and Jobs Plan – Mid West Gascoyne* (DEEWR, 2013). The *Regional Education, Skills and Jobs Plan* recognised the job opportunities (relevant to City of Greater Geraldton) regarding Oakajee, iron ore operations, the 330kV transmission line (DEEWR, 2013).

The *Regional Education, Skills and Jobs Plan* noted that labourers and technical and trades positions were employed in mining and construction activities, as well as the agriculture, forestry and fishing sector. The government sector and other industries were noted to employ many managers, professionals and administrative and clerical workers. A survey of employers' recruitment experiences around 2011 indicated that at least one-quarter of vacancies in the Mid West Gascoyne regions were filled by job seekers requiring training, experience and development (DEEWR, 2013).

10.1.3 INDUSTRY PERFORMANCE OVERVIEW

Within the City of Greater Geraldton, total output in the area was estimated at \$5.3 billion (REMPAN, 2017). The top three major contributors to output were:

- Manufacturing: \$725.34 million (13.6%)
- Construction: \$708.33 million (13.3%); and
- Rental, Hiring & Real Estate Services: \$577.42 million (10.9%).

The total employment in the area was estimated at 14,321 jobs (REMPAN, 2017) and the top three major contributors to employment were:

- Retail Trade: 1,894 jobs (13.2%);
- Health Care & Social Assistance: 1,827 jobs (12.8%);
- Education & Training: 1,487 jobs (10.4%).

Contributors to employment for the City, the Mid West region, and WA are compared below in **Table 16**.

Table 16 Proportion of Employment by Industry Sector (REMPAN, 2017)

Industry Sector	Work in City of Greater Geraldton	Percent	Work in Mid West Region	Percent	Work in Western Australia	Percent
Agriculture, Forestry & Fishing	478	3.30%	1,934	8.60%	26,245	2.50%
Mining	446	3.10%	2,769	12.30%	70,035	6.50%
Manufacturing	736	5.10%	1,161	5.20%	89,430	8.40%
Electricity, Gas, Water & Waste Services	183	1.30%	207	0.90%	12,567	1.20%
Construction	1,320	9.20%	2,057	9.10%	112,725	10.50%
Wholesale Trade	500	3.50%	607	2.70%	38,591	3.60%
Retail Trade	1,894	13.20%	2,229	9.90%	109,652	10.20%
Accommodation & Food Services	898	6.30%	1,488	6.60%	64,184	6.00%
Transport, Postal & Warehousing	949	6.60%	1,220	5.40%	49,645	4.60%
Information Media & Telecommunications	120	0.80%	128	0.60%	11,643	1.10%
Financial & Insurance Services	285	2.00%	321	1.40%	27,864	2.60%
Rental, Hiring & Real Estate Services	299	2.10%	349	1.50%	19,015	1.80%
Professional, Scientific & Technical Services	624	4.40%	778	3.50%	78,988	7.40%
Administrative & Support Services	350	2.40%	543	2.40%	34,021	3.20%
Public Administration & Safety	1,098	7.70%	1,539	6.80%	68,494	6.40%
Education & Training	1,487	10.40%	2,052	9.10%	87,710	8.20%
Health Care & Social Assistance	1,827	12.80%	2,149	9.50%	112,703	10.50%
Arts & Recreation Services	97	0.70%	137	0.60%	14,638	1.40%
Other Services	730	5.10%	858	3.80%	42,621	4.00%
Total	14,321	100.00%	22,526	100.00%	1,070,771	100.00%

10.1.4 GERALDTON INDUSTRIAL AREAS

The *Greater Geraldton Structure Plan* (WAPC, 2011) identifies industrial and service commercial general land use categories, and these have been considered within the preparation of the City's *Local Planning Strategy* and Local Planning Scheme No. 1.

There are two key locations for industrial land within the Geraldton vicinity: Nangulu Industrial Estate and the proposed Oakajee Strategic Industrial Estate, refer **Figure 20**. In 2012, LandCorp prepared a structure plan for the Oakajee Strategic Industrial Estate on the basis of the impending construction of the Oakajee Port and Rail expansion project. Oakajee lies just outside of the City of Greater Geraldton; however, its development would have a significant impact on the municipality and the Mid West region. Nangulu Industrial Estate is located within the City of Greater Geraldton and holds more certainty in terms of an industrial future.

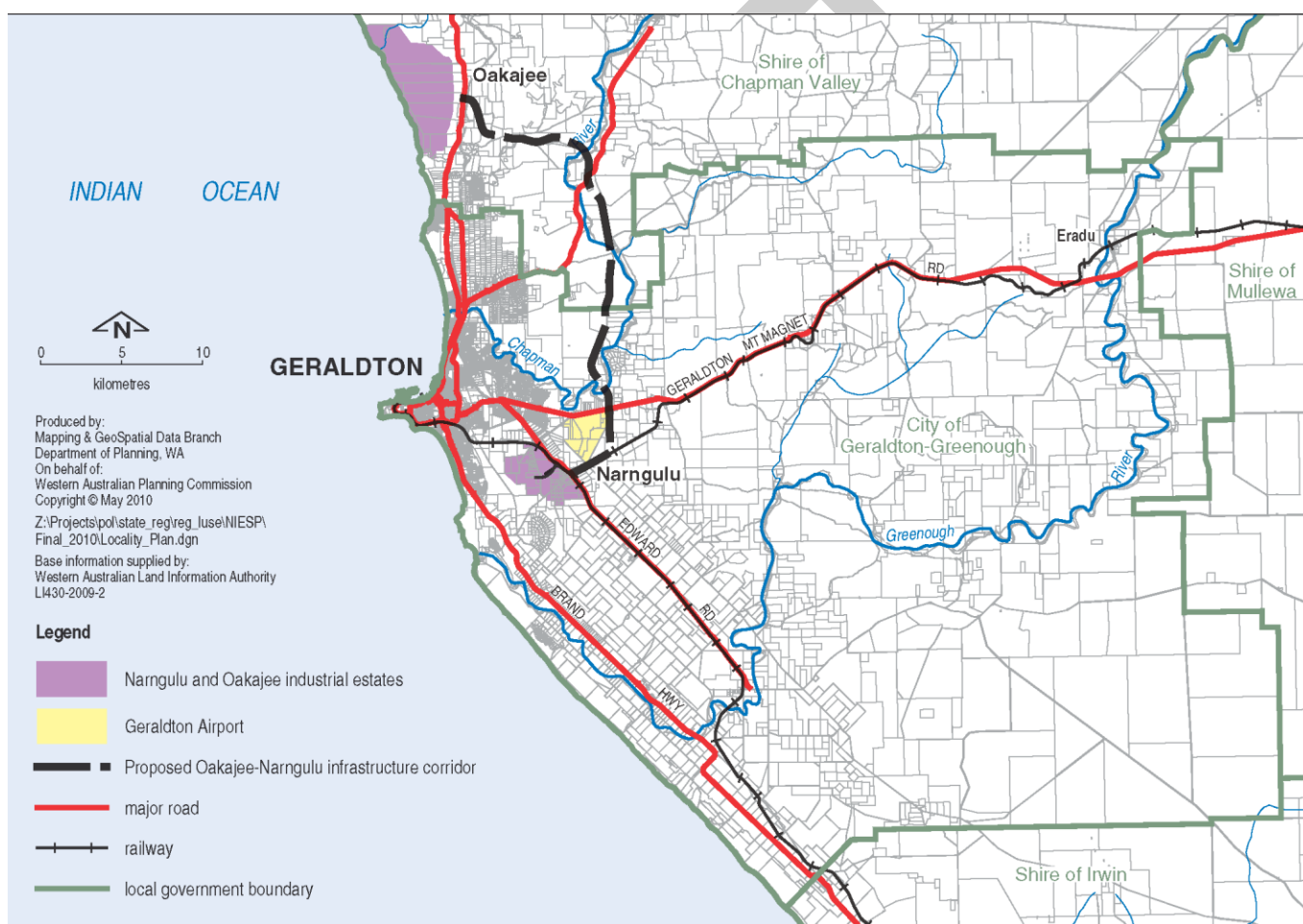


Figure 20 Regional Locations of Nangulu and Oakajee in context of Geraldton (WAPC, 2010)

10.1.4.1 NARNGULU INDUSTRIAL ESTATE

Nangulu Industrial Estate is approximately 5 kilometres south-east of the Geraldton City Centre.

Under the Local Planning Scheme No. 1, approximately 1,130 hectares of the Industrial Estate is zoned 'General Industry' and 129 hectares is zoned 'Light Industry', along with a number of 'Public Purposes' landholdings, and the balance being zoned 'Rural'. The estate is presently occupied by a wide range of industrial uses, including mineral sands processing, tanneries and general support industries.

The *Narngulu Industrial Area Strategic Land Use Directions* (WAPC, 2010) identified constraints on development including the limited supply of land for general and heavy industry; proximity to urban areas and Narngulu residences; and the need to maintain an adequate buffer. The report also recognised a number of precincts (refer **Figure 21**), described as follows.

Precinct A – this precinct comprises areas identified for future light industry / service commercial and mixed business. There is also a notional special design area subject to development and subdivision of this precinct, not recommended until the proposed Geraldton North-South Highway design and land assembly requirements are finalised. Land along this highway corridor and Geraldton-Mt Magnet Road will enjoy high levels of exposure to passing traffic, however, access into these areas from main arterials will need to be minimised and any future development will require careful consideration of traffic access and movement into and out of the Precinct.

Future uses will need to comply with the buffer requirements of Special Control Area 2 – wastewater treatment plan and Special Control Area 4 – Meru waste disposal facility, as shown on the Local Planning Scheme No. 1.

Precinct B – this precinct is subject to the requirements of Special Control Area 3 – Geraldton Airport, as shown on the Local Planning Scheme No. 1. The Strategic Land Use Directions Plan (**Figure 21**) also refers to a Narngulu Industrial Estate buffer and the Geraldton Regional Prison buffer. This precinct comprises a small portion of future general industry use, but is predominately zoned 'Rural' in Local Planning Scheme No. 1. Once the industrial area is developed, the rural portion could be reviewed.

Precinct C – existing general industry and light industry are the predominant land uses. The extent of land zoned 'General Industry' is updated and shown on the Local Planning Scheme No. 1, with a portion shown on **Figure 21** as general industry is now reserved 'Strategic Infrastructure: Airport' under Local Planning Scheme No. 1. The proposed Oakajee Narngulu Infrastructure Corridor runs through the middle of this precinct, and is labelled as a Development Investigation Area 6 – Narngulu in the *Local Planning Strategy* (CGG, 2015). The future development of this area should be considered in line with the finalisation of the future of the ONIC and interface of adjacent land uses to this corridor. Given the proximity of Precinct C to the Geraldton Airport, it is recommended that any future development proposals consider the impact on and future development of the airport.

Within Precinct C, the Geraldton Airport Technology Park is established to form a strategic hub providing for a range of aviation and non-aviation services and employment opportunities. The Technology Park is fully serviced including with fibre optic technology.

Precinct D – comprises existing light industry and future light industry areas. A large portion of this precinct is affected by the Special Control Area 4 – Meru waste disposal facility, as shown on the Local Planning Scheme No. 1. The Strategic Land Use Directions Plan (**Figure 21**) also refers to a Narngulu Industrial Estate buffer.

Future development will not be allowed direct access to/from the Southern Transport Corridor. There would be a major intersection at the Geraldton North-South Highway and Geraldton-Mt Magnet Road, and therefore careful transport planning and accessibility considerations will need to be articulated within structure planning exercises for new development.

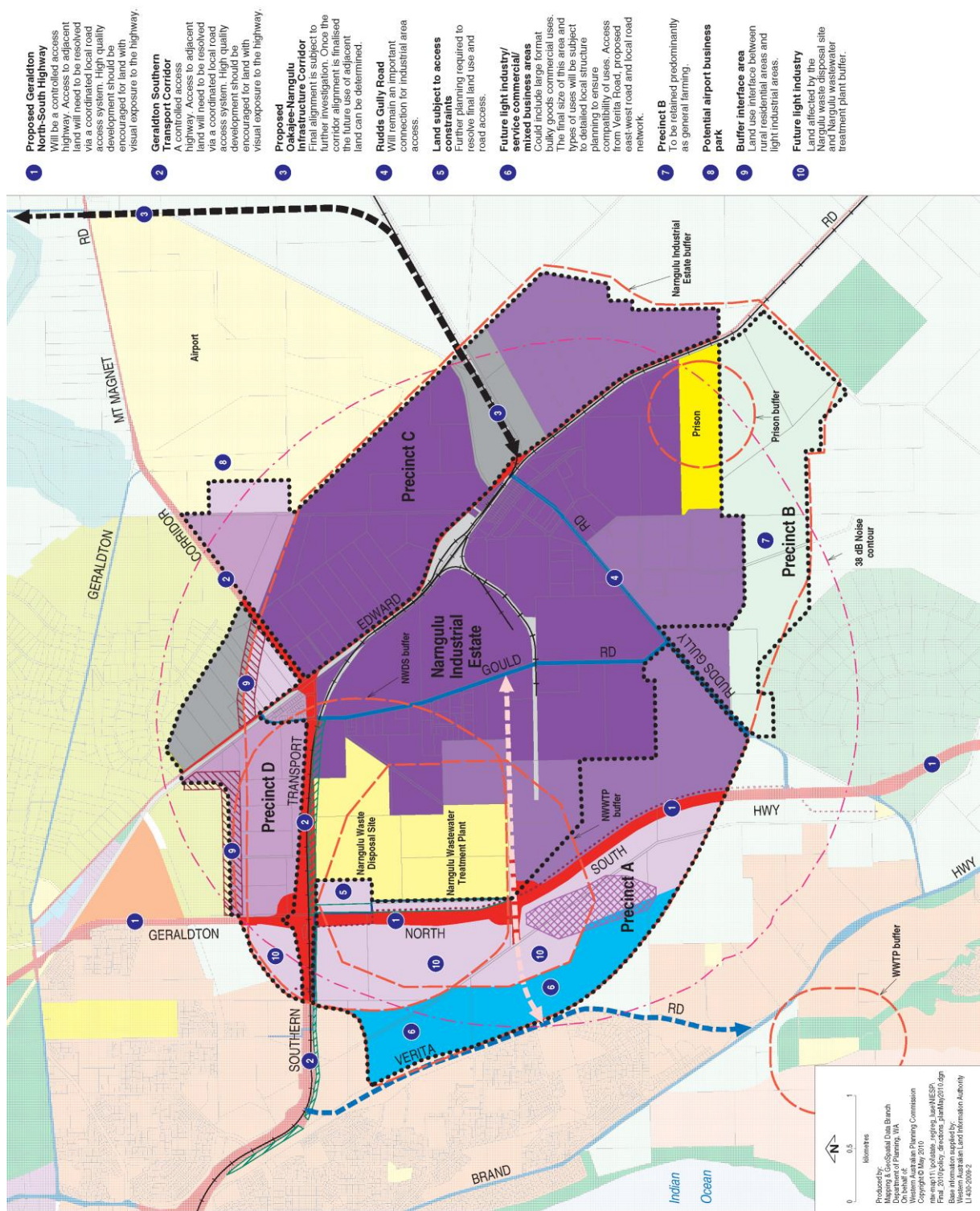


Figure 21 Strategic Land Use Directions Plan (WAPC, 2010)

10.1.4.2 OAKAJEE STRATEGIC INDUSTRIAL ESTATE

The Oakajee Strategic Industrial Estate is located 20-23 kilometres north of Geraldton. LandCorp owns the majority (99%) of the Strategic Industrial Estate, which comprises 6,400 hectares in freehold ownership and currently subject to short-term leases for agricultural purposes (LandCorp, 2018). The Oakajee Port (1,000 hectares) would be transferred to the Mid West Ports Authority once it is developed.

The WAPC approved the *Oakajee Industrial Estate Structure Plan Report* on 24 April 2012, which allocates land as follows (and refer **Figure 22**):

- Strategic Industry Area: 1,134.6 hectares;
- Coastal Area: 1,002.2 hectares;
- General Industry Area(s): 196 hectares;
- Buffer: 4,071.6 hectares.

The port would cater for 'Cape' and 'Panamax' class vessels and enhance links to a number of international destinations. It would be reliant on the construction of the Oakajee Narngulu Infrastructure Corridor (ONIC) and Oakajee Port and Rail alignments to provide links to the Narngulu Industrial Estate, Geraldton, and the mining provinces. The Oakajee Port's proximity to Geraldton is beneficial as the city can provide labour force housing/accommodation and major services and amenities for a permanent workforce.

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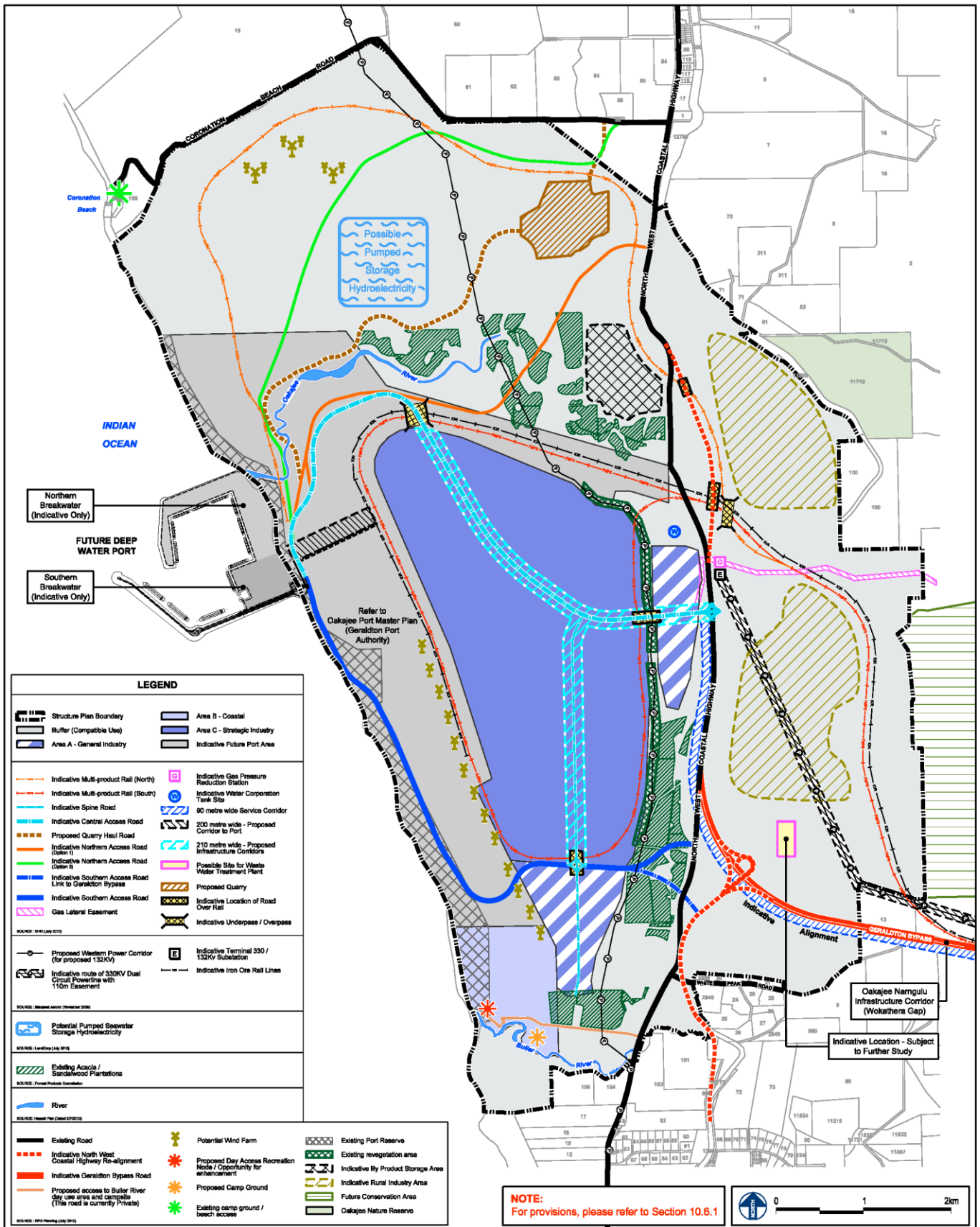


Figure 22 Oakajee Industrial Estate Structure Plan (RPS; LandCorp, 2012)

10.1.4.3 OTHER SITES

Webborton Industrial Estate is situated approximately 3 kilometres north-east of the Geraldton City Centre. Under Local Planning Scheme No. 1, approximately 248 hectares are zoned 'Light Industry'. A number of large properties are vacant or underutilised, indicating that there is potential for further intensification of the estate. Some functional limitations of land have resulted in increased activity in Narngulu. These limitations will need to be addressed in order to support intensification of development in the future.

Mullewa has 39 hectares of land zoned 'General Industry' under the Local Planning Scheme No. 1. Lots are substantial in size and are located eastwards of the town, providing sufficient distance from other uses to accommodate general industry or transport/logistics uses that may want to establish in Mullewa.

CBH has a well-established Primary Receival site in Mullewa to facilitate the storage and transfer of grain to Geraldton Port. Sites to the north of the rail line and along the Geraldton-Mt Magnet Road are occupied by CBH. The CBH facility in Mullewa is identified as one of 100 sites that currently receive 90% of the annual crop (CBH Group, 2016). In the future, Mullewa along with Geraldton, Narngulu and Moonyoonooka will be four of 16 sites in the Geraldton zone that CBH will focus capital and maintenance expenditure. Pindar and Sullivan are identified as sites for emergency or surge storage or other special uses as seasons require (CBH Group, 2016).

The Square Kilometre Array project, based in the Shire of Murchison, will be a significant contributor to the development of a more science and technology focused industries and workforce in the City of Greater Geraldton. The SKA requires a radio quiet zone, as reflected on the *Local Planning Strategy*. There is potential for additional industry and commercial opportunities to be considered in the City, as a result of the infrastructure (such as the National Broadband Network, refer **section 15.2**).

10.1.4.4 BUFFERS

Appropriate buffers have been identified in the *Local Planning Strategy* to avoid conflict between industry and/or essential infrastructure, and sensitive land uses. Through the preparation of the Local Planning Scheme No. 1, buffers were included for the following:

- Modelled wastewater treatment plant buffers;
- Meru waste disposal facility; and
- Geraldton Airport.

10.1.4.5 LAND SUPPLY

It is noted that further development within the Narngulu Industrial Estate could be undertaken, by rezoning lands identified for future industrial, service commercial, mixed business areas as required to provide an ongoing land supply. Strong development pressure exists within the Precinct C, and will need to be carefully planned in the future.

Land within Webborton is also identified for further intensification subject to ensuring constraints to development are addressed.

The development of Oakajee remains uncertain, and until such time as development occurs and links are made to Oakajee, development pressure will likely be placed on Narngulu Industrial Estate given its proximity to and linkages with Geraldton Port. Future planning of the Narngulu Industrial Estate will need to be cognisant of the decisions surrounding the future of the Oakajee port and rail project.

10.1.5 BASIC RAW MATERIALS

Basic Raw Materials are defined in SPP 2.5 as “sand (including silica sand), clay, hard rock, limestone (including metallurgical limestone), agricultural lime, gravel, gypsum and other construction and road building materials” (WAPC, 2016). The materials may be of State, regional or local significance depending on the resource location, size, relative scarcity, value and demand for the product. The ready supply of basic raw materials in reasonable proximity to developing areas is an important element of managing the costs of land development.

