



Port of Melbourne Corporation

August 2009

Port Development Strategy
2035 Vision





A message from the Minister

As the hub of a logistics network which extends across south-eastern Australia, the Port of Melbourne is Australia's largest container and general cargo port and a crucial supply chain interface for Victoria.

Handling around 36% of the nation's container trade, the Port of Melbourne is one of Victoria's key economic assets and supports up to 14,000 full-time jobs.

This Port Development Strategy builds on the Draft Port Development Plan released publicly in August 2006 and provides a conceptual framework for efficiently handling the long-term freight task at the Port of Melbourne which is set to quadruple to around 8 million TEU (twenty-foot equivalent units) by 2035.

Driven largely by Victoria's population growth, this expected increased trade will need to be accommodated within a limited area which is currently around 510 hectares. The Port Development Strategy seeks to utilise this land as efficiently as possible to cater for increased container volumes and other cargo types.

By outlining the port's plans to 2035, this strategic vision also provides the scope for future infrastructure investment to service the vast array of port customers, stakeholders and the broader community in the port's urban context.

With the Channel Deepening Project well advanced as major bay dredging concludes and other works are set for completion by the end of the year, the marine infrastructure servicing the Port of Melbourne is being addressed by deepening parts of the shipping channels. This project is being delivered within a strict set of environmental guidelines and demonstrates that infrastructure development and preservation of the marine environment are not mutually exclusive and that social and environmental issues can be managed sensitively and successfully.

This same rigour will apply to the Port of Melbourne's landside developments, particularly the need to prepare for the possibility of additional container handling capacity at Webb Dock as I previously outlined in the *Freight Futures Strategy* released in December 2008.

Subject to the relevant approvals, this major development will complement the Swanson Dock container terminals and bring the benefits of competition and certainty to Melbourne's container handling.

By adopting this long-term planning approach outlined in this strategic vision, the Port of Melbourne is well positioned to build on its competitive strengths and provide added value to port customers and the Victorian community.



A handwritten signature in black ink, appearing to read 'Tim Pallas'.

Mr Tim Pallas MP

Minister for Roads and Ports and Major Projects

Disclaimer

This document has been prepared for Port of Melbourne Corporation's planning purposes only.

No reliance may be placed by any person on Port of Melbourne Corporation meeting the strategic objectives or otherwise taking any action outlined in the document. Any potential infrastructure development identified in this document will be subject to financial viability, technical feasibility and environmental and planning considerations that will vary over time.

No commercial reliance may be placed on the trade forecasts or any other forecasts or projects referred to in this document.

Persons wishing to obtain further information on this document should contact Corporate Relations on +61 3 96831358.

Acknowledgements

Port of Melbourne Corporation would like to recognise the contributions made by its customers and stakeholders in formulating the development vision for the Port of Melbourne.

Published by Port of Melbourne Corporation
Level 4, 530 Collins Street, Melbourne Vic 3000

Also published on www.portofmelbourne.com



Contents

1	Introduction	1
2	The Port of Melbourne today	2
3	The Port Development Strategy.....	4
4	Community engagement and consultation.....	8
5	Changes and challenges	9
6	Looking to 2035: Forecasts for growth in trade.....	11
7	Looking to 2035: Future berth and land needs	14
8	Looking to 2035: Future development of Port precincts	19
9	Port Development Strategy.....	23
10	Port system planning	27
11	Funding the Port Development Strategy.....	38





RATED CAPACITY - 85t UNDER SPREADER CLASS CR
RATED CAPACITY - 75t UNDER HEAVY LIFT BEAM CLASS C3

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CAUTION
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1 Introduction

The Port of Melbourne is one of Victoria's most important assets. As Australia's leading container port and the linchpin in Victoria's port freight transport network, the Port of Melbourne is critical to Victoria's future economic growth and development.

The Port of Melbourne handles around 36% of the nation's container trade and is the primary mainland port for the transfer of Tasmanian cargo to and from domestic and international markets.

Ranked 46 of the world's container ports, the Port of Melbourne is Australia's international trading gateway for over forty shipping lines providing access to over 300 international markets.

A key driver for economic growth, in 2006 the port generated a total economic output of \$2.5 billion, including value added to the Victorian and Australian economies of \$1.1 billion and supported 13,748 full time jobs.

The port is committed to ensuring its operations are environmentally sustainable and responsible and continue to contribute to the social wellbeing of Victoria in keeping with its status as a city port.

The Victorian Government recognises the critical role of the Port of Melbourne and has assigned a range of responsibilities and obligations through policy initiatives such as the *Victorian Ports Strategic Framework*, *The Victorian Transport Plan*, *Freight Futures* and *Port Futures*. Further, Port of Melbourne Corporation (PoMC) as strategic manager of the Port of Melbourne has clear statutory obligations to manage, plan and develop the Port of Melbourne through the *Port Services Act 1995*.

PoMC has developed the *Port Development Strategy* (PDS) to address the requirements of its charter, to support the Government's planning policy objectives and to set a clear direction for managing the expected strong growth of the port to 2035.

Over the next 30 years, more than \$3 billion is expected to be invested by PoMC in port related projects, with the private sector expected to invest an even greater amount in ongoing terminal development and equipment improvements.

Australia's port freight and logistics industry is undergoing unprecedented change driven by commercial forces to consolidate, vertically integrate and deliver greater value to customers from achieving efficiencies across the whole of the port freight and logistics system.

The Port of Melbourne will play a leading role in these developments. PoMC's charter gives it a clear responsibility to facilitate the growth of trade in an efficient, cost-effective and sustainable way. To meet this responsibility, PoMC will continue to deliver an investment program to increase the quality of services provided at the port, boost the port's capacity to attract private investment and ensure that the port's development continues in an environmentally and socially responsible manner.

In making these investments, PoMC will provide core port infrastructure that promotes the benefits of competition to ensure that customers receive an appropriate level of service from port-provided infrastructure such as channels and roads, and from private port service providers.

The PDS provides for the better management of road, rail and shipping access to the Port and facilitates the effective integration of the port with the broader system of land transport infrastructure.

PoMC recognises the critical importance of balancing the needs of surrounding communities with the ongoing development and growth of the port and is committed to community engagement and consultation to achieve a shared vision for the development of the port.

Through the PDS, PoMC is setting a clear direction for managing the rapidly changing requirements of one of Victoria's most significant assets – an asset that will grow in value and importance over the next 30 years and continue to deliver major economic and social benefits to Victorians.

With the input received from the State Government's other strategic transport planning bodies, the PDS provides a clear direction for investment and planned development of the Port of Melbourne.

2 The Port of Melbourne today

The Port of Melbourne is the most prominent port in Australia and makes a major contribution to the Victorian economy and to the economies of surrounding local communities.

The Port of Melbourne is one of Australia's longest established city ports and has grown with the City of Melbourne to become the most prominent port in Australia.

The port is located at the heart of Victoria's major road and rail network, providing efficient connections to South Australia, regional New South Wales and the east coast of the Australian mainland. Melbourne is also the primary mainland port for the transfer of Tasmanian cargo.

The port is managed by Port of Melbourne Corporation (PoMC) which was established on 1 July 2003. The Corporation's objectives include:

- managing and developing the port land and infrastructure in an efficient, safe, secure and environmentally sound manner
- ensuring, in conjunction with other responsible organisations, that the port is effectively integrated with the State's broader freight and logistics system
- ensuring that key port services are available and cost effective
- facilitating, in conjunction with other responsible organisations, the sustainable growth of trade through the port
- managing the channels for use on a fair and equitable basis.

2.1 The port's contribution to Victoria

The port makes a major contribution to Victoria and delivers significant benefits to Victorians. At a glance the port:

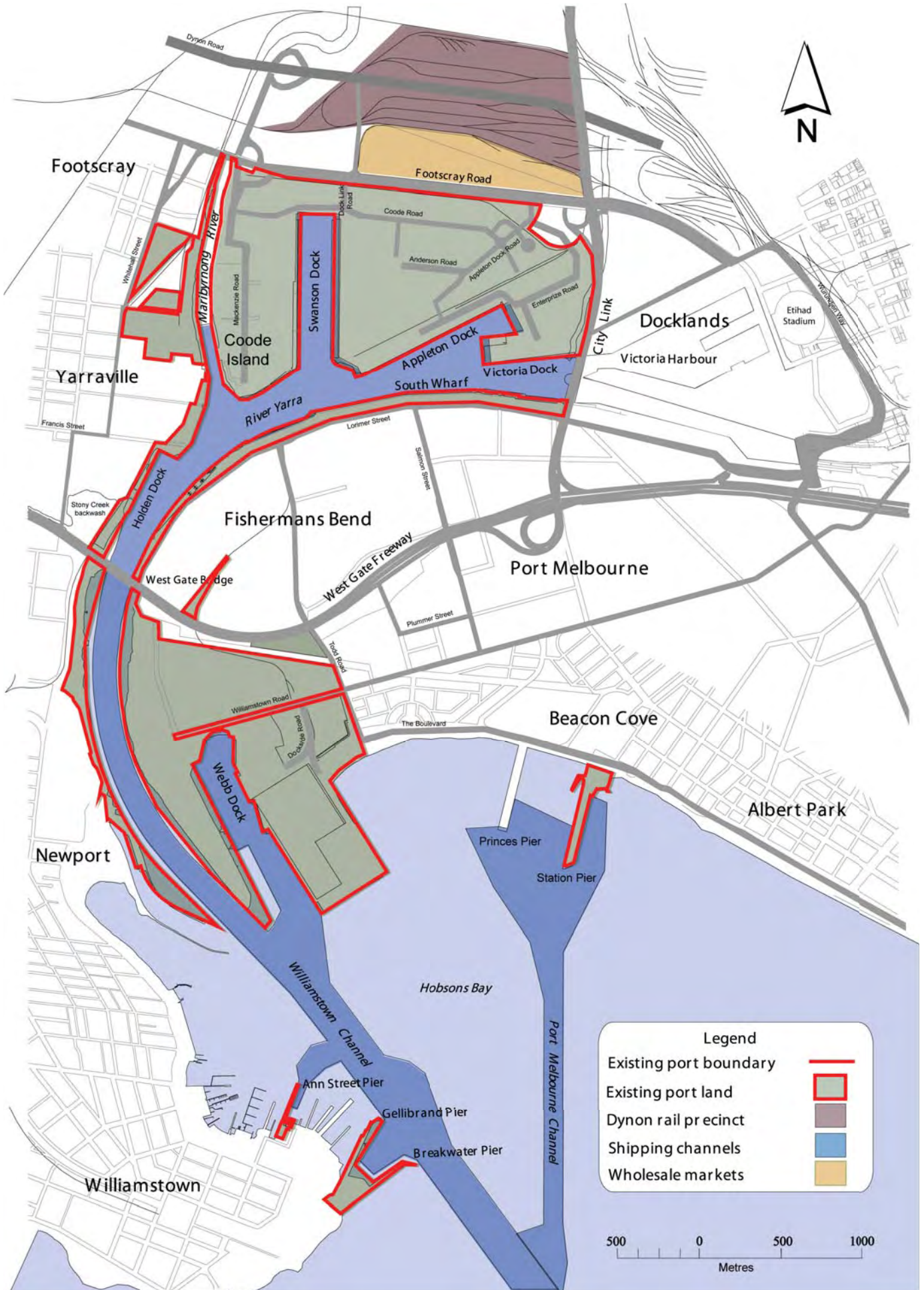
- is the largest multi-cargo pack type gateway port in Australia
- handled 2.16 million TEU (twenty-foot equivalent units) 2008-09
- handled over 71.4 million revenue tonnes in 2008
- handles regularly over \$90 billion worth of trade

2.2 The port's local contribution

The port also makes a major contribution to the economies of surrounding communities. At a local level the port is estimated to generate employment for:

- 562 residents of the City of Melbourne
- 248 residents of the City of Port Phillip
- 2,253 residents of the City of Hobsons Bay
- 273 residents of the City of Maribyrnong.

