



Department of
**Energy and Economic
Diversification**

Western Trade Coast Infrastructure Strategy Overview





Acknowledgement of Country

The Government of Western Australia acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal and Torres Strait Islander communities and their cultures, and to Elders past and present.

This publication was originally produced by the former Department of Jobs, Tourism, Science and Innovation in August 2024. Content was accurate at the time of publishing and may not reflect current government structures and ministerial portfolios.

Cover image: Western Trade Coast. Credit: Fremantle Ports.
Kwinana. Credit: DevelopmentWA.

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Premier's Foreword

Kwinana's industrial story began more than 70 years ago with the opening of an oil refinery. In the decades since, the area has established itself as the premier industrial area for Western Australia. Now known as the Western Trade Coast, the area hosts an array of industries that support some 42,900 jobs and contribute \$14.8 billion to the Western Australian economy.

As a local resident, I have witnessed Kwinana's ongoing evolution – from oil refinery to the Western Trade Coast. It's a microcosm of the economic diversification that is sweeping across the state under the guidance of the Western Australian Government. However, for the Western Trade Coast to fully realise its potential as a Global Advanced Industries Hub, there are challenges that must be overcome.

This is where the Western Trade Coast Infrastructure Strategy comes in. The strategy offers a comprehensive set of recommendations to transform the industrial precinct across transport, maritime, utilities, land, and policy and regulatory settings. It will help to guide and coordinate future investment in the Western Trade Coast. By outlining the most immediate and pressing challenges, agreed by government and industry stakeholders, we can methodically plan priority investment.

Tackling congestion is one key priority, and planning is now underway for upgrades to major arterial corridors, including intersection upgrades to Rockingham Road, and the development of the Anketell Thomas Road Freight Corridor. The creation of more strategic industrial land is also a priority. The State Government recently established a \$500 million Strategic Industries Fund and \$125 million has been allocated toward the development of Latitude 32 to create more lots for heavy industry, as well as additional general and transport industrial lots.

Decarbonisation is at the core of the Western Australian Government's economic diversification goals. We have already seen the growth of battery and future energy industries in the Western Trade Coast.

But there is so much more potential.

To unlock this potential, the State Government is heavily investing in boosting the State's main

Hon Roger Cook MLA

Premier; Minister for State and Industry Development, Jobs and Trade; Public Sector Management; Federal-State Relations



electricity grid, the South West Interconnected System. These critical upgrades will enable greater incorporation of renewable energy into the electricity grid, unlocking decarbonisation and growth opportunities for industry.

As the AUKUS program develops and Defence's presence and role in the Western Trade Coast grows, we are working closely with the Australian Government and Department of Defence to consolidate infrastructure to ensure the State is ready for a new era of shipbuilding and sustainment activities.

There is no doubt that reaching our vision to transform the Western Trade Coast

into a Global Advanced Industries Hub will take commitment and investment. But the future opportunity is much greater than the immediate challenges. The Western Trade Coast Infrastructure Strategy is an important step towards that vision.

I would like to extend my sincere appreciation to the organisations, the industry groups, Joe Collard from the Whadjuk Aboriginal Corporation and Cheryl Martin from the Gnaala Karla Booja Aboriginal Corporation, government agencies and the many individuals who have contributed to the Western Trade Coast Infrastructure Strategy and the Global Advanced Industries Hub program.



The Western Trade Coast Infrastructure Strategy Overview presents the full recommendations of the Western Trade Coast Infrastructure Strategy, with a summary of the supporting detail. To read the full Western Trade Coast Infrastructure Strategy, as delivered by Arup, please scan on the left.

Stakeholder acknowledgements

The Western Australian Government would like to acknowledge the following organisations and individuals for their contribution to the development of the Western Trade Coast Infrastructure Strategy. The Global Advanced

Industries Hub Ministerial Taskforce, chaired by Hon Roger Cook MLA, Premier; Minister for State and Industry Development, Jobs, and Trade has overseen the development of the Western Trade Coast Infrastructure Strategy.

We would like to thank all contributors

Industry bodies:

- » Kwinana Industries Council
- » Henderson Alliance

Local government representatives:

- » City of Cockburn
- » City of Kwinana
- » City of Rockingham

Union representative:

- » Australian Manufacturing Workers' Union

Western Australian Government representatives:

- » Department of Energy and Economic Diversification
- » Department of Treasury and Finance
- » Department of Premier and Cabinet
- » Department of Mines, Petroleum and Exploration
- » Department of Planning, Lands and Heritage
- » Department of Training and Workforce Development
- » Department of Transport and Major Infrastructure
- » Department of Water and Environmental Regulation
- » DevelopmentWA
- » Energy Policy WA
- » Fremantle Ports
- » Infrastructure WA
- » Main Roads WA

- » Perth Transport Authority
- » South Metropolitan TAFE
- » Synergy
- » Water Corporation
- » Western Power
- » Westport Project Office

Australian Government representatives:

- » Department of Industry, Science and Resources

Aboriginal Corporations:

- » Whadjuk Aboriginal Corporation
- » Gnaala Karla Booja Aboriginal Corporation

Industry:

- » Phil Thick, Industry Advisor
- » Alcoa
- » Avertas
- » Austal
- » BGC
- » BHP Nickel West
- » bp
- » Civmec
- » Cockburn Cement
- » Coogee Chemicals
- » IGO Limited
- » Matrix Composites & Engineering
- » Wesfarmers Chemicals, Energy and Fertilisers
- » Woodside

Understanding the Overview

The Department of Energy and Economic Diversification has prepared this document, the Western Trade Coast Infrastructure Strategy Overview to provide an accessible summary of the Western Trade Coast Infrastructure Strategy and its key messages.

This report offers a summary of recommendations outlined in the Western Trade Coast Infrastructure Strategy. All recommendations have been proposed based on their individual merit – some are complementary or require staged design and implementation. All options are uncostered and are subject to further consideration by Western Australian Government. In particular cases, multiple recommendations are given to resolve a single challenge to provide flexible alternatives to government.

The strategy recommendations (and the infrastructure options they propose) are not

listed in any specific order of significance, but critical enablers have been bolded for ease of reference. Critical enablers are projects that must proceed before other projects can be progressed – they act as a catalyst for future works by providing necessary supporting infrastructure.

Recommendations which are not considered critical enablers may still be major and significant projects, but they may require prior completion of priority projects, or have more long-term development timeframes. Note that not all recommendations are unique to the strategy, many are already being investigated or actioned by government independent of this process (particularly actions identified as critical enablers). Additional comments on Western Australian Government actions and key points for consideration have been included alongside each strategy.



Rockingham Industry Zone.
Credit: DevelopmentWA.

