Noisy and Hard-to-locate Sports

Action Priority Project Responsibili

Issue: Protect the future of noisy sport by locating facilities away from residential development

Objective: To ensure the continuation of 'noisy sports' facilities whilst reducing the current land use conflictions and adverse implications upon the local community.

Consolidate all noisy sports into one location in the South West area of the City, to be known as the 'noisy and hard- to-locate sports precinct'	Medium	Noisy and hard-to-locate sports precinct	City of Kalgoorlie-Boulder
Relocation of the Kalgoorlie Rifle Range as a priority task for the creation of the noisy and hard-to-locate sports precinct	Medium	Rifle range relocation	City of Kalgoorlie-Boulder
Investigate the possibility of establishing a Drag Strip at the noisy and hard-to-locate sports precinct	Medium	Drag strip feasibility study	City of Kalgoorlie-Boulder

Education

Issue: Provide sustainable education facilities and opportunities

Objective: Attract and retain people to through the provision of education services

Redevelopment of Kalgoorlie-Boulder Middle School campus	Medium	Kalgoorlie-Boulder Middle School redevelopment project	City of Kalgoorlie-Boulder
Development of a future State High School in the Hannans Precinct at the former Kalgoorlie Golf Course site	High	North West Structure Plan	City of Kalgoorlie-Boulder
Development of a Cultural & Educational Precinct within	High	City Centre Strategy	City of Kalgoorlie-Boulder







5. Economic

5.1 Extractive resources

Mining

Since the discovery of gold in 1893, the City of Kalgoorlie-Boulder has been strongly dependent on the success of the mining industry. The city is Australia's largest gold mining region which also produces nickel and other metals. Resident employment opportunities are closely tied to mining activity and the economy of Kalgoorlie-Boulder has fluctuated in line with the fortunes of the resources sector. According to recent findings by KPMG, over 25% of the Kalaoorlie-Boulder regional workforce was employed by the mining industry in 2011,14 making it the region's largest employment sector. According to the Goldfields-Esperance Region Summary Report and Workforce Plan, the next decade is likely to see a substantial expansion in labour demand in Kalgoorlie-Boulder. Continued international demand for resources, particularly nickel is expected to continue to increasing levels of activity in this sector¹⁵. In addition, total labour demand is expected to increase from 16,936 in 2012 to 19,625 by 2018 under the base scenario, reflecting an increase of 3.4% per year. Alternatively, under the high growth scenario, the labour force is expected to increase to 23,755 by 2018, while the low growth scenario projects demand rising to 17,25516. Based on these projections, it is evident that the strongest growth is expected to occur in the mining sector, increasing more than 49% between 2008 and 2018, with much of this growth occurring between 2012 and 2018.

The success of the mining industry also has had a direct impact upon the housing market. While there remains to be a need for FIFO accommodation provision in Kalgoorlie, there has lately been a shift away from temporary workforce accommodation through the provision of onsite miner's accommodation. To encourage commercial activity and investment back into the city through 'miner' accommodation, the City will consider including transient workforce accommodation as a discretionary (D) use on properties zoned 'Industrial,' and in the new Town Planning Scheme.

Where mining occurs in areas close to the urban area, it poses various planning and land use challenges. Mining issues and the likelihood of obtaining mining

clearances when identifying land to meet future needs must be considered. The Super Pit is the largest mining operation within close proximity to the urban area and the largest gold open pit mine in Australia. Due to its proximity and size, the Super Pit is a major development consideration from both a social and economic perspective. There is a particular need to manage relationships between mining and urban uses hence why a Safety Exclusion Zone was established in the current TPS 1 around the Super Pit. However, it is unlikely that this zone will be further extended in the future, with it being replaced with 'Special Control Area'.

In addition, 'special' tourist oriented uses should be encouraged in relation to the Super Pit. KCGM have advised that they are seeking to expand their current operations to include lands under the current recreational Reserve 9899. This is to accommodate the re-introduction of the 'loop-line' tourist train. The outcome of this will be dependent on the release of a portion of this State Reserve.

According to KCGM's current planning data, there is a possibility that the Super Pit may cease production within the time frame of this Strategy. This will possibly have significant social and economic implications for Kalgoorlie-Boulder. The City, in collaboration with KCGM will develop a strategic document as a contingency planning measure, which investigates multiple scenarios, including the extension of the super pit and subsequently its closure before this expected date

Where mines have ceased operation, it presents a number of challenges, as these former open pits have the potential to sterilise land. With this in mind, it is recommended that mining proposals should not be supported in areas earmarked for urban development, unless the area can be rehabilitated for further urban development.



¹⁴Source: KPMG, 'Analysis of the Changing Resident Profile of Australia's Mining Communities.

¹⁵Source: Department of Education, Goldfields-Esperance Region Summary Report and Workforce Plan.

¹éSource: Department of Education, Goldfields-Esperance Region Summary Report and Workforce Plan.

Basic Raw Materials

It is important that sources of basic raw materials (BRM) are identified and protected through the Town Planning Scheme. A State funded BRM strategy has recently been undertaken to identify the occurrence of basic raw materials within 100km of the City of Kalgoorlie-Boulder. The proposed Special Control Area shown on map 4 is the planning mechanism to protect these resources.

5.3 Agriculture

Agriculture has not developed on a commercial scale in the City of Kalgoorlie-Boulder due to the difficulties arising from the arid climate. Pastoral leases are the predominant rural land use in the area and are mainly used for agricultural purposes at present. The provision of water for keeping livestock or crop farming is vital. Reliance is placed on a variety of water sources including artesian bores, permanent water holes, windmills and dams. An expensive aspect of managing pastoral 'stations' is fencing. If not managed properly this section of the economy will disappear entirely.



Kalgoorlie-Boulder has an extensive range of hotels, motels and caravan parks. However due to a high level of demand for short-stay facilities as a result of mining activity in and around the city, there is often a shortage of accommodation available for tourists. The LPS considers tourism and mining workforce

accommodation as two separate aspects and seeks to ensure there is enough land and facility provision for both. The tables below represent the latest tourist data available from Tourism WA specifically related to Kalgoorlie-Boulder:17

Table 5: City of Kalgoorlie-Boulder visitor summary

YE Dec 2009/10/11 Average annual visitors	YE Dec 2009/10/11 %
rs	
94,700	71
23,300	18
14,300	11
132,700	100
r Nights	
302,300	N/A
N/A	N/A
290,100	N/A
N/A	N/A
n of Stay (Estim	ated Nights)
3.2	-
N/A	-
20.2	-
N/A	
	2009/10/11 Average annual visitors 94,700 23,300 14,300 132,700 or Nights 302,300 N/A 290,100 N/A n of Stay (Estimus) 3.2 N/A 20.2

Table 6: Purpose of visit to Kalgoorlie-Boulder

Kalgoorlie- Boulder	YE Dev 2009/10/11 Average Annual Visitors	YE Dec 2009/10/11 %	
Estimated Dom	estic Visitors		
Business	50,700	43	
Visiting friends/ relatives	29,000	25	
Holiday or leisure	27,000	23	
Other	11,700	10	
Estimated International Visitors			
Holiday or leisure	8,500	59	
Visiting friends/ relatives	3,300	23	
Business	1,000	7	
Other	1,600	11	

Table 7: Top three visitor accommodation types

YE Dev

Kalgoorlie- Boulder	Average Annual Visitors	2009/10/11 %	
Estimated Dom			
Hotel, resort, motel or motor Inn	60,700	51	
Friends / relatives property	27,000	23	
Caravan Park	9,700	8	
Other	11,700	10	
Estimated International Visitors			
Hotel, resort, motel or motor Inn	4,700	33	
Friends / relatives property	3,900	27	
Caravan Park	3,200	22	
Other	1,600	11	

Table 8: Room occupancy rate - hotels, motels and serviced apartments with 15 or more rooms

Month	2009 (%)	2010 (%)	2011 (%)
January	45.4	40.4	50.4
February	58.6	56.8	67.1
March	57.7	59.2	63.8
April	51.7	58.0	63.9
May	64.7	66.4	70.2
June	55.9	61.0	70.7
July	56.5	59.2	70.9
August	77.3	68.6	81.1
September	73.9	70.6	81.9
October	68.1	68.8	78.3
November	69.2	65.3	78.3
December	49.9	49.7	57.9
Annual Average	60.8	60.3	69.6

Based on Tourism WA's data, an estimated 132,700 people visited Kalgoorlie-Boulder per year between 2009 and 2011. The most popular form of visitor accommodation includes hotel / resort / motel / motor inn, with 51% of domestic visitors and 33% of international visitors to Kalgoorlie-Boulder staying in these facilities.

According to the latest statistics from ABS, the annual average occupancy rate in the hotels, motels and serviced apartments (in Western Australia) with 15 or more rooms have fluctuated between 2009 and 2011 averaging at 60.8% in 2009, decreasing slightly to 60.3% in 2010 and increasing to 69.9% in 2011. August and September are the most popular months with 81.1% and 81.9% respectively, while December has the lowest occupancy rate, averaging 57.9%. These fluctuations highlight the seasonal nature of the local tourism industry in Kalgoorlie-Boulder.

