The Perth Freight Transport Network Plan comprises two sections as outlined below:

**Part 1: Context**

**Introduction: Shaping Perth’s Future**

Outlines the need for the Perth Freight Transport Network Plan and describes the context for and scope of the Plan.

**Part 2: Strategic Priorities**

**Moving Perth’s Freight Task: Five Priorities for Action**

Articulates the Western Australia Government’s strategic priorities to manage future freight growth and address its impacts on the network over the next two decades and beyond:

1. A Generational Step-Up in Metropolitan Port Capacity

2. Moving More of Perth’s Freight Task by Rail

3. Expanding the Metropolitan Intermodal Terminal System

4. A High-Standard, High-Productivity Road Freight Network to Strengthen the Economy

5. Locking in Measures to Protect Transport Infrastructure Critical to Economic Prosperity

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- Priority Infrastructure

Glossary of Terms
PART 1: CONTEXT
Introduction: Shaping Perth’s Future
The Importance of Perth’s Freight Transport Network

The day-to-day functioning of Perth, and the State’s economy, is highly dependent on the effectiveness of the metropolitan freight transport network.

Freight transport costs flow directly on to the cost of everyday goods and services purchased by Western Australian communities and businesses. Efficient freight transport enables businesses across many sectors to consolidate warehousing facilities, reduce inventory costs, increase geographical market reach and create higher-value services and products that bring about major productivity improvements that support the broader economy.

The location of freight corridors and centres, and the manner in which goods move between them, can also have a significant impact on the amenity of local communities.

An effective metropolitan freight network underpins the capability to move goods efficiently and sustainably into, around and out of the State thereby making a substantial contribution to the overall prosperity and liveability of Western Australia.

For these reasons, it is in the interest of all Western Australians to ensure that Perth has an effective freight network that can continue to meet the growing freight task into the future.

The Role of the Freight Network in Western Australia’s Economy

- **Links metropolitan and regional goods with domestic and international markets** - An effective metropolitan freight network connects businesses to marketplaces across the State as well as interstate and overseas, generating wealth for Western Australia and attracting both investment and jobs.

- **Reduces costs and underpins productivity** - Transport costs flow directly onto the costs of everyday goods in supermarket and retail stores and affect the competitiveness of businesses. Savings from lower transaction costs, due to efficient freight networks, translate into lower cost goods which, in turn, flow through to productivity gains across the economy and can be a major contributor to economic growth and higher living standards over time.

- **Supports the efficient operation of the transport, warehousing and logistics sector** - The transport and logistics sector is an indispensable part of the Western Australian economy and one of the State’s largest employers. More importantly, the sector provides the goods, equipment and services that support other key industries across the economy, especially the retail, manufacturing, mining, oil and gas, and agriculture sectors.

The Need for a Freight Transport Network Plan for Perth

As Western Australia’s main international and interstate gateway, the State’s growth pressures are particularly evident in Perth.

As Perth’s population and economy continue to grow, so too does the size of its freight task, placing added pressures on existing transport infrastructure. A key role for the Government is to manage these pressures by providing clear strategic direction about how it will ensure an effective freight transport network to better manage Perth’s substantial freight task.

To gain the full advantage of the economic and social benefits associated with the provision of transport infrastructure and services, current and future freight transport needs must be identified and a plan that determines Perth’s freight transport priorities developed.

In this context, the Perth Freight Transport Network Plan outlines the Western Australian Government’s vision and strategic priorities to integrate and develop Perth’s freight network over the next two decades and beyond.
Plan Scoping Principles

The Perth Freight Transport Network Plan identifies the principal roads, railways, port and intermodal precincts which form the strategic components of Perth’s freight transport network and to which other freight corridors and freight centres, including local government roads, connect.

The Plan provides guidance and a coordinated approach to the ongoing integration and development of the future freight transport network for metropolitan Perth over the next two decades and beyond.

