KEEP**WA**GROWING

PROPERTY COUNCIL of Australia

PREPARED BY URBIS FOR THE PROPERTY COUNCIL OF AUSTRALIA

SUMMARY REPORT - AUGUST 2015

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FOREWORD

Joe Lenzo

WA EXECUTIVE DIRECTOR
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Western Australia is in a time of major transition. The resources investment boom has wound down for now and the completion of major Government projects such as Elizabeth Quay, the Perth Stadium and the City Link is in sight. The question, therefore, has to be asked – what will keep WA growing?

The property industry can provide the answer. As WA's second largest industry, contributing in excess of $31 billion to the State economy, property is an industry perfectly positioned to pick up the growth baton from the resources sector.

By capitalising on infrastructure investment, the property industry is able to create the enabling environment that will support a broad-based economy which draws on sectors such as knowledge, agribusiness and manufacturing.

Recognising this, the Property Council has been deeply engaged in WA's infrastructure conversation. In 2014, the Property Council released *Mind the Gap: The Costs of WA's Infrastructure Provisioning Framework*. This research report identified shortfalls in WA's approach to infrastructure governance and the prioritisation of projects.

To further this, the Property Council commissioned Urbis to develop a new framework that independently identifies and prioritises major projects according to economic and community benefits.

Following research and a round table discussion with the property industry, a long list of projects was compiled for further consideration.

This report, *Keep WA Growing*, demonstrates how, by correctly prioritising projects, $4.5 billion of infrastructure investment will unlock $2.4 billion of property development and a further $27 billion of economic activity for WA, generating 32,500 new jobs.

The framework identified three major projects around Perth that have the potential to deliver the greatest benefit: MAX Light Rail, the Western Trade Coast and the Peel Economic and Environmental Initiative.

Infrastructure investment is, ultimately, only one component of generating growth in WA. It is essential that the Government advances reforms for trading hours, planning, local government and tax.

At a time when the State is experiencing such Budget pain, it is essential that reform is not placed on the backburner and that we invest in high performing infrastructure. If we do not, WA risks losing so many of the economic and community benefits that came from the mining boom. WA needs to enable the property industry to create prosperity, jobs and strong communities.

The absolutely right thing for WA to do now is plan for growth and invest in high performing infrastructure. The totally wrong thing is to withdraw from infrastructure investment for short-term Budget reasons.

This is a summary report. The full report is available from the Property Council.

EXECUTIVE SUMMARY

Keep WA Growing puts forward an assessment framework to allow the identification of strategic infrastructure initiatives that can unlock property investment and broader economic opportunities that will support growth and diversification of the Western Australian (WA) economy as it transitions from the mining investment boom.

The unprecedented growth experienced by WA over the first decade of the millennium, as a result of the mining investment boom, has come to an abrupt halt, placing complex economic and fiscal challenges before the State's policy makers. Indeed, in his 2015-16 Budget Speech, the WA Treasurer described this as:

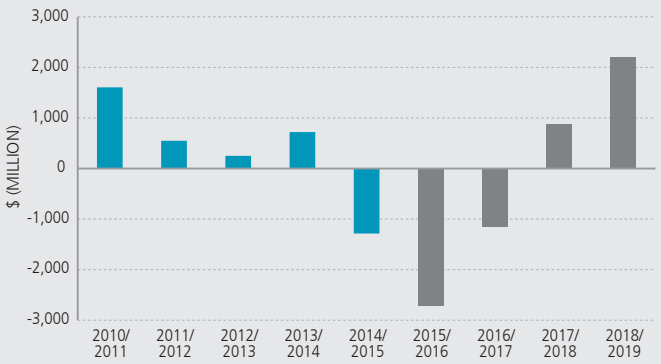
> *...the most challenging economic and fiscal environment the State has faced in at least the last three decades.*

Furthermore, with an expected population of 3.5 million by 2050 – a 75% increase over the next three decades – planning for the next generation of sustainable growth and employment opportunities needs to commence now.

In fact, the economic and demographic changes now facing WA demand a significant response from Government in the form of targeted investment in infrastructure that can deliver the greatest return on investment.

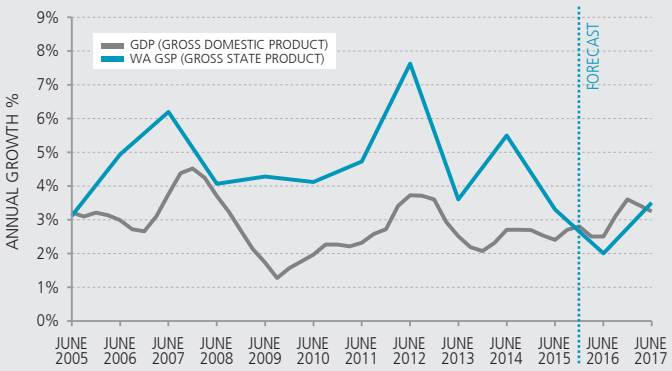
However, the State's fiscal position has also been damaged by the simultaneous downturn in mining investment and bulk metal commodity prices, with significant State Budget deficits expected for at least two years.

WESTERN AUSTRALIA'S BUDGET BALANCE



Source: WA State Budgets

NATIONAL GDP & STATE GSP GROWTH



Source: ABS 5206.0; Urbis forecasts, WA State Government
Growth rate is the total real value of goods and services produced in Australia
National GDP reported quarterly and State GSP reported annually

The deterioration in the fiscal position requires a bold response from the WA Government. Through careful and comprehensive analysis, Government can demonstrate how large investments in infrastructure at this time, far from being fiscally irresponsible, will in fact deliver better outcomes for the State over time.

In fact, if the WA Government were to turn its back on new investment in key infrastructure initiatives, the opportunity cost of lost economic growth and employment, social and environmental amenity, as well as fiscal repair, would be enormous.