The Department of Mines, Industry Regulation and Safety (DMIRS) has completed a geological review of the City of Greater Geraldton and has supplied datasets to the Department of Planning, Lands and Heritage that show the ‘Significant Geological Supplies’ resource areas and separation areas (refer **Figure 23**). Much of the basic raw materials is within the rural and rangeland areas and is not under any direct conflict with development. This understanding may need to be updated to identify any conflicts with the current extent of development.

Consistent with SPP 2.5, Significant Geological Supplies (SGS) and their buffers are not to be developed for other purposes until the resource is extracted, or unless development is compatible with the future extraction of the resource. Proposals that are located within the areas identified on **Figure 23** will be assessed with regard for the proposal’s potential impact upon the existing and potential extraction of the SGS resource.

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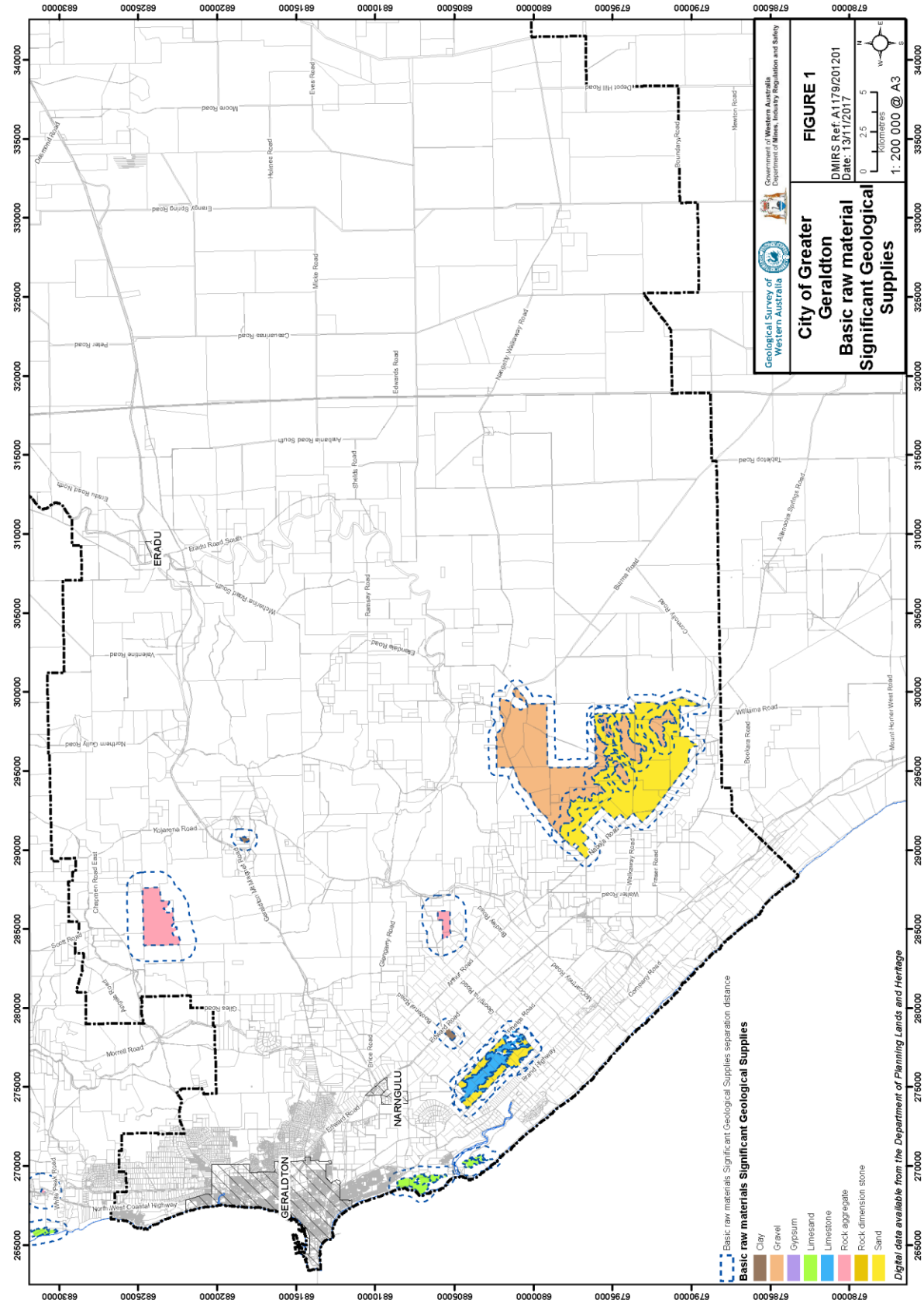


Figure 23 City of Greater Geraldton Basic Raw Material Significant Geological Supplies (DMIRS 2017)

Basic raw materials within the CGG are:

- Fill and Concrete Sand – sand has been excavated from a variety of land units over the years, mostly for fill and concrete sand. Quartz sand is available in the Tamala, Dissected and Sand Plain land units, and there are sand pits operating in a number of locations. This sand requires little or no processing apart from perhaps screening.
- Silica Sand – leached white silica sand has export potential as a source of pure silica, although availability is limited. Fine sand, which is preferred for export, only requires washing.
- Lime Sand – lime sand is excavated from the northern end of the Southgates Dunes. This sand is 80% calcium carbonate which is used for neutralising acidic agricultural soils. With continued growth of legumes such as lupins, and fertiliser application, lime resources will be an ongoing requirement to support the rural industry.
- Gravel – laterite gravel is present on mesa tops and on the plateau remnants. However, these areas also typically have remnant vegetation. Active and completed gravel pits frequently bottom on duricrust, which restricts rehabilitation and future land use.
- Limestone – Tamala limestone is used as road base, road sub-base, armour rock for breakwaters and groynes as well as cement manufacture if the grade is high enough. Generally, the grade of limestone will not be high enough for cement manufacture. Areas need to be set aside along the cleared Narngulu-Walkaway Tamala dune for the future extraction of limestone. Development has already sterilised the taking of limestone from north-western parts of the district. Limestone with high levels of calcium carbonate can be crushed for use as agricultural lime.
- Hardrock – there are two hardrock quarry areas at Beatenally Hill and Button Hill. The quarries extract granitic rock for aggregates, road bases, armour stone and highway seal coats. Currently the land uses around these areas are rural, but long-term protection is required with the use of buffers.
- Clay – clay is extracted from the Greenough Flats at Bootenal with other deposits from scattered sites such as Kojarena where white kaolin clay is mined. Other clay deposits can be expected to occur across the Greenough Flats and the Dissected Area.
- Phosphate – the Jurassic Bringoo Shale and Colalura Shale at Bringoo are both phosphatic but have no economic potential at this stage.

10.1.6 MINING

10.1.6.1 OVERVIEW

The value of minerals and petroleum for the Mid West Region for 2015-16 are provided in **Table 17**. Mining is the highest dollar value industry in the Mid West, valued at \$2.4 billion in 2015-16 (REMPPLAN, 2017) (DMIRS, 2016). Mining supplied approximately 2,769 jobs which accounted for 12.3% of the region's jobs (REMPPLAN, 2017) and 2.7% of people directly employed in the WA mining industry (DMIRS, 2016).

The export of iron ore from Geraldton Port almost trebled from 5.3 million tonnes per annum in 2011-12 to 14.4 million tonnes per annum in 2013-14, attributed to the Karara Mine commencing production and reaching towards its nameplate capacity (MWDC, 2015). The majority of iron ore is exported to China (approximately 95%) with the balance going to South Korea, Taiwan and Japan.

Mining is subject to international demand and supply of commodities and the value of the commodities as a result. Declining prices, particularly for iron ore, has had repercussions through the mining industry. Mining investment in Western Australia dropped 23% in 2015-16. DMIRS notes that exploration, investment and production across a range of commodities has changed since the resources boom, where the project development trend is to suspend or delay to await more favourable market conditions (DMIRS, 2016).

Table 17 Value of Minerals and Petroleum, Mid West Region, 2015-16 (DMIRS, 2016)

Meekatharra and Morawa	773,982,732
Yalgoo	513,942,601
Wiluna and Three Springs	348,419,018
Cue, Coorow and Geraldton	585,224,194
Mullewa and Mt Magnet	81,978,040
Northampton and Perenjori	37,805,795
Irwin	48,577,882
Carnamah	32,272,289
TOTAL	2,422,202,551

A summary of commodity prospects is outlined below and these are depicted in **Figure 24**.

- Coal – there is potential for coal in the Perth Basin, west of the Darling Fault with two main projects, Eradu project and Irwin River project.
- Iron ore – the former Tallering Peak Iron Ore mine is located 60 kilometres north of Mullewa. It ceased operation in 2014. However, there is potential for further iron ore mining in the region. Beyond the City, there are a number of proposed or operating iron ore projects. The closest operating mine is Karara, which is about 65 kilometres south-east of the City.
- Gold and base metals – there is high potential for gold and base metals in greenstone belts in the Archean granites east of the Darling Fault. There are known gold resources in the north-east corner of the City at the Snake Well gold project and east of the City at the Deflector gold project.
- Petroleum – at present, there is one petroleum title in the City. Due to the shallowing of the Perth Basin, it is considered to have comparatively low prospectivity for oil and gas within the City.

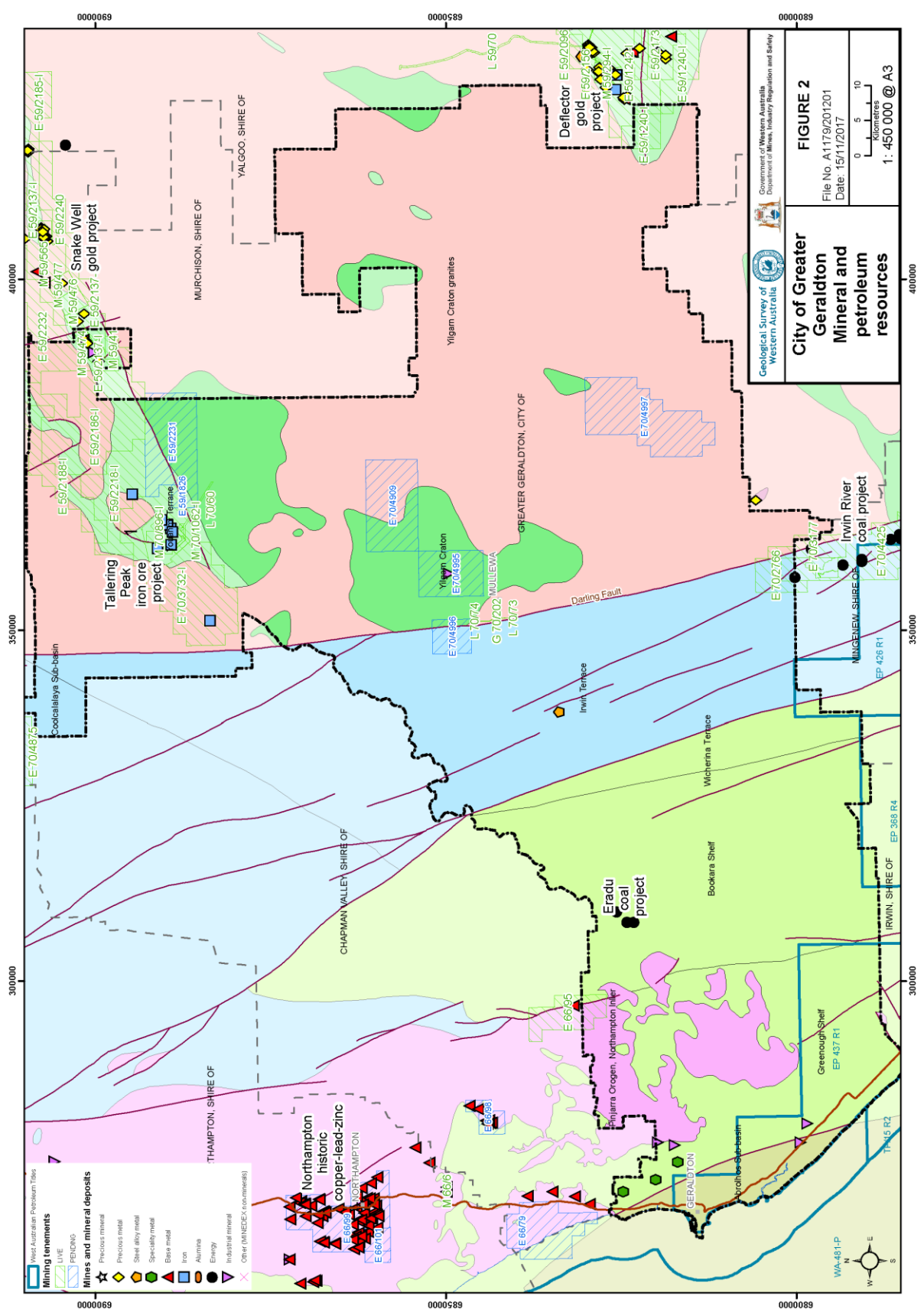


Figure 24 City of Greater Geraldton Mineral and Petroleum Resources (DMIRS 2017)

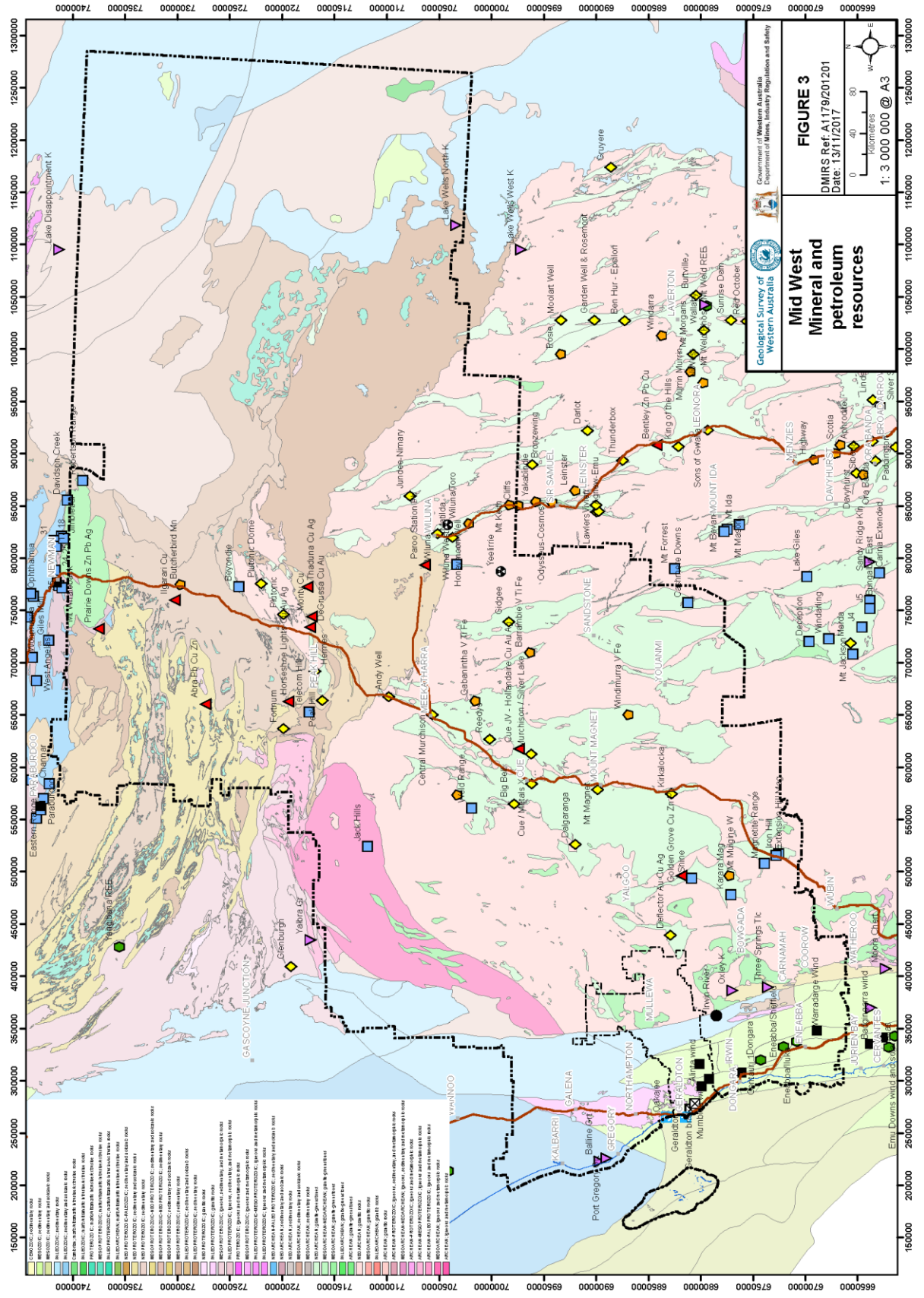


Figure 25 Mid West Mineral and Petroleum Resources (DMIRS 2017)

Regional mining activity potentially presents significant implications for the communities of the Greater Geraldton municipality, in terms of transport movements and infrastructure demands, and industry servicing and employment opportunities. Trade through Geraldton Port and the development of the Oakajee Port and Rail project will be critical to achieving major growth in the region's driver industries.

10.1.6.2 REGIONAL CHALLENGES IN SUPPORTING MINING GROWTH

Challenges affecting future growth in the mining industry in the Mid West include:

- Infrastructure requirements such as a deep water port, rail, power and water may limit future expansion of mining in the region;
- Uncertainty of demand due to slower than predicted international economic growth and political instability;
- Increased competition from rival suppliers in South America and Africa;
- Region's strong concentration of iron ore projects with a lack of diversification to absorb movements in price of a single commodity;
- Oakajee Port and Rail Project timing of implementation. While there is scope to upgrade Geraldton Port there is a limit to the quantity of resources passing through the town. The success of a number of mining projects within the Mid West is dependent on Oakajee Port and Rail project;
- Timely delivery of the Mid West Energy Project northern section;
- Support and recognition of the importance of FIFO as an employment choice;
- Delays at Perth airport and complicated arrangements surrounding charter licensing provide inefficiencies for FIFO to the Mid West mining operations. Also, the capacity of the Geraldton Airport to support an upswing in FIFO workers provides a constraint to efficient resourcing;
- The industry values highly the control benefits that come with owning and operating sole project based infrastructure. While there are examples of joint use of infrastructure in the region, there is a low level of industry collaboration due to the geographic spread of the various mine sites and varying infrastructure needs; and
- Rapid growth in development of unconventional oil and gas production (i.e. shale) within the US has the potential to undermine projects in WA where labour shortages and high costs are a problem.

There are also a number of social challenges relating to further Mid West resources industry development such as:

- A key for the Mid West will be recruitment of good professionals and workers with appropriate skills;
- This places a demand and need for housing and social infrastructure to support these additional workers in the region;
- Increased FIFO workers could mean a loss of community through transient employment as well as an unbalanced gender composition. Measures will need to be put in place to counteract this and to encourage workforce to be accommodated within existing settlements where practicable; and
- Government services and community infrastructure will be strained resulting in traffic congestion, shortages of rental properties, and shortages of essential services such as health. Careful planning of social infrastructure to support this industry in strategic locations will be required.

10.1.6.3 REGIONAL OPPORTUNITIES FROM MINING

Companies are looking into technological solutions to reduce costs and maintain the safety of operations. Automation is becoming more common and this has the ability to reduce the amount of human labour required for operating mine sites. Whilst this may be perceived by some as a challenge, it can also be interpreted as an opportunity as recent growth in automation such as automated transportation options and drone technology will undoubtedly expand in response to high labour costs in the mining industry, and community opposition to FIFO workforces may also force the issue.

The roll-out of the National Broadband Network (refer **section 15.2.1**) will assist with industry having remote control of operations, and other forms of automation. A risk for the Mid West is that operations could be centralised in Perth, although it is recognised that mine sites would not be fully automated. This may have a dual effect of reducing labour requirements for mines, but also may improve the viability of mines, which could lead to the opening of new ventures. This will create opportunities in the downstream supply of value-add product in the region's industrial sector.

The Oakajee Industrial Estate has the potential to support substantial employment in downstream and service industries that can support and complement resource sector activities. Development of this land may require the extension of the 330kV electricity transmission line from Three Springs to Oakajee.

The Goldfields Gas Transmission Pipeline and the Mid West Gas Pipeline have stimulated an increase in exploration and mining activity in the east Murchison. Sealing of the Mt Magnet-Leinster Road, coupled with the Southern Transport Corridor and port enhancements would provide companies in the East Murchison and northern Goldfields with more cost-effective transport infrastructure.

Mining projects in the Mid West will improve the local tax base for local governments, via collection of rates, and provide an additional range of jobs for local young people. This would help to retain more young people in the region, to offset migration to metropolitan centres. It also provides improved prospects for the growth of local industries servicing the mining operations.

10.1.7 MARITIME AND FISHING

Due to the length of its coastline and diversity of commercial species, fishing is an integral industry for the Mid West. It represents approximately 39% of the State's total catch value, making the Mid West the highest-value fishing industry in Western Australia totalling \$116 million annually (MWDC, 2015). Geraldton is the regional centre for commercial fishing and shipping. According to the *Mid West Investment Plan 2011-2021* (MWDC, 2011), the fishing sector constituted 4% of the region's Gross Regional Products for 2009-10. Together, 11.3% of the regional workforce is employed in the Agriculture, Forestry & Fishing sector (REMPPLAN, 2017).

The Abrolhos Islands support a wide array of fish and invertebrate species, making it a priority target area for commercial, recreational and charter fishing in the Mid West region (DoF, 2012). Numerous aquaculture licences have been granted for the production of various pearl oyster species, finfish, western rock oysters, corals and sponges at the Abrolhos. There is increasing interest at the Abrolhos for aquaculture of these and other marine species. The Department of Primary Industries and Regional Development aims to manage all commercial and recreational fishing under an Ecosystem-based Fisheries Management Framework to maintain sustainable fish populations.

In September 2017 the Minister for Fisheries announced a new Aquaculture Development Zone near the Houtman Abrolhos Islands. Aquaculture is an emerging industry and the Aquaculture Development zone opens up 2,200 hectares in addition to the existing 800 hectares already subject to an existing aquaculture licence. The new Aquaculture Development zone has the potential for 48,000 tonnes of marine finfish annually and creation of up to 1,400 jobs (Government of Western Australia, 2017). Environmental processes within the zone have been streamlined to ensure it is 'investment-ready' for setting up large-scale commercial aquaculture operations.

The trend of fish and seafood as a diet staple has grown dramatically. According to the studies by the Australian Department of Agriculture, demand for aquaculture and fishing product are expected to remain constant with growth of over 170% predicted between 2010 and 2031, equivalent to 5-8% per annum. The aquaculture industry for the Mid West now includes freshwater production of finfish, marron and yabbies, and marine production of finfish and pearl oysters.

Recreational boating is an important lifestyle and cultural component within the region, with a steady growth in the number for vessels. The City accounts for half of the vessels in the Mid West region (WAPC, 2017). Within the City of Greater Geraldton, there are boat launching ramps at the Batavia Coast Marina and at Town Beach, and an informal beach launching area at Drummond Cove.

Batavia Coast Marina has 84 floating pens and a double boat launching ramp with one jetty and fishing platform. The Marina is identified to have capacity for an additional 80 pens. It is understood that there is not always pens/moorings available to meet demand, so there is a waitlist. Additional boating facilities would be subject to growth in the number of vessels in the region, and visitor numbers, to justify expanding existing facilities (WAPC, 2017).

