Shire of Serpentine Jarrahdale

West Mundijong Industrial Area Structure Plan

October 2022

ENDORSEMENT PAGE

This structure plan is prepared under the provisions of the Shire of Serpentine-Jarrahdale Local Planning Scheme No. 2.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

01 November 2022

Signed for and on behalf of the Western Australian Planning Commission

an officer of the Commission duly authorised by the Commission pursuant to Section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

Witness

02 November 2022 Date

02 November 2032 Expiry

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Situational Analysis

Rezoning for this development has been gazetted and the Shire is proceeding with the development of a structure plan. Land for crucial supporting infrastructure (such as the Tonkin Highway extension and the Mundijong freight rail realignment) has been set aside.

In 2018 Premier Mark McGowan stated: "Long-term the West Mundijong site is intended to become a significant economic gateway and a link to the inner harbour and future outer harbour."

The Federal and State governments have also committed joint funding to deliver the $505 million extension of Tonkin highway from Thomas Road to South Western Highway.

Appendices

Appendix A: Environmental Assessment Report (including the Noise Assessment Report)

- Environmental Assessment Report, pgv Environmental, 23 November 2012 Version 2.
- Aboriginal Heritage Enquiry, Department of Indigenous Affairs, 30 October 2012– Appendix 6.
- Preliminary Environmental Noise Assessment, Herring Storer Acoustics, Revision 4 to 10 October 2012 – Appendix 7.

Appendix B: District Water Management Strategy

- District Water Management Strategy, TME (Town Planning Management Engineering), November 2014, Revision 2.
- Drainage Study for West Mundijong Industrial Area, TME (Town Planning Management Engineering), January 2013 – Annexure A.
- Area/Sand Fill Analysis, TME (Town Planning Management Engineering), December 2012 – Annexure B.

Appendix C: Local Water Management Strategy

- Local Water Management Strategy, Oversby Engineering, completed 2020.
- Wetland Study (included in the Local Water Management Strategy), completed 2020.

Appendix D: Traffic Impact Assessment

- Traffic Impact Statement, Cardno, November 2012, Version 1.
- Traffic Impact Assessment, Transcore, September 2021

Appendix E: Bushfire Assessment

- Bushfire Hazard Assessment, Calibre Consulting, 2015 (DFES approval IN15/20085)
- A Bushfire Management Plan (Hazard Level Assessment), Bushfire Prone Planning, November 2016, (DFES supported subject to BHL ratings modification IN17/4734)

Executive Summary

Executive Summary

The West Mundijong area was identified as a future industrial area in the following key documents prepared by the State Government:

- Directions 2031 and Beyond;
- Southern Metropolitan Sub-Regional Structure Plan 2009;
- Economic and Employment Lands Strategy: non-heavy industrial: Perth metropolitan and Peel regions;
- Perth and Peel @3.5m;
- Southern Perth and Peel Subregional Frameworks Document.

The status of West Mundijong as a future industrial area is also supported by the Council and Western Australian Planning Commission (WAPC) through:

- The approved, Mundijong Whitby District Structure Plan 2011;
- Amendment 187 (PL403) which gazetted the West Mundijong Development Contribution Scheme on 30 January 2018.
- Town Planning Scheme No.2

Council also supported the development through:

- The Local Planning Strategy;
- Local Planning Scheme No. 3;
- The West Mundijong District Structure Plan, an addendum to the gazetted Development Contribution Scheme;
- Council resolutions to progress the West Mundijong planning framework, the latest being a decision in August 2020 to progress the current documents to enable a first stage of development of dry industries up to a minimum size of 1.5-2ha.

PART ONE

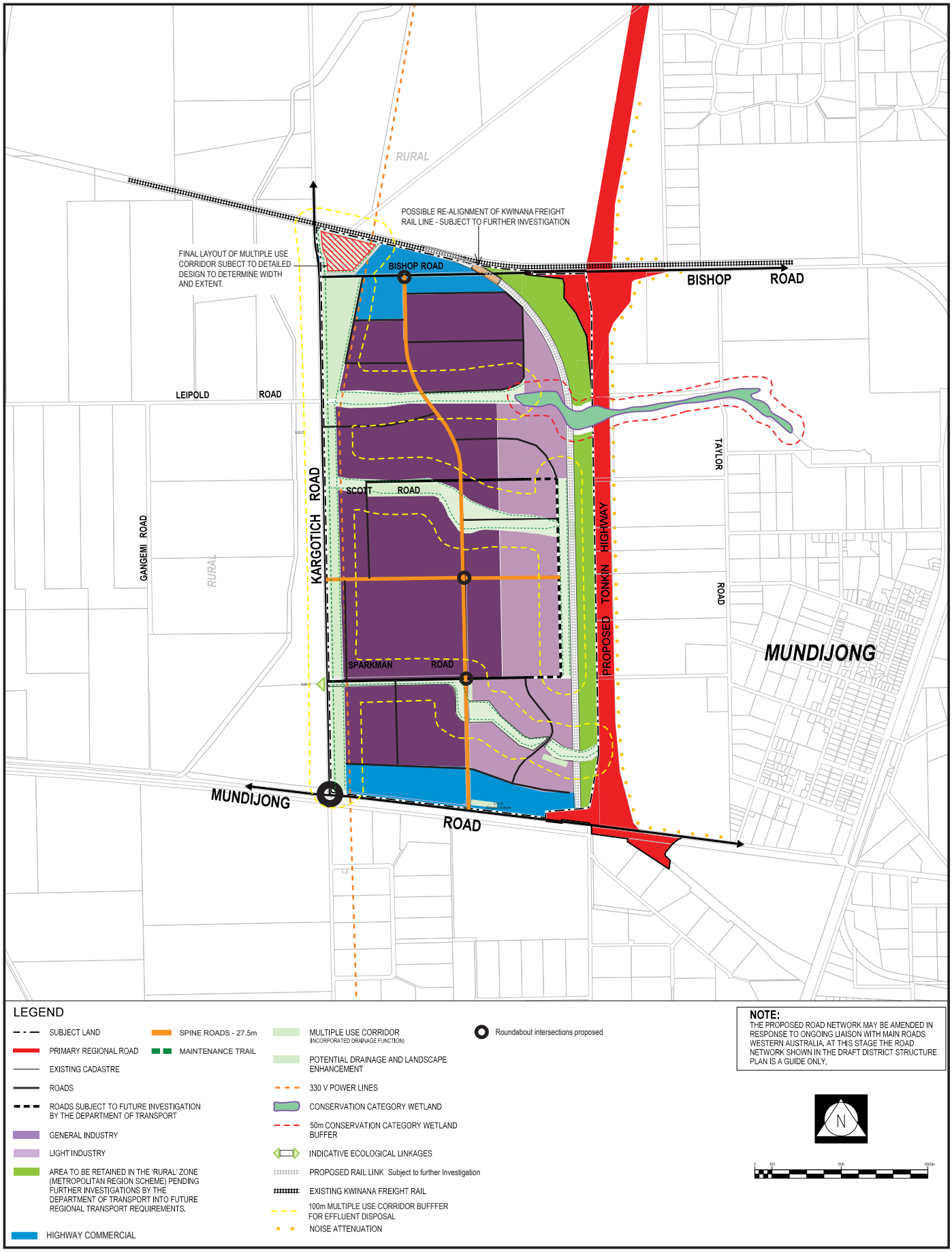
1. Implementation Section

Structure Plan Area

The structure plan area is approximately 474.34 hectares and is located west of the Mundijong town site. The area is located approximately 45 kilometres southeast of the Perth Central Business District.

The area is framed by Mundijong Road (south), Tonkin Highway Road reserve (east), Kwinana freight rail (north) and Kargotich Road (west). An ultimate deviation to the existing freight rail will see its current route through the middle of Mundijong townsite, shifted to run parallel to the western boundary of Tonkin Highway.

Figure 1: West Mundijong Structure Plan



2. Structure Plan Content

The structure plan has been formulated as a document to guide future subdivision, land use and development under the auspices of Clause 27 of the Deemed Provisions of Shire of Serpentine Jarrahdale Town Planning Scheme No. 2 (the Scheme). Further, the structure plan seeks to assist landowners in the orderly transition of land use to achieve industrial development outcomes for the precinct.

The structure plan has been prepared generally in accordance with the WAPC's guidelines for statutory plans.

Accordingly the structure plan comprises of two parts:

Part 1 – Implementation section

Part 2 – Non statutory (explanatory) section

Part 1 only includes the structure plan map and policy requirements.

Part 2 is intended to provide an outline and explanation of the structure plan, and the policy requirements contained in Part 1.

3. Metropolitan Region Scheme and Local Planning Scheme

The West Mundijong Structure Plan now responds to the land being zoned 'Urban' under the Scheme. The land is already zoned 'Industry' under the Metropolitan Region Scheme.

Inclusion in the 'Urban Development' zone enables structure planning to facilitate development of the land for light and general industry.

4. Interpretation, Scheme Relationship and Land Use

The terms used in the structure plan have the respective meanings given to them in the Scheme or where not defined in the Scheme, as set out in this structure plan.

The structure plan shall guide the Local Government and the Western Australian Planning Commission (WAPC) in considering subdivision proposals submitted to the WAPC.

Land use and development must consider the long term role of the West Mundijong Industrial Area as part of the frieght distribution network for the South Metropolitan Subregion. Land uses and development which may prejudice the ability for the West Mundijong Industrial Area to realise the strategic objectives of the area should be considered in this context.

Land use permissbility will be in accordance with the respective zone listed in the zoning table of the relevant Shire of Serpentine Jarrahdale Local Planning Scheme.

The following are the list of preferred land uses for the DRY LOT GENERAL INDUSTRY PRECINCT

Land Use	Explanation
Abattoir	Core general industry use that may have offsite impacts.
Fuel depot	Core general industry use that may have offsite impacts.
Industry	Core general industry use that may have offsite impacts.
Trade Supplies	Industry use appropriate to general industry precinct.
Transport Depot	Industry use appropriate to general industry precinct.
Warehouse and Storage	Industry use appropriate to general industry precinct.
Waste Storage Facility	Core general industry use that may have offsite impacts.

The following are non preferred land uses under the INITIAL DRY LOT PHASE IN EITHER PRECINCT

Land Use	Explanation
Amusement parlour	Not an industry use, services a number of people given lack of water and waste services.
Fast food outlet	Not an industry use, services a number of people given lack of water and waste services.
Place of worship	Not an industry use, services a number of people given lack of water and waste services.
Service station	Not an industry use, services a number of people given lack of water and waste services.

The following are the list of preferred land uses for the DRY LOT LIGHT AND SERVICE INDUSTRY PRECINCT

Land Use	Explanation
Bulky goods showroom	Service commercial use, requiring sufficient space and access. Offsite impacts can be managed.
Industry – light	Core light industry use. Offsite impacts can be managed.
Highway Commercial	Core light industry use. Offsite impacts can be managed.
Motor vehicle, boat or caravan sales	Service commercial use, requiring sufficient space and access. Offsite impacts can be managed.
Motor vehicle repair	Light industry use. Offsite impacts can be managed.
Motor vehicle wash	Light industry use. Offsite impacts can be managed.
Trade display	Light industry use. Offsite impacts can be managed.
Trade supplies	Light industry use. Offsite impacts can be managed.
Warehouse/storage	Light industry use. Offsite impacts can be managed.

5. Subdivision and Development Requirements

Development and subdivision within the structure plan area, may not be permitted unless in accordance with the requirements of the Shire of Serpentine Jarrahdale Local Planning Scheme and the associated Deemed Provisions under the Planning and Development (Local Planning Schemes) Regulations 2015.

Development shall comply with the cumulative noise emission limits set out in the Noise Assessment Report (Appendix A).

Subdivision shall be generally consistent with the structure plan, including the following supporting documents:

- Environmental Assessment Report – including Noise Assessment Report (Appendix A)
- Local Water Management Strategy (Appendix C)
- Traffic Impact Statement (Appendix D)

Subdivsion and development within areas containing remnant native vegetation are to be accompanied by a flora and fauna assessment.

Subdivision and development of land containing multiple use corridors is to address the width and construction requirements for the multiple use corridor through the subdivisional area.

Subdivision and development containing conservation category wetlands may provide a wetland buffer assessment in accordance with WAPC's Draft Guidelines for the Determination of Wetland Buffer Requirements and the Environmental Protection Authority's Guidance Statement 33 to determine detailed wetland buffer requirements.

Subdivision involving intersections with Mundijong Road and Kargotich Road are to provide a revised Traffic Impact Assessment accounting for any changes to sub-regional road network planning.

Roads and intersections providing access to and from the proposed inter modal terminal from the regional road network are to be designed to accomodate RAV 7 vehicles (generally vehicles 36.5m in length), in consultation with the Shire of Serpentine-Jarrahdale and the Department of Planning Lands and Heritage and to the satisfaction of the Western Australian Planning Commission. At a minimum, this is to include all intersections with Mundijong Road, Bishop Road and the proposed spine road.

Stage 1 miminum lot sizes shall not be below 1.5ha to allow for developmment without reticulated sewer. Stage 2 minimum lot sizes shall not be below 2000 square meters as reticulated sewer and water will be provided at this stage.

6. Amendment and Review of the Structure Plan

In considering amendments to the structure plan, decision makers shall have due regard to the District Structure Plan, relevant State and Local Planning Policies, the objectives of the zone and relevant planning matters.

