

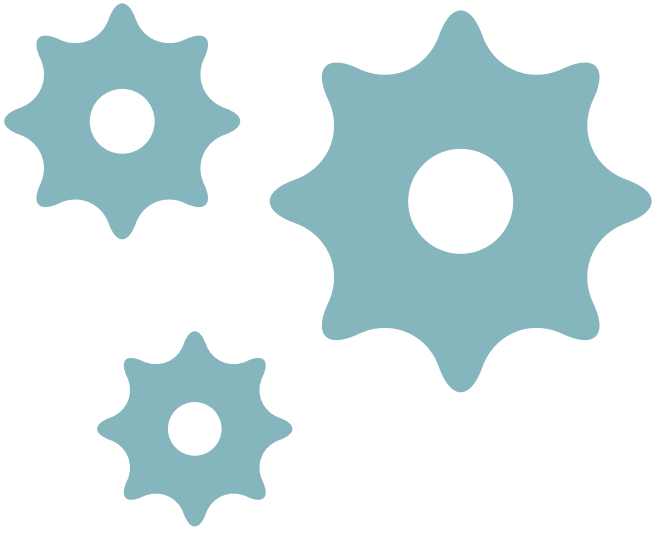
Narngulu Industrial Area

Strategic Land Use Directions

May 2010



**NARNGULU
INDUSTRIAL**



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The City of Geraldton-Greenough has been experiencing rapid growth in recent years and pressures have been mounting from local industries seeking to develop land immediately adjoining the Narngulu industrial estate and the Geraldton airport.

The draft Narngulu Industrial Estate Future Land Use Directions document was released for comment in April 2009. Following consideration of submissions, this final document is now released.

It is intended to provide broad land use planning directions to enable land owners, government agencies and the City of Geraldton-Greenough to proceed with more detailed local planning to assist in the supply for industrial land and infrastructure requirements.

Local planning also needs to take into account the industrial area buffer requirements to minimise the impact on surrounding residential and rural living areas and ensure that environmental, health, safety and amenity issues are fully considered.

Gary Prattley
Chairman

Western Australian Planning Commission

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1. Introduction

1.1 Context

Geraldton has been experiencing rapid growth in recent years. This has generated the need for a suitable strategic land use plan to guide future land uses and development in the Narngulu industrial area.

The Narngulu industrial estate and its buffer areas (that comprise the Narngulu industrial area) were established in the late 1990s by the Geraldton Region Plan and shown in the Greater Geraldton Structure Plan.

Development pressures have been mounting from local industries seeking to develop land immediately adjoining the industrial estate, particularly to the north and north-west of the existing estate in the buffer areas. This suggests that there may be a shortage of available industrial land.

To support the growth in this region, several major public infrastructure projects are in the planning stages. They include:

- the proposed Geraldton North-South Highway;
- the proposed Oakajee port, industrial area and railway alignment;
- the proposed Oakajee Narngulu infrastructure corridor;
- proposals for the expansion of Geraldton airport; and
- power transmission networks.

In order to maximise the economic and social opportunities arising from the expected growth in the region and the demand for a range of industrial land uses, it is important to have strategic plans such as this in place to guide future development.

1.2 Study aim

The aim of this study is to review the current strategic planning framework for the Narngulu industrial area and to provide direction for future planning and development, taking into account:

- the existing planning framework that applies to the area;
- existing and proposed regional infrastructure;
- buffers and emissions;
- the need for additional industrial land; and
- recent statutory planning considerations.

It is important to note that this land use directions plan is conceptual and should not be considered as a formal structure plan. Project proponents are expected to use this plan as a guide in preparing planning proposals, (including planning scheme amendments, local structure plans and plans for subdivision and development) in the locality. Extensive detailed local planning and design will be required by proponents to ensure proposals are achievable.

1.3 Study area

The study area is confined to the existing Narngulu industrial estate and the surrounding buffers precincts A, B, C and D. It is located approximately 5 km south-east of Geraldton's town centre. Reference to the Narngulu industrial area in this document means the existing Narngulu industrial estate and surrounding buffers areas (A-D). These precincts have been expanded from the original buffer areas depicted in the Geraldton Region Plan.

The study also takes into account (refer to Figure 1):

- the interface with adjoining existing and proposed urban and rural-residential areas;
- the Geraldton airport;
- the Geraldton southern transport corridor, the proposed Geraldton North-South Highway and the proposed Oakajee-Narngulu infrastructure corridor; and
- the City of Geraldton-Greenough Town Planning Scheme 4 (Greenough) and the Local Planning Scheme 5 (Greenough).

1.4 Consultation

The draft Narngulu Industrial Estate Future Land Use Directions plan was advertised for public comment in April 2009. Landowners in the affected area were posted a hard copy of the draft report and requested to submit their comments to the Department of Planning by July 2009. Eleven submissions were received from stakeholders, including state government agencies and landowners.

The key issues raised in submissions related to:

- corrections of fact in the draft;
- access restrictions from the Geraldton southern transport corridor and proposed Geraldton North-South Highway;
- land use restrictions in buffers; and
- lack of regional urban water management directions.

All issues raised in the submissions have been considered and where appropriate, changes have been incorporated into this final document and the land use plan shown in figure 5.

In particular, modifications have been made to better reflect land use compatibility with:

- the Narngulu waste disposal site and the wastewater treatment plant;
- controlled access requirements associated with the Geraldton southern transport corridor and Geraldton North-South Highway; and
- access to private land adjacent to the Narngulu wastewater treatment plant.



2. Regional and local planning background

The following objectives, guidelines and recommendations for the Narngulu industrial area are taken from the Geraldton Region Plan and Greater Geraldton Structure Plan:

2.1 Geraldton Region Plan

This plan was published in 1999 and provides the most recent strategic planning framework for the Narngulu area. The plan adopted recommendations made in the component study, Narngulu Industrial Estate Study (1996). The Geraldton Region Plan adopted the Narngulu industrial estate buffer as depicted in this study.

Industrial area objectives

- To preserve the integrity of the Narngulu industrial estate for general industry, recognising that this area will provide the only source of general industry zoned land close to Geraldton in the short to medium term.
- To recognise that airport requirements, including obstacle height limitations, will take precedence over general or light industrial rezoning.
- To retain Narngulu for general industry consistent with Environmental Protection Authority requirements.
- To protect the integrity of the Narngulu industrial estate with appropriate buffers.
- To prevent residential and incompatible uses in industrial buffers.
- To prevent expansion of general industry west of the existing zone.

Industrial area guidelines

- Ensure that development proposals comply with airport requirements, including obstacle height limitations.
- Investigate mechanisms of implementing a buffer to screen the area from the road.
- Retain Narngulu for general industry consistent with Environmental Protection Authority requirements for industrial development, close to urban areas. (Local governments, Ministry for Planning, LandCorp, Mid West Development Commission and Department of Resource Development).

Recommendations

- Include additional land comprising 152 ha to the south and 5 ha in the Narngulu townsite in the general industry zone.
- Reduce the size of the existing noxious and hazardous industry zone as recommended by the Narngulu industrial estate study.
- Include most of the land in the buffer inside a general farming zone, and include in development areas, to provide for the orderly subdivision and development of the land as and when additional industrial land is required.
- Review the zoning provisions in the general industry zone to ensure that they accommodate the type of development appropriate for the area.
- Formalise the Narngulu buffer to prohibit further residential development, including consideration of impacts on landowners.