The *Mid West Investment Plan 2011-2021* identified a number of flagship maritime projects that will be of value to the economy of the Batavia Coast area (which partially includes the City of Greater Geraldton):

- Batavia Coast Marina Enhancement: \$20 million taking 3-4 years to develop;
- Eastern Breakwater Development: \$4.3 million taking one year to develop; and
- Coastal management and erosion: \$5 million taking 1-4 years to develop.

The *Mid West Investment Plan 2011-2021* recommended an annual review to ensure that flagship projects remain current in their need. The City's *Greater Geraldton Economic Development Strategy 2013-2023* (CGG, 2013) indicated aquaculture as a growth sector, as well as marine sciences. The EDS also highlights the need for direct efforts towards developing higher value-added outputs through new and emerging industries, in order for the Mid West economy to remain diverse and robust against external challenges. The *Mid West Investment Plan 2011-2021* also recommends continued investment in fisheries research and management as well as encouragement of investment in aquaculture and fish farming (MWDC, 2011). Examples of investment areas could include aquaculture farms, down-line processing and packaging facilities, improved methods and productivity for aquaculture management, and research and development in specialised business incubation.

10.1.8 MANUFACTURING AND CONSTRUCTION

Manufacturing and Construction are two of the key industries characterising Geraldton's economy (CGG, 2013). Manufacturing activity includes goods processing and supply to fishing, agricultural and mining industries. This includes boat building, superphosphate production and mineral sands processing. As at 2016, Manufacturing and Construction had a combined output producing around \$1.43 billion, or 26.9% of City's total economic output (REMPPLAN, 2017). The *Mid West Investment Plan* (MWDC, 2011) identifies key industry segments for future growth into a diverse manufacturing base including:

- Renewable energy;
- Mining;
- Port, road and rail support services; and
- Fisheries, aquaculture, agriculture and horticulture value-adding product.

A further manufacturing consideration may be support products for the Australian Square Kilometre Array Pathfinder project.

The Mid West construction industry has experienced fluctuating growth in response to economic trends in the region. It could be said therefore that the region's construction industry is strategically linked to the economic development of the regional area. Forecasts put building and construction value in 2021 at \$380 million, 2025 at \$403.5 million, and 2031 at \$434.49 million.

The Federal Government has recommended within its report *Future Energy Efficiency*, a national increase in energy efficiency by 30% requiring such technologies such as cleaner, more efficient transport, and greener buildings. It is likely that if this trend towards cleaner construction activity continues, there will be further markets for new technologies in this area.

In order to support the manufacturing and construction industry, the *Mid West Region Investibility Model* suggests the following actions:

- Training for people in trades;
- Local companies linking with key technologies and building methodologies for energy efficiency, building efficiency, and supply chain efficiency;
- Establish sound marketing of the industry within the region to support regional employment growth and reduction of temporary FIFO arrangements; and
- Review of planning legislation to include compulsory sustainability measures and affordable housing provision.

10.2 KEY CONSIDERATIONS / ISSUES

Significant infrastructure projects including the Oakajee to Narngulu Infrastructure Corridor, the Oakajee Port and Rail project as well as the value add industries to the mining sector present strong opportunities for growth in the construction and manufacturing sectors. The uncertainty surrounding the development of the Oakajee port and rail project, will have impacts on the associated industrial land as well as the development of planning infrastructure corridors. The region will need to consider the implications of not progressing with this project on other regional projects and infrastructure.

Narngulu and Oakajee will remain the two key locations for general industry. Narngulu has access to necessary services and infrastructure. Oakajee is reliant on the port and rail project. Webberton is regarded to contain under-utilised land for light industry. There is adequate general industry zoned land in the Mullewa to accommodate future needs. Depending on the level of investment required by CBH Group in Mullewa, the zone may need to be reviewed and extended as required.

A number of buffers are reflected in Local Planning Scheme No. 1, and these have implications on development. Particularly around Narngulu, these buffers assist in maintaining separation distances to sensitive land uses.

Opportunities to maximise local benefits of mining operations including local business delivering mining services, and as a local employment base needs to be considered in future planning. Careful planning of port, rail and road infrastructure to support the mining industry is crucial. It is stated in a number of documents that lack of capacity in this transport infrastructure may stifle continued growth in this industry.

Manufacturing and construction are key industries characterising Geraldton's economy. As major projects occur, demands for construction workforce can peak. Depending on the nature of the projects and their phase periods, construction workforce may be more permanently settled within the region, or otherwise would largely be addressed through fly-in fly-out arrangements. The manufacturing sector services agriculture, fishing and mining industries.

The manufacturing sector will be expected to grow and expand according to population growth and industrial/commercial activity. Should projected population increases eventuate in Geraldton, there would be a considerable amount of construction not only in the residential and commercial sectors (in line with the *Residential Development Strategy* and *Commercial Activity Centres Strategy*), but also the construction of major infrastructure projects such as the Oakajee Port and Rail project, other major transport corridors, new or expanded mining projects, and the expansion of infrastructure or essential services.

Growth in the economy will invariably require additional works and particular skills for certain industry sectors. Careful identification of skills gaps in supporting future mining industry expansion could have positive spinoffs for local tertiary education institutions if planned appropriately. Ongoing review of the *Mid West Investment Plan 2011-2021* will be important to ensure flagship projects remain current.

It is important to increase employment outcomes for under-employed and disengaged mature-aged workers, local Aboriginal and Torres Strait Islander people, and other under-represented groups. This is supported at all levels of government.

Identification of social infrastructure and community amenity needs a thorough investigation to provide a guide for prioritising government community service provision infrastructure. The capacity of key utilities such as water and power may constrain the long-term development of industrial and service commercial areas, unless careful planning is undertaken.

Access to basic raw materials is an important consideration for the building and construction industry and can significantly add to industry costs through increased transport costs if appropriate sources of materials cannot be located.

The mapped areas of Significant Geological Supplies and their buffers need to be considered in relation to protection of the resources for existing or future extraction.

Priority should be made with a land holder to extract gravels from already cleared land. The removal of gravel from roadsides is not generally acceptable because it leads to clearing of native vegetation. There is a current trend to produce road making materials by crushing laterite (ferricrete/caprock/duricrust), which maximises the resource. In future years it should be a requirement that all gravel and duricrust (caprock) from gravel pits be utilised and old pits reworked to remove the duricrust and crush it to manufacture road bases. Careful consideration should also be given to the use of alternatives to gravel from remnant bushland prior to clearing.

Currently the land uses around the two hardrock quarries at Beatenally Hill and Button Hill are rural, but long-term protection is required with the use of buffers.

The Aquaculture Development zone in the vicinity of the Abrolhos Islands could create up to 1,400 jobs and 48,000 tonnes of marine finfish annually. The region may need to consider the following:

- Possible protection of other suitable sites;
- Mechanisms to resolve potential conflict between water users;
- Methodologies to address environmental concerns and streamline environmental approvals; and
- The capacity and ability to advocate for future investment in aquaculture, marine sciences, and other higher-value industries to boost the economic prosperity of the maritime and fishing industry.

11 RETAIL & COMMERCE

Retail is a large employment sector, accounting for 13.20% of the labour force (REMPAN, 2017). Many residents in the Shire of Chapman Valley use Geraldton for employment, shopping and schools (MWDC, 2015). The *Residential Development Strategy* (CGG, 2013) encourages integration of aged care and student housing with higher intensity activity centres, for access and efficient provision of services and infrastructure. The regional attraction of the City's activity centres together with encouraging density around centres could support the sustainability of retail and commerce within the CBD and activity centres. A hierarchical and staged approach is established to sustain and grow these centres in a sustainable manner.

11.1 GERALDTON

The *Commercial Activity Centres Strategy* (CACS) (CGG, 2013) is the most relevant and recent document relating to commercial centre planning for Geraldton. The document was prepared concurrent with the *Residential Development Strategy* (CGG, 2013).

The CACS sets out:

- A hierarchy of activity centres within the Geraldton Urban Area;
- Typical office development as one of the types of commercial activity provided within the City, across the different activity centre classifications;
- Recommendations for retail floorspace growth across the City Centre and activity centres; and
- Critical centres of activity such as the Geraldton Airport, Geraldton Port, Hospital and industrial areas likely to expand in the future.

A successful hierarchy development will:

- Support the agglomeration of strategic activities in various centres to provide for local high quality business and employment opportunities;
- Meet community needs by enabling employment and accessibility of goods and services;
- Provide certainty for public and private investment in activity centres; and
- Provide the City with a tool to assess current performance and impacts of proposals.

In support of the CACS recommendations, some of the key actions within the *Greater Geraldton Economic Development Strategy 2013-2023* (CGG, 2013) included:

- Supporting priority retail business development initiatives in partnership with industry;
- Investigating the feasibility of developing a business incubator centre in Geraldton (which has occurred). The Business incubator centre that has been established provides a supportive environment for start-up businesses and social entrepreneurship; and
- Adoption and implementation of the *City Vibrancy Strategy* (CGG, 2012) strategies to enhance retail and commercial vibrancy.

11.2 ACTIVITY CENTRES

The CACS sets out eight levels of activity centres as part of its Hierarchy. The hierarchy of activity centres for the City of Greater Geraldton is outlined in **Table 18**.

Table 18 Activity Centres Hierarchy (CGG, 2013)

Activity Centres Hierarchy	Status
Regional Centre	
Geraldton CBD	1
District Centres (proposed)	
Glenfield Beach	2
Southgates	2
Large Neighbourhood Centres	
Bluff Point	1
Rangeway	1
Sunset Beach	1
Wonthella	1
Neighbourhood Centres	
Cape Burney (not developed)	3
Geraldton – Durlacher Street	2
Moresby – Wooree New Town (not developed)	3
Mt. Tarcoola	2
Seacrest	2
Strathalbyn (not developed)	3
Utakarra	2
Waggrakine (not developed)	3
Local Centres	
Beachlands	2
Drummond Cove	2
Mahomets Flats – Fortyn Court	2
Spalding (not developed)	3
Wandina	3
Woorree (not developed)	3
Highway Commercial	
Geraldton Business Park	N/A
North West Coastal Highway	N/A
Verita Road	N/A
Specialised Centres – primary function	
CSBP Site – Development Investigation Area 4	N/A
Geraldton Airport – aviation and logistic services / technology park	N/A
Geraldton Port – port services	N/A
Health, Education and Training Precinct – health, education and training	N/A
Narngulu – strategic industry	N/A
Webborton – service industry / service commercial	N/A
Regional Towns	
Central Greenough	N/A
Mullewa	N/A
Walkaway	N/A

The CACS then categorises these activity centre types into priority status from 1-3, with the exception of Highway Commercial, Specialised Centres and Regional Towns. Status 1 are centres where active intervention by the City is required to encourage additional development. Status 2 are centres that maintain their current role with future private sector expansion possible. Status 3 are centres that have the potential to maintain their current role or transition of activity centre into an alternative use.

11.2.1 REGIONAL CENTRE – GERALDTON CBD

It is understood the Geraldton CBD has a total floorspace of 85,100m² comprised of 58,800m² of shop retail, 8,000m² of other retail and 18,300m² of entertainment. Modelling completed as part of the CACS suggests that the current floorspace supply is on the lower end of sustainable levels for shop retail. For other retail, the demand is modelled well below current supply levels and, over time, suggests an oversupply of this type of floorspace, which means that this use may not be the highest and best use in particular locations. The CACS recommends that major office space be developed within the Regional Centre, where appropriate.

For entertainment floorspace, significant growth is projected in this land use as a greater variety of workers, residents and visitors access the CBD. The development of Batavia Coast Marina Stage 2 will provide opportunities for expansion of this floorspace type, to service the City’s demand.

There is existing and future demand for a discount department store within the CBD and regionally. However, tensions exist between various locations for a discount department store, in terms of its impact on existing retailers.

The CGG endorsed a local planning policy *Geraldton City Centre Revitalisation Plan* (CGG, 2017) which is a supporting document to the *Growing Greater Geraldton: A Growth Plan* (refer **section 3.2**). It establishes a vision “For Geraldton city centre to develop as the regional capital of the Mid West, as a collaborative and innovative leader that positively harnesses change. The city centre will be a unique place for local and visitors and an active destination embracing Geraldton’s nautical history and assets. The broader community will come together to deliver this vision and strengthen their city centre heart” (CGG, 2017). The *Revitalisation Plan* provides short, medium and long-term aspirations and strategies to align public and private investment.

The *Geraldton City Centre Vibrancy Strategy* (CGG, 2012) identified Chapman Road and the surrounding zone from Cathedral Avenue through to Bayly Street, as the prominent commercial/retail zone in the longer-term (refer **Figure 26**).

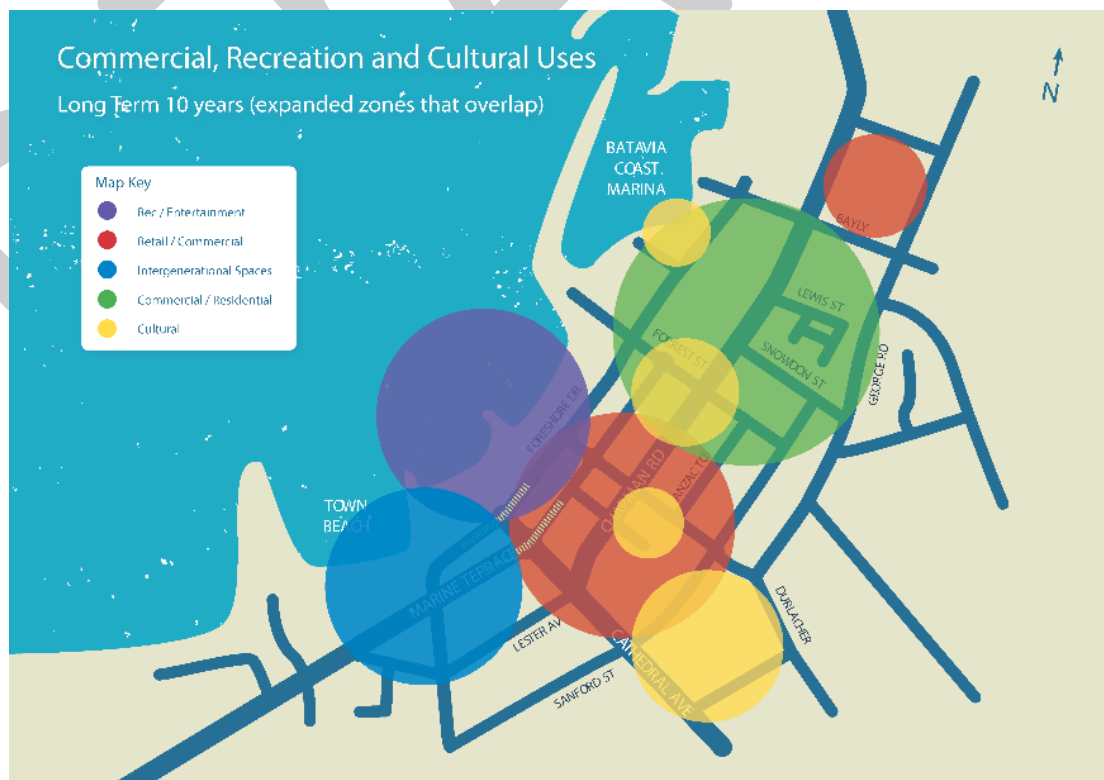


Figure 26 Long-term 10 year view of Commercial, Recreation and Cultural Uses (CGG, 2012)

11.2.2 DISTRICT CENTRES

Expansion and growth to a population of 80,000-100,000 will require the development of one or more district-level activity centres. District centres serve a smaller sub-regional catchment than a regional centre, but offer a range of essential services, facilities, and employment opportunities. The CACS modelled the staged development of a Northern District Centre around the Glenfield Beach area, and a Southern District Centre around the Southgates area. Stronger demand exists for the Northern centre, with the Southern centre assumed to commence thereafter.

11.2.3 NEIGHBOURHOOD AND LOCAL CENTRES

There are four Status 1 Neighbourhood Centres prioritised within the modelling carried out as part of the CACS. If the provision of district centres is planned well, then these should complement Neighbourhood and Local centres, and these centres should require little growth into the future. Neighbourhood and Local centres will remain important in terms of servicing daily household shopping needs and convenience services.

11.2.4 HIGHWAY COMMERCIAL – BULKY GOODS RETAIL

According to research presented within the CACS, demand for bulky goods retail is expected to double over the next 20 years. A range of floorspace will be required from 2,000m² in current day terms, through to 5,700m² out to 2031.

It is recommended within the CACS that major office space be located within the Regional, District and Specialised centres where appropriate. Retail and Office developments will be specific to each of the centres.

11.2.5 REGIONAL TOWNS

Mullewa, Walkaway and Central Greenough act as regional service centres. Central Greenough has been recognised as a future activity centre. The regional towns are multi-purpose and provide a diversity of uses as well as a full range of economic and community services necessary for residents and visitors within the catchment.

In Mullewa, areas for business and commercial activities are provided for through a 'Commercial' zone in LPS 1, applied to the properties along Jose Street (south of Molster Street) and along Thomas Street, between Mitchell Street and Burges Street. Some of these zoned lots front the Geraldton-Mt Magnet Road. The area includes a mix of convenience retail, service stations and hotels, farming supply businesses and office space for community and government services. The town's relative proximity to Geraldton and limited population can make it difficult for some local businesses to viably operate from Mullewa.

Jose Street is the main street where a number of buildings exhibit outstanding architectural features and contribute to the character of Mullewa. However, there are incidences where buildings are unoccupied, deteriorating or subject to vandalism. This creates challenges in maintaining the buildings and street's visual appeal, and the overall feeling of the town (despite works in recent years to improve the streetscapes through landscaping and painting of prominent buildings and murals). Much of this work has occurred through local government and community projects.

Many of the businesses and commercial activity along Geraldton-Mt Magnet Road are by their nature a mix of commercial, light industry and service commercial uses. Most of these activities are located in the 'Commercial', 'Service commercial' or 'Mixed use' zones in LPS 1. It is considered that these zones contain sufficient vacant lots to accommodate future needs.

The City would like to create an environment that could attract new trades and services for example, an electrician or painter). A previous proposal was to develop a light industry/service commercial area along Gray Street in the existing railways reserve, and some land fronting Gray Street is zoned 'Service commercial'. However, it is understood that high headworks costs have limited the opportunities for this to proceed.

11.3 CAR PARKING

The *City Centre Transport Planning & Car Parking Strategy* (CGG, 2012) guides the local government in terms of car parking and alternative modes of transport for the CBD. It encompasses a holistic approach to transit planning and car parking, and a key component of the *Strategy* is the *City Centre Car Parking Management Plan*. Parking in the City Centre is subject to the provisions of LPS 1 and the City Centre LPP.

The *City Centre Car Parking Management Plan* concluded that more efficient management of car parking would ensure availability of parking for residents, visitors and shoppers. It also noted that further development of at-grade parking would put direct pressure on other land uses and could lead to a decline of productivity of the retail and commercial offering. It recommended efficiency improvements via:

- Introduction of on-street parking fees in high demand areas, and investment in improved payment systems for on and off-street parking. This has already been implemented in some areas.
- Revisiting car parking wayfinding and signage.
- Development of a plan to identify future potential sites for multi-storey car parking, and consolidation of existing sites in poor demand.
- Provide adequate facilities for alternative modes of transport such as cycling facilities, motorcycle/scooter bays, and car share spots.
- Conduct regular parking surveys to understand duration of stay, compliance with restrictions, existing and potential spillover effects onto residential streets.
- Promotion and support of incentive programs to persuade employees to use alternative modes of transport.

The CACS outlined the importance of considering traffic requirements in the siting and planning of centres, in particular:

- Finding a balance between regional and local traffic access needs;
- Sustaining high levels of pedestrian movement;
- Encouraging appropriate and sustainable traffic volumes through the City, to support an external street-based retail environment; and
- Implementation of maximum car parking bay limits for certain uses.

11.4 RETAIL AND COMMERCE TRENDS

A number of trends are discussed within the CACS that may impact on the growth of the retail and commerce sectors within the region:

Retail trading hours: The City has commenced a 12-month trial for extended general retail trading hours which will allow for larger general retailers the opportunity to open on Sundays and most Public Holidays, as well as trade later during the week. Smaller retailers already have deregulated trading hours and can trade when they choose to do so. This could act to reinforce economic activation as well as create multiple value propositions within the CBD.

Large format retail: this is typically characterised by tenancies ranging between 10,000m² and 30,000m². Although these retail formats generate economic activity, there are associated issues such as:

- Accessibility and traffic management;

- Addressing potential low quality urban design outcomes;
- Addressing potential poor integration within the Activity Centres Hierarchy;
- Declining competition and the potential to put strain on smaller business, with a continued proliferation of this retail format on properties along the North West Coastal Highway; and
- Erosion of required industrial land that otherwise could support other economic sector needs such as mining.

Future planning of activity centres containing large format retail should consider addressing each of these issues above to ensure ongoing viability of these centres.

Online retailing: Based on the relative isolation of Geraldton to Perth, the demand for online retailing into the future is expected to grow. The roll out of the NBN will facilitate an increase in e-commerce both locally and globally. This disruptive technology can be advantageous and disadvantageous to retailers in the local area. The future planning for retail and commercial areas within the region should consider flexibility of these spaces in order to respond to the impact that online retailing and online business may have on floorspace and land use requirements into the future.

11.5 KEY CONSIDERATIONS / ISSUES

- It is important to consistently plan for the CBD with agencies, in terms of the servicing and development of the regional centre as the prominent activity centre.
- Economic development initiatives should initially be focussed on core activity zones within centres, with a view to connect and overlap these zones over time (as envisaged through the *City Centre Vibrancy Strategy*). Planning for the development of flagship anchor tenants will support activity node establishment. The City should identify freehold and/or Crown land opportunities along Foreshore Drive, promote targeted leasing campaigns for vacant shop fronts, and use rates relief or other incentives to secure good tenants that will improve vibrancy in an area.
- Future planning of activity centres containing large format retail should consider issues that are outlined in **section 11.4**.
- The CACS recommends consolidation of existing under-performing floorspace within the Regional Centre and ensuring a planned contraction of other retail floorspace within the Regional Centre, to ensure productivity levels remain high.
- Development of a discount department store within the Regional Centre or as an anchor in a District Centre could support the growing demand for this retail use. It will need to be carefully planned to ensure that existing retail offer and the retail sustainability of other centres is not jeopardised.
- Future planning provision for District centres at Glenfield Beach and Southgates is essential to support the growing population and diversity of retail offer.
- Mullewa has adequate commercial land to accommodate future needs, with sufficient zoning of land for commercial, service commercial and mixed use around the Jose Street main street and fronting Geraldton-Mt Magnet Road.
- Further work should be undertaken to ensure efficient management of existing and future car parking within the CBD. Planning for a future multi-storey parking location(s) will be an essential consideration to optimise land use and land take for car parking, as Geraldton expands in line with population projections.

12 TOURISM & VISITORS

Tourism is an important and strategic economic sector. The following information in **Table 19** illustrates the key metrics and tourism statistics relevant to the CGG.

