



West Mundijong Industrial Area

Enabling Infrastructure
Business Case



Shire of
Serpentine
Jarrahdale

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CONTENTS

1	Executive Summary	5
1.1	Challenges and Opportunities the Project Addresses.....	5
1.2	Strategic Support and Alignment.....	5
1.3	Project Description.....	6
1.4	Construction Stage Impact.....	7
1.5	Ongoing Economic and Social Benefits.....	7
1.6	Project Value for Money	8
1.7	Project Delivery.....	9
2	Introduction	11
3	Project Context	13
3.1	Shire of Serpentine Jarrahdale	13
3.2	West Mundijong Industrial Area.....	16
3.3	WMIA Existing Infrastructure	17
4	Problem and Opportuny Definition	20
4.1	West Mundijong Industrial Area Development Need	20
4.2	Financial Capacity of the Shire.....	24
5	Strategic Support and Alignment	26
5.1	Alignment with Policy and Strategic Plans.....	26
5.2	Alignment with Strategic Infrastructure Investments.....	30
6	Options Consideration	34
6.1	Project Overview	34
6.2	WMIA Without Enabling Infrastructure.....	34
6.3	WMIA With Enabling Infrastructure	35
7	Project Description	37
7.1	Road Infrastructure Need.....	37
7.2	Project Cost.....	41
7.3	Additional Operating Costs.....	41

8	Construction Stage Impact	43
8.1	Input-Output Tables Methodology	43
8.2	Construction Output Impact	44
8.3	Construction Employment Impact	45
9	Ongoing Economic and Social Impact.....	47
9.1	Methodology Overview	47
9.2	Critical Assumptions	47
9.3	Impact Pathways	48
9.4	Long-term Economic Impacts	49
9.5	Long-term Social Benefits	54
9.6	Present Value Benefits Summary	56
9.7	Cost Benefit Analysis Summary	57
10	Project Delivery.....	59
10.1	Project Management	59
10.2	Stakeholder Engagement and Communication Plan	60
10.3	Risk Analysis	62
10.4	Project Evaluation Framework	64
11	Conclusion and Recommendation	67
12	Appendix – Letters of Support.....	70

1 EXECUTIVE SUMMARY

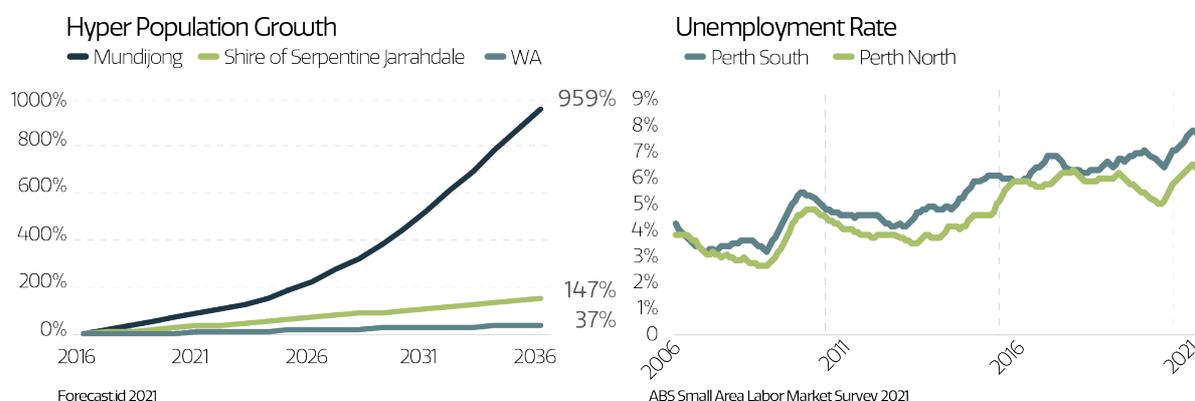
This business case has been prepared for the Shire of Serpentine Jarrahdale to support an investment and funding decision for the recommended option that expands and enhances existing infrastructure at West Mundijong Industrial Area.

1.1 Challenges and Opportunities the Project Addresses

The Shire of Serpentine Jarrahdale is located 45 km south-east of Perth. What was once an agricultural and equine oriented area in Perth's southeast is facing rapid urbanisation over the next 20 years. This is expected to more than double the population of the Shire from an estimated 27,654 in 2016 to 68,335 by 2036.

The West Mundijong Industrial Area (WMIA) is a State-significant key industrial site and a major economic gateway for the Greater Perth and a key long-term link to the Inner Harbour and future Outer Harbour. Significant population growth in the south east sub-region, and in particular in the Shire itself, and a rising unemployment rate requires focus on growing local businesses and provision of local jobs.

The construction of enabling infrastructure around West Mundijong Industrial Areas (the project) will generate significant economic impact by providing access to industrial land that cannot otherwise be developed. Lack of adequate access stops the land from achieving its intended and best use.



1.2 Strategic Support and Alignment

Enabling the development of WMIA is consistent with the whole-of-government strategies that reflect the importance of a well-coordinated approach to growing Australia's capacity to develop industry, grow the economy and provide local jobs. A significant opportunity exists in Mundijong to support and enable the significant growth in population and support other important regional projects, such as, Tonkin Highway Extension, Freight Rail Realignment, and Westport.

The project delivers on the strategic goals of creating employment where people live, improving quality of jobs, reducing the travel to work time and improving the liveability for current and future residents.

1.3 Project Description

Due to financial constraints, without the key funding being made available to construct the road packages it is unlikely that the WMIA will be developed as intended.

The Shire has identified that the most critical works required to enable adequate access to the industrial area include the purchase of the land, earthworks, paving/surfacing, drainage, traffic control devices, shared paths, utilities and associated costs for the upgrading and/or construction of:

- North South Spine Road between Mundijong Road (West) and Bishop Road (West) (1)
- Mundijong Road between Kargotich Road and Tonkin Highway reservation (2)
- Kargotich Road between the freight rail crossing and Mundijong Road (3)
- Bishop Road between Kargotich Road and Tonkin Highway reservation (4)

Figure 1. Project Elements



Source: Pracsys 2021

The total cost for the WMIA Road Package is estimated to be **\$60 million**.

1.4 Construction Stage Impact

The project will inject \$43.6 million (excluding land purchase) into the local economy, creating 74 direct FTE employment opportunities in the local area. The project will also stimulate 258 indirect FTE employment opportunities in the broader economy, for a total impact of 332 FTE employment opportunities.



Direct Employment

74 FTEs

Indirect Employment

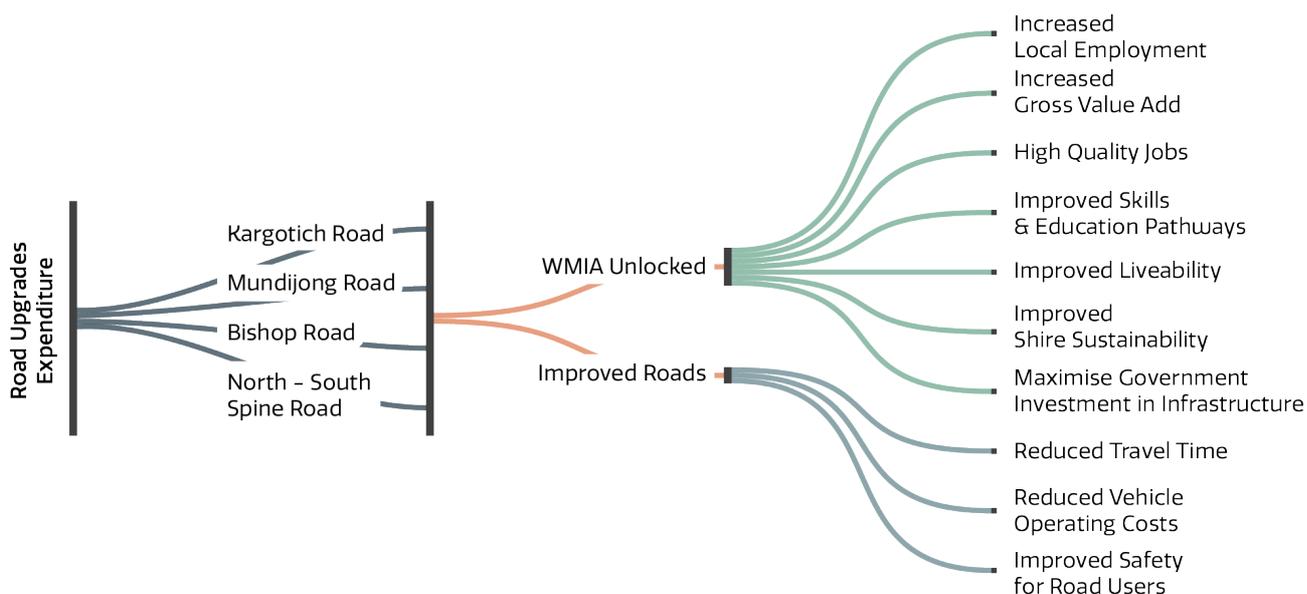
258 FTEs

The construction expenditure will stimulate an additional \$89.5 million of output indirectly, generating a total output of \$133.1 million. This large multiplying effect on total output is indicative of the significant amount of industry-to-industry inputs within the construction sector e.g. purchasing of materials that must be manufactured within Australia.

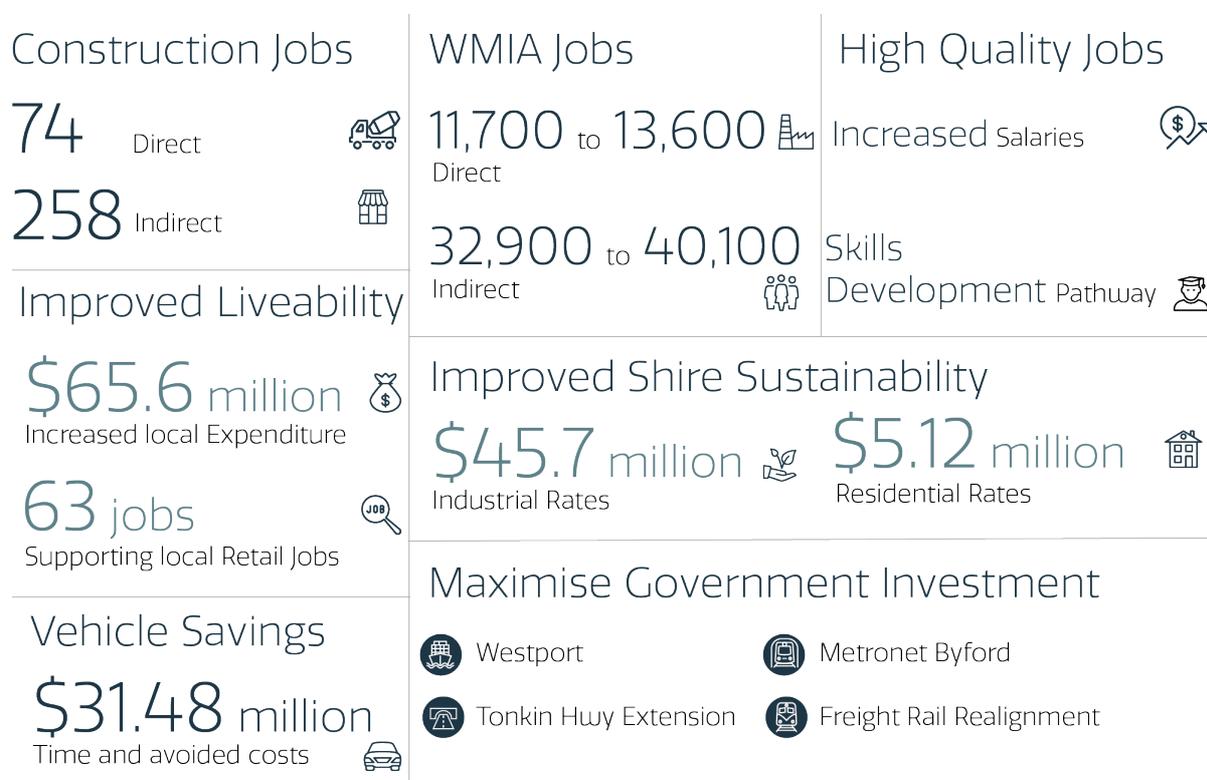
1.5 Ongoing Economic and Social Benefits

Potential economic and social impacts were assessed through impact pathways development, describing the process by which the value is created through the project. Due to the nature of the benefits associated with the project, only certain benefits can be successfully expressed in monetary value, therefore the total benefits of the project are expected to be higher than those quantified.

The required road infrastructure will enable WMIA development as intended as well as improving the road infrastructure for local residents. Both these outcomes are connected to a large number of benefits.



Over 30 years, the project is expected to deliver:



1.6 Project Value for Money

Cost-benefit analysis assesses the value for money of the project in relation to the associated development expenditure. The project Benefit Cost Ratio (BCR) is estimated to be 2.81, with the Net Present Value (NPV) estimated at \$96 million. For every dollar invested in the project there is approximately \$2.81 of social and economic benefits generated for the regional community, making it an appropriate investment for the Federal and State Government.

Total Present Value Benefits	\$149,268,977
Total Present Value Costs	\$53,076,169
Net Present Value	\$96,192,808
Benefit Cost Ratio	2.81

1.7 Project Delivery

The Shire has required plans and procedures in place to successfully deliver the project as soon as the funding is available. A preliminary analysis of deliverability demonstrates that the project is considered to be relatively standard from a risk management and overall governance point of view.

The Shire has the following key documents and procedures in place:

- Project Management
- Stakeholder Engagement and Communication
- Risk Analysis
- Project Evaluation Framework

The Shire has a successful track record of delivering projects and is confident that it has necessary skills and resources to deliver the required road upgrades on time and within the budget.

THE SHIRE REQUIRES \$60 MILLION TO CONSTRUCT AND UPGRADE THE CRITICAL ROADS AROUND WMIA. THE PROJECT IS AN APPROPRIATE INVESTMENT FOR THE FEDERAL GOVERNMENT THAT WILL ENABLE SIGNIFICANT COMMUNITY AND ECONOMIC BENEFITS FOR YEARS TO COME.



2 INTRODUCTION

The purpose of this business case is to support an investment and funding decision for the recommended option that expands and enhances existing infrastructure at West Mundijong Industrial Area.

This document presents the results of a detailed cost-benefit analysis on the recommended option. Supporting information is included on the context, problems underpinning the need for investment, options and deliverability considerations as per the structure below:

SECTION		CONTENT DESCRIPTION
3	Project Context	Description of the area of interest that is the focus of the problems and solution assessed in the business case.
4	Problem and Opportunity Definition	Description of the problems and opportunities that have been identified at this location, in the context of goals that have been established by State and Local policy.
5	Strategic Support and Alignment	Problem and opportunity alignment to policy and strategic plans. Consideration of linked and co-dependent projects.
6	Options Consideration	Consideration of a outcomes with and without the project.
7	Project Description	Description of the project including a description of works and locations.
8	Construction Stage Impacts	Description of economic benefits realised during the upgrade and construction stage.
9	Ongoing Economic and Social Impact	Key assumptions and description of the costs and benefits associated with the project case option. Includes summary of results of the economic and social cost-benefit analysis, sensitivity testing and non-monetised benefits and costs.
10	Project Delivery	Covers a range of deliverability considerations including: project management, stakeholder engagement and communication, risk management and benefits realisation.
11	Conclusion and Recommendation	Recommendation on the project support.
12	Appendix – Letters of Support	A number of letters provided in support and demonstrating the commercial interest from business.



3 PROJECT CONTEXT

This section of the report describes the location and context of West Mundijong Industrial Area supporting road infrastructure.