There is a need to provide for the sustainable growth of tourism in the city by identifying and retaining sites for the development of a range of high quality tourist accommodation facilities; including affordable tourist accommodation, to meet future demand. The LPS recommends the identification of a council owned site for the designation of an overflow caravan park to cater for seasonal demand and where possible retain existing caravan parks and camping grounds.

The City aims to ensure that there is a distinction between land used for tourism and land used for temporary workers accommodation and prevent the encroachment of temporary workers in such tourism facilities, thus removing the pressures currently existing on tourist facilities as a result of mining activity.

Furthermore, it is a recommendation of the LPS that land not utilised for tourism purposes is rezoned to an appropriate zoning in the new Town Planning Scheme.

Tourism promotion

Kalgoorlie and the Goldfields region are best recognised for their rich heritage and history as a result of the 1800s gold rush and modern day mining industry. The city is renowned for hosting national events such as the Kalgoorlie Race Round and Diggers & Dealers conference. Intrinsically linked to the enhancement of the tourist facilities, is the protection of significant heritage and historical assets and

the contribution such assets can have to the growth of the economy through effective promotion. The city has a wealth of opportunities in this respect and continuous cooperation between the mining and tourism industries will be encouraged. Significant planned future tourist projects for the city include the revitalisation of the Mining



Hall of Fame as a sustainable tourist attraction and the re-introduction of the historical Loopline Tourist Railway. The City is currently drafting a five year Tourism Strategy to ensure tourism opportunities are maximised - the recommendations of this strategy will be considered in more detail in the revision of the Town Planning Scheme.

5.5 Industry



Industrial land supply

There are a number of industry related issues that the LPS takes into consideration. One of the primary concerns is ensuring that an adequate supply of industrial land is reserved, particularly for general/light industrial uses. The nature and scale of the service industry in Kalgoorlie-Boulder is indicative of the city's strong mining activity and its central location within the Goldfields region. It is expected that the current level of demand for industrial land will persist. The future location for new industrial land is within the South Boulder and West Kalgoorlie planning areas. These areas should be consolidated as a central industrial zone. The area is considered to be suitably located in terms of rail and road transport services.

The LPS encourages industry to locate or relocate to land surrounding the intermodal transport facilities. In order to facilitate this, land adjacent to the new railway alignment to accommodate intermodal facilities and associated warehousing and industrial

At the same time as identifying new land, the existing industrial areas should be enhanced and supported. The LPS recommends that an Industrial Parks Beautification project is undertaken, in order to improve the aesthetics of existing industrial areas.

Another significant issue involves managing land use conflicts between industrial and residential areas. Where necessary, separation buffers should be introduced between residential and industrial areas. In order to achieve this, the implementation of buffer studies should be carried out for all industrial areas. Furthermore, the LPS recommends the rezoning of the 'Mixed Business' area between Lane, Throssell, Forrest and Hannan Streets to 'Commercial' and/ or 'Residential' as appropriate, to encourage the relocation of existing industrial activities that are incompatible with adjacent land uses.

5.6 Commerce



Activity centres

The continued viability of the Kalgoorlie City and Boulder Town Centres as the commercial and retail centres of the district and region should be promoted; existing local centres should be retained; and new phased neighbourhood and local centres incorporating retail as the primary focus should

be planned for and developed. Further to this, consideration will be given to increasing residential density to existing residential zoned land in and around activity and neighbourhood centres to increase patronage of centres, to reduce dependency on private transport and to promote infill development.



Commercial land supply

In order to encourage the promotion of Kalgoorlie City Centre and Boulder Town Centre as the commercial hubs. The LPS will drive the implementation of both the Kalgoorlie City Centre Strategy and Boulder Town Centre Strategy. As part of the Boulder Town Strategy implementation, a Burt Street Heritage Precinct project is currently being undertaken which involves the upgrading of verandas and facades along Burt Street. As part of the Kalgoorlie City Centre Revitalisation Project, Hannan Street will undergo a streetscape redevelopment project also.

An integral component of a successful commercial hub, is inner-city living within and adjacent to activity centres. This can be achieved in Kalgoorlie-Boulder through the density recoding of core greas zoned both 'Central Business' and District Business' from R60 to R-A3, to allow for 'shop-top' housing.

Appropriate commercial development is also supported outside of the City Centre, in the form of bulky goods outlets, offices, consulting rooms and home businesses. The LPS recommends the rezoning of the 'Mixed Business'

area south-west of the City Centre (between Lane, Throssell, Forrest and Hannan Streets) to 'Commercial' and/or 'Residential,' to facilitate a variety of medium/ high density residential (R60) with compatible commercial uses, facilitating home occupations and home businesses.

In Kalgoorlie-Boulder, bulky goods premises are currently concentrated in the 'mixed business' zone along Boulder Road and to the south of the city centre. Additional suitable sites for these purposes are increasingly becoming difficult to identify. The area south-west of the City Centre mentioned above is also the preferred location for future bulky goods outlets.

A need has also been identified to establish future commercial centres in the North West sector, in line with future Structure Plans. This will include the extension of the existing Hannans Centre to accommodate population growth, as identified in the Hannans ODP. In addition, there is a need to identify a suitable location for an additional local centre to the North West of the existing Hannans Centre to support this population growth.

Economic action plan

Extractive and primary industries

Table 9: Economic strategic action plan

Minina

Action	Priority	Project	Responsibility
ACION	FIIOIIIY	riojeci	Kesponsibility

Issue: Land use conflict between urban areas and mining activities

Objective: Discourage further expansion and infill development of existing Settlements

Prevent residential development occurring in Special Control Areas	High	TPS No.2 scheme map Special Control Areas	City of Kalgoorlie-Boulder, KCGM
Create a Special Control Area over the NE sector of the town to protect mining interests	High	TPS No.2 scheme map Special Control Areas	City of Kalgoorlie-Boulder, KCGM, Department of Mines and Petroleum
Identify and protect important basic raw material resources and provide for their extraction and use in accordance with the State Planning Policies on basic raw materials	High	TPS No.2 scheme map Special Control Areas	City of Kalgoorlie-Boulder, KCGM, Department of Mines and Petroleum
Develop Special Control Areas for the Gidji Roaster and Kalgoorlie Nickel Smelter using their existing buffer zones. Further scientific studies are required to determine the	High	TPS No.2 scheme map Special Control Areas	City of Kalgoorlie-Boulder, KCGM, BHP Billiton

Issue: Land use conflict between Settlements, mining activities and intensive industrial activities

Objective: Discourage further expansion of Settlements and only permit infill development

Zone town sites outside of the City urban area as 'Special			
Use' and develop planning controls for this zone to	High	TPS No.2 scheme map	City of Kalgoorlie-Boulder
prevent expansion			

Issue: Closure of the Super Pit

Objective: Ensure strategies are put in place for the imminent closure of the Super Pit

The City, in collaboration with KCGM are to develop a
strategy document regarding the closure of the Super Pit
which includes multiple scenarios e.g. closure before due
date extension of Super Pit etc

Super Pit Closure Strategy City of Kalgoorlie-Boulder, KCGM

Tourist land supply				
Action	Priority	Project	Responsibility	
Issue: Identify and retain sites for the development of a ran	ge of tourist	accommodation facilities to r	meet future demand	
Objective: Encourage affordable holiday accommodation				
Identify a Council owned site to be designated as an overflow Caravan Park to cater for seasonal demand and where possible retain existing Caravan Parks and Camping Grounds	Medium	City of Kalgoorlie-Boulder Tourism Strategy	City of Kalgoorlie-Boulder	
Objective: Support the development of future tourist facilities				
Re-introduction of the Loop-line Tourist Railway as a significant project to enhance tourism promotion	High	Loop line Tourist Railway Relocation	Golden Mile Loop line Railway Society, KCGM, City of Kalgoorlie-Boulder	
Enhancement of the Mining Hall of Fame as a sustainable tourist attraction	High	Tourism Strategy	City of Kalgoorlie-Boulder, Tourism WA, KCGM	
Objective: Land zoned 'Tourism' is only developed for touris	sm purpose			
Rezone land which is not utilised or required for tourism purposes to an appropriate zoning	Medium	TPS No.2 review	City of Kalgoorlie-Boulder	
Objective: Encourage the development of quality tourism of	accommodo	ation		
Support diversity in tourist accommodation product, and consider provision of incentives to improve the standard of existing facilities where appropriate	Medium	City of Kalgoorlie-Boulder Tourism Strategy	City of Kalgoorlie-Boulder	
Issue: Future growth in mining and industry will result in land	l use pressu	res on tourism infrastructure		
Objective: Ensure that sufficient land is provided in appropriate locations to accommodate temporary workers accommodation				
Identify sites for future temporary workers accommodation, and zone appropriately in the Town Planning Scheme	High	TPS No.2 review	City of Kalgoorlie-Boulder	
Ensure that tourist zoned land does not include residential or commercial uses	High	TPS No.2 review	City of Kalgoorlie-Boulder	
Provide for temporary workers accommodation as a Discretionary (D) use in 'Industrial,' and 'Commercial,' zone	Medium	TPS No.2 review	City of Kalgoorlie-Boulder	
Objective: Ensure the local planning and development fram and land for temporary workers accommodation		propriately defines the distincti	on between land for tourism	
Update Town Planning Scheme to ensure zones, land use definitions and scheme provisions appropriately define both tourism uses and temporary workers accommodation uses	High	TPS No.2 review	City of Kalgoorlie-Boulder	
Issue: Ensuring that the planning framework reflects the incorporative employment opportunities and income			omy, through its provision	
Objective: Acknowledge the role that tourism plays in supp	porting the re	esource and agricultural indus	stries	
Finalise the City of Kalgoorlie-Boulder Tourism Strategy in collaboration with Tourism WA	Medium	Ongoing	City of Kalgoorlie-Boulder, Tourism WA	

Industry

transport hub

Industrial land supply

warehousing and industrial development.