If we have learned only one lesson from the Global Financial Crisis fallout, it is that a shrinking economy only exacerbates that economy's debt position. Indeed, recent International Monetary Fund research reports that:

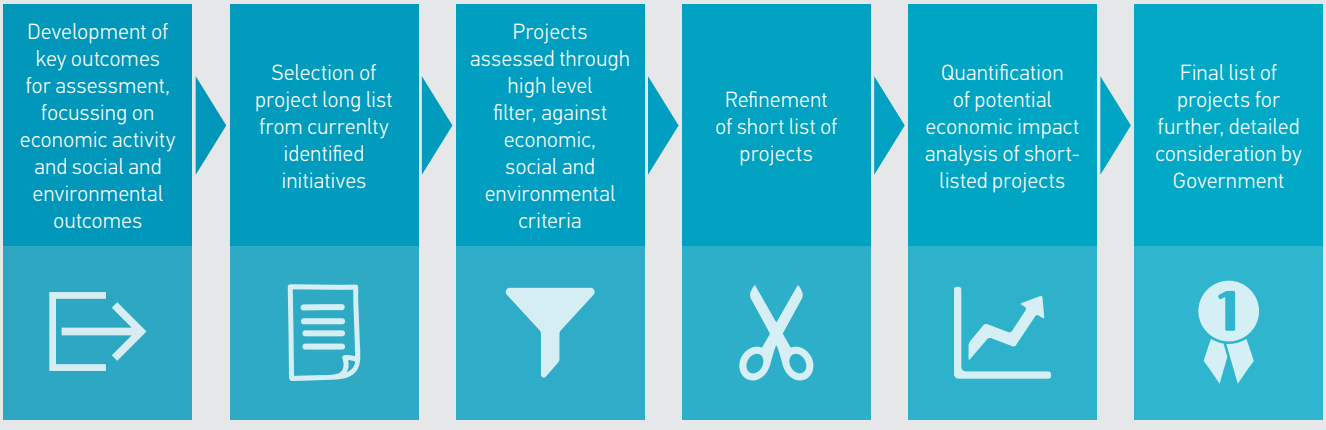
Increasing infrastructure investment on quality projects tends to raise output in both the short and long term, without increasing the debt-to-GDP ratio. During periods of low growth, a 1 percentage point of GDP increase in investment spending increases the level of output by about 1.5% in the same year and by 3% in the medium term.[0]

The key here is 'quality projects'. Now, more than ever, it is crucial that the decisions made by the WA Government regarding potential investment in infrastructure be based on the most comprehensive possible framework; one that looks beyond the short-term and embraces the full economic and social value that can be unlocked.

Identifying this value can also assist in unlocking funding support from Infrastructure Australia and Royalties for Regions, and offer opportunities for private sector investment, including through Public-Private Partnerships, so that funding responsibility does not rest solely with the WA Government.

The selection of quality infrastructure projects is an essential catalyst for unlocking investment, jobs and prosperity through the property development industry, which contributes more than $31 billion to the WA economy and employs more than 200,000 people.[1]

The Property Council actively advocates for improved infrastructure provision; planning, prioritisation, funding and delivery of infrastructure in WA. To further develop the conversation around the provision of infrastructure in WA, Urbis was engaged by the Property Council of Australia to develop an analytical framework of assessment to demonstrate where the most strategic infrastructure initiatives to unlock opportunities might lie. The framework developed followed a multi-stage process, as shown below.



Quantification of potential economic impacts is based on a *hypothetical* build out of the infrastructure in question, which has been framed based on publicly available information and assumptions about how outcomes might be optimised. Assumptions around timing and capital expenditure in particular should be read in this context.

[0] *International Monetary Fund, 2014, Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment, World Economic Outlook*
[1] *Australian National Accounts: State Accounts, 2013-14. Cat. No. 5220.0, ABS. + Census of Population and Housing: Working Population Profile, 2011. Cat. No. 2006.0, ABS*

Following research and a round table discussion with the property industry, the following long list of projects was compiled for further consideration as prospective strategic infrastructure initiatives to unlock economic opportunities:

- Breton Bay Deep Water Port for strategic industry
- Bunbury Very Fast Train (Perth to Bunbury)
- Ellenbrook Rail Project, with the potential to unlock higher density residential developments
- MAX Light Rail, including the University 'Knowledge Arc'
- Peel Economic and Environmental Initiative, incorporating Nambeelup Business Park, agri-precinct and water rehabilitation and recycling initiatives
- Perth to Darwin Highway, encompassing 37 km from the intersection of the Reid and Tonkin Highways to Muchea
- Western Trade Coast expansion, including an Outer Harbour and intermodal terminal
- Extension to Mitchell Freeway to improve connectivity with, for example, Neerabup
- Mundaring Infill Sewer Project, supporting further development around Mundaring town centre.

A high level filter was then applied to reduce this list, looking for only those projects that have the potential to deliver broad-based gains across a range of economic and social parameters, as highlighted in the table on the right.

Consideration was also given to the expected capital cost and the availability of data to assist in more detailed analysis. Over the period of this research the WA Government also made some announcements affecting the feasibility of some of the projects, such as the Bunbury very fast train.