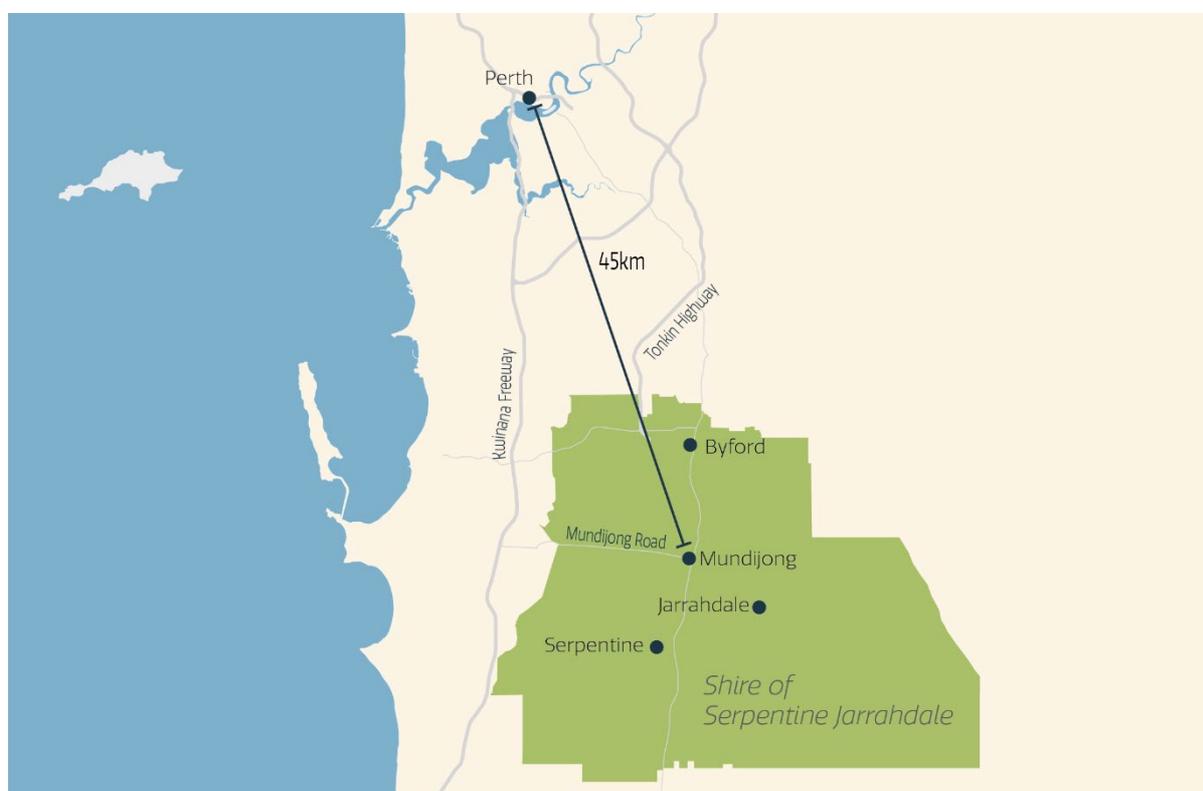
3.1 Shire of Serpentine Jarrahdale

Located approximately 45 kilometres from the Perth CBD, Serpentine Jarrahdale is set against the picturesque backdrop of the Darling Scarp. Forested hills and wetlands are complemented by areas of pristine wilderness with an abundance of wildflowers and wildlife. This unique landscape delivers an enviable rural setting in close proximity to a major metropolitan area.

Covering three wards within 905 square kilometres, the region is geographically diverse, with urban, suburban and rural communities. The majority of residents are located in the towns of Byford, Mundijong, Serpentine and Jarrahdale, as well as in rural residential areas of Oakford and Darling Downs. These rural residential areas feature a large share of equine properties, with significant training facilities.

As the Shire's population grows, there is an increase in need for local employment, affordable housing and appropriate services, in order to provide a high quality of life for residents.

Figure 2. Shire of Serpentine Jarrahdale

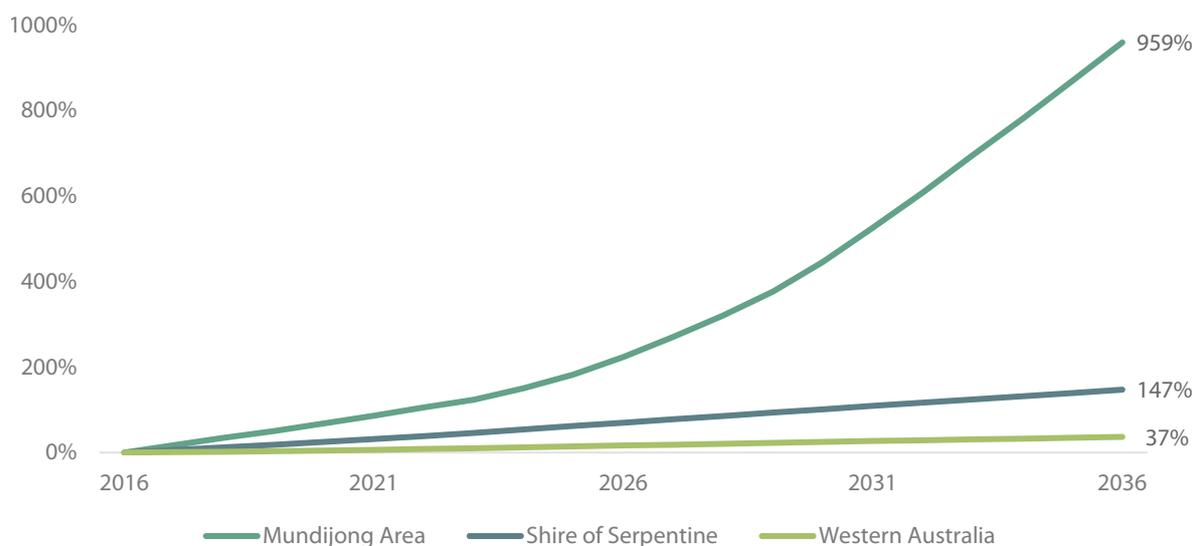


Source: Pracsys 2021

As Perth has urbanised, the extent of the Greater Perth area has moved further south. Over the last 10 years, 52.6% of Greater Perth's population has increased in the south east and south west region. Mundijong, the

location of the project, was once an agricultural and equine oriented suburb in Perth's southeast. It is now facing rapid urbanisation over the next 20 years. This is expected to take the population from an estimated 1,979 in 2016 to more than 20,900 by 2036 – a more than 10-fold increase. At the same time, the Shire is expected to swell from 27,654 to 68,335 over the same time period.

Figure 3. Population Growth in Mundijong and Shire of Serpentine Jarrahdale (2016 base)

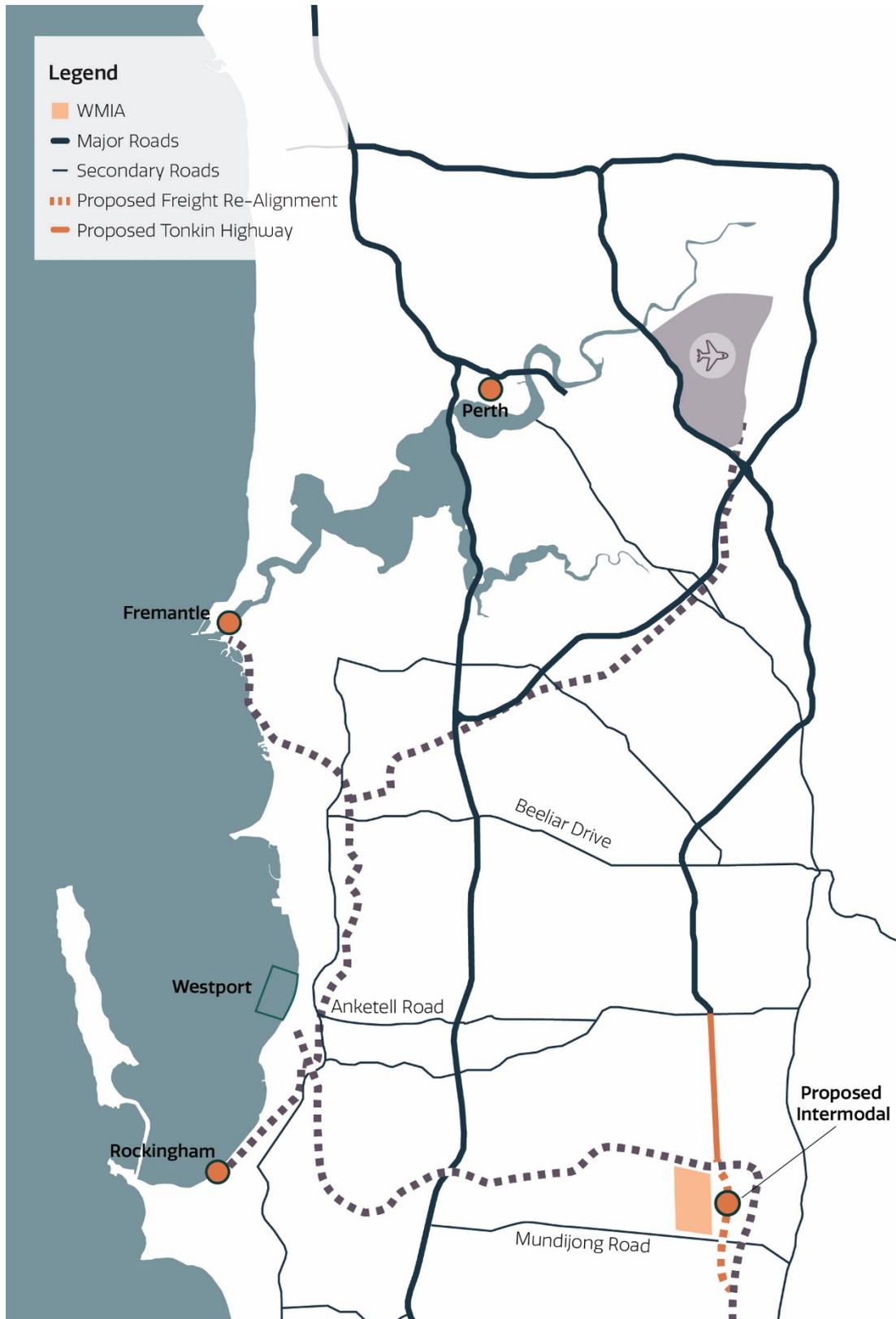


Source: Forecast.id 2021

This rapid population increase reflects the growth and economic development of the Perth metro area. As historical industrial areas within Perth are being transitioned to higher values, large industrial and residential lots are being explored further south. This is also leading to an extension in Perth's strategic infrastructure network including the relocation and expansion of some port activities from Fremantle to the Outer harbour at Kwinana through the Westport project, and the extension of Tonkin Highway past Mundijong. This growth is expected to build on the \$58 billion or 23.9% that the south east and south west regions of Perth contribute towards Gross State Product.

With an increase in population and urbanisation, the demand for industrial land has also increased. Areas to the north and south of Perth are being investigated and subsequently developed.

Figure 4. Strategic Location



Source: Pracsys 2021, Main Roads 2021, Department of Transport

3.2 West Mundijong Industrial Area

In 2008, the planning for the West Mundijong Industrial Area began after consultation with the Department of Planning, Lands and Heritage. Located to the west of the town site of Mundijong, the area is framed by Mundijong Road, the future extension of the Tonkin Highway, the Kwinana freight rail, Bishop Road, and Kargotich Road. 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. This will link Serpentine Jarrahdale to existing industrial freight infrastructure in Welshpool, Perth and Jandakot airports, and Fremantle Harbour.

The land is currently zoned 'Industrial' in the Metropolitan Region Scheme. The Shire has completed a structure plan to rezone approximately 440 hectares of rural land in West Mundijong to industrial use. Potentially creating 880 industrial lots, this development will include an intermodal transport facility and is designed to attract largescale industrial and agricultural investors and developers.

Although the majority of current land users are agricultural and residential in nature, there has, and continues to be, interest from industrial businesses. This has resulted in two industrial businesses moving into smaller lots along Kargotich road in vicinity of Leipold road. Although this development is welcomed, the increase in freight and heavy vehicle traffic along the existing roads is causing concern for road safety.

Figure 5. West Mundijong Industrial Area



Source: Pracsys 2021

The West Mundijong Structure Plan for Phase 1 is termed a dry lot industrial subdivision. The site is proposed to include a mixture of industrial uses, with anticipated development yields as per below:

- General Industry Core – 260ha
- Light Industrial Industry Precincts – 120ha
- Service Commercial Precincts – 30ha

The design objectives for Phase 1 are to 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 and to utilise the potential of key transport initiatives, including extension of Tonkin Highway, possible re-alignment of the Kwinana freight rail and a possible intermodal facility.

3.3 WMIA Existing Infrastructure

The Shire's rapid urban growth is placing considerable strain on the existing road network. Traffic along Mundijong Road has increased by 25% from 2016 to 2020¹. These roads, which were initially constructed at country road standards, are failing to meet the increased demand from population and industry.

Figure 6. Existing Roads Adjacent to WMIA



Source: Main Roads WA Road Information Mapping System

The current road infrastructure within close proximity to the WMIA includes the roads listed in Figure 7. They vary from regional distributors to small lanes which provide access to the farms and properties in the area.

¹ Mainroads Traffic Volume Data. Measurement point: Mundijong Road East of King Road.

The type of roads and their condition are not suitable for most large scale industrial businesses that are primarily proponents for the industrial lots.

Figure 7. Road Network Classification

Street Names	Road Hierarchy	Lanes	Width (m)	Posted Speed (km/h)
Mundijong Road	Regional Distributor	2	9.3	100
Bishop Road	Local Distributor	2	7.6	50 (built-up areas) 110 (outside build-up areas)
Kargotich Road	Regional Distributor	2	7.6	100 (south of Bishop Road) 90 (north of Bishop Road)
Pure Steel Lane	Access Road	2	6.4	50 (built-up areas) 110 (outside build-up areas)
Scott Road	Access Road	2	8	50 (built-up areas) 110 (outside build-up areas)

Source: Shire of Serpentine Jarrahdale 2021

The high speed and narrow width of some of these roads has led to a history of crashes and incidents. Data from Main Roads Crash Reporting Centre for the period January 2016 to December 2020 identified a number of incidents along the sections of Mundijong Road, Kargotich Road and Bishop Road adjacent to the WMIA.

The recorded crashes are summarised below:

- A total of 30 crashes were recorded adjacent or near the WMIA
- 13 crashes on Mundijong Road and Kargotich Road
- 15 crashes were recorded at the intersection of Mundijong Road and Kargotich Road (including one fatal crash and two hospital crashes)
- One crash was recorded at the intersection of Kargotich Road and Leipold Road, resulting in major property damage
- One crash was recorded at the intersection of Kargotich Road and Bishop Road, resulting in major property damage

The number of crashes at the intersection of Mundijong Road and Kargotich Road satisfied the crash criteria for both the Federal and State Blackspot and was therefore converted to a roundabout in early 2021. The standard of the Shire's road network is of particular concern to councillors and residents alike. As such, the Shire has developed a Hypergrowth Transport Network Implementation project which aims to advocate for funding to improve the quality of the road network to improve safety and improve economic development.



4 PROBLEM AND OPPORTUNITY DEFINITION

“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.”

MARK MCGOWAN

The construction of enabling infrastructure around West Mundijong Industrial Areas (the project) will generate significant economic impact by providing access to industrial land that cannot otherwise be developed. Lack of adequate access stops the land from achieving its intended and best use.

The West Mundijong Industrial Area (WMIA) has been highlighted as a key industrial site and a major economic gateway for the Greater Perth and a key long-term link to the Inner Harbour and future Outer Harbour. Significant population growth in the south east sub-region and a rising unemployment rate highlight the need for employment opportunities in the area; the development of the road infrastructure around WMIA provides a scope to address this regional need.

Industrial land is a significant provider of employment to the wider population of Perth and Peel, therefore, forms a vital part of the urban fabric and economic prosperity of the State. In addition to the opportunities that industrial land broadly provides, the following specific needs and opportunities have been identified that the WMIA directly addresses.

4.1 West Mundijong Industrial Area Development Need

Strong Population Growth

Over the next 10 years, the Shire will grow by more than 60%, or 21,000 people, which will be predominately young couples and families building their first home. This represents approximately 7,500 new dwellings over the next 10 years and two new families moving to the Shire each day. However, the Shire only has a small number of local jobs, with recent estimates placing it at just 5,300² jobs. This growth in population will require new and expanded employment precincts as well as improved road infrastructure to connect residential populations to employment areas.