Table 19 Local Government Tourism Profile (RDA, 2016)

Metrics	International	Domestic Overnight	Domestic Day	Total
Visitors ('000)	28	271	203	502
Nights ('000)	250	797	-	1,047
Average Stay (nights)	9	3	-	3
Spend (\$m)	16	157	36	209
Average spend per trip (\$)	562	580	178	416
Average spend per night (\$)	63	197	-	165
Average spend (commercial accommodation) per night (\$)	79	184	-	154
Tourism Statistics	International	Domestic Overnight	Domestic Day	Total
Reason ('000)				
Holiday	23	85	68	176
Visiting friends or relatives	4	75	np	np
Business	np	85	np	np
Other	np	np	np	np
Travel party type (visitors '000)				
Unaccompanied	11	68	-	79
Couple	10	53	-	63
Family group	3	63	-	66
Friends/relatives travelling together	3	57	-	61
Accommodation (nights '000)				
Hotel or similar	19	200	-	219
Home of friend or relative	73	327	-	400
Commercial camping/carvan park	19	79	-	98
Backpacker	17	np	-	np
Other	122	175	-	297

12.1 CURRENT TRENDS

The natural environment is a main driver for tourism within the area, including:

- The Abrolhos Islands for fishing and water-based recreation;
- Wildflowers such as around Mullewa;
- Ellendale Pool, Greenough;

- Geraldton-based attractions including the Moresby Range, HMAS Sydney memorial, St Francis Xavier Cathedral, and Geraldton Museum; and
- Walking and vehicle trails.

12.2 THE REGION'S TOURISM PRODUCT

The *Mid West Tourism Development Strategy* (Evolve Solutions, 2014) identified tourism opportunities, priorities and gaps for the Mid West region. The recommended strategy to grow Mid West tourism during 2015-2025 focused on five key areas:

- Increasing accommodation capacity from camping through to resorts;
- Opening up day use sites and places, to enhance the Mid West's appeal as a destination;
- Improve the quality and distribution of information for trip planning and wayfinding;
- Attracting more high-yield visitors and the self-drive and RV market; and
- Increasing the range of Aboriginal and eco nature-based tourism activities, attractions and experiences.

The following tourism product has been identified within the City.

12.2.1 GERALDTON CBD

- Batavia Coast Marina – Museum; HMAS Sydney Memorial; Bill Sewell complex; Geraldton Regional Art Gallery and Visitor Centre exhibits;
- Geraldton Port – lobster factory and working fishing boats;
- Shopping – local produce and markets; and
- Civic facilities – Geraldton Library; Theatre; Cinema; Aquarena; Cathedrals.

12.2.2 OUTDOOR ACTIVITIES

- Adventure and water sports;
- Walking trails and guided tours;
- Recreational facilities;
- Festivals and events – Red Hill Concert, Nukara Music Festival, various sporting events, car shows, Writers Festival.

12.2.3 MULLEWA

In the Mullewa area, tourism is focused on wildflowers during winter and spring. Built heritage and natural attractions include Talling Peak and Gorge, Coalseam National Park and Bindoo glacial bed. A number of heritage trails and sites include the Monsignor Hawes Heritage Trail, the Butterabby Gravesite and the De Grey – Mullewa Stock Route.

The town has two hotels, a caravan park, and a parking area with ablutions. The local government and broader community work on a number of projects that will offer interest for visitors including walk trails and heritage interpretation, and visitor information bays. There is potential to increase the choice of accommodation such as bed and breakfast accommodation, to complement existing facilities and services.

12.2.4 BEYOND THE GERALDTON URBAN AREA

- Historic and cultural visitor spots – historic settlements (Greenough Flats Heritage Area); historic homesteads and public houses; Point Moore Lighthouse; and

- Natural attractions – diving; fishing charters; wildflower tourism; river trails; sandboarding; Moresby Ranges; birdwatching; Greenough Wildlife and Bird Park; scenic flights; the leaning trees; coastal nodes including Cape Burney Greenough rivermouth, Flat rocks and Drummond Cove; Ellendale Pool; surfing; fishing; swimming; walk trails; and
- Low impact rural tourism – bed and breakfast, chalets/cabins, ecotourism and similar low impact tourist development. The City has a *Low Impact Rural Tourism* local planning policy that provides for tourist accommodation in rural areas where this does not erode the rural character and amenity, and ensures that environmental values, landscape values and the visual and rural character and amenity is not compromised.

12.2.5 HOUTMAN ABROLHOS ISLANDS

The Abrolhos features strong tourism appeal for the islands' environment, history and recreational assets and opportunities. With population increasing in the Midwest and North West, recreation and tourism at the Abrolhos is likely to increase into the future. This includes not only existing activities associated with boating, fishing, diving, wildlife and heritage photography and appreciation, but also potential new ones such as kayaking and wave, wind and kite surfing (DoF, 2012). Management of tourism and recreational activities would be undertaken in a manner consistent with the environmental and cultural heritage values of the Abrolhos Islands.

12.3 MEETING MARKET NEEDS

To meet the needs of proposed markets, gaps in the current tourism product need to be addressed.

12.3.1 ACCOMMODATION

Jones Lang LaSalle Hotels (JLLH) completed a study in 2008 into the demand and supply for tourism and business accommodation in Geraldton-Greenough. The Study found that up to 70% of demand for rooms came from contracted workers and corporate business visitors; 20% of demand came from independent holiday tourists; and 10% of demand came from tours and coaches during the wildflower season.

The JLLH Study found that:

- A shortage of caravan park sites and on-site accommodation is likely to occur (partly due to contract worker demand, assuming it is not met by other accommodation developments);
- Supply of hotel, motel and serviced apartment accommodation (in establishments over 10 rooms) was adequate in the short-to-medium term, assuming that new facilities planned for those periods opened;
- 300 additional hotel, motel and/or serviced apartment rooms were likely to be required in the medium term (2016-2020), requiring development of approximately 1.7 to 2.5 hectares of additional land (assuming a density of 120-180 rooms per hectare); and
- A further 286 hotel, motel and/or serviced apartment rooms are likely to be required in the long-term (2021-2028), requiring development of approximately 2.1 to 3.2 hectares of additional land.

JLLH recommended that the vacant Public Transport Authority site near the CBD and the Batavia Coast Marina Stage 2 sites be considered for accommodation in the medium and long-term, respectively. These sites are located close to tourism attractions and facilities, and are in locations favoured by visitors (the CBD, on the beach, or with ocean views). Further work should be done to identify other strategic locations for accommodation based on tourism activity and the Study should be updated to reflect current trends and demands for tourism-related accommodation.

As Geraldton diversifies its economic industry provision, adequate accommodation suited to the conferencing market should also be investigated and provided. The potential for a unique five-star eco-style resort in an appropriate location could also be investigated and provided.

12.3.2 AMENITIES

The foreshore redevelopment has considerably improved the amenity of the City Centre, and will need to be activated through entertainment and restaurant activity suited to a range of markets. Development plans in this precinct should be encouraged to provide for this type of activity.

Visitors tend to need a high standard of service if they are to enjoy their experience, come back, or encourage others to visit. If not, visitors would talk negatively or generate reviews that portray a negative reflection of a place. This requires investment and training in areas that create positive experiences such as customer service, quality of food, availability of meals (such as opening hours of restaurants), high standards of accommodation, friendly and safe environments, and sufficient activities for days/nights (including opening hours of attractions).

12.3.3 ATTRACTIONS AND ACTIVITIES

The identification of a suite of significant attractions for the CGG needs to reflect the tourism vision and marketing that is focused on the nature based and heritage assets and stories of the town and of the Abrolhos Islands, and to cover a range of experiences to engage with different market groups.

Suitable facilities and services to support the experiences need to be planned such as day-use infrastructure on the Abrolhos Islands, signage, public conveniences and facilities, wayfinding and signage, and transport options between experiences.

12.3.4 ACCESS

Geraldton Airport is the principal airport for the Mid West region and provides connections for visitors, businesses and residents. It has 23 return flights per week between Perth and Geraldton, with FIFO services for the mining industry and fishing and tourism charters to the Abrolhos Islands, Kalbarri, Monkey Mia and the surrounding coastline.

In August 2017, the State Government announced a \$6.5 million co-contribution funding commitment in the budget for a runway upgrade at the Geraldton Airport (Government of WA, 2017). The funding is sourced through the Regional Airports Development Scheme. Whilst providing improved safety, reliability and maintenance costs, it would have an opportunity to support growth in tourism.

Transport access is an important factor for tourism in Geraldton due to the City's relatively long distance from Perth, and the long travel distances experienced in WA generally. Within Geraldton, access is limited for people without cars. Studies should be undertaken into upgrades for bus services and alternative modes of transport between the CBD and key tourism points, to boost access and tourist activity.

The Indian Ocean Drive provides an alternative route for some of the road distance between Perth and Geraldton, and is suited for tourist experiences.

12.3.5 AWARENESS

Making Geraldton Recreational Vehicle (RV) Friendly (CGG, 2015) identifies the economic value of the caravan and camping industry, with 2012/2013 estimates of:

- Approximately 25,500 visitors staying in a commercial caravan park in Geraldton (compared to 25,800 in Carnarvon and Coral Bay, and 40,300 in localities of Northampton, Kalbarri, Horrocks Beach, Port Gregory, Mullewa and Greenough);
- RV campers made up 12% of the market;
- Approximately \$14 million of direct tourism expenditure by visitors to caravan parks;
- Approximately \$4 million by permanent or long-stay residents in CGG;
- For every \$1 of commercial caravan park turnover, \$1.38 of local economic activity is generated by the park to the local area.

The implementation of the key recommendations of the report would work towards the city being accredited as 'RV Friendly'. The recommendations of the report included actions relating to improved signage/entry statements; provision of a range of parking facilities; improved marketing strategy material for publication; provision of dumping facilities; free public Wi-Fi; and nature based camping facilities (CGG, 2015).

12.4 FUTURE TOURISM OPPORTUNITIES

Through the *Guilderton to Kalbarri Sub-regional Planning Strategy* the WAPC conducted an analysis of land that is potentially zoned for tourism purposes. The analysis identified 128 hectares of undeveloped land, and 58.75 hectares of developed land, that could be suitable for tourism purposes (WAPC, 2017). This land is zoned Special Uses 2 and 3, Regional Centre, Tourism, Mixed Use, Residential, Rural Residential (Additional Use 1), Rural (Additional Use 15), and Commercial (Additional Use 17). The merits of having tourism purposes within these zoned areas would need to be reviewed over time, to ensure the local planning scheme permits appropriate tourism development in areas of amenity and character that is conducive to tourist appeal.

A number of additional tourism attractions have been considered as part of the *Geraldton – Greenough Tourism Strategy* (MWDC, 2009) for further investigation, such as:

- Marine discovery centre;
- Increased activities and improvements in the Central Greenough historic settlement;
- Greater Geraldton themed interpretative walk trails;
- North Road Stock Route trail;
- Walking tours for the Port, Chapman River, and wildflowers;
- Moresby Range recreation park;
- Indian Ocean Masters games;
- International water sports championships; and
- Artificial reefs at Oakajee and Back Beach.

Over time, future attractions should be reviewed in line with the tourism offering within Geraldton, the district, and the region.

12.5 KEY CONSIDERATIONS / ISSUES

The seasonality of tourism can impact upon the use of tourism facilities and infrastructure. Peak periods are understood to be during September-October (school holidays and spring wildflowers), April (school holidays, Anzac Day, Easter) and July-August (school holidays and wildflowers). This can potentially place pressure on use of holiday homes and caravan parks.

Tourism is primarily promoted through Western Australia's Coral Coast and Golden Outback. There is much to be gained by a unified approach to marketing and promoting the Mid West as a great place to live, work, study and invest. The future development of tourism experiences should have a focus on the nature based and heritage assets experiences. Consideration of the natural environment should be included in planning these destinations in order to promote these nature based activities as well as improve facilities and implement strategies to further develop and promote tourism.

The State government identifies the importance of retaining and/or developing caravan parks for affordable holiday accommodation (WAPC, 2017).

Transportation and accessibility of tourism attractions should be a priority consideration in the planning of the tourism industry. Current air services may need to be expanded based on market growth. Upgrades of bus services and alternative modes of transport can help boost accessibility and tourism activity.

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13 RURAL LAND USE, SUBDIVISION AND DEVELOPMENT

13.1 AGRICULTURE

Agriculture is significant across the Mid West, both in terms of land area, and economic and employment importance. In 2011-2012 the gross value of agriculture activities for the Mid West was \$1,004 million (DRD, 2014). In the 2016 census, it employed 8.60% of the Mid West workforce, and 3.30% of the City of Greater Geraldton workforce (REMPAN, 2017). The City is within the North Midlands region, which is known for its large tracts of relatively inexpensive grazing land close to Perth. It produces fresh fruit and vegetables and offers extensive opportunities for expansion into irrigated horticulture.

Agricultural activity can be categorised as:

Pastoral Primarily grazing activity undertaken on uncleared, leasehold rangelands in the north-eastern portions of the district. The commencement of pastoral rangelands typically corresponds to the 300mm rainfall isohyet across the Mid West (DAFWA, 2013).

Broadacre Includes wheat, oats, barley, lupins, canola, chickpeas and faber beans, requiring access to good quality land with reliable rain for crops and pasture.

Irrigated Occurs on smaller areas of suitable land with access to a water source.

Across the CGG and the Shires of Northampton, Chapman Valley and Irwin, broadacre agriculture was valued at about \$268 million per annum (DAFWA, 2013). Irrigated agriculture has been valued at about \$4 million per annum. While broadacre agriculture is expected to continue as the dominant land use, climate change impacts may result in increased pastoral activity in the long-term.

Broadacre agriculture is dominated by world economic markets that increasingly require farmers to diversify into a range of products to reduce reliance on a single product subject to cyclical fluctuations. In keeping with the issues faced by other broadacre farming communities, the amalgamation of farms to become more viable operations is resulting in a declining rural population. **Table 20** provides a breakdown of broadacre and irrigated agriculture within the CGG.

Table 20 Overview of Broadacre and Irrigated Agriculture in the CGG (DAFWA, 2013)

	Geraldton-Greenough	Mullewa
Population (ABS Census 2016)	37,432 (Geraldton Urban Area)	1,202 (excluding GUA)
Land Area (ABS Census 2016) – CGG	9,909 km ²	
Area within the South-West Agricultural District	178,000 hectares	811,000 hectares
Areas of Agricultural Properties (excludes roads, town and conservation reserves)	146,000 hectares	474,000 hectares
Agricultural properties as a proportion of total area	82%	58%
Total value of agricultural production (2008-09)	\$47,052,000	\$123,196,000
Land used for broadacre agriculture*	61%	91%
<i>*Proportion of properties cleared for broadacre agriculture within the agricultural districts, including areas of remnant vegetation on properties.</i>		
Land used for grazing	86%	69%
Land use for horticulture	0.2%	0.0%

Broadacre crops grown in the region are of state-wide significance and on a national scale. Wheat production in the Geraldton planning region (which also includes land outside of the CGG) accounted for 8% of WA's total wheat production for the 2000-2010 decade, and 3% of the national production (DAFWA, 2013).

Horticultural crops contribute a small fraction of the total WA production of fruit and vegetables, mostly planted in the Shire of Irwin and the CGG. The following irrigated agriculture activity was recorded within the CGG in 2006 (DAFWA, 2013):

- Annual crops: 108 hectares
- Stone fruit and nuts: 61 hectares
- Olives: 46 hectares
- Table and wine grapes: 39 hectares
- Aquaculture: 35 hectares
- Cattle feedlot, poultry and egg farms: 26 hectares
- Abattoir: 12 hectares
- Other irrigation: 42 hectares

While the Geraldton region is highly unlikely to become a major horticultural area, in the longer term its importance may increase as the WA population grows (DAFWA, 2013). Continued urbanisation particularly around the Perth metropolitan region may force relocation of horticulture activities. The soils and landforms over much of the Geraldton planning region have good potential for the development of irrigated agriculture.

Intensive horticulture, in the form of covered cropping, has expanded greatly in the past few years in the Geraldton area, boosting the production of tomatoes, cucumbers and capsicums. Significant investment has been made to establish these irrigated agricultural businesses and they are very beneficial for the Geraldton economy, offering an important boost for local employment, transport and construction industries.

13.2 KEY CONSIDERATIONS / ISSUES

Broadacre agriculture is currently a dominant land use in the City's hinterland. Population in the agricultural hinterland is forecast to decline as a result of farms amalgamating. Climate change may also result in increased pastoral activity in the longer-term, as a result of lower rainfall and possible impacts on broadacre agriculture and/or intensive agriculture.

As mentioned in **section 12**, the City may consider low impact rural tourism development. Such development does not detract from the rural and natural amenity of the locality, does not impact on the use of land for rural purposes, yet may supplement incomes for the landowners.

The planning challenge is to set aside the most productive and versatile areas of agricultural land for food security, to meet the needs of projected global, national and state population growth (DAFWA, 2013). The value of land for agriculture needs to be taken into consideration against other land use proposals, including residential and rural living developments. State Policy supports a presumption against the subdivision of rural land in the interests of protecting important agricultural land, and the inherent value this land represents. As a result, given the Geraldton Urban Area is regarded to be sufficient to accommodate future population growth and urbanisation, it is reasonable to ensure the rural and rangelands of the City are retained for their agricultural value. Areas of highly productive soils are close to the coast, particularly the front and back flats at Greenough and whilst they are in proximity to Geraldton their value to the agricultural sector should be retained.

These higher versatility agricultural areas are important yet finite assets for the agricultural sector. These are identified in the *Environmental Profile* (Essential Environmental, 2014). The Part 1 Local Planning Strategy has regard to the High Quality Agricultural Land and this is reflected on the Rural Land Strategy Plan as 'higher versatility agricultural land'. The Department of Primary Industries and Regional Development (DPIRD) undertakes ongoing analysis of the High Quality Agricultural Land in the North Midlands planning subregion. A comprehensive information package is being compiled and will be made available. The studies provide detailed information on the agricultural characteristics of land in the study area.

Consideration needs to be given to the protection of areas of existing production and areas with the potential for future agricultural development, and with recognition to the impacts of climate change, water scarcity and sustainable use, increasing population growth and urbanisation.

One possible hindrance to intensive horticulture is the rising price of water, supplied via Water Corporation. This issue has the potential to undermine the ongoing viability of irrigated agriculture in the area. DPIRD supports the growth of irrigated agriculture in the City and encourages water initiatives that promote a viable, long-term, horticulture industry.

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14 TRAFFIC & TRANSPORT

Figure 27 depicts the high-level road, rail, infrastructure corridor and port facilities within the City of Greater Geraldton.

14.1 ROAD NETWORK

The Geraldton urban area and the Mid West region is serviced with a network of major sealed roads, connecting Geraldton to Perth, the north-west of Western Australia as well as the hinterland surrounding Geraldton. Main Roads Western Australia is responsible for the main routes to and from Geraldton including Brand Highway, North West Coastal Highway and Geraldton-Mount Magnet Road. They are also responsible for other primary distributor roads within the urban area including John Willcock Link, Geraldton-Walkaway Road and Moonyoonooka-Yuna Road. These roads provide access for tourism to the Batavia Coast, freight to Geraldton Port and daily commute. Primary and district distributors are identified in the *Local Planning Strategy* and are outlined in Table 21 below.

Table 21 Road Network Hierarchy as reflected in the Local Planning Strategy (CGG, 2015)

Road Network Hierarchy	Road Names		Primary Responsibility
Primary Distributor	Brand Highway North West Coastal Highway Geraldton-Mount Magnet Road John Willcock Link Edward Road Moonyoonooka Narra Tarra Road Geraldton North South Highway* Oakajee Narngulu Infrastructure Corridor*		Main Roads WA
District Distributor	Chapman Road Chapman Valley Road Cathedral Avenue Durlacher Street Eastward Road East West Connector Road* Eighth Street Fitzgerald Street	Green Street Johnston Street Lester Avenue Marine Terrace Ackland Road Abraham Street Place Road* Verita Road	City of Greater Geraldton

*Note: * indicates a new/proposed road link*

14.1.1 NETWORK DEMANDS

Demands on road infrastructure across the Mid West can be attributed to mining and agricultural product movement; population in coastal centres; and ongoing promotion of regional tourism. It is important that the road network can meet these pressures; whilst working towards efficiency gains and community safety, sustainability and social expectations.

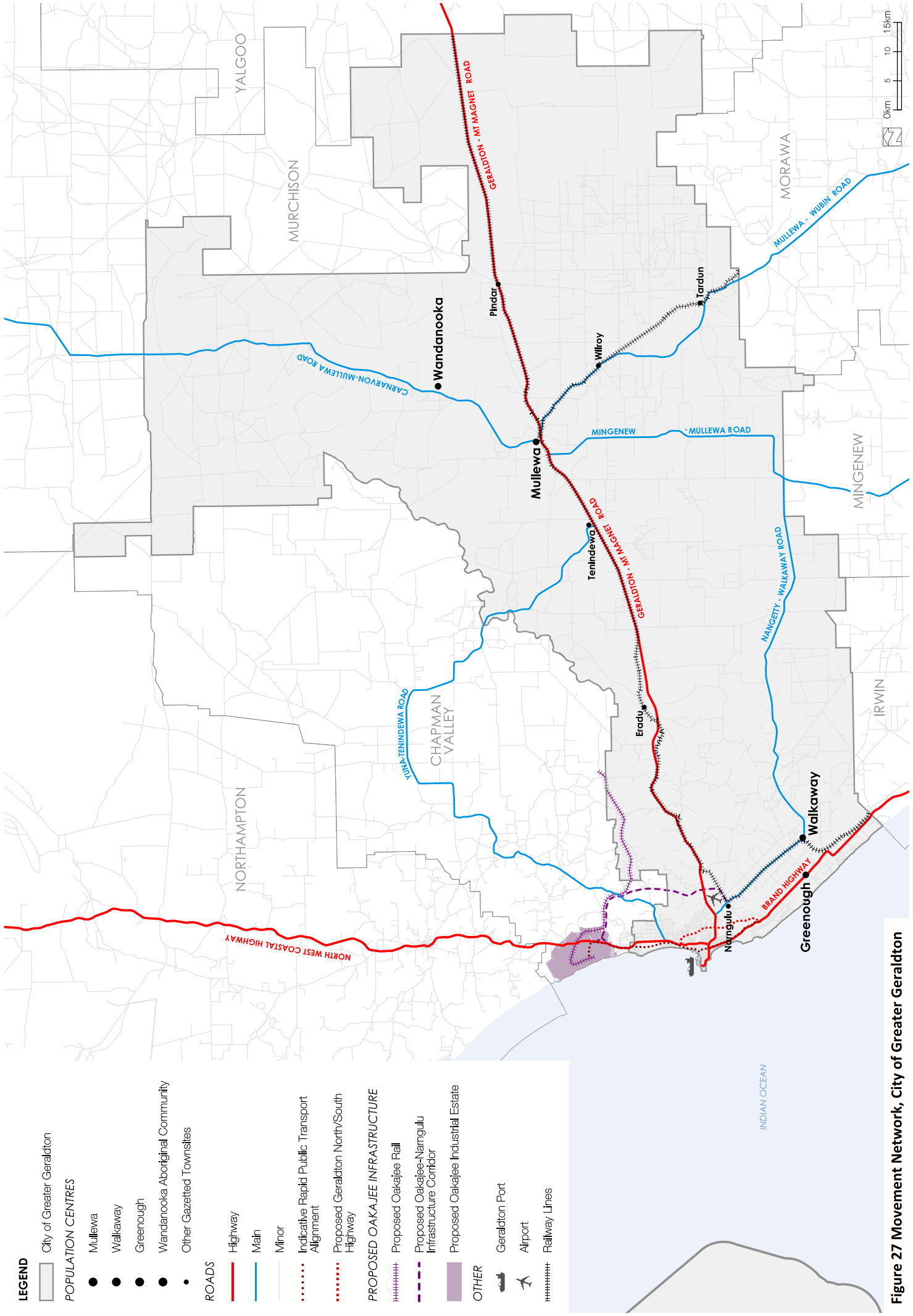
Congestion is also anticipated to increase due to the growing dominance of the resources industry sector within the Mid West, and the reliance upon fly-in fly-out, and the associated drive-in drive-out practices. Other major focus areas include the southern approach to the city centre via the Brand Highway. Tourism-based traffic along this route has previously caused issues including accidents caused by a lack of familiarity with the road network, and towed loads slowing local traffic.