The final shortlist of three projects chosen for further analysis were:

- MAX LIGHT RAIL
- PEEL ECONOMIC AND ENVIRONMENTAL INITIATIVE
- WESTERN TRADE COAST EXPANSION
- PERTH TO DARWIN HIGHWAY

PROJECT ASSESSMENT CRITERIA

NEW MARKETS

Enhances access to new markets for existing industries e.g. agricultural (raw and processed) exports to Asia; larger student pool for university

NEW BUSINESSES/INDUSTRIES

Facilitates investment in new business and industry as a result of filling infrastructure gaps, or through promotion of a precinct

SUPPLY CHAIN

Improves upstream and/or downstream access and opportunities for organisations that are horizontally or vertically connected across the supply chain e.g. 'paddock to port'

PRODUCTIVITY ENHANCEMENT

Delivers productivity gains for individuals (e.g. travel time savings) and organisations (e.g. lower cost utilities, improved transport logistics)

AGGLOMERATION

Results in economies of scale and efficiencies produced by co-location (a sub-set of productivity) e.g. through industry and innovation hubs

LAND USE

Improves land use e.g. unlocks potential for new and enhanced uses through increased access

HOUSING AFFORDABILITY

Delivers new and/or more accessible housing stock

URBAN ACTIVATION

Facilitates an increased level of activity for local residents and workforce

ACCESS TO EMPLOYMENT

JOBS

Improves availability of regional job opportunities

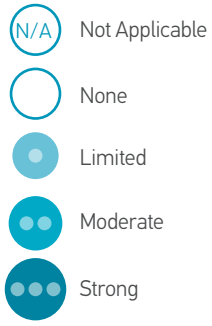
IMPROVED COMMUTER OUTCOMES

Time travel and environmental savings

AMENITY AND LIFESTYLE

Improves quality of life e.g through access to open spaces, reduced traffic congestion

PROJECT ASSESSMENT – FIRST STAGE FILTER



	EST CAPITAL EXPENDITURE	NEW BUSINESS/INDUSTRY	NEW MARKETS	PRODUCTIVITY (INC AGGLOMERATION)	SUPPLY CHAIN	LAND USE/VALUE CAPTURE	ACCESS TO EMPLOYMENT, IMPROVED COMMUTER OUTCOMES	HOUSING AFFORDABILITY, LIFESTYLE AND AMENITY, ACCESS TO SERVICES	URBAN ACTIVATION
BRETON BAY	$3 bn	None	Limited	Limited	Limited	Limited	Limited	N/A	None
BUNBURY VERY FAST TRAIN	$9.5 bn	Limited	Limited	Limited	N/A	Limited	Limited	Limited	Limited
ELLENBROOK RAIL PROJECT	$1.4 -2.1 bn	Limited	None	Limited	None	Limited	Limited	Limited	Limited
MAX LIGHT RAIL	$2.2 bn	Moderate	Moderate	Moderate	None	Moderate	Moderate	Moderate	Moderate
PEEL ECONOMIC AND ENVIRONMENTAL INITIATIVE	$112 mn	Moderate	Moderate	Moderate	Moderate	Moderate	Limited	Limited	Moderate
PERTH TO DARWIN (NORTHLINK) HIGHWAY	$1.2 bn	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited
WESTERN TRADE COAST	$2.1 bn	Moderate	Moderate	Strong	Moderate	Limited	Moderate	N/A	None
EXTENSION TO MITCHELL FREEWAY	$291 mn	Limited	Limited	Moderate	Moderate	Limited	Moderate	Moderate	Limited
MUNDARING INFILL SEWER PROJECT	N/A	None	None	Limited	None	Limited	Moderate	Limited	Limited

The Mitchell Freeway is now funded and commencing

The analysis presented in this report is not intended to provide a conclusive or complete understanding of each project. This is not possible in any event, given the lack of availability of detailed data on the final design options for each project at this stage.

Rather, it takes a realistic look at how each project could reasonably be expected to develop over time, from the up-front infrastructure investment required as a starting point, through the range of developments expected to occur around this infrastructure, to the economic activity and employment opportunities, as well as other social and environmental benefits, to be unlocked.

For each project, the study looked at master planning and public documentation to understand the size and scale of developable land unlocked by the initial infrastructure investment, a realistic time line for development as well as the types of economic activity that could result from development.

Economic and employment activity was estimated using current WA Government benchmarks of land to employment ratios for each industry as well as ABS data for average Gross Value Added (GVA) per employee by industry in WA. Development costs are based on Rawlinsons benchmarks.

The study also looked at outcomes for similar projects across Australia and relevant research such as the extensive work done by Curtin University in relation to light rail and unpublished data from consultants commissioned by the Peel Development Corporation in relation to the Peel Initiative. Finally, community and environmental benefits were assessed, as appropriate.

Examination of the Perth to Darwin link demonstrated quite early on that the project would not be able to meet the benchmarks for inclusion in a priority list. Critically, important traffic use data is not made public by the WA Department of Main Roads. In addition, the 37 kilometres of road development without any further integration of the network was considered likely to create no additional benefits over and above any other road investment. While congestion reduction is a worthy aim, the project would deliver better outcomes if assessed as part of a broader regional initiative, for example connecting to an industrial area such as Bullsbrook, and tying with tourism infrastructure initiatives to drive greater visitation to the Swan Valley.

The tables below summarises the key estimated outcomes for each of the three remaining short listed projects. As noted previously, these estimates are not intended to represent a firm outcome, but rather the potential value if developments are fully exploited.

Through the provisioning of $4.5 billion of infrastructure investment, the three state strategic projects analysed – MAX Light Rail; the Peel Economic and Environmental Initiative; and the Western Trade Coast expansion – have the combined potential to unlock $2.4 billion in property development, a further $27 billion in economic activity for WA, and up to 32,500 new jobs. Key estimated outcomes are summarised in the table below.

MAX LIGHT RAIL

Est. Capital cost - $2.1bn

- $960 million in development unlocked.
- $5.5 billion in economic activity enabled (NPV over 20 years – 2018 through 2038) encompassing health, education, commercial, retail and civic amenities.
- Employment peak of 13,000 on full completion of development across key activity centres.
- Productivity gains through reduced congestion (expected to cost Perth $16 billion in 2031 in the absence of any additional transport capacity).
- Land value uplift estimated at an average of 9.5% (range of -19% to 30% for similar sites).