Encourage the manufacturing industry to locate to industrial land adjacent to the proposed inter-modal

Issue: Provide land to meet the demand for light and general industrial uses in appropriate locations whilst supporting and enhancing the existing industrial areas

Objective: Encourage industry to establish and/or relocate to land surrounding the inter-modal transport facilities

Secure land adjacent to the new railway alignment to accommodate inter-modal facilities and associated

Medium TPS No.2 scheme map

City of Kalgoorlie-Boulder

Objective: Provide the necessary land and supporting infrastructure to maintain an adequate supply and range of serviced industrial land in appropriate locations

Medium TPS No.2 scheme map

City of Kalgoorlie-Boulder

Identify additional land for general/service light industry development, possibly in the southern part of the NW sector and to the South-West of the current airport up to Anzac Drive

Provide sufficient amount of industrial zoned land around the proposed inter-modal transport hub to enable synergy between uses

Medium

TPS No.2 scheme map

City of Kalgoorlie-Boulder

City of Kalgoorlie-Boulder

Issue: Minimise risks of land use conflict between industrial and residential uses

Objective: Appropriately zone land that minimises the potential of land use conflict

Rezone 'Mixed Business' area between Lane, Throssell,
Forrest and Hannan Streets to 'Commercial', and some
places 'Residential', to encourage relocation of existing
industrial activities that are incompatible with adjacent
land uses to this area

Require buffer studies to be undertaken for all general and
noxious industry areas

Medium

Planning Study

City of Kalgoorlie-Boulder

Issue: Beautification of existing industrial areas

Objective: Improve the aesthetics of industrial areas

Develop strategies to make existing industrial areas more attractive

High

Industrial Parks
Beautification Project

City of Kalgoorlie-Boulder



Activity Centres

Action Priority Project Responsibility

Issue: Promote Kalgoorlie-Boulder as the commercial hub for the Goldfields-Esperance Region

Objective: Support and enhance the ongoing development of the Kalgoorlie City Centre and the Boulder Town Centre as the commercial and social hubs of Kalgoorlie-Boulder and the Goldfields-Esperance Region

Promote the continued viability of the City and Town centres as the commercial hub of the Region	High	Ongoing	City of Kalgoorlie-Boulder, Chamber of Commerce
Implement the revitalisation plan for Hannan and Burt Streets to improve the visual attractiveness of the streetscape	High	Kalgoorlie City Centre Revitalisation Project & Burt Street facade upgrade project	City of Kalgoorlie-Boulder
Implement the recommendations of the Boulder Town Centre Strategy and the Kalgoorlie City Centre Strategy	High	Ongoing	City of Kalgoorlie-Boulder

Issue: Facilitate commercial development outside of the City and Town centres

Objective: Support growth in other business activity, in the form of bulky goods, offices, consulting rooms and home business

Rezoning of the 'Mixed Business' area south-west of City Centre (between Lane, Throssell, Forrest and Hannan Streets) to 'Commercial' and 'Residential' to facilitate a mix of medium/high density residential (R60) with compatible commercial uses and to allow for home occupations and home businesses	High	TPS No.2 scheme map	City of Kalgoorlie-Boulder
This area south west of the City Centre is also the preferred locality for future bulky goods outlets	High	TPS No.2 scheme map	City of Kalgoorlie-Boulder
Identify additional land for non-retail, commercial and community purposes, possibly the land bordered by the Great Eastern Highway, Atbara, Jordan Streets and Gatacre Drive	Medium	TPS No.2 scheme map	City of Kalgoorlie-Boulder
Facilitate the extension of the Hannans centre to accommodate population growth in the NW sector	Medium	Ongoing	Private Sector, City of Kalgoorlie-Boulder
Finalise and implement the Structure Plan for the expansion of the O'Connor Centre.	High	O'Connor Structure Plan	City of Kalgoorlie-Boulder

Issue: Promote inner-city living within and adjacent to activity centres

Objective: Incorporate residential development in and adjacent to activity centres

Re-code core areas zoned 'Central Business' and 'District Business' from R60 and R50 to R-AC3 to allow for 'shoptop' housing

Medium TPS No.2 Scheme Map

City of Kalgoorlie-Boulder



6. Environment



The Gribble Creek Flood Management Study 2001 identifies the 100 year Gribble Creek 'flood way' and 'flood fringe.' It makes recommendations in relation to the regulation of land-use and development within affected areas. The City's current Town Planning Scheme No.01 was developed prior to the completion of this study and the zoning of land along the Gribble Creek corridor has not been comprehensively reviewed in light of the study's findings. Furthermore,

since 2001 a number of works have occurred within and around the Gribble Creek corridor and there is a need to review the findings of the study.

The LPS encourages protection, consolidation and enhancement of the Gribble Creek corridor. This can be achieved through the introduction of a planning constraint overlay in the new Town Planning Scheme and a review the Gribble Creek Planning Policy.

Salinity management

Groundwater in and around the city's urban area is highly saline. Development of the area over time has resulted in a loss of vegetation and a rise in the water table, resulting in salinity problems particularly in the lower lying south-eastern parts. The long-term outcomes of planning decisions should be to conserve the natural landscape, water and soil resources. The existence of the Goldfields water pipeline also causes the watertable to rise which in turn exacerbates salinity problems. As a measure to kerb this issue, the sewer network should be extended to saline prone areas with the removal of septic tanks, prohibiting soak wells and any other on-site stormwater disposal in these problematic areas. Land clearing and revegetation around Gribble Creek should also be discouraged. The City aims to work with the Department of Environment and Conservation together with Kalgoorlie-Boulder Urban Landcare Group to ensure development in areas that pose a long term salinity risk is prevented.

Water Sensitive Urban Design



Water Sensitive Urban Design (WSUD) is an approach to the planning and design of urban environments that encourages careful management of all our waters. The Department of Water WA state:

"integrating water as early as possible into the land use planning process provides the best opportunity to achieve optimal solutions and implement efficient and effective best management practices." 19

The City aims to promote water efficiency measures in future housing design through the integration of housing design policies within the future planning scheme.

Vegetation

The Great Western Woodlands is an internationally significant area of biological significance covering almost 16 million hectares. This continuous band of native vegetation stretches from the edge of the Western Australian Wheat Belt to Kalgoorlie-Boulder in the north, to the inland deserts to the north-east and the Nullarbor Plain to the east. Over 60% of the Great Western Woodlands is covered with operating mines, granted mineral tenements and tenement applications. It is regarded as the largest remaining area of intact Mediterranean-climate woodland left on Earth. This region includes nearly a quarter of Australia's Eucalyptus species, many of which grow nowhere else in the world.

The Great Western Woodlands is significant for the existing and potential economic development of the

region as it supports significant mining and exploration activity, as well as active pastoral leases and timber resources, and is increasingly popular for recreation and tourism. The Government has committed \$3.8 million to the development and initial implementation of a management strategy for this area. As part of the Town Planning Scheme review, the use of management plans, the creation of conservation lots and provision of development exclusion areas will be encouraged in order to protect these areas of significant biodiversity.

The City also proposes to consult with key environmental groups, State agencies and the local community to develop a comprehensive Environment Strategy to achieve an integrated approach to managing the local environment and ensuring sustainable land use outcomes.

Air Quality

A major issue of concern in relation to air quality is the level of sulphur dioxide emissions within the air. The Environmental Protection (Goldfields Residential Areas) (Sulphur Dioxide) Policy order (No.2)2003 specifies the maximum sulphur dioxide concentration that is permitted in the ambient air of identified protected areas, including Kalgoorlie-Boulder. It also aims to control and progressively reduce the Sulphur Dioxide levels in ambient air in these protected areas.

Of particular significance to the City, is the operation of the Gidji Roaster, designed for the refractory sulphide concentrate produced by the Fimiston Mill, as well as the Kalgoorlie nickel smelters. In order to manage

Sulphur Dioxide emissions within the Environmental Protection Policy (EPP) area, KCGM have developed an Air Quality Control Strategy (ACQS). This uses prevailing and predicted weather conditions and an extensive sulphur dioxide monitoring system to ensure roasting operations adhere to the air quality requirements of the EPP. It is a recommendation of the LPS that Special Control Areas are developed around the plume areas of the Gidji Roaster and the Kalgoorlie NickelSmelterandthatnofurtherresidential development should occur on lands outside of the revised EPP monitoring area.

Dust Abatement Zones

Historically, Kalgoorlie-Boulder has been a dusty place. The combination of the dry climate, storage of mine tailings near the city, unsealed roads and degraded land within and surrounding the city have and continue to be contributing factors in generating dust problems. The Goldfields Dust Abatement Committee was founded 30 years ago and has developed dust abatement zones around the city to help protect residential areas from high levels of dust. The responsibility of managing these zones through vegetation planting and monitoring of dust levels has since been taken over by the Kalgoorlie-Boulder Urban Landcare Group (KBULG).