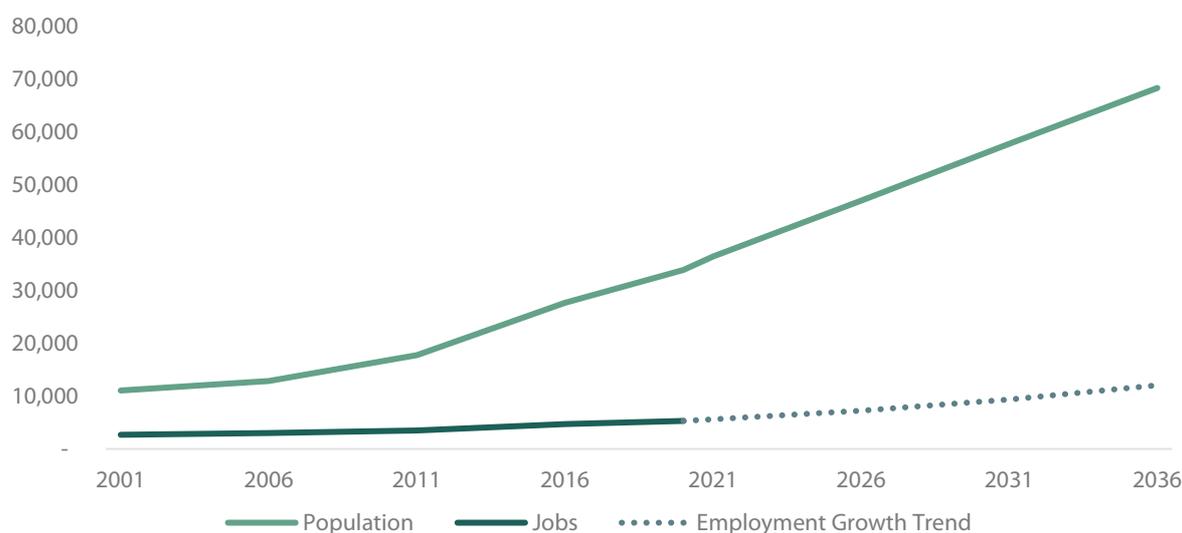
ESS and Employment Capacity

In 2016, the Shire had an Employment Self-Containment (ESC) - the percentage of Shire residents who also worked within the Shire - of 19.3%. Given the size of the Shire, this means that large number of residents must travel long distances to seek employment. Additionally, there has been a negative trend in the ESC as in 2011

² NIEIR, 2021, Employment Estimate

it was 24.7%. This suggests that employment creation has significantly lagged population growth. Without a significant investment in the employment opportunities creation and support within the Shire, employment will continue to lag population growth. Figure 8 below illustrates this emerging employment gap faced by the Shire.

Figure 8. Emerging Population - Job Gap Within the Shire



Source: Pracsys 2021, Forecast.id 2021, ABS 2016

Recent data from the National Institute of Economic Research suggests that there is a local workforce with the required skillset for the WMIA to succeed. The employment capacity - the number of local jobs in an industry when compared to the number of residents who work in that industry - is just 21% for manufacturing, 15% for Wholesale Trade, and 30% for Transport Postal and Warehousing. This shows that workers who could be employed within the WMIA are travelling outside the Shire for employment.

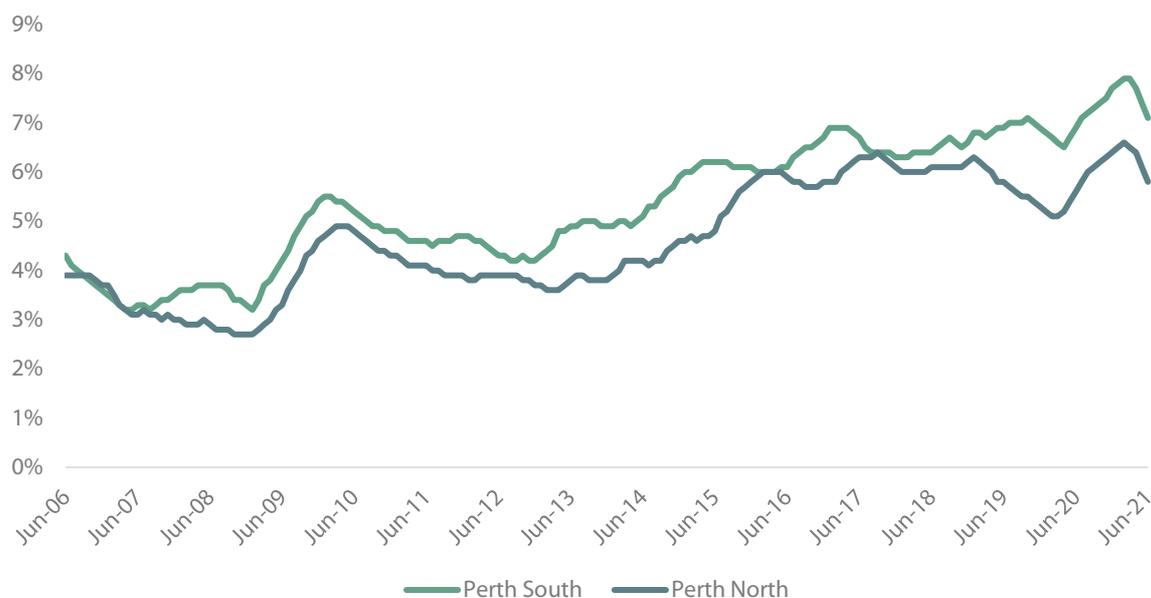
Developing the WMIA and the associated road works would be a key step in addressing multiple factors arising from significant increases in population, including:

- Increased need for local employment and high-quality career pathways
- Need for equitable access to employment areas (i.e. road infrastructure around WMIA would provide Serpentine Jarrahdale residents with more direct access to important employment zones)
- Need for improved access to key transport routes including Kwinana Freeway and Tonkin Highway
- Growing road safety issues along Mundijong Road due to the mix of freight and passenger vehicles, especially relevant to the Mundijong and Kargotich road which has had historically high crash and incident rates

Regional Employment Pathways and Diversity of Opportunities

Unemployment in the Perth South region has increased significantly in the last five years due to the rapid population growth and a slowing economy. Further, the Perth South region has a historically higher unemployment rate than Perth North, with the gap growing since 2017.

Figure 9. Unemployment Rate 2006 – 2021



Source: ABS Small Area Labor Market Survey 2021

There is a need to create employment opportunities to address the upward trend in unemployment, and the gap between Perth North and Perth South. This problem is even more acute when considering the future population growth expected in the area.

Industrial areas are a significant employer, both locally and regionally. Industry employs on average 34% of the labour force in the Perth and Peel regions, or approximately 336,000 people³. The construction industry has the largest number of total registered businesses in the Shire, comprising 26.5% of all total registered businesses as opposed to just 17% of total businesses in WA.

Developing the required road infrastructure is key to enabling WMIA becoming a strategic employment precinct that:

- Provides employment opportunities for current and future populations in the entire Peel Region, the Shire of Serpentine Jarrahdale and Mundijong
- Diversifies the Shire's employment into the stable growth
- Increases the gross regional value and local expenditure of the region

³ Department of Planning and WAPC, 2012, Economic and Employment Lands Strategy: non-heavy Industrial, p. 6

Meeting Demand for Industrial Land

The consumption rate for industrial land in the Perth metropolitan and Peel regions indicates a generally cyclical trend, with consumption through subdivision fluctuating from 50 to 550 hectares per annum⁴. This is driven by a multitude of demand factors linked to employment and population which can change based on the business and commodities cycle. However, the supply of industrial land is mostly fixed to endowment of available land within Perth and the land use and planning process.

Figure 10. Broad Demand and Supply Factors of Industrial Land

LAND DEMAND	LAND SUPPLY
Perth and Peel Working Age Population	Current available industrial land
State Labour Participation Rate	Future industrial land releases
Perth and Peel Employment Self Sufficiency	
Industrial Estate Employment Share	
Hectare per employee	

Source: Department of Planning and WAPC 2012

There are currently a number of large businesses who have expressed interest in moving into the WMIA. However, without the investment in the road infrastructure, they are unable to move into the area. This significant interest shows that there is existing demand from the market waiting to move into the WMIA given its competitive advantages of location, supporting transport infrastructure and inexpensive land relative to other industrial areas. A number of these businesses have provided a Letter of Support to indicate their willingness to move into the area.

These letters of support detail interest for the WMIA from Land Developers, Real Estate Agents, and two local businesses wishing to safeguard the strategic future of their business.

Harley Dykstra, a land development consultancy, has had contact with a variety of industrial land operators who are seeking to establish or expand activities within the Shire of Serpentine Jarrahdale. The WMIA has proven to be a popular location given its access to regional roads, available land area and separation from residential areas.

O'Neil Real Estate has had over 35 inquiries about the WMIA from owner operator businesses over the last 18 months. Interest has been broad, covering logistics companies through to manufacturing companies and has included over-seas based companies looking to commence operations in Australia.

In addition to agents and consultants, WA business has displayed interest in the WMIA. Permapole and Permacast as well as 888 Crushing and Screening Equipment collectively employ over 100 people. They understand the long-term potential for the WMIA and wish to relocate. However, without the initial infrastructure, it is not feasible.

⁴ Department of Planning and WAPC, 2012, Economic and Employment Lands Strategy: non-heavy Industrial

In addition to the letters of support, which are located in the Appendix – Letters of Support, the Shire is in discussion with companies from trucking services, industrial packaging, steel fabrication, and wood pulp energy manufacturer.

Legacy Land Uses in Surrounding Area

Due to the lack of readily available industrial land within the Shire, rural areas are proliferated with industrial businesses that should have been accommodated in industrial areas. These businesses create issues of compliance, pollution and groundwater management. Additionally, these businesses require access from heavy haulage vehicles which are increasing the wear on rural road assets which were not designed for these types of vehicles. This is increasing the requirement for maintenance and repair, draining resources from more productive investments. Collectively, these factors create additional burdens for the Shire. Some rural industries create conflict with existing residents forcing the Shire to fight legal challenged at significant cost to the ratepayer and taxpayer.

Therefore, developing the WMIA and the associated road works would not only provide jobs but a better outcome for the environment, rural residents, ground water management and likely reduce associated costs.

4.2 Financial Capacity of the Shire

The Shires population growth rate has meant that even with normal revenue streams and developer contributions, it is still unable to finance the infrastructure that residents and business need. A further challenge for the Shire is that it has not previously had a Developer Contribution Plan for community infrastructure, therefore no funds have been collected for all the development that have occurred in recent developments within Byford. As the fastest growing local government in WA, the Shire relies on partnerships with State and Federal Governments to deliver infrastructure required for the growing community. This means that without early-stage Government support in infrastructure projects, large economic and social benefits cannot be delivered due to the limited financing capacity available.

Development WA, a State Government owned enterprise, delivers a number of industrial estates in WA. As the State Government development agency, it can access significant amounts of seed capital to de-risk and kick start development. The WMIA is strategically positioned to benefit from such seed capital and will form an anchor for the southern industrial ecosystem and the Tonkin Highway Industrial corridor.



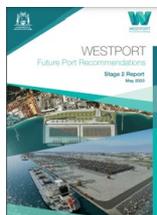
5 STRATEGIC SUPPORT AND ALIGNMENT

Enabling the development of WMIA is consistent with the whole-of-government strategies that reflect the importance of a well-coordinated approach to growing Australia's capacity to develop industry, grow the economy and provide local jobs. A significant opportunity exists in Mundijong to support and enable the significant growth in population and support other important regional projects.

5.1 Alignment with Policy and Strategic Plans

DOCUMENT	FOCUS AREA	PROJECT ALIGNMENT
<p>Perth and Peel @ 3.5million Department of Planning, Lands and Heritage, 2018</p> 	<p>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.</p> <p>To provide an efficient and effective regional movement network for people and freight that is integrated with land uses, links key economic and employment opportunities and connects the sub-regions to the greater Perth and Peel regions, as well as the south-west of the State and the Wheatbelt.</p>	<ul style="list-style-type: none"> • Mundijong Road identified for future extension, realignment or upgrading to provide vital east/west freight linkages to the Outer Harbour (Westport). • Mundijong identified as a potential industrial area. Further, the strategy identified the need for “staged delivery of infrastructure and public and private sector investment to maximise economic development and employment potential” • Mundijong/Whitby area is identified as a potential TAFE campus
<p>South Metropolitan Sub-Regional Planning Framework Department of Planning, Lands and Heritage, 2018</p> 	<p>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.</p>	<ul style="list-style-type: none"> • Facilitate an intermodal facility in Mundijong. • Mundijong is a future district centre • West Mundijong is an existing industrial area

Westport Future Port Recommendations
Department of Transport, 2020

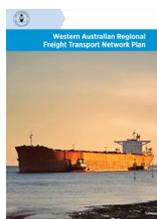


Identify and recommends the future site for Perth's Sea port. Additionally, the strategy identified supporting and enabling infrastructure including industrial area, freight routes and intermodal terminals.

Industry stakeholders have identified the need for more intermodal facilities as soon as possible.

West Mundijong identified as an area for investigation.

WA Freight Network Plan
Department of Transport, 2016



Better manage the State's immense freight task, now and into the future – the State transport network supports some of Australia's largest freight movements, many of which are attributed to export-related transport movements associated with the State's resources sector

- Mundijong listed an investigation area to assist in planning for an expanded intermodal terminal network located in outer-metropolitan Perth areas.
- The Mundijong area is listed as a potential south-eastern freight gateway through the extension of Tonkin Hwy to South Western Hwy with the benefit of removing freight traffic from built-up urban areas.

Peel Regional Investment Blueprint
Peel Development Commission, 2015



The Peel region is expected to be one of the most populated regions outside of Perth with population expected to reach 440,000 by 2050.

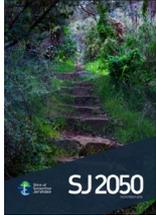
The blueprint identifies goals and strategies that emerge from five key themes, with Thriving Industry and Capable People most relevant to the WMIA project.

As part of this line of effort, the West Mundijong Industrial Area was identified as a key opportunity for investment.

The blueprint identifies that industrial development has failed to keep pace with the rapid urbanisation and Perth's expansion southwards. This had led to dormitory suburbs where residents are forced to leave the region to attain employment. The development of the WMIA will provide vital employment for the region, allowing for opportunities for local residents to be employed locally.

SJ 2050

Shire of Serpentine Jarrahdale, 2016

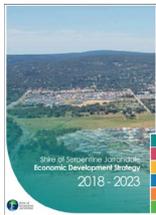


SJ 2050 is the Shires long-term future visioning document for the community. The key themes identified within the strategy include People, Place and Prosperity. Within these themes, the WMIA supports the outcome areas of Transport Infrastructure, Economic Development and Agriculture.

As the Shire is expected to achieve a rapid growth in population over the coming decades, the stress placed on the existing road network needs to be alleviated. The WMIA project will improve the intersections bordering the WMIA providing for increased efficiency and safety for projected traffic levels out to 2031.

The Shires economic development goals highlight value added manufacturing as an opportunity given the Shires proximity to agricultural production. This is an identified use for the WMIA and leverages off further development within this industry through the Nambeelup Agribusiness Park located 25 km to the south along South Western Highway.

**Economic Development Strategy
Shire of Serpentine Jarrahdale, 2016**



The Shire of Serpentine Jarrahdale's Economic Development Strategy (EDS) 2012 - 2023 is an economic development blueprint for the investment, social growth and prosperity of the Shire for the next six years. The purpose of the EDS is to achieve the community's aspirations for "An innovative, commercially diverse and prosperous economy" as highlighted in the Shire's Strategic Community Plan.

Similar to the SJ 2050, the opportunity for value add manufacturing within food production was stressed. This was further explored through the opportunity for advanced manufacturing within the Shire given the future Westport harbour and Western Trade Coast developments.