2.2 Greater Geraldton Structure Plan

The Greater Geraldton Structure Plan is a component of the Geraldton Region Plan and provides the spatial framework for coordinating development in the greater Geraldton area. It was anticipated that this structure plan would:

- provide the basis for a regional planning scheme;
- provide a guide for consideration of scheme amendments; and
- form a basis on which service agencies could plan their future infrastructure requirements.

The Greater Geraldton Structure Plan anticipated potential conflicts between residential areas and the general and light industrial uses in Narngulu. The plan identified significant new areas for proposed residential land and rural-residential use: to the north (Rangeway, Karloo and Utakarra); to the west (Mount Tarcoola, Wandina, Cape Burney/Rudds Gully); and to the south-west (special residential use south of Rudds Gully Road).

The need to separate incompatible land uses and minimise land use conflicts led to the adoption of buffer areas A-D, to guide future development of these areas. The plan aimed to ensure that there is a limit to the eastward extension of urban uses, and that compatible industrial land uses are established in the buffer areas.

The structure plan notes that Narngulu is a general industry site and recommends development areas, as defined in the local planning scheme, be applied to guide subdivision and development of land in the buffer areas.

The Greater Geraldton Structure Plan proposes the following for the identified four buffer areas (figure 2):

Area A Future light industry	This area is zoned as general farming and will be considered for future light industry, consistent with its location on the future regional entry road into Geraldton. The development of the area as a business park, rather than a conventional light industrial area, would be encouraged given its location on the future entry road, adjacent to residential areas.
Area B General farming	This area will be retained as general farming only and will not be considered for light industrial uses.
Area C Future light industry and general farming	The land north of the eastern railway line will be retained as general farming with potential for future light industry. The land south of the eastern railway line will be retained for general farming only, and will not be considered for future light industry.
Area D General farming and long-term light industry.	This area will be retained as general farming with potential for long-term light industry. Given the amount of light industrial land currently available, the development of this area for light industry would be unnecessary in the foreseeable future.

2.3 Local planning

The existing City of Geraldton-Greenough Town Planning Scheme No 4 has been replaced by the City of Geraldton-Greenough Local Planning Scheme No 5.

The local planning scheme is in draft and will be finalised and gazetted in early 2010. This planning scheme will then provide the framework for dealing with growth and development in the Narngulu industrial area.

It should be noted that this document was prepared while Town Planning Scheme No 4 was in operation and Local Planning Scheme No 5 was in draft form.

If there are conflicts between information in this document and a gazetted Local Planning Scheme No 5 , Local Planning Scheme No 5 will prevail.

2.3.1 Local Planning Strategy

The City of Geraldton-Greenough Local Planning Strategy (2008) identifies:

- existing and proposed land use precincts for agriculture and basic raw materials;
- areas of environmental value;
- urban, rural residential and rural smallholdings precincts;
- existing and possible industry sites; and
- notional commercial and infrastructure sites.

The local planning strategy map, shows infrastructure such as Geraldton airport, roads and railways, Geraldton Regional Prison, landfill and water supply, wastewater treatment plants and electricity generation/transmission.

The map also shows the Narngulu industrial estate buffer, the wastewater treatment plant buffer, the Geraldton airport inner buffer area and the Geraldton airport area of influence.

The local planning strategy makes the following statement on the Narngulu industrial estate and area:

‘Within the Narngulu industrial estate buffer shown on the strategic plan, further intensification of land use will not be permitted if the use is not compatible with the Narngulu industrial area.’

Where possible residential use will be located outside of the buffer. In addition, the number of residential dwellings in proximity to the notional buffer area in rural residential precincts will be limited as much as possible, and the separation distances between these dwellings and Narngulu will be maximised.

Memorials may be placed on titles to notify prospective purchasers of emissions from Narngulu. In a further effort to minimise the impact of industry at Narngulu on surrounding owners, the town planning scheme will prevent new industries from locating in Narngulu if the impacts are likely to affect surrounding residents.’

The strategic direction for industry is that general and strategic industry will be accommodated within the Narngulu industrial estate. Other land uses compatible with the industrial estate shall be considered in the buffer areas for Narngulu industrial estate, in accordance with any detailed planning strategy for the Narngulu locality.’



3. Regional infrastructure

Narngulu occupies a strategically significant location with respect to infrastructure in the Geraldton region. Connections to the regional and local road and rail networks are key considerations in planning for the future of the Narngulu industrial area.

Several key decisions on regional level infrastructure are yet to be made and will have a major influence on land use planning for the area. These include the Oakajee-Narngulu infrastructure corridor, the proposed Geraldton North-South Highway, the Western Power 132 kV transmission line, expansion of the Geraldton airport, and upgrades to the Geraldton port. The decisions made on these projects will have ramifications on the future access and development of the Narngulu industrial area.

The status of relevant projects and the implications for Narngulu industrial area are summarised as follows.

3.1 Regional road and rail network

The Geraldton Region Plan and the Greater Geraldton Structure Plan outlined a proposed regional road network. This network has formed the basis for regional transport planning to date.

At present, Edward Road and the Geraldton southern transport corridor are the primary roads connecting Narngulu to the city, the airport and Geraldton port. Rudds Gully Road provides the major link to the south-west and to the Brand Highway. Goulds Road is a major internal distributor.

The alignment shown for the Oakajee-Narngulu infrastructure corridor is yet to be finalised and the most current alignment is shown. The infrastructure corridor may form part of a major outer bypass road with a link through the southern transport corridor, and the proposed Geraldton North-South highway to the Brand Highway.

There is a need for strong north-south and east-west regional and district road links to connect the Narngulu industrial area to the surrounding road network.

The proposed Verita Road and east-west connector road will play important roles in connecting to the local road network.

Any development in the short term will need to demonstrate that it can be accommodated by the existing road network.

3.1.1 Geraldton southern transport corridor

The Geraldton southern transport corridor is shown on the Greater Geraldton Structure Plan.

Stage 1 was completed in October 2005 and included construction of the new direct rail link to the Geraldton port and the first section of highway from the Geraldton port to the North West Coastal Highway (around 4 km). Stage 1 also included work necessary to connect the corridor to the local road system.

Construction on stage 2 commenced in late 2008 and was completed in late 2009.

Stage 2 extends the new highway from the North West Coastal Highway to Geraldton-Mount Magnet Road near the Geraldton airport, a distance of approximately 8.7 km. This will provide direct road access to the city, the port and the airport from the Narngulu industrial area. It is predominantly single carriageway but is designed with provision for dual carriageway in the future. It incorporates provisions for intersections with the proposed Verita Road, the proposed Geraldton North-South Highway, Goulds Road and Edward Road. The interchange with Edward Road will significantly improve access to land in precincts C and D in the long term.

Properties facing the Geraldton southern transport corridor will be visible to passing traffic and Main Roads Western Australia has advised that direct access to the transport corridor will not be permitted. This visual exposure may be enough to attract or trigger a natural market progression towards industries and businesses seeking greater exposure. As the Geraldton southern transport corridor is a controlled access road, coordinated planning will be necessary to provide access to these properties via a well designed local road network.

3.1.2 Geraldton North-South Highway

The Geraldton Primary North-South Road Alignment Selection Study (2002) identified that the existing North-West Coastal Highway will become congested by 2020. The report recommended that a bypass route should be investigated. The proposed north-south road (or Brand Highway bypass) indicative alignment was shown on the Greater Geraldton Structure Plan. At that time, it was assumed that a staged development of this north-south road was to commence in the short to medium term.