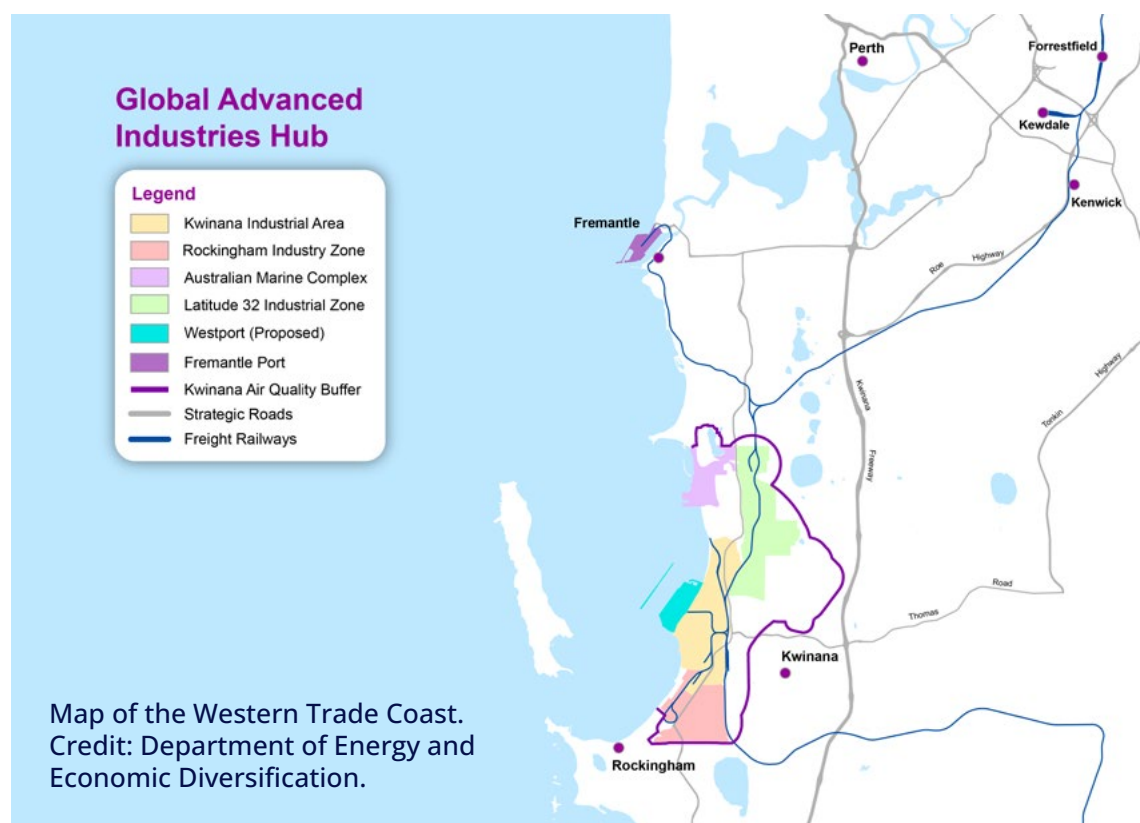
The Western Trade Coast

The Western Trade Coast is Western Australia's only metropolitan-located industrial land. The precinct has supported industrial activity in Western Australia for more than 60 years and contributes \$14.8 billion to the State's economy, sustaining around 42,900 direct and indirect jobs.

Covering 3,900 hectares between the Perth suburbs of Munster and Rockingham, the Western Trade Coast comprises 4 industrial areas: the Kwinana Industrial Area, Rockingham Industry Zone, the Australian Marine Complex and Latitude 32 General Industrial Area. While the Western Trade Coast continues to provide significant economic benefits for Western Australia, it is nearing the limits of its organic development due to significant land and infrastructure constraints.

Transition to a Global Advanced Industries Hub

The Western Australian Government has committed to transforming the Western Trade Coast into a Global Advanced Industries Hub, in recognition of its existing and future growth constraints. The Western Australian Government's vision is to position the Western Trade Coast as a global hub for sustainable trade, advanced manufacturing and innovation. It aims to ensure that the region will continue to attract business investments in the long term, generate quality jobs for local communities and contribute to positive economic, social and environmental outcomes for Western Australians.



The Western Trade Coast Infrastructure Strategy

In 2023, the Department of Energy and Economic Diversification commissioned Arup to produce the Western Trade Coast Infrastructure Strategy on behalf of the Western Australian Government. The strategy outlines proposed infrastructure priorities and actions for driving economic development in the Western Trade Coast, to deliver on the Western Australian Government's vision of a Global Advanced Industries Hub.

The Western Trade Coast Infrastructure Strategy is a coordinated and collaborative assessment of the infrastructure and policy mechanisms required to address existing and future constraints to industrial development in the Western Trade Coast. The strategy will be used to inform and guide Western Australian Government investment decisions in the region and is developed with regard to the future Westport program, projects of state significance and emerging national Defence initiatives.

The strategy comprises infrastructure and policy mechanisms to both de-constrain the Western Trade Coast and facilitate its transformation into a Global Advanced Industries Hub. It includes 12 development strategies organised by focus area: transport, maritime, utility, land use, and policy and regulatory frameworks.

Each development strategy has discrete recommendations with some identified as critical enablers. A critical enabler is a gateway project that must go ahead to enable other (major) projects and significantly de-constrain the Western Trade Coast.

Other recommendations may still have a significant impact on the development of the precinct, but they are not deemed time-critical or enablers to other strategic outcomes.

The Western Trade Coast Infrastructure Strategy recommendations are designed to simultaneously address multiple constraints while also delivering a range of strategic and economic benefits.

Each proposed recommendation:

- » exhibits significant positive impact towards achieving the strategic objectives of the Global Advanced Industries Hub
- » addresses constraints within the Western Trade Coast
- » has broad stakeholder support
- » demonstrates urgency through sequencing requirements

How was the strategy informed?

The Western Trade Coast Infrastructure Strategy has been co-designed with Western Trade Coast stakeholders including Western Australian and Australian Government representatives, industry bodies and tenants (current and prospective), local government authorities, and Aboriginal representatives.

Aboriginal representatives from Whadjuk Aboriginal Corporation and Gnaala Karla Booja Aboriginal Corporation were engaged throughout the development of the Western Trade Coast Infrastructure Strategy. This strategy maintains respect for the precinct's heritage through Environmental, Social and Governance frameworks, whilst also addressing critical infrastructure needs.

Stakeholder engagement has been fundamental to the design of the strategy, with a focus on transparency and collaboration. The strategy responds to the known infrastructure constraints faced by industry in the region, and recommendations have been designed to position the Western Trade Coast for long-term economic success.



Scan on the left to view The Western Trade Coast: A Western Australian Global Advanced Industries Hub. This report highlights the significant contribution of the Western Trade Coast to both the State's and the nation's economic development. It also provides a point-in-time profile of the industry and critical success factors that have supported the long-term growth and development of the Western Trade Coast.

Strategic context

Global decarbonisation

In 2019, the Western Australian Government announced a statewide target of net zero emissions by 2050, alongside a commitment to work with all sectors of the economy to achieve this goal.

These commitments are underscored by strategic frameworks that recognise the importance of contributing to national and global efforts to tackle climate change and safeguard the community and environment. These include:

- » The **Western Australian Climate Policy**, which sets out the Western Australian Government's plan for a climate-resilient community and prosperous low-carbon future.
- » The **Sectoral Emissions Reduction Strategy**, which provides pathways and priority actions for the State's transition to net zero emissions.

In this context, the Western Trade Coast faces 2 distinct challenges – supporting global and local decarbonisation while also capitalising on the distinct strategic opportunities generated by the global supply chains of the world's emerging energy industries.

The Western Trade Coast comprises a range of industry sectors which contribute to the direct value of the region including:

- » wholesale trade (including transport/storage): \$2.4 billion
- » non-ferrous metal manufacturing: \$1.5 billion
- » basic chemical manufacturing: \$1.3 billion
- » ship and boat building: \$470 million
- » heavy and civil construction: \$420 million
- » construction services: \$374 million
- » cement, lime and concrete manufacturing: \$308 million
- » agricultural product handling: \$210 million.

Decarbonising these critical industries will be fundamental to achieving the State's commitments for the net zero transition, and ensuring Western Australia's exports remain competitive in the global trade environment.