WESTERN TRADE COAST EXPANSION

Est. Capital cost - $2.3bn - Includes roads and services, Outer Harbour and Intermodal terminal

- $740 million in development unlocked (primarily industrial).
- $13.7 billion in economic activity enabled (NPV over 20 years – 2021 through 2041) generating significant new trade activity, for example processed agricultural goods to expanding Asian and African markets.
- Employment – Peak of 20,000.
- Agglomeration – results in productivity gains through interlinkages across precinct supply chain.
- Land value uplift potential (n/a).
- Underpins diversified growth path for WA economy.

PEEL ECONOMIC AND ENVIRONMENTAL INITIATIVE

Est. Capital cost - $112mn

- $700 million in development unlocked (agricultural, commercial, industrial) – likely to attract new regional residential development (not quantified).
- $8 billion in economic activity enabled (NPV over 20 years – 2018 through 2038) generating significant new trade activity, for example processed agricultural goods to expanding.
- Employment peak of 9,500 jobs when Hub is fully developed, proving much-needed regional opportunities.
- Agglomeration and synergy benefits across the Hub from paddock to bottle, with optimal water use.
- Land value uplift potential of 3%-10%.
- Improved water outcomes, and access to renewable (biogas) power generation.

The summary of outcomes demonstrates the potential for each of these three projects to deliver significant benefit to WA by broadening the economic base and creating long-term sustainable economic and employment opportunities across a range of sectors and regions.

The study acknowledges that there will be other projects that may be added to this list over time.

It is also acknowledged that political factors can at times make economically rational decisions difficult. This framework aims to remove at least some of that difficulty by providing a truly transparent framework for assessment. It is also hoped that the framework will support improved funding outcomes, by clearly demonstrating the value of benefits to be derived.

This analysis also provides policy makers with a framework to understand the opportunity cost of not funding those infrastructure projects that can provide both a boost to short term economic growth, taking up the slack left by the mining sector, as well as – and more importantly – put WA on the path to long term, broad-based and sustainable growth that consolidates the gains driven by the mining investment boom and that will support jobs, economic prosperity and communities.

RECOMMENDATIONS

The recommendations of this report are fundamental to assist in transitioning the economy onto a broader and more sustainable growth path that will ensure the prosperity of its citizens and support budget repair over the longer term.

1. Publically commit to identify, prioritise and assess in detail the most prospective state strategic infrastructure investments.

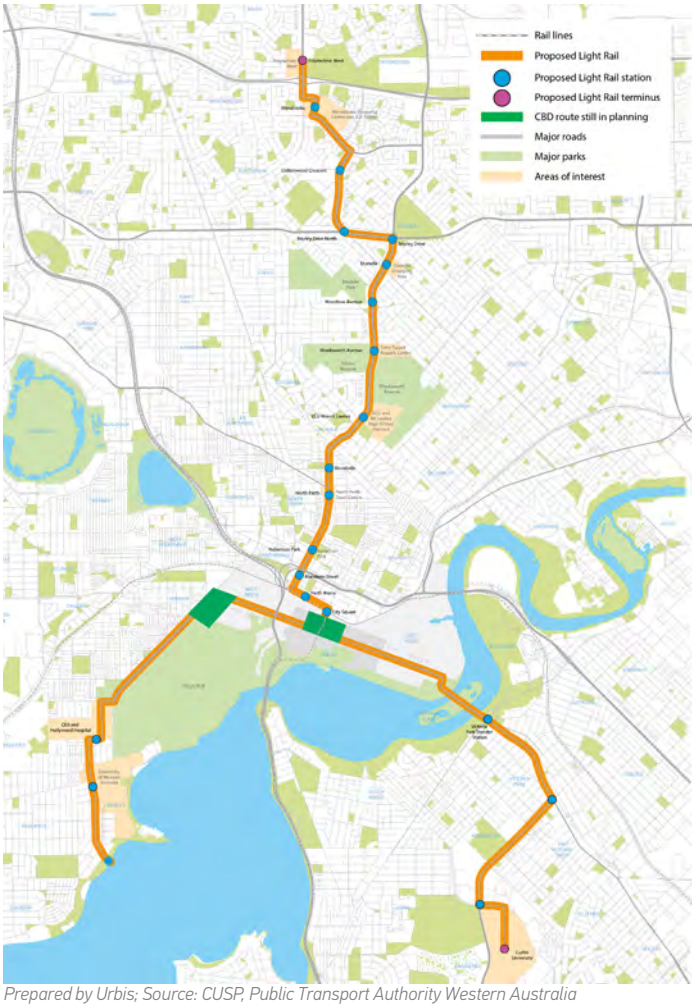
2. Adopt an open and transparent analytical framework to select and prioritise those projects that will deliver the greatest economic and community benefits to WA.

3. Draw on the analytical framework developed in this report, which suggests three state significant projects warrant prioritisation for further detailed analysis:

- **MAX Light Rail**
- **Peel Economic & Environmental Initiative**
- **Western Trade Coast.**

4. Use this analysis to look at a wider range of funding mechanisms including grants and private sector participation, for example through Public-Private Partnerships.