This north-south road has since been realigned and renamed the Geraldton North-South Highway and is in advanced stages of planning by Main Roads Western Australia.

The proposed Geraldton North-South Highway will improve the regional accessibility and visibility of Narngulu (particularly precinct A). The highway will be a controlled access road and as such there will be no direct access to adjacent land.

Coordinated local road planning will be required to provide access to land adjoining the highway. Visual exposure to traffic may influence the demand for lots visible from the highway.

The proposed east-west connector road to the proposed Geraldton North-South Highway is an important east-west strategic transport link that needs to be considered.

3.1.3 Edward Road

Edward Road will remain a major distributor between Narngulu, Webberton and Geraldton town centre.

It is possible that Edward Road will be upgraded between Geraldton-Mount Magnet Road and Rudds Gully Road. Upgrades to Edward Road may require a widening of the road reserve. Improvements are likely to be on the western side of Edward Road towards the rail reserve, and some land may also be required to the eastern side of the road reserve. The extent of improvements on the old railway reserve depends on the heritage issues associated with the railway reserve.

3.1.4 Verita Road and proposed east-west connector road

Verita Road and the proposed east-west local access road will function together in providing access to Narngulu. The east-west road will act as an important connection between the core industrial estate, precinct A, the proposed Geraldton North-South Highway and Verita Road. Verita Road will be an important local access road to precinct A from the surrounding urban areas. Detailed planning for the east-west road should occur in two stages. Stage 1 to provide a connection between Verita Road and the Geraldton North-South Highway, and stage 2 between the Geraldton North-South Highway and Goulds Road.

3.1.5 Rail

The existing Narngulu rail marshalling yards on Edward Road is a significant rail infrastructure hub in the Mid-West region and is at the junction of services arriving from the south and east into Geraldton. It is used as a trip servicing and fuelling point for all train services operating in and around the Geraldton region, and as a staging point for services into the Geraldton port.

Projected growth in the region over the next 3 to 5 years will see train movements increase significantly. This growth will necessitate upgrades to the rail network and servicing yards in order to support higher axle load trains, with the capability of running longer and heavier trains.

The existing line from Mullewa to Narngulu is a 16 tonne axle load structure engineered for low tonnage throughput. Indicative planning shows the track will need to be upgraded to accommodate 36 tonne axle loads given the expected throughput. In the medium term, a double track (bi-directional) may be required to accommodate increased traffic volumes destined for the Geraldton port and the proposed



Oakajee port. The extent of any new rail corridor from Mullewa is yet to be determined and development of a holding yard outside Narngulu to stage trains into and out of Geraldton port may also be required.

Increased rail activity will create additional noise issues. It is likely that land near the rail corridor will be subject to additional noise and not suitable for land uses that require areas of high amenity, such as commercial and mixed business uses.

A major component of the Oakajee-Narngulu infrastructure corridor is the rail link connecting Narngulu and Oakajee. This potential major transport link may influence the type of industries that may establish in precinct C and Narngulu industrial estate. The new rail link will need to be considered in planning decisions.

3.2 Oakajee-Narngulu infrastructure corridor

The proposed Oakajee-Narngulu infrastructure corridor is a 34 km transport and service corridor linking the Narngulu industrial estate and the future Oakajee industrial area and port. The corridor, as shown on the Greater Geraldton Structure Plan, includes provision for road, rail and services.

The Oakajee-Narngulu infrastructure corridor is vital to connect the proposed Oakajee port and industrial area with the Narngulu industrial area and Geraldton port. As such, any future review and development of land in the Narngulu industrial area should take into account the requirements of the infrastructure corridor. A corridor of up to 250 metres wide may be required in precinct C.

Planning for this corridor is progressing and studies to determine the final alignment are currently being undertaken by the Department of Planning. The exact alignment of the Oakajee-Narngulu infrastructure corridor into the Narngulu industrial area is yet to be finalised.

3.3 Geraldton airport

Geraldton airport is located to the north-east of precinct C and is the major airport servicing the Geraldton-Greenough community and the Mid-West region. The Geraldton airport masterplan was updated in 2007 and has been adopted by the City of Geraldton-Greenough. The masterplan identified surplus airport land suitable for commercial development in the form of a business park.

Proximity to the airport may provide some industries with a significant competitive advantage. Development in the proximity of the airport reserve needs to take into account compatibility with the airport and the potential airport business park.

The airport's aerial contours or obstacle limitation surfaces must be protected from the infringement of structures and dwellings for the safe operation of aircraft at Geraldton airport. Height restrictions are not considered to be a significant development impediment, provided that landowners are advised of the development restrictions.

The City of Geraldton-Greenough Local Planning Strategy identifies an inner airport buffer and an area of influence. This buffer has been incorporated into the 2008 local planning strategy along with measures to protect the integrity of the airport. It defines locations where residential land uses are not permitted, or where low density residential is permitted with special conditions. In the interim, there is a general presumption against supporting further rezoning and subdivision in the inner buffer area, which may lead to intensification of residential or other sensitive land uses.

3.4 Geraldton port

The port of Geraldton is one of Australia's busiest regional ports and a gateway to the Mid-West region. More than half of the port's exports are generated from minerals and iron ore and it is Australia's second largest grain export port.

Narngulu will maintain a strong relationship with Geraldton port and berth 5 has recently been upgraded to a dedicated iron ore berth. Commercial relationships exist between the port and many businesses in the Narngulu industrial area, including Australian Railroad Group, Iluka and Giacci.

The Geraldton southern transport corridor provides a direct road and rail link between the Narngulu industrial area and the Geraldton port.

Limited storage space at the port may lead to proposals for a range of storage requirements in the Narngulu industrial area. The environmental and amenity impacts of these proposals will need to be considered and managed appropriately

3.5 Western Power 132 kV transmission line

Demand for electricity in the southern Geraldton region is increasing. In response, Western Power has proposed to construct a dual circuit 132 kV transmission line between the existing Rangeway-Geraldton 132 kV transmission line, located adjacent to the southern transport corridor, and the Rudds Gully substation located on the corner of Rudds Gully Road and Scott Road. The proposed alignment runs parallel to the eastern side of the proposed Geraldton North-South Highway. Western Power is undertaking investigations and consultation before finalising the alignment of the transmission line.

The proposed 132 kV line will provide power for the establishment and growth of a range of general and light industrial land uses at Narngulu. It will require an easement approximately 20 metres wide to enable construction and maintenance access of the 132 kV line.



4. Buffers and emission contours

Land use planning in the Narngulu industrial area must take into account the need to protect industrial land from the encroachment of sensitive land uses and to separate sensitive land uses from industrial emissions.

The Narngulu industrial area and several land uses located in the area require separation from incompatible uses to ensure their operation is not compromised.

Buffers and special control areas have been adopted for the Narngulu industrial area, the wastewater treatment plant, the waste disposal site and the prison. These buffers and special control areas are designed to prevent the encroachment of sensitive and incompatible land uses.

A Narngulu industrial estate buffer was adopted in the Greater Geraldton Structure Plan. Special control areas for the Narngulu waste disposal site and the wastewater treatment plant were adopted in Town Planning Scheme No 4 and have been carried over to Local Planning Scheme No 5. A modelled 38 dB noise emission contour is also shown in figure 5.

The definition of buffers is not a precise science. A conservative approach should be taken when considering the impacts of noise, odour and emissions on new development, to ensure incompatible uses are not established that will unduly constrain the establishment of industrial uses.