Key Scoping Principles

• Focusing on freight transport demands and priorities within the Perth and Peel regions, and with clear recognition of the significant public and private passenger transport demands on the network

• Covering the State Government’s major freight roads (State Roads), State-owned rail lines (privately operated by Brookfield Rail under lease arrangements) and metropolitan ports (port authority facilities) and major freight and logistics related land uses including intermodal terminals

• Providing clear direction about the major capital investment priorities required to develop Perth’s freight network over the next two decades and beyond thereby ensuring robust and transparent investment in network assets

• Articulating the Western Australian Government’s main roles in the development of the metropolitan freight transport network: planning and protecting the network, managing the network, building and maintaining the road network, and facilitating and selectively investing in strategic rail, intermodal terminal and port projects
Integrated Transport Planning
The Perth Freight Transport Network Plan complements the Western Australian Regional Freight Transport Network Plan, released by the State Government in 2013, which sets out the strategic planning, policy and infrastructure investments for Western Australia’s regional freight transport network over the next two decades. Together the plans form a long term freight infrastructure blueprint for the development of the State’s freight roads, freight rail lines and ports for metropolitan and regional Western Australia.

Integrated Land Use Planning

Development of the Perth Freight Transport Network Plan has been coordinated with the State Government’s spatial framework for the metropolitan area, Perth and Peel@3.5million.

The Plan also draws on a range of other policies and planning frameworks for strategic direction including:

- The long term State land use planning priorities articulated in the State Planning Strategy
- The Perth and Peel@3.5million report and associated planning frameworks for the Central, North-West, North-East and South Metropolitan Peel sub-regions
- State planning policies, guidelines and region schemes developed by the Western Australian Planning Commission, particularly the Metropolitan Region Scheme and Peel Region Scheme
- The extensive body of Local Government planning schemes including industrial structure plans

A Partnership Approach

Partnerships across government and industry are vital to ensure both an integrated approach to freight network planning, investment and management and to optimise the allocation of resources to improve the efficiency and capacity of the network.

Funding partnerships with the Commonwealth Government are particularly essential for the delivery of a number of freight transport projects articulated in the Plan. The Plan considers relevant Commonwealth Government freight policies and programs to ensure that State freight transport network projects support the development and performance of the National Land Transport Network.

The National Land Transport Network is an integrated network of land transport linkages of strategic national importance, which is funded by Commonwealth, State and Territory Governments. This network is based on national and inter-regional transport corridors including connections through urban areas, links to ports and airports, rail, road and intermodal connections that together are of critical importance to national and regional economic growth, development and connectivity.

Local Government also has a particularly important role in managing the operation of the transport network through its responsibilities for local area planning and the local road network which provides many of the important connections into the freight transport network.

The Western Australian Government recognises that Local Governments have, or are preparing, transport and strategic land use plans that address local freight transport issues, and will work with councils in the development and implementation of these plans, particularly in relation to the delivery of the Perth Freight Transport Network Plan.

The Western Australian Government recognises the importance of strong partnerships with private sector participants in the freight and logistics sector – the businesses that move freight – to ensure its initiatives are relevant, practical and founded on an accurate understanding of key supply chains.

Maintaining existing partnerships between the Government and industry, as well as enabling the creation of new commercial relationships, is pivotal to the Plan. The Plan reflects the Western Australian Government’s long standing practice of partnering with the private sector to deliver major infrastructure, particularly in relation to port and rail development. It will selectively explore opportunities to partner with the private sector to deliver key projects articulated in the Perth Freight Transport Network Plan on a case-by-case basis with the aim of maximising value for money outcomes for the State.
Managing Perth’s Future Freight Task - Five Priorities for Action

The metropolitan freight task will increase significantly in the future. This growth will place pressure on the transport network and presents a major challenge if Perth is to maintain a strong and competitive economy as well as uphold the quality of life aspirations that its community values.

Within this context, the Perth Freight Transport Network Plan sets out five strategic priorities the Government of Western Australia will focus on to improve freight efficiency, maximise productivity and better connect Western Australia and its businesses with local, national and international markets over the next two decades and beyond.

1. A Generational Step-Up in Metropolitan Port Capacity

Growth in the international container task, the most rapidly growing and valuable of port trades, will drive the need for a significant increase in metropolitan port capacity in the long term.

The ability of the port of Fremantle’s Inner Harbour to handle future growth in the container task will necessitate expanding capacity and improving efficiency to ensure that the port can continue to accommodate growing trade volumes and changing shipping requirements. The development of new container port facilities to service container demand will also be required.

The Western Australian Government has announced the divestment, through long term lease, of the assets and operations of the port of Fremantle. The future development of container facilities in the Outer Harbour in Cockburn Sound will be considered as part of the divestment process.

These major greenfield port facilities will be of strategic importance to the State presenting a unique opportunity to ensure the long term competitiveness of the international container supply chain by synchronising the planning of the new port facility, the land transport corridor and nearby industrial lands to release synergistic land uses. This integrated land use and transport planning approach is vital within the metropolitan area given that land for freight and logistics purposes is becoming increasingly limited.