The most prevalent regional road network issue is the high number of heavy vehicles – an issue amplified in Geraldton given its role as a freight gateway. The transport of fuel and fertiliser between the Geraldton Port and inland locations places increasing demands on the road network, especially during seasonal pressure periods. Seasonal livestock movements utilising special heavy vehicle permits, cause substantial congestion on North West Coastal Highway and Brand Highway. At a district scale, proposals likely to have a significant impact on the orderly road network are the Geraldton North South Highway, and the North West Coastal Highway dual carriageway.

The existing rail network alleviates some road congestion in the movement of freight through Geraldton but the network currently transports only iron ore and grain. Long term planning is for grain movements to be transferred onto rail, thereby reducing demand on the road network. Mineral sands have shifted off rail and is now mainly road freight. It is recognised that Aglime routes for freight traffic and the resultant level of freight activity on the road network is an important infrastructure consideration.

Through the preparation of the *Local Planning Strategy* a number of road upgrades were identified and confirmed through the *Transport Planning Report* (DVC, 2014). In turn, proposed roads are reflected on the Strategy Plans and included on the Scheme Maps as local scheme reserves. New street alignments for local roads are contained in Part 4 of the Scheme Text.

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LEGEND

City of Greater Geraldton

POPULATION CENTRES

- Mullewa
- Walkaway
- Greenough
- Wandanooka Aboriginal Community
- Other Gazetted Townsites

ROADS

- Highway
- Main
- Minor
- Indicative Rapid Public Transport Alignment
- Proposed Geraldton North/South Highway

PROPOSED OAKEJEE INFRASTRUCTURE

- Proposed Oakejee Rail
- Proposed Oakejee-Namgulu Infrastructure Corridor
- Proposed Oakejee Industrial Estate

OTHER

- Geraldton Port
- Airport
- Railway Lines

Figure 27 Movement Network, City of Greater Geraldton

14.1.2 KEY ROAD PROJECTS

The early identification and acquisition of land needed for important infrastructure such as roads is essential to orderly growth and can provide for substantial costs savings in the longer term. In some cases, this may necessitate the identification of funding well in advance of implementation for key alignments. The information below highlights a number of key road projects which will provide important capacity, safety and efficiency improvements for the CGG's road network.

Southern Transport Corridor

Stage 1 of the Geraldton Southern Transport Corridor project was completed in September 2005. This involved the construction of a single rail line from the Narngulu industrial area to the Geraldton Port. Stage 2 was completed in December 2009, with the construction of an east-west road linkage connecting the port and the Geraldton Airport.

The Port Link Inland Freight Corridor is a State Government initiative and seeks to establish integrated road and rail corridors linking resource-rich areas in the Mid West, Goldfields and Pilbara regions to export ports, such as the Geraldton Port and the proposed Oakajee port. The planning studies are in progress.

Geraldton North-South Highway

The *Western Australian Regional Freight Transport Network Plan* (DoT, 2012) identifies a number of strategic road priorities throughout the City of Greater Geraldton and the broader Mid West region, which focus on the safe movement of freight and passenger traffic. Within the Geraldton urban area, the Geraldton North-South Highway and the duplication of the North West Coastal Highway from Utakarra Road to Green Street are proposed to alleviate traffic congestion issues, consolidate access points and improve operational efficiency and road safety. Main Roads have, to date, initiated land acquisition as land development progresses and cases of landholder hardship are demonstrated for Stages 1 and 3 of the North West Coastal Highway (NWCH) duplication.

Funding has not yet been prioritised to deliver the stages of the NWCH duplication, however further detail design has been considered to upgrade some intersections in order to be considered for funding. The Hosken Street intersection with the NWCH has recently had funding prioritised to deliver a round-about upgrade including connection with Horan Street providing a link to Spalding.

The City has adopted a position through its *Geraldton North-South Transport Corridor* local planning policy that "*The North-South Highway Inner Bypass (in particular the northern section from Horwood Road to North West Coastal Highway) should be prioritised over all other alternatives*". This would provide a traffic bypass alternative for Geraldton particularly for heavy vehicles, increasing road safety and maximising efficiency of movements.

North West Coastal / Brand Highway realignment

Brand Highway and North West Coastal Highway collectively act as an essential corridor for coordination of town essential services. Where there are increased coordination/access issues due to narrower sections of the corridor there may be pressure or the need to increase the width of the corridor. Through the *Integrated Transport Strategy* (CGG & Cardno, 2015) all transport modes were considered for the road corridor with a sense of place, using landscaping, colour and shade, may significantly contribute towards encouraging walking and cycling as alternate modes of transport.

To some extent, pressure may ease on the need for the realignment if the Geraldton Outer Bypass were to commence and be delivered earlier.

Greenough River Bridge replacement and Brand Highway realignment

Brand Highway is an inter-regional link between Perth and Geraldton and provides access as a coastal alternative to the Great Northern Highway, when travelling to the North West of WA. Brand Highway carries large volumes of traffic, and in the location of the realignment, has had crash history. A section of Brand Highway south of the Greenough Bridge was realigned and included relocating intersections with Reynolds Road and Hamersley Road.

The Greenough River Bridge was replaced by a new bridge which opened in October 2014 (refer **Figure 28**), located 25 metres downstream of the former structure and almost double the length of the previous structure. The deck of the bridge is higher to remain operational in large flood events (MRWA, 2017).



Figure 28 Greenough River Bridge replacement (Institution of Engineers Australia, 2014)

Oakajee Narngulu Infrastructure Corridor (ONIC)

To address the challenges of finding road, rail and infrastructure connections to the proposed Oakajee Port and associated industrial estate, the (then) Department of Planning published the draft *Alignment Definition Report for the Oakajee Narngulu Infrastructure Corridor* (DoP, 2014). The preferred alignment of the ONIC and the preferred Oakajee Port and Rail Corridor are reflected on the Geraldton Urban Area Strategy Plan in the *Local Planning Strategy* (CGG, 2015).

The ONIC, being planned, will provide a road, rail and utility services corridor linking the proposed Oakajee Port and adjacent strategic industrial estate with the existing Narngulu industrial area and Geraldton Port. The envisioned corridor will be approximately 34 kilometres long and notionally 250 metres wide and facilitate the coordinated delivery of transport and service infrastructure. The ONIC consists of an 80-metre reserve width for road, 60-metre reserve width for rail and 90-metre reserve width for utilities. Western Power has registered interest in utilising the ONIC for its 330kV transmission line to Oakajee. The Department of Planning, Lands and Heritage has investigated the opportunity for increasing the ONIC width towards 300-metres to accommodate a second rail route, consistent with what was proposed by Oakajee Port and Rail. The ONIC will also provide for a section of a new outer freight bypass road around Geraldton, linking Narngulu and the existing port with Oakajee, and part of the proposed future long-term Dongara to Northampton Coastal Route.

Construction of the ONIC is dependent on funding and demand as well as the development of the Oakajee Port and industrial area. Main Roads WA has previously sought funding for project development of the Geraldton Outer Bypass, which includes the ONIC as a component.

Dongara to Northampton Coastal Route

In 2015, Main Roads WA released a *Dongara to Northampton Coastal Route Corridor Alignment Selection Study* (MRWA, 2015). Critical components of the Dongara to Northampton Coastal Route included the:

- Northampton Bypass;
- Geraldton Outer Bypass; and
- Oakajee Narngulu Infrastructure Corridor.

The City of Greater Geraldton and Shires of Chapman Valley, Irwin and Northampton expressed their concerns about the proposed route and outlined an alternative option. The option by the local governments considered a route that would enable road trains to travel between Carnarvon and Muchea, without having to travel through Northampton and Geraldton. The option removed duplication of roads and included the ONIC in order to provide access and use to the Oakajee Industrial Estate.

Main Roads WA sought WAPC endorsement of their selected route, which was not provided. MRWA was required to undertake further consultation to ensure the Study was consistent with all relevant state planning priorities including the WA Regional Freight Network Plan. While independent of the ONIC project, the section of the proposed Dongara to Northampton Coastal Route between Geraldton-Mt Magnet Road and White Peak Road, or North West Coastal Highway (depending on alignment options from White Peak Road to Northampton) is ultimately planned to utilise the alignment of the road element of the ONIC.

The study is ongoing and when it is complete and endorsed, an Alignment Definition Study will be undertaken to define the road reservation requirements for the preferred route. Further community and stakeholder consultation will be undertaken, particularly with affected landowners.

14.2 PUBLIC TRANSPORT

The public transport network is currently comprised of eight routes operated by TransGeraldton, through the Public Transport Authority's TransRegional scheme. There are more than sixty bus shelters throughout Geraldton, whilst the Public Transport Authority is responsible for the locations of bus stops. There are eight bus routes that provide coverage for a fair proportion (although not all) localities within the Geraldton Urban Area. Frequencies are comparatively poor and the operating periods of some of the services are short.

The City intends to increase the use of sustainable transport through the installation of bike racks and end-of-trip facilities. Increased patronage would contribute towards further improvements to public transport services.

There has been consideration of a north-south Bus Rapid Transit (BRT) proposal reflected in the *Greater Geraldton Structure Plan* (WAPC, 2011). This also is reflected on the Geraldton Urban Area Strategy Plan in the Local Planning Strategy (CGG, 2015). The BRT proposal is a long-term consideration with no firm implementation programme.

14.3 RAIL INFRASTRUCTURE

Rail infrastructure in the Mid West region is State owned; managed, maintained and operated by private company Arc Infrastructure under a long-term lease until 2049. It is operated as an open access, multi-user network, with a number of different companies operating above rail fleets and a variety of end-customers utilising the network to transport freight and passengers.

The rail network is mixture of narrow, standard, and dual gauge lines carrying a broad range of commodities, agricultural products, containerised freight and passengers. In the Mid West region, there is 608 kilometres of narrow gauge rail lines and associated infrastructure including numerous level crossings, signals and communications equipment. These lines carry iron ore and grain for three customers; Karara Mining Limited, Mount Gibson Iron and CBH Group. In the past the rail network has transported mineral sands, but this freight task is now moved by road.

The map shown in **Figure 29** illustrates the rail infrastructure throughout the Mid West region. The freight rail network connects in at the Narngulu industrial area, which acts as the main junction. The CGG’s approach is from two directions – one line running in from the east through Mullewa; and from the south through Dongara connecting Geraldton to the remainder of the network. From the depot at Narngulu the network then connects into Geraldton Port, passing to the south of the city centre.

Driven by growth in the iron ore sector, Arc Infrastructure completed a \$550 million investment project in 2012 to support Mid West mining and agricultural customers to fulfil their immediate and very substantial export goals.

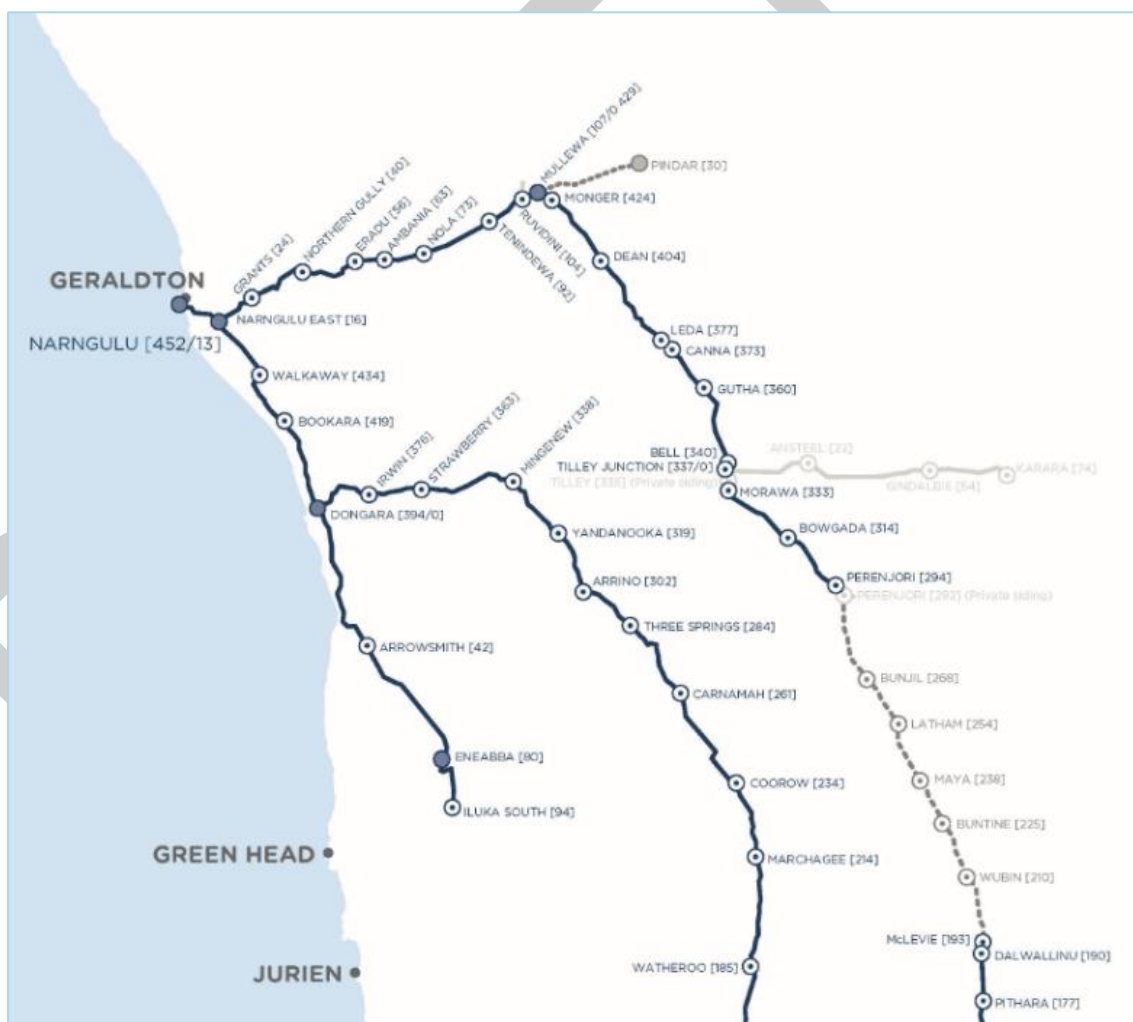


Figure 29 Rail Infrastructure, Mid West Region

Originally designed for grain haulage, 184 kilometres of rail network and related infrastructure was replaced running from Morawa north through Mullewa and west through to Narngulu and ultimately connecting into Geraldton Port.

Replacing a large proportion of the main line of the rail network, the new rail structure comprises concrete dual gauge sleepers, up to 60 kilograms per metre rail, with a minimum of 21 tonne axle load at narrow gauge. Six new passing loops were constructed, two existing passing loops were extended, two bridges were replaced, a number of new culverts were installed, and new signalling and radio communications infrastructure was installed.

The installation of dual gauge concrete sleepers provides the opportunity to connect the Mid West region to the rail network through the Yilgarn region and ultimately into the national interstate freight rail network.

This private investment in public infrastructure lifted the rail classification to heavy haul, allowing the rail network in the Mid West to immediately transport 25 million tonnes per annum, with the capability to increase to 75 million tonnes per annum.

The existing rail network alleviates some road congestion in the movement of freight through Geraldton but the network currently transports only iron ore and grain. As the ongoing development of the network continues it is important that future rail corridors are secured and planned for, with appropriate policies and strategies.

The *Western Australian Regional Freight Transport Network Plan* (DoT, 2012) indicates that freight growth is expected to increase exponentially to 2030, with the focus on investment and capacity increase concentrated on the Morawa-Mullewa-Narngulu-Geraldton arc. As this growth is realised, demand on the capacity of the both the existing rail network and port facilities in Geraldton is expected to increase. Evidence of the growth is already being seen with substantial upgrades to the network in the last two years as well as the expansion and extension of the Karara line, linking into the existing freight rail network.

There is no passenger rail service within the CGG. A future consideration by the State Government may be a passenger rail service between Perth and Geraldton (WAPC, 2017). At this time there is no land set aside for a passenger rail service nor a defined route.

14.4 GERALDTON AIRPORT

Geraldton Airport is located 9.5 kilometres east-south-east of the Geraldton city centre, with primary access via Geraldton-Mount Magnet Road and accessed from Gordon Garratt Drive. To the west and south are the suburbs of Deepdale and Meru respectively. Meru forms part of the Narngulu Industrial Estate, whilst Deepdale is a primarily rural residential area, that has steadily expanded eastwards towards the airport. East of the airport is almost exclusively rural land, whilst the Geraldton-Mount Magnet Road and Chapman River are located to the north.

Geraldton has a main runway 03/21 (asphalt) and two shorter runways 14/32 (asphalt) and 08/26 (gravel). The airport includes the Greenough passenger terminal, a hangars precinct, general aviation facilities, terminal and aprons and taxiways. The airport is supported with short-term and long-term car parks and vehicle hire operations (CGG, 2015). Mobil Oil has storage for Jet A1 fuel and Avgas fuel.

Since 2000, the City has progressively acquired additional land to increase the Airport land area to approximately 530 hectares. In the last couple of years, a number of developments have been completed. Taxiways and aprons have been upgraded, with new short-term and long-term car parks and relocated car hire operations (CGG, 2015). An extension of the Greenough passenger terminal provided expansion of the public lounge and security screening facilities.

Regular Public Transport services are provided by Virgin Australia Regional Airlines and Qantas through QantasLink or Network Aviation. Shine Aviation is a fixed base charter operator servicing resource industry charters and general charters. Geraldton Air Charter is a fixed base operator servicing the Abrolhos Islands fishing industry and general charters. Prestige Helicopters operates a small fleet of resident helicopters. Kelmac Aviation and Shine Aviation provide pilot training and certification services (CGG, 2015). The Airport also is visited on an occasional basis by RAAF aircraft and Royal Flying Doctor Services.

Patronage at Geraldton Airport has steadily grown as demonstrated in **Figure 30**. Geraldton Airport currently has return flights between Perth and Geraldton, along with fly-in fly-out services for the mining industry, and fishing and tourism charters to the Abrolhos Islands, Kalbarri, Monkey Mia and the surrounding coastline. Geraldton Airport helps generate nearly \$100 million in annual economic value, and 187 jobs (Government of WA, 2017). The airport is recognised by several international airlines as the Alternate Landing Port to Perth in the case of bad weather and emergency landings for aircraft up to and including A320 and B737. This alternate land port role is shared with Kalgoorlie Airport.

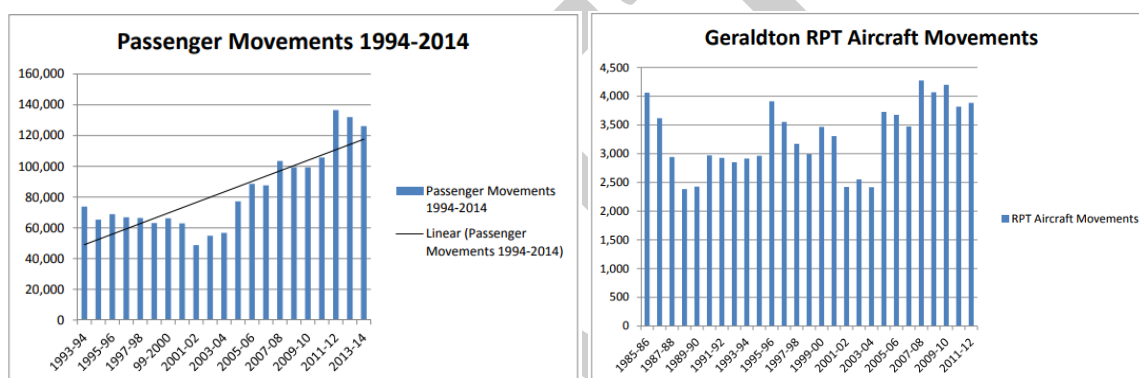


Figure 30 Passenger Movements 1994-2014 & Aircraft Movements 1985-2012, Geraldton Airport (CGG, 2015)

The growth and diversity of the region’s economy, particularly in commodities, will lead to population growth and continued demand for air transport services. The role and importance of Geraldton Airport is expected to increase in prominence in the future, based on expected growth of the resources industry and reliance on fly-in fly-out workforce, coupled with projected resident population growth and tourist visitation in Geraldton and surrounding areas.

It is regarded that the Airport currently has capacity. On the most conservative forecasts, passenger movements are reasonably expected to exceed 150,000 by 2020 and 200,000 by 2028 (CGG, 2015). Larger jet aircraft operations may warrant infrastructure upgrades after passenger numbers consistently exceed 150,000 with one carrier, or until after passenger movements exceed 200,000 passengers in the case of two carriers (CGG, 2015). Timing of infrastructure upgrades would also be influenced by through-services such as Perth to/from Pilbara via Geraldton.

In 2017 the State Government announced \$6.5 million towards a runway upgrade for repaving, through the Regional Airports Development Scheme (Government of WA, 2017). The main runway 03/21 was paved some 16 years prior and so this funding was necessary, with sequential enhancement of the runway factored in to the *Geraldton Airport Master Plan 2012-2030* (CGG, 2015). The main runway 03/21 can be extended from 1,980 to 2,400 metres, whilst a future development of a 2,700-metre runway is considered in the long-term to be parallel to the current runway 03/21. The timing of the 2,700-metre runway is contemplated beyond the year 2030 (CGG, 2015).

The *Local Planning Strategy* Part 1 recognises the Obstacle Limitation Surfaces, Australian Noise Exposure Forecast and 70 Decibel Noise Event contours which align to the 'ultimate future development' as well as planned runway upgrades. These are integrated as SCA 3 in Local Planning Scheme 1 in order for the local government to have regard and consider development in proximity to the Geraldton Airport, to the *Geraldton Airport Master Plan*, the requirements of the Obstacle Height Limitation Surface Area, and the National Airports Safeguarding Framework.

14.5 PORT FACILITIES

14.5.1 GERALDTON PORT

The Geraldton Port is located on the north shore of the West End, extending north towards the Geraldton CBD foreshore. Geraldton Port is operated under the *Port Authorities Act 1999* by the Mid West Ports Authority, governed by the Board of Directors appointed by the Minister for Transport. Geraldton Port caters for exporting grains, minerals and livestock, and importing fertiliser, mineral sands, general cargo and fuel. The Port also receives cruise ships, oil rig tenders and exhibition craft. The Port provides berthing facilities, maintenance, waste disposal and security services to the Fishing Boat Harbour.