The Port of Melbourne today



3 The Port Development Strategy

The PDS will guide the future development of the Port of Melbourne and give the port's tenants, stakeholders and the wider community a clear picture of the port's future plans, requirements and responsibilities.

The PDS aims to create a clear picture of the short to medium and long term development plans of the Port of Melbourne. This will give the port's tenants, stakeholders and the wider Victorian community a clearer understanding of:

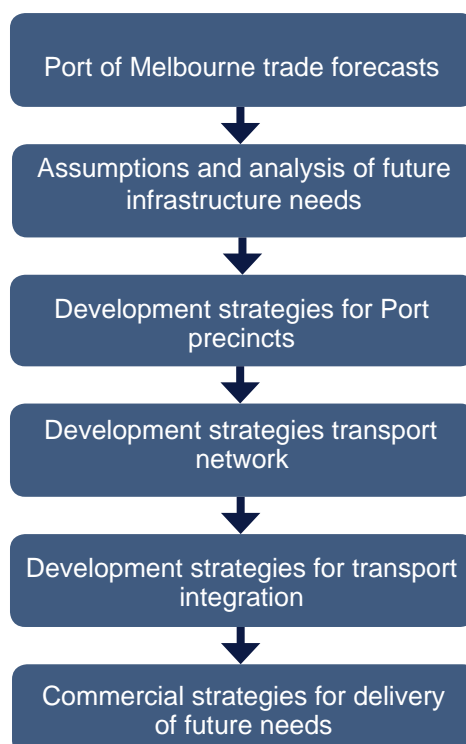
- forecast trade volumes and terminal productivity in the port freight and logistics industry that will have an impact on the port and its development
- the infrastructure improvements required by the port and the implications for land and water use
- the funding strategy the port will use to deliver infrastructure projects
- the environmental and social principles the port will follow in its development of the port and facilitation of port growth.

3.1 The process used to develop the PDS

The PDS was developed through:

- consideration of Government policy and strategic framework as they apply to ports
- extensive consultation with stakeholders, including stevedores, transport operators and shipping companies
- analysis of trade and industry statistics
- assessment of relevant findings from the *Port of Melbourne Land Use Plan*
- assessment and integration of growth objectives with relevant strategic planning initiatives
- public consultation and comments received in response to the draft *Port Development Plan* exhibited in 2006
- reviews of both internal and external literature

The major steps in the PDS process are shown below.



3.2 Input from the Port of Melbourne Land Use Plan

In July 2002, the *Port of Melbourne Land Use Plan* (LUP) was completed. This plan was a whole of port planning strategy that analysed:

- port needs
- economic influences
- transport requirements
- environmental and land use pressures.

The PDS builds upon the findings of the LUP and feedback during the exhibition of the PDP as well as the economic, market and commercial intelligence information gathered. The PDS supersedes the LUP and the draft PDP.

3.3 Stakeholder and community feedback

The draft PDP was officially released for public consultation by the Minister for Transport on 14 August 2006. In response, over 50 submissions were received representing a wide variety of interested parties and broad cross-section of port stakeholders.

The submissions were reviewed and the key issues identified and consolidated. The primary issues of interest included the development of Webb Dock, road management and interface management issues. All issues have been assessed with regard to their significance to the development strategies outlined within the draft PDP. Where appropriate, amendments have been made to these strategies and have been incorporated into the PDS.

3.4 Policy and strategic framework

The PDS sits within a framework of State Government policies, including the 2004 *Victorian Ports Strategic Framework* (VPSF); *The Victorian Transport Plan* (VTP) and *Freight Futures – Victorian Freight Network Strategy*, both released in December 2008; and *Port Futures*. These important policies recognise the importance of the Port of Melbourne to the economic prosperity of the State, together with the need for an efficient and effective freight and logistics network. They recognise the Port of Melbourne as Victoria's principal international container port in the short to medium term and the role of other Victorian ports to accommodate overflow trades from the Port of Melbourne in the longer term.

The VTP sets out the Government's vision and plans for developing an integrated, sustainable transport system for Victoria over the next 20 years. *Freight Futures* provides a complementary consideration of freight movement through Victoria's transport network and gives particular consideration and direction to the movement of port freight.

Freight Futures is the Victorian Government's long term strategy to ensure that the State's freight networks, systems and infrastructure are planned and developed to continue performing well to meet the existing and future freight tasks. *Freight Futures* forms an important companion document to the VTP and elaborates the Government's thinking in relation to freight in the VTP.

Freight Futures identifies a Principal Freight Network (PFN) of key transport (road, rail, sea and air) corridors which link the Freight Activity Centres (FACs), particularly those of national, state and regional significance. *Freight Futures* recognises ports as particularly important FACs with special attributes and needs and sets out a range of actions to ensure their ongoing efficiency and sustainability.

It anticipates a significant role for the Port of Melbourne in planning and developing the port freight network to ensure the efficient movement of freight between the port and its origin and destination.

Port Futures advances new direction outlined in the VTP and *Freight Futures* and updates aspects of the existing settings in the VPSF, including the sequence of port development and improvements to port governance arrangements.

The goal of *Port Futures* is to introduce improved policy and strategy settings to ensure that the contribution of Victoria's ports to the State's economic prosperity and sustainability is maintained and maximised.

Port Futures addresses the following key issues:

- Port Governance arrangements – *Freight Futures* flagged the Government's intention to integrate the ports of Hastings and Melbourne. *Port Futures* develops the policy rationale for this port governance change and sets out the next steps in implementation.
- Port planning and protection – *Port Futures* provides the context for the release of the final port land use and development strategies for the four commercial trading ports; the requirement that they be updated regularly on a four yearly cycle; and the proposal that they be appropriately recognised in the *Victoria Planning Provisions*. It also contains a range of proposed initiatives to streamline planning processes.
- Port safety, security and environmental performance – *Port Futures* proposes to build on improvements in safety, security and environmental risk management by giving effect to the recommendations of the *Review of Pilotage Arrangements in Victoria*; committing to a full response to issues identified in the *Marine Emergency Framework Review*, and undertaking a review of the implementation and operation of *Safety and Environment Management Plans* (SEMPs) in the ports. *Port Futures* also identifies the priorities for ports in adapting to the challenges presented by Climate Change and increasing community expectations on ports in relation to sustainability issues.

Infrastructure Australia

In 2008, Infrastructure Australia (IA) identified the following key challenges facing Australia, which are relevant to ports:

- supporting our cities: improving the livability, sustainability and productivity of Australia's major cities
- boosting exports: increasing the productivity of Australia's international gateways, making sure that they can meet the rapidly growing freight task without adverse impacts on community amenity
- supporting rural communities: improving the quality of life and economic prosperity in rural and regional communities.

In May 2009, the Australian Government and IA announced nine Priority Projects to commence immediately and a further twenty-eight projects of national significance, Priority Infrastructure Pipeline projects, which should proceed to more detailed design development prior to investment, including development of the Port of Melbourne Freight Terminal and the Port of Hastings.

As Melbourne is Australia's largest container port, IA recognises that issues regarding plans for dealing with long term growth in container trades after capacity is reached are critically important to Australia's productivity.

3.5 Other planning processes

PoMC is not a planning authority. The PDS relates only to development plans for the Port of Melbourne, whilst recognising the integration of the port with the broader port system and related freight networks. Other planning arrangements and activities involving the port and influencing its future growth and development include the *Port of Melbourne Planning Scheme* (administered by the Department of Planning and Community Development on behalf of the Minister for Planning), the *State Planning Policy Framework* and local council planning schemes.

3.6 Port development planning review

Port of Melbourne Corporation will review and update the Port Development Strategy at least every 4 years.

The Port Development Strategy is not intended to provide a definitive plan of infrastructure investments within the port but rather, provides an overarching framework for the preferred development sequence of port infrastructure and capacity priorities.

It is recognised that these priorities may develop and evolve over time and in this regard, consistent with the recommendations of the Essential Services Commission's Review of Port Planning and the recent *Port Services Act* amendments, PoMC is committed to regularly updating the Port Development Strategy.

The Port Development Strategy will be reviewed and released at least every four years. Earlier reviews may be necessary where there are significant changes in the business and/or policy environment surrounding the port and related activities.



4 Community engagement and consultation

Port of Melbourne Corporation recognises that community engagement and consultation is vital to the success of the Port Development Strategy and to ensuring that the port is valued by its neighbours as an important public and community asset.

4.1 Consultation

Preliminary consultation for the draft Port Development Plan was undertaken with the port's stakeholders including stevedores, shipping lines, importers and exporters and State Government agencies such as VicRoads and VicTrack.

A draft version of the detailed *Port Development Plan* was released for public consultation on 14 August 2006. PoMC undertook extensive consultation with the community, stakeholders and customers. The views of stakeholders have been considered and consolidated in the PDS.

4.2 Consultation and education activities

Alongside the consultation undertaken for the detailed development plans of the port, other community consultation and education activities undertaken by PoMC include:

- the *Port Page* quarterly news brief for people living and working near the port (appears in all Leader newspapers surrounding the port)
- information updates delivered to neighbouring municipal councils
- information evenings about port projects for neighbouring community and business groups
- hosting a variety of local council, community groups and industry bodies at the Port Education Centre, which provides an opportunity for people to find out more about the port's activities
- working to foster partnerships with key community stakeholder groups around the port precinct.

4.3 Ongoing community engagement

PoMC will continue to consult and work closely with communities surrounding the port.

PoMC is committed to being a responsible corporate citizen and recognises that community support is vital for the long term development of the port.

PoMC recognises that the port's role as a key trading gateway and employment generator means that its activities have a significant influence on local communities. With growth in both trade and population occurring around the port, PoMC will continually strive for improvements in the social and environmental aspects of the port's operations.

PoMC actively fosters relationships with neighbouring communities and local councils to ensure that community concerns are recognised and addressed. In developing the port, PoMC has adopted a management framework that incorporates:

- community engagement through direct engagement and consultative forums
- development of a shared vision with local councils regarding port growth and development
- the ongoing development of a vibrant education program
- support for community activities
- managing the port's impact on the environment and amenity, facilitated by the *Port Safety and Environmental Management Plan* and the *Port Environs Framework*
- an appreciation of the port's landscapes, facilitated by the port amenity enhancement program.

PoMC also recognises the impact on communities of the increased demand for freight as Melbourne's population grows. PoMC will continue to work with communities and local councils to address transport and amenity issues affecting the future of the port and the communities that live nearby.

5 Changes and challenges

Rapid change in many areas is bringing new opportunities and challenges to the Port of Melbourne. The Port Development Strategy will ensure the port keeps pace with these changes, develops the capacity to manage future growth in trade and continues to contribute to Victoria's economic prosperity.