Industrial decarbonisation is a complex process, but the global clean energy transition is also creating new economic opportunities for industry. This trend is particularly evident in the production of value-added critical and battery mineral products, green hydrogen and renewable energy. Constraints on land availability and utilities (particularly access to renewable energy) present a critical challenge that must be overcome for decarbonisation and the development of new projects in the Western Trade Coast.

Economic diversification and resilience

The Western Australian Government has identified 4 target industries for investment and growth in the Western Trade Coast. These industries are aligned to the State's economic development framework, Diversify WA, and the targeted diversification strategy Future State: Accelerating Diversify WA. The Western Trade Coast target industries are:



- 1. Renewable hydrogen:** leading the emergence of the hydrogen economy by leveraging local industry demand and access to global markets.



- 3. Shipbuilding and sustainment:** supporting Australia's defence industries through vessel manufacturing, maintenance and sustainment.



- 2. Future facing minerals processing:** value-added battery and critical mineral processing to support global decarbonisation and electrification initiatives.



- 4. Port-related logistics, manufacturing and processing activities:** recognising the growth of diverse industrial activity that occurs around ports, and the benefits on surrounding commercial activity.

The identification of target industries informs strategic land allocation in the Western Trade Coast for new industry proponents and assists the Western Australian Government in focusing and prioritising resources for these industries.

There is also a critical opportunity for the Western Trade Coast to leverage the Australian Government's Future Made in Australia agenda to benefit the target industries. The Australian Government's Future Made in Australia agenda is focused on encouraging and facilitating private sector investment to foster economic development, enhance national and economic security, and drive the net zero transformation. The Australian Government announced the agenda

in 2024, accompanied by a National Interest Framework to guide decision making on significant public investments.

Through the 2024-25 Federal Budget, the Australian Government identified 5 industries under the National Interest Framework: renewable hydrogen, critical minerals processing, green metals, low carbon liquid fuels, and clean energy manufacturing. These priority industries align with the Western Australian Government's Western Trade Coast target industries. This presents a significant opportunity for Western Australia to partner with the Australian Government, leveraging support through the Future Made in Australia agenda to unlock public and private investments.



Tianqi Lithium.
Credit: Gary Peters.

A growing Defence presence

As one of 2 major shipbuilding hubs in Australia, the Australian Marine Complex is an asset of national importance and a major location of shipbuilding and sustainment.

In 2023, the Defence Strategic Review set an agenda to reform Defence's posture and structure. It called for the consolidation of infrastructure at the Australian Marine Complex to allow Defence to take forward their program of shipbuilding and sustainment.

In response to the recommendations of the Defence Strategic Review, the Australian Government initiated an independent analysis of the Navy's surface combatant fleet capability. This identified a pipeline of

naval shipbuilding and sustainment work for Western Australia, including offshore patrol vessels, landing craft, general purpose vessels and large optionally crewed vessels.

In addition to AUKUS, the ambitions of the Australian Department of Defence add to the broader context in which infrastructure decisions in the Australian Marine Complex need to be made.

Western Australia will continue to work closely with the Australian Government on developing a Defence precinct at the Australian Marine Complex to support delivery of AUKUS and continuous naval shipbuilding and sustainment.

Defence industries

In 2021, the Australia – United Kingdom – United States (AUKUS) partnership was formed to support Australia's acquisition of a conventionally-armed nuclear-powered submarine capability and develop joint advanced military capabilities. Western Australia will be at the forefront of Australia's optimal AUKUS Pathway as the home of Australia's submarine fleet. Implications arising from the AUKUS agreement, as well as the 2024 National Defence Strategy and 2024 Integration Investment Program, include potential infrastructure investments to ensure the Australian Marine Complex can accommodate Australian Defence industry needs, and additional training to meet skill and workforce requirements.



Shipbuilding and sustainment.
Credit: Austal.

Future proofing the Western Trade Coast

The Western Trade Coast has capitalised on a number of critical success factors which provide competitive advantages for industry in Western Australia. This has included the availability of industrial land; established transport and utilities infrastructure; access to a local skilled workforce; a stable regulatory environment; symbiotic industrial ecosystems; and proximity to strategic export markets.

Established industries are now looking to expand, new green energy industries are emerging, a new container terminal is being considered by Government, and the Australian Marine Complex is set to expand to accommodate the growth of defence industries under the AUKUS agreement and national shipbuilding programs.

Collectively these new trends and projects present a transformational economic opportunity for Western Australia, however, they also introduce unique stressors on the capability and capacity of the industrial precinct. These pressures threaten to inhibit

the Western Trade Coast's competitive advantages and ability to build on the unique growth opportunities presented. As the amount of available land reduces, and supporting transport, utility and maritime infrastructure nears capacity, the Western Trade Coast approaches a developmental crossroad.

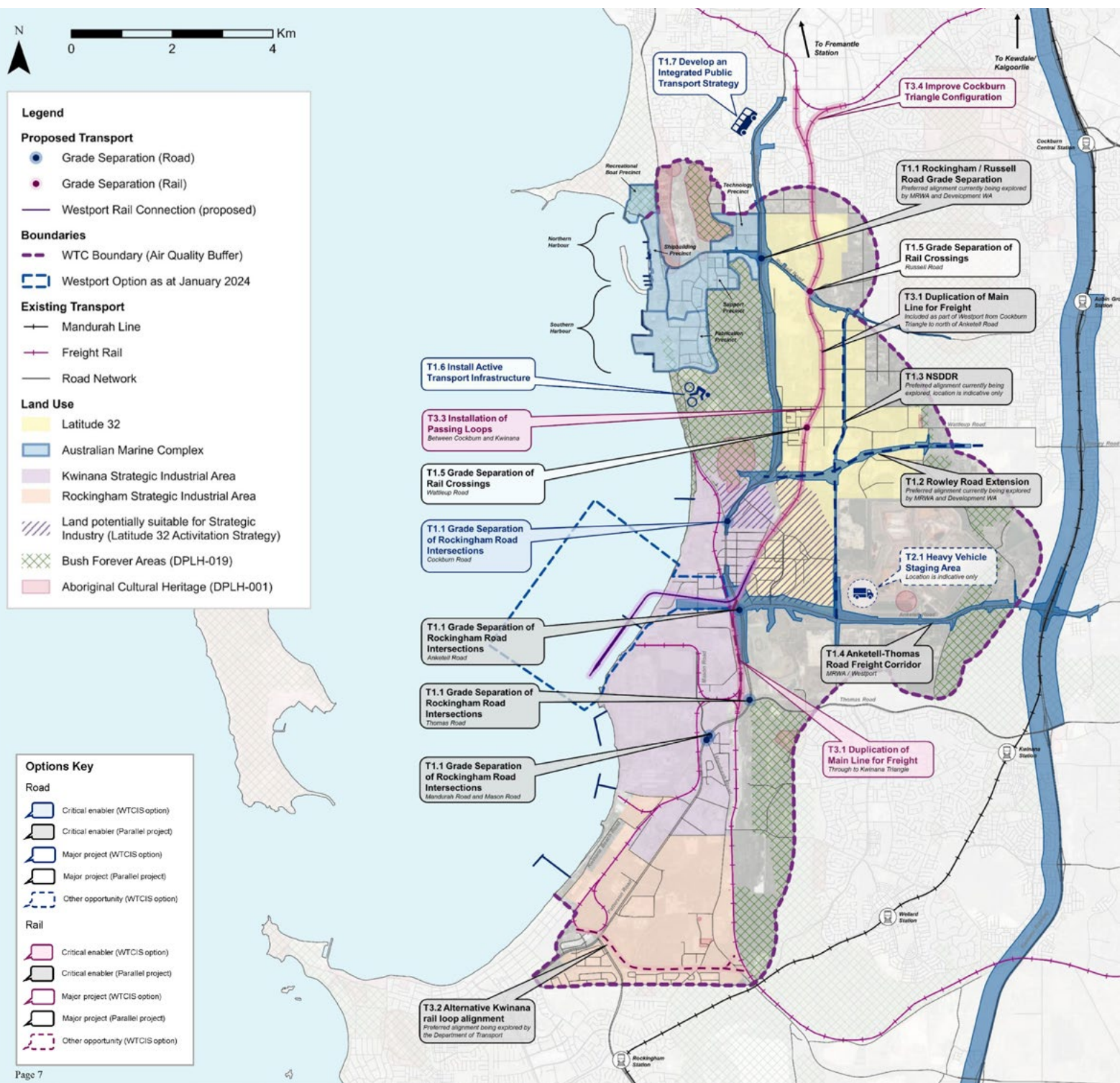
The Western Australian Government is focussed on ensuring that the competitive advantage of industries operating in the Western Trade Coast is maintained long-term. This will stimulate resilient economic growth and create sustainable jobs for Western Australians. The Western Trade Coast Infrastructure Strategy has been developed at a point in time, and it is expected that new needs and opportunities for the region will arise over time. The Western Australian Government will continue to engage closely with stakeholders and the Australian Government as it seeks to respond to the recommendations in the strategy.