Planning in the Narngulu industrial estate, buffer precincts A-D and the surrounding areas, needs to have regard to current land use, future land use proposals, buffer requirements and noise and odour emission regulations. Statutory regulations, including but not limited to, State Planning Policy 4.1, the Environmental Protection (Noise) Regulations (1997) and Guidance Statement 47 - Assessment of Odour Impacts from New Proposals (2002) also need to be taken into account and will be used to determine and manage impacts.

Key buffers are summarised as follows.

4.1 Narngulu industrial estate buffer

This buffer was proposed in the Narngulu Industrial Estate Study, prepared for the Geraldton Region Plan Review Technical Committee. It was subsequently adopted into the Geraldton Region Plan and Greater Geraldton Structure Plan, and it is not shown in the City of Geraldton-Greenough Local Planning Scheme No 5.

The Narngulu industrial estate buffer may require updating in order to properly consider current and future land uses. Sensitive land uses are not appropriate in the Narngulu industrial estate buffers.

4.2 Emission contours

In 2003, Sinclair Knight Merz completed a technical study, the Narngulu Industrial Estate Study of Potential Emissions. The study modelled odour, dust, noise and gaseous emissions based on existing and future industry forecasts at that time. The modelling conducted in the Sinclair Knight Merz study may require updating to consider current land use and land use projections.

The study concluded that noise and odour were the most significant emissions from the Narngulu industrial estate and that industry was a compatible land use with the noise and odour emission contours established in the study. It also recognised that determination of future industry mixes, and the estimation of their emission characteristics, would be a key area of uncertainty in the buffer definition for the Narngulu industrial estate.

The study also concluded that cumulative noise impacts in the proposed residential areas adjacent to the Narngulu industrial estate buffer, identified in the Greater Geraldton Structure Plan, exceed standards set in the current *Environmental Protection (Noise) Regulations Act 1997*.

A conservative approach should be applied to the consideration of proposals in the 38 dB noise contour. Zoning and subdivision proposals for habitable purposes inside the modelled 38 dB contour should be required to be referred to the Environmental Protection Authority to consider the acceptability of these uses and noise impacts.

4.3 Narngulu waste disposal site buffer

The Narngulu waste disposal site buffer is reflected as a special control area in Local Planning Scheme No 5. The schemes' provisions prohibit residential land uses and other sensitive land uses in the waste disposal site buffer. This special control area also prohibits the development of more than one dwelling per lot for land zoned general farming.

4.4 Narngulu wastewater treatment plant buffer

The Narngulu wastewater treatment plant buffer is reflected as a special control area in Local Planning Scheme No 5. The schemes' provisions prohibit residential land uses and other sensitive land uses in the wastewater treatment plant buffer.



5. Industrial land supply

The economic growth of Geraldton is partially underpinned by growth in the general and light industrial sectors.

The Geraldton Region Plan and Greater Geraldton Structure Plan identified Narngulu as the main general industry estate in Geraldton. The structure plan also proposes Oakajee and Wizard Peak as major industrial areas suitable for large minerals and mining interests and associated industries. Webberton Road industrial area is identified for lighter industry needs.

5.1 Webberton industrial estate

At present, 78.8 ha (27.5 per cent) of industrial zoned land in the Webberton industrial estate is vacant. Feedback from local government planners, landowners and developers suggests the Webberton estate is evolving into an area in which general industrial activities are becoming unsuitable. For example, some lots and roads are not large enough to service road trains. Sand blasting industries are also known to create land use conflicts.

5.2 Narngulu industrial estate

Currently, 41 per cent (289.05 ha) of the Narngulu industrial estate is vacant. There is a need for additional industrial land to provide for a range of lot sizes for a variety of light industrial, general industrial and commercial purposes.

The Geraldton Region Plan adopted the recommendation made in the Narngulu Industrial Estate Study, to preserve the integrity of general industry at Narngulu industrial estate from the encroachment of sensitive land uses by securing an appropriately zoned buffer. This plan provides strategic land use directions for the buffer precincts A-D to ensure that only compatible and appropriate land uses are considered.

It was previously assumed that development at Narngulu would be driven by demand for large lots suitable for the resource sector. LandCorp own a large portion of vacant land at Narngulu and have retained large parcels of land for industries contributing to the regional economy. The demand for these large lots has been lower than originally forecast. There has been a steady demand for industrial land from small and medium sized industries that are difficult to accommodate in large lots.

The functional limitations of land at Webberton have also contributed to increased industrial market activity around Narngulu. Precinct C has proven attractive to agricultural service industries (eg fertiliser storage) and road haulage. This is partly due to the lack of suitable alternatives, but also the need for sites to break down and assemble road trains. Edward Road at Narngulu is strategically located to provide for these kinds of activities. Demand has also been steady from businesses such as transport companies that need space or storage which is difficult to accommodate in the Webberton industrial estate.

A large number of subdivision applications for industrial lots have been given conditional approval but have not proceeded to final approval due to outstanding subdivision conditions or servicing issues. This may reflect issues associated with limited service infrastructure available in Narngulu.

The Western Australian Planning Commission and the City of Geraldton-Greenough acknowledge that expansion of heavy/noxious industry in Narngulu is inappropriate, given the sensitive urban land uses to the west of Narngulu and the location of the prison. Land previously zoned for heavy/noxious industry has since been rezoned to general industry.

Recent events involving infrastructure and mining negotiations in the Mid-West suggest that Oakajee will provide alternative sites for certain types of larger or heavier industries in the medium term. Narngulu is still a location for industries using the Geraldton port and due

to the limited storage space at the port, there has been an increase in proposals for storage in the Narngulu estate that has caused land use conflicts. The off-site impacts of these proposals will need to be considered and managed appropriately.



6. Strategic directions for Narngulu industrial estate and precincts A-D

Figure 5 shows the future strategic land use directions for the Narngulu industrial estate and surrounding precincts A to D. The plan recognises existing industry use and development and identifies additional land in the area for a wide range of industry related uses.

Figure 5 is intended to guide structure plans and outline development plans, amendments, subdivision and future development in and around the Narngulu industrial area.

6.1 Narngulu industrial estate

The Narngulu industrial estate is bordered by precincts A-D and is predominantly zoned general industry and rural. It also accommodates the Narngulu waste disposal site, the Narngulu wastewater treatment plant and the Geraldton Regional Prison.

Strategic land use directions

- The introduction of additional heavy industry should be avoided given regional planning objectives and concerns regarding the impacts of noise and emissions on the surrounding urban area. The Geraldton Region Plan and Greater Geraldton Structure Plan identify Wizard Peak and the Oakajee industrial area as more suitable alternatives for the location of such industries.
- Caretaker's dwellings should continue to not be permitted in light and general industry zones.
- While stockpiling can be potentially approved in the general industry zone, any proposals for this use should take into consideration strict environmental management requirements.
- Residential and other sensitive land uses are not appropriate in the Narngulu wastewater treatment plant buffer, the waste disposal site buffer, the industrial estate buffer and the 38 dB noise contour.
- Noise modelling needs to be updated for consideration and determination of development proposals, scheme amendments and subdivisions. In the interim a conservative approach should be applied to the consideration of proposals in the 38 dB noise contour until noise modelling is updated.
- Potentially significant emissions, such as odour, should be taken into account in the consideration of land use proposals.
- Access to individual properties from Edward Road should consider factors such as proposed vehicle types and movements, Main Roads Western Australia guidelines for driveway designs, and existing road geometry so that the safety of Edward Road is not compromised.
- Rudds Gully Road will remain an important regional connection for access to the industrial area and the surrounding road network, and may be upgraded in the future. Further subdivision and development along Rudds Gully Road will need to take into account the upgrade requirements and the future role and function of Rudds Gully.
- Local structure planning should be used to guide local scheme amendments, subdivision and development in the Narngulu industrial area.
- The recognition of, and management of, water resources and drainage issues is an important consideration and needs to occur as part of local structure planning for the area. Water resource management is an input into guiding scheme amendments, subdivision and development in Narngulu. Any proposed local structure plan or outline development plan must address environmental issues and be supported by an appropriate level of water resource management and drainage information, as outlined in the Better Urban Water Management (2008) framework.