5.1 Changing business environment

Many of the critical elements required for the Port of Melbourne to succeed in the years ahead are undergoing rapid change. These elements include:

- changes in technology allowing stevedores, shipping companies, and road and rail operators to handle more freight, faster
- changes in ownership of many companies participating in the industry
- rapid increases in container growth
- increasing competition from interstate ports
- changes in what are considered socially and environmentally acceptable practices
- the increasing encroachment of non-port related uses on waterfront land (for example, residential and commercial developments) pricing out future port options
- increasing security and safety measures required for port operations and the transport supply chain.

Recognition of the potential impact of these changes led PoMC, in cooperation with port stakeholders and the State Government, to prepare a long term development plan for the port and adopt the PDS.

5.2 Drivers influencing the port's development

It is recognised that there is an emerging focus by customers and regulatory authorities on infrastructure capacity, capacity investment and service levels that warrants greater consideration from a whole-of-port perspective.

There are principally two key drivers of development at the Port of Melbourne.

The first of these drivers is related to capacity demand and the delivery of an appropriate level of infrastructure capacity to accommodate and facilitate trade growth. Increases in port capacity can be delivered through asset investment or productivity improvements. Over recent years, capacity has been increased through investment in superstructure and equipment delivering productivity enhancements and this has proved effective on the basis of the continued investment in existing facilities and terminals. Whilst this has proved effective in the past, there is a growing need to deliver certainty of capacity into the future and ensure that the Port of Melbourne maintains its position as Australia's premier port.

The second driver influencing the port's development is the opportunity to enhance and facilitate competition as a means of achieving greater efficiency and delivering better service level outcomes for port customers.

5.3 Drivers influencing the port's operations

A number of significant drivers will influence the way in which the Port of Melbourne operates and develops.

Limited land options

Like most city ports around the world, the port has a finite amount of land available for expansion. Future options to overcome this problem may include more efficient use of existing land through improvements in productivity, land reclamation, relocation of some activities to new areas, and expansion of the port through strategic land acquisition.

In addition to direct wharf requirements, land is also needed in the immediate vicinity of the port for related uses such as equipment maintenance, cleaning facilities, storage, information and communications services, quality control and truck marshalling.

These ancillary activities will need to be in locations either in close proximity to the port or close to efficient transport links to the port. As part of the ongoing development of the port, PoMC will continue to work with local councils to identify and implement initiatives that preserve valuable industrial land to support and protect the development of the port.

Port environs planning for interface issues

The long term sustainability of the port requires managing the port's impact on surrounding areas and protecting the port from any adverse impact and constraints from adjacent developments and uses.

It is also important to strike a balance between the needs of a working port and the expectations of the community in terms of amenity, environment, recreation, open space, safety and security.

In addition to the PDS and associated infrastructure planning initiatives, PoMC is working with the State Government and local councils to complete a Port Environs Planning Framework. This framework of planning controls will address issues affecting land use close to port operational areas and will ensure the effective management of the interests of both the Port of Melbourne and its neighbouring communities.

Further consideration is also being given to the recreational and commercial watercraft uses and their interaction with commercial shipping in light of the continued growth and development of the port.

Security

The growing focus on maritime security has required increased investment by ports to provide protection against potential acts of terrorism. Since 2004, PoMC has implemented a range of new security measures. PoMC's *Maritime Security Plan* is approved by the Department of Infrastructure, Transport, Regional Services and Local Government (DITRD LG). Private sector operators within the Port of Melbourne are committed to implementing security plans at all dedicated terminals. Generally the security initiatives are focused on the main port area and commercial port facilities. Water craft movement and public access to foreshore and wharf areas may be restricted as a result of the security plan and may be subject to change.

Safety and environmental management

The Victorian Government requires all port managers to prepare a formal *Safety and Environmental Management Plan* (SEMP) approved by the Department of Transport and take reasonable steps to implement the plan.

PoMC has developed a SEMP for the Port of Melbourne that is based on a sound understanding of the port environment and operational risks. The port's approach aims to effectively manage safety and environmental risks in the following core areas:

- ships in port waters
- berthing activities
- cargo transfer activities
- activities on port lands
- movements to and from the port
- development activities

In support of the SEMP, PoMC has a comprehensive *Emergency Management Plan* for emergencies that occur on port property or in port waters.

6 Looking to 2035: Forecasts for growth in trade

The Port of Melbourne is expected to experience strong growth in trade through to 2035, with major new investment in infrastructure required to handle future trade volumes.

A principal objective of PoMC is to ensure that the port's infrastructure has the capacity to meet future trade volumes.

For infrastructure planning purposes PoMC has prepared detailed trade forecasts for all major trade segments for the period 2008 to 2035. The trade forecasts assume unconstrained port operations in terms of channel depth and capacity, infrastructure and operations and land transport connections.

These forecasts are used to estimate the port's future land and berth requirements.

It is anticipated that trade growth will be affected by the current global financial crisis and this will impact on PoMC's revenue base and in turn the short term financial return. In the long term, PoMC does not expect that there will be a major impact on its ability to implement its strategic objectives, infrastructure development and trade facilitation, and thus will continue to focus on these outcomes.

6.1 International containers

Total international container trade through the port increased from 838,000 TEU in 1997 to 1.753 million TEU in 2007 - an annual average growth rate (AAGR) of 7.7%.

Year	2005 Forecasts of Containers (millions TEU)	CAGR*
2010	2.062	
2015	2.707	5.6%
2025	4.466	5.1%
2035	7.057	4.7%

*Compound Annual Growth Rate

6.2 Tasmanian containers

Between 1997 and 2007 Tasmania's container trade increased from 176,000 TEU to 317,000 TEU – an AAGR of 6.1%. In the same period break bulk, WCCUs and motor vehicles grew at an AAGR of 1.7%, 8.7% and 4.5% respectively.

Year	2005 Forecasts of Containers (thousands TEU)	CAGR
2010	416	
2015	534	5.1%
2025	793	4.0%
2035	1,150	3.8%

6.3 New motor vehicles

Between 1997 and 2007 new motor vehicle trade increased from 134,000 vehicles to 316,000 vehicles – an AAGR of 9.0%.

Year	2005 Forecasts Vehicles (thousands)	CAGR
2010	324	
2015	388	3.7%
2025	534	3.2%
2035	720	3.0%

6.4 Break bulk

Between 1997 and 2007 breakbulk trade increased from 604,000 mass tonnes to 859,000 mass tonnes – an AAGR of 3.6%.

Year	2005 Forecasts Mass tonnes (thousands)	CAGR
2010	957	
2015	1,041	1.7%
2025	1,164	1.1%
2035	1,246	0.7%

6.5 Dry bulk

Between 1997 and 2007 total dry bulk trade increased from 1,709,000 mass tonnes to 2,867,000 mass tonnes – an AAGR of 5.3%. However if grain exports through the ABA facility at Appleton Dock F, which commenced as a new trade in 2001, are excluded, the AAGR for all other commodities reduces to 5.1%.

Cement imports

Year	2005 Forecasts Mass tonnes (thousands)	CAGR
2010	1,221	
2015	1,332	1.8%
2025	1,584	1.8%
2035	1,884	1.8%

Grain exports

Year	2005 Forecasts Mass tonnes (thousands)	CAGR
2010	1,651	
2015	1,858	2.4%
2025	2,351	2.4%
2035	2,976	2.4%

All dry bulk trade

Year	2005 Forecasts Mass tonnes (millions)	CAGR
2010	4.477	
2015	5.022	2.3%
2025	6.196	2.1%
2035	7.589	2.0%

6.6 Liquid bulk

Between 1997 and 2007 total liquid bulk trade reduced from 4,462,000 mass tonnes to 4,094,000 mass tonnes – an AAGR of -0.4%.

The major liquid bulk trade is crude oil.

Crude oil imports

Year	2005 Forecasts Mass tonnes (millions)	CAGR
2010	3.085	
2015	3.768	4.1%
2025	5.049	3.0%
2035	6.132	2.0%

All liquid bulk trade

Year	2005 Forecasts Mass tonnes (millions)	CAGR
2010	4.424	
2015	5.093	2.9%
2025	6.362	2.2%
2035	7.439	1.6%

7 Looking to 2035: Future berth and land needs

Growth in trade and major technological changes in the cargo handling and supply chain will require major capital investment by the port's commercial operators and PoMC.

The majority of the port's trade throughput is containerised but it also handles breakbulk, liquid bulk, dry bulk, general cargoes and motor vehicles.

Major assets and facilities include the shipping channels and 34 commercial berths located at five docks, river wharves and Station Pier. These facilities include two modern, purpose built container terminals and specialised berths for motor vehicles, break bulk, dry bulk, liquid bulk and passengers. Currently, PoMC is responsible for the management and development of over 510 hectares of land for port-related development and 101,000 hectares of maritime jurisdiction.

PoMC has undertaken an analysis of current and future port capacity taking into account likely future efficiency and technology improvements. Based on this analysis, PoMC has quantified the port's future berth and land requirements to accommodate the forecast growth in trade.

7.1 International container terminals

Substantial improvement in productivity of the existing Swanson Dock international container terminals, combined with capital investment in berths, wharves, cranes, yard storage and transport links by PoMC and stevedores, will significantly increase the capacity of this precinct.

Productivity of Swanson Dock berths is forecast to increase from approximately 1,015 TEU/metre in 2007 to around 1,350-1,500 TEU/metre in the short to medium term. This is less than the rates currently being achieved at the world's most efficient container terminals with similar vessels and exchanges.

It is proposed that additional international container terminal facilities be developed, with a third terminal at Webb Dock in the short term, before Swanson Dock reaches its ultimate capacity.

By 2035 the port's international container terminals will be operating at a berth productivity of up to 2,000 TEU/metre and a terminal productivity of up to 45,000TEU/hectare. As part of the infrastructure needs analysis, international benchmarking indicates that an increase in productivity of this scale is achievable and will result from a combination of factors including; increased ship size and cargo exchange, berth occupancy, number of cranes employed, crane productivity and intensity etc. It is acknowledged that these factors will require complimentary investment in terminal productivity by the private sector. Terminal performance will be monitored against appropriate international benchmarks to ensure that the terminals perform to world's best standards.

PoMC has assessed the cumulative long term infrastructure needs for international containers (including mainland containers) to be:

Future international container terminal needs

	Year	Berth Length (m)	Terminal Area (ha)
Existing		1,828	77
Future	2010	1,828	85
	2015	2,760	120
	2025	2,760	120
	2035	3,770	160

7.2 Tasmanian trade

Webb Dock roll-on, roll-off (ro-ro) terminals, and the Appleton Dock conventional terminal, handle the bulk of Tasmanian containers, break bulk and new motor vehicles. It is assumed that these cargos will continue to be handled at Webb Dock through to 2035. TT-Line ships operating from Station Pier will continue to carry the bulk of wheeled cargo carrying units (WCCUs).

The infrastructure requirements for Tasmanian trades are sensitive to vessel size and cargo handling equipment and methodology. PoMC has assessed the cumulative long term infrastructure needs for Tasmanian trade to be:

Future Tasmanian terminal needs*

	Year	Berths (m)	Terminal Area (ha)
Existing		2	14
Future	2010	2	14
	2015	2	16
	2025	4	20
	2035	5	30

*Excludes Station Pier

7.3 Motor vehicles

Motor vehicle terminals are currently located at Webb Dock East and Webb Dock West. PoMC has assumed that motor vehicles will continue to be accommodated in the Webb Dock precinct until at least 2025. In the short to medium term it is assumed that the motor vehicles located at Webb Dock East will have moved to Webb Dock West to make way for international containers.