The WMIA will increase the supply of affordable land with large lot sizes allowing for such manufacturing to be viable within Perth.

**Letters of Support
Appendix - Letters of Support**

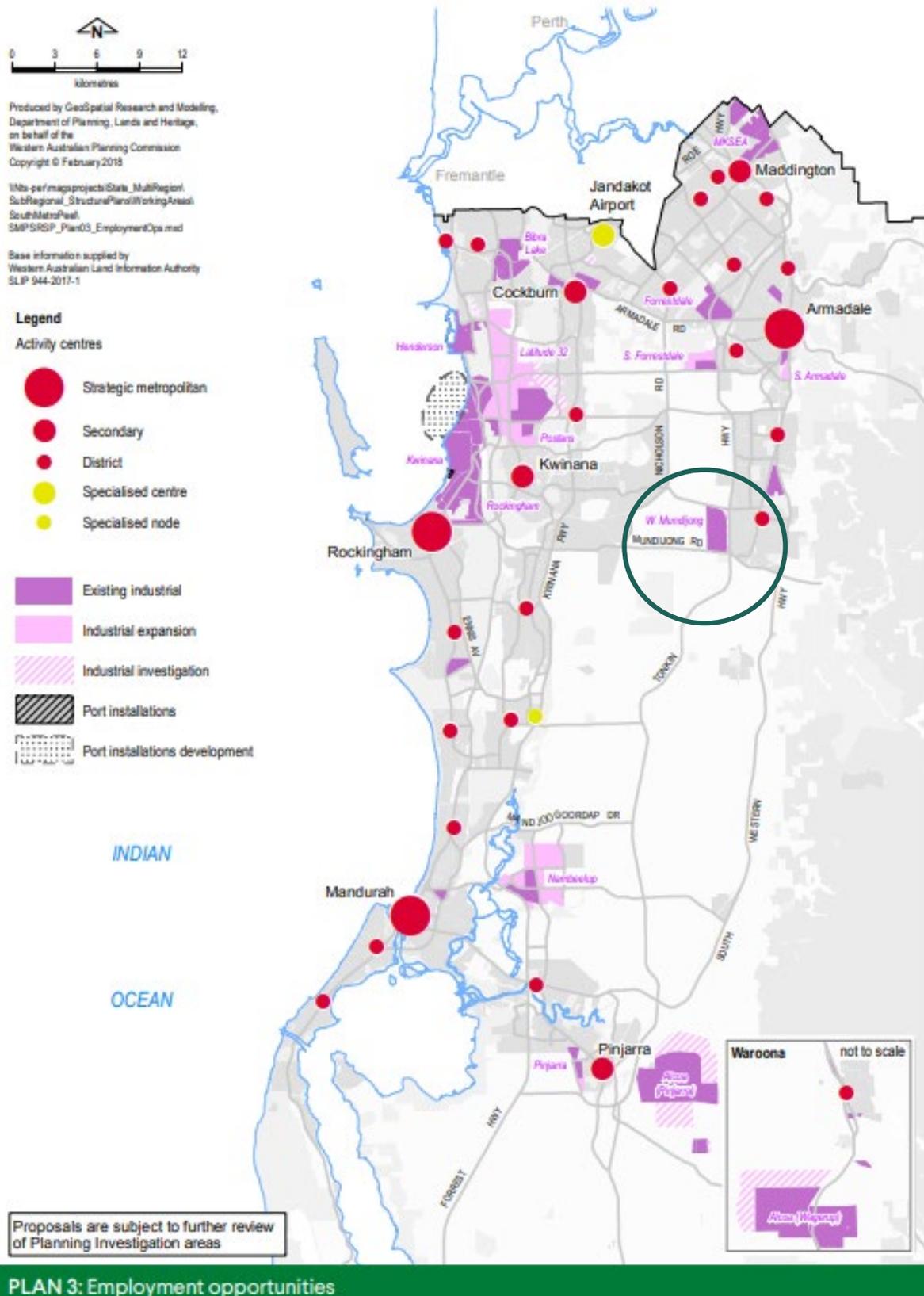


Need and support for the project

Letters of support have been provided by:

- Permapole and Permacast
- 888 Crushing and Screening Pty Ltd
- Harley Dykstra (land developer consultant)
- O'Neil Real Estate (industrial land sales agent)

Figure 11. South Metropolitan Sub-Regional Planning Framework Employment Opportunities



Source: Department of Planning, Lands and Heritage 2018, Pracsys 2021

5.2 Alignment with Strategic Infrastructure Investments

Tonkin Highway Extension

A reservation for the road extension has been included in the Metropolitan Region Scheme (MRS) for a number of years. Main Roads Western Australia (MRWA) is proposing to extend the existing Tonkin Highway from Thomas Road in Oakford to the South Western Highway in Mundijong, Western Australia. The south-east corridor is an important and fast-growing area faced with increased congestion, higher travel times for freight vehicles and reduced safety outcomes on the existing road network. Once complete the Tonkin Highway corridor will provide a high standard north-south transport link from Muchea down to Mundijong. The WMIA is strategically located to maximise the potential benefit of the Tonkin Highway extension, as its eastern boundary will be shared with the Tonkin Highway.

Although the Tonkin Highway extension will be a strategic booster for the WMIA, it will also increase traffic from freight vehicles on surrounding roads, causing concern for road safety. Without upgrading the surrounding road network to accommodate this traffic, it is expected to increase the interaction of freight and general traffic along the key east west roads, increasing the likelihood of road incidents.

Figure 12. Tonkin Highway Extension and Freight Realignment

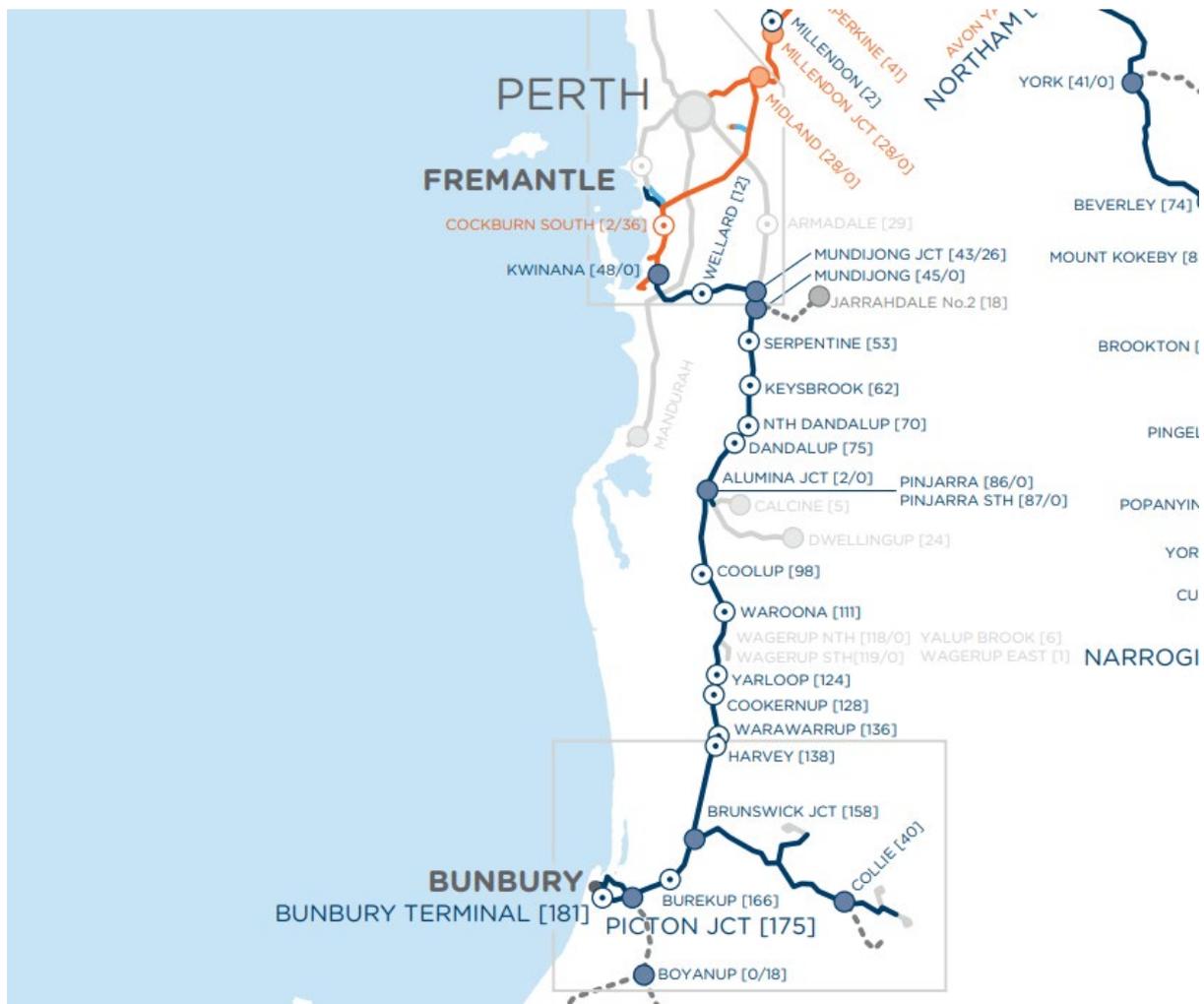


Source: Mainroads Western Australia 2021

Freight Rail Realignment

Concurrently with the Tonkin Highway extension, Mainroads is investigating the realignment of the Kwinana South Western Freight Rail, including the development of an intermodal terminal within the WMIA. Once complete this will connect the WMIA by rail to the seaports of Kwinana and Bunbury, inland to Collie and to the wider Australian rail network.

Figure 13. Perth and South West Freight Rail Network



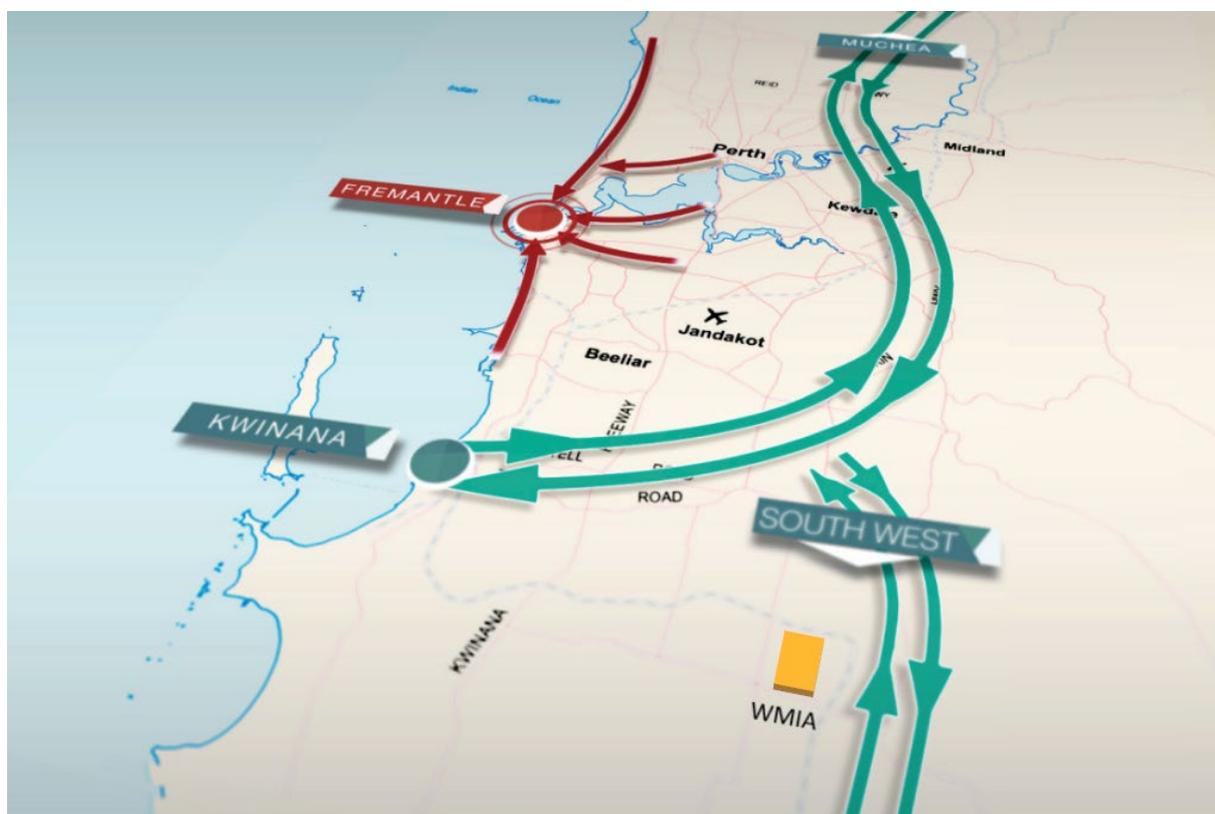
Source: Freight and Logistics Council

Westport

As Perth and the surrounding areas grow, container freight traffic has begun to test the capacity of the suburban road and rail networks. This continued growth is requiring a new container port and transport links to be developed in Kwinana, near Anketell Road.

The WMIA will be located to uniquely benefit from the new Westport. Its existing and future rail links will provide easy access to the port without constraining the land located adjacent to the port which should be held for the most valuable uses. Additionally, the WMIA may alleviate road traffic to Westport as the freight rail and intermodal terminal will allow for the cross loading of goods bound for the port.

Figure 14. Westport Freight Corridor



Source: Department of Transport 2020, Pracsys 2021



6 OPTIONS CONSIDERATION

This Section of the reports provides an overview of the base case option and the project option.

6.1 Project Overview

The supply of industrial land is often not suitable to meet the demand from the market. The Department of Planning, Lands and Heritage notes that the supply of industrial land in proximity to major transport infrastructure including the airport, rail and major arterial roads with heavy vehicle access is an essential requirement for many prospective industrial land buyers and tenants. However, inadequate infrastructure and servicing poses a challenge for development⁵. The WMIA is not immune from these constraints.

The WMIA site is currently held by multiple land holders and is used for agricultural, residential and limited industrial purposes. Before the WMIA project can be unlocked, key roads and intersections need to be constructed and land acquired. As this infrastructure will be used by WMIA tenants as well as the general public, there is no clear user pay model for construction. Like for most public goods, the cost of funding then falls to the branches of Government. As roads are the responsibility of the Local Government, this cost is to be born by the Shire of Serpentine Jarrahdale. At an estimated project cost of \$60 million, it is outside the Shire's funding capacity in the near, middle, and long term.

When analysing the project, multiple options were considered. However, funding constraints limited the list of feasible options to a single two-phase development enabled by the roads package.

6.2 WMIA Without Enabling Infrastructure

Due to financial constraints, without the key funding being made available to construct the road packages it is likely that the WMIA will not be developed to meet its intent within a near or medium-term timeline. As the land is currently zoned 'Industrial' in the Metropolitan Region Scheme and as 'Urban Development' in the Local Planning scheme some ad-hoc development may occur when land becomes available. However, without the necessary road improvements, it is unlikely that the strategic businesses who would be interested in the WMIA would move into the area, and that the development timeline will be extended considerably, delaying the economic and social benefits. Additionally, as concerns for road safety increase, further constraints on development may occur. Therefore the 'business as usual' or do-nothing option for this business case is that the WMIA is not developed.

The ability of the Shire to invest in major road upgrades facilities is constrained by the area's revenue generation capacity. The Shire raises less than half of the revenue per population than Perth inner metropolitan councils (around \$998 vs \$2,006 per person)⁶, limiting the ability to deliver much-needed

⁵ DPLH, 2021, Economic and Employment Land Monitor June 2020

⁶ Department of Local Government, Sport and Cultural Industries, Compare All Councils

community infrastructure despite the presence of a significantly younger demographic who create higher demand for employment and infrastructure.

6.3 WMIA With Enabling Infrastructure

Once the road package is constructed (identified by the solid orange lines in Figure 15) the WMIA will be unlocked for development. This will enable the WMIA to reach its ultimate and best development mix with land uses focussing on:

- 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

This will make best use of complimentary projects in the area including the Tonkin Highway Extension and Rail Re-Alignment.