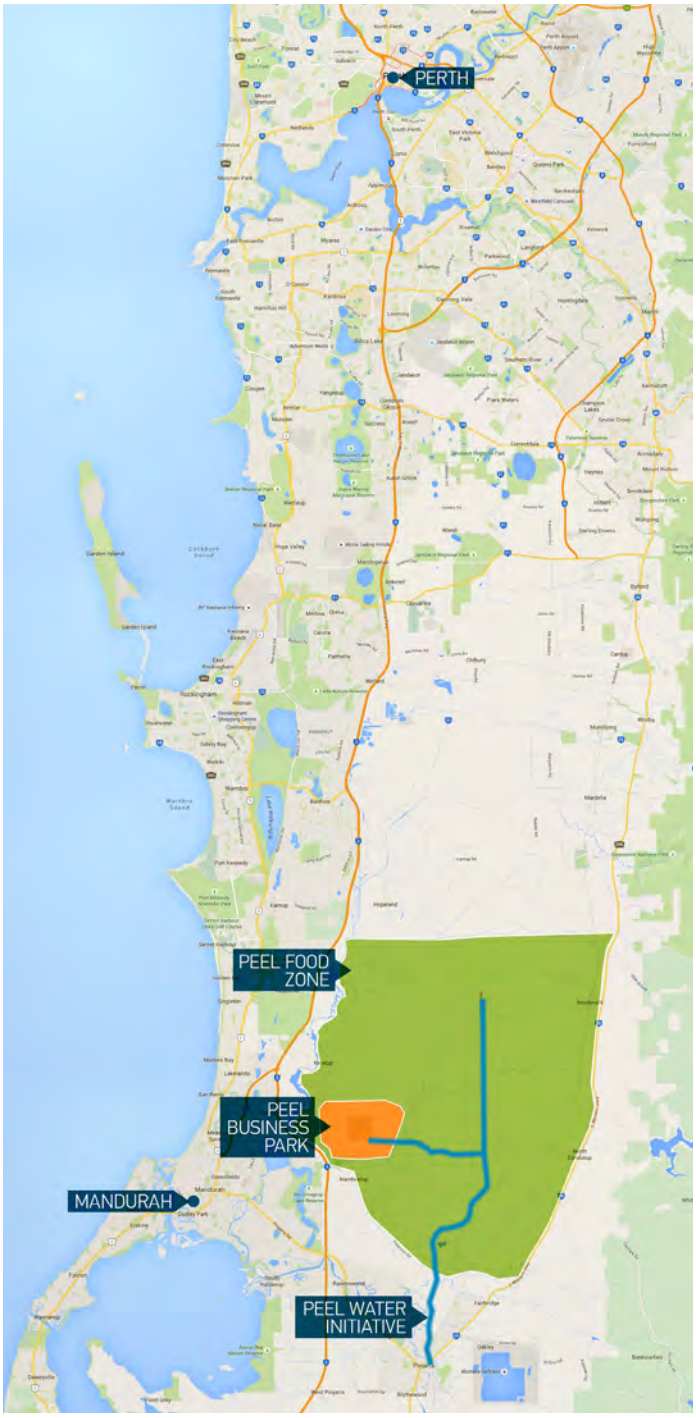
MAX LIGHT RAIL



Prepared by Urbis; Source: CUSP, Public Transport Authority Western Australia

Source: Public Transport Authority Western Australia

PEEL ECONOMIC AND ENVIRONMENTAL INITIATIVE



Prepared by Urbis; Source: Pracsys Peri-Urban Strategic Economic And Environmental Initiative

MAX LIGHT RAIL

MAX LIGHT RAIL: THE INVESTMENT

The MAX Light Rail will significantly increase public transport capacity in the Perth Metropolitan area and unlock a number of key activity centres across Perth[2]. The proposed extension to the MAX put forward by CUSP3, known as the Knowledge Arc, will link two of Perth's largest academic institutions (University of Western Australia and Curtin University), as well as the Queen Elizabeth II Medical Centre (QEII), a major tertiary hospital facility. The north-south route, planned along Fitzgerald Street and Alexander Drive, provides the economic impetus to develop medium and high density residential, commercial and retail offerings around light rail stops.

Congestion in Perth, due to an over dependence on cars, results in significant loss of productivity and the commute time to work can create barriers to employment opportunities for individuals that do not live in close proximity to employment precincts.[4]

Light rail, if supported by appropriate planning guidelines, can deter further urban sprawl and entice developers to contribute to the creation of smart urban villages characterised by medium and high density development, mixed-use zoning and with an emphasis on public space.

Of equal importance, however, is an understanding of the potential of investing in the MAX Light Rail to unlock significant development potential that in turn will generate a wide range of economic activity:

- Along the Light Rail corridor
- At Curtin University – research hub, commercial space, student accommodation, retail and civic amenity
- At the University of Western Australia (UWA).

INFRASTRUCTURE	ESTIMATED COST	KEY ASSUMPTIONS
Phase one of the MAX Light Rail infrastructure.	$1.8 billion	Phase one sees the development of infrastructure from Polytechnic West in the North to QEII in the South West and Victoria Park Station in the South East.
Phase two of the MAX Light Rail infrastructure (Knowledge Arc)	$350 million	Phase two extends the rail from QEII to the University of Western Australia and from Victoria Park Station to Curtin University.

DEVELOPMENT STAGE

The construction phase of the redevelopment of land around light rail stops, including at and around the Universities, is expected to create around 7,000 jobs. The development is also expected to generate an average land value uplift of 9.5% for property within a 400m radius of each light rail station.[5]

RESIDENTIAL DEVELOPMENT

$330 million ESTIMATED CAPTIAL EXPENDITURE

Includes planned residential development in the Curtin University precinct as well as in UWA and medium density development around light rail stops (with a highly conservative average of 350 dwellings per stop outside of those in the CBD – if well-planned there is very considerable upside).

COMMERCIAL DEVELOPMENT

$155 million ESTIMATED CAPTIAL EXPENDITURE

Captures the expansion of commercial offerings at the following (a very conservative estimate with significant upside potential):

- Curtin University including Bentley Technology Park
- UWA with a focus on professional, scientific and technical services
- Mixed-use buildings surrounding light rail stations

OTHER DEVELOPMENT

$475 million ESTIMATED CAPTIAL EXPENDITURE

Accounts for the expansion of education, student accommodation and health offerings across the two university precincts as well as increased retail and civic offerings.