Structure plan amendments proposing changes to road or land use layout are to provide a revised Traffic Impact Assessment accounting for any changes to sub-regional road network planning.

Upon the 10 year expiry of the structure plan any further review of the structure plan wil require an updated Traffic Impact Assessment accounting for any changes to sub-regional road network planning and an engineering servicing report detailing the provision of essential services to the subject site.

7. Utilities Services

Subdivision and development within the structure plan area is to make suitable arrangements for the provision of reticulated water and sewer.

Temporary or interim measures for the provision of water and waste water services may be considered, provided that any measure does not prejudice the long-term provision of reticulated water and sewer.

Any subdivision or development within the structure plan area must include an engineering servicing report detailing the provision of esssential services to the subject site.

NOTE:

This structure plan provides for a phased approach to subdivision.

The first phase is termed a dry lot industrial subdivision, which is subject to a minimum lot size of 1.5 - 2ha;

This first phase is not reliant on reticulated water or sewer infrastructure being provided;

The 1.5 - 2ha minimum lot size requirement is to provide sufficient flexibility for onsite potable water catchment (via water tanks) and onsite effluent disposal;

The second phase of the development will commence when lots are subdivided into smaller than 1.5ha at which stage the full suite of infrastructure services will need to be planned, designed and installed.

Intensity of development is also compatible with current road infrastructure limits, and the planned upgrades reflective of the Development Contribution Plan for the area.

8. Transition of Sensitive Land Uses

The presence of sensitive land uses within the area means any new industrial development must comply with the Environmental Protection (Noise) Regulations 1997, and must respond to the separation distances as defined under the EPAs Separation Distances between Industrial and Sensitive Land Uses. Sensitive land uses provide a limiting factor while they remain.

Appendix A contains a Noise Assessment Report, and provides further guidance in respect of the contributing factor of each development to cumulative noise impacts. Compliance with Appendix A is also required.

The Local Government will require all development proposals to be accompanied by detailed reports prepared by suitably qualified consultants, demonstrating that proposed industrial development will not result in unacceptable levels of amenity impact on pre-existing sensitive development within or external to the structure plan boundary. The detailed reports must demonstrate either that:

1. an existing sensitive use will not be subject to unacceptable amenity impacts, or
2. that all potential amenity impacts can be mitigated against through design and operation of the development.

The report is to address the requirements of the WAPC State Planning Policy 4.1 - State Industrial Buffer.

PART TWO

Explanatory Section

The structure plan has been prepared in accordance with the WAPC's guidelines for statutory plans.

Accordingly the structure plan comprises of two parts:

a) Part 1 – Implementation section

b) Part 2 – Non statutory (explanatory) section

Part 1 only includes the structure plan map and policy requirements.

Part 2 is intended to provide an outline and explanation of the structure plan.

1. Planning and Background

1.1 Introduction and Purpose

The structure plan seeks to provide:

- An outline of intended industrial land use for the area;
- A road framework including integration with existing and planned future transport infrastructure;
- A response to the context of the land;
- Proposed interface measures with existing and planned sensitive uses;
- An outline of servicing issues and transitional arrangements;
- A local water management strategy (drainage framework); and
- Guidance in the preparation of subdivision.

The structure plan is a document that will guide future subdivision and development in accordance with Clause 27 of the Deemed Provisions of the Scheme.

1.2 Land Description and Location

The structure plan area is located within the locality of Mundijong within the Shire of Serpentine Jarrahdale.

The area is located directly 20 kilometres east of the Kwinana industrial area via Mundijong Road. Mundijong Road will provide direct linkage to Kwinana and associated infrastructure, including complementary industries and services. This includes the proposed Westport Outer Harbour development that has recently been approved by government.

The extension of the Tonkin Highway along the eastern boundary of the site will provide direct access to a considerable range of destinations within the Perth metropolitan area via the highway and freeway transport system. Such destinations include complementary industrial estates, ports, strategic suppliers or input sources, international and domestic airports and workforce.

Figure 2. Location Plan

1.3 Area and Land Use

The structure plan area is approximately 474 hectares. The area is framed by Mundijong Road (south), Tonkin Highway Road reserve (east), Kwinana freight rail (north) and Kargotich Road (west). The area has been derived from the Economic and Employment Lands Strategy.

The land is predominantly used for the grazing of cattle. The area has been substantially cleared of remnant vegetation to enable grazing. There is also a concentration of rural lifestyle development in the south eastern margins of the area around Pure Steel Lane.

Figure 3. Location Map

Figure 4. Aerial Site Plan

Land Ownership Table

Address Line	Owner Name
25 PURE STEEL LANE MUNDIJONG	L, Fletcher B & G Wibberley
48 PURE STEEL LANE MUNDIJONG	S, Downs F, Trichet
174 PURE STEEL LANE MUNDIJONG	Shire of Serpentine Jarrahdale
1149 KARGOTICH ROAD MUNDIJONG	Mundijong Nominees Pty Ltd
181 SCOTT ROAD MUNDIJONG	Water Corporation
525 BISHOP ROAD MUNDIJONG	Wellstrand Pty Ltd
Lot 5BISHOP ROAD MUNDIJONG	PEET Mundijong Syndicate LTD
900 HOPKINSON ROAD MUNDIJONG	T, Mustica
1081 KARGOTICH ROAD MUNDIJONG	Busquest Investments Pty Ltd

Land Ownership Table

Address Line	Owner Name
1087 KARGOTICH ROAD MUNDIJONG	CTJ (WA) Pty Ltd
184 SCOTT ROAD MUNDIJONG	Civilpit Pty Ltd
46 PURE STEEL LAND MUNDIJONG	M, Saywell
73 PURE STEEL LANE MUNDIJONG	A & I Walpole
72 PURE STEEL LANE MUNDIJONG	D & T Walters
64 PURE STEEL LANE MUNDIJONG	L, Edwards I, Snell
31 PURE STEEL LANE MUNDIJONG	Goldbase Investments Pty Ltd
1255 KARGOTICH ROAD MUNDIJONG	K, Bailey
59 PURE STEEL LANE MUNDIJONG	C, Burton S, Guy
24 PURE STEEL LANE MUNDIJONG	D, Tucker
402 SCOTT ROAD MUNDIJONG	L, Atwell P, Harbison D, Sparkman
13 KARGOTICH ROAD MUNDIJONG	Crossley Asspcoates {ty :td
1680 Crn BISHOP & KARGOTICH MUNDIJONG	Wellstrand Pty Ltd
11 PURE STEEL LANE MUNDIJONG	A & S, Fitzi
58 PURE STEEL LANE MUNDIJONG	J & T, Atkins
122 SCOTT ROAD MUNDIJONG	A & H, Anderson
114 SCOTT ROAD MUNDIJONG	B & L, McCarthy
1305 MUNDIJONG ROAD MUNDIJONG	Western Australian Planning Commission
99 GOSSAGE ROAD MUNDIJONG	T, Mustica
202 SCOTT ROAD MUNDIJONG	C, Atwell
L5 BISHOP ROAD MUNDIJONG	Peet Ltd

1. Planning and Background

1.3 Planning Framework

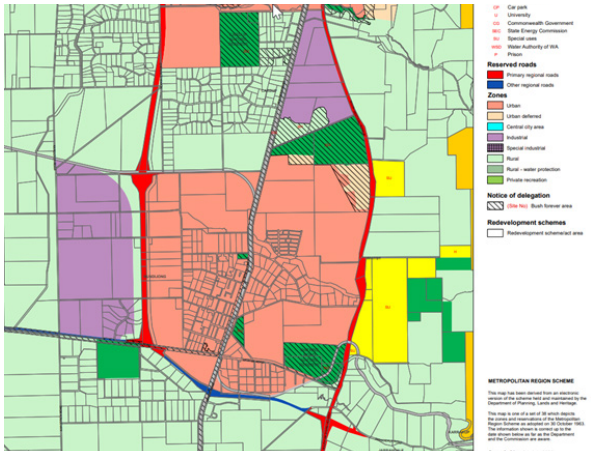
ZONING AND RESERVATIONS

The land is zoned 'Industrial' in the MRS. A small portion of the land in the north eastern margins is reserved as 'primary regional road' in lieu of the Tonkin Highway extension and future intersection upgrades with Bishop Road. A strip of land between the 'primary regional road' reservation and 'Industrial' zone is zoned 'Rural' and provides for the expected deviation of the freight rail in this corridor.

With respect to adjoining and nearby land the following should be noted:

- Mundijong Road, adjoining the southern boundary, is a designated 'other regional road';
- The portion of Mundijong Road is also a designated 'bush forever area';
- Land adjoining the eastern boundary is designated 'primary regional road' in lieu of the southern extension of the Tonkin Highway; and
- The primary regional road reserve allows for future intersection treatment to Mundijong Road and grade separation of the freight rail line.

Figure 5. Metropolitan Region Scheme



The Minister for Planning approved the Shire of Serpentine Jarrahdale Local Planning Scheme amendment on 30 January 2018 for the purpose of—

Reclassifying the following land parcels to the 'Urban Development' zone in West Mundijong—

(a) Part Lot 99 Kargotich Road (near intersection Kargotich Road)

(b) Lot 38 Bishop Road (Cnr Kargotich Road)

(c) Lots 1680, 525 and 405 Bishop Road

(d) Lots 2, 6, 9 8, 7 and 402 Scott Road

(e) Lot 4 Sparkman Road

(f) Lot 2 Kargotich Road

(g) Lots 11 and 1255 Mundijong Road

(h) Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 Pure Steel Lane

The majority of the parcels are included within the 'Urban Development' zone as delineated on the Scheme amendment map.

A portion of Lot 7 and Lot 402 Scott Road and Portion of Lot 405 Bishop Road are in the 'Public Open Space' reserve for the purposes of the Mandejal Brook.

1.4 Regional and sub-regional Structure Plans

DIRECTIONS 2031 AND BEYOND

In August 2010, the WAPC released Directions 2031 and Beyond. The purpose of the document is to guide future development for the Perth and Peel regions. In terms of metropolitan planning Directions 2031 represents the primary planning document for the metropolitan region including Peel.

The following key points arise from Directions 2031 which directly relate to West Mundijong:

- Identification of West Mundijong as an industrial area;
- Planned intermodal freight terminal at West Mundijong;
- Potential additional dwelling yield of 12,500 for Mundijong townsite; and
- Designation of Mundijong town site as a 'District Centre'.

The following key points arise from Directions 2031 which indirectly relate to West Mundijong:

- A projected further growth in population of 30,000 for Serpentine Jarrahdale by 2030;
- Employment self sufficiency target of 55%; and
- Identification of Tonkin Highway and Mundijong Road as 'strategic' roads.

A significant recommendation of Directions 2031 relates to the possible intermodal facility at West Mundijong. It states:

"An investigation of the suitability of an intermodal freight terminal at West Mundijong, as a strategically important industrial site, will be required. The potential realignment of the Kwinana–South West freight rail line that runs along the eastern boundary of the proposed West Mundijong strategic industrial area presents the opportunity to develop an intermodal terminal in this area. The West Mundijong site has the potential to become a strategically important intermodal node given its proximity to the intersection point of the rail system and the primary road network".

PERTH AND PEEL @ 3.5 MILLION

The Perth and Peel@3.5million strategic documents "… clearly spells out what SJ could look like in the future, how we can maintain our valued lifestyle and how we can realistically accommodate a substantially increased population." It specifically mandates the creation of areas for employment in the areas where there is a lack of employment.

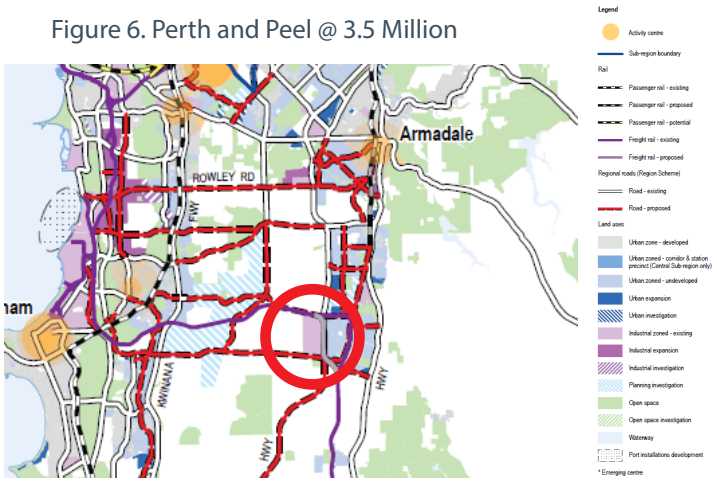
The following paragraphs quoted from the document shows how critically important economic development and specifically manufacturing is to provide the employment. The recently announced state infrastructure projects confirm the importance of development of the West Mundijong industrial area.

4.3 Key planning framework principles - Identify ultimate land uses for industrial and public purposes sites, while promoting access to finite basic raw materials, through the strategic staging and sequencing of development.

4.5 Delivering a connected city - planning for the development and growth of both the Inner Harbour at Fremantle and the future Outer Harbour at Kwinana by the Westport Taskforce.

Overall overarching objectives - Economy and employment - To promote employment opportunities and increase the number of people who live and work within the sub-regions, with a focus on attracting strategic economic and employment land uses within the strategic metropolitan centres and key industrial centres, while maximising use of existing and proposed infrastructure.