These dust abatement zones as indicated on map 4, are located to the north and west of the urban area, due to the fact that westerly and north-westerly winds in late spring and early summer create the biggest dust problems. These areas are only used for passive recreation, motor vehicles / motor bikes are not permitted in these areas. Further to this, woodcutting is prohibited in these zones and within a 20km radius around the urban area.

A number of these zones are located within the North West sector which is earmarked for future residential development, of particular concern is zone 1A in the Karlkurla planning area. The City aims to ensure that the existing Dust Abatement Strategy continues to operate effectively as the city expands. To implement this, the LPS proposes the introduction of a new dust abatement zone adjacent to zone 1E as highlighted on map 4. Further to this, when preparing/assessing land use proposals, the impact of any land clearing must comply with the requirements of the EPA Position Statement No.2 Environmental Protection of Native Vegetation in WA. It is an additional recommendation of the LPS that where development occurs within dust abatement zones, it is to include vegetation offsets to counteract any loss through development. This will be controlled through a vegetation management planning scheme policy in the

Bush fire preparedness and mitigation

The City of Kalgoorlie-Boulder's Chief Bushfire Control Officer is responsible for monitoring, reporting and controlling bushfires within city boundaries. The officer has responsibilities and delegated powers under the Bushfires Act 1954, which includes liaising with other Bush Fire Control Officers at rural stations.

Urban development is encroaching on vegetated areas, increasing the potential risk of bush fire. Ongoing management of the strategic fire breaks across the city are important, as is the identification and creation of appropriate inner city firebreaks. With the extension of the urban area, the firebreak

lines need to be reassessed and updated in the City's Bushfire Prevention Strategy as a matter of high priority. Further to this, the development of planning policies to mitigate the potential threat of bush fire to urban areas is recommended. This will require appropriate fire protection measures to reduce fire risk in scheme amendment proposals, development conditions and advice to WAPC on subdivision proposals. Any new measures should correspond with the WAPC Planning guideline: Planning for Bush Fire Protection (Edition 2) (May 2010).

Sustainable Development

As a member of the United Nations, the Australian State Government has a responsibility to address issues of climate change and implementing measures to encourage sustainable development. The LPS has a role to play in tackling this problem at a local level and aims to address this by instigating sustainable development measures to be controlled through the revised Town Planning Scheme. This may include but not limited to: rain water harvesting; solar power; grey water reuse; solar orientation at subdivision stage.

Climate Change

Climate change is outlined in the draft State Planning Strategy as a driver of change 'which we must try to manage and adapt to through guiding principles.' The Draft State Planning Strategy points out that adapting to the impacts of climate change is critical as well as reducing the carbon emissions and the development of eco-technologies that promote the efficient use of natural resources. Western Australia occupies one third of the land mass of Australia and has a vast array of mineral and natural resources. A careful and managed balance of conservation and development will ensure the State can sustain prosperity in the long term.

Energy efficiency

One way in which the LPS can encourage sustainable development is through the provision of energy efficient control measures in future housing design. Opportunities in this respect have been overlooked in previous development and the LPS recommends

that future environmental design guidelines and principles are implemented through the creation of housing design policies in the future planning scheme.

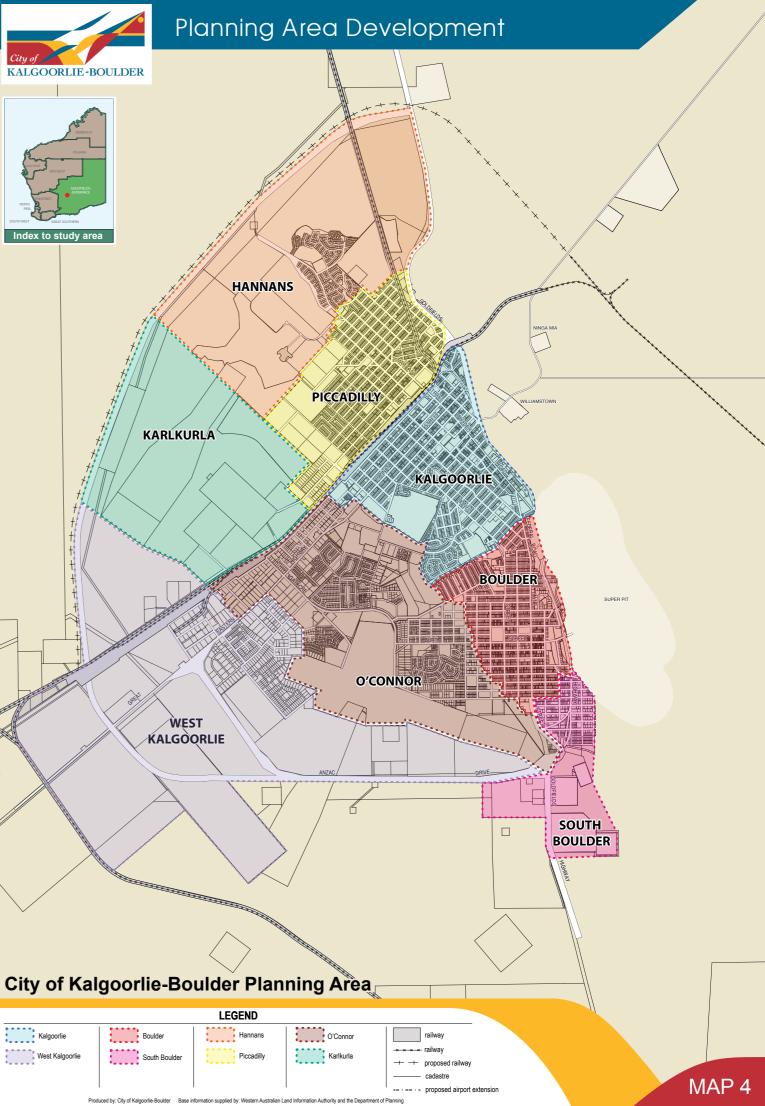
¹⁹Source: Department of Water, Water Sensitive Urban Design: an introduction

			40 (1981)				
Environment action plan				Land Use Management			
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March March 1985 March 1985 Services		6					
			E STAN	A STATE OF THE PARTY OF THE PAR		大地路	
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Natural Resources Table 10: Environment strategic action plan				Dust abatement zones			
				Action	Priority	Project	
Conservation				Issue: Minimise health risks to the community and provide ho	abitat for no	ative faur	
Action	Priority	Project	Responsibility	Objective: Ensure dust abatement zones are located in area	ıs appropri	ate to the	
Issue: Conserve natural resources to ensure biodiversity is re				Any development within dust abatement zones will require vegetation offsets.	High	Veget	
Objective: Protect sensitive environmental areas from urbar	n developm	nent		Give due regard to the EPA Position Statement No.2		pidililii	
Identify environmentally significant areas which have restricted surrounding land uses reflected in previous town planning schemes.	Medium	Environment Strategy, TPS No.2 scheme map	Department of Environment and Conservation, Kalgoorlie-Boulder Urban Land Care Group, City of Kalgoorlie-	Environmental Protection of Native Vegetation in WA.	High	TPS No	
			Boulder	Review the location of Dust Abatement Zone 1A during planning for future development of the NW sector.	Medium	planni	
Protect the Gribble Creek corridor (including the flood way and flood fringe) and encourage the linking of the existing green corridor via the proposed golf course at the northern end of the urban area creating a north south green corridor.	Medium	TPS No.2 scheme map planning constraint overlay, reviewed policy	City of Kalgoorlie-Boulder	Introduction of a new dust abatement zone on the North West edge of the City, as indicated on map 4.	High	TPS No plannii overla	
Objective: Encourage biodiversity preservation through limit	ting urban (encroachment on areas of en	vironmental significance	Develop a community/recreation centre in the Hannans Planning Area	Medium	Comm	
Establish reserves to protect significant ecosystems in areas of high biodiversity value	Medium Local Planning Strategy, TPS No.2 scheme map	Department of Environment and Conservation, Kalgoorlie-Boulder Urban Land Care Group, City of Kalgoorlie-	Agriculture land				
			Boulder	Issue: Agriculture has not developed on a large scale due to	the arid c	limate	
Encourage the use of management plans, creation of conservation lots and provision of development exclusion areas in scheme amendments and subdivision to protect significant biodiversity areas.	High Local planning policy, TPS No.2 scheme map	City of Kalgoorlie-Boulder, Department of	Objective: Manage agricultural land sustainably				
		No.2 scheme map	Environment and Conservation	Rehabilitate salt affected areas in the South-East	Medium	Rehab areas	
Salinity management				Promotion and protection of Kalgoorlie-Boulder's as a			
Issue: Salinity issues as a direct result of urban development	pastoral rich locality as outlined in the Draft State Planning Strategy. This to be achieved through the provision of						
Objective: Avoid development and activities in areas that pose a long term salinity ris				Medium	TPS No		
Support land use activities which contribute to the decrease in salinity, such as retaining remnant vegetation	High	Vegetation Management Planning Scheme Policy	Department of Environment and Conservation, Kalgoorlie-Boulder Urban Land Care Group, City of Kalgoorlie-	to encourage farming. Investigate the feasibility of introducing a community garden.			
	and revegeration. Boulder		The state of the s	Bush Fire			
Air Quality						45.	
Issue: High level of Sulphur Dioxide in the air as a result of mining activities							
Objective: Restrict urban development from encroaching in	to identified						
Develop Special Control Areas for the existing buffer zones associated with the Gidji Roaster and Kalgoorlie Nickel Smelters	High High Undertake a scientific review of existing buffer zones to determine their accuracy, TPS No.2 scheme map Special Control Areas	City of Kalgoorlie-Boulder, Environmental	Rush fire proparation		4.5		
		•	Protection Authority, KCGM	Bush fire preparation Action	Priority	Projec	
Objective: Lobby the State Government to expand the EPP of	area to incl			Issue: Urban development is encroaching on vegetated are			
Comply with the objectives of The Environmental Protection (Goldfields Residential Areas) (Sulphur Dioxide) High Amendment to EPP great City			Objective: Develop planning policies to mitigate potential b				
		Amendment to EPP area	City of Kalgoorlie-Boulder, Environmental Protection Authority, KCGM	Require appropriate fire prevention measures to reduce the threat of bush fire	High	Local policy	
Do not allow residential development to occur on lands outside of the revised EPP monitoring area	High	TPS No.2 scheme map overlay		Review of the 2002 Bushfire Prevention Strategy	High	Reviev Strate	
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auna and flora the City's urban development fringe City of Kalgoorlie-Boulder, Kalgoorlie-Boulder Urban Land Care Group getation management nning scheme policy City of Kalgoorlie-Boulder, Department of Environment and Conservation No.2 review No.2 scheme map nning constraint City of Kalgoorlie-Boulder rlay No.2 scheme map City of Kalgoorlie-Boulder, Kalgoorlie-Boulder Urban Land Care Group nning constraint mmunity Centre for nnans Planning Area City of Kalgoorlie-Boulder Department of Environment and Conservation, Kalgoorlie-Boulder Urban abilitation of salinity Land Care Group City of Kalgoorlie-Boulder No.2 review Responsibility potential of bush fire rban areas al planning scheme City of Kalgoorlie-Boulder iew Bushfire Prevention City of Kalgoorlie-Boulder