2. Moving More of Perth’s Freight Task by Rail

As Perth grows the amount of freight to be transported and the increasing distances involved in its distribution will place significant pressure on road transport infrastructure, congestion and road safety. It will be necessary to ensure that an appropriate balance is struck between freight efficiency and the potential amenity and safety impacts associated with these movements.

Most of the freight moved within the metropolitan area is by road transport because of the relatively short distances involved and the relatively small and fragmented nature of the freight movements, together with the flexibility of door-to-door pick-up and delivery. Although rail has been historically the most efficient modal choice for moving bulk product and containers over long distances, it is also increasingly being recognised as an alternative for shorter-haul container freight movement with benefits such as reducing congestion, improving amenity and enhancing road safety.

The Government sees a growing role for rail in providing a viable alternative to road transport for suitable freight tasks in strategic corridors, thereby relieving pressure on the road network. The Perth Freight Transport Network Plan sets out the future infrastructure upgrades and operational approaches needed to achieve a better balance between metropolitan road and rail freight transport and ensure a strong future for rail over the next two decades and beyond.
3. Expanding the Metropolitan Intermodal Terminal System

Intermodal terminals play an important role in facilitating efficient movement of freight and in helping to achieve broader government objectives such as encouraging greater use of rail for freight transport. The Western Australian Government is committing, through the Perth Freight Transport Network Plan, to take a lead role in shaping the metropolitan freight network by actively planning for the development and growth of a select number of high capacity intermodal terminals strategically located across the metropolitan area.

In terms of interstate gateways to support domestic trade, emphasis is on facilitating the expansion of existing interstate intermodal terminal capacity within the Kewdale and Forrestfield precincts to meet growth in the interstate rail task. In terms of international gateways to support international trade, emphasis is on planning for additional intermodal facilities to accommodate growth in the international container market.

This underlying strategy will mitigate the impacts of freight activity on the community and the environment by relieving congestion pressures on the road transport network. It will also support the use of high productivity vehicles between intermodal precincts on a designated road freight network, and as volumes grow, also support growth in metropolitan rail freight, contributing to further overall reductions in fuel use and emissions per unit of freight moved.

4. A High-Standard, High-Productivity Road Freight Network to Strengthen the Economy

Due to its geographic isolation, primary economy and vast distances, Perth depends heavily on the efficient movement of freight in and around the city. To achieve this outcome, the Perth Freight Transport Network Plan focuses more concentrated patterns of freight movements on higher capacity routes, carried by larger vehicles, while acknowledging the important role played by light commercial vehicles and the large number of trips made by these vehicles.

Although there are points in the network where congestion creates inefficiencies for freight, which will require investment to rectify, there is significant potential to improve the productivity of the network through policy, regulatory or technological interventions. For example, Western Australia has led the way with the introduction of larger combination trucks on the road network over the last few decades. These vehicles are safer and perform better environmentally than smaller semi-trailers and, at the same time deliver major productivity benefits for operators and customers.

Most of Perth’s freight task is carried on the road network. This will continue to be the case as the majority of freight movements, particularly in urban areas, cannot be readily serviced by rail. In addition to measures to improve access to the network for high productivity freight vehicles, a number of road network enhancements are necessary to maintain freight efficiency in the face of growth from general traffic as well as the freight task.

The Government has identified the Perth Freight Link project as a priority. Once completed it will deliver transport improvements and enduring productivity benefits.

A key element of the Perth Freight Transport Network Plan is to look beyond these projects to identify significant road freight network development priorities over the next two decades and beyond. This includes a comprehensive road freight grid to service transformational industrial land and port development along Perth’s south-west coastline including the future container port facilities in the Outer Harbour and the upgrade and southern extension of Tonkin Highway to create a heavy vehicle outer bypass of the city in the longer term.

5. Locking in Measures to Protect Transport Infrastructure Critical to Economic Prosperity

In developing the Perth Freight Transport Network Plan, the Western Australian Government has given priority to planning for future freight growth. While this planning aims to ensure the efficient movement of freight, it must take into account environmental and social impacts on Perth’s communities.

A critical focus of the Perth Freight Transport Network Plan is to identify key measures to minimise the impact of heavy freight movements on communities and to integrate land use and transport solutions to minimise incompatible development and encroachment on freight corridors and activity centres as the freight task grows.