Figure 6. Perth and Peel @ 3.5 Million



1. Planning and Background

PERTH AND PEEL @ 3.5 MILLION

Economy - For sub-regions with lower employment self-sufficiency, such as the North-West and the South Metropolitan Peel's south-eastern sector, it is critical that employment opportunities focus on key industries that encourage people to live and work within the same sub-region.

South Metropolitan Peel sub-region: In 2011, the sub-region generated a total of 143,970 jobs, estimated to rise to 437,730 by 2050. Employment opportunities are expected to focus on manufacturing, construction, retail, healthcare and social assistance. Jobs in the south west sector are projected to reach 195,115; 137,030 in the south east sector and 105,580 in the Peel sector by 2050.

South Metropolitan Peel sub-region: This sub-region is expected to require 5,900 hectares of industrial land to 2050 with the Kwinana Industrial Area, the Rockingham Industrial Zone, the Australian Marine Complex and the Latitude 32 industrial area accounting for the majority of this demand. The establishment of the Outer Harbour will also provide opportunities, as do the alumina refineries in Pinjarra and Wagerup. Other industrial areas for expansion or establishment will include sites at Nambeelup, Maddington/Kenwick, Pinjarra, Forrestdale and Mundijong. Staged delivery of infrastructure and public and private sector investment to maximise economic development and employment potential will be critical to the successful development of priority employment lands. This will require a coordinated and collaborative approach to delivery across government and private stakeholders.

Local government has an important role in facilitating economic development within the sub-region through the preparation of local development strategies that:

- encourage and facilitate of growth for activity and industrial centres for the purpose of delivering employment opportunities;
- protect of employment generating land from the encroachment of competing and/or incompatible land uses;
- create employment opportunities which utilise local labour force skills to increase employment self-sufficiency;
- maximise and encourage further growth of the area's key economic sectors and/or clusters;
- cultivate and strengthen relationships with key stakeholders; and
- provide targeted services and support to businesses to facilitate economic growth.

Figure 7. Employment and Economic Network 2050

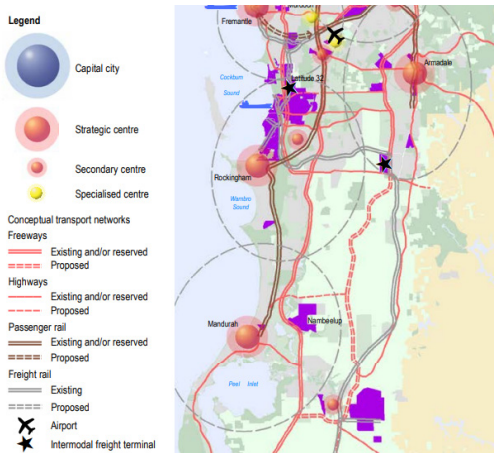
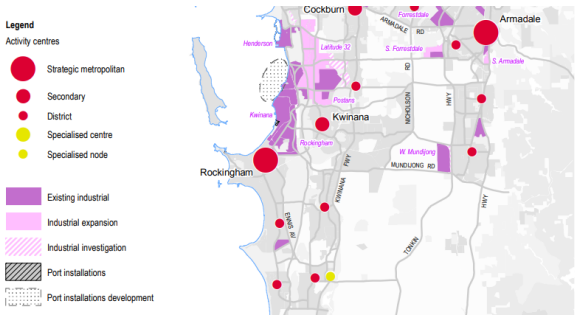


Figure 8. Employment Opportunities

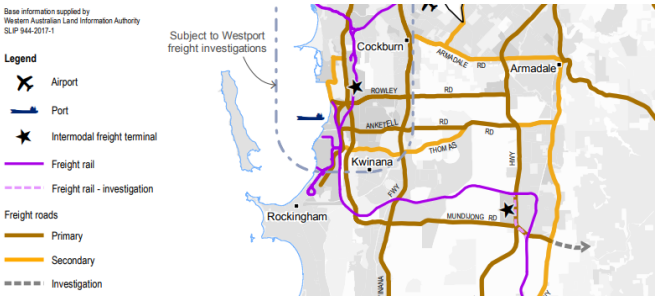


Mundijong (West) - Mundijong is a future industrial area that is expected to mainly cater for increased agriculture-related industries, including transport and logistics. Comprehensive district planning for the area will need to respond to the proposed intermodal facility and long-term realignment of the freight rail out of the developing Mundijong town centre.

Figure 9. Industrial Investigation Areas

TABLE 7: Industrial Investigation areas – key considerations

Site	Key considerations
Cardup	Arrangements being made for the long-term protection of Bush Forever site 361.
West Mundijong – freight rail realignment	Determine land requirements for future realignment of the freight railway that currently passes through Mundijong.



The West Mundijong Area responds to Table 8: Implementation actions and shows the intent of the local government to improve the economic and employment situation within the Shire.

Figure 10. Economy and Employment

Economy and employment

Sub-regional planning framework objective	Strategic direction/priority	Actions	By whom
To promote employment opportunities and increase the number of people who live and work within the sub-region, with a focus on attracting strategic economic and employment land uses within the strategic metropolitan centres and key industrial centres, while maximising use of existing and proposed infrastructure.	Promote employment nodes including activity centres, specialised centres, Industrial areas, Industrial Expansion areas and Industrial Investigation areas	Structure planning	WAPC Local government
		Relevant investigations (for investigation areas)	WAPC Various
		Region scheme amendments	WAPC
		Local Economic Development Strategy	Local government
		Local planning strategy/ scheme amendments	WAPC Local government
	Protect employment land from uses inconsistent with the employment objective by planning for ultimate development with limited interim uses	Region scheme amendments	WAPC Local government
		Local planning strategy/ scheme amendments	
		Structure planning	
	Protect strategic industries and land classified for this purpose, together with their buffers, from the encroachment of non-strategic and/ or incompatible land uses	Region scheme amendments	WAPC Local government
		Local planning strategy/ scheme amendments	
		Structure planning	
	Improve employment self-sufficiency to reach target	Structure planning	Local government

SOUTHERN METROPOLITAN SUB-REGIONAL STRUCTURE PLAN 2009 (SMSRSP)

In 2009 the WAPC prepared the SMSRSP.

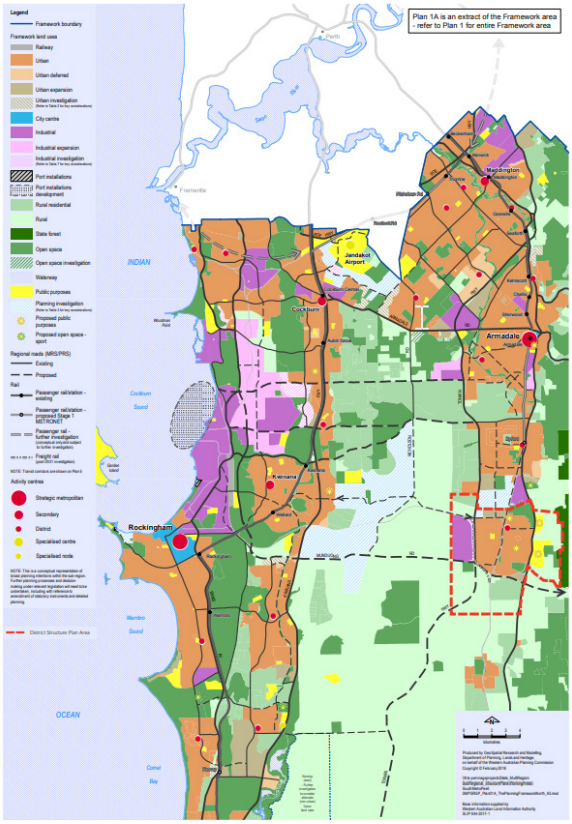
The following key points arise from SMSRSP which directly relate to the investigation area:

- Identification of West Mundijong as an industrial investigation industrial area;
- Possible re-location of the Kwinana South West freight rail line to follow alignment of Tonkin Highway extension;
- Possible extension of Mundijong Road east of Mundijong; and
- Planned dwelling yield of 12,500 for Mundijong townsite

The SMSRSP also established a hierarchy of industrial areas within the sub region which are discussed as follows:

- Kwinana designated as a strategic heavy industry area;
- Latitude 32 established as subsidiary to the Kwinana port;
- Potential future general industry areas at East Baldivis and Forrestdale;
- The Cardup area for light industry.

Figure 11. South Metropolitan Peel - Sub-Regional Planning Framework



1. Planning and Background

1.5 Industrial Land Strategies

ECONOMIC AND EMPLOYMENT LANDS STRATEGY: NON-HEAVY INDUSTRIAL: PERTH METROPOLITAN AND PEEL REGIONS

The Economic and Employment Lands Strategy: non-heavy industrial: Perth metropolitan and Peel regions (EELS) was completed by the WAPC in August 2012. The purpose of the EELS is to determine demand for industrial land in the short to medium term and ensure that sufficient industrial land is identified and made available in the Perth and Peel region. The EELS has identified 37 potential industrial areas. Eleven of the sites have been identified as 'priority industrial sites The EELS states:

West Mundijong has the potential to become a strategically important intermodal node, given its proximity to the intersection point of the rail system and the primary road network.

DEMAND ANALYSIS FOR EMPLOYMENT GENERATING LAND IN SERPENTINE JARRAHDALE

The study was completed in 2009 for the Shire of Serpentine Jarrahdale. Key findings for West Mundijong:

- An additional 150 hectares of land will be required by 2021 to meet projected demand for industrial land;
- The following sectors offer optimum employment and economic potential:
  - Manufacture of building construction materials;
  - Food manufacture; and
  - Transport and logistics

1.6 Local Planning Strategy

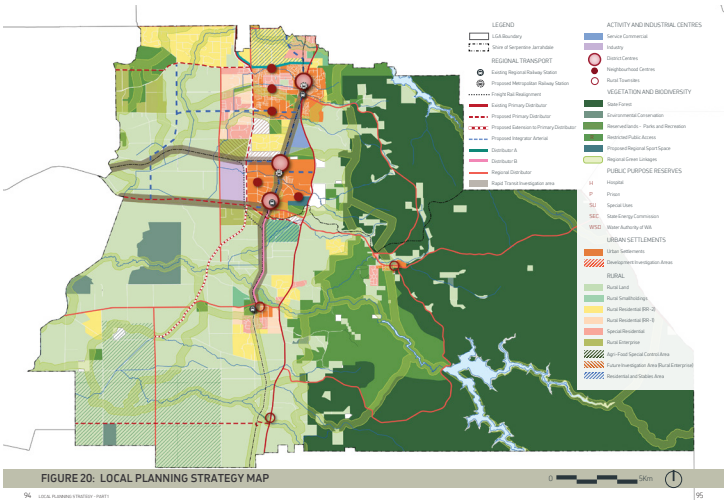
The Local Planning Strategy provides for a variety of industries and businesses ranging from low intensity service industries to intensive general industries which may have offsite impacts. There are two industrial areas identified within the Shire including the West Mundijong Industrial Area and the Cardup Business Park. Both of these industrial and service commercial areas are well connected to regional roads and the freight rail network, with the West Mundijong Industrial Area bound by Mundijong Road, the future Tonkin Highway and the Kwinana Freight Rail and the Cardup Business Park located on South Western Highway.

Industrial development is fundamental to sustaining and strengthening the local economy and creating local employment opportunities. The development of industrial land is important to generate investment within the Shire and attract businesses, creating a need for more services to support such industries. Industrial development generates employment opportunities in both the industries and businesses within industrial areas and the associated support services. Creating local employment opportunities provides the potential for local residents to work within the area in which they live. This may improve employment self-containment within the Shire reducing travel times, traffic congestion and improving resident's access to the workforce, which could result in higher rates of workforce participation, lower unemployment rates and less occurrence of socio-economic disadvantage. Industrial areas can also attract skilled workers to the Shire to patronise local businesses and potentially locate within nearby residential areas, driving both the local economy and housing market. It is crucial for industrial areas to be well located with convenient access to regional transport networks.

Objectives

- Provide for an appropriate and well located supply of industrial land to make the Shire an attractive, well connected location within the region to establish industries and businesses;
- Encourage the growth, development and diversification of the local economic base;
- Facilitate local employment opportunities and improve employment self-containment and self-sufficiency;
- Protect industrial land from the encroachment of sensitive land uses;
- Create sustainable industrial developments which utilise innovative technologies;
- Develop well designed industrial areas with a high level of amenity.

Figure 12. Draft Local Planning Strategy Map



The West Mundijong Industrial Area is optimally located to the west of the Mundijong Whitby urban area, bound by north-south and east-west regional road connections in the form of the future Tonkin Highway and Mundijong Road respectively, and the Kwinana Freight Rail. This location provides efficient connectivity to the freight network, making it ideal for various industrial uses. There are long term plans for the realignment of the Kwinana Freight Rail to be relocated from the Mundijong Whitby urban area to run parallel to the future Tonkin Highway adjacent to the West Mundijong Industrial Area.

The strategic location of the West Mundijong Industrial Area and the future realignment of the Kwinana Freight Rail potentially provides the opportunity for a strategically important intermodal node to be located within the West Mundijong Industrial Area. The proximity of the West Mundijong Industrial Area to agricultural land and food production activities provides the potential to create synergies between existing rural activities such as poultry farming and the new operations within the industrial area. The development of an agri-precinct within the West Mundijong Industrial Area is supported for such purposes.