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The Hannans planning area, also commonly referred to as the North-West Sector contains the bulk of the residential Citv's new development. Much of the future planning for this area has already been determined through the Hannans Outline Development Plan (ODP); however, reassessment of the ODP may be required subject to the finalisati on of the Portlink Inland Freight Study.

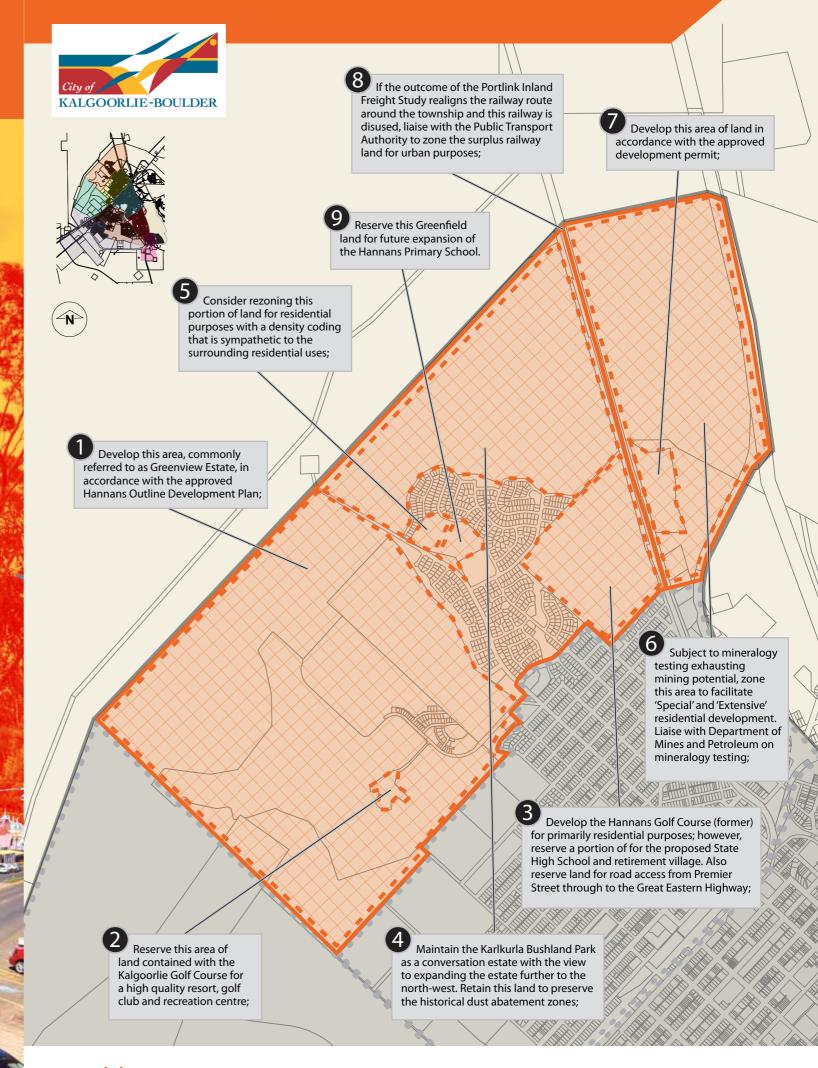
No new commercial land is required within this planning area as the Hannans Boulevard Shopping Centre and planned commercial areas as part of the ODP will suffice. There is however a lack of public open space and consideration should be given to utilising Gribble Creek to compensate for the shortfall.

Industrial development will not be considered for this planning area.

Table 11: Hannans planning area development

Objectives

- Develop this area, commonly referred to as Greenview Estate, in accordance with the approved Hannans Outline Development Plan;
- Reserve this area of land contained with the Kalgoorlie Golf Course for a high quality resort, golf club and recreation centre;
- 3 Develop the Hannans Golf Course (former) for primarily residential purposes; however, reserve a portion of for the proposed State High School and retirement village. Also reserve land for road access from Premier Street through to the Great Eastern Highway;
- Maintain the Karlkurla Bushland Park as a conversation estate with the view to expanding the estate further to the north-west. Retain this land to preserve the historical dust abatement zones;
- Consider rezoning this portion of land for residential purposes with a density coding that is sympathetic to the surrounding residential uses:
- Subject to mineralogy testing exhausting mining potential, zone this area to facilitate 'Special' and 'Extensive' residential development. Liaise with Department of Mines and Petroleum on mineralogy testing;
- Develop this area of land in accordance with the approved development permit;
- If the outcome of the Portlink Inland Freight Study realigns the railway route around the township and this railway is disused, liaise with the Public Transport Authority to zone the surplus railway land for urban purposes;
- **9** Reserve this Greenfield land for future expansion of the Hannans Primary School.



This planning area is often referred to as the North-West Sector. Currently, the Karlkurla planning area is undeveloped and is largely vegetated with native tree species. It is also home to the Explosive Reserve and Commonwealth Rifle Range. This planning area is widely recognised as the last remaining large Greenfield area capable of future urbanisation; however, development of this area is dependent on relocating the rifle range and explosive depot.

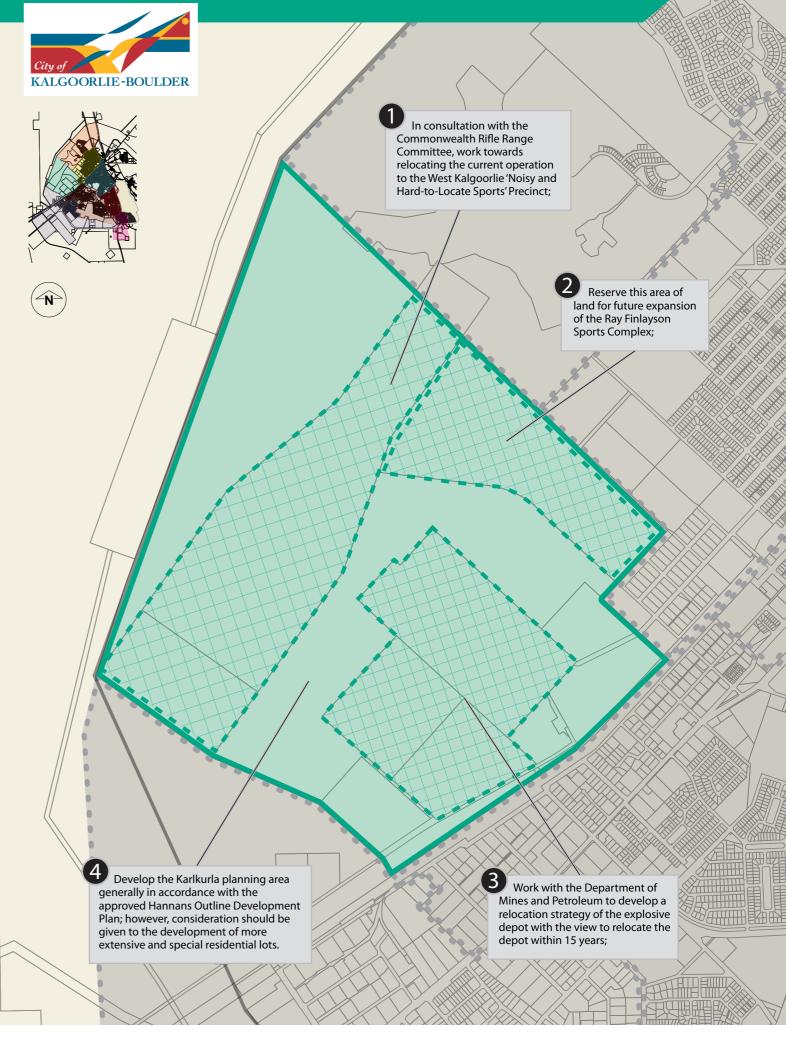
The West Kalgoorlie planning area has been identified as a provisional location to relocate the rifle range, but no location has been earmarked for the explosive depot. This planning area is also subject to reassessment once the Portlink Inland Freight Study has been finalised. Finally, moving forward, this planning area will be development generally in accordance with the Context Analysis Plan contained in the Hannans Outline Development Plan.