After a record harvest was produced in 2016 from the Geraldton Port zone, CBH reported that receivals sites were under pressure to handle the quantity delivered for transport and storage space in preparation for shipping. DPIRD supports initiatives which sustain the storage capacity at the Geraldton Port for harvest receivals. The Mid West Ports Authority and CBH indicated that 500 kilotonnes were stored in emergency up-country facilities, and 200 kilotonnes at Moonyoonooka during the 2016 season. CBH has the capacity to increase port storage by 300 kilotonnes, and to develop a 750 kilotonne site at Narngulu when conditions warrant the expenditure. Poor seasonal conditions for grain will result in lower grain exports in 2017/18.

The Geraldton Port handles exports including grain, iron ore, mineral sands, garnet, talc, copper and zinc concentrate (MWPA, 2017). During the 2016/17 financial year the Port handled 16.86 million tonnes, which is up from 16.17 million tonnes in 2015/2017. The Karara mine achieved its name-plate production volume, which contributed towards growth in exports through Geraldton Port. This is close to its physical import/export capacity of around 20 million tonnes per annum. The Port has the capacity to handle up to 30 million tonnes per annum across the seven land-backed berths. Some upgrade capacity is available; however, it is limited by the surrounding transport network capacity for managing freight movements. Geraldton Port is reasonably well connected to heavy truck routes that avoid built up areas to the east; but less well to the south and even less so to the north.

Cruise ships typically have anchored in Southern Champion Bay, approximately 1 kilometre offshore. Passengers are then tendered into Batavia Coast Marina. In 2017, Mid West Ports Authority acquired four ShoreTension Units that are primarily used on cruise vessels and can also be used for other commercial vessels (cattle, bulk cargo or break bulk cargo). These units are a mooring solution designed to minimise vessel movement at berth, improving berth utilisation and lowering costs to vessels.

The Mid West Ports Authority is preparing a 30-year development master plan for the Geraldton Port. The project is expected to be completed late 2018/first half of 2019. The project objective is to articulate the future layout of the Geraldton Port, to understand infrastructure requirements, to consider port-community interface issues and to account for future operational requirements to meet the future needs of the Port and the key stakeholders. Critically, the project will also:

- Inform and assist regional and local planning authorities and transport network providers in preparing and revising their strategic planning; and

- Inform port users, employees and the local communities as to how they can expect to see the Port develop over the coming years.

The project will include consideration of drivers for any potential expansion of parts of the Geraldton Port or Fishing Boat Harbour, beyond the existing footprint (if appropriate). The master planning process will include broad consultation with the community and stakeholder groups regarding the future of Geraldton Port. All trade sectors will be considered, including the following:

- Container Trade
- Livestock
- Aquaculture
- Grain
- Cruise ships
- Naval and Border Force vessels
- Marine service
- Fuel exports and imports
- Iron ore (haematite and magnetite, etc)
- Existing and emerging non-iron minerals
- WA offshore oil & gas industry
- Fishing industry
- Boat building
- General Breakbulk
- Explosives for mining
- Mining equipment imports
- Fertiliser

A general desire for trade growth and larger shipments, cruise ships, and naval/defence vessel berths and servicing, will be part of the assessment. Potential for transshipping and hinterland linkages (including road, rail and slurry pipelines) will be considered. Further, the project will address Oakajee and Geraldton port inter-relationships.

14.5.2 OAKAJEE PORT

The proposed Oakajee Port is a new facility located 25 kilometres north of Geraldton, in the Shire of Chapman Valley. It is the coastal end-point to the proposed 550-kilometre heavy haulage rail route and is intended to be a part of the proposed Oakajee Industrial Estate. Oakajee has been designed to specifically handle iron ore exports; to accommodate vessels up to Cape Class; and to ease the pressure currently facing the Geraldton Port and supporting regional infrastructure.

With a start-up capacity of 45 million tonnes per annum and an upgrade potential to 80-100 million tonnes per annum, the project is viewed as critical to realising the mining and resource potential of the Mid West (MWDC, 2015). Many existing and proposed iron ore mining projects in the Mid West are not able to develop to desired levels until a rail link and deep water port is developed. The location of Oakajee to Geraldton is depicted in **Figure 31**.

Despite the recent suspension of the Oakajee Port and Rail project, the long-term planning implications of this infrastructure for both the Mid West and the CGG are substantial. The capacity to service the planned future resources projects does not exist within the existing Geraldton Port, which places pressure on the port and rail project to progress. It is understood that the Oakajee project still forms part of the Federal Government's \$75 billion "record infrastructure spend" out to 2020-21. The Mid West Ports Authority will ultimately be responsible for the proposed port of Oakajee.

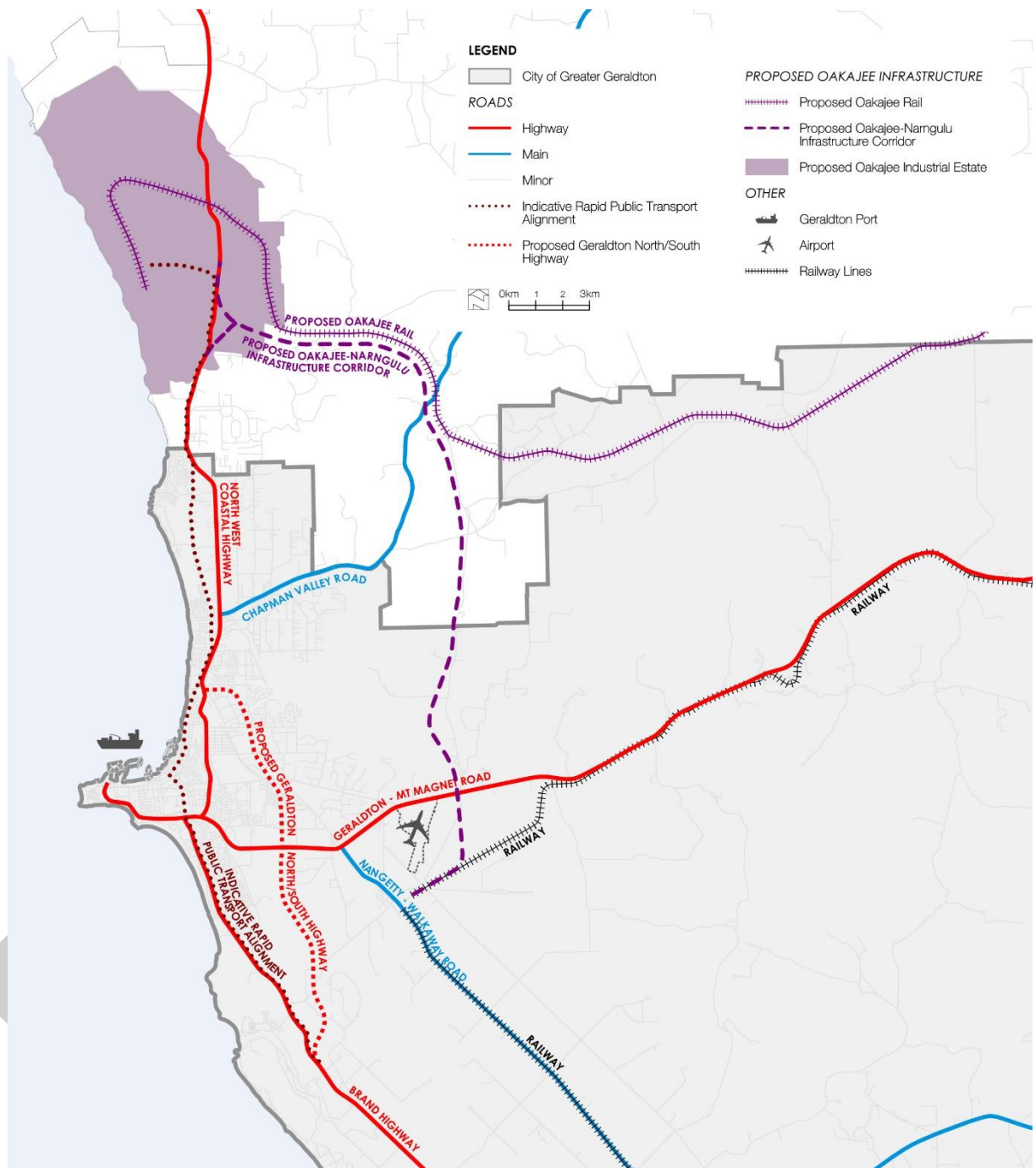


Figure 31 Location of Oakajee

14.6 KEY CONSIDERATIONS / ISSUES

The volume of regional-based freight movement through the State’s port authorities will more than double by 2031. The regional freight road task will also be around double that was recorded in 2010. In addition, the rail freight task is also expected to double. The challenge of developing infrastructure in a coordinated manner to sustain high productivity will underpin the efficiency of logistics and freight.

DPIRD supports road infrastructure initiatives which meet the grain and stock freight traffic requirements. More recently, the introduction of Aglime Routes has been an infrastructure consideration. DPIRD supports the upgrading and maintenance of these routes for continued Aglime freight traffic activity.

The Mid West Development Commission is working on a Regional Transport Strategy to work with its *Mid West Regional Blueprint*. Initial understanding of the work indicates there is a general desire for operators to achieve bigger payloads between farm gates and grain receipt points. There is a need for a road train assembly area and the need for a public weighbridge in Geraldton.

The CGG maintains its policy position on the importance of delivering the North-South Highway Inner Bypass between Horwood Road to North West Coastal Highway, and is supportive of the ONIC. There is a clearly identified need for the North-South Highway Inner Bypass, with the most urgently required section being the northern portion, north of Geraldton-Mount Magnet Road, followed by the southern section to the south of Geraldton-Mount Magnet Road.

Both the North-South Highway Inner Bypass and ONIC are reflected in the endorsed *Local Planning Strategy*. In this regard, the CGG considers these roads to be critical components to development of the regional transport network, and will collaborate with stakeholders for further clarification of commitments towards timeframes for these road projects.

DRAFT

15 INFRASTRUCTURE SERVICES

Infrastructure and services relevant to the City of Greater Geraldton area shown at **Figure 32**, including the locations of waste water treatment plants, substations, power transmission lines, gas pipelines, and power generators.

15.1 ELECTRICITY

15.1.1 CURRENT NETWORK DETAILS AND CAPACITY

Western Power's South West Interconnected System (SWIS) extends into the Mid West region, and is referred to as the North Country network which spans 400 kilometres. The SWIS connects Geraldton and surrounds to Perth. Geraldton is connected to Three Springs by 132kV transmission lines; whilst Mullewa is connected to Geraldton via High Voltage Three Phase transmission lines. There is a gas power station at Utakarra (21MW) in Geraldton, and a Peaking Generator at Geraldton Airport owned and operated by Tesla Corporation. The Western Power Network Capacity Mapping Tool indicates that four Western Power substations are located in Geraldton, at Chapman, Geraldton, Durlacher Street, and Walkaway.

In 2015, Western Power completed the Mid West Energy Project Southern Section transmission line to increase capacity to Three Springs, provide support to Geraldton and reduce the reliance on generation at Mungarra. The Western Australian Government funded an upgrade through a 75-kilometre 330kV double circuit high voltage transmission line, from Three Springs to Eneabba, where it connected with Western Power's SWIS. Stage 1 of the transmission line was undertaken at a cost of \$175 million, from August 2012 to February 2014 (Cordell Connect, 2017). The project included a new 330kV terminal at Three Springs and a 330kV double circuit transmission line from Pinjar to Three Springs terminal.

Stage 2 of the project is dependent on new entrant generation and large loads connecting. The Stage 2 would improve the transmission network through to Geraldton (WAPC, 2015). New double circuit 132 kV transmission lines are also proposed to be staged, from Chapman to Oakajee, and from Chapman to Northampton. Stage 2 would uplift the 132kV section north of the Three Springs terminal.

Mungarra gas turbine units 1, 2 & 3 (113 MW) are scheduled for retirement by Synergy, notionally for September 2018. Mungarra is one of four identified assets for retirement in response to the State Government's 2016 direction to reduce generation to 2,275 MW (exclusive of renewable generation facilities).

15.1.2 GERALDTON CBD POWER REQUIREMENTS

Due to current load pressures on the network, the undergrounding of power in the CBD has been on the agenda for many years with the community and Council. The State's Underground Power in the City of Greater Geraldton CBD Project began early November 2017, and involves the laying of underground cables to the CBD buildings located on Chapman Road between Cathedral Avenue and Forrest Street, and buildings located on Durlacher Street between Sanford Street and Marine Terrace.

15.1.3 MULLEWA

Mullewa is connected via High Voltage overhead transmission lines that extend out of Geraldton from the 33kV substation located within the city centre. Mullewa has experienced outages that have been categorised as environmental factors rather than equipment failure. The town's hospital is backed up by emergency generators that have the capacity to maintain essential lighting, equipment and computers. The City is an advocate for Western Power to address power outage issues as they have a detrimental impact on the ability to deliver health and community services to residents, as well as inconvenience to residents and businesses.

15.1.4 RENEWABLE ENERGY SOURCES

The Mid West region is recognised as being a prospective major contributor for renewable electricity generation, and Western Power has been working to upgrade the SWIN with a recognition of the growing number of projects that would generate electricity to feed into the system. The region has abundant renewable resources including solar, wind, wave, geothermal and biomass. A number of renewable energy projects are found in the City, with many others in the region:

- Alinta Wind Farm at Walkaway (90 MW) – completed 2006;
- Greenough River Solar Farm east of Walkaway (10 MW) – completed 2012;
- Mumbida Wind Farm at Burma Road (55 MW) – completed 2013;
- Burma Road, Burma (45 MW) – approved by JDAP, July 2016.

The electricity generated by the Mumbida Wind Farm and Greenough River Solar Farm is purchased by the Water Corporation to offset the energy requirements for the Southern Seawater Desalination Plant at Binningup.

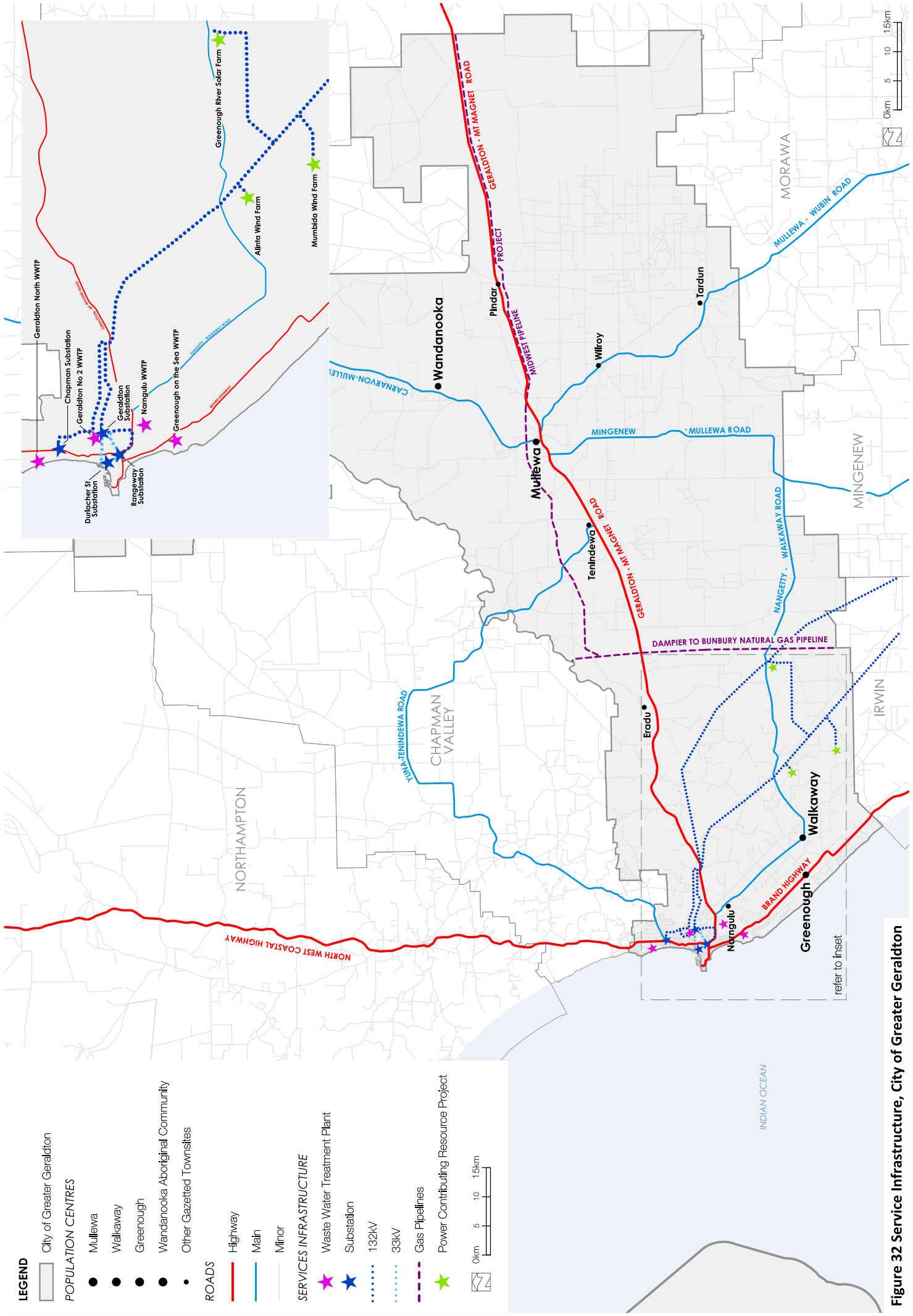


Figure 32 Service Infrastructure, City of Greater Geraldton

15.2 COMMUNICATIONS

15.2.1 NATIONAL BROADBAND NETWORK

NBN Co was established in 2009 to design, build and operate the National Broadband Network (NBN). The Perth to Geraldton fibre backbone link was completed in March 2011. Within Geraldton, NBN Co commenced installation of fibre optic cable in 2012 and activated fibre services in July 2013. As at activation, 600 Geraldton properties had been connected and a further 6,000 were targeted for connection (ABC News, 2013).

A satellite ground station is also located in Geraldton to deliver services over the NBN to outback communities. The satellite ground station supports the NBN's Long Term Satellite Services, which began operating in 2015. Ground stations feature two 13.5 metre satellite dishes and on-ground solar farms (NBN Co, 2014).

Over time, it is considered that the NBN will greatly assist people in accessing e-health, distance education and entertainment on demand, whilst businesses could potentially increase productivity, reduce costs and access new markets. The digital accessibility of the City would enable new business sectors to grow and develop, and for existing businesses to operate more effectively. There are also substantial opportunities for the resources industry, by making possible more remote operations and reducing the reliance on local labour or fly-in fly-out workforce.

The CSIRO has an office in Geraldton within the Geraldton Universities Centre complex, named the Murchison Radio-astronomy Observatory (MRO) Support Facility. The Support Facility provides administrative and project management support for the Murchison Radio-astronomy Observatory, which is 370 kilometres north-east of Geraldton. The MRO Support Facility also provides remote operations services for CSIRO's Australian Square Kilometre Array Pathfinder telescope and the Square Kilometre Array international project. It also features space for researchers to use time on supercomputers at iVEC's Pawsey Centre in Perth. All data flow from the north/north-east of WA will travel via Geraldton, making the city one of the most connected in Australia and placing it in a strong position to provide a range of digital services, such as those on offer by the Geraldton Data Centre, to communities in the region.

15.2.2 TELECOMMUNICATIONS

The Australian Government has committed \$220 million to the Mobile Black Spot Programme to improve mobile coverage along major regional transport routes, in small communities and in locations prone to natural disasters (Department of Communications and the Arts, 2017). The parameters for the program were set and used in determining which base stations were selected for funding by the Federal Government. Two rounds of expansions were announced for 2015 and 2016. A number of round one works have been completed within the CGG, whilst a number of round two works are yet to be completed within 2018 such as Pindar Base Station, Wongoody Tardun Road Base Station, and Tenindewa Yuna Road Base Station (Australian Government, 2017), (Telstra, 2017).

15.2.3 RADIO COMMUNICATIONS

The Murchison Radio-astronomy Observatory is the host site for the Australian Square Kilometre Array Pathfinder and the Square Kilometre Array international project.

A significant issue for the SKA project's operational success is maintaining radio quiet protection to the highly sensitive instruments. The success of the Square Kilometre Array international project (SKA) is based upon the Australian Radio Quiet Zone Western Australia (ARQZWA) that is centred on the Murchison Radio-astronomy Observatory (MRO) at Boolardy pastoral station, under the control of the CSIRO. This radio quiet zone ensures that interference is minimised from transmitters and that consultation occurs.

The Australian Communications and Media Authority (ACMA) issued a Radiocommunications Assignment and Licensing Instruction (RALI) MS32, which came into effect on 19 December 2014 (ACMA, 2014). The RALI specifies consultation requirements prior to installing radiocommunications transmitters within 260 kilometres of the MRO.

This frequency dependent zone extends 150km to 260km from the centre point of the ARQZWA and impacts on land within the City of Greater Geraldton, with both Mullewa and Pindar within the Zone. The ARQZWA influences the assignment of apparatus-licensed transmitters that may impact on the SKA or the MRO. The ARQZWA frequency dependent zone bands are identified on the Rural Land Strategy Plan contained in the Local Planning Strategy (CGG, 2015).

The Australian Defence Satellite Communications Ground Station (Kojarena) is a major Australian signals interception facility. It is part of the Echelon worldwide system of satellite communications keyboard monitoring (CGG, 2017).

15.3 POTABLE WATER SUPPLY AND USE

Groundwater is the major, almost sole water source for domestic, agricultural, industrial and commercial developments. Water is taken from the Arrowsmith groundwater management area, proclaimed under the *Rights in Water and Irrigation Act 1914*. *The Towards a Water Sensitive City: the Greater Geraldton Water Planning and Management Strategy* (CGG, 2014) establishes clear objectives for water planning and a framework for the management and use of water resources around Geraldton. This report performs the functions of a District Water Management Strategy, and identified the following main items as forming the water balance for the Geraldton Urban Area in 2011/12:

- The Water Corporation supplied approximately 6.7 GL of scheme water into Geraldton of which approximately 5 GL was for residential use. This figure excludes certain outer areas of Geraldton such as Narngulu, Walkaway and Cape Burney.
- This water was sourced from a 14 GL per annum licence from the Allanooka borefield in the Arrowsmith groundwater area, outside of the shire boundary to the south. The maximum available allocation is 18.5 GL and perhaps ultimately 20 GL. The Water Corporation estimated that 27 GL will be required within the next 30 years.
- The total capacity of the Water Corporation's four waste water treatment plants is currently 3 GL per annum.
- The City of Greater Geraldton's groundwater use for public open space for 2013 was just under 0.8 GL.
- The City also uses scheme water on some areas of public open space where the groundwater is unavailable, too saline for irrigation or for shandyng with high salinity groundwater. Just over 0.2GL of potable scheme water was used for irrigation in 2013.
- Just under 0.2 GL of treated wastewater from WWTP No 2 was used by the City of Greater Geraldton for watering some public open space areas and turf clubs in 2008/09.

The above data demonstrates that there is a potentially significant shortfall in water supply if business-as-usual approaches are maintained, rainfall decline continues and population expands at the predicted rates within the City.

The Geraldton Regional Water Supply (GWRS) Scheme, operated by the Water Corporation, covers approximately 1,000 square kilometres between Dongara-Port Denison and Northampton, and east to Mullewa. The GWRS Scheme is the largest supply scheme in the Mid West region. The historical average rate of service increase from 2005 has been two per cent. Service increase is expected to continue at this rate for the foreseeable future (WAPC, 2015). Most of the Geraldton Regional Water Scheme Supply is drawn from the Allanooka borefield within the Arrowsmith groundwater area in the Shire of Irwin.