If the Shire secures the required funding and delivers the road infrastructure, the following will be enabled:

- WMIA will develop strategic industries that make use of the proximity to State freight infrastructure – significant strategic employment is created in the South sub-region, providing high quality jobs to residents that were not previously available
- WMIA will provide a diverse mix of industries that strengthens the economy and offers high skill, high value jobs
- Residents will experience reduced travel time going to work resulting in reduced living costs and increased attractiveness of the Serpentine Jarrahdale as a place to live
- Freight traffic will be able to use future Tonkin Highway extension creating time savings for freight
- Relocation of industries in the surrounding area which are creating compliance issues

Figure 15. WMIA Post Construction



Source: Shire of Serpentine Jarrahdale 2021, Department of Transport 2020,2021



7 PROJECT DESCRIPTION

This section describes the works required and the costs associated with them to enable the timely development of WMIA.

7.1 Road Infrastructure Need

The Shire has identified that the most critical works required for enabling adequate access to the industrial are for proponents include the purchase of the land, earthworks, paving/surfacing, drainage, traffic control devices, shared paths, utilities and associated costs for the upgrading and/or construction of:

- North South Spine Road between Mundijong Road (West) and Bishop Road (West) (1)
- Mundijong Road between Kargotich Road and Tonkin Highway reservation (2)
- Kargotich Road between the freight rail crossing and Mundijong Road (3)
- Bishop Road between Kargotich Road and Tonkin Highway reservation (4)

Figure 16. Works Required



Source: Pracsys 2021

North South Spine Road – Local Road

The North South Spine Road bisects the developable land between Bishop Road to the north and Mundijong Road to the south. The road will be a Shire road and is not reserved under the MRS. The width of the road will be 30 metres. The construction of the new road will occur between Mundijong Road reserve and Bishop Road reserve to the north.

The associated construction works for the North South Spine Road for the WMIA project includes:

- Land required over and above a standard 20m road reserve, to achieve a 30 metre wide road reserve
- Earthworks for the whole road reserve
- Complete road construction based on a single lane split carriageway with central median
- Associated drainage works including water sensitive urban design measures
- Traffic control devices including intersection treatments incorporating slip lanes and associated works
- Shared paths
- Associated costs including design, administration and management

The following items are not included for the North South Spine Road:

- Minor intersections treatments into the North South Spine Road from the adjoining subdivisional road network. These will be subject to standard subdivisional truncation requirements.
- Land required to achieve a standard 20m road reserve, which will be ceded free of cost as part of the subdivision process.

Mundijong Road – District Distributor

Mundijong Road borders a significant portion of the WMIA area to the south. The road currently exists, but will require changes in width, alignment and configuration to support development envisaged under the District Structure Plan (DSP). The width of the Mundijong Road reserve will be 40m. The upgrade of Mundijong Road will occur between the Tonkin Highway Metropolitan Region Scheme (MRS) Primary Regional Road Reserve and Kargotich Road to the West. The detailed design of Mundijong Road is still to be determined in conjunction with relevant State agencies.

The associated construction works for the Mundijong Road for the WMIA project includes:

- Land required over and above a standard 20m road reserve, to achieve 40m wide road reserve
- Earthworks for the whole road reserve
- The construction and upgrade of one carriageway
- Associated drainage works including water sensitive urban design measures
- Traffic control devices and intersection treatments incorporating slip lanes and associated works
- Shared paths
- Utility removal, relocation and insertion

- Associated costs including design, administration and management

The following items are not included:

- Any upgrades to Mundijong Road West of Kargotich Road; and
- Any intersection treatment with Tonkin Highway. Tonkin Highway is a Primary Regional Road under the MRS and is a responsibility of Main Roads

Kargotich Road – Local Road

Kargotich Road is located on the western boarder of the WMIA, providing a north south connection. Kargotich Road is a Shire controlled road and is not reserved under the MRS. The existing state of Kargotich Road is rural in nature, with a narrow single carriageway allowing for one lane in either direction. The width of Kargotich Road will be 30m. The upgrade of Kargotich Road will occur between Mundijong Road reserve and the railway crossing to the north.

The associated construction works for Kargotich Road for the WMIA project includes:

- Land required over and above a standard 20m road reserve, to achieve 30m wide road reserve
- Earthworks for the whole road reserve
- Complete road construction based on a single lane split carriageway with central median
- Associated drainage works including water sensitive urban design measures
- Traffic control devices including intersection treatments incorporating slip lanes and associated works
- Shared paths
- Utility removal, relocation and insertion
- Associated costs including design, administration, and management

The following items are not included for Kargotich Road:

- Minor intersections treatments into Kargotich Road from the adjoining subdivisional road network. These will be subject to a standard subdivisional truncation requirements;
- Modifications to the current railway crossing configuration; as this may change in the future when detailed planning is undertaken by the Department of Transport for the future freight rail realignment out of the existing Mundijong and proposed Whitby town sites.

Bishop Road – Local Road

Bishop Road is located in the northern portion of the DSP area, running east-west between Kargotich Road and Soldiers road. Bishop Road is a Shire controlled road and is not reserved under the MRS. The existing state of Bishop Road is rural in nature, with a narrow single carriageway allowing for one lane in either direction. Changes to the alignment of the road are proposed towards Tonkin Highway and the road is proposed to connect into Tonkin Highway. The width of Bishop Road will be 30m. The upgrade and construction of Bishop Road will occur between the Tonkin Highway MRS Primary Regional Road reserve and Kargotich Road.

The associated construction works for Bishop Road for the WMIA project includes:

- Land required over and above a standard 20m road reserve, to achieve 30m wide road reserve
- Earthworks for the whole road reserve
- Complete road construction based on a single lane split carriageway with central median
- Associated drainage works including water sensitive urban design measures
- Traffic control devices including one set of traffic lights, intersection treatments incorporating slip lanes and associated works
- Shared paths
- Utility removal, relocation and insertion
- Associated costs including design, administration, and management

The following items are not included for Bishop Road:

- Minor intersections treatments into Bishop Road from the adjoining subdivisional road network. These will be subject to a standard truncation requirement\
- Any intersection treatment with Tonkin Highway. Tonkin Highway is a Primary Regional Road under the MRS and is a responsibility of Main Roads

Land for Drainage

A significant amount of land will be provided within the WMIA area for drainage purposes. This land includes:

- A mix of multiple-use and ecological corridors forming a drainage function; and
- Land purely for drainage purposes.

All land required for drainage is included in the project costings. This will ensure transparency and equity in terms of land required for district benefit. Without the provision of district level drainage the development of the area holistically could not proceed.

A significant amount of water planning has been completed for the West Mundijong DSP area including a District Water Management Strategy (DWMS) and associated studies. This level of planning allows for the specific identification of land areas required for regional drainage purposes.

Land for Roads

Additional road reserve land is required for Mundijong Road (40 metre reserve), Kargotich and Bishop Roads (30 metre reserve). The new North South Spine Road requires an additional 5m to be acquired over and above the subdivisional 20m provided by adjoining landowners.

7.2 Project Cost

The total cost for the WMIA Road Package is estimated to be \$60 million. Figure 17 provides a breakdown of the costs associated with each component of the project.

Figure 17. Cost Breakdown

EXPENDITURE ITEM	COST (\$)
Mundijong Road Upgrade	7,706,148
Kargotich Road Upgrade	11,489,165
Bishop Road Upgrade	5,235,982
New North-South Spine Road	11,833,432
Administration Costs	7,371,670
Land for Road	1,990,056
Land Requirements for drainage	14,400,000
Total Project Cost	60,026,453

Source: Shire of Serpentine Jarrahdale 2021

7.3 Additional Operating Costs

The Shire's Infrastructure division estimates that the regular annual maintenance is within the capacity of their resourcing. It is estimated that each road will need to be resealed every 12 years at a cost of between \$35,000 and \$45,000 per kilometre for the reseal and new line marking.

As the spine road will be new, and the others upgraded to be "as new", an annual provision of \$3,333 per year per lane km has been made. This equates to \$50,000 annually across the 15km of road.



8 CONSTRUCTION STAGE IMPACT

The construction impact of constructing the required roads has been assessed using ABS National Input-Output tables at an Input-Output Industry Group (IOIG) level.⁷ The methodology involves estimating the total direct and indirect employment and output arising from the project.

8.1 Input-Output Tables Methodology

Input-Output tables provide information about supply and disposition of commodities in the Australian economy as well as the structure and inter-relationships between industries.⁸ The National Input-Output tables were used to derive total multipliers, which consider the total supply-chain of goods and services for the activity in question. Impact multipliers were calculated for employment and output. The obtained multipliers were then combined with annual construction expenditure data to estimate the direct and indirect economic effect of the project on the economy. It is noted that this method has been applied for the quantification of indirect impacts only, and does not affect the project BCR.

Assumptions and Limitations

The following assumptions and limitations apply to this method:

- The results of the model represent the gross impacts in the absence of capacity constraints
- National Input-Output table approximates the actual patterns of linkages between industries in the regional economy
- Analysis assumes that the industrial structure of the economy is fixed. Considering the scale of the Redevelopment project, it is likely that this assumption is true;
- Employment impact is based on the average output per Full Time Equivalent (FTE) employee. It is possible that a significant component of the impact will result in an increase in the number of hours worked by existing employees, with some additional employment created.

⁷ Industry grouping used by the ABS for constructing National Input-Output Tables

⁸ ABS, 1995, *Australian National Accounts: Introduction to Input-Output Multipliers, Information paper*

8.2 Construction Output Impact

The economic impact of the WMIA Road Package is based on the estimated construction cost of \$43.6 million. The remaining project expenditure was excluded from the construction output impact modelling as land acquisition does not have an associated construction output impact.

Figure 18. Construction Impact Model Inputs

EXPENDITURE ITEM	COST (\$)
Mundijong Road Upgrade	7,706,148
Kargotich Road Upgrade	11,489,165
Bishop Road Upgrade	5,235,982
New North-South Spine Road	11,833,432
Administration Costs	7,371,670
Construction Costs	43,636,397

Source: Shire of Serpentine Jarrahdale 2021

This expenditure was applied to the appropriate industry sector based on the breakdown of costs by construction activity (Figure 19).

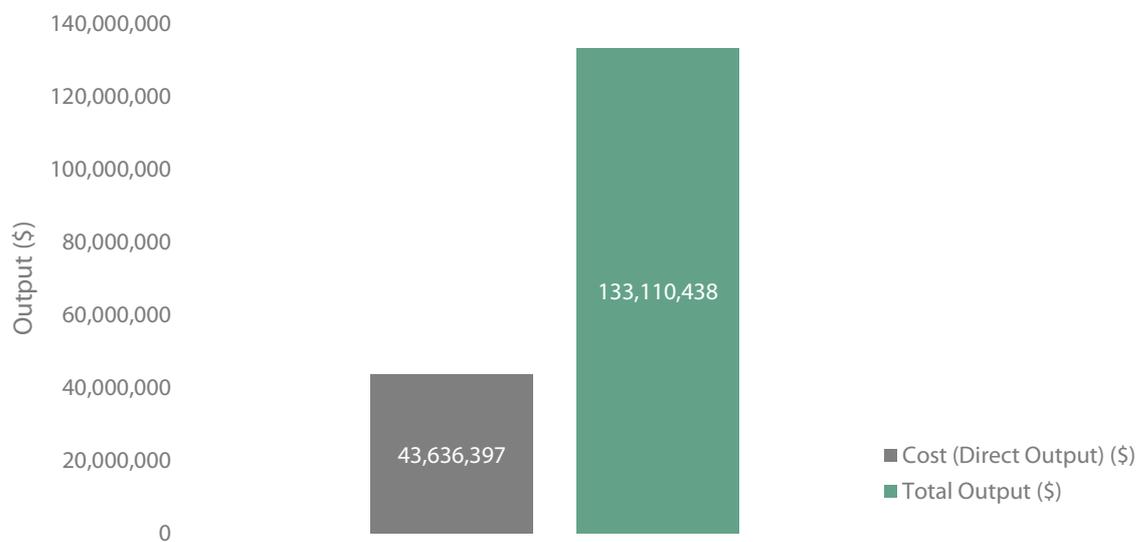
Figure 19. Construction Type and Corresponding Industry

CONSTRUCTION ACTIVITY	INDUSTRY
Mundijong Road Upgrade	Heavy and Civil Engineering Construction
Kargotich Road Upgrade	Heavy and Civil Engineering Construction
Bishop Road Upgrade	Heavy and Civil Engineering Construction
New North-South Spine Road	Heavy and Civil Engineering Construction
Admin Costs	Public Administration and Regulatory Services

Source: Pracsys 2021

The costs are concentrated over a one-year period for the output calculation purposes. The construction of the roads package will directly inject approximately \$43.6 million into the local economy (Figure 20). This construction expenditure will stimulate an additional \$89.5 million of output indirectly, generating a total output of \$133.1 million.

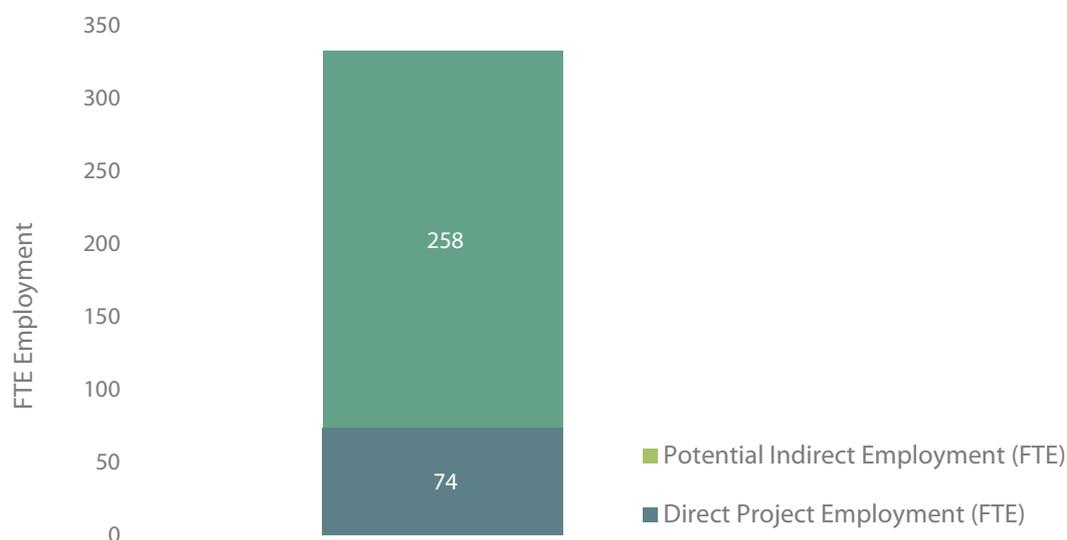
This large multiplying effect on total output is indicative of the significant amount of industry-to-industry inputs within the construction sector e.g. purchasing of materials that must be manufactured within Australia.

Figure 20. Construction Output

Source: ABS I-O Tables (2016); Pracsys 2021

8.3 Construction Employment Impact

Employment generation associated with the project has been estimated through national average output per Full-Time Equivalent (FTE) estimates in relevant industries (Figure 21).

Figure 21. Number of FTE Employees over Project Period

Source: ABS I-O Tables (2016); Pracsys 2021

The project is expected to create 74 direct FTE employment opportunities in the local area. The project will also stimulate 258 indirect FTE employment opportunities in the broader economy, for a total impact of 332 FTE employment opportunities.



9 ONGOING ECONOMIC AND SOCIAL IMPACT

9.1 Methodology Overview

Impact Pathways are central to the economic and social impact assessment. Impact Pathways are a method of summarising the process by which value is created through a project (Figure 22).

Figure 22. Impact Pathways Approach



Source: Pracsys (2017) based on the SROI Network International's Guide to Social Return on Investment 2015

The identified impacts are then monetised by using the 'benefit transfer' method – drawing values (through financial proxies) from high-quality studies and applying them to the context in question. The consistent quantification of metrics allows the direct comparison of project costs and benefits, summarised in the Benefit Cost Ratio (BCR).