Westport

Ensuring Western Australia has a terminal and freight network capable of supporting projected growth in container trade is critical to the State's long-term economic growth. Westport is the Western Australian Government's planning and delivery program to move container trade from Fremantle to Kwinana – this includes planning new port facilities, a connected road and rail freight system and logistics operations.

The Supply Chain Integrated Design will develop an early design for an optimised Supply Chain System including infrastructure for the terminal, road and rail network, intermodal terminals, distributions centres, and empty container management.

Transport strategies



Transport Strategies Map.
Credit: Arup.

Transport strategies and recommendations

Transport Strategy 1: address road network congestion

Improve traffic flow and connectivity between precincts and identified pinch points.

- T1.1** **Deliver a package of Rockingham Road Intersection Upgrades to alleviate significant north-south congestion.**
- T1.2.** **Construct an extension off Rowley Road to facilitate east-west movements from the Kwinana Freeway.**
- T1.3** **Construct the North-South District Distributor Road to provide connectivity between Russell Road and Anketell Road and additional access to Latitude 32 developments.**
- T1.4** **Enable the Anketell-Thomas Road Freight Corridor to act as a key corridor between the future Westport terminal and intermodal precincts at Kewdale and Forrestfield.**
- T1.5 Remove rail level crossings by grade separation to improve safety and reduce road congestion caused by freight trains.
- T1.6** **Install active transport infrastructure, such as principle shared paths, to improve alternative choices for commuters and address congestion.**
- T1.7 Develop an integrated public transport strategy to enable universal access to the industrial area, and reduced congestion and carbon emissions from commuter activity.

Bolded recommendations are critical enablers.

Addressing road network congestion

Transport Strategy 1 includes a series of projects that are currently under consideration and/or planning by the Western Australian Government, particularly those identified as critical enablers.

Upgrades to Rockingham Road and extension to Rowley Road are under review by Main Roads Western Australia and DevelopmentWA. The proposed North-South District Distributor Road is reliant on the development of Latitude 32.

The Anketell-Thomas Road Freight Corridor (ATRFC) is the Western Australian Government's long-term plan for establishing a key transport corridor to the Kewdale and Forrestfield intermodal terminals via Tonkin Highway. It is a key opportunity to alleviate significant congestion in the industrial precinct. Westport and Main Roads Western Australia are currently progressing the planning phase of the ATRFC West section between Leath Road and Kwinana Freeway, including land assembly required to create the corridor.

The Australian Government committed \$33.5 million in the 2024-25 Federal Budget towards planning works to support the development of Westport, including funding for planning to progress upgrades to Anketell Road.

Transport Strategy 2: improve heavy and oversized vehicle networks

Improve the safety of road networks to allow efficient freight movement.

- T2.1 Provide and operate a heavy vehicle staging area to improve safety, reduce road space requirements and alleviate congestion.

Transport Strategy 3: increase the capacity and efficiency of the rail network

Facilitate the growth of the freight supply chain and passenger access to and within the Western Trade Coast.

- T3.1 **Duplicate the heavy rail network between Cockburn Triangle and the Westport Junction to increase freight capacity.**
- T3.2 **Construct an extension of the Kwinana Loop Railway (from its current balloon loop to the Kwinana-Mundijong Freight Railway) to streamline freight movements and reduce congestion.**
- T3.3 **Install passing loops to enable bi-directional freight movements to increase capacity without the need for full line duplication.**
- T3.4 Improve the Cockburn Triangle configuration (through double tracking and grade-separating) to remove rail service bottlenecks.

Bolded recommendations are critical enablers.

Improving heavy and oversized vehicle networks

Transport Strategy 2 addresses the need for a heavy and oversized vehicle staging area. Land assembly is required in proximity to key intersections of primary road connections. This work is best progressed following further planning around freight and road networks in the Western Trade Coast, as outlined in Transport Strategy 1.

Increasing capacity and efficiency of the rail network

Rail infrastructure provides an important transport function for industry located within the Western Trade Coast. Improving capacity and efficiency of freight movements via rail has several strategic advantages including lowering transportation costs and reducing congestion from road freight, ultimately decreasing emissions, road accidents and road wear. Rail networks also provide critical support for the Western Trade Coast's target industries, including critical minerals processing, which are reliant on efficient and low-cost transport of bulk commodities.

As part of the Westport program, duplication of the main line is being explored between Cockburn Triangle and Westport. The Western Trade Coast Infrastructure Strategy presents a case to consider additional extension of the rail line further south to the Kwinana Triangle.

The Department of Transport is currently investigating the extension of the Kwinana Loop Railway, with a preferred rail alignment being considered. This project requires land assembly and the possibility of remediation works.

Australian Marine Complex intersection upgrades

In 2020, the Australian Marine Complex Strategic Infrastructure and Land Use Plan identified that congestion had become a significant issue on the external road network and at key intersections providing access to the Australian Marine Complex.

The site is reliant on road access for workforce access and operational purposes, with the requirements of each group substantially different. Employment generated trips are reliant on overall road network capacity while operational trips are more dependent on specific design elements, such as lane widths, turning pockets and priority movements with adequate sight lines and braking distances at intersections.

Intersection upgrades within the Australian Marine Complex were completed in May 2023, improving traffic flows and safety for the Australian Marine Complex workforce. These upgrades will also prepare the roads within the Australian Marine Complex for increased traffic and further upgrades that will take place in light of the AUKUS agreement, the 2024 National Defence Strategy and the 2024 Integrated Investment Program. Upgrades were made at the following intersections:

- » Cockburn Road / Quill Way (North)
- » Cockburn Road / Quill Way (South)



Western Trade Coast.
Credit: DevelopmentWA.



Maritime strategies and recommendations

Maritime Strategy 1: increase capacity, resilience and efficiency of port infrastructure.

Expand and upgrade port infrastructure to create opportunities for new industries and increased trade in the Western Trade Coast.