Table 12: Karlkurla planning area development

Objectives

- In consultation with the Commonwealth Rifle Range Committee, work towards relocating the current operation to the West Kalgoorlie 'Noisy and Hard-to-Locate Sports' Precinct;
- Reserve this area of land for future expansion of the Ray Finlayson Sports Complex;
- Work with the Department of Mines and Petroleum to develop a relocation strategy of the explosive depot with the view to relocate the depot within 15 years;
- Develop the Karlkurla planning area generally in accordance with the approved Hannans Outline Development Plan; however, consideration should be given to the development of more extensive and special residential lots.





The Piccadilly Planning Area is largely characterised by heritage homes, wide streets and a considerable amount of high quality public open space. The principle goals for this area are to conserve enhance character homes whilst still facilitating sustainable development; to achieve better planning outcomes for medical facilities in close proximity to the public hospital and; relinquishment of public open space deemed surplus to operational and community requirements.

This planning area has limited opportunities for additional commercial zoning giving its proximity to Hannans Boulevard and Kalgoorlie City Centre; future commercial zoning should not be supported.

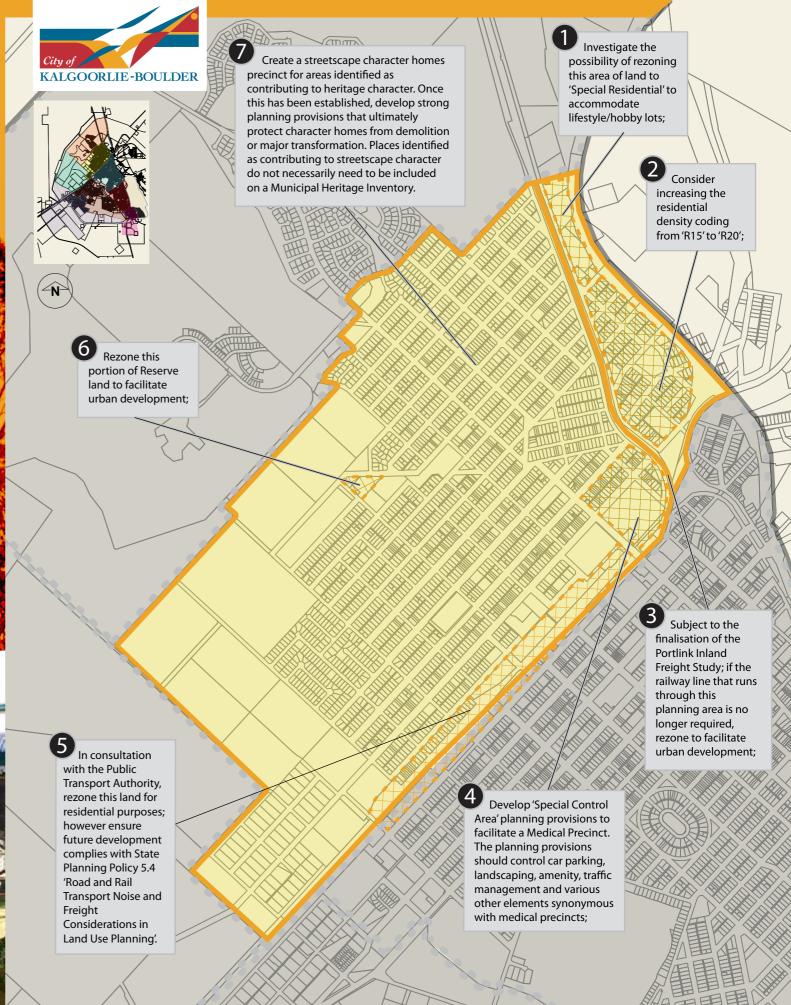
There are no opportunities to support future industrial activity for this planning area.

Table 13: Piccadilly planning area development

Objectives

- 1 Investigate the possibility of rezoning this area of land to 'Special Residential' to accommodate lifestyle/hobby lots;
- 2 Consider increasing the residential density coding from 'R15' to 'R20';
- 3 Subject to the finalisation of the Portlink Inland Freight Study; if the railway line that runs through this planning area is no longer required, rezone to facilitate urban development;
- Develop 'Special Control Area' planning provisions to facilitate a Medical Precinct. The planning provisions should control car parking, landscaping, amenity, traffic management and various other elements synonymous with medical precincts;
- In consultation with the Public Transport Authority, rezone this land for residential purposes; however ensure future development complies with State Planning Policy 5.4 'Road and Rail Transport Noise and Freight Considerations in Land Use Planning'.
- 6 Rezone this portion of Reserve land to facilitate urban development;
- Create a streetscape character homes precinct for areas identified as contributing to heritage character. Once this has been established, develop strong planning provisions that ultimately protect character homes from demolition or major transformation. Places identified as contributing to streetscape character do not necessarily need to be included on a Municipal Heritage Inventory.





Piccadilly Strategic Direction Planning Area

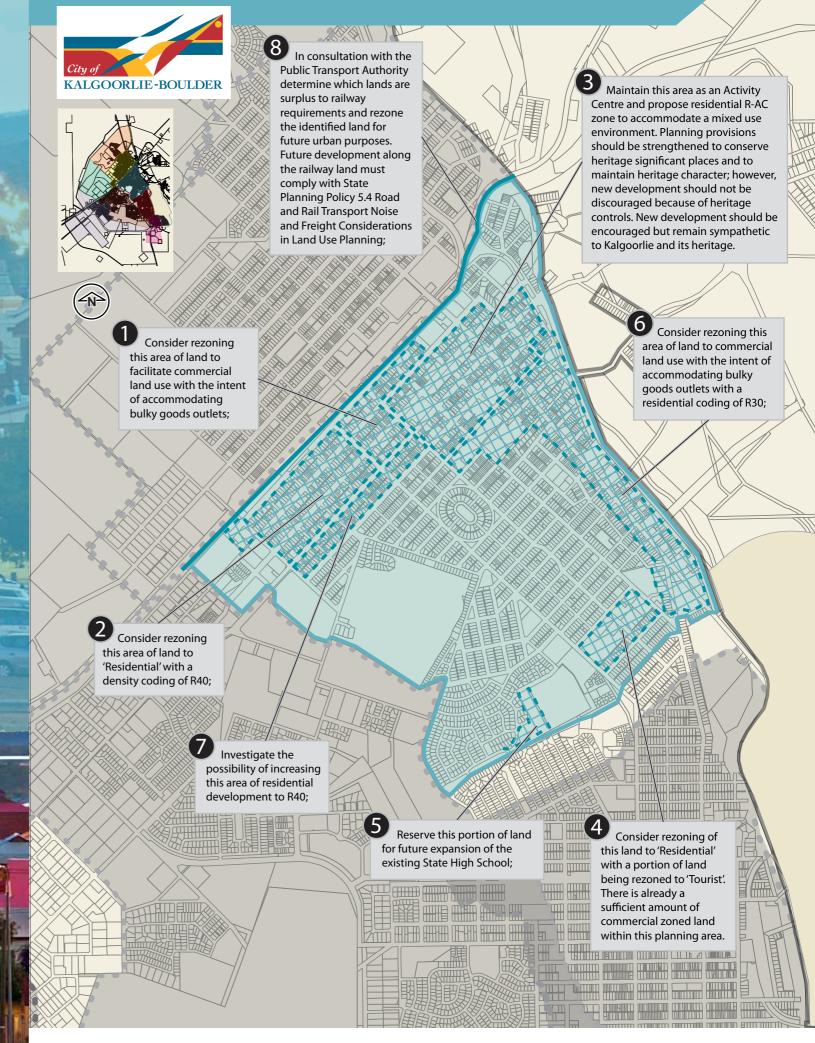
Kalgoorlie is the City's Activity Centre servicing the needs of the City's residents and the wider Goldfields District. To ensure an increase in residential density within the Kalgoorlie planning area, planning provisions will need to be implemented to provide for a range of housing choice and lot sizes. Further to this ensure there is adequate infrastructure available to facilitate development.