For these reasons, the Government, through the Western Australian Planning Commission, will review the planning provisions affecting the freight network and make improvements to the State’s planning system to ensure that land use and development decisions are consistent with the objectives of the Perth Freight Transport Network Plan.
PART 2:
STRATEGIC PRIORITIES
Five Priorities for Action

1. A Generational Step-Up in Metropolitan Port Capacity
2. Moving More of Perth’s Freight Task by Rail
3. Expanding the Metropolitan Intermodal Terminal System
4. A High-Standard, High-Productivity Road Freight Network to Strengthen the Economy
5. Locking in Measures to Protect Transport Infrastructure Critical to Economic Prosperity

Image courtesy of Fremantle Port Authority
A Generational Step-Up in Metropolitan Port Capacity
Developing effective and sustainable port growth plans

Highlights
The Perth Freight Transport Network Plan brings together the Government of Western Australia’s metropolitan port planning, policy and infrastructure investments to enable efficient operations and growth at Perth’s Inner and Outer Harbours over the next two decades and beyond.

A critical focus of the Perth Freight Transport Network Plan is the need for an efficient Inner Harbour over the long term. The Plan also provides for a future container and general cargo port development in the Outer Harbour in Cockburn Sound. The future container and general cargo port development in the Outer Harbour will operate in an industrial environment, where major industrial developments will interface with the new port and its principal access corridors. This important planning principle will be reflected in the land use planning supporting the future port development.

Perth Freight Link and the Rowley Road Transport Corridor will be the State’s principal road and rail access routes supporting the container port facilities and an integral part of the Government’s vision for the development of the metropolitan freight transport network.

The Latitude 32 Industry Zone represents one of Western Australia’s largest industrial developments. The Industry Zone presents a strategic opportunity to synchronise port and industrial development and release synergistic land uses which will become increasingly important within the metropolitan area as land for freight and logistics purposes is limited.

Key Supporting Actions

Enabling the Inner Harbour to Reach its Optimum Operating Capacity

- The divestment of the assets and operations of the port of Fremantle through a long term lease
- Roe 8 and the Fremantle Tunnel will ensure long term access to both the current and future planned container terminals. Roe 8 will serve the Inner Harbour, the existing Kwinana Industrial Area and the future Outer Harbour container terminal
- North Quay to operate over the longer term at its optimum operating capacity with additional trade being handled by new container and general cargo port facilities in the Outer Harbour

Facilitating Development of Bulk Terminal Capacity in the Outer Harbour

- Inclusion of the Kwinana Bulk Terminal and the Kwinana Bulk Jetty in the port divestment to broaden the size and appeal of the transaction to investors

Planning Future Port Facilities in the Outer Harbour

- Container and general cargo port development in the Outer Harbour (Cockburn Sound) to be serviced by the Rowley Road Transport Corridor and integrated with an intermodal logistics centre at Latitude 32 Industry Zone
A Growing City Dependent on International Trade

Overview

The State’s metropolitan port is owned by the Government of Western Australia and is currently managed by the Fremantle Port Authority. Covering approximately 220 hectares of land and 38,300 hectares of water, Fremantle Port Authority’s area of responsibility is extensive. It operates from two geographic locations: the Inner Harbour at the mouth of the Swan River in Fremantle and the Outer Harbour, approximately 20 kilometres to the south at Kwinana.

The Inner Harbour handles almost all the container trade for Western Australia. It also provides facilities for motor vehicle imports, other general cargo trades, cruise ships and visiting naval vessels. The Outer Harbour is one of Australia’s major bulk cargo ports handling grain, petroleum, liquid petroleum gas, alumina, mineral sands, fertilisers, sulphur, iron ore and other bulk commodities.

Most of the container trade associated with the Inner Harbour has an origin or destination in the metropolitan area whilst most of the bulk trade associated with the Outer Harbour has an origin or a destination in the State’s regions.