- M1.1** Deliver the Westport Program (navigation channel, breakwater terminal and tug harbour) to relocate container trade from Fremantle to Kwinana.
- M1.2** Construct a new bulk terminal to replace the ageing infrastructure of the Kwinana Bulk Terminal.
- M1.3** Expand the Kwinana Bulk Jetty with a dedicated bulk liquids berth to increase capacity for dry and liquid bulk trade.
- M1.4 Progress the development of the Australian Marine Complex Northern Common User Facility to increase capacity for ship-building, vessel maintenance and integrated heavy engineering and fabrication industries.
- M1.5 Complete the Australian Marine Complex South Expansion to provide capacity and flexibility for major construction projects.
- M1.6 Investigate methods to diversify and expand capacity for material offloading in the Australian Marine Complex, including establishing a common user Material Offloading Facility.

Increasing capacity, resilience and efficiency of port infrastructure

The Western Trade Coast comprises critical port infrastructure for both military use and commercial freight. The maritime areas within the Western Trade Coast currently serve as key connection points between local industries and global export markets.

Much of the port infrastructure within the Western Trade Coast is ageing and reaching capacity. To accommodate new industries (particularly the region's 4 target industries) and expand capacity for trade, these facilities will require significant expansions and upgrades. This includes the Kwinana Bulk Jetty and the Kwinana Bulk Terminal.

The Westport Program, which will establish a new container port facility in Kwinana, is a project of significant scale and complexity. The delivery phase of Westport requires strategic assessment of the environmental impacts to facilitate port construction and dredging in Cockburn Sound.

The preferred design for a container terminal and associated works were approved by the Western Australian Government in November 2023 with a business case including project timelines and costings to be finalised in 2024.

Bolded recommendations are critical enablers.

Westport and related port development

Fremantle Inner Harbour handles most of Western Australia's container trade however increased congestion on key roads is likely to restrict the future expansion of container trade at the Port of Fremantle. Westport is the Western Australian Government's long-term program to investigate, plan and build a port in Kwinana with integrated road and rail transport networks.

A preferred design and location for Westport has been established following 18 months of detailed design and consultation with key stakeholders.

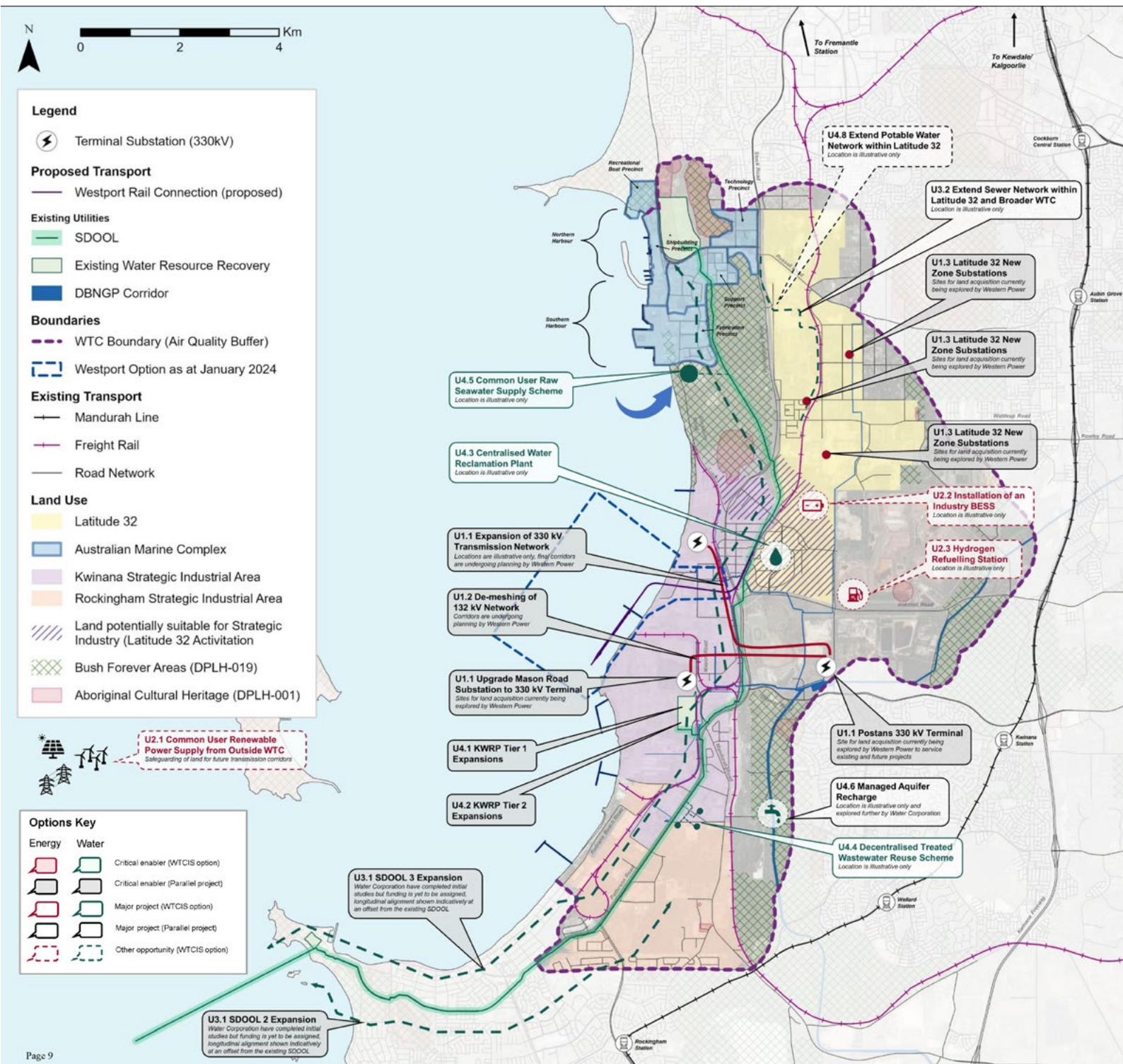
The preferred port design includes a container terminal adjacent to the shoreline of the current Kwinana Bulk Terminal among other infrastructure builds and upgrades including redevelopment of the Kwinana Bulk Terminal.

The preferred design will inform a business case which will outline detailed delivery timelines and costings. The Australian Government has committed to contributing \$33.5 million towards planning works for the development of Westport. These projects will include upgrading Anketell Road (west); widening Kwinana Freeway and Roe Highway; and freight rail duplication and level crossing removal.



Preferred design of Westport.
Credit: Westport.

Utilities strategies



Utilities Strategies Map.
Credit: Arup.

Utilities strategies and recommendations

Utilities Strategy 1: improve electricity availability	
Reinforce the transmission network to allow for increased uptake of clean energy and additional connection options for new tenants.	
U1.1	Progress development of the Tier 1 Western Power Upgrades, which represent the minimum infrastructure enhancements required to meet the electrical demands of known future tenants and existing customers seeking to expand operations.
U1.2	Plan the Tier 2 Western Power Upgrades (following successful completion of Tier 1) by demeshing the existing network to increase power supply capacity.
U1.3	Plan Tier 3 Western Power Upgrades which involves building transmission networks from future regional renewable energy hubs to the Western Trade Coast to meet future energy and decarbonisation demands.
U1.4	Develop a strategic plan to support the efficient connection of new tenants in the precinct.

Bolded recommendations are critical enablers.

Improving electricity availability

Electricity is a key enabler for industrial processing in the Western Trade Coast. The precinct connected to the South West Interconnected System (SWIS), the State’s main electricity grid.

The capacity of the 132 kilovolt electrical networks within the Western Trade Coast is constrained and requires augmentation. Western Power have progressed planning for solutions to bring more power to the industrial precinct through a combination of system upgrades and new infrastructure construction. The proposed upgrades for the Western Trade Coast have been split into 3 tiers that could be deployed in response to the future power requirements of tenants.