Any additional infrastructure requirements will be met in the short to medium term by extending existing terminals where possible and, in the long term, possibly by creating new dedicated motor vehicle facilities at some suitable location within the port. Subject to availability of land in the long term, the Yarraville Precinct has been identified as a potentially suitable location for this trade. If this can not be achieved, an alternate port such as Geelong or Hastings will need to be investigated.

PoMC has assessed the cumulative long term infrastructure needs for motor vehicles as shown below. The estimated needs are highly sensitive to input assumptions such as the average import vehicle dwell time.

Future motor vehicle terminal needs

	Year	Berths	Terminal Area (ha)
Existing		2.5	31
Future	2010	2	25
	2015	2	30
	2025	3	40
	2035	3	50

7.4 Break bulk

The port's major break bulk operations are accommodated at Appleton Dock B-D, Victoria Dock 24 and Webb Dock 3-5. In the short to medium term it is assumed that break bulk will be progressively moved from Webb Dock 3-5 to make way for international containers. Long term break bulk operations will be concentrated at Appleton Dock and Victoria Dock.

PoMC has assessed the cumulative long term infrastructure needs for break bulk to be:

Future break bulk terminal needs*

	Year	Berths	Terminal Area (ha)
Existing		3	15
Future	2010	3	15
	2015	3	15
	2025	3	15
	2035	3	15

* Because break bulk is often handled at multiple/shared facilities, the port's total berth and land allocation for break bulk may be in excess of the minimum berth and land requirements listed in the table.

7.5 Dry bulk

Future dry bulk needs are based on berth capacity and cargo transfer rates only. Storage capacity of dry bulk terminals is heavily dependent on the type of storage used for the dominant cargo (such as silos compared to sheds), which are provided by the tenant or user.

It is assumed that the existing dominant uses will continue for the forecast period.

- cement - South Wharf 26-27
- sugar - Yarraville 5
- gypsum - Yarraville 5
- grain - Appleton Dock F
- cement additives - South Wharf 33

PoMC has assessed the cumulative long term infrastructure needs for dry bulk commodities and has concluded that no additional capacity is required; however, some minor relocation and consolidation of existing dry bulk trade may be required.

7.6 Liquid bulk

Future liquid bulk needs are based on berth capacity and cargo transfer rates only. In many cases, storage capacity of liquid bulk terminals in the Port of Melbourne is provided by the tenant or user outside the port boundary.

It is assumed that the existing dominant uses will continue for the forecast period.

- Crude oil - Gellibrand Pier
- Refined products - Holden Dock
- Chemicals/hazardous - Maribyrnong No.1

PoMC has assessed the cumulative long term infrastructure needs for liquid bulk and has concluded that no additional berths are required.

7.7 Passenger ships

It is assumed that Station Pier will continue to be the home of TT-Line and cruise ships.

PoMC has assessed the long term needs for passenger ships and has concluded that adequate capacity is available at Station Pier to cater for the future needs of TT-Line and the cruise ship industry.

7.8 Port related needs

7.8.1 Value added logistics

A range of port-related activities may be located on-port or near-port to meet the logistics requirements of key users and operators or to enhance the port's competitive position. These activities include:

- cold stores
- packing and unpacking depots
- distribution centres.

Where an on-port location is critical to cater for particular cargoes or where it is necessary to service industry needs, where possible, provision will be made within the port and Dynon precincts for these activities.

7.8.2 Freight terminals and empty container parks

Freight terminals and empty container parks provide essential links between importers, exporters and international container terminals. Critical functions include storage and servicing of empty containers, providing a time buffer for delivery and receipt of full containers and assisting terminals to cope with peak load periods.

In its planning for future land allocation within the Dynon and port precincts, PoMC recognises the need for freight terminals and empty container parks at strategic locations including near port and outer metropolitan locations.

7.8.3 Ancillary needs

Provision will be made at appropriate locations within the port to accommodate a range of land and water based businesses and operations that support the port's operations including:

- tugs
- bunkering barges
- storage depots for piles and marine equipment
- customs services
- security services
- berthing facilities for miscellaneous vessels.



8 Looking to 2035: Future development of port precincts

The future requirements of the port will create new opportunities, challenges and uses for each of the port's precincts.

PoMC has taken a long term strategic approach to development based on an assessment of the long term cargo needs of the port. The hierarchy of cargos in which PoMC has assessed future infrastructure needs is:

- international containers
- Tasmanian trade
- dry bulk/liquid bulk
- break bulk
- motor vehicles

International containers are a significant cargo type for the Port of Melbourne, 65% of the freight passing through the Port of Melbourne is international containers – making the magnitude and cost of the infrastructure requirements for international containers a dominant concern for the port's future.

International containers are considered to be essential to the port because the vast majority of containerisation relates to activities surrounding the Port of Melbourne and supports imports and exports for local industry and consumption.

Similarly, much of Tasmania's imports and exports are now transhipped through Melbourne and southbound trade is particularly time sensitive.

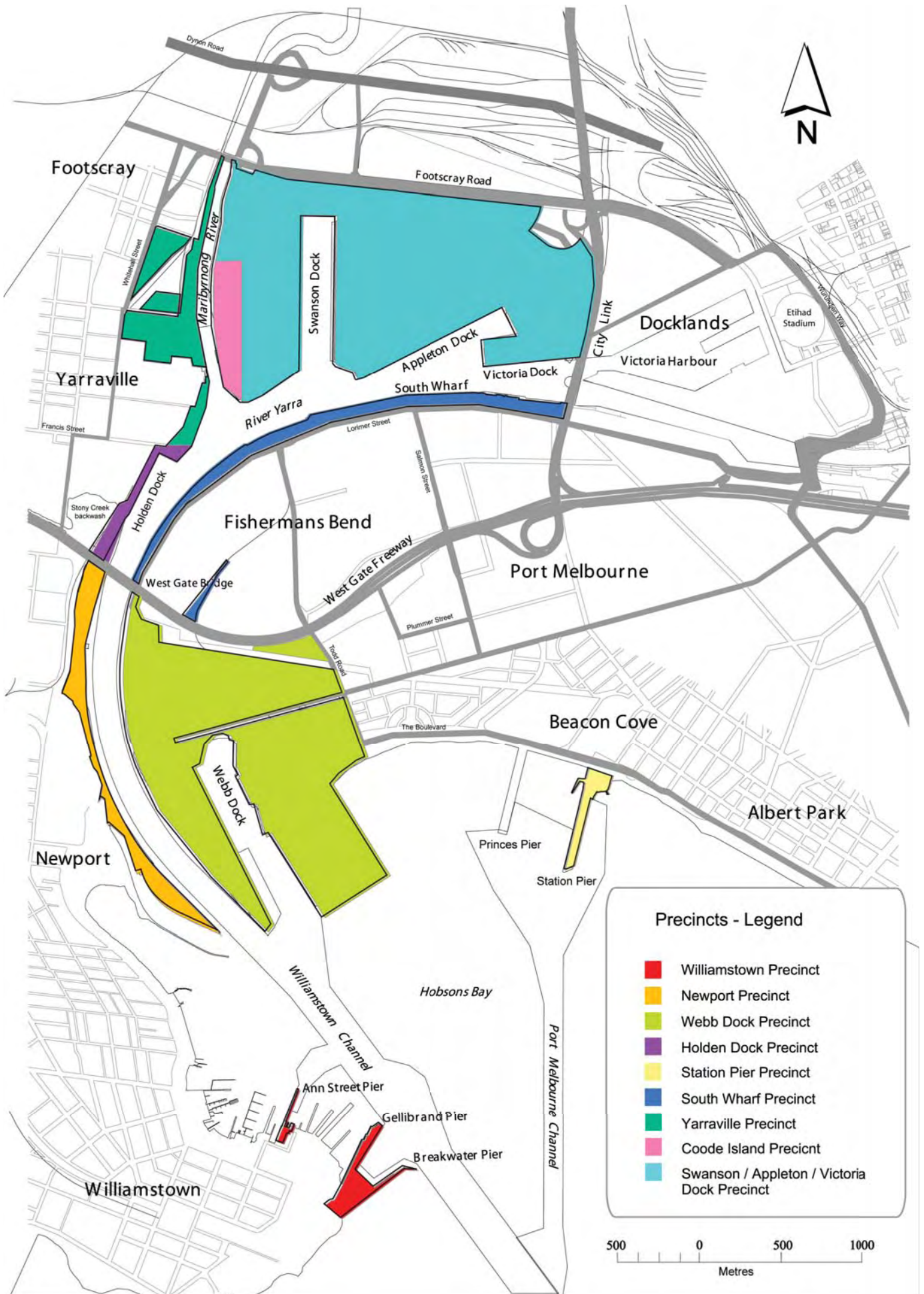
Dry bulk and liquid bulk berths are usually linked directly to dedicated land based transfer and storage facilities. For dry bulk commodities, such as grain, the port can provide a highly competitive transport link between the supplier and customer that benefits both parties.

While the ability to cater for break bulk is important, there is some flexibility in accommodating its needs at relatively low cost facilities.

While motor vehicle terminals are important in servicing the needs of the export industry in particular, they do not require infrastructure intensive facilities. Their major needs are for sizeable land areas, which may be provided at alternative locations within the Port or at another Victorian port. This trade is considered to be more flexible than other trades in its ability to be accommodated at alternative locations. For these reasons the long term development strategy for motor vehicles is not as definitive as for other cargoes. While Webb Dock provides considerable scope for motor vehicles up to 2025, the long term requirement to free up Webb Dock for international containers and Tasmanian trade means that an alternative location for the motor vehicle trade needs to be found. Within the Port of Melbourne a location to the west of the Maribyrnong River may provide an appropriate use for this area after taking into account the surrounding land uses.

A number of distinct port precincts have been identified and assessed against future berth and land needs. Following is a summary of the proposed future use of each precinct.

Port development precincts



8.1 Williamstown – Ann Street Pier

Ann Street Pier is currently used for the storage and mooring of marine equipment, such as tugs, barges, pontoons, workboats and survey vessels. The precinct will continue its multipurpose role for the foreseeable future.

8.2 Williamstown – Gellibrand Pier

Gellibrand Pier will be retained for liquid bulk (crude oil) pack type.

8.3 Williamstown – Breakwater Pier

Breakwater Pier will be retained to ensure the security and safety of the adjacent Gellibrand Pier. Breakwater Pier is also considered to be a strategic port asset for use as a future liquid bulk berth or for special purposes such as visiting naval ships, vessel lay-up and large plant storage.

8.4 Newport

The Newport precinct includes oil pipelines and jetties used by adjacent oil companies. The precinct will be retained as a key asset for the petroleum industry and as a park, managed in partnership with Parks Victoria, Hobsons Bay City Council and PoMC.

8.5 Webb Dock

Webb Dock can be developed in stages and could potentially handle a similar capacity to Swanson Dock if required. The first stage of development in the short to medium term will involve a portion of the east side of the dock being converted to international containers to accommodate terminal capacity of 1m TEU. In the longer term around 2025, the remainder of the east side of the dock may be converted to containers and the west side of the dock will become the port's major coastal terminal precinct. Displaced motor vehicles will be relocated elsewhere in the port or to another Victorian port. Break bulk trades will be accommodated elsewhere in the port.