With the bulk of commercial zoned land being within this planning area, Kalgoorlie remain the Activity Centre for life of this Strategy. The major challenges for future commercial development are compliance with heritage controls and orderly land assembly. Although these two challenges are not insurmountable, they can pose as a deterrent. Aside from this, the other planning challenge is to facilitate the relocation of industrial and light industrial uses from the 'Mixed Business' zone to either South Boulder or West Kalgoorlie planning areas. In turn this will improve residential amenity and/or increase commercial viability.

Table 14: Kalgoorlie planning area development

Objectives

- Consider rezoning this area of land to facilitate commercial land use with the intent of accommodating bulky goods outlets;
- 2 Consider rezoning this area of land to 'Residential' with a density coding of R40;
- Maintain this area as an Activity Centre and propose residential R-AC zone to accommodate a mixed use environment. Planning provisions should be strengthened to conserve heritage significant places and to maintain heritage character; however, new development should not be discouraged because of heritage controls. New development should be encouraged but remain sympathetic to Kalgoorlie and its heritage.
- Consider rezoning of this land to 'Residential' with a portion of land being rezoned to 'Tourist'. There is already a sufficient amount of commercial zoned land within this planning area.
- Reserve this portion of land for future expansion of the existing State High School;
- 6 Consider rezoning this area of land to commercial land use with the intent of accommodating bulky goods outlets with a residential coding of R30;
- Investigate the possibility of increasing this area of residential development to R40;
- In consultation with the Public Transport Authority determine which lands are surplus to railway requirements and rezone the identified land for future urban purposes. Future development along the railway land must comply with State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning;



Kalgoorlie Strategic Direction Planning Area

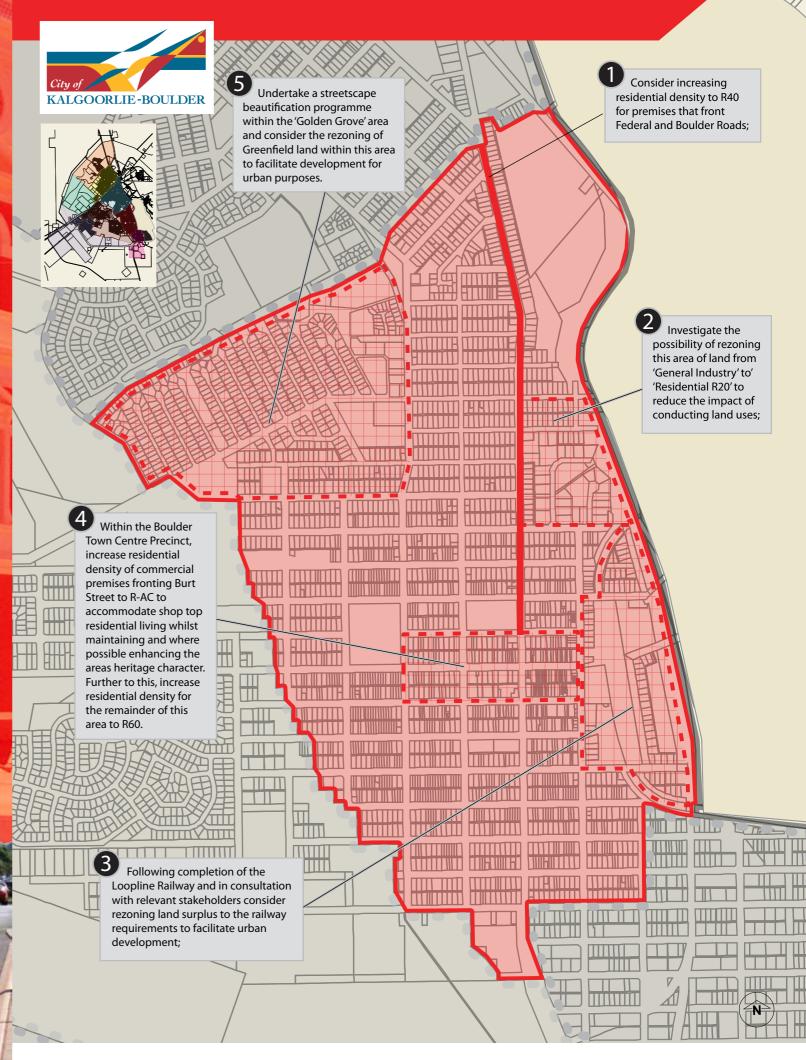
Boulder will continue to be recognised for its abundance of rich European cultural heritage buildings and, where possible Boulder's heritage character will be preserved whilst embracing modernity. Burt Street, the epicentre of Boulder's heritage character, will carry on servicing the commercial needs of Boulder. Due to the significant amount of already zoned commercial land, no new commercial land will be introduced.

Boulder also suffers from a distinct lack of public open space. To overcome this shortfall, Gribble Creek will be investigated as a possible source of open space. To ensure residential amenity is protected and valued, land use planning provisions will be put in place to move all industrial uses out of Boulder and into adjoining South Boulder and West Kalgoorlie planning areas.

Table 15: Boulder planning area development

Objectives

- Consider increasing residential density to R40 for premises that front Federal and Boulder Roads;
- Investigate the possibility of rezoning this area of land from 'General Industry' to' 'Residential R20' to reduce the impact of conducting land uses;
- Following completion of the Loopline Railway and in consultation with relevant stakeholders consider rezoning land surplus to the railway requirements to facilitate urban development;
- Within the Boulder Town Centre Precinct, increase residential density of commercial premises fronting Burt Street to R-AC to accommodate shop top residential living whilst maintaining and where possible enhancing the areas heritage character. Further to this, increase residential density for the remainder of this area to R60.
- Undertake a streetscape beautification programme within the 'Golden Grove' area and consider the rezoning of Greenfield land within this area to facilitate development for urban purposes.



Boulder Strategic Direction Planning Area

7.6 South Boulder

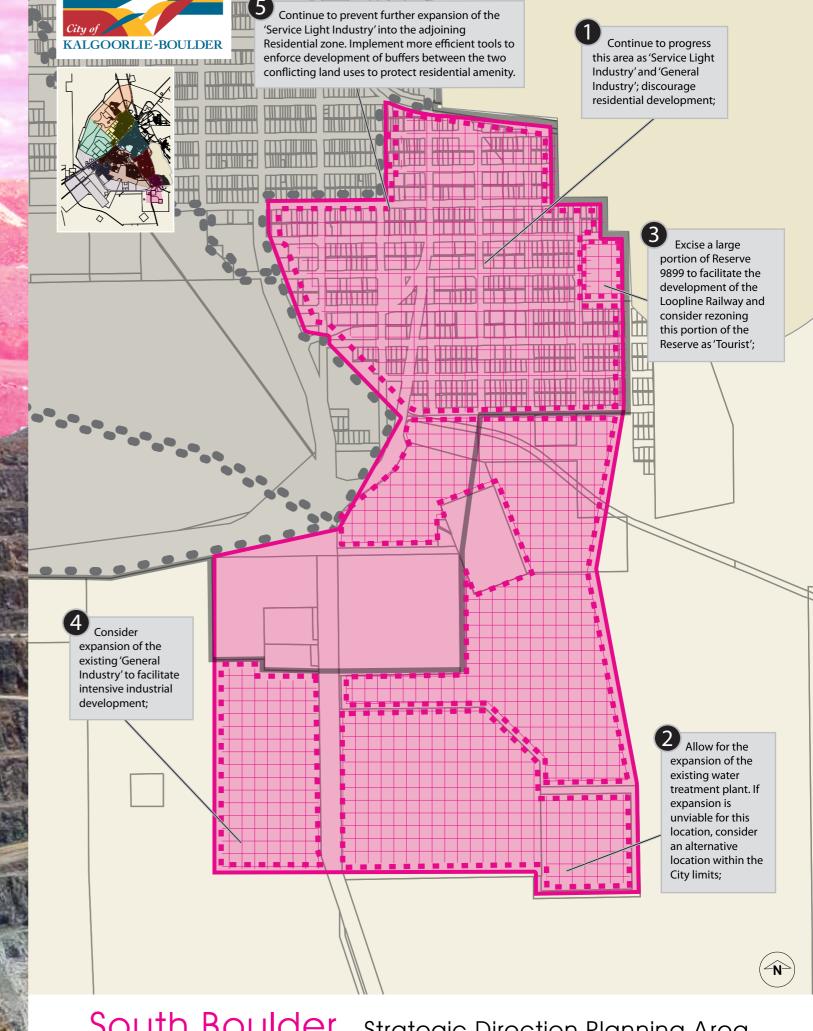
Strategic Direction

The South Boulder planning area will continue to grow as a light to medium industrial area. Due to close proximity to existing residential development, strong efforts will be made to ensure that no more industrial activities encroach into the residential area. Planning controls will be put in place to conserve and enhance residential amenity.

Table 16: South Boulder planning area development

Objectives

- 1 Continue to progress this area as 'Service Light Industry' and 'General Industry'; discourage residential development;
- 2 Allow for the expansion of the existing water treatment plant. If expansion is unviable for this location, consider an alternative location within the City limits;
- 3 Excise a large portion of Reserve 9899 to facilitate the development of the Loopline Railway and consider rezoning this portion of the Reserve as 'Tourist';
- Consider expansion of the existing 'General Industry' to facilitate intensive industrial development;
- Continue to prevent further expansion of the 'Service Light Industry' into the adjoining Residential zone. Implement more efficient tools to enforce development of buffers between the two conflicting land uses to protect residential amenity.