Source: Urbis modelling

[2] Department of Transport, 2011, Public Transport for Perth in 2031 <http://www.transport.wa.gov.au/mediaFiles/about-us/ABOUT_P_PT_Plan2031.pdf>
[3] Peter Newman and Jan Scheurer, Curtin University Sustainability Policy (CUSP), The Knowledge Arc Light Rail < http://www.curtin.edu.au/research/cusp/local/docs/cusp-arc-lrt-tod-hr.pdf>
[4] RAC BusinessWise, 2013, Congestion Survey 2013
[5] Department of Infrastructure and Regional Development, 2015, Transport infrastructure and land value uplift < https://bitre.gov.au/publications/2015/files/is_069.pdf>

ECONOMIC AND COMMUNITY BENEFITS

From 2022, infrastructure and other development are assumed to be sufficiently advanced to allow economic activity to commence around light rail stops. Evidence suggests that during the construction phase, business and residents are negatively affected due to the disruption of construction along main corridors.[6]

As such, Urbis expects economic activity to commence around light rail stations only upon completion of the light rail. Curtin University and the University of Western Australia are expected to undertake economic development before the completion of the light rail due to their location outside of busy pedestrian corridors.

The QEII Medical Centre was not included in this analysis as its expansion is necessary in response to Perth's population growth. However, the MAX Light Rail is a critical component to delivering agglomeration and social benefits for the medical precinct. Additionally, linking UWA with the QEII has the potential to cultivate a unique environment for medical research in Australia.

OUTCOME	VALUE	COMMENT
Economic Activity	$5.5 billion	Measured over a 20 year period (2018-2038), encompasses health, education, commercial, retail and civic amenities.
Employment	13,000	Upon full completion of development in key activity centres.
Productivity	n/a	Congestion is expected to cost Perth $16 billion in productivity loss in 2031 in the absence of any additional transport capacity.
Land value uplift	9.5% (range reported -9% to 30%)[7]	Average and range are shown. The variation occurs due to influencing factors such as density and productivity.
Social	Increase in Perth's capacity for innovation driven employment	Promotes new economic activity in high value employment, especially in the knowledge-based economy due to the expansion of tertiary education and research precincts.
Environmental	$3.15 million[8]	Transport cost of greenhouse gas per 1,000 dwellings as a result of continued urban sprawl.

LIGHT RAIL TRANSIT AND BUS RAPID TRANSIT

Discussion around substituting Light Rail Transit (LRT) with a Bus Rapid Transit (BRT) system has recently intensified following analysis suggesting that the latter could be built for half the price of the MAX Light Rail.

Evidence from the US suggests light rail systems generally have a higher capacity to accommodate passengers and a higher daily patronage compared to BRT systems; as a result LRT will typically:

- have a lower per passenger cost than BRT
- have preferable environmental outcomes (including noise as well as emissions)
- promote greater land use and with the potential to unlock greater Transit-Oriented Developments (TODs). [9]

This is however a controversial issue that warrants further examination.

Ultimately, for the purposes for economic activation, it is not about the relative up-front cost of the mode of public transport chosen; rather, it is about ensuring the optimal benefit cost ratio. To maximise economic benefits, stops must have the greatest capacity to attract TOD and be supported by developers and end users of the housing and businesses in locations surrounding each stop. The likely value uplift of each mode of transport also needs to be carefully considered.

[6] Golub, Aaron, Subhrajit Guhathakurta, and Bharath Sollapuram. "Spatial and temporal capitalization effects of light rail in phoenix from conception, planning, and construction to operation." Journal of Planning Education and Research 32.4 (2012): 415-429
[7] Department of Infrastructure and Regional Development, 2015, Transport infrastructure and land value uplift <https://bitre.gov.au/publications/2015/files/is_069.pdf>
[8] Peter Newman, 2010, The Costs of Urban Sprawl - Physical Activity Links to Healthcare Costs and Productivity. Environment Design Guide. GEN 85: pp. 1-13
[9] Graham Currie, 2006, Bus Transit Oriented Development – Strengths and Challenges Relative to Rail <http://www.nctr.usf.edu/jpt/pdf/JPT%209-4%20Currie.pdf>

PEEL ECONOMIC AND ENVIRONMENTAL INITIATIVE

PEEL BUSINESS PARK: THE INVESTMENT

The Peel Economic and Environmental Initiative (PEEI) is a combination of three separate proposed projects located in Nambeelup, 60km south of Perth. The three projects are:

- Peel Business Park – this would include a range of industries such as manufacturing, transport and logistics, and agribusiness (including food processing and packaging).
- Peel Food Zone – a hub for intensive food production and research, targeting key export markets both locally (Perth) and globally (Asia, Africa).
- Peel Water Initiative – a link between the business park and food zone, providing a sustainable, non climate dependant water supply through a recycled water and managed aquifer recharge scheme.

State and local governments have identified Peel as a key region for supporting future growth in WA, together with Metropolitan Perth.[10] The PEEI can act as a catalyst for development in the region.

The PEEI can help to address the limited supply of industrial land in the region, while providing employment opportunities for local residents.

The WA Department of Planning has identified that the creation of an additional 23,000 jobs will be required in the Peel region to meet future employment self-sufficiency targets[11]. The PEEI has the potential to provide a significant number toward this total.

In a region where mining and mineral processing contributed close to 30% of total Gross Value Added (GVA) across industries in 2013[12], the PEEI can help to diversify the regional economy away from commodities to more sustainable and steady sources of growth. In particular, food production, processing and packaging services in the PEEI will help to create a nationally competitive food industry, and could see the PEEI recognised as a major food trade and investment hub.

As a site placed on undeveloped land, new road, power and water infrastructure is required. Furthermore, the Peel region faces a number of environmental challenges, in particular around water management. It is likely that the Peel Water Initiative would need to take place to address the water issues in Peel, regardless of whether the Business Park and Food Zone projects went ahead.