9.2 Critical Assumptions

Costs and Timeframe

The capital and operating costs are as per the Section 7 Project Description. It is assumed that the project will progress as per the project plan with construction occurring over one year.

Additional Costs and Benefits

For the purposes of the analysis, only the additional costs and benefits that would not have occurred but for the project were evaluated.

Modelled Land Development

It was assumed that the land would start being developed in 2024 with full build out occurring in 2045. Over this period, it has been assumed that around 18 ha will be released per year (development equally distributed over the timeline).

The following development plan was adopted for the impact modelling.

Figure 23. Land Development Scenario

LAND USE	WMIA NET LAND SIZE (HA)
General Industrial	269
Light Industry	109
Total	378

Source: Shire of Serpentine Jarrahdale 2021

Discount Rate and Present Value

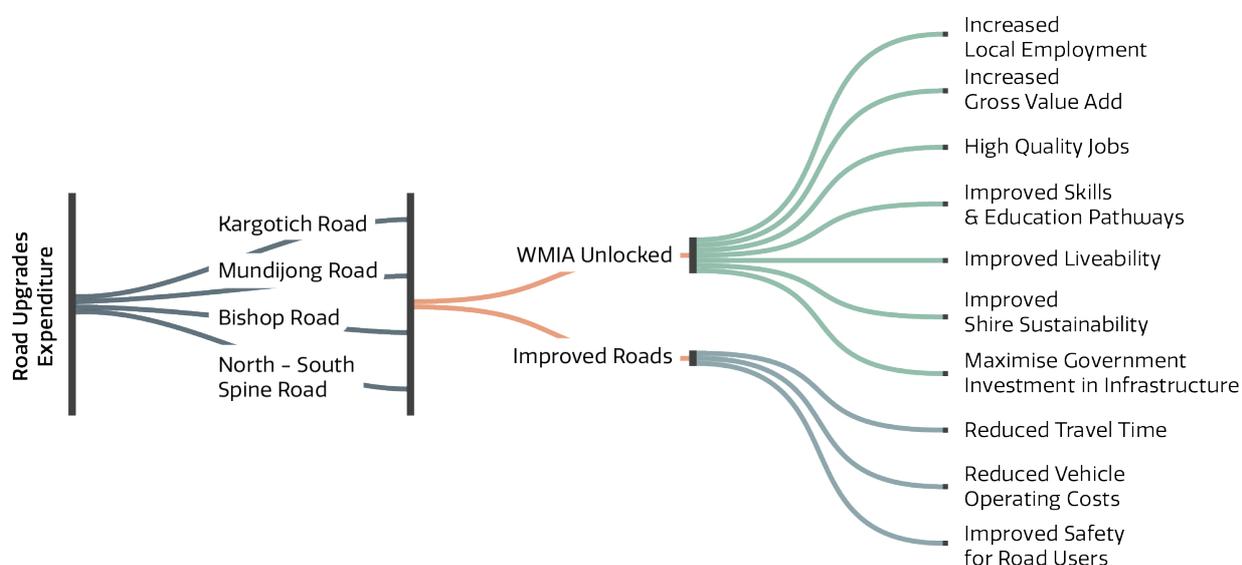
For monetised flows to be directly comparable in a CBA, future costs and benefits need to be discounted back to current dollar terms. This reflects society's preferences, which place greater weight on consumption occurring closer to the present, and the opportunity cost of the investment. In the analysis, all future costs and benefits are discounted to obtain the present value of benefits and costs. A 30-year timeframe was set for this analysis; after 30-years, present value costs and benefits become very minor.

The rate that converts future values into present values is known as the discount rate. The office of Best Practice Regulation (2016) requires the calculation of present values at an annual real discount rate of seven percent (7%). This is consistent with NSW Treasury (2007) and USOMB (2003). As with any uncertain variable, sensitivity analysis was conducted, so in addition to the 7% 'central' discount rate, the net present values were also calculated with real discount rates of 3% and 10%.

9.3 Impact Pathways

Each project output is associated with specific positive changes in the community. The process through which specific outcomes are achieved is mapped as follows:

Figure 24. Impact Pathways Diagram



Source: Pracsys 2021

The required road infrastructure will enable WMIA developed as intended as well as improving the road infrastructure for local residents. Both these outcomes are connected to a large number of benefits.

Unlocking WMIA will enable the realisation of the following:

- Significant high-quality employment in proximity to where people live
- Increased Shire's contribution to the gross regional product
- Improved pathways to skills development
- Higher salaries for local employees

- Improved liveability in the area due to employment opportunities
- Improved Shire's sustainability to delivery on community priorities due to increase rates revenues
- Maximised return on the significant government investment in other critical projects such as Tonkin Hwy

Overall improvement in the local roads in the area as a result of the project will enable the following:

- Vehicle travel time savings for road users
- Vehicle operating cost saving for road users
- Improved safety on the road

These benefits discussed and where possible monetised in the following Section.

9.4 Long-term Economic Impacts

“CREATING JOBS CLOSE TO WHERE PEOPLE LIVE IS AN IMPORTANT ASPECT OF A STRONG COMMUNITY”

MARK MCGOWAN⁹

Additional Local Employment

Significant high-quality employment will be enabled within WMIA as a result of the project.

Two benchmark areas were selected to determine the range of potential employment within WMIA based on development scenarios:

- The Kewdale-Welshpool East combined industrial centre was chosen as an appropriate benchmark if WMIA develops as a transport, logistics and distribution based industrial area, given its strategic location between the extended Tonkin Highway and the South West Highway, and its co-location with rail infrastructure.
- The Wangara Enterprise Park was chosen to represent a more general industrial area development.
- The Bibra Lake Commercial Park benchmark was used to account for the smaller light industrial land component.

Figure 25. Benchmark Land Areas

LAND USE	EMPLOYMENT INTENSITY (PERSONS/HA)	BENCHMARK AREA (LAND USE)
General Industrial - Low Estimate	24	Kewdale (Transport, Logistics and Warehousing)
General Industrial - High Estimate	31	Wangara Enterprise Park (General Industrial)

⁹ The West Australian, 2018, New Industrial Estate Planned for West Mundijong

LAND USE	EMPLOYMENT INTENSITY (PERSONS/HA)	BENCHMARK AREA (LAND USE)
Light Industry	48	Bibra Lake Commercial Park (Light Industrial)

Source: Pracsys 2021, DPLH 2015/17

By applying the benchmark employment intensity to the development profile presented in the Section 9.2, an estimated 11,600 to 13,600 employment opportunities are possible at full buildout (Figure 26).

Figure 26. Potential Direct Employment Estimate

LAND USE	DEVELOPMENT AREA (HA)	LIKELY EMPLOYMENT GENERATED
General Industrial – Low Estimate	269	6,456
General Industrial - High Estimate	269	8,339
Light Industry	109	5,232
Total Employment Estimate		11,600 to 13,600

Source: Pracsys 2021

Note: Numbers are rounded

This is expected to support an additional 32,900 to 40,100 indirect employment opportunities in the broader economy.¹⁰

Additional Output and GVA

The industrial activity supported by WMIA will provide a significant increase in output and value-add. The above employment estimates for WMIA have been used to estimate additional Output and Gross Value-Add (GVA). Industry output and GVA estimates are based on the industry mix identified in each of the industry benchmarks used in Figure 25 and to be conservative have been applied to the low employment range.

Unlocking the WMIA is expected to generate an estimated \$1.42 billion in output per annum at full build out. The direct value add generated in the economy is estimated to be \$751 million (Figure 27).

Figure 27. Direct Output Associated with Long-Term Employment

Metric	WMIA Additional Employment	Additional Direct Output/Value Add (\$) at Full Build Out
Output	11,688	1.42 billion
GVA		751 million

Source: ABS Census 2016, ABS I-O Tables 2016

The indirect activity generated in the broader region has been estimated through the input-output model and the benchmark centres. Based on the industry mix, the average output multiplier from WMIA is estimated to be 2.91. Indirect output in the greater economy is estimated to be in the order of \$4.31 billion.

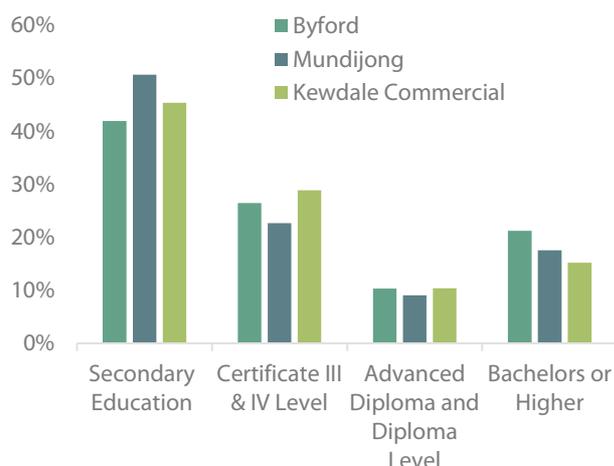
As other stakeholders and projects are involved in building and enabling the WMIA before the benefit can be fully realised, the employment and GVA has been calculated though excluded from the benefit-cost ratio to not overstate the economic impact.

¹⁰ Based on the median multiplier for manufacturing and Transport, Postal and Warehousing industry.

Pathway to Skills Development

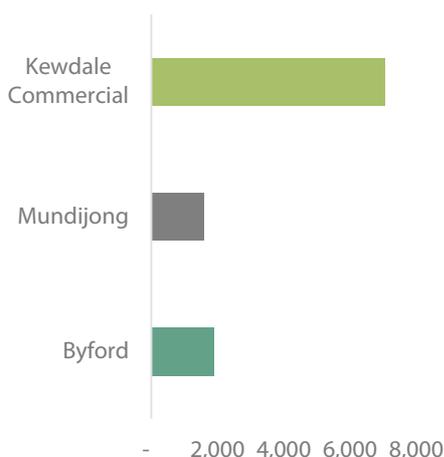
Strategic employment areas such as industrial areas play a key role in delivering high skilled, high value employment to communities. Workers within Mundijong currently have lower rates of skill attainment as evidenced through lower certificate and diploma attainment when compared to the Kewdale Commercial area (Figure 28). A similar, though less extreme observation can be made for Byford, which similarly employs less skilled workers than Kewdale.

Figure 28. Education Level by Place of Work



Source: ABS 2016

Figure 29. Number of Jobs in Area



Source: ABS 2016

Developing WMIA as a strategic industrial area is likely to generate a diverse range of employment opportunities for current and future Shire residents. As noted in the strategic alignment, the Shire’s vision is to create a prosperous region with capable people. The WMIA will lead to higher levels of educational attainment and may provide the needed catalyst for a TAFE campus within Byford or Mundijong.

Pathway to Salary Uplift

In addition to providing the impetus for residents to increase their levels of educational attainment, Strategic industries tend to generate higher salary employment opportunities. The below analysis compared the Kewdale Commercial area to the current Mundijong and Byford total personal income levels (Figure 30).

Figure 30. Cumulative Distribution of Total Personal Income by Place of Work

Source: ABS 2016

The current median levels of personal income for workers are highest in the Kewdale Commercial area. This suggests that should the WMIA succeed in becoming a strategic industrial area, higher paying jobs will be available within the area.

Improved Shire's Financial Sustainability

Currently the Shire raises less than half of the revenue per population than Perth inner metropolitan councils (around \$998 vs \$2,006 per person), limiting the ability to deliver much-needed community infrastructure. The industrial land development at WMIA will provide significant rate income to the Shire of Serpentine Jarrahdale, decreasing the pressure on residential rates and other sources of income.

The rates payable by industrial operators were based on an estimate of lot sizes, current benchmark rent per m² for industrial land¹¹ and the current industrial rate charges in the Shire¹².

Figure 31. Industrial Land Rent Value Benchmarks

BENCHMARK PROPERTY	LAND SIZE	RENT P.A.	RENT (\$/M ²)
East Rockingham	25,000		90
Kwinana Beach	18,000		70
East Rockingham	18,000	450,000	25
Kwinana Beach	21,900	399,000	18.20
Naval Base	20,200	400,000	19.80
Average All Properties			44.60
Average (Excluding High Rent Properties)			21.00

Source: Commercial Real Estate 2021

¹¹ Commercial Real Estate, Domain Group 2021

¹² City of Serpentine jarrahdale, 2021, Annual Budget

Based on benchmarking to similar large industrial lots (approximately 2 ha), a conservative rent estimate of 21.00 per m² has been adopted. At full build out, it is estimated the Shire could generate \$9.39 million per annum in industrial rates. When applying the lot uptake schedule over 20 years to the WMIA project, the present value of the rates revenue is estimated at \$45.7 million over 30 years, significantly improving the Shire's ability to finance other important projects.

Improved Liveability

Research from the Regional Australia Institute concluded that employment is a critical factor in deciding to move to a region¹³. The Shire's residents value the country lifestyle and natural environment the most¹⁴. Therefore, by increasing the access to employment opportunities within the Shire, current residents are likely to remain in the area and additional residents are likely to be attracted to move to the area.

To estimate the impact that the WMIA may have on attracting and retaining residents to the area, the difference in State Government population growth rates¹⁵ was applied. These estimates provide different projections of growth based on pessimistic and optimistic scenarios. Band C represents the median forecast (most likely) whilst Band D represents a medium-high growth rate. The difference between these forecasts is 1,250 additional people residing in Byford and Mundijong in 2050. This equates to an additional 415 dwellings in the area¹⁶.

To monetise this impact on the area an estimate of the additional retail expenditure pool associated with additional residents has been calculated. The Household Expenditure Survey demonstrates that the average weekly household retail expenditure is around \$422 per week (\$2016).¹⁷ Adjusting for inflation, this figure is \$23,300 (\$2021) per year per household. Based on this assumption, the retail expenditure that can be attributed to the increase in population attracted/retained created by unlocking the WMIA is over \$9.10 million p.a. at full build out. This additional retail expenditure is estimated to support up to 63 population-driven jobs in the area.

Based on this estimate, the present value of additional residents is estimated at \$65.6 million over 30 years. This is a conservative estimate as it does not include the potential expenditure associated with indirect employment and only includes retail expenditure - other expenditures such as education, health and transport are also likely to occur within the Shire.

The impact that these additional dwellings will have on the Shire's rate revenue can also be calculated. Based on the average rates collected per dwelling within the Shire in 2020, an additional \$709,000 in rates can be collected in 2050. Therefore, the present value of additional residential rates is estimated at \$5.12 million over 30 years.

¹³ Regional Australia Institute, 2021, Strengthening Liveability

¹⁴ Shire of Serpentine Jarrahdale, 2016, SJ 2050

¹⁵ Based on WATomorrow forecasts produced by Department of Planning, Lands and Heritage 2018. Five Bands of forecasts are provided from Band A the most pessimistic to Band E being the most optimistic.

¹⁶ ABS persons per dwelling of 3 and 3.1 was applied to Byford and Mundijong additional population, respectively

¹⁷ ABS, 2016, Household Expenditure Survey, Australia: Summary of Results, 2015-16

Maximised Return on the Significant Government Investment

Benefits from Federal and State Government investments are optimised when a strategic approach is taken to complimentary investments. In other words, for the government to receive the highest return on investment, projects should work together rather than compete. By unlocking the WMIA land through the road package, it is likely that the businesses who will move to the area will compliment other Government infrastructure projects in the area including the Tonkin Highway Extension, Westport, and the Kwinana South Western Freight Rail realignment. This will also provide the necessary demand for the intermodal terminal catalysing its development.

In summary, providing the required road infrastructure and unlocking the WMIA will help create a better transport network, maximising Government ROI by:

- Providing an alternative location for warehousing goods to and from Westport
- Providing additional demand to re-align the freight rail line
- Providing the land and land uses required to facilitate the southern intermodal terminal
- Providing a southern node for freight shuttles into Westport reducing traffic and congestion in Rockingham
- Providing a transport and logistics node adjacent to the Tonkin Highway Extension and South Western Highway reducing traffic into built up areas

9.5 Long-term Social Benefits

Vehicle Operating Cost and Vehicle Travel Time Reduction

Construction of the roads package will enable a significant number of local job opportunities for residents of the South East Metro region, the Shire of Serpentine Jarrahdale and in particular the areas of Mundijong and Byford.