The port of Fremantle is vitally important transport infrastructure, supporting investment, economic growth and contributing to the local, State and national economy. Together, the Inner and Outer Harbours currently handle around 72.5 per cent of Western Australia’s seaborne imports and around 10.6 per cent of seaborne exports by value. These trades currently amount to 35.8 million mass tonnes per annum and are valued at more than $28 billion annually.
Developing Effective and Sustainable Growth Plans for the Inner and Outer Harbours

As Western Australia’s population and economy continue to grow strongly, so too does the size of its freight task, placing added pressures on portside as well as landside transport infrastructure. As the State’s main population centre, growth pressures are particularly evident in Perth. The Perth and Peel regions are currently home to more than two million people and this is projected to reach 3.5 million by 2050. This population growth trend is expected to underpin an international container task increase from around 740,000 TEUs in 2014-15 to 1.25 million TEUs per annum by around 2030 and 2.2 million TEUs per annum by around 2050 – a substantial, more than threefold increase in demand over that time period.

A critical focus of the Perth Freight Transport Network Plan is to provide clear strategic direction about how the Government will manage these growth pressures to ensure an effective international trade gateway into the future.

Additional container port facilities to serve the metropolitan area and the State’s regions will be required to complement the Inner Harbour. Future container port facilities located in the Outer Harbour (Cockburn Sound) will meet this critical infrastructure need.

Supported by the Perth Freight Link project and recent investment in the railway network, the divestment of the assets and operations of the port of Fremantle, and provision for major container port development, will catalyse a number of related infrastructure investments of strategic importance to the State and national economy.

Public and private sector investment will be dependent on future trade and port growth projections, the provision of metropolitan port capacity and use of port lands, as well as road and rail access and strategic integration with major industrial lands. The Perth Freight Transport Network Plan articulates these strategic directions.
Enabling the Inner Harbour to Reach its Optimum Operating Capacity

The Inner Harbour has three main port operational areas:

- **North Quay** - located on the north side of the Swan River. North Quay includes 1,290 metres of berth used for container terminal operations and four general cargo berths used for both break-bulk and liquid bulk cargoes. The quay is directly linked to the rail and intermodal terminal networks via the North Quay Rail Terminal.

- **Victoria Quay** - located on the south side of the Swan River. Victoria Quay has a continuous wharf-face of 1,290 metres with a total of six common-user berths used for port operations. The quay is used mainly to accommodate the motor vehicle import trade. Agricultural equipment and other machinery are variously imported through Victoria Quay and North Quay, although this trade is mostly via Victoria Quay. Victoria Quay also hosts cruise ships and naval visits and is the location of the heritage-listed Fremantle Passenger Terminal.

- **Rous Head** - located adjacent to North Quay. The Rous Head Industrial Estate provides industrial land specifically allocated to activities that support, or are complementary to, the efficient operation of the port.

Major Government investments have been made at the Inner Harbour in recent years to extend its capacity and ensure it remains internationally competitive. Investments include harbour deepening and berth upgrades to increase port capacity as well as land developments to expand the port’s footprint and optimise use of port lands. This will allow the port to accommodate larger, more efficient ships contributing to lower freight costs for Western Australia’s communities and businesses. The Perth Freight Link investment will also transform the productivity of the land transport linkages.

Recent Major Investments in Port Infrastructure

**Inner Harbour Deepening and Associated Projects**

The most noteworthy of recent investments has been the Inner Harbour deepening and berth works project which began in 2009 and was completed in 2011. This $250 million project, one of the largest undertaken at the port since the opening of Fremantle Harbour in 1897, will contribute significantly to the long term sustainability of the Inner Harbour as a major gateway for national and international trade. This project involved:

- Deepening the Inner Harbour and approach channels to a depth of 14.7 metres to allow for 14 metre draft vessels to access the port at all tides.

- Upgrading a number of berths at North Quay to increase container handling capability including:
  - Upgrading Berths 4 to 9 to support larger container vessels and cranes and to protect the quay wall from damage by berthing vessels
  - Reconstructing Berth 10 to provide an additional 180 metres of heavy-duty wharf space for the port’s container trade.

- An additional 27 hectares of land reclaimed at the Rous Head Industrial Estate as a result of the Inner Harbour deepening. This increased the land available for port related activities, mainly to support container trade.

Important features of the development include a new truck marshalling area with fuelling facilities and amenities to assist traffic flow within the area and a new road along the seawall to improve public safety and access to North Mole. Another innovation is the automated call-up system for trucks waiting to enter the port’s container terminals. This has reduced congestion caused by queuing, particularly at peak periods.