Strategies

- Ensure industrial development is located in appropriate locations which are highly accessible to road and rail transport connections;
- Investigate the opportunity to develop an intermodal hub within the West Mundijong Industrial Area along the proposed realignment of the Kwinana Freight Rail to support the development of industry;
- Allow for a broad range of industrial uses to be developed within industrial areas;
- Ensure that more intensive industrial uses which are likely to affect the amenity of the surrounding area are located away from existing urban areas;
- Locate less intensive industries, rural industries or large scale commercial uses to act as a buffer between industries of a greater intensity and sensitive land uses;
- Provide for the development of bulky goods retail and other large-scale format retail, services or showrooms within close proximity to activity centres.
- Prevent the development of sensitive land uses within the buffer of industrial land that may prejudice the future development of the industrial land for industrial purposes;
- Encourage industrial developments to utilise best practice management techniques and innovative technology to minimise environmental impacts;
- Require industrial uses that may detract from visual amenity to be screened from view;
- Require landscaping and trees to be provided within industrial areas to enhance amenity and provide shade;
- Identify the land in a 1km buffer north and west of the West Mundijong Industrial Area as 'Rural Enterprise Investigation'.
- 'Support the realignment of the Kwinana Freight Rail out the Mundijong Whitby urban area to the more appropriate location adjacent to the West Mundijong Industrial Area and Tonkin Highway extension, removing a significant constraint to the urban development and amenity of Mundijong Whitby.

1. Planning and Background

Actions

- Review the West Mundijong District Structure Plan and the Cardup Business Park Structure Plan;
- Prepare a development contribution scheme and plan for the West Mundijong Industrial Area and the Cardup Business Park;
- Include a General Industry zone within LPS 3 to allow for a range of industrial uses.
- Include a Light Industry zone within LPS 3 to allow for a limited range of industries which are not likely to have offsite impacts;
- Include an Industrial Development zone in LPS 3 to identify future industrial areas;
- Zone the West Mundijong Industrial Area as Industrial Development under LPS 3;
- Include a Service Commercial zone within LPS 3 to facilitate development of bulky goods retail and other large scale retail and commercial services;
- Facilitate the zoning of the Cardup Business Park to Service Commercial;
- Zone the land between South Western Highway and Soldiers Road, north of Cardup Siding Road as Service Commercial;
- Include provisions to require the screening of industrial uses within LPS 3;
- Include provisions to require landscaping within LPS 3.

1.7 Serpentine Jarrahdale Town Planning Scheme No.2

The Shire of Serpentine Jarrahdale Town Planning Scheme No. 2 refers to the West Mundijong as Development Area 6. A copy of the map and table is below:

Ref. No.	Area	Provisions
DA 6	a) Part Lot 99 Kargotich Road (near intersection Kargotich Road). b) Lot 38 Bishop Road (Cnr Kargotich Road). c) Lots 1680, 525 & 405 Bishop Road. d) Lots 2, 6, 9 8, 7 & 402 Scott Road. e) Lot 4 Sparkman Road. f) Lot 2 Kargotich Road. g) Lots 11 & 1255 Mundijong Road. h) Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 & 12 Pure Steel Lane. *AMD 187 GG 13/02/18*	1. Land use, development, and if necessary, subdivision are to be guided by local structure plan(s) prepared and approved pursuant to Schedule 2 Part 4 of the LPS Regulations. 2. Each Local Structure Plan will require the preparation of a Local Water Management Strategy and appropriate level Bushfire Risk Management Planning. 3. Each Local Water Management Strategy will be required to address the following matters: a) Hydrological assessment to demonstrate no adverse impact on Threatened Ecological Communities and Conservation Category Wetlands within and surrounding the subject land; b) Consideration of Commonwealth referrals for Threatened Ecological Communities within as well as adjoining the subject land; and c) The inclusion of Surveys for habitat of Black Cockatoo. 4. In addition to the considerations outlined in *Schedule 2, Part 4 of the Planning and Development (Local Planning Schemes) Regulations 2015*, the structure plan is to have regard to the following factors: a) Proposed extension of Tonkin Highway. b) Possible realignment of the Kwinana Freight line. c) Provision of a possible intermodal facility if found feasible by the Department of Transport. d) Conservation of Manjedal Brook. e) Preparation and implementation of a noise management strategy to the satisfaction of the Office of Environmental Protection which is cognisant of proposed and existing sensitive uses including those existing uses contained within the structure plan area. f) Provision of ecological corridors reflecting district drainage patterns, vegetation and wetland values within the amendment area. g) Inclusion of a 50 metre buffer around the Conservation Category Wetland unless a specific site study is undertaken and recommends a revision of this buffer distance. 5. Compliance with a Developer Contribution Plan prepared in accordance with clause 9.3. 6. A Wastewater Pump Station is planned in this locality and as a result, odour buffers will apply to sensitive land uses.

1.7 Serpentine Jarrahdale Town Planning Scheme No.2

Figure 13. Town Planning Scheme No.2 Maps

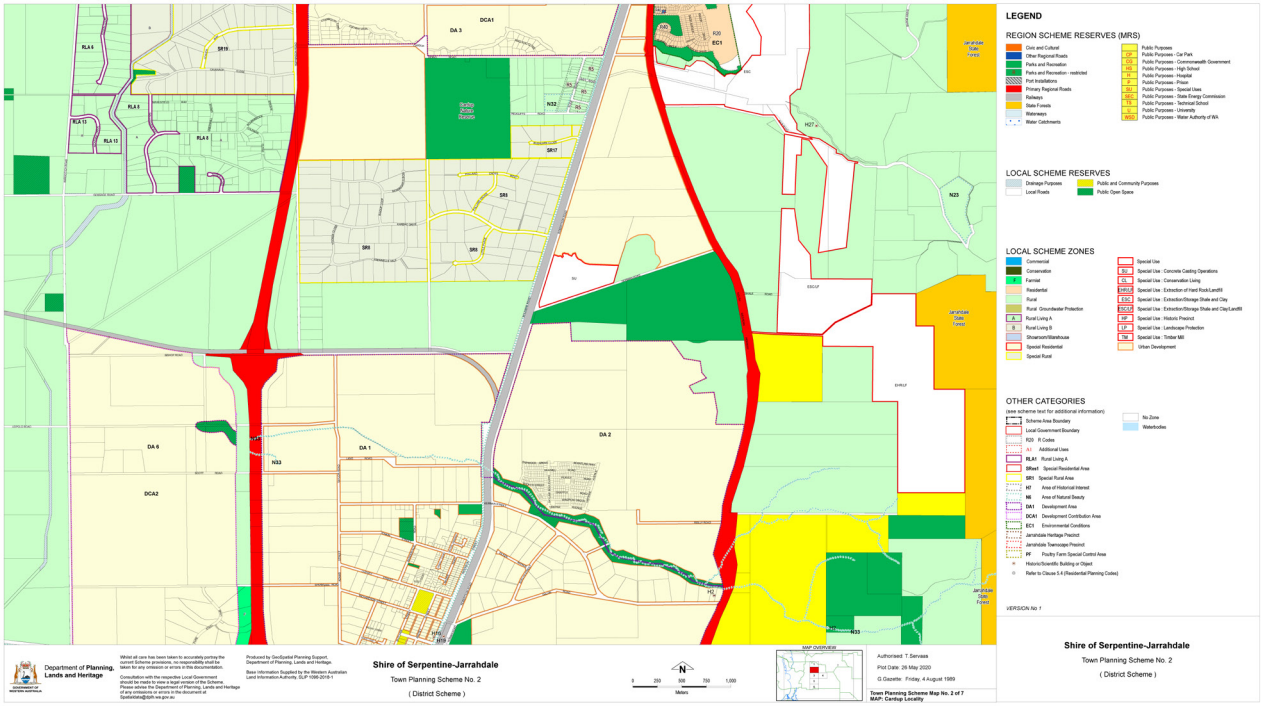
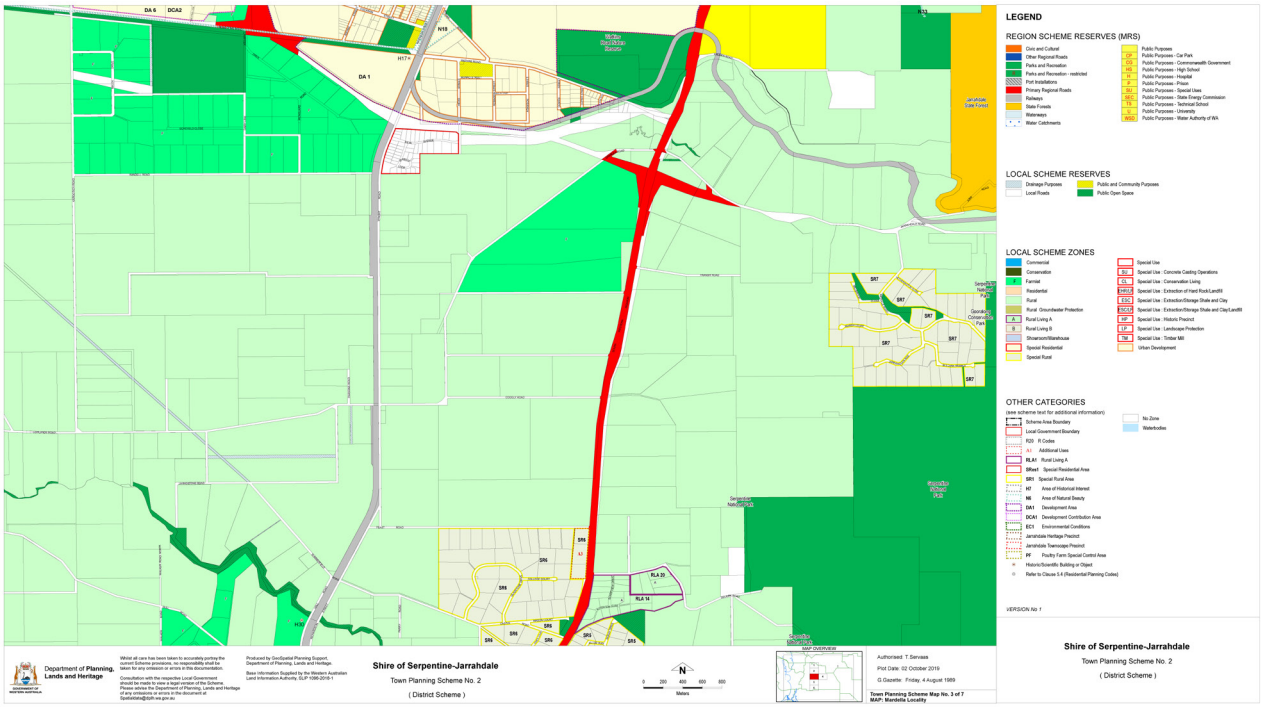


Figure 14. Town Planning Scheme No.2 Maps



1. Planning and Background

1.8 Serpentine Jarrahdale Local Planning Scheme No.3

The Serpentine Jarrahdale Local Planning Scheme No. 3 refers to the West Mundijong Industrial Area as Special Control Area 10.

SCA10	West Mundijong Development Contribution Area	To designate areas where a Development Contribution Plan shall apply. To specify the infrastructure items and contribution methodology contained within the Development Contribution Plan.	1. Items: Mundijong Road: (a) Land required to achieve the proposed 40 metres road reserve; (b) Earthworks for the whole road reserve; (c) The construction and upgrade of one carriageway; (d) Associated drainage works including water sensitive measures; (e) Traffic control devices including two sets of traffic lights, intersection treatments incorporating slip lanes and associated works; (f) Shared paths; (g) Utility removal, relocation and insertion; and (h) Associated costs including design, administration, and management. Kargotich Road: (a) Land required to achieve the proposed 30 metres road reserve; (b) Earthworks for the whole road reserve; (c) Complete road construction based on a single lane split carriageway with central median. (d) Associated drainage works including water sensitive measures; (e) Traffic control devices including intersection treatments incorporating slip lanes and associated works; (f) Shared paths; (g) Utility removal, relocation and insertion; and (h) Associated costs including design, administration, and management. Bishop Road New: (a) Land required to achieve the proposed 30 metres road reserve; (b) Earthworks for the whole road reserve; (c) Complete road construction based on a single lane split carriageway with central median. (d) Associated drainage works including water sensitive measures; (e) Traffic control devices including one set of traffic lights, intersection treatments incorporating slip lanes and associated works; (f) Shared paths; (g) Utility removal, relocation and insertion; and (h) Associated costs including design, administration, and management. North-South Spine Road: (a) Land required over and above a standard 20 metre road reserve to achieve the required road width of 30 metres; (b) Earthworks for the whole road reserve; (c) Complete road construction based on a single lane split carriageway with central median. (d) Associated drainage works including water sensitive measures; (e) Shared paths; (f) Utility removal, relocation and insertion; and (g) Associated costs including design, administration, and management. Land for drainage: • All land required for district drainage purposes. Administrative: All estimated future costs associated with administration planning and development in West Mundijong, including: • Planning studies; • Traffic studies; • Drainage studies; • Road design costs; • Borrowing costs (including interest and principal loan repayments); and • Scheme Management Costs (including administration and management of the DCA). 2. Methodology: Per hectare or square metre basis. 3. Timeframe: Period of operation: 20 years Priority and timing of infrastructure provision: Refer development contribution plan report