Land availability is a key challenge for Western Power. For the transmission cables, the more diverse the routes the better the reliability of the electrical network. However, the constrained land availability in the Western Trade Coast makes this difficult to achieve.

The recommendations under Utilities Strategy 1 outline the foundational infrastructure upgrades needed to allow renewable power to be brought into the Western Trade Coast from generation sources in regional areas.

Utilities Strategy 2: increase the Supply of Renewable Electricity

Support industries to decarbonise operations.

- U2.1 Facilitate common user renewable power generation and supply from regional areas to overcome land constraints within the Western Trade Coast.
- U2.2 Install an industry Battery Energy Storage System to store excess tenant-generated renewable energy for use during peak and overnight periods.
- U2.3 Construct a common user hydrogen fuel station to support the decarbonisation of heavy vehicles and commercial use of hydrogen.
- U2.4 Coordinate the development of joint power purchase agreements to provide greater financial and energy security for tenants.

Utilities Strategy 3: improve the capacity of the wastewater network

Improve amenity conditions and operational costs for local proponents.

- U3.1 **Expand the capacity of the Sepia Depression Ocean Outlet Landline to meet future increases in treated wastewater outflows.**
- U3.2 Extend the Water Corporation's sewer network throughout the Western Trade Coast to reduce reliance on private septic systems and support activation of Latitude 32.

Bolded recommendations are critical enablers.

Increasing renewable electricity supply

Utilities Strategy 2 focuses on the integration of renewable energy sources from regional areas, such as wind and solar, into the Western Trade Coast. This strategy and its associated recommendations will enable tenants to achieve their decarbonisation targets, and in turn support broader net zero goals outlined in the Western Australian Climate Policy.

Increasing renewable energy supply, particularly from outside the Western Trade Coast, would involve safeguarding land for transmission corridors into the precinct and supporting the development of renewable energy projects, including solar, and onshore and offshore wind. These options are less urgent than those outlined in Utilities Strategy 1, which are focussed on developing a future ready grid.

Improving the capacity of the wastewater network

Western Australia's State Infrastructure Strategy calls for a coordinated, resilient and integrated water sector including wastewater services that protect public health and the environment. Utilities Strategy 3 focuses on improving amenity conditions, with the expansion of the Sepia Depression Ocean Outlet Landline identified as a critical enabler. This is required to accommodate increased treated wastewater in the region as industry activity grows.

Utilities Strategy 4: increase availability of water supply options

Secure and deliver fit for purpose water supplies to industry.

- U4.1 Upgrade the Kwinana Water Reclamation Plant (Tier 1) to increase the availability of recycled water to current industries.**
- U4.2 Expand the Kwinana Water Reclamation Plant (Tier 2) and its associated distribution network beyond 26.7 megalitres per day**
- U4.3 Construct a new Water Reclamation Plant if the Tier 2 Kwinana Water Reclamation Plant expansion is not feasible.
- U4.4 Decentralise the treated wastewater reuse scheme to allow proponents to optimise the level of water treatment to suit their specific water quality needs.
- U4.5 Construct a common user raw seawater supply scheme to extract and distribute raw seawater directly to proponents.
- U4.6 Install aquifer recharge infrastructure to increase the volume of groundwater that could be allocated to industry.
- U4.7 Review and reallocate groundwater licenses to recoup unused entitlements to recover groundwater capacity for new tenants.
- U4.8 Extend Water Corporation's potable water network along key routes within Latitude 32 in advance of private development.

Bolded recommendations are critical enablers.



Rockingham strategic industrial area.
Credit: DevelopmentWA.

Increasing availability of water supply options

The supply of recycled water to proponents throughout the Western Trade Coast is limited by the capacity of the Kwinana Water Reclamation Plant (KWRP), the carrying capacity of the treated wastewater in the Sepia Depression Ocean Outfall Landline, and the extent of the recycled water network.

Utilities Strategy 4 seeks to provide discrete options for increasing water supply availability across the Western Trade Coast, with a particular focus on providing proponents with non-potable water for industrial use.

South West Interconnected System investment

The South West Interconnected System (SWIS) provides electricity to the majority of Western Australia's population, from Kalbarri to Kalgoorlie. In 2023, the Western Australian Government released the SWIS Demand Assessment charting electricity demand required to meet industry and government net zero commitments by 2050. The Demand Assessment maps the potential change in electricity demand over the next 20 years, considering the requirements of existing industrial users on the SWIS and potential growth in new industries like hydrogen and critical minerals. The SWIS Demand Assessment complements the 2020 Whole of System Plan by looking at the future growth

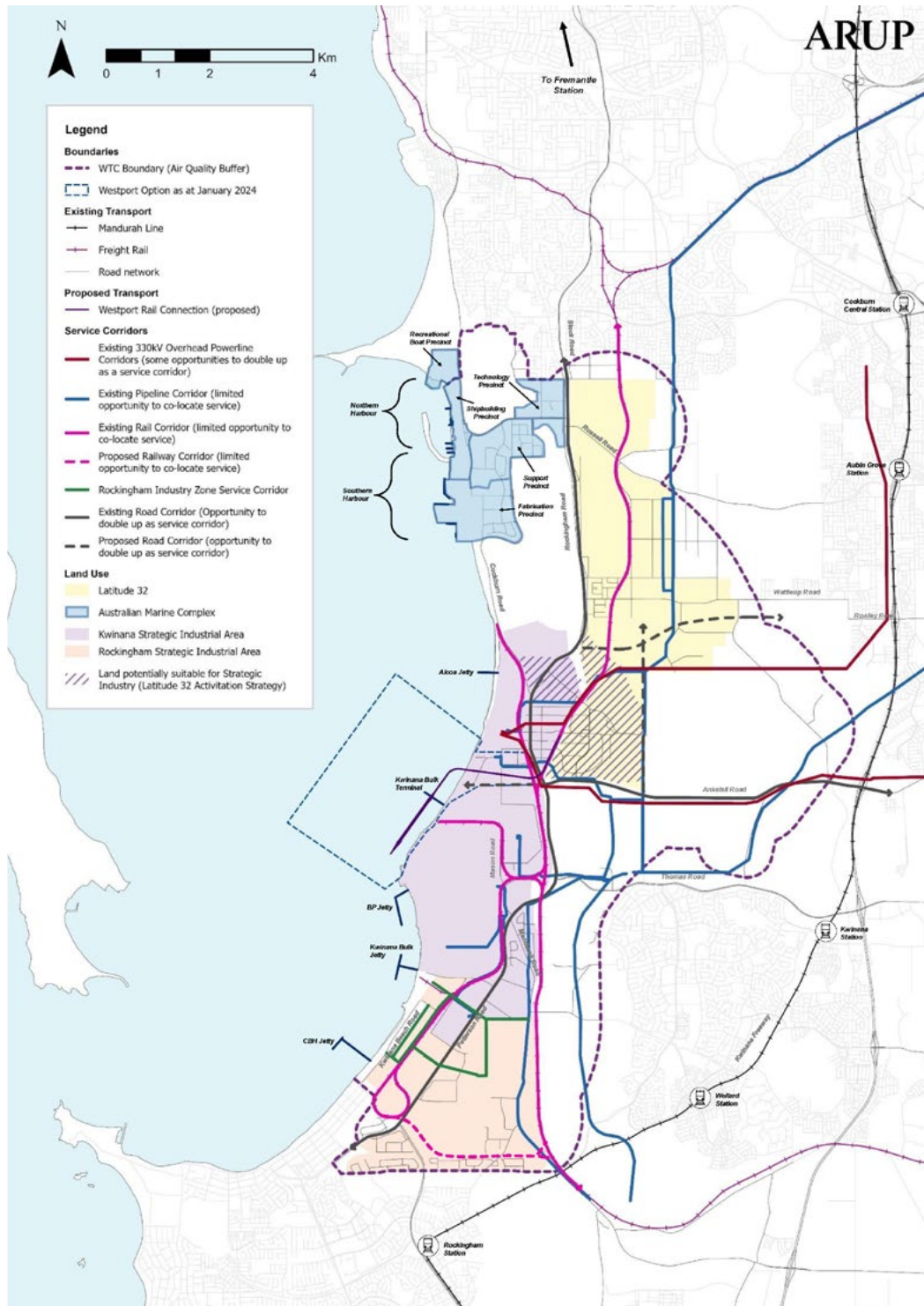
of electricity demand that is largely driven by industry's action on climate change.