The Shire of Serpentine Jarrahdale is one of the fastest growing LGAs in the country with an estimated additional 100,000 residents moving into the area by 2050¹⁸. The current median distance travelled to work by a Shire resident is between 24 and 25km. This figure is high when compared to similar LGAs including the City of Armadale where the median distance to work is 18 to 19km.

Assuming that the WMIA will attract workers who also live within the Shire at the same rate as the City of Armadale (conservative assumption), this will result in around 2,770 Shire residents employed within the WMIA at full build out (24% of the total WMIA employment¹⁹). This will result in an overall distance to work reduction of around 10km per local WMIA worker²⁰.

¹⁸ Shire of Serpentine jarrahdale, 2020, 2021 WA State Election: Priorities and Requests

¹⁹ Benchmarked to City of Armadale employment self containment

²⁰ Weighted average distance reduction based on distributing workers by suburb population across the Shire

The present value benefit over 30 years of the reduced travel for work is \$18.3 million in avoided vehicle operating costs and \$13.2 million in avoided vehicle travel time.

Figure 32. Avoided Vehicle Cost Table

ASSUMPTION	METRIC (UNIT)
Average Days Worked per Week	3.88
Average Work Weeks per year	48
Vehicle Operating Cost per Km ²¹	0.377 (\$ per km)
Travel Time Value Estimate ²²	16.40 (\$ per hour)
Improvement in Travel Distance	10 km
Improvement in Travel Time (assumed 60 km/h average speed)	6 minutes

Source: Pracsys 2021

Improved Safety for Road Users

Spending more time on the road exposes users to a greater risk of fatality or serious injury. The area surrounding the WMIA has historically been a dangerous road. Between 2016 and 2019, there was a total of 30 crashes recorded with the following crash data:

- 15 crashes were recorded at the intersection of Mundijong and Kargotich road. Of which, two resulted in hospital treatment and one was fatal.
- One crash was recorded at the intersection of Kargotich Road and Leipold Road resulting in major property damage
- One crash was recorded at the intersection of Kargotich Road and Bishop Road resulting in major property damage.

The intersection of Mundijong and Kargotich road was upgraded in 2021 to improve the safety for road users. However, the history of crashes near the WMIA site suggests that a larger roads upgrade package is needed in order to cope with the increase in traffic from Tonkin Highway extension and the population growth in the area.

Residual Value

To account for the life of the road remaining, the residual values has been calculated given the 30-year analysis period versus 40-year design life of sealed roads. Residual value has been applied to construction costs of the road only to reflect the remaining physical asset value (exclusive of on-costs such as planning, administration, and land acquisition). Based on the physical asset value of construction being approximately \$36.2 million and a quarter of the road's life remaining after 30 years, the present residual value of the road is estimated to be \$1.27 million.

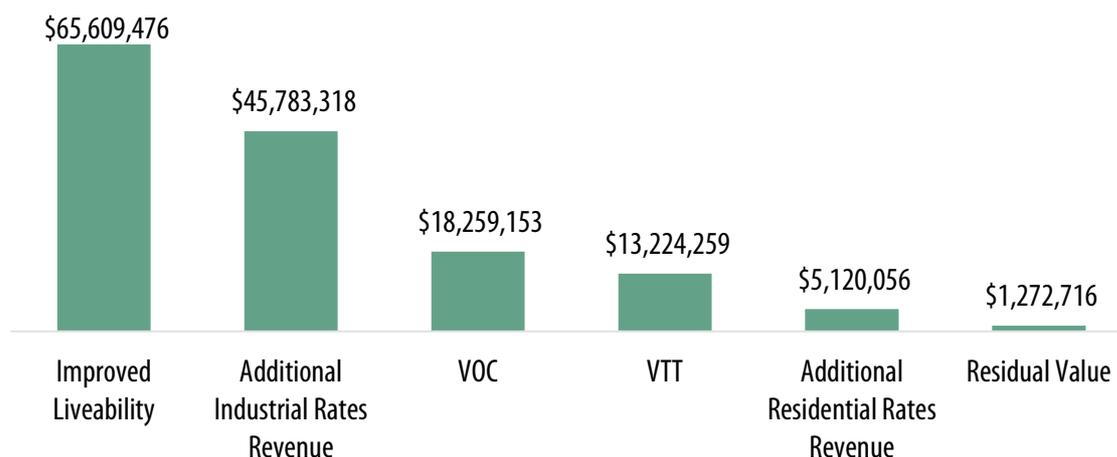
²¹ Austroads 2007

²² RAC 2015

9.6 Present Value Benefits Summary

The project has the potential to bring significant benefits to the region and the Shire of Serpentine Jarrahdale, with the increase in financial sustainability and additional expenditure driven by liveability being the most substantial (Figure 33). Please note, this excludes employment and GVA benefits.

Figure 33. Comparison of Present Value Economic Benefits



Source: Pracsys 2021

In addition to the benefits quantified, the project is expected to deliver qualitative benefits including:

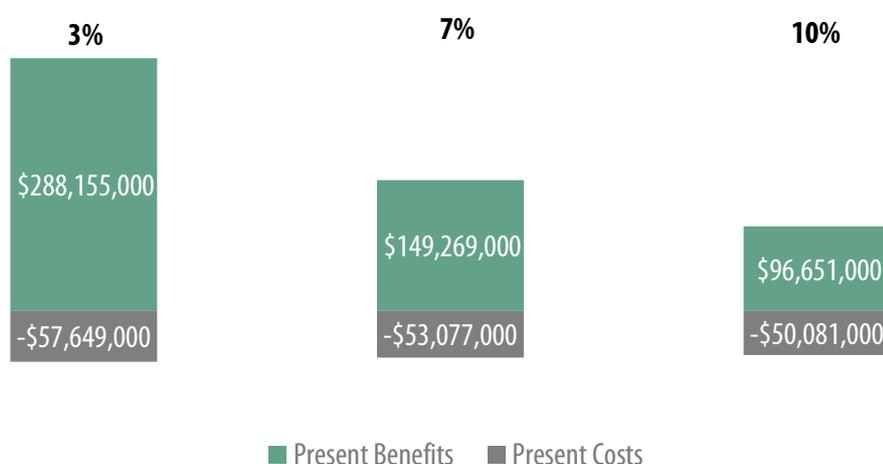
- Maximised return on the significant government investment
- Pathway salary uplift
- Pathway to skills development
- Improved safety for road users

9.7 Cost Benefit Analysis Summary

The present value of total costs has been compared to the present value of total benefits over a 30-year period to calculate the Net Present Value (NPV) of the project. As recommended by the Office of Best Practice Regulations (2016), present values are calculated at an annual real discount rate of 7%.

Sensitivity analysis was conducted to account for uncertainty using real discount rates of three and 10% (Figure 34). The project is likely to provide significant long-term benefits with an NPV of approximately \$96.2 million.

Figure 34. Sensitivity Analysis



Source: Pracsys 2021

The Benefit Cost Ratio (BCR) was calculated based on the ratio of present value benefits to present value costs (Figure 35).

Figure 35. BCR

DISCOUNT RATE	3%	7%	10%
Net Present Value (\$)	\$230,506,597	\$96,192,808	\$46,570,380
Benefit Cost Ratio	5.00	2.81	1.93

Source: Pracsys 2021

The analysis estimated a BCR of 2.81 for the project, indicating that for every dollar invested there is approximately \$2.81 of benefits generated for the regional community. The BCR reduces to 1.93 when a discount rate of 10% was applied, suggesting that there is a high level of certainty that the project will achieve a positive benefit outcome compared to costs. In addition, there is a number of large benefits that are not included in the BCR calculation:

- Gross value add
- Salary uplift
- Skills development
- Realised network benefits
- Improved safety for road users



10 PROJECT DELIVERY

The Shire has the required plans and procedures in place to successfully deliver the project as soon as the funding is available. A preliminary analysis of deliverability demonstrates that the project is considered to be relatively standard from a risk management and overall governance point of view.

10.1 Project Management

The Shire of Serpentine Jarrahdale will be the lead project manager.

In the development of the project, the Shire will appoint a suitably qualified project manager to oversee project delivery. The project manager will be responsible for contract administration, superintending, QA, project managing, and liaising with stakeholders.

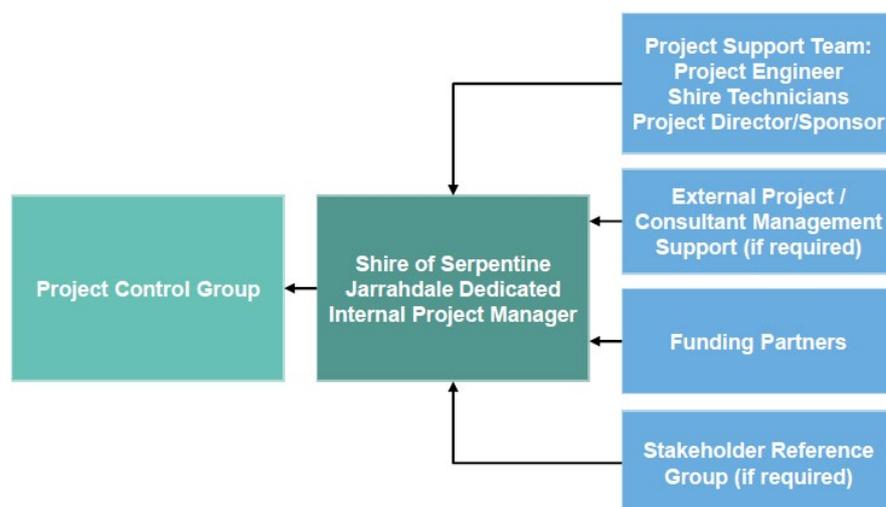
A range of factors will be taken into account in the development of the Procurement Plan including: the risk profile of the project, project development status, approvals progress, schedule constraints, value for money considerations, sequencing, packaging, risk transfer and current market conditions.

Minimum reporting arrangements will exist whereby monthly progress reports, issues log and progress payment authorisation requests are provided to a project control group which would meet as required and quarterly as a minimum. The project control group will be responsible for:

- Monitoring the project deliverables and milestones,
- Ensuring probity compliance,
- Ensuring procurement and contract policies are consistent with the Shire's policies (and that of any funding partners) and reviewing and recommending any contract variations.

A project management plan for the construction and upgrades of the roads will be developed to describe in detail the project management, governance, procurement, communication and risk procedures.

The Shire will own, operate and maintain the completed project as it is an enhancement of existing infrastructure.



10.2 Stakeholder Engagement and Communication Plan

The Shire of Serpentine Jarrahdale seeks to encourage community participation in decision making processes, communicate information to stakeholders and the community generally and to ensure decision-making transparency.

It therefore utilises a range of mechanisms to target a broad cross-section of the community to both engage and then inform residents, incorporated associations, community groups and business and industry stakeholders. Communication of Shire initiatives, including proposal prior to final approval, generally involves online information provision and feedback mechanisms, traditional print advertising, direct mail both random and targeted, as well as information provision through outstation locations and direct community access to both informally and formally convened communication opportunities.

These communication activities are guided by the Shire's Community Engagement Policy and based on A Toolkit for Community Engagement. This policy applies to all Shire staff and contractors that deliver services, or undertake projects, that impact Shire community and stakeholders.

Preliminary promotion and communication mechanisms are recommended to be implemented by the Shire in relation to this project. These initiatives should be reviewed and amended as required during detailed planning for this project. Further, the communication plan will need to align with financial agreement requirements.

The Shire uses the IAP2 Spectrum of Public Participation, an internationally recognised tool, which helps define stakeholder roles in an engagement process. When planning engagement for the project, the below tool is used to determine and communicate the 'level of engagement'.

The following stakeholder list provides a general overview of relevant stakeholders for this project:

- State and Federal MPs
- State Government Agencies
- Project Reference Group members
- Directly impacted landowners
- Environmental regulators
- Indigenous representative groups
- Local businesses (current and future)
- Adjacent residents / local community
- Road users
- Freight industry (incl Transport Forum)
- Emergency services
- METRONET
- Public Transport Authority
- Resident and Ratepayer Groups

Mechanisms for communications across the contract will be chosen to best reach the target audience in the most efficient and cost-effective way.

Figure 36. Stakeholder Communication Matrix

Increasing public influence on the decision 

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Public participation goal	To provide the public with balanced and objective information to assist them in understanding the problems, alternatives and/or solutions.	To obtain public feedback on analysis, alternatives and/or decision.	To work directly with the public throughout the process to ensure that public issues and concerns are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
Promise to the public	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and issues are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
Example methods	<ul style="list-style-type: none"> · Letter · Email · Signage · Public display · Social media · Advertising 	<ul style="list-style-type: none"> · Questionnaire · Online – Have Your Say · Door knocking · Interview · Pop up · Interactive public display · Public open house · Feedback form 	<ul style="list-style-type: none"> · Focus group · Working group · Workshop · Pop up at venue or event · Public open house 	<ul style="list-style-type: none"> · Focus group · Working group · Workshop · Public open house 	<ul style="list-style-type: none"> · Working group · Workshop

Source: Shire of Serpentine Jarrahdale 2021

10.3 Risk Analysis

The Shire of Serpentine Jarrahdale manages and mitigates risks in accordance with its Risk Management Policy. The objective of this policy is to outline the strategies and processes applied in implementing an effective risk management system. This policy applies to all risk processes within the Shire and is subject to regular monitoring through the Audit, Risk and Governance ('ARG') Committee and Council.

To guide the effective risk management of the WMIA road upgrades project, a preliminary risk identification process has been undertaken as part of this business case. A detailed risk workshop will be undertaken by the project director / manager as part of the development of the project management plan and this role will be responsible for maintaining the risk register. The overall objectives of the risk management and assessment process were to identify risks to the successful delivery of the project and construction contract in respect to:

- Financial risks
- Regulatory risks
- Procurement risks
- Site / construction risks
- Public perception / stakeholder risks
- Operational risks

Figure 37. Risk Matrix

Consequence Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Rare	LOW	LOW	LOW	LOW	MODERATE
Unlikely	LOW	LOW	MODERATE	MODERATE	MODERATE
Possible	LOW	MODERATE	MODERATE	SIGNIFICANT	SIGNIFICANT
Likely	MODERATE	MODERATE	SIGNIFICANT	HIGH	HIGH
Almost Certain	MODERATE	SIGNIFICANT	HIGH	HIGH	HIGH

Source: Shire of Serpentine Jarrahdale 2021

The following table summarises the key risks associated with the project and proposed mitigation strategies:

EVENT	RISK LEVEL	MITIGATION MEASURES
Impact to safe and efficient flow of traffic and access for all road users during construction (closures and staging), with potential for significant network connectivity and functionality impacts.	Moderate	Engage a suitably pre-qualified constructor with demonstrated capability and capacity in the management and implementation of complex traffic staging for road construction.

Impact to the local community and businesses resulting from adjacent construction activities, including timing.	Low	Engage a suitably pre-qualified constructor with demonstrated capability and capacity in the management and construction of road works in similar environment.
Protection of the public and workforce from construction related hazards and activities as a result of staging, traffic management and road closures, and capacity.	Low	Engage a suitably pre-qualified constructor with demonstrated capability and capacity and track record in construction safety.
Protection, relocation and operation of existing assets, drainage and services during construction.	Low	Develop relocation and protection strategy with affected asset owners and engage suitably pre-qualified constructor to manage works.
The timing and conditions of approval and other critical enabling tasks (including services) do not align with proposed works packages or staging.	Moderate	project development activities to identify, manage and obtain critical approvals in advance of hand over of site to constructor.
Additional works are included in the scope with lack of provision to undertake them.	Moderate	Undertake thorough scoping as part of project definition. Package any additional works in separate contracts.
Ability to deliver the project within budget.	Moderate	Ensure accurate budgets are prepared and subsequently managed by qualified project manager. Ensure allocated funds are utilised in a timely and cost-effective manner. Capital cost estimate conducted by Quantity Surveyors.
Possibility of cost escalations due to shortage of labour and materials.	Moderate	Project plan to include contingencies. Up to date cost estimates obtained. Project to be managed by qualified project manager.
Community relations and expectations.	Low	Develop and implement communication plan. Community information kept up to date. Support confirmed from stakeholders regularly.
Risk of litigation, public liability and professional negligence.	Low	Ensure all contractors follow Shire procedures and insurance requirements. Follow strong ethics regarding tender process.
Pandemic-related shut down	Low	Include a pandemic-related clause in all contracts to limit the potential consequences, additional costs and liability resulting from a shut down.