1.8 Serpentine Jarrahdale Local Planning Scheme No.3

Figure 15. Local Planning Scheme No.3 Maps

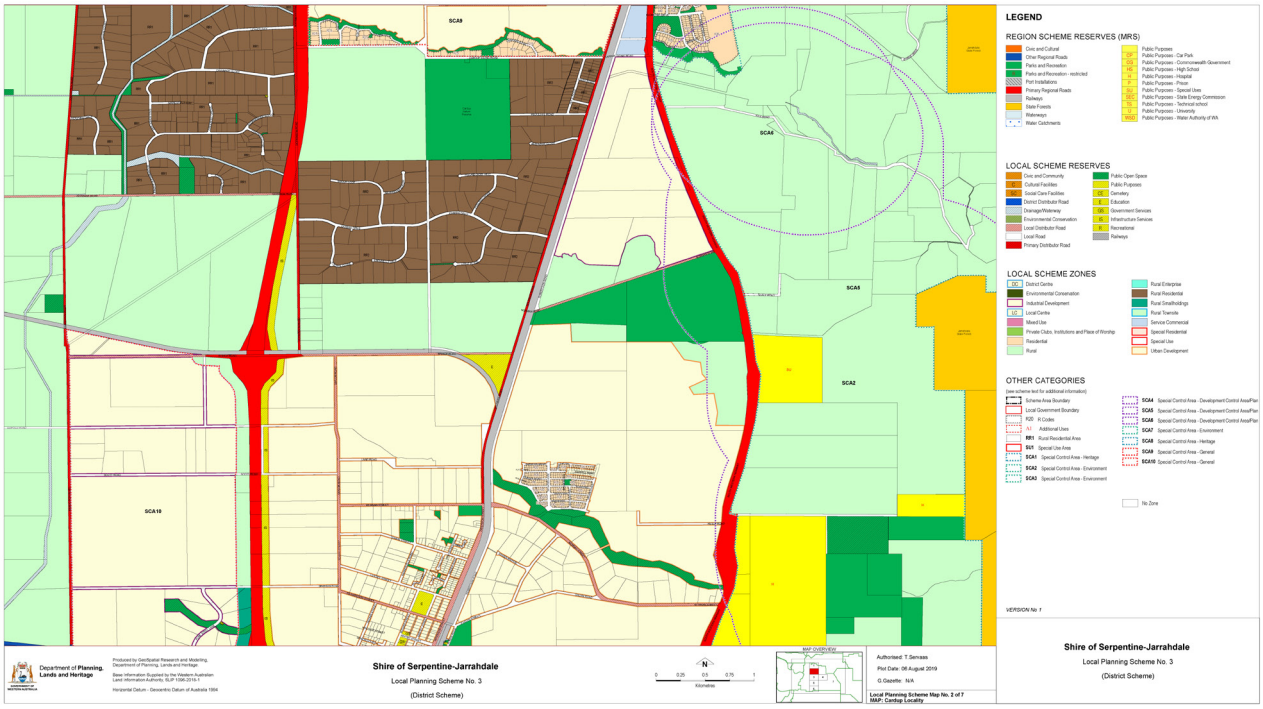
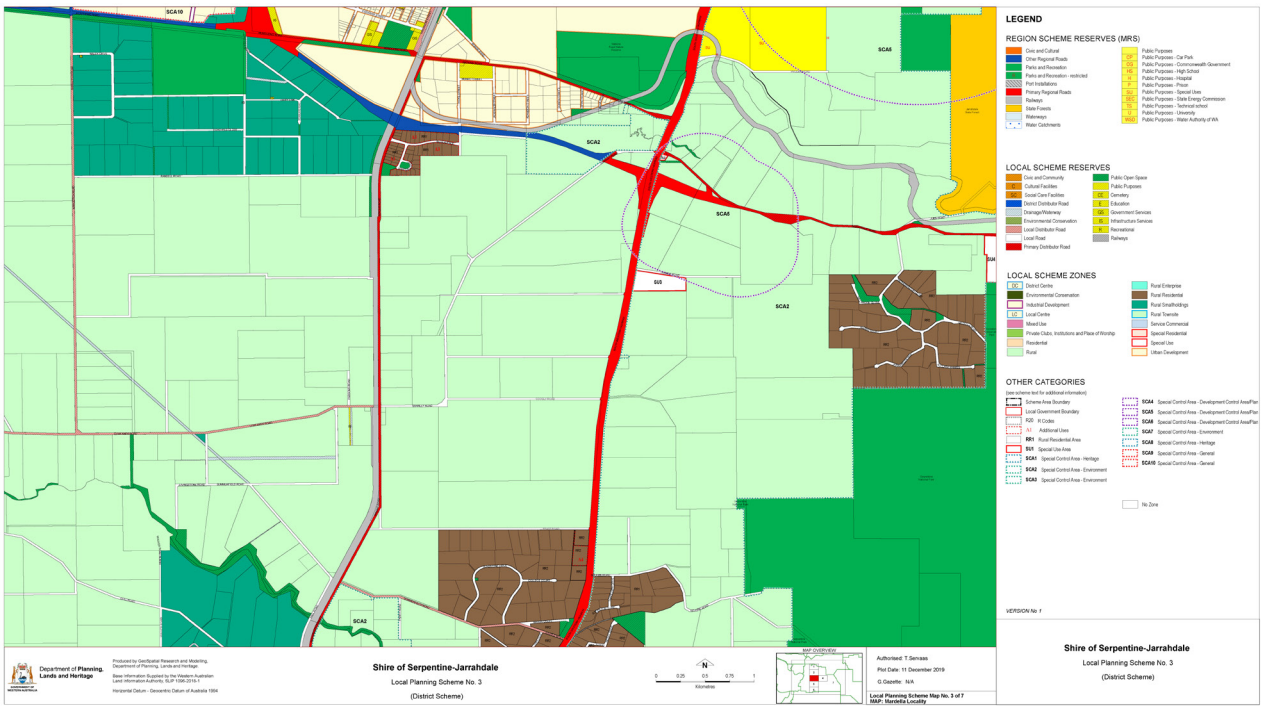


Figure 16. Local Planning Scheme No.3 Maps



1. Planning and Background

1.9 Mundijong Whitby District Structure Plan 2011

The Mundijong Whitby District Structure Plan was endorsed in 2011.

Key implications for West Mundijong:

- Identification of West Mundijong as a 'Strategic Industrial Node';
- Designation of Manjedal Brook as a 'public viewing area';
- Realignment of Kwinana Freight Rail Line to follow alignment of Tonkin Highway extension;
- Long term future population of 40-50,000 residents at Mundijong-Whitby.

Summary

- A high level of strategic support for industrial development at West Mundijong embodied is in both state and local planning strategies;
- Possibility of an intermodal facility at West Mundijong which could be a significant catalyst for industrial development;
- A further projected growth in population of 30,000 for the Shire of Serpentine Jarrahdale by 2030;
- Employment self sufficiency target of 55% and therefore the need to plan for and provide employment generating areas such as West Mundijong;
- Identification of Tonkin Highway and Mundijong Road as 'strategic' roads; and
- Need for the Shire of Serpentine Jarrahdale and the Department of Planning and the Department of Transport to effectively collaborate regarding future planning at West Mundijong

1.10 Mundijong District Structure Plan 2020

Approximately 880 industrial lots are possible in the West Mundijong Industrial Area, providing a significant opportunity to act as a catalyst for change generating a significant amount of jobs and sustained economic growth. The current West Mundijong Structure Plan provides for a general industrial core (279 ha) and supporting light industrial areas (135 ha) for precincts to the east and south. The light industrial areas also provide separation from the core area to adjoining residential areas to the east and south.

Based upon previous work, it is likely that the core may support the following forms of industry, subject to approvals:

- Agribusiness, including abattoirs, food processing, canneries & breweries;
- General industry, including manufacture / prefabrication of building products and materials;
- Storage, warehousing, freight and logistics;
- Heavy machinery servicing and sales; and
- Transport and fuel depot.

To deliver the above, significant investment into transport infrastructure is required - namely the Tonkin Highway extension and freight rail realignment. These transport connections improve the viability of the industries mentioned above and would enable the establishment of an intermodal hub. While the Shire is committed to industrial development at West Mundijong irrespective of an intermodal facility, the following benefits are acknowledged:

- Cost savings on industrial land over other parts of Perth, greatly reducing investment costs;
- Strong transport links via rail and road (offering access to major domestic and international markets with just one traffic light routing by the Tonkin Highway);
- Available industrial land (and surrounding land for associated industrial uses);
- Rapidly growing population in the Shire that will double over the next decade and quadruple by 2050;
- Labour pool of 270,000 potential workers (within a 30 minute drive); and
- Strong inter-regional road linkages (north-south and east-west).

The Mundijong District Structure Plan 2020 recognises the opportunity of a West Mundijong structure plan to provide for a 'first phase of industrial subdivision', based upon a phased approach to subdivision. The first phase is termed a dry lot industrial subdivision, which is subject to a minimum lot size of 1.5- 2ha. This first phase is not reliant on reticulated water or sewer infrastructure being provided. The 1.5 - 2ha minimum lot size requirement is to provide sufficient flexibility for onsite potable water catchment (via water tanks) and onsite effluent disposal. Intensity of development is also compatible with current road infrastructure limits, and the planned upgrades reflective of the Development Contribution Scheme for the area as per the Council Minutes from the 16 November 2020 on the advertised Mundijong District Structure Plan 2020.

More intense subdivision and development will require precinct based planning to occur. For subdivision at greater intensities than the 1.5 - 2ha dry lot industrial phase, the following will be required to be adequately addressed:

Engineering and Servicing

- Servicing response that demonstrates the subdivider being capable of providing all services to proposed lots;
- Geotechnical Investigation to determine fill requirements.

Traffic Design and Management

- A road network that reflects a well ordered and connected industrial area, and which provides for necessary road widths and space capacity to carry industrial vehicles (initially up to RAV4);
- Traffic Impact Assessment.

Water Management

- An amendment to the adopted Local Water Management Strategy, which is precinct specific to the area of the structure plan being proposed for subdivision beyond the 1.5 - 2ha dry lot phase. This must demonstrate an acceptable transition of the precinct to be able to deal with drainage and depth to groundwater requirements in a manner that responds to the design criteria set through the Local Water Management Strategy.

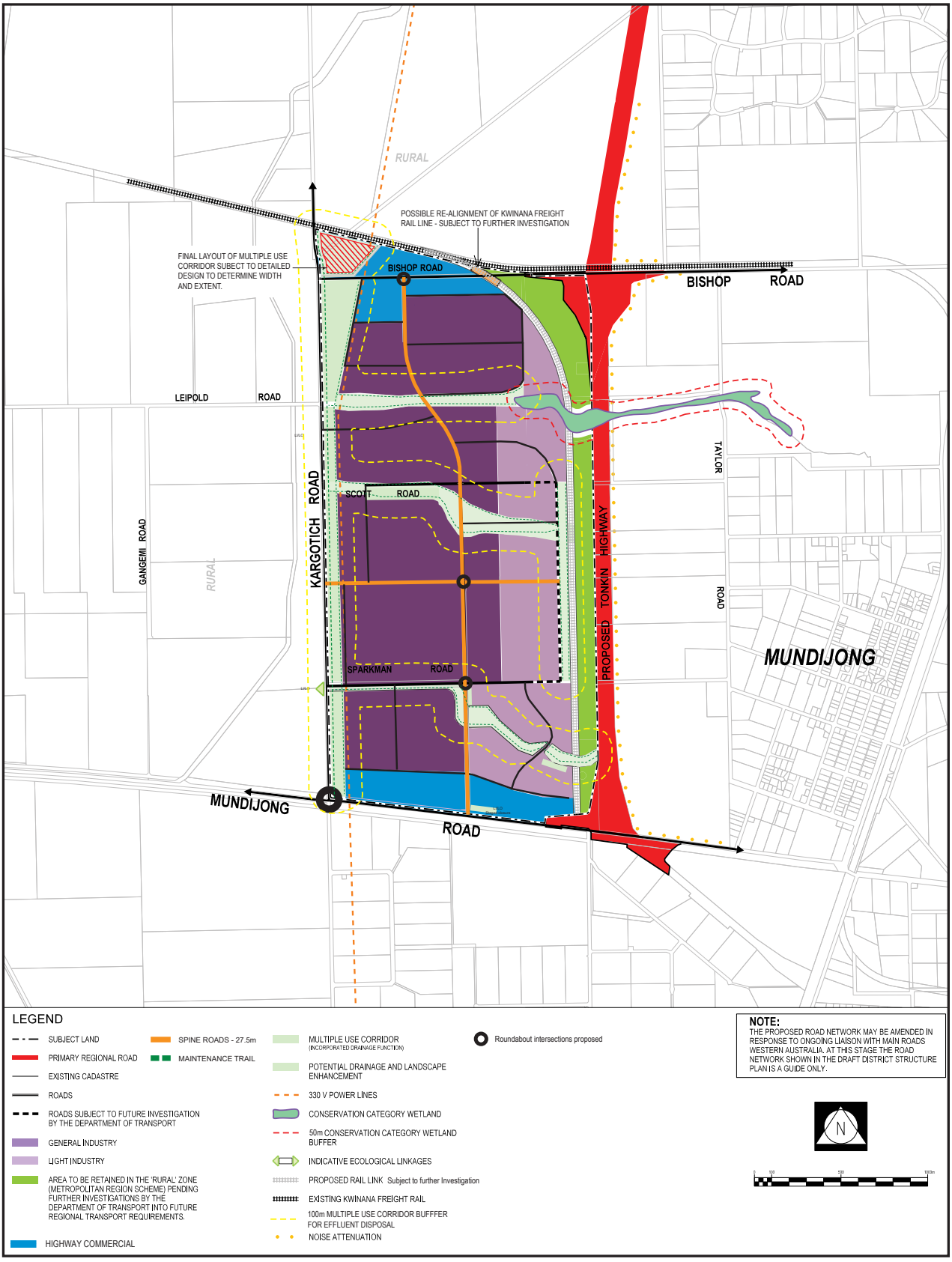
Minimum lot sizes, beyond the dry lot phase, shall not be below 2000sqm.