As industry and government move towards net zero greenhouse gas emissions by 2050, it is expected demand for renewable energy supplied through the SWIS will increase significantly. An expansion of the grid and upgrades to the transmission network will permit greater quantities of wind and solar energy generation to be integrated into the SWIS. Since 2017, the Western Australian Government has invested \$5.4 billion into the energy transition, including new energy generation, transmission and storage infrastructure.



bp Workers.
Credit: bp.

Land use strategies



Land Use Strategies.
Credit: Arup.

Land use strategies and recommendations

Land Use Strategy 1: Latitude 32 activation strategy

Provide land assembly and acquisition options to unlock general and strategic industrial land within Latitude 32.

- L1.1 **Deliver key strategic road connections, with a focus on Rowley Road and the North South District Distributor Road to provide connectivity within Latitude 32.**
- L1.2 **Initiate an assessment of private landholdings to determine their potential for strategic industrial use, activating areas that could better serve economic and infrastructural objectives as a strategic industrial area.**
- L1.3 **Initiate an assessment of private landholdings to determine their potential for strategic industrial use, activating areas that could better serve economic and infrastructural objectives as a general industrial area.**
- L1.4 **Conduct an evaluation of sensitive land uses within Latitude 32, particularly to identify longstanding residential dwellings.**
- L1.5 **Investigate the assembly of additional land parcels outside Latitude 32 to increase the capacity of the strategic industrial area.**

Bolded recommendations are critical enablers.

Latitude 32 activation strategy

In exploring the activation of Latitude 32, 5 strategic recommendations have been identified, each with distinct objectives aimed at enhancing infrastructure and land utilisation within the precinct.

In line with Land Use Strategy 1, the Department of Energy and Economic Diversification and DevelopmentWA are progressing land assembly strategies in Latitude 32 for the purpose of creating a new strategic industrial area. This is supported by a \$125 million investment from the Western Australian Government through the new Strategic Industries Fund.



Land Use Strategy 2: establish and maintain a common user services corridor

Maintain existing and establish new corridors to facilitate existing and future servicing and synergies.

L2.1 Safeguard existing road, rail, and service corridors to maintain their integrity and functionality for current and future infrastructure projects.

L2.2 Identify and implement opportunities to formalise existing and establish new service corridors, to enable industrial synergies between Latitude 32 and the Rockingham Industry Zone and Kwinana Industrial Area.

Bolded recommendations are critical enablers.

Land Use Strategy 3: optimise land usage

Facilitate the growth of the Western Trade Coast in a coordinated manner.

L3.1 Evaluate and optimise road and utility connections into and between industrial precincts to facilitate industrial symbiosis.

Bolded recommendations are critical enablers.

Establishing and maintaining a common user services corridor

Delivering Land Use Strategy 2 requires a focus on land use governance solutions to ensure existing service corridor capacity is not diminished by the footprints of new projects or the demand for additional industrial land in the Western Trade Coast.

Optimising land usage

Land Use Strategy 3 focuses on the evaluation and connectivity of regional roads linking industrial precincts in the Western Trade Coast. It is designed to ensure that internal road networks are examined to identify critical connections and establish infrastructure corridors in line with zoning plans and existing pipelines.

Strategic Industries Fund

Western Australia is home to more than 10 strategic industrial areas spanning the entire State. There has been significant interest in access to industrial land across Western Australia, particularly for the development of green energy related projects. To incentivise and facilitate this investment from industry, the Western Australian Government announced the \$500 million Strategic Industries Fund in 2024. The Strategic Industries Fund will deliver common user and other enabling infrastructure in strategic industrial areas

across regional and metropolitan Western Australia to ensure they are primed for sustainable growth and development.

The Western Australian Government has announced initial investments through the Strategic Industries Fund, including:

- » \$125 million to open up new industrial land at Latitude 32 in Kwinana
- » \$20 million to develop general industrial land in Karratha and in the Peel region
- » \$20 million to unlock land in the Goldfields and South West regions



Construction in the Kwinana Strategic Industrial Area.
Credit: DevelopmentWA.

Policy and regulatory framework strategies



Workers in the Western Trade Coast.
Credit: bp.

Policy and regulatory framework strategy and recommendations

Policy and Regulatory Framework Strategy 1: streamline approval processes

To address policy and regulatory barriers to infrastructure development.

- P1.1 Identify and simplify approval pathways that are common to strategic industrial areas, and specifically the Western Trade Coast.
- P1.2 Empower regulatory agencies to act autonomously within their own approval mandates and responsibilities by minimising prerequisite approval requirements to facilitate parallel approval processing.
- P1.3 Engage in ongoing enhancement of approval streamlining and coordination, ensuring alignment with the Charter for the Council of Regulators to maintain a consistent regulatory environment.
- P1.4 Establish pre-determined approval conditions that address and facilitate the resolution of specific infrastructure development bottlenecks, particularly within defined pipeline corridors.
- P1.5 Initiate a government-led effort to identify and merge redundant approval procedures, remove duplication and strengthen collaboration among regulatory bodies, including local government authorities.
- P1.6 Develop a dynamic cross-government framework that categorises, prioritises, and tracks approval processes based on the complexity level, to ensure appropriate resources and expected approval timeframes are allocated based on approval complexity.
- P1.7 Introduce time-bound approval processes with real-time tracking that can be monitored by both regulators and proponents.
- P1.8 Actively enhance regulatory frameworks and practices (aligning with Streamline WA and related Approvals WA initiatives) and publish detailed flowcharts for approval pathways to improve information accessibility and understanding.

The Coordinator General and Council of Regulators

In 2023, the Western Australian Government announced an \$18 million investment to streamline approvals, reduce bottlenecks and allow for the rapid deployment of additional resources for critical approvals. This investment has supported the delivery of multiple recommendations from the Vogel-McFerran Review, including the creation of a Coordinator General role within the Department of Energy and Economic Diversification. As the Coordinator General role and team are established, they will coordinate efforts and facilitate approvals across government for priority projects.

The Coordinator General is working to prevent and resolve delays to priority projects and provides regular reports to the Council of Regulators on progress of major projects and opportunities to further regulatory reform.

The Council of Regulators has also recently endorsed a 12 month action plan to support parallel approvals and reduce regulatory duplication (among other initiatives) with progress and performance regularly reported to the Approvals Reform Ministerial Taskforce.

Streamlining approval processes

Policy and Regulatory Framework Strategy 1 aims to provide opportunities for streamlining approvals processes within the Western Trade Coast precinct. It seeks to do this by:

- » modifying frameworks to prioritise Western Trade Coast objectives
- » simplifying approval pathways
- » removing/minimising pre-requisites for negotiation or submission of approval
- » implementing continuous improvement strategies
- » providing comprehensive proponent education on policies and approvals relevant to development within the area.