The development also includes leased areas for container storage, quarantine service facilities and short term warehousing to ensure the optimisation of the container logistics chain connecting the landside and marine transport networks.
Future Outlook – Inner Harbour Container Trade

Overview

Container trade is handled at North Quay through two container terminals currently operated by DP World and Patrick. They operate a total of seven berths under two separate leases which were granted in 1996. One terminal lease for Berths 4, 5 and 6 has a quay length of 526 metres and an area of 15 hectares. The other terminal lease for Berths 7, 8, 9 and 10 has a quay length of 766 metres and an area of around 22 hectares. As currently configured, there are eight quay cranes located across the two terminals.

Given improvements in technology, operational efficiencies and transport linkages, the Inner Harbour is expected to have a container capacity in the vicinity of two million TEUs per annum, with potential for even greater capacity through further efficiency measures in the future.

Future Trade and Development

The port of Fremantle’s trade in containers has performed strongly in recent years. In 2014-15, the container terminals handled over 740,000 TEUs carried via 511 container vessel visits.

Significant growth is expected in Western Australia’s container trade in the future with the total task forecast to grow to around 1.2 million TEUs per annum by around 2030.

In addition to improvements to, and further investment in the road and rail transport network supporting access to and from the port, there are a number of other strategies that can maximise the Inner Harbour’s container handling capacity. These include:

- Buffers - the Government recognises the vital importance of protecting port operations and ensuring that existing buffering around ports is retained and strengthened. This is particularly important at the Inner Harbour in view of its location in the heart of Fremantle and projected strong growth in trade.
- Land use planning - with a number of existing industries planning to vacate the industrial site to the north of Tydeman Road, land use planning for the area will need to consider the port’s future trade needs including ensuring that development in areas close to key port facilities is compatible with the 24-hour operational needs of the port.

- Container terminal leases - when the current leases expire there may be an opportunity to structure future agreements with clear performance criteria aimed at improving the efficiency of the international container supply chain and minimising impacts within and outside the port gate. This could include a requirement for container terminal operators to work proactively with other supply chain participants to increase rail mode share and manage truck queuing and congestion.

This is also an opportunity for greater investment by terminal operators to adopt container handling technology that enhances productivity, as seen in other domestic and international ports.
Future Outlook - Other Inner Harbour Trade

Overview

Other trades through the Inner Harbour have an impact on the freight network, although to a lesser degree than the container trade. These include the import of iron and steel, agricultural and other machinery and motor vehicles and the export of scrap metal and livestock.

Future Trade and Development

Imports of agricultural equipment and other machinery are expected to increase over the next two decades.

Recent strong growth in automotive imports has been driven by Western Australia’s fast growing economy and population. More than 101,000 vehicles were imported into Western Australia in 2014-15, with most trade originating in Japan, Thailand and South Korea. Estimates of future growth indicate that volumes will continue to increase over the next two decades, although growth rates will depend on a number of factors including economic growth, population growth and vehicle ownership.

Most other trades are expected to increase steadily over the next two decades.

Freight growth and the overall trend towards larger ship sizes will translate into larger cargo transfers per ship visit and therefore a significant increase in peak periods of high intensity landside transport operations. This will underpin the need for larger lay-down areas for handling, storing and distribution.

There will be a need to consider sufficient storage facilities to cater for the expected growth in the motor vehicle trade and to handle larger shipments of up to 6,000 vehicles that are emerging as ship sizes increase.

Victoria Quay is the preferred berthing area for car carriers, and the roll-on roll-off trade generally, as the Quay is used for parking and pre-delivery inspection services. A dedicated roll-on roll-off terminal at Berths E to H is an opportunity to service this market. It will facilitate the port’s ongoing commitment to the imported motor vehicle trade and enable the roll-on roll-off trade to be extended and consolidated on Victoria Quay.

Figure 2: Forecast iron and steel import volumes (Source: Fremantle Port Authority)

Figure 3: Forecast agricultural and other machinery import volumes (Source: Fremantle Port Authority)

Figure 4: Forecast motor vehicle import volumes (Source: Fremantle Port Authority)
Facilitating Development of Bulk Terminal Capacity in the Outer Harbour

The Outer Harbour is located within the Western Trade Coast, a swathe of coastal land between Munster and Rockingham where some of Western Australia’s most important heavy industrial assets are located. This includes the Kwinana Industrial Area, Australian Marine Complex, Latitude 32 Industry Zone and Rockingham Industry Zone.

The Outer Harbour hosts a range of port authority and privately owned and operated deep-water port facilities. These comprise:

- Kwinana Bulk Terminal currently owned and operated by the Fremantle Port Authority
- Kwinana Bulk Jetty currently owned and operated by the Fremantle Port Authority
- Three jetties operated by private companies: Alcoa, BP and Co-Operative Bulk Handling, generally under Agreement Acts and other Acts with the State.