1.10 West Mundijong District Structure Plan 2017

The structure plan was formulated as a strategic document to support amendments to the Metropolitan Region Scheme (MRS) and the Shire of Serpentine Jarrahdale Town Planning Scheme No. 2. Further, the district structure plan was instrumental in guiding the development of this subsequent structure plan.

1. Planning and Background

Figure 17. West Mundijong District Structure Plan 2022



2. Site Conditions and Constraints

Overall the site has been substantially cleared to enable grazing and related farming activity. There is also evidence of smaller lots being used for rural lifestyle uses, including equestrian activity. Nevertheless, small pockets of remnant vegetation or re-growth are present in isolated parts of the investigation area. It is estimated that such vegetation represents approximately 2% of the total investigation area.

Manjedal Brook traverses the structure plan area east-west. In response to farming activity, the Brook has been substantially cleared of vegetation and altered in order to perform a more efficient drainage function.

PGV Environmental were engaged to prepare a desktop environmental assessment to support the structure plan (refer Appendix A). The results of the desktop assessment conclude that the potential for industrial development to negatively impact on the bio-physical environment are considered to be low.

The primary environmental consideration will be the potential impacts of industrial development on the existing dwellings adjacent to the site and in some cases within the site. DWER has advised that particular regard will need to be given to potential noise impacts. Herring Storer Acoustics were engaged to conduct a noise assessment for potential industry at West Mundijong (refer Appendix B). Their report concluded that certain categories of industry may be developed at West Mundijong and meet the requirements of the relevant noise regulations.

Biodiversity and Natural area assets

Vegetation

The vegetation on the site is 'Completely Degraded' and in small areas 'Degraded' to 'Completely Degraded'. The site does not contain any areas with an intact understorey.

Notwithstanding the significant degradation of vegetation on site the assessment recommends:

Consideration be given to retention of trees in public areas including road reserves, public open space, car parks, entry statement areas and possible ecological corridors; and Salvaging and relocation of some trees including Kingia Australis plants.

It is noted that the Mundijong Road reserve contains threatened ecological communities (TEC) to the south of the road tarmac. To protect these TECs any further construction to provide services or to upgrade this road should be undertaken to the north of the constructed road. Management procedures should be in place to ensure that the vegetation to the south is not disturbed.

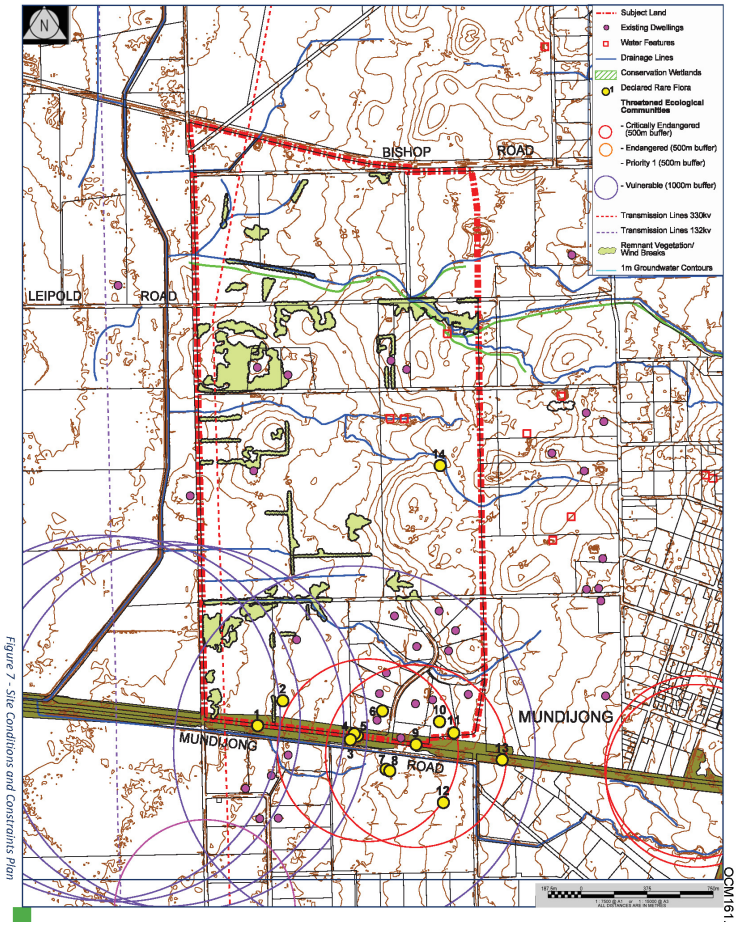


Figure 18. Site Conditions and Constraints Plan

2. Site Conditions and Constraints

Flora

The report found that there is unlikely to be any declared rare flora and likely to be no priority species present within the structure plan area. It is recommended that further assessment is required and therefore flora is not an impediment to the development of the structure plan area for industry.

Fauna

The following species listed under Section 18 of the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act may be impacted by development of the site:

- Forest Red-tailed Black-Cockatoo (Calyptorhynchus banksii subsp. naso)
- Baudin's Cockatoo (Calyptorhynchus baudinii)
- Carnaby's Black Cockatoo (Calyptorhynchus latirostris)

Surveys will need to be undertaken at subdivision stage to determine the risk to these species. This will particularly apply to areas that contain Marri trees. Examples include areas to the north of Scott Road on the western end and the lots immediately to the north of Manjedal Brook. Depending upon potential risks to habitat referral may be required to the Commonwealth Department of Sustainability, Environment, Water, Population on and Communities pursuant to the Environmental Protection on and Biodiversity Conservation on Act 1999.

To mitigate potential impact on black cockatoos the report recommends that in subsequent stages of planing consideration be given to the retention of Marri and Flooded Gum trees. It is also noted that there is the potential to improve the black cockatoo habitat by planting appropriate species in drainage corridors, open space and road reserves.

Landform and soils

Overall, the area has the appearance of being flat, however the following should be noted:

- The land falls from east to west by up-to 10 metres over a distance of approximately two kilometres;
- A sandy peak is located in the middle of the site near the eastern boundary. The peak is approximately 27 metres AHD;
- The lowest point of the site is approximately 16.5 metres AHD in the south west.

Refer Figure 3 - Aerial Site Plan

Overall, the site does not contain any unique topographical or geological formations and therefore these factors are not an impediment to the development of the site for industrial purposes.

Some of the soil types on the site are prone to waterlogging and ponding. The assessment recommends that surface water management will be required to manage these soil types. To minimise potential for soil erosion to occur the following management measures are recommended:

- Ground disturbing activities should be kept to a minimum and carried out 'as required' (in stages) immediately prior to lots being released for sale as part of a 'staged' development of the site;
- Landscaping/stabilising/dust suppression of areas where ground disturbance has occurred should be scheduled to occur immediately after clearing/and or infrastructure construction has been completed; and
- Clearing activities have the potential to add clay 'fines' into the drainage channels or the Conservation Category Wetland and the installation of temporary drop-out basins to capture and aid in the settling of clay fines should be considered.

Refer Figure 12 Site Conditions and Constraints Plan.

Acid Sulphate Soils (ASS)

The ASS Risk on the site is mapped as being Moderate to Low (<3m from the surface). The WAPC Acid Sulphate Soils Planning Guidelines (WAPC, 2009) indicate that "acid sulphate soils are technically manageable in the majority of cases". ASS Investigation and, if required, Management Plans should be prepared at subdivision stage once the detailed design of the site is finalised. This should be undertaken in accordance with the Acid Sulphate Soils Guideline Series: Identification and Investigation of Acid Sulphate Soils and Acidic Landscapes (DEC, 2009a) and Draft Treatment and Management of Soils and Water in Acid Sulphate Soil Landscapes (DEC, 2009b).

Groundwater and surface water

Groundwater management has been outlined in both the District Water Management Strategy and DRY LOT PHASE Local Water Management Strategy. These conclude that potential impacts on groundwater can be mitigated and managed and does not impede development of the site for industrial purposes.

As mentioned in Part 1, an amendment to the adopted Local Water Management Strategy will be required for any precinct that contemplates subdivision beyond the 1.5 - 2ha dry lot phase. This must demonstrate an acceptable transition of the precinct to be able to deal with drainage and depth to groundwater requirements in a manner that responds to the design criteria set through the Local Water Management Strategy.

Surface Water

As for groundwater the management of surface water is outlined in the District Water Management Strategy and Local Water Management Strategy. The structure plan has identified two of the drainage channels (one of which includes Manjedal Brook) as potential 'ecological corridors' that will be revegetated and contain some passive recreation opportunities. The corridors should be designed to create a 'living stream' that is incorporated into the eventual subdivision and development on the site. There is the potential to increase the ecological value of the degraded channels through rehabilitation which may provide additional habitat for some species.

Wetlands

A large proportion of the site is mapped as a Palsplain Multiple Use Wetland.

A portion of the Manjedal Brook is also categorised as a Conservation Category Wetland. This structure plan provides for a 50 metre buffer to this section of Manjedal Brook. The buffer distance is consistent with the environmental reporting completed to accompany this structure plan.

The structure plan also includes the Brook within an ecological corridor. A wetland management plan prepared at the time of subdivision, should also detail measures to maintain the hydrology and improve the environmental values of the Brook. It should also include rehabilitation measures and outline the methodology to provide the ecological corridor upon development of the site.

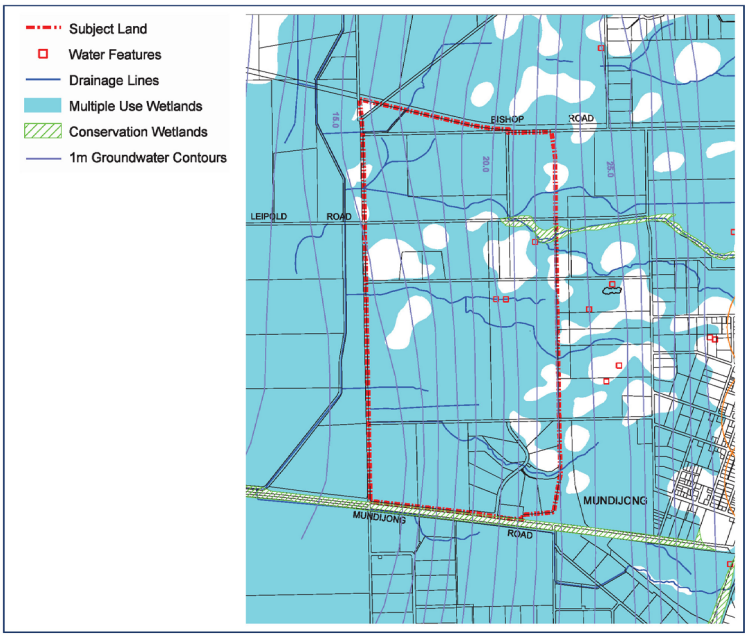


Figure 19. Wetlands and Hydrology Map

2. Site Conditions and Constraints

Wetland Buffers

The part of Manjedal Brook west of the site is in similar condition to the portion of the Brook east of the site. Planning for this part of the Brook is underway and it has been determined that as a riverine wetland the responsible authority for the Brook is the Department of Water. The Water Quality Protection Note 6: Vegetation Buffers to Sensitive Water Resources (DoW, 2006) outlines the manner in which buffer distances are to be measured:

Horizontal buffer distances are measured at right angles to the margins of streams or waterbodies, while buffers are normally circular for water supply wellheads. Where margins to ephemeral waterways are unclear, buffers should be measured outward from grade changes defining run-off channels.

Similar to the portion of the Brook east of the proposed Tonkin Highway extension, the wetland has clearly defined banks. On this basis the wetland buffer should be consistent with that to the east of the site. Subdivision and development containing conservation category wetlands may provide a wetland buffer assessment in accordance with WAPC's Draft Guidelines for the Determination of Wetland Buffer Requirements and the Environmental Protection Authority's Guidance Statement 33 to determine detailed wetland buffer requirements. The area surrounding the Brook is partially vegetated however in areas that are completely degraded, drainage infrastructure could be placed in the buffer area, consistent with the eastern part of the Brook.

The Local Water Managment Strategy (LWMS) proposes to fill/partially fill lots to achiveve the necessary celarnace to groundwater and recommends a 100 meter buffer from the Peel Harvey Catchment drains. This 100m buffer ensures the separation of effluent disposal systems from Peel-Harvey catchment drains.

Heritage

There are possibly two aboriginal heritage sites near or within the structure plan area.

- Site '450' is a registered site and is located near Manjedal Brook near the eastern boundary of the structure plan area.
- A 'heritage place' is also located approximately 500 metres south of site 450, also near the boundary of the proposed southern extension of the Tonkin Highway.