The reconnection of rail to Webb Dock will be considered consistent with trade demand and the longer term development of Webb Dock for international containers.

It is envisaged that by 2035 this precinct could handle a similar number of containers to Swanson Dock.

PoMC also recognises the need to maintain an effective transition and buffer zone between the community and the working port in developing future operations in the precinct.

8.6 Yarraville

The Yarraville precinct will retain its multi-purpose dry and liquid bulk functions in the short to medium term and appropriate development of newly acquired PoMC properties for port related functions will be encouraged.

Suitable long term uses may include new motor vehicle terminals or other acceptable port related operations.

8.7 Coode Island

This precinct is used as a storage facility for importing and exporting bulk liquids. Because it serves a vital State role, Coode Island is to be retained for bulk liquid operations for the long term.

8.8 Holden Dock

Holden Dock will be retained for bulk liquid operations for the long term.

8.9 Swanson/Appleton/Victoria Dock

Swanson Dock East and West will continue to be used for international containers for the long term. This will involve an intensification of trade through the dock with some expansion to the north possibly being necessary to cater for future shipping needs. It is anticipated that the combined capacity of the Swanson Dock terminals using the best of current technology and planned infrastructure investment will be in the range of 3.4 to 4 million TEU.

Trade through Victoria Dock will also increase in the short to medium term, with substantial new investment currently underway. The eastern edge of Victoria Dock is reserved for the future Webb Dock rail link, if required.

This precinct will be closely integrated with the Dynon rail precinct to the north of Footscray Road following relocation of the Melbourne Wholesale Fruit and Vegetable Market.

Intensive development of the Swanson/Appleton/Victoria Dock precinct for international containers and general cargo is planned to take place during the short to medium term to ensure sufficient capacity and productivity to accommodate forecast demand.

8.10 South Wharf

South Wharf is used for a range of activities, including break bulk and dry bulk cargoes, bulk cement imports and ancillary services. The limited width of the wharf area, particularly with the Webb Dock rail corridor, makes the wharf area ideally suited to its current activities and it will continue to be used for these activities for the long term.

8.11 Station Pier

Station Pier is used as the Melbourne Sea Passenger Terminal and is the principal cruise liner facility in Melbourne. The precinct will continue to be used by TT-Line, cruise liners and naval vessels visiting Melbourne.

8.12 Port Waterways

The Port Waterways precinct covers all waterways adjacent to the wharves. It extends downstream from the Shepherd Bridge on the Maribyrnong River and the Bolte Bridge on the River Yarra and includes the Williamstown and Port Melbourne channels.

The Port of Melbourne is situated in a sensitive estuarine environment, characterised by a number of environmental and heritage values of regional and state significance. PoMC is committed to maintaining the use of the waterways for large ships in an environmentally sustainable manner consistent with PoMC's safety and environmental management plans.

The issues of channel depth, ship size, potential conflict between commercial shipping and recreational craft and ferries, and improvement in water quality are ongoing issues that PoMC will continue to address in partnership with other Government agencies and local communities. The renewed focus in Melbourne on using and living near the waterways will continue to be a major issue that PoMC will need to closely monitor.

9 Port Development Strategy

A staged approach to development of the Port of Melbourne has been defined.

9.1 Short to medium term vision

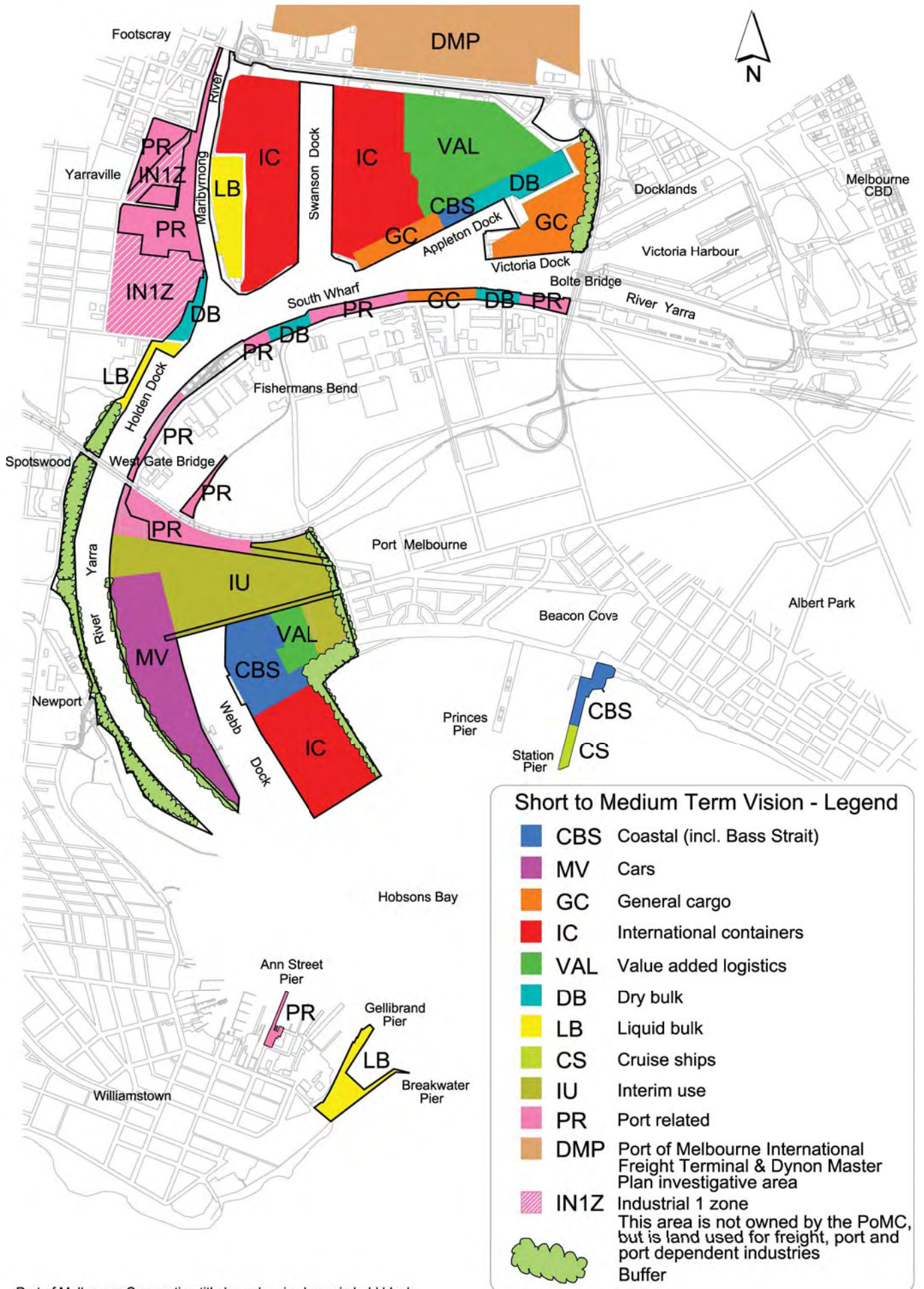
As an interim step in achieving the port's 2035 Vision, in the short to medium term, the Port of Melbourne will seek to maximise the use of existing infrastructure and leverage off the significant infrastructure investments that have already been made in the port.

The principal developments that will change the Port in the short to medium term will include the:

- development of Webb Dock East for international containers
- consolidation of motor vehicle operations at Webb Dock West
- increased size and intensification of international container terminal facilities at Swanson Dock
- integration of the Dynon and Swanson Precincts to support the Port's activities
- consolidation of general cargo at Appleton, Victoria Dock and South Wharf.



Short to medium term vision concept plan



Port of Melbourne Corporation title boundary is shown in bold black

9.2 The Port of Melbourne in 2035

The Port in 2035 will be handling significantly larger volumes of trade with increased efficiency and productivity, underpinned by state-of-the-art infrastructure and technology. The Port will be integrated with the Dynon precinct, delivering seamless road and rail links to outer metropolitan areas and regional Victoria.

The Port of Melbourne in 2035 will be substantially different in appearance than today.

While it is unlikely that the size of the Port will greatly exceed the current 500 hectares, it will be handling more than four times the number of containers, more than three times the volume of Bass Strait trade, more than two and a half times the number of new motor vehicles (subject to a suitable location for this trade being found) and double the quantity of bulk products.

The most obvious differences will be the extensive development of Webb Dock and the Dynon precinct. Swanson Dock will have been extended northwards. Subject to State Government approval, the Webb Dock precinct could be connected to the rail network, substantially increasing the port's capacity to move cargo by rail. The Port's operations will have been seamlessly integrated with the Metropolitan Freight Transport Network identified in *Freight Futures* and, locally, with the Dynon precinct by the removal of the markets to the north of Footscray Road.

Deeper channels leading to the port will enable bigger and more efficient ships to visit the port on a regular basis. More trains and highly efficient trucks will transport cargo to and from the port using upgraded rail and road infrastructure that minimises the impact on the surrounding community.

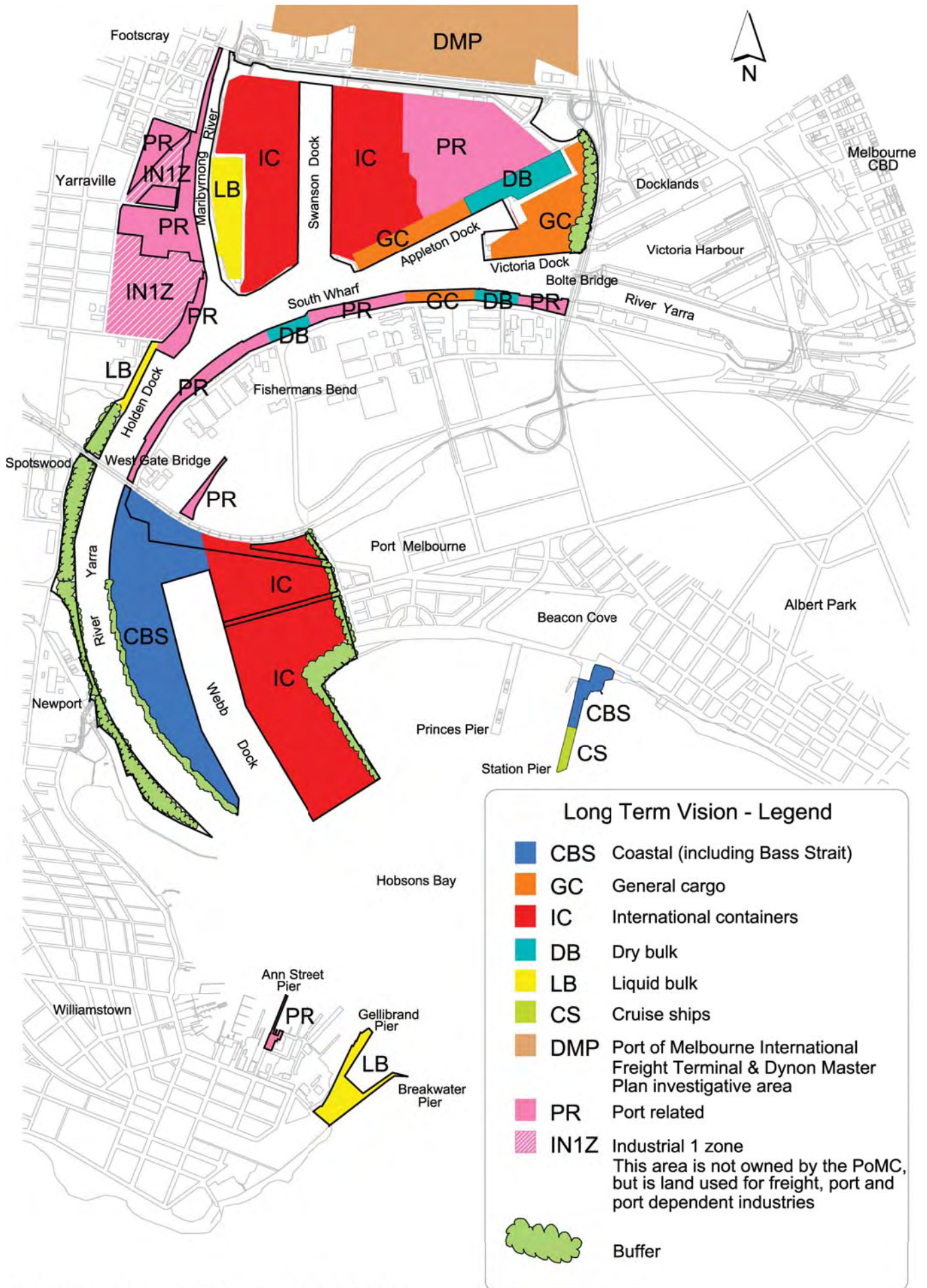
The port will handle all major trade segments and will have sufficient capacity to cope with the most likely volumes of trade currently forecast. Substantial rearrangement of terminal boundaries and functions, alongside a substantial capital investment program, will mean that highly productive and efficient international container terminals will be located at Swanson Dock and Webb Dock East.