6.2 Precinct A

Precinct A is bordered by the Geraldton southern transport corridor, Verita Road and the western edge of the existing Narngulu industrial estate. It is in proximity to the urban development areas of Wandina, Rudds Gully, Mount Tarcoola and Karloo.

Development and subdivision in precinct A is considered premature before the proposed Geraldton North-South Highway design and land requirements are finalised. Consolidated service commercial/mixed business hubs should be encouraged only in strategically accessible locations.

Land facing the proposed Geraldton North-South Highway and Geraldton southern transport corridor will have a high level of visual exposure to passing traffic and high quality development should be encouraged along these main approaches to the city. These are controlled access highways and multiple direct entry/exit points from these roads is not permitted.

Those areas that are identified for future light industry/service commercial/mixed business areas will need to ensure that the types of uses in these areas comply with the buffer requirements for the industrial area, the Narngulu waste disposal site and the Narngulu wastewater treatment plant.

Strategic land use directions

- A special design area situated on the high ridge should be investigated as part of future detailed planning. This ridge provides a visual screen between residential areas and the core of the Narngulu industrial estate. It is suggested that special design guidelines for building design, heights and ground levels are developed.
- Residential and other sensitive land uses are not appropriate in the Narngulu wastewater treatment plant buffer and the waste disposal site buffer, and light industrial uses are more suitable.
- Potentially significant emissions, such as odour, should be taken into account in the consideration of land use proposals.
- Land in precinct A to the west of the Narngulu wastewater treatment plant buffer and the Narngulu waste disposal site buffers has potential for light industry/service commercial/mixed business uses. These uses will need to be further investigated as part of future local structure planning.
- Noise modelling should be updated for consideration and determination of development proposals, scheme amendments and subdivisions. In the interim, a conservative approach should be applied to the consideration of proposals in the 38 dB noise contour until noise modelling is updated.
- Caretaker's dwellings should continue to not be permitted in light and general industry zones.
- While stockpiling can be potentially approved in the general industry zone, any proposals for this use should take into consideration strict environmental management requirements.
- The potential for an east-west infrastructure corridor parallel to the southern transport corridor needs to be investigated and, if required, land requirements defined.
- Local structure planning should be used to guide local scheme amendments, subdivision and development in the Narngulu industrial area.
- The recognition of, and management of, water resources and drainage issues is an important consideration and needs to occur as part of local structure planning for the area. Water resource management is an input into guiding scheme amendments, subdivision and development in Narngulu. Any proposed local structure plan or outline development plan must address environmental issues and be supported by an appropriate level of water resource management and drainage information, as outlined in the Better Urban Water Management framework.
- The Geraldton southern transport corridor and the proposed Geraldton North-South Highway are controlled access highways. Access to precinct A will be provided via Verita Road and the proposed east-west road link, planned to connect Verita Road to precinct A. A well planned local road network must be coordinated at the local structure planning stage. Development must take into account road access restrictions and proposed future connector roads. Any proposed subdivision and/or development must be accompanied by detailed planning of the local road system.



- Rudds Gully Road will remain an important regional connection for access to the industrial area and may be upgraded in the future. Further subdivision and development along Rudds Gully Road will need to take into account the upgrade requirements and the future role and function of Rudds Gully.

6.3 Precinct B

Precinct B is located on the southern edge of the Narngulu industrial estate between Rudds Gully Road and Edward Road. This precinct is affected by the 38 dB noise contour, the Narngulu industrial estate buffer and the Geraldton Regional Prison buffer.

Strategic land use directions

The majority of land in precinct B has been identified to predominantly remain as general farming uses. Once the Narngulu industrial area is mostly developed the general farming portion may be reviewed.

- A small portion abutting Rudds Gully Road is recommended as suitable for future general industry uses.
- Caretaker's dwellings should continue to not be permitted in light and general industry zones.
- While stockpiling can be potentially approved in the general industry zone, any proposals for this use should take into consideration strict environmental management requirements.
- Noise modelling needs to be updated for consideration and determination of development proposals, scheme amendments and subdivisions. In the interim a conservative approach should be applied to the consideration of proposals in the 38 dB noise contour until noise modelling is updated.
- Potentially significant emissions, such as odour, should be taken into account in the consideration of land use proposals.
- Local structure planning should be used to guide local scheme amendments, subdivision and development in the Narngulu industrial area.
- The recognition of, and management of, water resources and drainage issues is an important consideration and needs to occur as part of local structure planning for the area. Water resource management is an input into guiding scheme amendments, subdivision and development in Narngulu. Any proposed local structure plan or outline development plan must address environmental issues and be supported by an appropriate level of water resource management and drainage information, as outlined in the Better Urban Water Management framework.

6.4 Precinct C

Precinct C is bordered by Edward Road, the southern transport corridor and the airport reserve. The area is subject to increasing development pressures.

Strategic land use directions

- Land in this precinct is suitable for general and light industrial uses.
- Caretaker's dwellings should continue to not be permitted in light and general industry zones.
- While stockpiling can be potentially approved in the general industry zone, any proposals for this use should take into consideration strict environmental management requirements.
- Land adjacent to precinct C in the airport reserve has been identified as a potential business office park in landscaped surrounds, including aviation and logistics industries. Interface issues with the airport reserve and potential business park should be addressed.
- Development and subdivision surrounding the proposed Oakajee-Narngulu infrastructure corridor should not be supported until

decisions in relation to the corridor are finalised. Once the infrastructure corridor is finalised the future use of adjacent land can be determined.

- Noise modelling should be updated for consideration and determination of development proposals, scheme amendments and subdivisions. In the interim a conservative approach should be applied to the consideration of proposals in the 38 dB noise contour until noise modelling is updated.
- Potentially significant emissions, such as odour, should be taken into account in the consideration of land use proposals.
- Local structure planning should be used to guide local scheme amendments, subdivision and development in the Narngulu industrial area.
- The recognition of, and management of, water resources and drainage issues is an important consideration and needs to occur as part of local structure planning for the area. Any proposed local structure plan or outline development plan must address environmental issues and be supported by an appropriate level of water resource management and drainage information, as outlined in the Better Urban Water Management framework.

6.5 Precinct D

Precinct D is located north of the southern transport corridor. The southern portion has high visual exposure to this transport corridor. A large portion of this precinct is affected by the Narngulu waste disposal site buffer, the Narngulu industrial estate buffer and the 38 dB noise contour.