The development of the Oakajee deep-water port and industrial estate will determine the projected water needs for industrial uses in the region.

It is anticipated that water use in the Mid West region could double over the next 30 years. One of the main drivers anticipated for the increase in water consumption is the growth of Geraldton and other rural towns. The Mid West Regional Water Supply (DoW, 2015) states the expansion of the Allanooka and Mt Hill borefields, combined with water management, will secure water supplies for the next 30 years. The City of Greater Geraldton is also implementing pilot projects which examine the potential to harvest and redirect stormwater from urban catchments.

15.3.1 MULLEWA

The town of Mullewa exists in a small basin. The townsite covers a third of the catchment area (105 hectares), with the remainder covered by native vegetation and a 24 hectare surface water catchment. The town was settled around a permanent spring however over use of the source resulted in partial dewatering of the aquifer, and local bores were no longer able to supply the town's water. Groundwater salinity around the town has been reported at between 500 and 5,500ppm (Global Groundwater, 2006).

Potable water has been imported to Mullewa since about 1965. Less use of local bores and importation of scheme water has increased groundwater recharge. Groundwater levels through the town have been rising and reportedly causing damage to facilities and infrastructure. The rate of groundwater rise, change in groundwater salinity and expansion of areas with shallow groundwater is not known, although may be of concern in relation to rising damp within buildings, street surface and culvert degradation and overflowing septic systems.

Global Groundwater (2006) identified options for managing groundwater to reduce recharge and/or increase discharge around the town, including enhancing surface water runoff; planting high water use perennials; ensuring water infrastructure does not leak; wastewater designed to remove water from the town (i.e. deep sewerage); water reuse activities (i.e. capturing stormwater and recycling wastewater) to reduce the amount of imported (scheme) water; and groundwater pumping through bores.

The Mullewa town drainage system follows natural flows in a north-eastern direction into the Wooderarrung River, part of the Greenough catchment. The town has been subject to flooding in the past, with a number of buildings and infrastructure in the town centre affected. Remediation works have occurred with additional drainage capacity along the Geraldton-Mt Magnet Road. New development should be required to ensure finished floor levels are above the 1/100-year flood level.

15.4 WASTE WATER

In 2013, the Water Corporation advised that:

- 10,945 customers were connected to the Geraldton sewer area; and
- 344 customers were connected to the Cape Burney sewer area.

The balance of premises, approximately 6,000, will be on septic tanks (CGG, 2014).

The Greater Geraldton wastewater system comprises of five sewer districts: Waggrakine, Spalding, Geraldton, South Geraldton and Greenough. There is a total of 27 operational pump stations (including temporaries) in the greater Geraldton wastewater system. There are currently four operational wastewater treatment plants (WWTP):

- Geraldton North WWTP (605 kL/day) (Glenfield Beach), services most of Waggrakine;
- Geraldton No. 2 WWTP (1,944 kL/day) (Wonthella), which services the remaining sewer areas;
- Narngulu WWTP (2,000 kL/day) is located within the Narngulu Industrial estate. The land adjoining the WWTP is used for rural and industrial purposes; and
- Greenough on Sea WWTP (60 kL/day) services development in the Cape Burney area (CGG, 2014).

The estimated growth in population and change in land use has the potential to impact on the environment and water resources. Inappropriate stormwater and wastewater management in the catchment may increase the potential for flooding and also lead to changes in groundwater levels due to changes in infiltration and an increased demand. It is important to note that the amount of wastewater generated in Geraldton is far more than the current irrigation requirements of the City of Greater Geraldton, and therefore there are substantial opportunities for additional water reuse arising across the four treatment plants.

15.5 SOLID WASTE

The Meru Waste Disposal Facility is a Class III landfill site located in Narngulu, approximately 10 kilometres south-east of the city centre. The facility comprises four waste cells, liquid waste treatment facility, evaporation ponds, a transfer station, hazardous goods store, recycling centre and green-waste mulching centre. The facility is anticipated to have a lifespan of 50 years, based on current disposal rates. The City encourages the separation of landfill waste from reusable or recyclable materials. The City aims to target organics waste for composting and reuse, and to maximise the air space available in the facility to increase its lifespan.

Within LPS 1, SCA 4 applies to the buffer area for the Meru Waste Disposal Facility, in order to prevent sensitive land uses avoid being placed within the vicinity of the facility. The SCA aims to avoid conflict and to minimise environmental and health impacts.

It is recognised that waste management in remote communities is difficult due to low levels of opportunity for community awareness and participation in recycling, distance from landfill facilities and recycling markets, as well as inappropriate waste management practices that have the potential to impact on drinking water resources.

15.6 KEY CONSIDERATIONS / ISSUES

The provision of water supply for residential, agricultural, mining and industrial uses, and water quality management, will be a key challenge. Key pressure areas in the City would include the Narngulu Industrial area and the Geraldton urban area.

The cost of maintaining landfills needs to be factored in and efforts to reduce waste, encouraging reusing material, and recycling programmes need to be continually reviewed. Waste management can aim to improve the effectiveness of these facilities and efficiency of waste collection and management processes.

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APPENDIX A STATE PLANNING POLICY CONTEXT

State Planning Context Documents

Strategy / Policy	Overview	Implications
<p>State Planning Strategy (2014)</p>	<p>The State Planning Strategy is the overarching strategic document that informs planning and regional development. The Strategy presents a vision for Western Australia to 2050 and beyond, based on a framework of planning principles, strategic goals and State strategic goals.</p> <p>The six-interrelated principles of the Strategy include the following:</p> <ul style="list-style-type: none"> • Community: enable diverse, affordable, accessible and safe communities; • Economy: facilitate trade, investment, innovation, employment and community betterment; • Environment: converse the State's natural assets through sustainable development; • Infrastructure: ensure infrastructure supports development; • Regional development: built the competitive and collaborative advantages of the regions; and • Governance: build community confidence in development processes and practices. 	<p>The City of Greater Geraldton is within the 'Central' sector. The Central sector is recognised for its diverse economy in mining, agriculture, fisheries and tourism. Geraldton is regarded to offer lifestyle alternatives to Perth and has substantial growth potential with appropriate infrastructure.</p> <p>The Oakajee port and industry precinct is recognised for its potential to deliver significant industrial and resource downstream processing.</p> <p>The State Planning Strategy supports the investment strategic priorities in the Mid West Investment Plan.</p> <p>Delivery of Oakajee and strengthening key industry sectors will contribute towards Geraldton being a desirable lifestyle alternative, for population growth.</p>
<p>State Planning Policy 1 – State Planning Framework (Variation 3 – October 2016)</p>	<p>The State Planning Policy 1 <i>State Planning Framework</i> (SPP 1) is an overarching policy which sets the context for decision-making on land use and development in Western Australia. This SPP ratifies and expands upon the key principles of the State Planning Strategy in planning for sustainable land use and development. SPP 1 gives statutory effect to regional strategies, regional and sub-regional structure plans, as well as strategic and operational policies.</p> <p>SPP1 states that planning should respond to the unique characteristics of, and enable the building of, vibrant regional communities and regions with strong economies. This is to be facilitated by diversifying and expanding of regional economies, allowing regional centres to capture investment to create sustained growth and enable remote settlements to maintain economic and community development through improved connectivity, services and cultural processes.</p>	<p>The broad policy statements of SPP 1 are supported by state and local government planning strategies and documents.</p> <p>Sub-regional planning strategies would include the draft Guilderton to Kalbarri sub-regional planning strategy, and the future Batavia Coast sub-regional planning strategy.</p> <p>Other operational policies are discussed further.</p>
<p>State Planning Policy 2.5: Rural Planning (December 2016)</p>	<p>The State Planning Policy 2.5 Rural Planning (SPP 2.5) guides decision-making on rural land and for rural living purposes throughout Western Australia. This SPP provides guidance for managing areas where land uses are transitioning from rural to urban land uses</p>	<p>SPP 2.5 promotes flexibility for rural zones and a wide range of land uses that may support primary production, small-scale tourism, regional facilities, environmental protection and cultural pursuits.</p> <p>DAFWA has identified higher versatility agricultural land that should be given due consideration for agriculture and related uses, to ensure this finite resource is suitably retained for crops, food production, etc.</p> <p>LPS 1 includes renewable energy as a form of land use that has a logical connection to rural</p>

Strategy / Policy	Overview	Implications
		areas, given extensive cleared land is available. Suitable locations should ensure basic raw materials, significant geological supplies, conservation land, and higher versatility agricultural land are avoided wherever possible, to protect these for future requirements.
State Planning Policy 2.6: State Coastal Planning Policy (December 2016)	<p>The State Planning Policy 2.6 (SPP 2.6) is intended to control development along the coast, guiding coastal setbacks, land use and development height. The Policy requires coastal and hazard risk management and adaption to be appropriately planned for, encouraging innovative approaches to managing coastal hazard risk.</p>	<p>The City is currently preparing a Coastal Hazard Risk Management and Adaption Plan that addresses the risk of coastal erosion and inundation along the City's coastline. The City is currently consulting the community to identify options to manage coastal hazards when they arise.</p> <p>The City commissioned MP Rogers and Associates Pty Ltd to prepare the following studies along its coast:</p> <ul style="list-style-type: none"> • Point Moore Inundation & Coastal Processes Study; • Town Beach to Drummond Cove Inundation & Coastal Processes Study; and • Cape Burney to Greys Beach Inundation & Coastal Processes Study.
State Planning Policy 2.7: Public Drinking Water Source Policy (June 2003)	<p>State Planning Policy 2.7 (SPP 2.7) applies to proclaimed Public Water Source Areas (PDWSA) throughout Western Australia. SPP 2.7 guides the use, development and management of land contained in PDWSAs, to ensure that land development within PDWSAs is compatible with the protection and long-term management of water sources and water supply.</p>	<p>Only one PDWSA is located within the City of Greater Geraldton, proclaimed over the Wicherina Catchment Area. This has not been assigned a priority category and therefore has not been included in a special control area.</p>
State Planning Policy 2.9: Water Resources	<p>State Planning Policy 2.9 (SPP 2.9) applies throughout Western Australia and aims to conserve water resources, while ensuring the availability of suitable water resources and sustainable use of water resources.</p>	<p>The City of Greater Geraldton has a Water Planning and Management Strategy that addresses SPP 2.9.</p>
State Planning Policy 3.1: Residential Design Codes (R-Codes) (December 2006)	<p>State Planning Policy 3.1 (SPP 3.1) sets out residential development requirements to provide for a range of housing types and densities; local neighbourhood character; amenity; conservation of heritage values; and environmentally sensitive design. They must be given regard when assessing and determining development applications. Local variations can be approved subject to clear justification.</p> <p>Draft State Planning Policy 7 <i>Design of the Built Environment</i> was released in October 2016. A part of this suite of documents includes <i>Apartment Design</i>. The <i>Apartment Design</i> Policy is intended to replace Part 6 of the current R-Codes.</p> <p>The next stage of Design WA will include <i>House Design</i>, to provide guidance for single and grouped dwellings. It is intended that these two volumes, when finalised, will entirely replace the current version of the R-Codes.</p>	<p>The City of Greater Geraldton has adopted the following Local Planning Policies that alter certain development standards of the R-Codes:</p> <ul style="list-style-type: none"> • Ancillary Dwellings LPP (2015); • Outbuildings LPP (2015); • Retaining Walls LPP (2015); • Setback Variations (2015); and • Vehicular Access LPP (2015).
State Planning Policy 3.2: Aboriginal Settlements	<p>State Planning Policy 3.2 (SPP 3.2) aims to recognise Aboriginal settlements through local planning schemes and strategies and to</p>	<p>The Wandanooka Aboriginal Community has a Community Layout Plan (Draft v2 2013) and is classified under the 'Settlement' zone in LPS 1.</p>

Strategy / Policy	Overview	Implications
(May 2011)	collaboratively plan for coordinated development of Aboriginal settlements in order to ensure planning needs of large Aboriginal communities are accommodated for.	
State Planning Policy 3.4: Natural Hazards and Disasters (April 2006)	State Planning Policy 3.4 (SPP 3.4) addresses planning for natural disasters and minimising the adverse impacts of natural disasters on communities, the economy and the environment. A number of natural hazards addressed in this policy include flood risk, bush fire (detailed further in SPP 3.7), landslides, cyclonic activity, severe storms and storm surges.	The City has had due regard for SPP 3.4 in preparing the <i>Local Planning Strategy</i> . Areas within the City of Greater Geraldton experience adverse weather events, including cyclones and flooding. Development along the coast and around Greenough and Chapman Rivers are subject to flood and storm events. The City is also subject to climate change which, for example, may increase the frequency of storm surge events.
State Planning Policy 3.5: Historic Heritage Conservation (May 2007)	This policy sets out the principles of sound and responsible planning for the conservation and protection of Western Australia's historic heritage.	The City has prepared a <i>Heritage Strategy</i> and its <i>Municipal Inventory of Heritage Places</i> , with 694 places identified as having heritage significance. There are 83 State Registered Places. The National Trust lists many of the buildings in Central Greenough.
State Planning Policy 3.6: Development Contributions for Infrastructure (July 2016)	SPP 3.6 is currently under review. The revised Policy aims to provide consistency in the application of development contribution plans and to ensure that development contributions are necessary and relevant to the development. Draft Guidelines aim to provide additional guidance and explanatory information to ensure that the policy is interpreted and implemented consistently across local governments. Additionally, the draft Scheme Text Provisions to provide consistency in the application of developer contribution plans through local planning schemes.	LPS 1 has incorporated the Model Provisions of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i> . Clause 4.3 of LPS 1 confirms that SPP 3.6 is to be read as part of the Scheme. Clause 4.4 of LPS 1 indicates that there are no modifications made in the Scheme to SPP 3.6. LPS 1 does not contain any Development Contribution Areas.
State Planning Policy 3.7: Planning in Bushfire Prone Areas (December 2015)	State Planning Policy 3.7 (SPP 3.7) directs how land should address bushfire risk management and seeks to guide the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. The policy is accompanied by <i>Guidelines for Planning in Bushfire Prone Areas</i> which provides advice on how bushfire risk is to be addressed when planning, designing or assessing a planning proposal within a designated bushfire prone area.	There are limited areas within the City of Greater Geraldton that are identified on the <i>Map of Bushfire Prone Areas</i> . Predominately, these areas are not within identified locations for future development.
Draft State Planning Policy 4.1: Industrial Interface (November 2017)	Draft SPP 4.1, in which is currently being advertised, applies to all planning decisions relating to industrial zones, industrial land uses, infrastructure facilities and land that may be impacted by existing and proposed industrial land uses and/or infrastructure facilities, by avoiding encroachment from sensitive land uses and potential land use conflicts. The revised policy now applies more broadly to planning for industrial zones and infrastructure reserves and includes a new implementation section which outlines recommended planning	Buffers and separation distances for industry and strategic infrastructure have been considered in the preparation of the <i>Local Planning Strategy</i> and LPS 1. The City of Greater Geraldton has adopted the following Local Planning Policies that address industrial land uses: <ul style="list-style-type: none">• Extractive Industry Local Planning Policy (2015)• Industrial Development Local Planning Policy (2015)

Strategy / Policy	Overview	Implications
	approaches at each stage of the planning framework.	
State Planning Policy 5.2: Telecommunications infrastructure (September 2015)	State Planning Policy 5.2 (SPP 5.2) establishes a framework for preparation, assessment and determination of applications for telecommunications facilities to facilitate an effective state-wide telecommunications network.	The LPS 1 incorporates 'Telecommunications Infrastructure' as a land-use within the Scheme, and it has a mix of permissibility depending on the zoning. The City's Local Planning Policy on Telecommunications Infrastructure also addresses SPP 5.2.
Draft State Planning Policy 5.4: Road and Rail Noise (September 2017)	The Draft State Planning Policy 5.4 (SPP 5.4) addresses transport noise from within major transport corridors, including primary freight routes and its impact on nearby noise-sensitive land uses. It also considered the need to strategically locate freight handling facilities. SPP 5.4 and relevant guidelines, apply to proposals for new noise-sensitive developments. New railways or major roads, major redevelopments of existing railways or major roads, and new freight handling facilities.	The SPP 5.4 identifies several roads and railways that are subject to this policy. For example, North West Coastal Highway, Brand Highway, Utakarra Road/Eastward Road and Geraldton-Mt Magnet Road are considered major State road corridors. Additionally, the railway from Geraldton to Mullewa is considered as a major State railway corridor.
Draft State Planning Policy 7 Design of the Built Environment (October 2017)	State Planning Policy 7 (SPP 7) sets out the principles, processes and considerations which apply to the design of the built environment across Western Australia. It provides an overarching framework for the State Planning Policies that deal with design related issues. SPP 7 is intended to guide and compliment other state planning policies, and apply to the design, review and assessment of activity centre plans, structure plans, local development plans, subdivisions. Residential development, institutional development and public works.	Revision of existing local planning policies that vary the R-Codes may be required to be reviewed by the City.
WAPC Development Control Policies (numerous)	The WAPC has adopted a range of operational Development Control (DC) Policies to guide its decision making on subdivision and development applications.	The following DC policies apply: <ul style="list-style-type: none"> • DC1.1 Subdivision of Land - General Principles (draft 2018) • DC1.2 Development Control - General Principles (draft 2018) • DC1.3 Strata Titles (2009) • DC1.5 Bicycle Planning (1998) • DC1.7 General Road Planning (draft 2018) • DC2.2 Residential Subdivision (2017) • DC2.3 Public Open Space in Residential Areas (2002) • DC2.4 School Sites (1998) • DC2.5 Special Residential zones (draft 2018) • DC2.6 Residential Road Planning (1998) • DC3.4 Subdivision of Rural Land (2016) • DC4.1 Industrial Subdivision (1988) • DC4.2 Planning for Hazards and Safety (1991) • DC4.3 Planning for High-Pressure Gas Pipelines (draft 2016) • DC5.1 Regional Roads (Vehicular Access) (draft 2018)
Acid Sulfate Soils Planning Guidelines (WAPC 2008)	The <i>Guidelines</i> outline the range of matters which need to be addressed at various stages of the planning process.	There are areas within the City of Greater Geraldton that are of high and moderate risk of acid sulfate soils within 3 metres of the ground surface, typically associated with river and

Strategy / Policy	Overview	Implications
	This is to ensure that the subdivision and development of land containing acid sulfate soils is planned and managed to avoid potential adverse impacts on the natural and built environment.	estuary beds. Due regard to these areas will be given in accordance with the <i>Acid Sulfate Soils Planning Guidelines</i> .
Better Urban Water Management (WAPC 2008)	Better Urban Water Management has been designed to facilitate better management of our urban water resources by ensuring an appropriate level of consideration is given to the total water cycle at each stage of the planning system. It also provides guidance on the implementation of SPP 2.9 <i>Water Resources</i> .	The <i>Local Planning Strategy</i> identifies strategies and actions with regard to better management and use of water, safeguarding public drinking water resources, and recognising existing floodplain mapping of significant waterways. The City of Greater Geraldton also has adopted a Water Planning and Management Strategy.
Liveable Neighbourhoods (draft) (WAPC 2015)	<i>Liveable Neighbourhoods</i> is an operational policy that guides the structure planning and subdivision for greenfield and large brownfield (urban infill) sites. <i>Liveable Neighbourhoods</i> promotes an urban structure of walkable neighbourhoods. Community facilities and services are accessed by walking, cycling and public transport through an efficient, interconnected movement network. Employment opportunities and economic sustainability are facilitated through a coherent hierarchy of activity centres.	The principles of <i>Liveable Neighbourhoods</i> are reflected in the <i>Residential Development Strategy</i> for increased residential densities around activity centres, to provide a more sustainable urban form. This is supported through the <i>Local Planning Strategy</i> and incorporated into the density codes shown on LPS 1. Urban structuring and siting of community facilities, schools, public open space and other elements of <i>Liveable Neighbourhoods</i> are incorporated into endorsed Structure Plans.
Local Planning Manual (WAPC 2010)	The <i>Local Planning Manual</i> is a guide to the preparation and application of local planning strategies and local planning schemes in Western Australia.	The <i>Local Planning Strategy</i> , <i>Local Profile and Context Report</i> , and LPS 1 have been prepared in accordance with the <i>Local Planning Manual</i> .