10.4 Project Evaluation Framework

Post implementation performance monitoring is a key element in ensuring the delivery of fit for purpose infrastructure. This plan articulates the benefits associated with the project, which will be realised once the project is completed. Benefit realisation is integral to the project and should be measured to evaluate the success of the project throughout its useful life. This requires assessing if the asset meets or exceeds expectations over the short, medium and longer term.

The Shire and key stakeholders are tasked with the ongoing review and assessment of the performance of the infrastructure. To assist with this process, this document outlines the key expected benefits of the project, methodology for ongoing measurement of these benefits, and the proposed benefit targets that will provide a benchmark for assessment of actual realised benefits.

A summary of the benefits, their relevant metrics, the baseline and targets have been included in Figure 38.

Figure 38. Benefit Register – Direct Benefits, Metrics and Targets

#	BENEFIT	MEASURE	BASELINE	TARGET
1	WMIA development	Number of ha developed within WMIA	0	<ul style="list-style-type: none"> Additional 130ha 10 years after the development Additional 260 ha 20 years after the development
2	Increased Employment	Persons employed within WMIA	0 (ABS 2016)	<ul style="list-style-type: none"> Additional 5,000 10 years after the development Additional 10,000 20 years after the development
3	Increased Industrial Rates Revenue	Rates Revenue generated directly through the WMIA	0	<ul style="list-style-type: none"> \$4.40 million 10 years after the development \$8.8 million 20 years after the development
4	Residents attracted	Additional number of residents within Mundijong and Byford	57,336 (Estimated 2031 population)	<ul style="list-style-type: none"> 58,583 population in 2031 Additional 1,247 residents above band C forecast 20 years after the development
5	Improved access to work in proximity to home	Number of local residents employed within WMIA	0	<ul style="list-style-type: none"> Additional 1,189 10 years after the development Additional 2,509 20 years after the development
6	Increased Residential Rates Revenue	Rates Revenue generated directly through the Mundijong area	\$12,925,970 (2022 budget)	<ul style="list-style-type: none"> \$13,635,270 10 years after the development \$13,635,270 20 years after the development
7	Travel to work time reduction	Median distance travelled to work by local residents	24	<ul style="list-style-type: none"> 14 km 10 years after the development 14 km 20 years after the development

Source: Pracsys 2021

Risks associated with the benefits have been identified and mitigations strategies have been adopted. These are the activities, which the Shire and relevant stakeholders can control.

Figure 39. Risks and Mitigation

#	RISK	MITIGATION (CONTROL)
1	The project does not support increased employment.	The Shire will work with stakeholders to promote the WMIA. A level of interest already exists in the market providing a level of certainty. Opportunities for employment will be clearly communicated with the community.
2	The project does not attract additional businesses to the project site	The Shire will work with stakeholders and interested businesses to make the available lots usable for the required purpose. A level of interest already exists in the market providing a level of certainty.
3	The WMIA does not generate rates revenue	The Shire will work and support businesses moving into the area. The Shire will undertake promotional activities.
4	The residents are not attracted to the area	Opportunities for local employment will be clearly communicated with the community.
5	Access to work in proximity to home is not improved	The Shire will work with WMIA businesses to promote local resident employment as a priority.
6	Travel to work time is not reduced	Similarly, the employment opportunities within WMIA will also be advertised.



11 CONCLUSION AND RECOMMENDATION

This business case has been prepared for the Shire of Serpentine Jarrahdale to support an investment and funding decision for the recommended option that expands and enhances existing infrastructure at West Mundijong Industrial Area.

The West Mundijong Industrial Area (WMIA) is a State-significant key industrial site and a major economic gateway for the Greater Perth and a key long-term link to the Inner Harbour and future Outer Harbour. Significant population growth in the south east sub-region, and in particular in the Shire itself, rising unemployment rate and lack in employment opportunities creation to match the population growth requires focus on growing local businesses and provision of local jobs.

The construction of enabling infrastructure around WMIA will generate significant economic impact by providing access to industrial land that cannot otherwise be developed. Lack of adequate access stops the land from achieving its intended and best use.

The project delivers on the strategic goals of creating employment where people live, improving quality of jobs, reducing the travel to work time and improving the liveability for current and future residents. And it allows to maximise the return on the committed government investment into the regional infrastructure such as Tonkin Highway Extension, Freight Rail Realignment and Westport.

Due to financial constraints, without the key funding being made available to construct the road packages it is unlikely that the WMIA will be developed.

The Shire has identified that the most critical works required for enabling adequate access to the industrial area include the construction of the North South Spine Road and upgrade of Mundijong Road, Kargotich Road and Bishop Road. The total cost for the WMIA Road Package is estimated to be \$60 million.

The project will deliver significant benefits during and after the construction.

The project will create 74 direct FTE employment opportunities and stimulate 258 indirect FTE employment opportunities during the construction.

The required road infrastructure will enable WMIA developed as intended as well as improving the road infrastructure for local residents.

Unlocking WMIA will enable the realisation of the following:

- Significant high-quality employment in proximity to where people live
- Increased Shire's contribution to the gross regional product
- Improved pathways to skills development
- Higher salaries for local employees
- Improved liveability in the area due to employment opportunities
- Improved Shire's sustainability to delivery on community priorities due to increase rates revenues

- Maximised return on the significant government investment in other critical projects such as Tonkin Hwy

Overall improvement in the local roads in the area as a result of the project will enable the following:

- Vehicle travel time savings for road users
- Vehicle operating cost saving for road users
- Improved safety on the road

The Shire has required plans and procedures in place to successfully deliver the project as soon as the funding is available. A preliminary analysis of deliverability demonstrates that the project is considered to be relatively standard from a risk management and overall governance point of view.

The project Benefit Cost Ratio (BCR) is estimated to be 2.81, with the Net Present Value (NPV) estimated at \$96 million. For every dollar invested in the project there is approximately \$2.81 of social and economic benefits generated for the regional community, making it an appropriate investment for the Federal and State Governments.



12 APPENDIX – LETTERS OF SUPPORT

Please see attached the letters from businesses evidencing the support and need for the project.

Mark Timoney

Subject: FW: West Mundijong Industrial Area - Request for key infrastructure funding

From: Henry Dykstra <HenryD@HarleyDykstra.com.au>

Sent: Monday, 26 July 2021 4:53 PM

To: John O'Neill <joneill@sjshire.wa.gov.au>

Subject: West Mundijong Industrial Area - Request for key infrastructure funding

Hello John

First of all, allow me to confirm that Harley Dykstra, has a local land development consultant within the South Metropolitan and Peel Region, has been providing land development, planning and survey services to the development industry in this area for over 25 years now. We have established numerous contacts and networks with industry and have regular contact with a variety of industrial operators who are seeking to establish or expand existing activities within the south east corridor, including with the Shire of Serpentine Jarrahdale.

The West Mundijong Industrial Area is proving popular to business, given its highly desirable location for business to grow as it offers excellent opportunities in terms of regional road access, available land area, and is not impacted upon by surrounding residential amenity expectations and buffers. We are acutely aware of the planning processes associated with obtaining approvals and obtaining infrastructure for this particular industrial estate, and we understand that for business to successfully develop and grow within this particular industrial area, substantial infrastructure is needed in order to unlock the development of this industrial estate. In particular, the major road infrastructure associated with the north south central spine road through the estate, and its surrounding regional road connections including access to the Tonkin Highway extension, are critical items of infrastructure.

We remain hopeful that developers of land within this industrial area, and prospective purchasers and developers within this industrial area, together with support from potential Government Funding options, are able to in the very short term, unlock parts of this strategically located industrial area. This will enable several of our key industrial clients, as well as numerous industrial enquiries that we receive, to be able to move forward with their business development plans to expand and locate within the West Mundijong Industrial Area. We therefore support the Shire of Serpentine Jarrahdale in their endeavour to secure funding and pre-funding opportunities to bring forward the essential infrastructure required.

Kind regards

Henry Dykstra BA (URP), MPIA
Executive Director / Manager of Planning

T: 08 9495 1947 | M: 0407 405 584 | www.harleydykstra.com.au
 Unit 15, 2 Hensbrook Loop, Forrestdale WA 6112



Albany Bunbury Busselton Forrestdale Perth

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888 Crushing and Screening Pty Ltd

10.5.1 attachment 2

PO Box 4103

Myaree BC

WA 6915

Phone 08 9550 6388

27 July 2021

Shire of Serpentine Jarrahdale
6 Paterson St,
Mundijong 6123

Attn: Mr John O'Neill

RE: Major Road Infrastructure

Dear John

Our business sells crushing, screening and conveying equipment and parts, and currently employs around 16 people. We have been looking at a possible relocation of the business to the West Mundijong Industrial Area (WMIA).

The primary obstacle to a strategic move like this at the moment is the uncertainty surrounding the timing of the development of the WMIA.

The development of the area and the unlocking of the land for our business is highly dependent on the major road infrastructure associated with the estate being in place in a very timely manner.

We would need to see the major road infrastructure associated with the north south central spine road through the estate and its surrounding regional road connections including access to Tonkin Highway extension underway for us to consider purchasing in the estate.

We therefore support the Shire of Serpentine Jarrahdale in their endeavor to secure funding and pre-funding opportunities to bring forward the essential infrastructure required.

Yours sincerely

Paul Hutchinson

Director/Company Secretary

888 Crushing and Screening Equipment Pty Ltd



t: 08 9495 9999

2925 Albany Highway, Kelmscott WA 6111

Licensed Real Estate Agent: John O'Neil & Son Pty Ltd

Chief Executive Officer
Shire Serpentine Jarrahdale
Patterson Street
Mundijong WA 6123

Dear Paul,

RE: West Mundijong Industrial Area

Following on from our recent meeting in relation to the West Mundijong Industrial Area I thought it would be appropriate for me to outline for you some of the history in relation to the development of the Forrestdale Business Park in the City of Armadale.

Based on this history we see that Government Funding will be a critical component in unlocking (in the short term) parts of this strategically located West Mundijong Industrial Estate.

As you are aware O'Neil Real Estate is the districts leading commercial and industrial real estate agency and we have been operating in the area for 54 years so the information provided to you is based on historical facts.

The agency and the writer were very heavily involved in facilitating the initial development of the Forrestdale Business Park located within the City of Armadale.

The Forrestdale Business Park (FBP) was general rural land exactly the same as the West Mundijong Industrial Area (WMIA) when we commenced the facilitation of development of this industrial estate way back in 1997.

At the time the FBP started in 1997 it had the same teething problems that the WMIA has now.

That is, there is plenty of interest from developers and more importantly owner operators to move their business to the district but there is a lack of suitably sized land or for that fact any land at all to sell to them.

The reason for the lack of land to sell to them is quite simply there is not enough infrastructure in place to facilitate the development by owner occupier or developer.

Given the planned dry lot subdivision of this estate (in the short term) the major hurdle is the lack of Road Infrastructure in this planned WMIA estate.

We all know that most master planned estates will have Developer Contribution Plans and the WMIA will be no different to these. The FBP also had/has a developer contribution plan for the total estate but the difference and major reason for its success (FBP) was the ability of the Armadale Redevelopment Authority (Government Legislated Body) to oversee the development of the estate and get access to seed funding to allow for the construction of the major/primary roads within the estate (paid back later by recoup of developer scheme costs)

Had this seed type funding not been available then the FBP estate would not be as far advanced as it is today. The economic benefits to the City of Armadale of this advanced Infrastructure spend on roads in the interim period have been huge with over 65 % of this estate now developed and the industrial area now growing in size to the east side of the Tonkin Highway.

This is a classic example of the benefits of a road infrastructure spend and, in my opinion, a model that should be use in the development of all industrial estates in the future.

As another example you only need to look at the Nambeelup Industrial Estate in the Shire of Murray and the success that estate is starting to achieve, but only after Government intervention and the provision of some critical road infrastructure.

WEST MUNDIJONG INDUSTRIAL AREA

From an industrial sales perspective we have had interest from both developers and owner operators alike in the WMIA and I have précised below, for you, their thoughts after extensive discussion with us about purchasing.

Owner Operators

We have had over 35 enquiries for land in the WMIA in the past 18 months from just owner operators.

The enquiry from owner operators has been quite broad from large logistic operations to manufacturing and also from local operators to Chinese or overseas operators looking to start operations in WA.

The problem/concern with owner operators is that they require the land now or in the immediate future which is not something that can currently be offered in the WMIA given the lack of infrastructure and therefore capacity to develop.

The current land ownership in the WMIA area is predominately 50 acres plus (other than the pure steel estate) and owner operators don't require this land size. Most of the 35 enquiries to date indicate they are chasing 4000m² to 20,000m² (1 to 5 acres)

The major reason the land cannot be broken/subdivided into smaller parcel of saleable land is the lack of ROAD infrastructure. The structure planning proposed for the WMIA by the Shire of Serpentine Jarrahdale will now allow this smaller dry lot subdivision so the road infrastructure becomes more critical in the shorter-term development of the estate.

The dry lot subdivision/ District Structure Plan proposed is the key to unlocking the estate but the next crucial step is the provision of primary/ major roads to enable this to happen.

This will enable us as salespeople to get suitable product to the market for owner operators to build what they require.

Industrial Land Developers

For the same reasons as above (owner operators) we are not likely to see Industrial Developers come to the table just yet.

We have fielded enquiries from 7 developers in the past 18 months as well as the 35 from owner occupiers

The lack of certainty or even an approximate timeframe about when roads and other services will be available (both commercially and residentially) is a huge deterrent to developers or people looking to landbank for the future.

Combine this with the unknown timeframe of the extension of the Tonkin Highway and most developers will argue it does not make commercial sense to invest in the area at this time.

Most will argue they are better to have their dollar working from day 1 in another investment, rather than sit for 5 years, pay the holding and lost opportunity cost and hope for appreciation in land value.

Current Land Ownership

As you are acutely aware most of the land owners in the proposed WMIA estate are farmers and not developers.

Some still actively farm the land which has been in family ownership for over 50 years and historically they are asset rich but cash poor and not in a position to develop for themselves.

Hopefully this provides you with some historical fact about what has happened in the past and the requirement for Government support to enable these greenfield Industrial estates to get off the ground.

We therefore strongly support the Shire of Serpentine Jarrahdale in their endeavour to secure funding and prefunding opportunities to bring forward the essential infrastructure required to develop the WMIA

Yours Truly

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3/8/2021

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27th July, 2021

John O'Neil
Shire of Serpentine/Jarrahdale
6 Paterson Street
MUNDIJONG WA 6123

Dear Mr O'Neil

Permacast and Permapole are large Concrete Construction and Timber Mill / Treatment businesses that currently employs a workforce of around 100 people respectively, have been looking at a possible relocation of the business to the West Mundijong Industrial Area (WMIA).

The primary obstacle to a strategic move like this currently, is the uncertainty surrounding the timing of the development of the WMIA.

The development of the area and the unlocking of the land for our business is largely dependent on the major road infrastructure associated with the estate being in place in a very timely manner.

We would need to see the major road infrastructure associated with the north south central spine road through the estate and its surrounding regional road connections including access to Tonkin Highway extension underway for us to consider purchasing in the estate.

We therefore support the Shire of Serpentine Jarrahdale in their endeavour to secure funding and pre-funding opportunities to bring forward the essential infrastructure required.

Your sincerely



Mario Casotti