Strategic land use directions

- Land in this precinct is suitable for light industrial uses and uses as defined in the city's Local Planning Scheme No 5 Special Use Zone 1.
- The north-west portion of this precinct that lies outside of the industrial area buffer may have potential for rural living uses if it is demonstrated that these uses are compatible with noise, emissions and other industrial buffer issues.
- Caretaker's dwellings should continue to not be permitted in light and general industry zones.
- A land use interface comprised of composite lots could provide an effective land use transition between light industry and rural-residential land. These lots could take the form of caretaker dwellings fronting rural-residential areas, with a separate road access way to the rear fronting the light industry area.
- Given that there will be no direct access to the Geraldton southern transport corridor, access will be subject to coordinated local planning to determine local road access points from Edward Road, taking into account factors such as proposed vehicle types and numbers, Main Roads Western Australia guidelines for driveway designs, and the existing road geometry. Development should preferably present frontages to major roads and take advantage of the visual exposure to the transport corridor.
- Sensitive land uses are not appropriate in the Narngulu wastewater treatment plant buffer, the Narngulu industrial estate buffer and the 38 dB noise contour.
- Noise modelling should be updated for consideration and determination of development proposals, scheme amendments and subdivisions. A conservative approach should be applied to the consideration of proposals in the 38 dB noise contour until noise modelling is updated.
- The potential for an east-west infrastructure corridor parallel to the southern transport corridor needs to be investigated and, if required, land requirements defined.
- Potentially significant emissions, such as odour, should be taken into account in the consideration of land use proposals.
- Local structure planning should be used to guide local scheme amendments, subdivision and development in the Narngulu industrial area.
- The recognition of, and management of, water resources and drainage issues is an important consideration and needs to occur as part of local structure planning for the area. Any proposed local structure plan or outline development plan must address environmental issues and be supported by an appropriate level of water resource management and drainage information, as outlined in the Better Urban Water Management framework.



7. Implementation

This plan has been adopted to provide strategic guidance for future land use planning and decision-making in the Narngulu industrial area. It should be used to guide matters such as local structure planning, local scheme amendments and future subdivision and development.

Significantly, Local Planning Scheme No 5 provides the opportunity to require subdivision and development in the Narngulu industrial area to be supported by local structure plans. These plans are recommended to ensure the proper and orderly subdivision and development of large areas of industrial land and, in particular, assist in the coordination of the delivery of suitable local road networks and associated infrastructure.

Local structure plans will need to address environmental issues, including water resource and drainage issues as required by the Better Urban Water Management framework. The inclusion of such information is important to ensure appropriate management of water resources and the delivery of a coordinated and efficient drainage system. It is also required so that the significance of issues such as water logging and the use of on-site waste disposal systems can be determined.

Opportunity is also available to the City of Geraldton-Greenough, through their Sustainable Future City Project, to consider this document in preparing their new local planning strategy and scheme.



8. References and abbreviations

8.1 References

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Environmental Protection Authority, 2002, Guidance Statement 47 - Assessment of Odour Impacts from New Proposals (2002), Environmental Protection Authority, Perth.