Webb Dock will also cater for the Tasmanian trade. General cargo will be concentrated in the Appleton Dock and Victoria Dock precincts. Dry bulk and liquid bulk facilities will look much the same as today; however, some rearrangement of the South Wharf dry bulk terminals will have occurred. Station Pier will continue to service the needs of the cruise ship industry and the Tasmanian passenger ship trade.

The Yarraville precinct is a potential site for new motor vehicle terminals. Alternatively, the motor vehicle trade may be located at another Victorian port. The port will be seen as a responsible neighbour and an attractive and pleasant place near which to live and work. The port will be recognised for its social and environmental stewardship and for ensuring that sensitive uses are adequately buffered from core port activities.

The port will be Australia's premier container port and acknowledged as a leader in handling large volumes of trade efficiently.

Long term vision concept plan



Long Term Vision - Legend

	CBS	Coastal (including Bass Strait)
	GC	General cargo
	IC	International containers
	DB	Dry bulk
	LB	Liquid bulk
	CS	Cruise ships
	DMP	Port of Melbourne International Freight Terminal & Dynon Master Plan investigative area
	PR	Port related
	IN1Z	Industrial 1 zone This area is not owned by the PoMC, but is land used for freight, port and port dependent industries
		Buffer

Port of Melbourne Corporation title boundary is shown in bold black

10 Port system planning

The port's sea, road and rail transport systems and infrastructure must be planned to maximise efficiency. Port of Melbourne Corporation will work closely with the Victorian Government, local councils and transport authorities to develop seamless and efficient road, rail and sea connections to the port.

The movement of trade to, through, and out of the Port of Melbourne involves the activities of numerous organisations interacting with each other in a dynamic and extremely complicated system of relationships. These interactions occur within and outside the port's geographic boundaries, are supported by both hard and soft infrastructure, and use a complex arrangement of communication networks and systems.

There is a diversity of strategic responsibilities across this port freight system. It is important to recognise the complementary nature of the current strategic planning instruments that are seeking to maximise efficiencies across the system.

Consistent with the recommendations of the ESC *Review of Port Planning* (2007), PoMC recognises that it has a responsibility to clearly articulate the strategic development objectives of the Port of Melbourne and to promote integration across external agency strategic planning instruments. PoMC is committed to monitoring external instruments and ensuring their integration with the port's development plans.

Whilst port related freight is only a small component of the overall transport network demand, given the significance of the port freight industry, there is now a requirement to take a wider approach to development planning for the port system. The "Port System" includes channels, shipping terminals, roads, rail lines, transport equipment, near port and remote freight terminals, empty container parks, service providers and information flows. Government and industry stakeholders are recognising that an integrated and coordinated approach to planning for the port freight network is required to satisfy policy objectives relevant to freight transfer. PoMC is currently working towards a better understanding of the port system as it relates to the movement of full and empty import and export containers from origin to destination.

Through *Freight Futures*, the Government has committed to reviewing the port freight network and ensuring its effective integration with Victoria's key trading ports. *Port Futures* addresses a number of emerging priorities aimed at improving the integration of Victoria's port system and its ability to coordinate effectively with freight network infrastructure servicing key international supply chains. *Port Futures* also clarifies the role expected of PoMC and its capacity to influence and actively participate in the planning and development of the port freight network. It is readily acknowledged that, as the central hub in the international freight and logistics supply chain, PoMC is well placed to influence efficiency and productivity improvements along the full length of the international supply chain.

PoMC is committed to working with the State government to ensure that broader strategic planning initiatives such as the *The Victorian Transport Plan* (2008) and *Freight Futures* take appropriate consideration of the port's development needs and infrastructure demand.

There has been considerable focus and recognition across relevant agencies that both road and rail infrastructure capacity must be planned to accommodate the needs of the port freight industry along with domestic freight and general traffic. Given the detailed forecasting and analysis of maritime freight demand, PoMC is confident that the port's needs will be accommodated in the long term planning of road and rail infrastructure across Melbourne.

In particular, the port system sits within the Principal Freight Network identified in *Freight Futures*. It has a number of key elements which respond to the Directions in *Freight Futures*.

10.1 Freight activity centres

10.1.1 Regional terminals

Regional terminals are the logistics and distribution points for handling containers in the local freight area. An optimal port system would have a number of freight terminals appropriately positioned in the region it serves to optimise transport efficiency between the port and the customer. These terminals would have potential for

the co-location of complementary supply chain services such as pack/unpack, warehousing and transport and incorporate facilities for the storage and management of empty containers.

10.1.2 Local area terminals

Local area terminals are small freight terminals with limited functionality. A number of local area terminals would be developed in the optimum locations as close as possible to importer and exporter businesses in the major freight areas within a region. De-hiring empty containers and storing full and empty containers for extended periods of time are unlikely activities for local area terminals because of the financial return of this activity and the complexity added to the empty container management task - these functions would be more efficiently provided for in the regional terminals and in the port precinct. Containers would be transported directly between the local area terminals and the port using high productivity freight vehicles.

10.1.3 High productivity freight vehicles

High Productivity Freight Vehicles (HPFV) can move up to 4 TEUs at a time between the port and potential freight terminals that may be located in the outer metropolitan area. These vehicles are currently used in the port precinct.

The use of HPFVs minimises the number of trucks necessary to move containerised freight on the primary legs between the port and freight terminals. The use of HPFVs will result in lower costs, less carbon emissions and increased productivity per unit of freight.

The use of HPFVs will be restricted to approved primary arterial roads and PoMC will work with industry and relevant agencies to ensure that the use of HPFVs is maximised and appropriately applied. Until the use of HPFVs are able to be adopted broadly across Melbourne's principal freight network, back loaded use of B-doubles will be the focus of road shuttle services between the port and metropolitan freight terminals.

10.1.4 Increasing use of rail

Currently, the majority of rail volumes to the port are from interstate (utilising the standard gauge network) and non-urban intrastate (mainly from the broad gauge system).

Further substantial increases in rail mode share will require significant growth in urban freight volumes. PoMC regards the planning and development of an effective "Port System", including adequate capacity and efficiently operated metropolitan freight terminals, as essential to the achievement of the Government's objective of encouraging the movement of a greater share of port-related traffic by rail. PoMC also believes that ensuring appropriate access to these terminals is likely to be required to promote effective competition in the port-focussed rail services.

10.1.5 Empty container parks

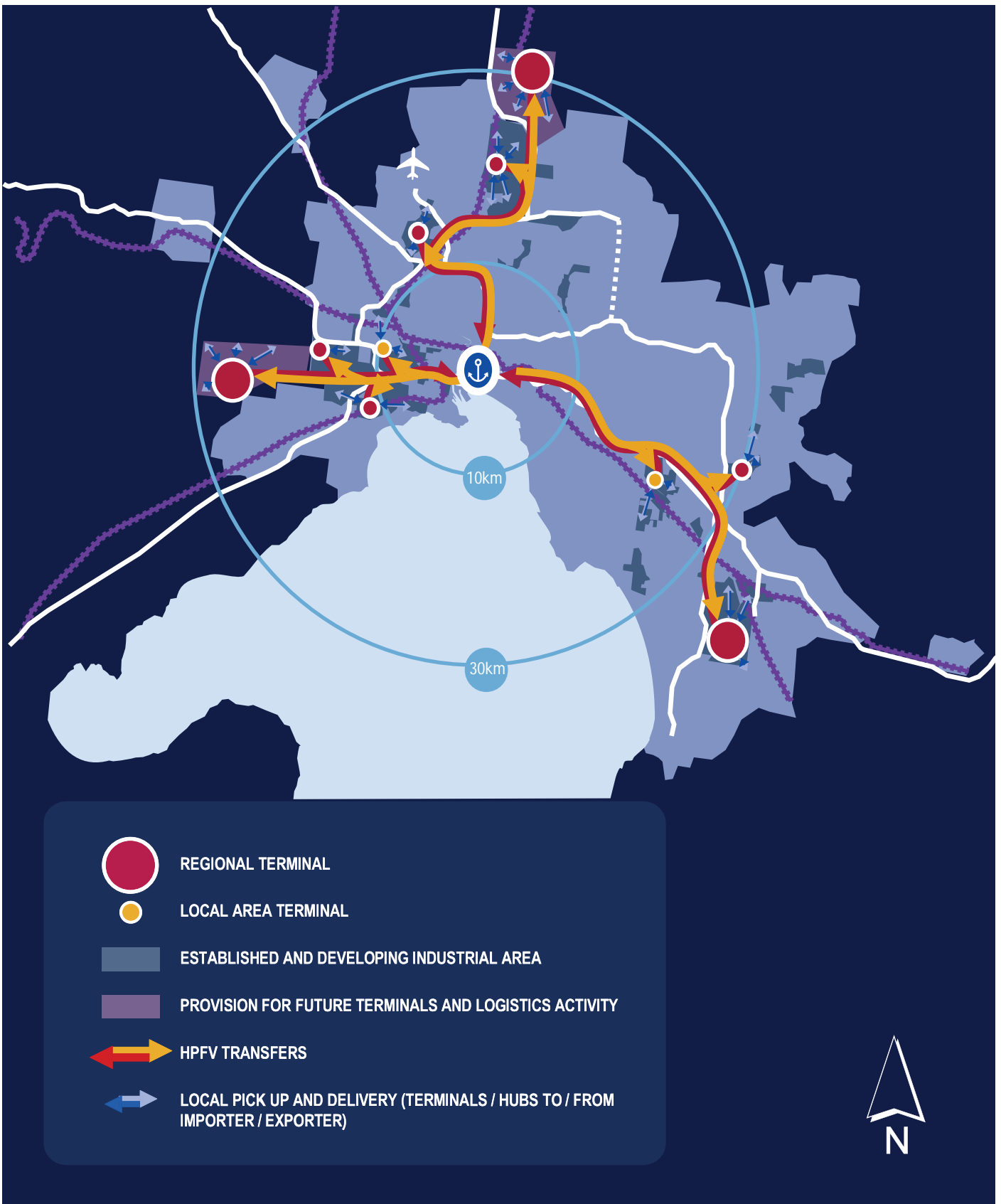
Empty container parks are an essential part of the port system. There are transport efficiencies and logistic benefits in empty container parks having good accessibility to port terminals, importers and exporters. PoMC will work with the shipping and transport and logistics industry to support the provision of empty container parks with good access to both the port and strategic metropolitan locations.