Ethnographic surveys will need to be conducted at subdivision stage to establish their significance and if required what measures should be put in place to ensure their conservation. Subject to survey, the sites may not be located within the development area. Refer Figure 12 Site Conditions and Constraints.

Sensitive uses / land use compatibility

The structure plan area is adjoined to the east by existing and planned residential uses. Furthermore, there is a preponderance of dispersed dwellings located to the south of the area associated with rural lifestyle or hobby farm subdivisions.

The EPAs Guidance Statement No 3 prescribes standard separation distances between industry and sensitive uses such as residential. Based on the guidance statement, it is unlikely that some categories of industry could locate within 500 metres of existing planned or sensitive uses on account of their emissions which could include noise, dust, odour or public risk. Such uses may include; abattoirs, brickworks, extractive industry, cement manufacturing and heavy fabrication involving steel or other metals. Nevertheless, low emission industries may locate within this area such as warehousing, logistics, service industry and some categories of light industry

Refer to Part 9 - Preferred and Non Preferred Land Uses for all sensitive uses/ land use compatibility for the West Mundijong Industrial site.

Irrespective of the potential for industrial development to the west, the extension of Tonkin Highway will require installation of associated noise attenuation measures in response to planned and existing dwellings to the East near Mundijong town site.

There is an opportunity for low emission uses near the eastern and southern boundaries such as:

- Warehousing
- Logistics

- Heavy machinery servicing, distribution and sales
- Some forms of light industry and service industry use
- Limited showroom development

As explained above, the eastern portion of the site adjoining the extension of the Tonkin Highway has been retained in the 'Rural' zone within the Metropolitan Region Scheme pending further investigations relating to a possible intermodal facility or related transport infrastructure.

Noise emissions

In preparing the structure plan liaison has taken place with the DWER to establish key environmental factors to consider in the development of the plan. While it is likely that future industry will be low emission in nature, the DWER recommended that consideration should be given to potential noise emissions. Odour, dust and light spill were considered to be unlikely emission risks for the types of industry envisaged at West Mundijong.

Acoustic consultants, Herring Storer, were engaged to determine the feasibility of industrial development given the proximity of existing and planned noise sensitive uses. Their report concluded that future industrial development has the potential to comply with the relevant regulations subject to the following critical factors:

- Industrial development being limited to non heavy industry as detailed in the Economic and Employment Lands Strategy prepared by the WAPC;
- Future individual industrial developments being limited to predicted noise levels of (108dB) in the general industry core and (101dB) in the supporting light industry precincts;
- Provision for 'internal buffers' to the eastern and southern margins of the estate to provide sufficient separation from the general industrial core to existing and planned adjoining sensitive uses. The internal buffer should be a minimum width of 500 metres and could be developed for light industry to complement development within the core;
- Construction of the southern extension of the Tonkin Highway to act as a further barrier to sensitive uses to the east. The highway provides for both further separation and a 'wall effect' particularly at the intersection of Bishop Road where future highway levels will exceed the natural ground level of the adjoining estate; and
- Requirement that subsequent local structure plans be accompanied by an emission management plan demonstrating how resultant development will comply with the noise report and the relevant noise regulations.

State Industrial Buffer Policy

The State Industrial Buffer Policy: Statement of Planning Policy No. 4.1 (SPP 4.1) outlines the WAPC's approach to buffers for industrial areas within the state. Section 3.2 prescribes a requirement for off-site buffers for certain categories of industry including general industry. Appendix 2 provides mechanisms for securing off-site buffer areas.

Existing dwellings within structure plan area

There are several dwellings or sensitive uses located within the structure plan area. Notably there is a concentration of dwellings off Pure Steel Lane in the south eastern margins of the area. Such uses are generally not considered with industrial development.

In the short term, the presence of these dwellings will prevent areas from being developed for industry. Consequently development will need to be staged pending removal or cessation of these uses. Alternatively, proponents may demonstrate control of emissions in a way which allows for interim coexistence of some dwellings and future industry.

330 Kv Power Lines

Adjoining the eastern side of Kargotich Road are 330 kv power lines. Refer Figure 7 Site Conditions and Constraints.

3. Infrastructure Proposals

Possible intermodal facility and realignment of Kwinana freight rail.

The West Mundijong area has been identified as a potential intermodal facility site. Associated with this initiative is the proposed realignment of the Kwinana freight rail to adjoin the southern extension of Tonkin Highway.

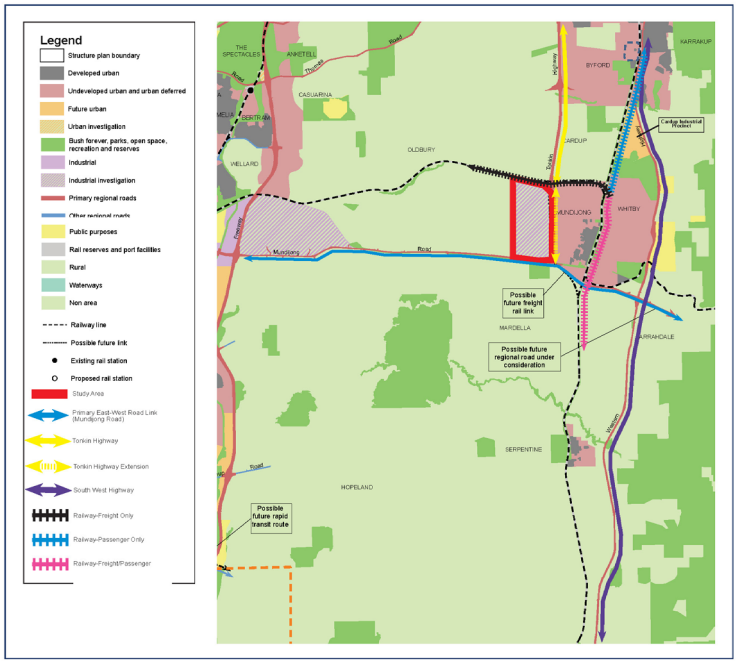


Figure 20. Infrastructure Initiatives

Southern Extension of Tonkin Highway

The MRS provides for the southern extension of Tonkin Highway.

The extension is vital to connecting the area to key destination points within the metropolitan area and importantly destinations in the north-west via the Great Northern Highway. This is now funded for delivery to begin, with an estimated completion date of 2025.

Mundijong Road

As outlined above Mundijong Road is designated an 'other regional road' in the MRS.

The designation allows for upgrading to the status of a sub regional road. Mundijong directly connects the investigation area to Kwinana Freeway to the west and Kwinana beyond.

The South Metropolitan Sub-Regional Structure Plan (2009) also makes provision for the extension of Mundijong Road east of Mundijong town.

4. Structure Plan

Design Objectives

A structure plan has been prepared for the West Mundijong Industrial Area. The design has been influenced by the following objectives:

Industrial land use

- To provide for a first phase dry lot industrial outcome, with preferred land uses set, and a minimum lot size of 1.5 - 2ha;
- To provide for an ultimate fully serviced second phase non-heavy industrial outcome, compatible with existing and planned adjoining land uses

Transport

- Provide for a distributor road network designed to enable efficient movement of commercial vehicles within the Estate and to and from the Estate via the existing and planned district and sub–regional road framework;
- To fully optimize the potential of key transport initiatives, including extension of Tonkin Highway, possible realignment of the Kwinana freight rail and a possible intermodal facility

Environment & Sustainability

- Creation of ecological corridors with the potential to facilitate drainage, environmental rehabilitation, conservation of wetlands and passive recreation where practical;
- Creation of an accessible centre that meets the employment requirements of future neighbouring and district residential areas;
- Provision for future access to sustainable transport modes, such as a possible freight rail line and associated intermodal facility;
- The need for a comprehensive district drainage framework which balances agency requirements with the objective of realizing the optimum development potential of the land.

Land Use

The structure plan provides for a phased approach - Refer to Section 1 Part 4 - Preferred and Non Preferred Land Uses for all land uses permitted within each zone within the West Mungijong Industrial site.

In terms of ultimate phase two and beyond, the general industrial core and supporting light industrial areas or precincts are located surrounding to the east and south.

Based upon previous work it is likely that the core may support the following forms of industry, subject to approvals:

- Agribusiness, including abattoirs, food processing, canneries & breweries
- General industry, including manufacture / prefabrication of building products and materials
- Storage and logistics
- Heavy machinery servicing and sales
- Transport and fuel depot

The core area is intended to be zoned 'General Industry'. The range and types of land use appropriate in the area are:

- Fuel Depot
- General Industry
- Light Industry
- Trade Display
- Transport Depot
- Warehouse

The core area will be supported by eastern and southern light industry precincts. The uses envisaged include:

- Automotive repair and servicing
- Storage and logistics
- Showrooms and
- Rural and service industry.

The eastern periphery of the land (adjoining the southern extension of the Tonkin Highway) is now retained in the 'Rural' zone of the MRS and the 'Rural' zone of the local scheme. It is expected that existing rural uses will continue pending completion of the investigations relating to a possible intermodal facility and or related transport infrastructure.

4. Structure Plan

Figure 21. Estimated Development Yield

Component	Area (ha)	Possible Lot Yield
General Industry Core	260ha	400
Light Industry Precincts	120ha	400
Service Commercial Precincts	30ha	150
Ecological Corridors	20ha	N/A
Drainage Corridors	15ha	N/A
Multiple Use Corridor	25ha	N/A
Total	470ha	950

Based on other comparable estates the following average lot sizes have been assumed:

- Phase 1 General industry core: 1.5 - 2ha
- Phase 1 Light industry: 1.5 - 2ha
- 80% of the area is developable
- Phase 2 and beyond ALL precincts: minimum lot size of 2000sqm.

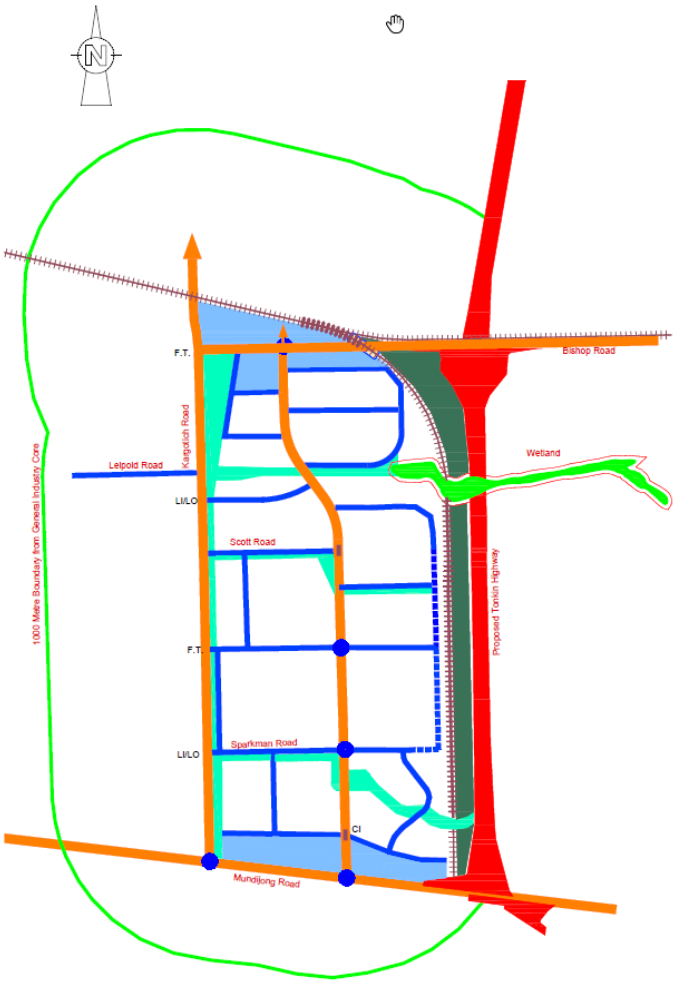
Transport

Road Network

The structure plan provides for two east / west distributor roads and one north / south distributor road. The network is intended to:

- Allow for ease of movement of commercial vehicles within the estate and moving to and from the estate;
- Provide strong connection to adjoining road network, notably Katgotich Road, Mundijong Road and Bishop Road; and
- Assist in defining precincts or local structure plan areas.

Figure 22. Proposed Road Network Plan



A preliminary traffic report has been provided by Cardno, with an updated Traffic Impact Assessment being prepared by Transcore for Phase 1. The orginal Cardno report recommended upgrades and key intersection treatments, with the most recent information from Cardno shown in Figure 23 - Road Upgrades and Figure 24 - Road upgrades and cross sections provided by Cardno.

Pure Steel Lane and Scott Road Closures

As per the Structure Plan and as shown in figure 22, Pure Steel Lane will be closed before Mundijong Road to ensure that no access to the West Mundijong Industrial Area can be taken from Pure Steel Lane from Mundijong Road. Pure Steel Lane will be connected to roads on either side, which will connect to the major North - South Spine Road.

As per Figure 22 and the Structure Plan, Scott Road will be closed at the North - South Spine Road, ensuring that Scott Road will only join Kargotich Road together with the North - South Spine Road. It will not extend from Kargotich Road through to Adam Street. This will enable efficient traffic flow in and around the industrial area. The closure will allow for traffic to flow throughout the industrial area without the need for major four way intersections.

The timing of these road closures will depend on the various stages of development considering the dry and wet lot phases. Land owners along Pure Steel Lane are dependant on the road for access to their dwellings.