The Government of Western Australia, while not directly involved in the management of these private port facilities, has a key role to play in ensuring they are effectively connected to the broader freight network. As such, the land freight task generated by these industries is taken into account in the Perth Freight Transport Network Plan.

The Government currently has a more direct role in planning and facilitating the delivery of key infrastructure and services at the Kwinana Bulk Terminal and the Kwinana Bulk Jetty.

The Kwinana Bulk Terminal and the Kwinana Bulk Jetty are included in the planned scope of the divestment of the assets and operations of the port of Fremantle. The new private leaseholder will therefore take over the primary responsibility for these facilities.

Future Outlook - Kwinana Bulk Terminal

Overview

The Kwinana Bulk Terminal was built in the 1950s and comprises two berths, Kwinana Bulk Berth 1 and Kwinana Bulk Berth 2, as well as an area of adjacent land. The southern berth, Kwinana Bulk Berth 2, is operational whereas the northern berth, Kwinana Bulk Berth 1, is not operational having been decommissioned in the late 1980s.

The Kwinana Bulk Terminal currently exports and imports a range of bulk cargoes including iron ore, cement clinker and nut coke. It is serviced by a rail terminal which currently supports iron ore exports.

Future Trade and Development

Increase in trade through the Kwinana Bulk Terminal will be driven in the short to medium term by exports including iron ore and in the medium to long term by imports.

The Fremantle Port Authority has made significant investments in the Kwinana Bulk Terminal in recent years to upgrade the terminal infrastructure and service capability. A commercial agreement was signed in May 2011 with Mineral Resources Limited to export 4.4 million tonnes of iron ore annually through the Kwinana Bulk Terminal. The ore is railed to the Kwinana Bulk Terminal from the Carina mine in the central Yilgarn. The first shipment of ore was exported in November 2011 and since this time the terminal has undergone a $44 million upgrade to its export infrastructure.

Infrastructure works to facilitate this trade included upgrading the rail infrastructure to accept standard gauge rolling stock, upgrading the train unloading system, installing new and upgraded conveyors, a new product sample and weigh station and stacker, upgrading the ship loader and providing electrical and water services.

As such, Kwinana Bulk Berth 2 is relatively well-placed to handle future trade under a base case forecast. A future upgrade of Kwinana Bulk Berth 2 and its rail handling infrastructure possibly will be required to enhance the terminal’s capability to efficiently handle major increases in trade volumes.
Future Outlook - Kwinana Bulk Jetty

Overview
The Kwinana Bulk Jetty comprises two berths, Kwinana Bulk Berth 3 and Kwinana Bulk Berth 4. Both berths are used for the import of various bulk commodities. This includes fertiliser, sulphur, slag residue, ammonia and caustic soda.

The Kwinana Bulk Jetty is serviced by a rail terminal and is connected to the freight rail network south of the connection that serves the Kwinana Bulk Terminal.

Future Trade and Development
There has been strong growth in both dry and liquid bulk trades over the past decade. Future bulk trade forecasts for the Kwinana Bulk Jetty indicate that the trade is expected to remain relatively constant over the next two decades.

There are opportunities to further the development of the Kwinana Bulk Jetty to include expansion of the Jetty and an additional terminal facility.

Figure 6: Forecast bulk import volumes through the Kwinana Bulk Jetty (Source: Fremantle Port Authority)
The State Government is committed to ensuring that Western Australia has a robust and flexible long term strategy to meet future growth in the international container task. To provide for demand beyond the capacity limits of the port of Fremantle's Inner Harbour, it will facilitate planning and approvals for future container port facilities in the Outer Harbour to handle future trade volumes.

Significant research over many years has identified the coastal area between the Naval Base and James Point in Cockburn Sound as a suitable location for additional container port facilities. Most recently, the Western Australian Planning Commission undertook a rigorous planning assessment of a range of options for new container port facilities in the Outer Harbour.

The Perth Freight Transport Network Plan provides for a future container and general cargo port development in the Outer Harbour as the preferred location for future container port facilities to serve Western Australia. Container port facilities in the Outer Harbour are well placed in that:

- The location is close to key consumer as well as industrial markets including the Western Trade Coast area
- The direct deep-water access and proximity to existing major shipping lanes will minimise dredging of the approach channels
- The location is already within a commercially operational trading port area with existing connections nearby to the land freight network

The container port facilities will operate in an industrial environment, where major industrial developments will interface with the development and its principal transport corridor. This important planning principle will be reflected in the land use planning overlays supporting the development.