Regional Context Documents

Policy / Strategy	Overview	Implications
Bulletin No 10 Geraldton Regional Flora and Vegetation Survey (Department of Planning , 2010)	The <i>Geraldton Regional Flora and Vegetation Survey</i> (GRFVS) aims to provide a regional context for land use planning and the environmental impact assessment of proposals affecting native vegetation in the Geraldton region. The GRFVS involved desktop analysis of existing information on vegetation and soils, field survey of 81 floristic quadrats, statistical analysis of quadrat data that identified floristic groups, and further interpretation of floristic groups that determined recognisable plant communities.	The <i>Local Planning Strategy</i> aims to ensure that development of land maximises the protection of environmental features and to support the conservation, protection and management of natural resources and native vegetation. An action outlined in the <i>Local Planning Strategy</i> is to ensure land use planning and development has due regard of the <i>Geraldton Regional Flora and Vegetation Survey</i> .
Capacity of Water Resources in the Mid West to meet mining and industrial growth (Department of Water 2011)	Provides information on the availability of water resources in the Mid West in the context of expected mining and industrial growth, and recognising that water quality and quantity demands vary depending on the type of mining activity.	The report outlines that large quantities of water may also be required for a range of industrial uses associated with Oakajee and the Strategic Industrial Estate. With limited quantities of water available at the project

Policy / Strategy	Overview	Implications
		location, water resources may need to be sourced further afield.
Climate Change Risk Assessment Adaptation Action Plan (Batavia Regional Organisation of Councils 2010)	<p>The <i>Climate Change Risk Assessment Adaptation Action Plan</i> focuses on identifying risks and opportunities and developing adaptation actions for the City, and the Shires of Irwin, Northampton and Chapman Valley.</p>	<p>Increased temperatures, prediction reductions in rainfall, and projected sea level rise are all potential risks for the Mid West and are likely to have impacts on the main employment generating industries of farming, fishing and tourism. Sea level rise presents significant issues for coastal communities and major port infrastructure. Risks and opportunities are identified based on climate change projections for 2030 and 2070; and adaptation actions are suggested. Risks relate to increased maintenance, running, repair, relocation and resourcing costs, loss of amenity and natural assets, human health and safety hazards, and reduced economic viability.</p> <p>Local governments have a clear program of action to respond to risk, however climate change risks and responses will need to be reviewed on a regular basis, as scientific, technological and institutional factors continue to evolve.</p>
Discussion Paper: A Regionalisation Strategy for Western Australia (Western Australian Regional Capitals Alliance 2013)	<p>The WA Regional Capitals Alliance represents the local governments of seven major regional centre. The discussion paper includes a number of policies which seek to respond to the Alliance's stated purpose of developing the key regional centres as desirable and viable alternatives to the Perth metropolitan area.</p>	<p>The key focus areas of the discussion paper are:</p> <ul style="list-style-type: none"> • Regional Living Pathways – a series of strong vibrant young and growing regional centres. • Regional Devolution Strategy – a series of strong regional city (capitals) centres with capacity and decision makers living, working and supporting the regions in the regions. • Strengthening Regional Business – a strong, vibrant and diverse regional business community driving economic and social growth. • Planning Regional Capital Cities – well planned regional centres with the capacity, infrastructure and services to attract and sustain substantial economic and population growth. • Building Regional Industry – strong industrial precincts creating jobs and economic growth throughout regional Western Australia.
Draft Country Sewerage Policy (November 2016)	<p>The draft <i>Government Sewerage Policy 2016</i> promotes reticulated sewerage as the best disposal method for sewage. It requires all new subdivision and development to be connected to reticulated sewerage where available or considered necessary on health, environment or planning grounds.</p>	<p>Advice from Water Corporation in 2013 indicated that potentially 6,000 premises were not connected to sewer.</p> <p>The Greater Geraldton wastewater system comprises of five sewer districts, with 27 operational pump stations and four operational wastewater treatment plants at Glenfield Beach, Wonthella, Narngulu and Cape Burney.</p> <p>Mapping of the draft <i>Government Sewerage Policy</i> is available on the WAPC website. The river mouth of the Chapman River, and the Greenough River estuary are both identified, as are a number of Habitats of threatened and priority ecological communities and specially protected water-dependent fauna generally</p>

Policy / Strategy	Overview	Implications
		within Wandina, Rudds Gully, Cape Burney, and Greenough (west of Brand Highway).
Greater Geraldton Structure Plan (WAPC, 2011)	The <i>Greater Geraldton Structure Plan</i> focuses on urban areas and areas likely to experience pressure for development within the City and the Shire of Chapman Valley.	The <i>Local Planning Strategy</i> has had due regard to the <i>Greater Geraldton Structure Plan</i> .
Identification of High Quality Agricultural Land in the Mid West Region: Stage 1 - Geraldton Planning Region Resource management technical Report 386 (Department of Agriculture and Food 2013)	This report develops and applies a methodology for the identification of high quality agricultural land for the Geraldton planning region (within the South West Agricultural District). The report provides high level detail through maps and tables which depict and characterise agricultural land, and defines areas of greatest versatility for broad acre and irrigated agriculture.	<p>The <i>Local Planning Strategy</i> has incorporated the DAFWA 2013 data in the preparation of the Strategy Plans. DPIRD has advised that updated datasets could be available mid-2018.</p> <p>The following are important considerations surrounding agricultural land uses within the City of Greater Geraldton:</p> <ul style="list-style-type: none"> • Continued urbanisation particularly around the Perth metropolitan region may force relocation of horticulture activities. The soils and landforms over much of the Geraldton planning region have good potential for the development of irrigated agriculture. • Population in the agricultural hinterland is forecast to decline as a result of farms amalgamating. Climate change may also result in increased pastoral activity in the longer-term, as a result of lower rainfall and possible impacts on broadacre agriculture and/or intensive agriculture. • The planning challenge is to set aside the most productive and versatile areas of agricultural land for food security, to meet the needs of projected global, national and state population growth. • Geraldton Urban Area is regarded to be sufficient to accommodate future population growth and urbanisation – significant to ensure the rural and rangelands of the City are retained for their agricultural value.
Mid West Economic Perspective (DLGRD & MWDC 2006)	<p>The <i>Mid West Economic Perspective</i> provides insight into the Mid West through provision of the latest available information on population, labour force and employment, taxable income, tourism, fishing and aquaculture, agriculture, mining, construction, manufacturing, commerce, project investment, indigenous economic development and infrastructure.</p> <p>Each section contains a brief analysis, supported by graphs to illustrate trends over time. The <i>Mid West Economic Perspective</i> recognises the economy is predominantly based on the mining, agriculture, fishing and tourism with a Gross Regional Product was \$2.9 billion in 2004/05.</p>	<p>The Mid West Economic Perspective is out-of-date due to its age, and the significant shift of the global, national, state and regional economies since 2006.</p> <p>More information would be available through the <i>Geraldton Growth Plan</i> and other reports prepared by MWDC.</p>
Mid West Infrastructure Analysis (WAPC 2008)	<p>The <i>Mid West Infrastructure Analysis</i> detailed existing social and physical infrastructure, servicing and settlement capacity in locations across the Mid West region, and has been a useful and extensive audit of the settlements.</p> <p>The report also examined employment, population, social needs, and critical infrastructure deficiencies, with consideration</p>	<p>Key recommendations carried timeframes from 2008-2010, although a number of recommendations were marked as 'ongoing'.</p> <p>The infrastructure analysis would have been updated through the preparation of the <i>Mid West Investment Plan</i> (2011), <i>Greater Geraldton Structure Plan</i> (2011), and <i>Mid West Regional Blueprint</i> (2015), and <i>Mid West</i></p>

Policy / Strategy	Overview	Implications
	to anticipated regional growth driven by the resource sector. Recommendations and priority issues across key infrastructure sectors were provided.	<i>Regional Planning and Infrastructure Framework</i> (2015).
Mid West Investment Plan 2011 – 2021 (Mid West Development Commission 2011)	<p>The <i>Mid West Investment Plan</i> outlines community priorities in the Mid West as a set of projects that will enhance economic and social development. The MWIP recognises more than \$19 billion worth of projects are being planned or proposed for the Mid West over the period from 2011-2021.</p> <p>An agreed list of projects were assessed and prioritised based on their level of economic and/or social benefit to the local community and regional benefits. Projects include investment in economic infrastructure (railways, roads, ports, communication, electricity and utilities) and social and community infrastructure (health, education, town revitalisation and recreation facilities).</p> <p>Information in the report may be able to leverage funding and support applications through Federal and State Government programs.</p>	<p>Projects funded through the <i>Mid West Investment Plan</i>, relevant to Greater Geraldton include:</p> <ul style="list-style-type: none"> • Place Road/Flores Road Intersection Reconfiguration; • Batavia Coast Marina stage 2; • Geraldton Universities Centre; • Wubin Mullewa Road; • Geraldton Airport Landside Development; • Building Better Regional Cities – Urban Expansion Package; • Original Railway Building Restoration; • Geraldton Residential College; • Strategic Alignment Study – Dongara-Geraldton-Northampton; • Foodbank WA; • Wonthella Oval Lighting; • Monsignor Hawes Interpretive Centre; • Lot 601 Marine Terrace; • Central Regional TAFE Student Services Interactive Hub; • Geraldton Cemetery Board; and • Beresford Foreshore protection works and amenity.
Mid West Region Investability Model Final Report (2010-2031) (City of Geraldton-Greenough, 2011)	<p>The <i>Mid West Investability Model</i> objective was to improve competitiveness of the Mid West by making local economic conditions more attractive and increase the probability of investment, rather than pursue a particular specialisation.</p> <p>The model aimed to: ensure economic development or employment creation results from decisions; identify opportunities for specific localities; identify and address issue with the local business environment.</p> <p>Projects are outlined in the report that aim to stimulate investment.</p>	<p>The model forecasted a regional population of between 86,473 and 99,681 by 2031. This remains consistent with the City’s aspirational population target.</p>
Mid West Regional Planning and Infrastructure Framework (WAPC, 2015) Part A: Regional Strategic Planning Part B: Regional Infrastructure Planning	<p>The <i>Mid West Regional Planning and Infrastructure Framework</i> provides an overall strategic regional context for land use planning within the Mid West region; and to identify a number of priority initiatives required to facilitate comprehensive regional planning in order to guide sub-regional and local planning.</p>	<p>The <i>Framework</i> anticipates that the majority of transport pressure in the Mid West would be concentrated around the Geraldton Urban Area. The City, MWDC and MRWA are undertaking transport modelling to assist future planning regarding this issue.</p> <p>Infrastructure upgrades to power have occurred via Western Power’s completion of the Mid West Energy Project Southern Section in 2015. A 330kV transmission line was completed in 2014 between Three Springs and Eneabba.</p> <p>The <i>Framework</i> identified adequate power infrastructure as an issue for the efficient operation of the Geraldton and Oakajee ports. New 132kV transmission lines are proposed to be stages from Chapman to Oakajee, and from Chapman to Northampton.</p>

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<p>Northern Agricultural Regional Vision (NARvis) https://www.narvis.com.au/</p>	<p>NARvis is a regional plan created with the input and support of state and local government agencies, community groups and land managers. It has been designed as a tool for these stakeholders to identify and prioritise natural resource management investment in the Northern Agricultural Region (NAR) and promote collaboration across all levels.</p> <p>NARvis is an update to the <i>Regional Natural Resource Management Strategy</i> (NACC 2005). Rather than a traditional document, NARvis has been presented as a website with interactive maps and content.</p>	<p>Current project relevant to the City of Greater Geraldton are:</p> <ul style="list-style-type: none"> • Traditional Ecological Knowledge (NACC) • Seabird Tracking (CCWA, Fisheries, NACO, University of Amsterdam) • Landscaping & Community Garden (Bundiyarra) • Community Photo-monitoring (NACC, LGA's, Community Groups) • African Boxthorn Control (City of Greater Geraldton, Shire of Irwin and Northampton, NACC) • CHRMAP (Coastal LGA's, NACC) • Noxious Invasive Species Control (Tilapia) (Central Regional TAFE) • Capacity Building for Indigenous Prison Inmates (DCS, Central Regional TAFE, NACC).
<p>Regional Road Network Plan, Midwest Region: The Next Ten Years (MRWA, 2012)</p>	<p>The <i>Plan</i> describes the freight network, current and future freight drivers and freight demand and the implications for regional freight network to 2031.</p> <p>The <i>Plan</i> articulates the vision and objectives for the regional freight network, and the Government's role and directions to manage future freight growth and addressing the impacts on the network to 2031.</p>	<p>The <i>Plan</i> outlines that the Morawa-Mullewa-Narngulu-Geraldton railway lines will experience significant growth to 2030, driven largely by developments in the southern Mid West resources sector.</p> <p>Additionally, with regard to building and maintaining the road network, the <i>Plan</i> identifies the Geraldton Outer Bypass Stage 1 and Geraldton Inner Bypass Stage 1 as priorities.</p> <p>A project investment priority for the Regional Freight Transport Network outlined in the <i>Plan</i> is the expansion of the Mid West and Gascoyne regions' freight network to link the emerging Mid west resources industry to existing and future Mid West and Gascoyne ports, manage the Greater Geraldton area's increasing freight task and improve the area's northern and southern freight accesses to support future regional development.</p> <p>The <i>Plan</i> aimed to undertake berth expansion and optimisation to service short-term Mid West resource demands, with a longer-term transition to the proposed Oakajee port.</p>
<p>Situational Analysis for Midwest Gascoyne (Regional Development Australia, 2013)</p>	<p>The report examined social, technical, economic, environmental and political and legal issues and trends affecting the mining and energy industries.</p>	<p>Key findings of the report included:</p> <ul style="list-style-type: none"> • Criticality of infrastructure; • The reliance on development of the resource industry to achieve the rapid population growth envisaged by the CGG; and • The need to promote more even socio-economic development across the region.

Local Documents

Policy / Strategy	Overview	Implications
Accommodation Study Geraldton, WA (Western Australian Tourism Commission 2008)	<p>The study reports on the future accommodation needs for Geraldton to assist with identification, planning and prioritisation of tourism development sites. The study provides market information on visitation and accommodation patterns, and makes recommendations about the location and quantity of future accommodation needs.</p>	<p>The <i>Local Planning Strategy</i> identified a number of sites suitable for development or redevelopment within the City either exclusively for tourism or with a strong tourism component (e.g. African Reef Resort).</p> <p>The <i>Local Planning Strategy</i> outlines that provisions need to ensure that these sites are primarily developed for tourism purposes, yet recognise that the delivery of such tourism facilities in the current economic climate will rely on other compatible land uses.</p>
Background Report for Residential Development Strategy and Commercial Activity Centres Strategy (CGG 2011)	<p>The Background Report contains considerable detail on the local physical, economic and social environment within the municipality.</p>	<p>The Background Report is a local profile and context document that was prepared to support the development of the residential and commercial activity centre strategies (which have now been endorsed).</p>
City of Geraldton-Greenough Coastal Communities Study (Beckwith Environmental Planning, 2010)	<p>The <i>City of Greenough-Geraldton Coastal Communities Study</i> documents the views of stakeholders and the wider community with regards to the value and importance of the coast, and provides insight into key issues for coastal planning and development, coastal management and behavioural change issues. It includes a recommendation that NACC periodically repeat the survey to measure changes in the community's views on coastal management over time</p>	<p>Coastal Processes are also addressed from a technical perspective in the Inundation and Coastal Processes Studies for:</p> <ul style="list-style-type: none"> • Town Beach to Drummond Cove (MPRA, 2016); • Point Moore (MPRA, 2015); and • Cape Burney to Greys Beach (MPRA, 2017).
City of Greater Geraldton Commercial Activity Centres Strategy (CGG, 2013)	<p>The CACS provides information on the intent for activity centres in CGG, overarching principles to guide development as well as measures specific to achieving a minimum standard of development in each identified area of focus.</p> <p>The CACS responds to an aspirational population target of 100,000 residents, with growth in commercial activity to respond to eight performance based criteria.</p>	<p>The CACS recommends the following implementation strategies to be implemented by the City:</p> <ul style="list-style-type: none"> • Strategy to guide future strategic planning requirements. • Greater emphasis on performance based decision making. • A single local planning scheme (LPS was gazetted 11 December 2015). • Simplify statutory planning system. • Determine need for additional infrastructure. • Encourage activity centre planning from a 'strong core'. • Actively encourage the consolidation and prioritisation of growth within the Geraldton CBD. • Actively encourage the development of a diverse range of activities within Status 1 centres.
City of Greater Geraldton Community Strategic Plan 2017-2027	<p>The <i>Community Strategic Plan</i> identifies objectives and priorities, taking into account current and projected changes in community demographics, social issues and local, national and global influences. The <i>Community Strategic Plan</i> also outlines ways in which key objectives can be achieved and how to measure their progress.</p>	<p>The major objectives of the <i>Community Strategic Plan</i> are embedded within the Local Profile and Context Report, and further provide justification to the strategic planning direction contained in the <i>Local Planning Strategy</i>.</p>

Policy / Strategy	Overview	Implications
City of Greater Geraldton Integrated Transport Strategy (CGG, 2015)	The City's <i>Integrated Transport Strategy</i> gives direction on how to expand the transport system to service a population of 100,000. The purpose of the <i>Strategy</i> is to provide a 'blueprint' for capital and operational prioritised investment into transport infrastructure in the greater Geraldton region.	The <i>Integrated Transport Strategy</i> was given due regard during the preparation of the <i>Local Planning Strategy</i> .
City of Greater Geraldton Local Planning Scheme No. 1 (CGG, 2015)	<p>The LPS 1 objectives seek to:</p> <ul style="list-style-type: none"> • provide for vibrant arts, culture and education; • promote a sustainable built form and natural environment facilitate a strong healthy community which is equitable, connected and cohesive; • foster a dynamic diverse and sustainable economy; • support inclusive civic and community engagement and leadership. <p>The Scheme includes:</p> <p><u>Reserves</u> for: Civic and Community, District Distributor Road, Environmental Conservation, Foreshore, Primary Distributor Road, Public Open Space, Public Purposes, Railways, Special Purpose - Infrastructure Corridor, Strategic Infrastructure Corridor, Strategic Infrastructure - Airport, Strategic Infrastructure - Port.</p> <p><u>Zones</u> for: Regional Centre, Commercial, Mixed Use, Service Commercial, Tourism, Residential, General Industry, Light Industry, Rural Industry, Rural, Settlement, Urban Development and Special Use.</p>	The preparation of the LPS 1 was undertaken in parallel to the <i>Local Planning Strategy</i> . The <i>Local Planning Strategy</i> in turn is supported by this Local Profile and Context Report.
City of Greater Geraldton Public Open Space Strategy (CGG, 2015)	<p>The <i>POS Strategy</i> provides a 'snapshot' of the current provision of public open space, at that time, in each locality to understand the under or over supply of POS, its distribution, role and servicing. The provision of POS within the Geraldton urban area and townsites represented 9.82% of the total net area.</p> <p>The <i>POS Strategy</i> also provided guidance with regard to design, construction and maintenance of public open spaces, as well as locality specific strategies. The overall objectives of the <i>POS Strategy</i> include:</p> <ul style="list-style-type: none"> • Establish a quality open space network. • Establish a framework for public open space provision with regard to hierarchy, service design, and construction and maintenance. • Upgrade existing and develop new public open space. 	Implementation of the strategies and actions contained in this <i>POS Strategy</i> will guide the CGG in managing its extensive public open space network in an efficient and equitable manner so that all residents may enjoy its many benefits.
City of Greater Geraldton Residential Development Strategy (CGG 2013)	<p>The <i>Residential Development Strategy</i> directs the allocation and use of land for residential purposes, in responding to an aspirational population target of 100,000 residents.</p> <p>The <i>Residential Development Strategy</i> was adopted by the WAPC as a local planning strategy.</p>	<p>Priority areas for future residential development are:</p> <ul style="list-style-type: none"> • Activity centres – Geraldton CBD, Bluff Point, Rangeway, Sunset Beach and Wonthella. • Future Residential Areas – Glenfield Beach, Woorree New town and Karloo. • Regional Towns – Mullewa.

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City of Greater Geraldton Sporting Futures Report (CGG 2013)	The report aims to address a number of immediate and future challenges concerning the future provision, maintenance and renewal of sporting and recreation facilities.	Major issues include the growing requirement for multipurpose facilities with collocation of sporting groups and clubs. Funding is also a concern.
Designing our City Enquiry by Design Implementation Strategy (CGG 2011)	This Strategy considered mechanisms to implement the preferred scenario for how the Geraldton urban area should grow. The report proposed a "Greater Geraldton Growth Plan" to ensure community aspirations for the future are integrated into statutory strategic planning processes.	The <i>Growing Greater Geraldton – A Growth Plan</i> aims to bring more wealth into Geraldton through a traded economy. It envisions Greater Geraldton as being a globally recognised, growing and resilient economy and aims to drive and align regional effort and resources.
Geraldton Aboriginal Housing Action Plan (Midwest Aboriginal Organisations Alliance and Combined Universities Centre for Rural Health 2012)	<p>The <i>Geraldton Aboriginal Housing Action Plan</i> represents the findings of a collaborative research partnership to address priority issues of concern to Aboriginal people, the first of which is housing supply and access for Aboriginal people in Geraldton. The research seeks to understand why there doesn't seem to be enough affordable housing for Aboriginal people in Geraldton, and options for addressing the situation. The plan is a result of ideas generated during focus groups and workshop involving housing service providers and Aboriginal community members.</p> <p>The report considers local, national and international housing research findings and planning exercises and has presented a range of recommendations which need to be integrated into housing planning and delivery models.</p>	The MAOA and WACRH may provide updated information in 2018 in relation to housing issues and priorities for Aboriginal people.
Geraldton Airport Master Plan 2012-2030 (CGG, 2016)	The Geraldton Airport Master Plan provides the vision and layout of facilities and infrastructure for Geraldton airport. It identifies the main runways, long-term runway extensions, new car parking and operations. The Master Plan acknowledges the increased role of the airport within the State's aviation infrastructure network, and identifies expected growth from the resources industry (FIFO workforce), together with projected population growth and tourist visitation.	<p>Geraldton airport is an essential regional transport infrastructure asset and an integral part of the State aviation infrastructure network. The Airport currently has capacity; however, larger jet aircraft operations may warrant infrastructure upgrades.</p> <p>The <i>Local Planning Strategy</i> recognises the Obstacle Limitation Surfaces, Australian Noise Exposure Forecast and 70 Decibel Noise Event contours, which are integrated as SCA 3 in LPS 1.</p>
Geraldton City Centre Car Parking Management Plan (CGG, 2012)	Considers parking as an essential element of the overall transport system. Current parking issues are not about supply but management.	Particular issues in the city centre addressed by the management plan include: public parking availability during peak times; maximising efficiencies of available parking rather than adding to supply; and use of parking pricing as a travel demand measure.
Geraldton City Centre Revitalisation Plan (Department of Regional Development, 2017)	Prepared to guide the future development and revitalisation of the Geraldton city centre. The Plan outlines short, medium and long-term aspirations and strategies to provide an ongoing mechanism for implementation. The Revitalisation plan outlines key objectives, core priorities, revitalisation strategies and associated actions and measures. The Revitalisation Plan has been prepared to align with <i>Growing Greater Geraldton – A Growth Plan</i> .	Council resolved on 22 August 2017 to adopt the Geraldton City Centre Revitalisation Plan as a Local Planning Policy.

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Geraldton Regional Land Supply Assessment (WAPC, 2017)	<p>Prepared as a component of WAPC's Urban Development Program (UDP) which tracks and models land supply. The <i>Land Supply Assessment</i> assesses land for future residential, industrial and commercial uses, providing context for land use planning and infrastructure provision required to meet demand.</p>	<p>The <i>Land Supply Assessment</i> suggests that there is sufficient stock for urban land to accommodate substantial population growth well into the future. Majority of this growth is expected to occur in the eastern and northern parts of the Geraldton urban area. Additionally, there is opportunity for future development of a range of light and general industry at the Narngulu industrial area. The Oakajee port and industrial estate has the potential to generate substantial investment.</p> <p>Majority of commercial land in the Geraldton CBD is considered to be developed, however there is capacity for intensification of development to support future growth.</p>
Growing Greater Geraldton – A Growth Plan (CGG, 2017)	<p><i>Growing Greater Geraldton – A Growth Plan</i> envisions Greater Geraldton as globally recognised with a growing and resilient economy – a strong regional centre in a strong region. It aims to encourage more wealth into Geraldton by growing traded economy.</p> <p>The three focus areas are:</p> <ul style="list-style-type: none"> • Growth engine - To identify and grow Greater Geraldton's niche specialisations, where deep local competencies align with global demand. • Strong Heart - To revitalise the Greater Geraldton city centre as a distinctive and magnetic place for residents, businesses and visitors – an active destination embracing Geraldton's nautical history and assets. • Healthy circulation - To retain wealth within Greater Geraldton and minimise economic leakage through innovative and thriving small businesses seizing opportunities to serve the local population. 	<p><i>Growing Greater Geraldton – A Growth Plan</i> aims to address the following key challenges:</p> <ul style="list-style-type: none"> • Export growth; • City centre performance; and • Leakage from the local government. <p><i>Growing Greater Geraldton – A Growth Plan</i> outlines projects and initiatives that will be pursued in the short, medium and long term. The Plan's Growth Case Target for 2036 is a population of 65,246 people and 25,384 jobs.</p>
Local Planning Policies	<p>Planning policies are adopted to provide the local government's position on various planning matters which either expand on the requirements in the local planning scheme or provide direction on those matters where the scheme enables the local government to exercise discretion. Local planning policies do not form part of the local planning scheme, however the local government must have due regard in applicable policies during its consideration of applications for development approval.</p>	<p>The City of Greater Geraldton has adopted 49 local planning policies which address a variety of matters.</p>
Western Australia Tomorrow, Population Report No. 10, Medium-term Forecasts for Western Australia 2014-2026 and Sub-regions 2016-2026	<p><i>WA Tomorrow</i> is a set of forecasts representing the best estimate of Western Australia's future population size based on current fertility, mortality and migration trends.</p>	<p>The Geraldton urban area is considered to continue to be home to a growing proportion of the City's population, and over time, will be the location for a greater proportion of the Mid West's population.</p> <p>'Band C' of <i>WA Tomorrow</i> represents the median population growth forecast, and is widely regarded to reflect a stable pattern of growth. 'Band C' predicted a population of 36,880 (2011), up towards 47,110 by 2026.</p>