The road can only be closed once the future road network (particularly the North - South Spine Road) is developed. Scott Road from Adam Street and Kargotich Road also services dwellings. Scott Road will be closed when industrial development occurs and access to the dwellings is no longer needed and the supporting road network constructed.

Where a road dedicated for public use is proposed to be closed, it may be closed at the request of Local Government under s.58 of the Land Administration Act 1997. The Local Government must allow 35 days after the publication in a newspaper for objections and must consider any objection before requesting closure.

Figure 23. Road Upgrades

Road	Upgrades Widening (ultimate)	Intersection Treatment (ultimate)
Kargotich Road	30m eastern side	Dual lane roundabout intersection control with Mundijong Road.
Bishop Road	30m southern and northern sides	Dual lane roundabout intersection control with proposed north / south distributor road.
Mundijong Road	30m northern side	Dual lane roundabout intersection control with Kargotich Road.

The proposed road network may be amended in response to ongoing liaison with Main Roads Western Australia. At this Stage the road network shown in the structure plan is a guide. Intersection treatments and widths to be subject to further detailed design.

Figure 24. Mundijong Road - Kargotich Road Intersection

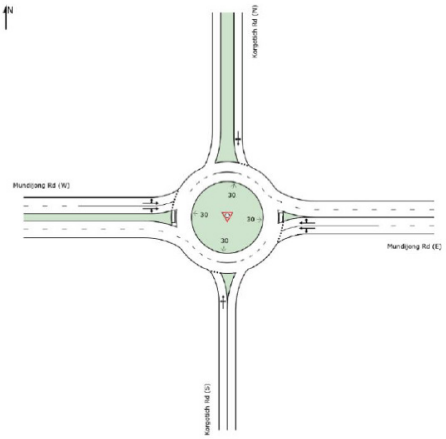
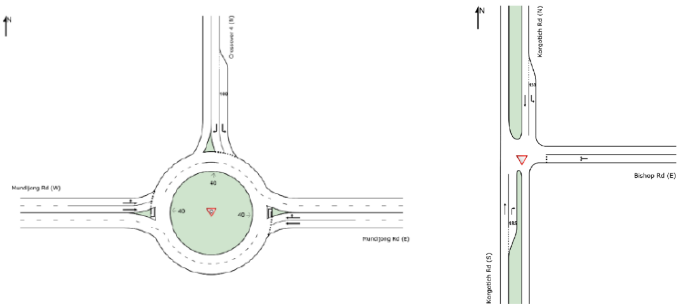


Figure 25. Mundijong Road - Spine Road and Kargotich Road - Bishop Road Intersections



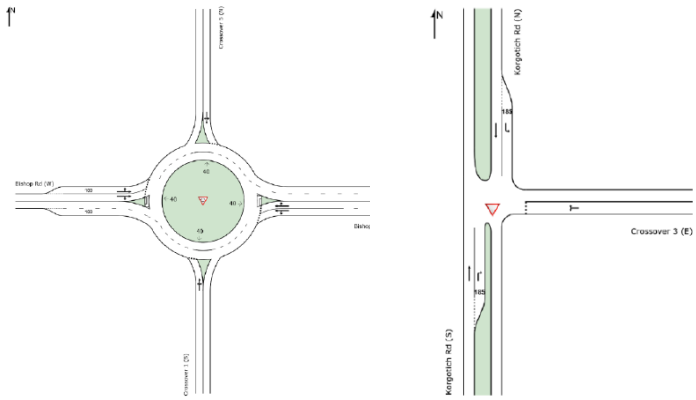
Mundijong Road - Spine Road

Kargotich Road - Bishop Road

Figure 26. Bishop Road - Spine Road and Kargotich Road - Spine Road Intersections

Bishop Road - Spine Road

Kargotich Road - Spine Road



4. Structure Plan

State Transport Initiatives

Possible Realignment of Kwinana Freight Rail

The structure plan recognises the possible realignment of the Kwinana Freight Rail parallel with the southern extension of the Tonkin Highway. At the time of preparing this structure plan the realignment shown was the preferred option by both the Department of Transport and the Department of Planning. Nevertheless, the suitability of the route is to be subject to further investigation by the state government in due course.

Possible Intermodal Facility

As outlined above, various state government planning documents envisage a possible intermodal facility at West Mundijong. Accordingly, the structure plan recognises a possible intermodal facility adjoining the southern extension of Tonkin Highway. The location represents the preferred position for such a facility by both the Department of Transport and the Department of Planning. Again, it is understood that the suitability of the location is to be subject to further detailed investigation by the state government in due course.

An intermodal facility would need to accommodate freight vehicles up to RAV 7 category. Accordingly, a Part 1 subdivision requirement has been included to ensure that the road network is designed to accommodate RAV 7 vehicles. Should the intermodal facility not be required in the future, other design vehicles may be applied as appropriate in consultation with the Shire and Department of Planning Lands and Heritage and to the satisfaction of the Western Australian Planning Commission.

Ecological Corridors

The structure plan provides for three ecological corridors running east / west through the structure plan area. The corridors generally reflect the location of existing drainage channels. The northern corridor also includes Manjedal Brook. A portion of the Brook is also classified as a conservation category wetland.

The corridors will provide a vital role in providing for the channelling of storm water runoff through the site. The ultimate size and form of the corridors will be further refined as part of the local structure planning process and the associated preparation of a local water management strategy.

Subject to further detailed planning, there is the potential for the corridors to be re-habilitated as 'living streams'. Consideration could also be given to passive recreational opportunities, including bridle paths or tracks.

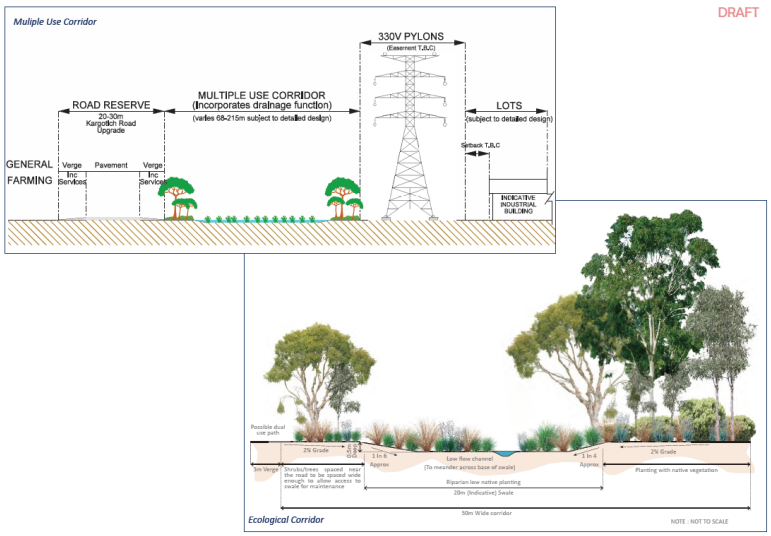
Multiple purpose corridor

The plan makes provision for a multiple purpose corridor which occupies the area between Kargotich Road and the overhead 330 kv power lines. The corridor serves a number of purposes including:

- Principally drainage. Consistent with Western Power requirements retention areas would be located outside the 330 kv corridor;
- Landscape treatment, including possible rehabilitation of remnant vegetation;
- Possible passive recreation opportunities including bridle and dual use paths; and
- Suitable interface to the overhead 330 kv lines.

Details of the corridor will be further refined in subsequent stages of the planning process.

Figure 27. Indicative Ecological & Multiple Use Corridor Cross Sections



5. Servicing

Wastewater

The subject land is located adjacent to the Byford sewer district. The Corporation's long term planning provides for limited capacity to service the area through its future main Byford wastewater pumping station. The Water Corporation acknowledges that the future pump station will need to be integrated with planning for both the industrial area and urban expansion east of the future Tonkin Highway extension.

The Water Corporation will need to review its long term infrastructure plan to accommodate future industrial development of the whole of the industrial estate. Phase one does not rely on sewer servicing, but will be required beyond land use intensity below 1.5ha - 2ha dry lot industrial subdivision.

In phase one, it is envisaged that candidate industrial will be large (occupying multiple land parcels) rendering site specific wastewater disposal more feasible than traditional connection to the reticulated wastewater system. This is known to be the case in comparable estates, particularly concerned with logistics, elsewhere in the Perth Metropolitan Area.

Development will need to comply with the Government Sewerage Policy – Department of Health and the Western Australian Planning Commission's development control policy 4.1: Industrial Subdivision.

The first phase of dry lot subdivision will have a minimum lot size of 2 - 1.5ha to allow for onsite effluent disposal systems, as there will be no provision of reticulated sewer at this stage. Phase 2 will have a minimum lot size of 2000sqm, and has a requirement for reticulated sewer to be provided to lots created at this stage to support the intensified industiral land uses throughout the structure plan area.

Water Supply

Subject to further investigations, it might be possible for an initial stage of development to be serviced through extension of existing infrastructure locate east of the Tonkin Highway extension near the intersection with Mundijong Road.

Like wastewater infrastructure, the Water Corporation's long term plans will need to be reviewed in order to service future industrial development at West Mundijong. On site water catchment will be possible under the first phase of subdivision for dry lot, as there will be no provision of reticulated water at this stage.

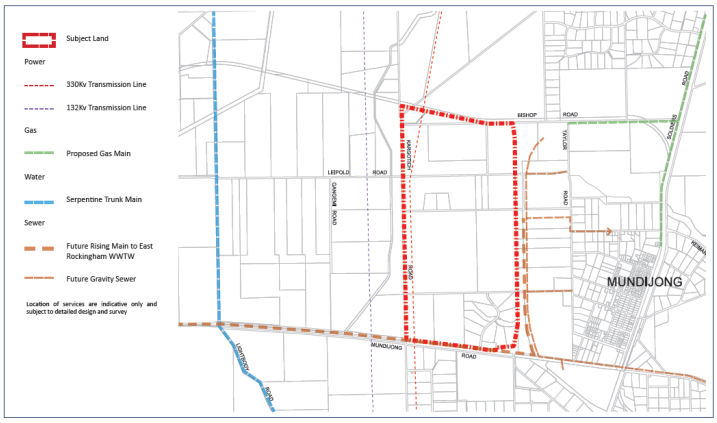
The second phase will include wet lot subdivision, and like wastewater infrastructure, will include the provision of reticulated water supply to the lots.

Power

The land is traversed 330 kv lines. Western Power has advised that a 'step down' facility will need to be installed to enable reticulated supply for future industry. There is likely to be sufficient capacity to service industrial development.

Gas

Recently gas distribution / reticulation infrastructure has been installed within the Mundijong area to service future residential development. The existing high pressure gas main located within Soldiers Road to the north at Byford has been extended south to Bishop Road. Lateral gas mains would be required off this trunk to serve the industrial estate.



6. Subdivision

Staging

Stage 1 (20 years) will only allow subdivision to minimum of 1.5 - 2ha for dry industries (large workshops/cold storage etc.) only. Stage 2 will allow further subdivisions but the developer/ landowners will need to arrange for the services to covert to wet industries or smaller lots.

The Western Australian Planning Commission (WAPC) is responsible for approving all subdivision applications and certain classes of strata subdivision applications in our State. Information and comment from the relevant local government, any public authority or utility services provider are also included in this assessment prior to a decision being made on the proposed subdivision.

The Shire will provide comment to the WAPC based on the planning framework and considers the Local Planning Strategy, Shire of Serpentine Jarrahdale Town Planning Schemes, Structure Plans, State Planning Policies and Local Planning Policies. Officers also consider the environmental, drainage, access, local character and amenity impacts as well as safety concerns and other potential impacts of the subdivision proposal.

Appendices

Appendix A: Environmental Assessment Report (including the Noise Assessment Report)

- Environmental Assessment Report, pgv Environmental, 23 November 2012 Version 2
- Aboriginal Heritage Enquiry, Department of Indigenous Affairs, 30 October 2012– Appendix 6
- Preliminary Environmental Noise Assessment, Herring Storer Acoustics, Revision 4 to 10 October 2012 – Appendix 7

Appendix B: District Water Management Strategy

- District Water Management Strategy, TME (Town Planning Management Engineering), November 2014, Revision 2
- Drainage Study for West Mundijong Industrial Area, TME (Town Planning Management Engineering), January 2013 – Annexure A
- Area/Sand Fill Analysis, TME (Town Planning Management Engineering), December 2012 – Annexure B

Appendix C: Local Water Management Strategy

- Local Water Management Strategy, Oversby Engineering, completed 2020
- Wetland Study (included in the Local Water Management Strategy), completed 2020

Appendix D: Traffic Impact Assessment

- Traffic Impact Statement, Cardno, November 2012, Version 1
- Traffic Impact Assessement, Transcore, September 2021.

Appendix E: Bushfire Assessment

- Bushfire Hazard Assessment, Calibre Consulting, 2015 (DFES approval IN15/20085)
- A Bushfire Management Plan (Hazard Level Assessment), Bushfire Prone Planning, November 2016, (DFES supported subject to BHL ratings modification IN17/4734)

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Serpentine
Jarrahdale

APPENDIX A

Environmental Assessment Report - Noise Assessment Report

APPENDIX B

District Water Management Strategy

APPENDIX C

Local Water Management Strategy

APPENDIX D

Traffic Impact Assessment

APPENDIX E

Bushfire Assessment