The aim is to plan for container port facilities capable of handling at least 3 million TEUs per annum, with staged development.

This, combined with the ongoing capacity at the Inner Harbour, will be sufficient to accommodate the long term container trade demands of Western Australia well beyond 2050.

Planning Transport Access between the Future Container and General Cargo Port Development in the Outer Harbour and the Metropolitan Freight Network

The provision of high standard freight corridors to connect the future port development in the Outer Harbour to the broader metropolitan network is of particular importance in the provision of an integrated freight transport network. The Perth Freight Link investment with the extension of Roe Highway will be a critical link for both the Inner and Outer Harbours.

A critical focus of the Perth Freight Transport Network Plan is to give prominence to the Rowley Road Transport Corridor as the principal access route supporting the container port development in the Outer Harbour and an integral part of the Western Australian Government’s long term vision for the development of the metropolitan freight transport network. Accordingly, Rowley Road is proposed to form part of Western Australia’s proposed future National Land Transport Network.

The transport corridor can accommodate both road and rail linkages to the future port.

Road Access

The scale and scope of the port development along with further industrial lands development within the Western Trade Coast will profoundly influence the broader metropolitan road freight network in the future. These developments will underpin the need for a number of new or upgraded east-west links across the south-west and inner south-east metropolitan sub-regions, including the upgrade of the existing Rowley Road (east of the Kwinana Freeway), MUNDIJONG ROAD and ANKETELL ROAD, and the construction of a major new north-south link, the FREMANTLE ROCKINGHAM CONTROLLED ACCESS HIGHWAY.

Rowley Road (west of the Kwinana Freeway) will be extended and upgraded to provide an 8 kilometre four-lane dual carriageway to the coast. A portion of the road will go through the Latitude 32 Industry Zone. The new road reserve will be a Primary Regional Road reserve in the Metropolitan Region Scheme. It will have controlled access status and incorporate interchanges or grade separated junctions at major intersections.

Stock Road will also be upgraded to full freeway standard south of the Roe Highway. It will be aligned into the future Fremantle Rockingham Controlled Access Highway to provide a linkage to the Kwinana Freeway via MUNDIJONG ROAD at the southern end and the FREMANTLE INNER HARBOUR at the northern end via the FREMANTLE TUNNEL.
Rail Access

Rail access to the future container port facilities is planned to connect to the existing Cockburn to Kwinana freight mainline through the Latitude 32 Industry Zone. The rail alignment will follow the western section of the road alignment within the Rowley Road Transport Corridor.

Planning for the rail alignment will allow for a dual-track connection and double-stacked containers. Operational effectiveness will be ensured by a 24-hour operation.

The provision for dual-gauge rail, together with efficient interfaces for long, double-stacked trains at the port and the Latitude 32 Industry Zone will ensure interoperability between the existing rail network and the future rail link to the port. The interface between the first inland passing loop, or dual-track line section, will be critical in determining the effectiveness of port rail terminal operations should the rail line into the port initially be constructed as a single line.

The transport planning will ensure a strong role for rail by minimising container handling impost and enabling the efficient transfer of containers from the future container facilities to an integrated system of metropolitan intermodal terminals.

Latitude 32 Industry Zone

There are substantial parcels of industrial land allocated primarily outside the designated port area, within the Western Trade Coast, where there is potential to optimise port activities, including container management functions.

The Perth international container market is a net receiver of freight with loaded import containers representing the largest proportion. Around 50 per cent of the export containers are empty for return to origin markets. As such, there is a critical need for the port and associated intermodal terminals to provide sufficient capacity to manage the empty container task as overall container demand grows.

Strategic and master planning activities will identify container storage and management opportunities and establish grounds for enhanced connectivity and appropriate planning overlays outside the port environs to ensure the long term competitiveness of the container port facilities. Latitude 32 Industry Zone represents one of Western Australia’s largest industrial developments. As a visionary project, it highlights the State’s commitment to large scale development specifically designed to meet the medium and long term demand for industrial land in Perth.

The Industry Zone presents a strategic opportunity to synchronise port and industrial developments and release synergistic land uses which will become increasingly important within the metropolitan area as land for freight and logistics purposes is limited.