8.2 List of abbreviations

dB	decibel
ha	hectare
km	kilometre
kV	kilovolt
m	metre



9. Figures

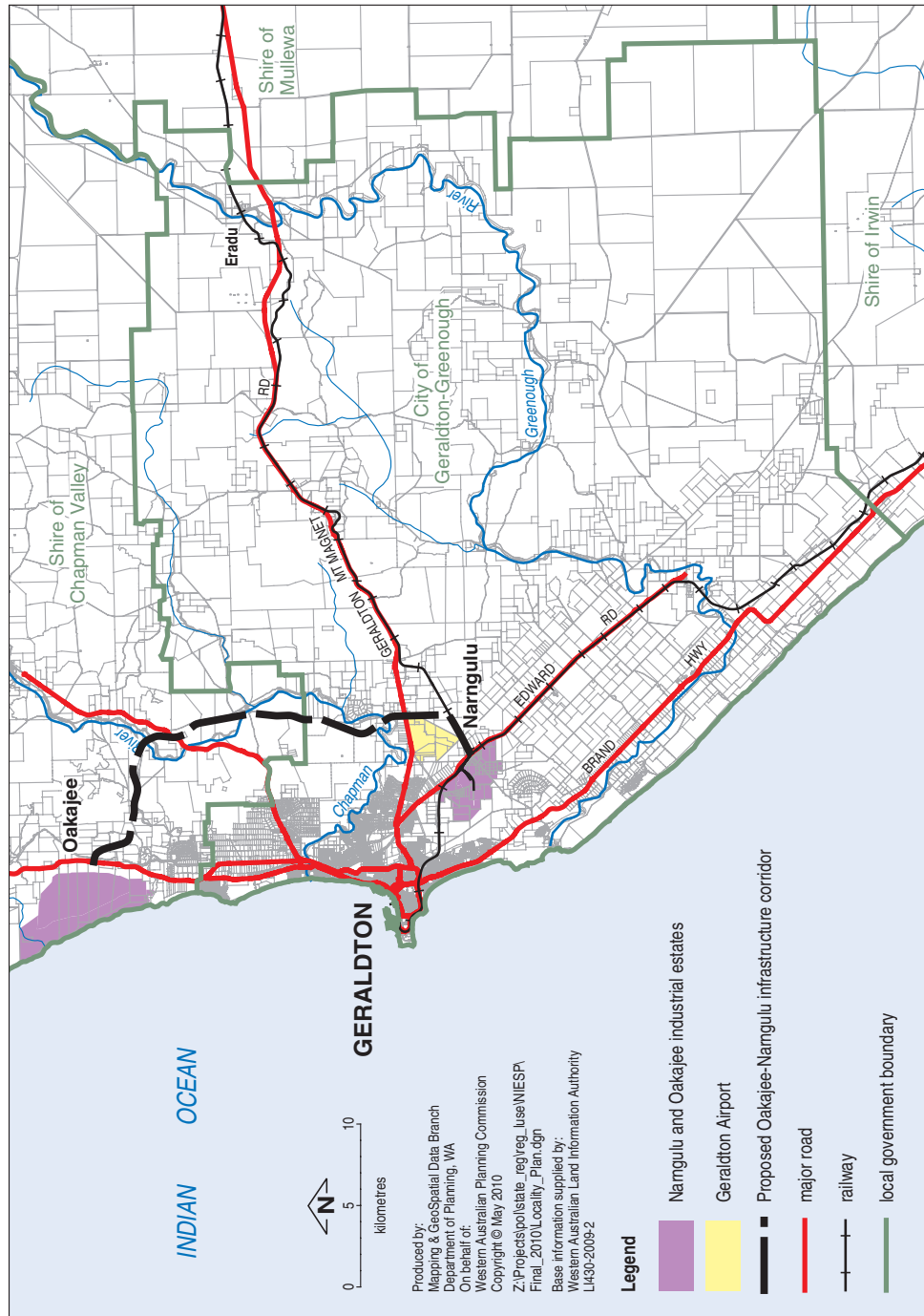


Figure 1: Regional location

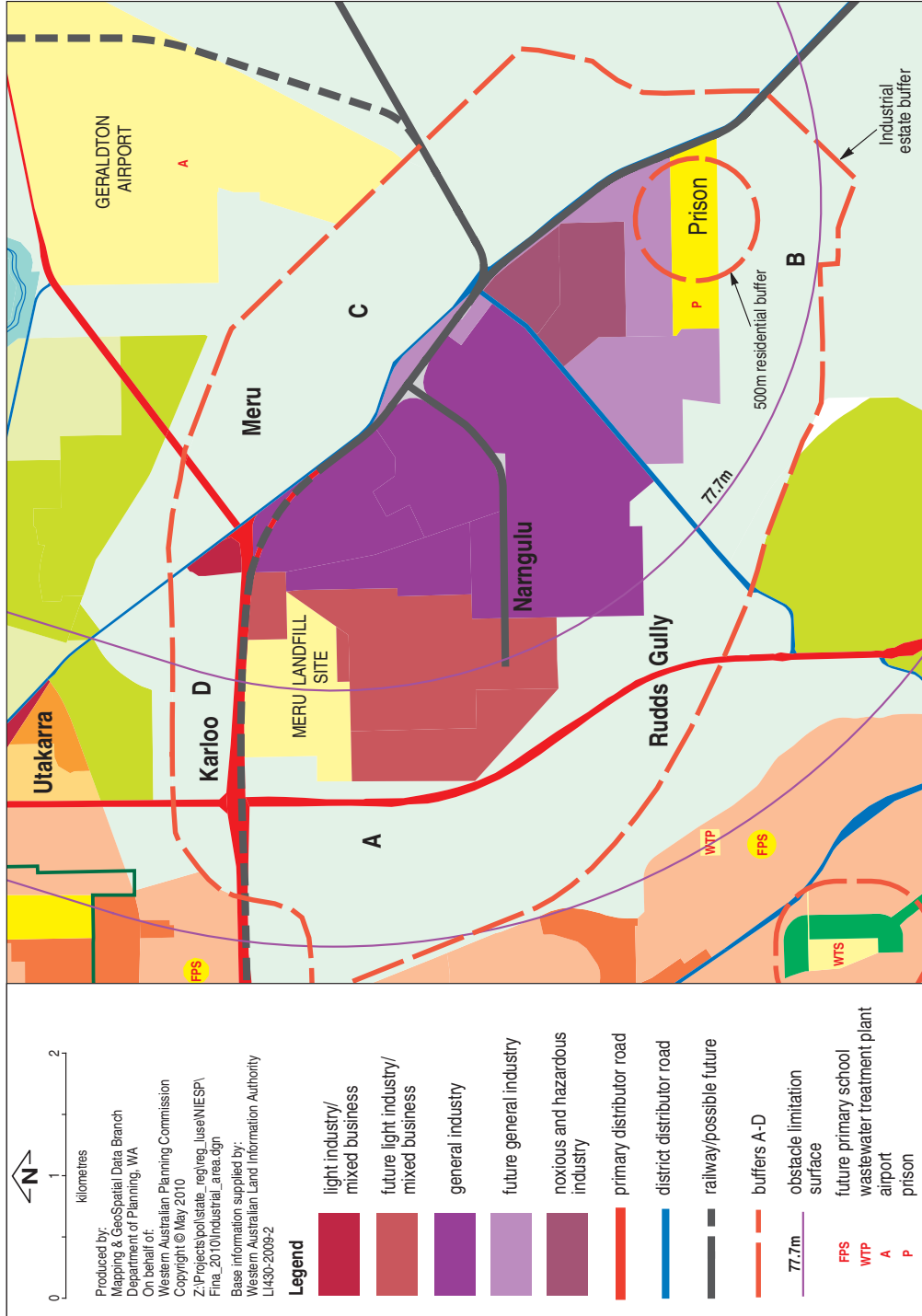


Figure 2: Greater Geraldton Structure Plan