The increasing use of near port and outer urban freight terminals with rail or road shuttles to port terminals may benefit the port system and increase transport efficiencies alongside environmental and social benefits.

10.1.6 Information Communication Technologies (ICT)

Information and communication technologies (ICT) are essential to efficiency improvements and the eventual optimisation of the maritime container logistics chain. The importance of these technology solutions relate directly to improved empty container management and truck utilisation to and from the port. They also have the potential to provide an essential operational link between the port and freight terminals in metropolitan and regional locations.

Port system conceptual diagram



10.2 Road transport

Whilst port related traffic is only a small component of the overall freight volume moved through the port area (approximately 0.16% of all motor vehicle trips in Melbourne and 3.3% of traffic on the West Gate Freeway), approximately 80% of all port trade is currently moved by road transport (excluding liquid bulk movement by pipelines).

Because road transport has a highly visible and profound impact on community amenity, the efficient management of truck movements servicing the Port is a critical issue for the trucking industry, stevedores, local councils, PoMC and the State Government. Basic strategies that PoMC will support to manage the growing volume of truck traffic include:

- increasing the utilisation and back loading of trucks to reduce the relative number of truck trips
- optimising truck trips to reduce the distance travelled
- moving more cargo by rail to reduce the road share
- locating appropriate container management functions including empty container parks, close to the Port
- optimising the use of existing road infrastructure
- improving the road network by increasing its scope, capacity and convenience.

10.3 Increased truck utilisation

Substantial improvements in trucking efficiency will be needed to manage future truck numbers servicing the port. PoMC and State Government departments will work with the trucking and transport industry and stevedores where possible to deliver a significant increase in truck utilisation by:

- encouraging truck fleet enhancements through the wider use of HPFVs (4 TEU per truck) and B-Doubles (3 TEU per truck)
- encouraging stevedore systems and practices that drive increased efficiency
- integrating supply chain logistics systems to ensure that the proportion of loaded inbound trucks with an outbound load (and vice versa) is increasing.

The aim of these initiatives is to increase truck utilisation from the current 1.24 TEU/truck to 2.0 TEU/truck by 2035.

PoMC will consult extensively with the trucking industry, VicRoads, stevedores, government, local councils and other stakeholders to better define the road transport issues around the Port, identify initiatives that will improve truck efficiencies and the impact of trucks on the community and to formulate action plans to implement the recommended changes.

10.4 Improved roads

The VTP and *Freight Futures* propose strategies to upgrade the road network servicing the Dynon and port precincts that may see the development of alternative and improved road links that reduce the impact of road traffic on the surrounding community. Further, the commitment to the Truck Action Plan will have significant influence on port related traffic.

To improve traffic conditions in the Port Melbourne/Webb Dock area, including ameliorating the impacts of existing Williamstown Road traffic on local residents, a network improvement study of the Port Melbourne/Webb Dock area has been completed which has resulted in a number of priority road works including:

- widening of Todd Road and Cook Street and signalisation of Cook Street and the Westgate freeway eastbound off-ramp
- development of Plummer Street as an alternative access route to the Westgate Freeway.

Further road works within the port and at the Todd Road intersection will be undertaken in the short to medium term to provide an integrated solution to Webb Dock access.

10.4.1 Port roads

PoMC has responsibility for the provision and maintenance of an efficient road network within the port boundary. A number of changes and improvements to this network will be undertaken including:

Mackenzie Road

The extension of Mackenzie Road to an intersection with Footscray Road at Sims Street completed in early 2005, provides road access to Swanson Dock West container terminal and Coode Island. This road connection allows closure of Coode Road west of Dock Link Road to be considered with the extension of Swanson Dock West container terminal to the north.

Direct access from the Swanson Dock West container terminal to Dock Link Road would maintain the port/Dynon connection for overweight and Super B-double transfers.

Coode Road

In addition to the planned closure of Coode Road west of Dock Link Road, the closure of Coode Road east of Dock Link Road would allow extension of the Swanson Dock East container terminal to the north and integration of the terminals with the transport services, container freight stations and storage functions to the north of Coode Road.

The closure of Coode Road east may require a new internal heavy and Port Precinct Vehicle (PPV) access road to link Swanson Dock West to the rest of the Port and provide access to Dock Link Road from areas to the east of the port.

Appleton Dock Road

Appleton Dock Road to the south of Anderson Road will be closed to allow completion of the East Swanson Dock rail terminal development.

Enterprize Road

Enterprize Road will provide total access to the ABA/Grainco facility, Victoria Dock and Appleton Dock B-E leaseholds.

Link Road

A Link Road has been constructed from Enterprize Road to service the Appleton Dock leaseholds and permit the closure of the existing Appleton Dock Road rail crossing.

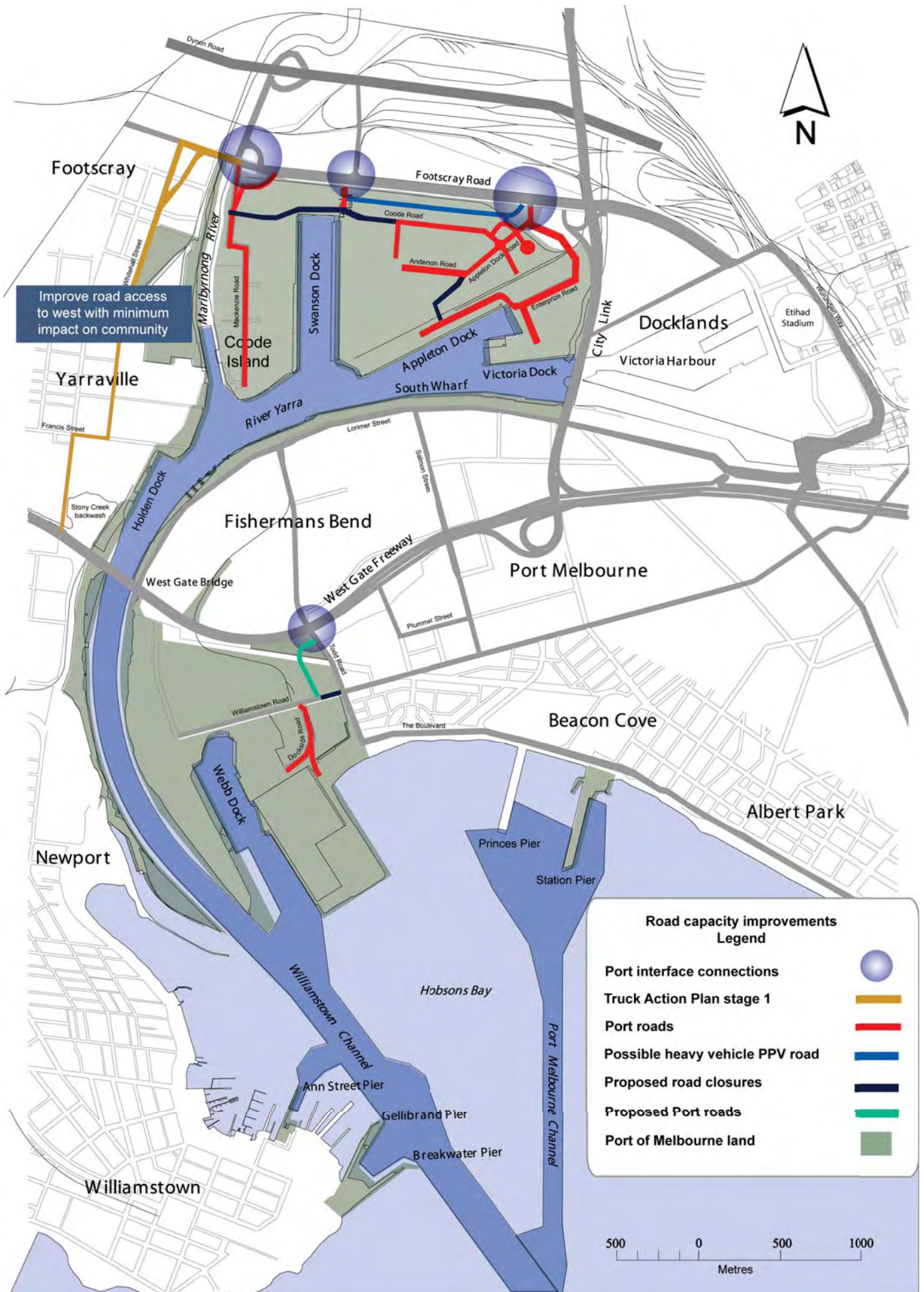
Dockside Road

Dockside Road works will be undertaken as required to complement other Webb Dock road works and provide an integrated solution.

Port and Dynon connection

The Dynon Port Rail Link project has provided an opportunity for a future connection between the Port and Dynon rail terminal precincts, to provide for unrestricted movement of special vehicles including PPVs.

Road capacity improvements



10.5 Rail transport

PoMC is committed to working with all stakeholders to facilitate and promote improved rail mode share for all port trade (excluding liquid bulk). PoMC initiatives aimed at promoting rail mode share include:

- supporting the development of on-port rail terminals through appropriate land allocation and provision of efficient rail links between the external network and terminal boundaries
- engaging Australian Rail Track Corporation Ltd (ARTC) to provide management services for rail operations within the Port that maximise the use of available track capacity for port trains
- actively supporting the concept of common user access to on-port rail terminals under acceptable commercial arrangements
- Gaining a better understanding of the critical elements of the business models underpinning rail operations servicing the Port
- working with various industry bodies to develop rail based logistics links between the Port and outer urban areas.

An important part of delivering and promoting improved rail mode share is the development of viable shuttle train services between outer urban freight terminals and the on-port rail terminals. As the freight task expands, freight terminals will play an important role in achieving greater on-rail volumes. PoMC continues to work with stevedores, rail operators and other stakeholders towards facilitating improved rail mode share.

There is considerable debate around the capacity of the on-port rail terminals. The potential maximum terminal capacities listed in this section are based on optimum operations which may only be achieved with significant investment in terminal equipment and external rail network capacity. Through the port system PoMC will work with stevedores, rail operators and other stakeholders to ensure that sufficient rail capacity is available in the Port and Dynon Rail precincts.

10.6 Increased capacity of rail network

Opportunities for increasing the capacity of the rail network servicing the Port will be explored with the assistance of government and relevant industry stakeholders. For example, additional storage capacity for long trains close to the Port will increase network capacity and improve the efficiency of rail operations by reducing train delays.