South Boulder Strategic Direction Planning Area

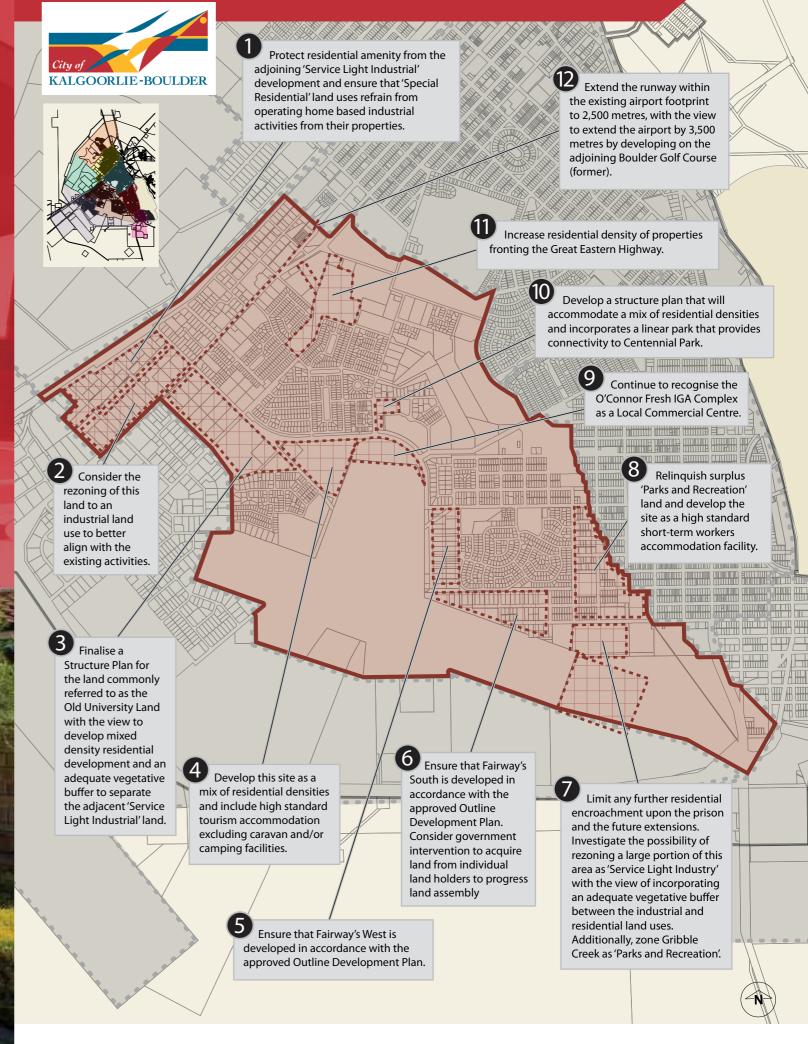
Primarily mixed density residential development, the O'Connor planning area has a number of vacant Greenfield sites suitable for future residential development. Additional commercial land will be required for this area as residential development increases.

The longevity of the airport and its future expansion are key priorities for the City. Planning controls will be required to minimise the potential impact of any conflicting land uses to the surrounding residential development, in addition to facilitating land use for airport and 'air side access' supporting industry.

Table 17: O'Connor planning area development

Objectives

- Protect residential amenity from the adjoining 'Service Light Industrial' development and ensure that 'Special Residential' land uses refrain from operating home based industrial activities from their properties.
- 2 Consider the rezoning of this land to an industrial land use to better align with the existing activities.
- Finalise a Structure Plan for the land commonly referred to as the Old University Land with the view to develop mixed density residential development and an adequate vegetative buffer to separate the adjacent 'Service Light Industrial' land.
- Develop this site as a mix of residential densities and include high standard tourism accommodation excluding caravan and/or camping facilities.
- 5 Ensure that Fairway's West is developed in accordance with the approved Outline Development Plan.
- 6 Ensure that Fairway's South is developed in accordance with the approved Outline Development Plan. Consider government intervention to acquire land from individual land holders to progress land assembly
- Limit any further residential encroachment upon the prison and the future extensions. Investigate the possibility of rezoning a large portion of this area as 'Service Light Industry' with the view of incorporating an adequate vegetative buffer between the industrial and residential land uses. Additionally, zone Gribble Creek as 'Parks and Recreation'.
- Relinquish surplus 'Parks and Recreation' land and develop the site as a high standard short-term workers accommodation facility.
- 9 Continue to recognise the O'Connor Fresh IGA Complex as a Local Commercial Centre.
- Develop a structure plan that will accommodate a mix of residential densities and incorporates a linear park that provides connectivity to Centennial Park.
- Increase residential density of properties fronting the Great Eastern Highway.
- Extend the runway within the existing airport footprint to 2,500 metres, with the view to extend the airport by 3,500 metres by developing on the adjoining Boulder Golf Course (former).



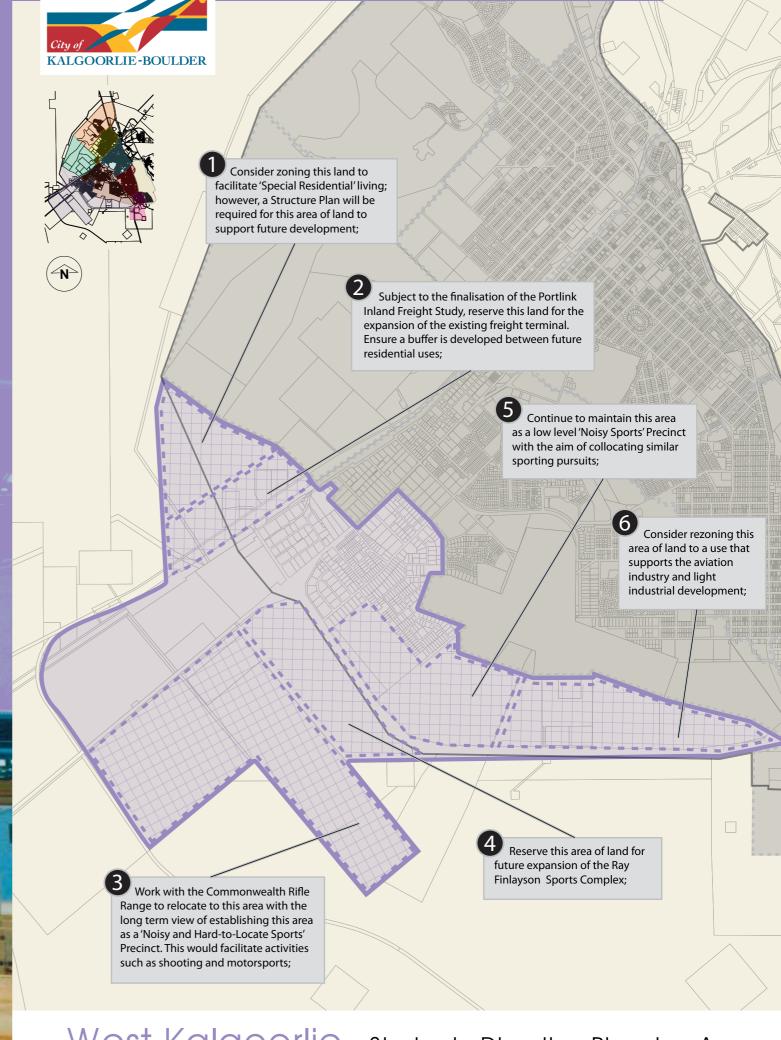
O'CONNOI Strategic Direction Planning Area

West Kalgoorlie is regarded as the City's industrial hub with the majority of industrial uses located within this planning area. At present, there are a number of industrial uses established outside of the West Kalgoorlie planning area which impact on residential amenity and commercial viability. To ensure this is reduced in the future, planning provisions will be introduced to encourage these industrial uses to relocate to this planning area. Also, giving that this planning area is a significant distance from the Kalgoorlie and Boulder CBD's and the nature of industrial development, this area lends itself well to accommodate a multi-purpose 'Noisy and Hardto-Locate Sports' Precinct. With this said, the future development proposed for this planning area hinges on the outcomes of the Portlink Inland Freight Study.

Table 18: West Kalgoorlie planning area development

Objectives

- Consider zoning this land to facilitate 'Special Residential' living; however, a Structure Plan will be required for this area of land to support future development;
- 2 Subject to the finalisation of the Portlink Inland Freight Study, reserve this land for the expansion of the existing freight terminal. Ensure a buffer is developed between future residential uses;
- Work with the Commonwealth Rifle Range to relocate to this area with the long term view of establishing this area as a 'Noisy and Hard-to-Locate Sports' Precinct. This would facilitate activities such as shooting and motorsports;
- Reserve this area of land for future expansion of the Ray Finlayson Sports Complex;
- Continue to maintain this area as a low level 'Noisy Sports' Precinct with the aim of collocating similar sporting pursuits;
- Consider rezoning this area of land to a use that supports the aviation industry and light industrial development;



West Kalgoorlie Strategic Direction Planning Area