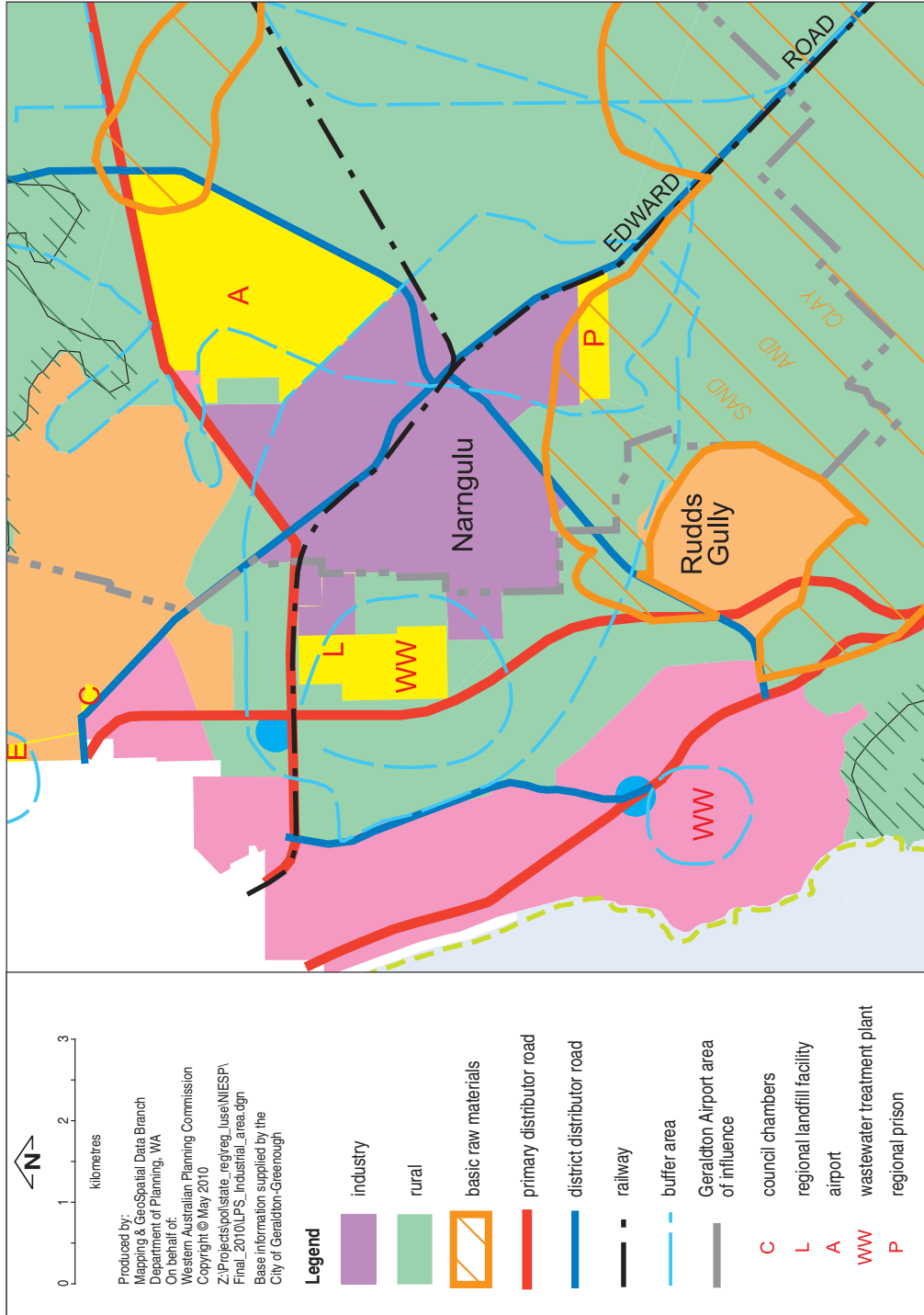


Figure 3: Shire Greenough Local Planning Scheme

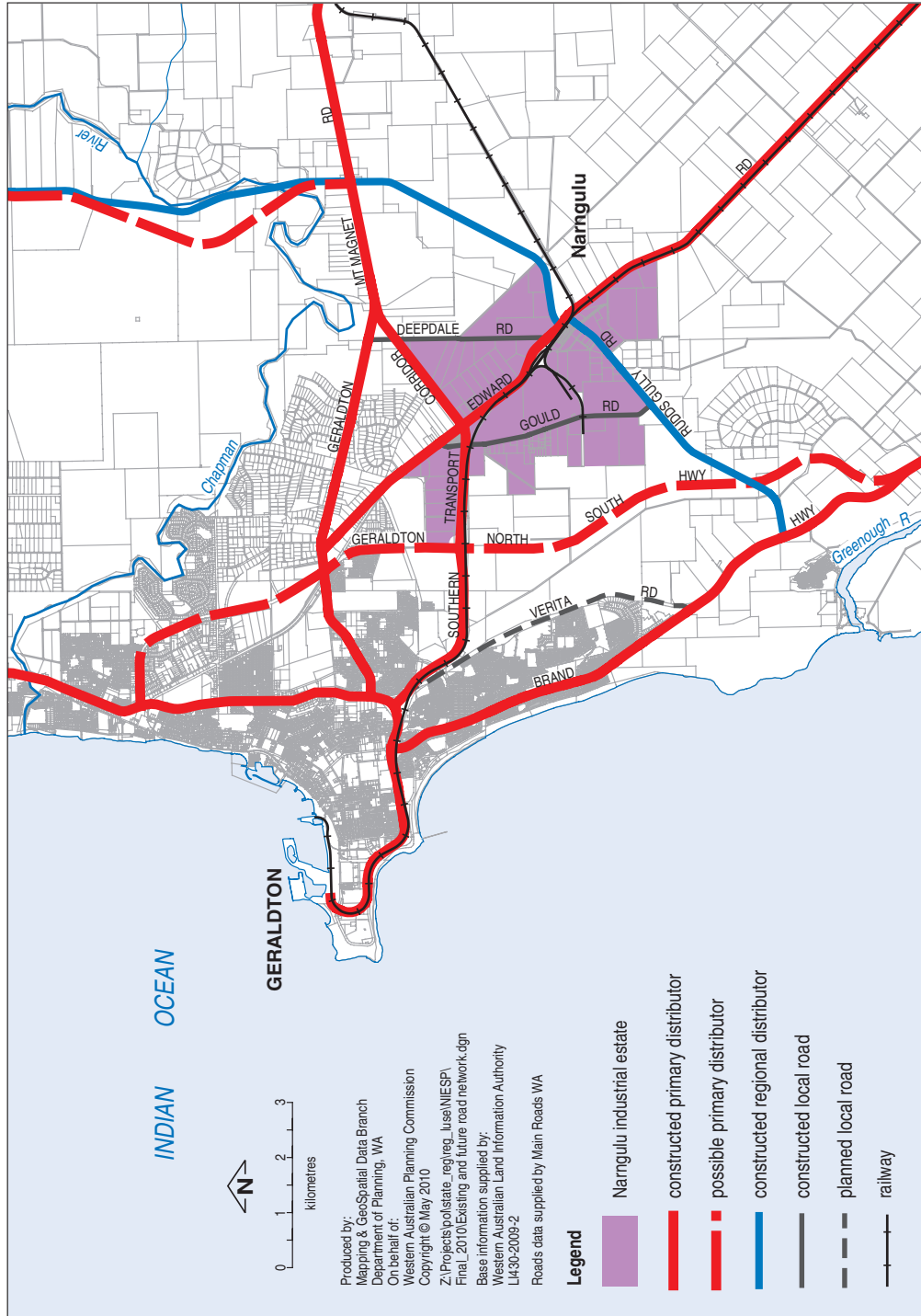


Figure 4: Existing and future road network

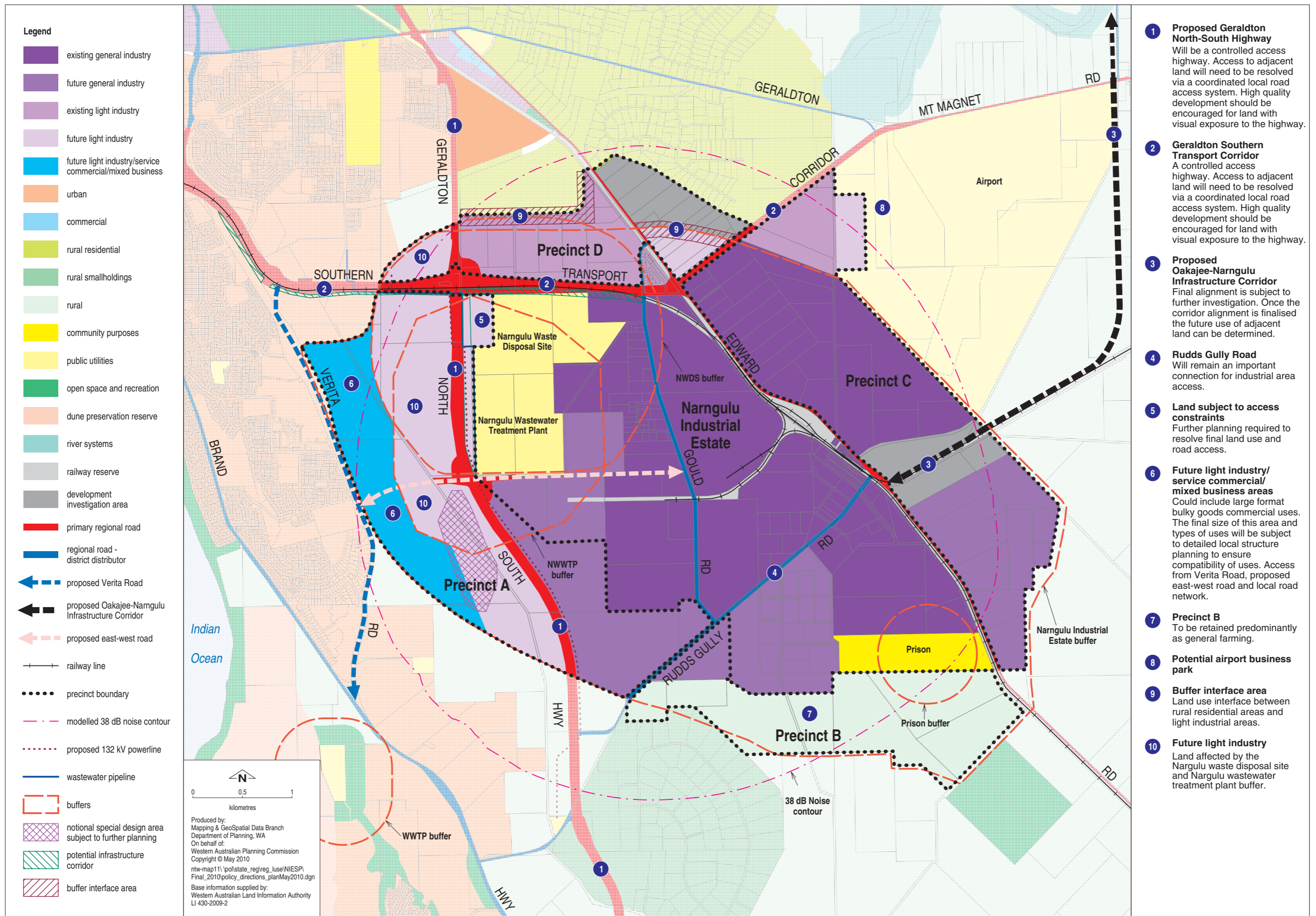


Figure 5: Strategic land use directions plan