INFRASTRUCTURE	ESTIMATED COST	KEY ASSUMPTIONS
Services infrastructure	$112 million	Includes land, power and water infrastructure necessary for the development of the PEEI.

Source: Peel Development Commission

Under Urbis' assumed rollout for the PEEI development from 2018, the investment could generate $8 billion in Net Present Value in economic activity over a 20 year period and 9,500 FTE jobs when operating at full capacity.

DEVELOPMENT STAGE

It is assumed there will be a total of 290ha of land available for development by 2017. In 2018, the introduction of key industries will be a catalyst to spur development of land, until it is fully developed in 2038.

OFFICE AND RETAIL DEVELOPMENT

$20 million EST. CAPTIAL EXPENDITURE

Ancillary and support services for industrial and transport firms

TRANSPORT (WAREHOUSE) DEVELOPMENT

$110 million EST. CAPTIAL EXPENDITURE

For logistics support

INDUSTRIAL DEVELOPMENT

$400 million EST. CAPTIAL EXPENDITURE

Captures a number of industries including:

- Manufacturing and engineering
- Agribusiness
- Commerce

AGRICULTURE DEVELOPMENT

$170 million EST. CAPTIAL EXPENDITURE

Includes the proposed Agri-Food hub, which will build upon and support existing agriculture businesses in the area.

Source: Urbis modelling

The construction of the PEEI could see development of around $700 million generated, over the period 2018 to 2038 with a peak of approximately 650 FTE in construction jobs. The development is also expected to generate land value uplift of around 3%-10%.

[10] *Western Australian Planning Commission, 2015, Perth and Peel@3.5 million*
[11] *WA Department of Planning, 2010, Directions 2031 and beyond*
[12] *Peel Development Commission, 2014, Peel Regional Investment Blueprint Vision 2050*

ECONOMIC AND COMMUNITY BENEFITS

Economic activity generated is based on the development of the following key activities:

- Intensive food production and exports, to key markets both domestically and internationally
- High-value manufacturing, increasingly scaled up over time, with a high-skilled workforce
- Synergies and efficiencies created between the three projects. The Peel Water Initiative is a key link, providing waste water from the Business Park for agricultural use in the Food Zone. These two in turn create synergies in food production, processing and manufacturing.

Key economic and community benefits include:

- Access to new export markets
- Development of new businesses and new regional jobs
- Increased productivity through co-location and agglomeration effects
- Transformation of previously unused land into industrial and agricultural land, supported by the Peel Water Initiative.

OUTCOME	VALUE	COMMENT
Economic Activity	$8 billion	GVA measured over a 20 year period from 2018 to 2038. Will generate significant exports to new markets (Asia, Africa).
Employment	9,500 jobs	Peak number of jobs when park is fully developed.
Productivity	n/a	Agglomeration and synergy effects. A key example being that the Business Park will provide food processing and manufacturing from agricultural production in Food Zone.
Land value uplift	3% - 10%	Based on analysis commissioned by the Peel Development Commission.
Social	Increase the attractiveness of the region through greater provision of jobs, reduced commute times for local workers, etc.	Assumes that jobs created are accessed predominately by local residents.
Environmental	Land use will see a reduction or neutral impact on Peel Estuary.	The Peel Water Initiative is a key aspect of this, providing recycled waste water from the Business Park as agricultural water for the Food Zone. The Business Park will also offer renewable power generation through biogas.

Source: Urbis modelling

GROWING DEMAND FOR FOOD PRODUCTS

The Agricultural business park will support food manufacturing services, building supply chain synergies with agricultural producers across the broader precinct. This will provide the PEEI with a competitive advantage which can be leveraged to take advantage of rapidly growing markets, both domestically and globally, for enhanced manufactured food and beverage products.

As world population grows, global demand for agricultural products is projected to increase by over 1% per annum up to 2050, or over 75% above global food demand in 2007.[13] Asia is expected to be the dominant driver of food demand, accounting for more than half of global food demand increase. Specifically, China and India are seen as key growing markets for agricultural products. Domestically, there are also opportunities for Peel to be a key food supplier for the Perth Metro region and wider WA.

[13] *Linehan, Verity, et al, 2012, "Food demand to 2050: Opportunities for Australian agriculture." Paper presented at the 42nd ABARES Outlook conference*

WESTERN TRADE COAST

WESTERN TRADE COAST: THE INVESTMENT

Latitude 32 represents the next stage of development for the Western Trade Coast (WTC), the largest industrial zone in WA, which comprises a range of activities. Alongside Latitude 32, the WTC encompasses the Kwinana Industrial Area, Rockingham industrial estate, and the Australian Marine Complex at Henderson.

The establishment of the Outer Harbour in the Cockburn Sound provides the opportunity for synergies with existing port operations at the Australian Marine Complex and is integral to the optimisation of the development, supported by an intermodal terminal and an increase in industrial land.

WA already delivers almost half of Australia's exports, and on its current growth path the Port at Fremantle is expected to reach capacity within the next decade. Given the long development lags, planning to ease future capacity constraints should occur at the earliest possible time.

Singapore provides an excellent example of the potential benefits of early investment.

In order to achieve development of the region's full potential, investment is required in significant infrastructure as outlined in the below table.

INFRASTRUCTURE	ESTIMATED COST	KEY ASSUMPTIONS
Services including roads	$225 million	Construction occurs from 2017 to 2019.
Intermodal terminal	$500 million	Expected throughput of 1 million TEU per annum at full capacity. Construction occurs from 2020 to 2026.
Outer Harbour	$1. 3 billion	Essential to activate full capacity of intermodal terminal and optimise synergies/agglomeration benefits across the industrial park. Construction occurs from 2019 to 2026.