Kwinana.
Credit: Fremantle Ports.

Next steps

Staging investment in the Western Trade Coast

Action is urgently needed to address the identified constraints that are hindering the current efficiency and future development potential of the Western Trade Coast. The recommendations identified and described in the Western Trade Coast Infrastructure Strategy provide a shortlist of possible government-led interventions that may be beneficial in addressing the constraints of the Western Trade Coast and supporting the delivery of the Global Advanced Industries Hub objectives.

These recommendations will inform government investigations and will be used to guide sequential investment in the Western Trade Coast. Investing in critical works now will enable the State to leverage the region's strategic strengths and cement Western Australia in the global supply chains of the world's emerging industries before these opportunities are lost.

A hub and spoke approach: Statewide activation of strategic industrial areas

In recognition of the role land and infrastructure play in investment attraction, Western Australia is actively developing strategic industrial areas around the State to support delivery of a diversified and resilient State economy. Strategic industrial areas are coordinated industrial precincts meticulously planned to support investment in downstream processing of Western Australia's resources and other strategic industrial activities.

Western Australia's strategic industrial areas have been designed for strategic and heavy industrial uses that generate large investment, employment and production value. The State's strategic industrial areas have been selected for their proximity to large resource projects and key infrastructure including roads, rail and ports. They will

play a key role in the development of new and emerging industries that will underpin the State's green energy transition. Complementary to strategic industrial areas, general industrial areas accommodate a broad range of industrial, service and storage activities, which should be isolated from residential and other sensitive land uses.

The Western Trade Coast Infrastructure Strategy forms part of a broader plan to develop Western Australia's strategic industrial areas as hubs for key priority sectors, driving decarbonisation and economic diversification. The process of developing and utilising the Western Trade Coast Infrastructure Strategy will form a blueprint for how the Western Australian Government can activate strategic industrial areas statewide.

Appendix A – Summary of Recommendations

Transport

- T1.1 Deliver a package of Rockingham Road Intersection Upgrades to alleviate significant north-south congestion.
- T1.2 Construct an extension off Rowley Road to facilitate east-west movements from the Kwinana Freeway.
- T1.3 Construct the North-South District Distributor Road to provide connectivity between Russell Road and Anketell Road and additional access to Latitude 32 developments.
- T1.4 Enable the Anketell-Thomas Road Freight Corridor to act as a key corridor between the future Westport terminal and intermodal precincts at Kewdale and Forrestfield.
- T1.5 Remove of rail level crossings by grade separation to improve safety and reduce road congestion caused by freight trains.
- T1.6 Install active transport infrastructure, such as principle shared paths, to improve alternative choices for commuters and address congestion.
- T1.7 Develop an integrated public transport strategy to enable universal access to the industrial area, and reduced congestion and carbon emissions from commuter activity.
- T2.1 Provide and operate a heavy vehicle staging area to improve safety, reduce road space requirements and alleviate congestion.
- T3.1 Duplicate the heavy rail network between Cockburn Triangle and the Westport Junction to increase freight capacity.
- T3.2 Construct an extension of the Kwinana Loop Railway (from its current balloon loop to the Kwinana-Mundijong Freight Railway) to streamline freight movements and reduce congestion.
- T3.3 Install passing loops to enable bi-directional freight movements to increase capacity without the need for full line duplication.
- T3.4 Improve the Cockburn Triangle configuration (through double tracking and grade-separating) to remove rail service bottlenecks.

Maritime

- M1.1 Deliver the Westport Program (navigation channel, breakwater terminal and tug harbour) to relocate container trade from Fremantle to Kwinana.

- M1.2 Construct a new bulk terminal to replace the ageing infrastructure of the Kwinana Bulk Terminal.
- M1.3 Expand the Kwinana Bulk Jetty with a dedicated bulk liquids berth to increase capacity for dry and liquid bulk trade.
- M1.4 Progress the development of the Australian Marine Complex Northern Common User Facility to increase capacity for integrated heavy engineering and fabrication industries.
- M1.5 Complete the Australian Marine Complex South Expansion to provide capacity and flexibility for major construction projects.
- M1.6 Investigate methods to diversify and expand capacity for material offloading in the Australian Marine Complex, including establishing a common user Material Offloading Facility.

Utilities

- U1.1 Execute the Tier 1 Western Power Upgrades, which represent the minimum infrastructure enhancements required to meet the electrical demands of known future tenants and existing customers seeking to expand operations.
- U1.2 Deliver the Tier 2 Western Power Upgrades (following successful completion of Tier 1) by de-meshing the existing network to increase power supply capacity.
- U1.3 Plan and construct Tier 3 Western Power Upgrades which involves building transmission networks from future regional renewable energy hubs to the Western Trade Coast to meet future energy and decarbonisation demands.
- U1.4 Develop a strategic plan to support the efficient connection of new tenants in the precinct.
- U2.1 Facilitate common user renewable power generation and supply from regional areas to overcome land constraints within the Western Trade Coast.
- U2.2 Install an industry Battery Energy Storage System to store excess tenant-generated renewable energy for use during peak and overnight periods.
- U2.3 Construct a common user hydrogen fuel station to support the decarbonisation of heavy vehicles and commercial use of hydrogen.

Bolded recommendations are critical enablers.

U2.4	Coordinate the development of joint power purchase agreements to provide greater financial and energy security for tenants.
U3.1	Expand the capacity of the Sepia Depression Ocean Outlet Landline to meet future increases in treated wastewater outflows.
U3.2	Extend the Water Corporation's sewer network throughout the Western Trade Coast to reduce reliance on private septic systems and support activation of Latitude 32.
U4.1	Upgrade the Kwinana Water Reclamation Plant (Tier 1) to increase the availability of recycled water to current industries.
U4.2	Expand the Kwinana Water Reclamation Plant (Tier 2) and its associated distribution network beyond 26.7 megalitres per day.
U4.3	Construct a new Water Reclamation Plant if the Tier 2 Kwinana Water Reclamation Plant expansion is not feasible.
U4.4	Decentralise the treated wastewater reuse scheme to allow proponents to optimise the level of water treatment to suit their specific water quality needs.
U4.5	Construct a common user raw seawater supply scheme to extract and distribute raw seawater directly to proponents.
U4.6	Install aquifer recharge infrastructure to increase the volume of groundwater that could be allocated to industry.
U4.7	Review and reallocate groundwater licenses to recoup unused entitlements to recover groundwater capacity for new tenants.
U4.8	Extend Water Corporation's potable water network along key routes within Latitude 32 in advance of private development.

Land

L1.1	Deliver key strategic road connections, with a focus on Rowley Road and the North South District Distributor Road to provide connectivity within Latitude 32.
L1.2	Initiate an assessment of private landholdings to determine their potential for strategic industrial use, activating areas that could better serve economic and infrastructural objectives as a strategic industrial area.
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L1.5	Investigate the assembly of additional land parcels outside Latitude 32 to increase the capacity of the strategic industrial area.
L2.1	Safeguard existing road, rail, and service corridors to maintain their integrity and functionality for current and future infrastructure projects.
L2.2	Identify and implement opportunities to formalise existing and establish new service corridors, to enable industrial synergies between Latitude 32 and the Rockingham Industry Zone and Kwinana Industrial Area.
L3.1	Evaluate and optimise road and utility connections into and between industrial precincts to facilitate industrial symbiosis.

Policy and regulatory frameworks

P1.1	Identify and simplify approval pathways that are common to strategic industrial area, and specifically the Western Trade Coast.
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Bolded recommendations are critical enablers.



Tianqi Lithium.
Credit: Gary Peters.

Disclaimer

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