Construction of the intermodal terminal, Outer Harbour and services results in average employment of 1,450 per annum from 2019 through 2026, reaching 2,600 in peak construction years.

This is a major development that will take many years to fully develop. In modelling the economic activity and social benefits that expansion of the Western Trade could unlock, Urbis has assumed the timeline of development as described in the table above.

DEVELOPMENT STAGE

The construction of new road and service networks in the WTC, together with the staged building of an Outer Harbour and intermodal terminal, is estimated to unlock $740 million in capital expenditure for development of primarily industrial facilities.

ECONOMIC AND COMMUNITY BENEFITS

OUTCOME	VALUE	COMMENT
Economic Activity	Economic activity enabled: $13.7 billion (NPV over 20 years – 2021 through 2041)	Fosters trade activity and diversified economic growth, in particular in raw and processed agricultural products, to expanding Asian and African markets. Provides additional capacity over time as existing ports reach limits.
Employment	6,500 per annum jobs at 2028	20,800 jobs per annum at full build out (2040).
Productivity	n/a	Agglomeration results in productivity gains through interlinkages across precinct supply chain.
Land value uplift	n/a	Benchmarks are difficult to apply, but as the productive capacity of the land increases, it is reasonable to expect a degree of uplift.

[14] *Newman, P and Hendrigan, C, 2015, Perth Freight Link: Making the right investment in Perth's Freight task, Curtin University*

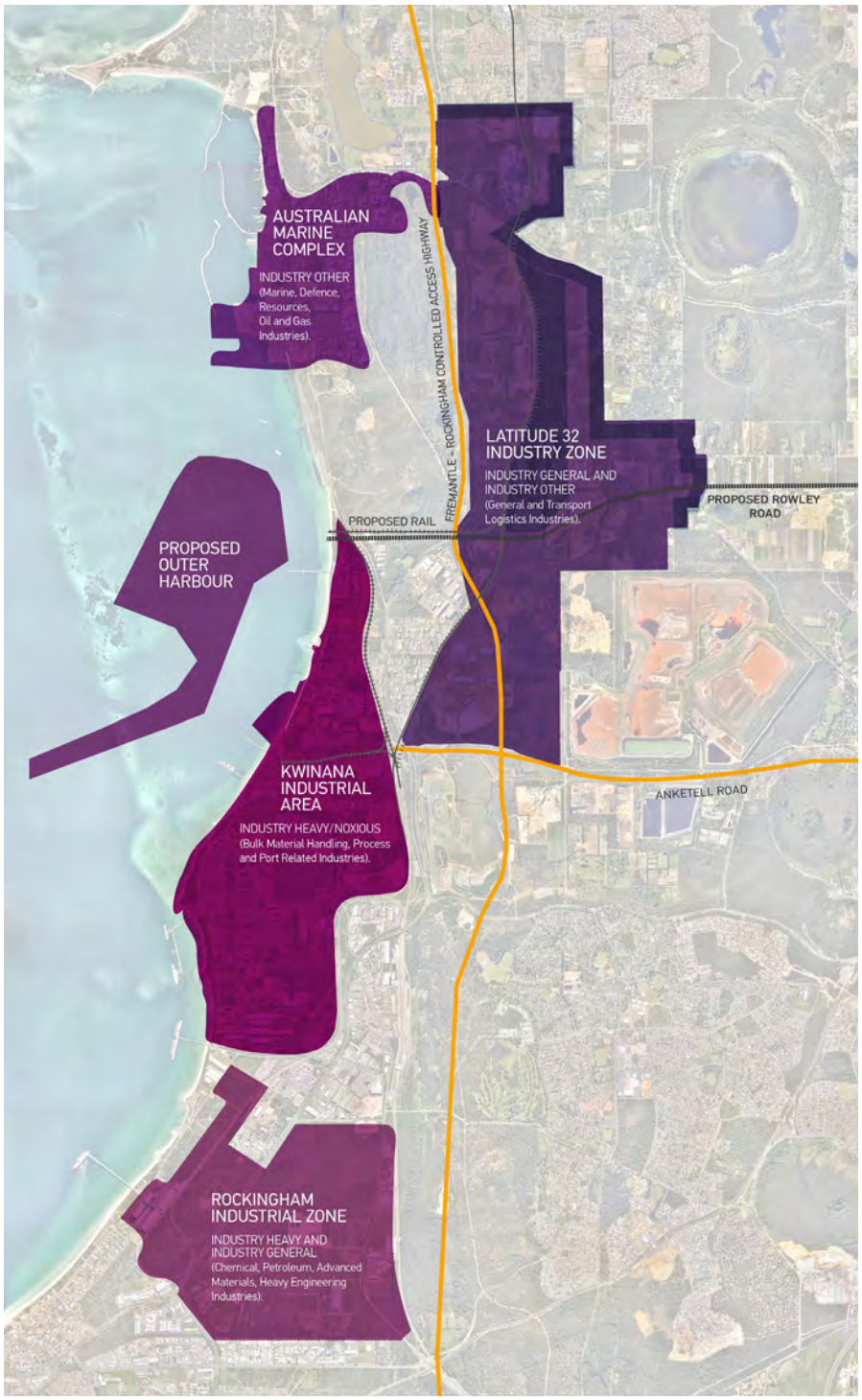
OUTER HARBOUR DEVELOPMENT

There is some potential for debate around the optimal path of timing and delivery mechanism of the Outer Harbour, given the proposed privatisation of Fremantle Port (which will reach capacity in the coming decade).

The WA Government has the ability to negotiate terms with the potential purchaser to ensure that an Outer Harbour comes on stream before Fremantle reaches capacity.

Analysis by Curtin University[14] suggests that the development of the Outer Harbour will in fact increase the potential value to be realised from the sale of Fremantle Port and it may also unlock improved residential development potential near the Inner Harbour.

Source: Urbis



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