Dynon rail precinct

Relocation of the Melbourne Wholesale Markets from their Footscray Road location in the short to medium term will facilitate the development of this site for more appropriate port related activities.

Webb Dock rail connection

The rail connection to Webb Dock was severed in 1996 to allow for the Docklands development to proceed; however, a new reservation has been provided west of and adjacent to the Bolte Bridge to allow for its reinstatement.

The new rail alignment requires either a bridge or tunnel crossing of the Yarra River.

Under the VPSF, the State Government has committed to protect future options to reconnect the rail link to Webb Dock. This project will proceed when there is a strong business case to do so and all necessary approvals have been obtained.

Based on PoMC's trade forecasts and assessment of the Port's infrastructure needs, the optimum time for reopening this rail connection is likely to be in association with the long term development of Webb Dock for international containers.

West Maribyrnong rail connection

A Broad Gauge rail link connects North Dynon Terminal to the Port and other properties to the west of the

Maribyrnong River with the potential to accommodate future trades or port-related activities. This track currently terminates near Somerville Road.

Preliminary investigations have been carried out into the provision of Dual Gauge access to this precinct to cater for possible future growth in trade.

10.7 On-port rail terminals

East Swanson Dock rail terminal

The long term plan for East Swanson Dock provides for the full duplication of the dock rail sidings to permit long trains to be accommodated within the sidings without the need for shunting. The theoretical capacity of the terminal is 550,000 TEU pa.

West Swanson Dock rail terminal

A 550 metre Dual Gauge rail siding which allows 1,100 metre trains to be accommodated is located north of the West Swanson Dock Container Terminal and parallel to Footscray Road. Future duplication of the siding will significantly increase the theoretical capacity of this terminal to 320,000 TEU pa.

Grain terminal

The DPRL project has provide the opportunity for trains up to 50 wagons long to operate through this facility without the need to break the train. Extension of the dead end track to the west combined with a second unloading facility could increase future capacity substantially.

Victoria Dock rail terminal

The first element of the Victoria Dock development involves the introduction of train operations. A working track length of up to 400 metres is possible at this site.

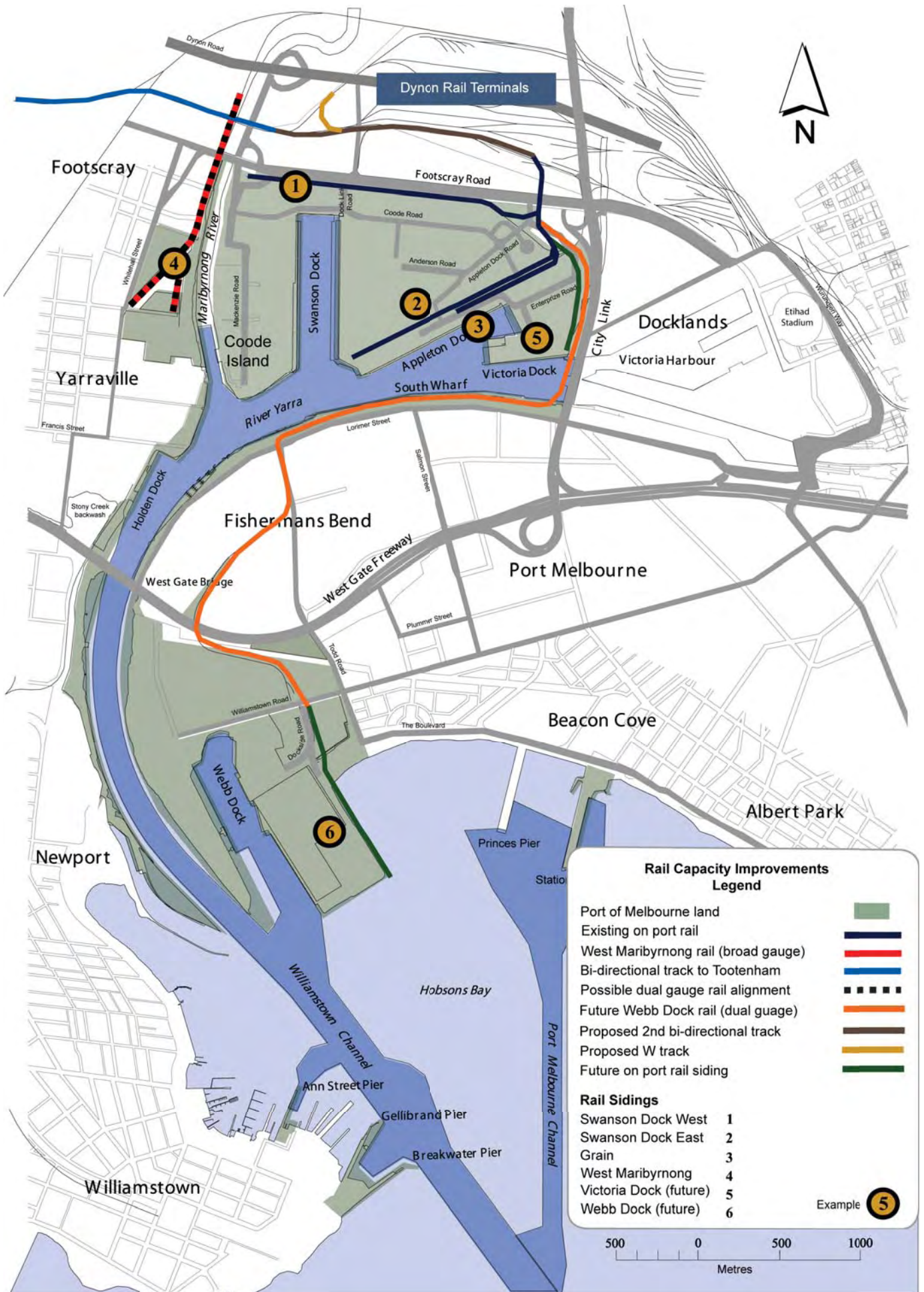
Webb Dock rail terminal

It is likely that the reintroduction of rail operations to Webb Dock would be prior to, or integrated with, the commencement of long term intensification of international container terminal operations in this precinct.

While the actual layout of rail terminals linked to any new international container terminal developments will not be known for some time, it is conceivable that up to 4,500 metres of working track with a theoretical capacity of 900,000 TEU pa could ultimately be provided.

Bass Strait terminals at West Webb Dock may also be serviced by rail in the long term.

Rail capacity improvements



10.8 Shipping

Since 1997 the total number of ships visiting the Port of Melbourne has increased by approximately 22%.

PoMC estimates that by 2035 approximately 6,000 ships will visit the Port with approximately 45% of these being container ships.

Ship size and draught

Container ship size is increasing as companies realise economies of scale and deploy larger ships to Melbourne. These larger ships are growing in number as shipping lines rationalise costs in a competitive market. Within the next 10 years, ships of up to 4,500 - 5,500 TEU capacity will come to Melbourne from the busiest trading routes, once larger vessels replace them on other routes.

Forty four per cent of container ships accessing the port in 2007 had a maximum summer draught equal to or greater than 11.6 metres and were therefore potentially affected by draft limitations. Approximately 4% of dry bulk ships and 47% of liquid bulk ships were similarly affected.

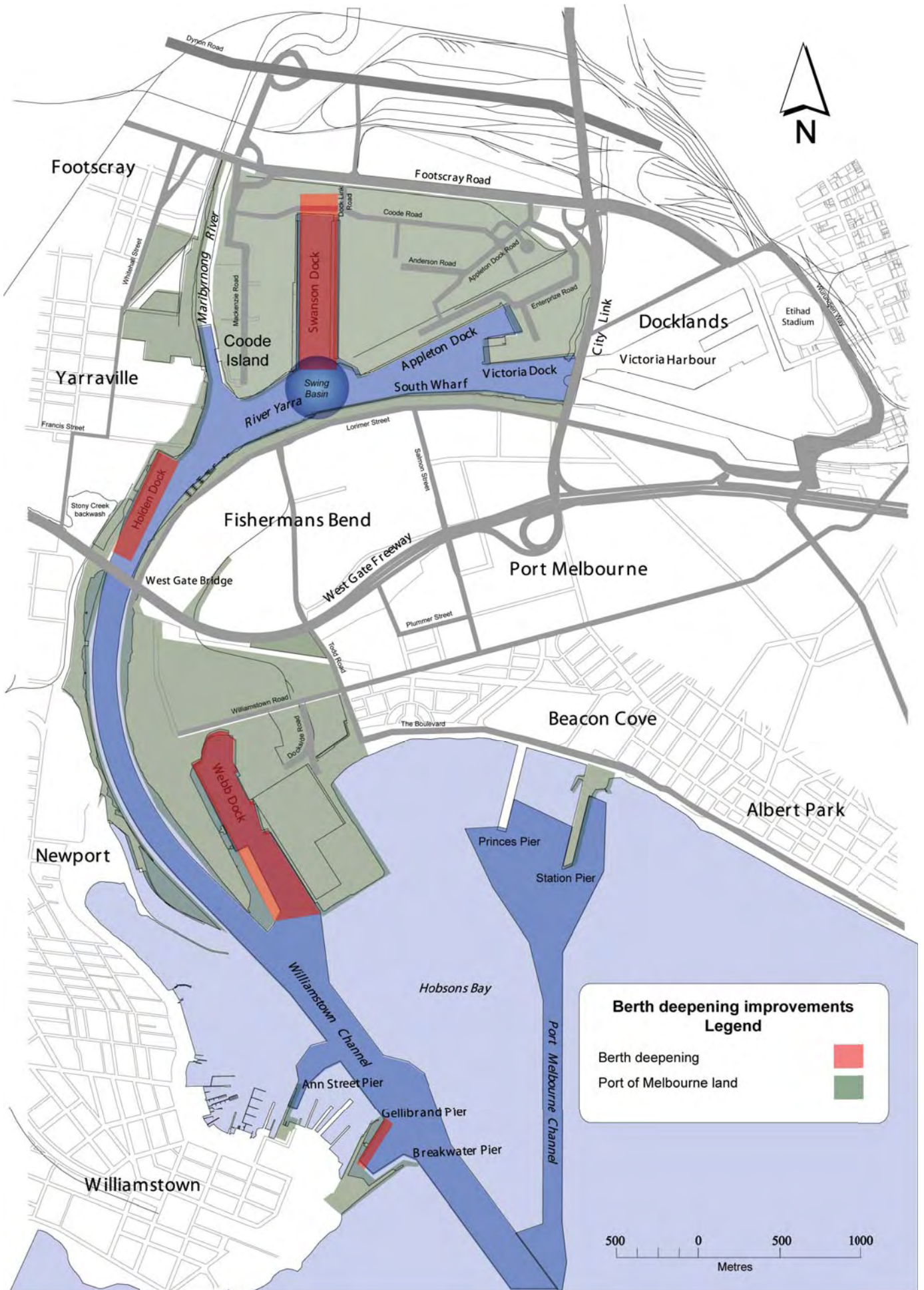
Channel deepening

PoMC is deepening sections of the existing channels to provide access to the Port of Melbourne for deeper draught vessels. The project is vital to:

- address the current draught restrictions whereby up to 60% of container vessels cannot load to full capacity
- accommodate the next generation of deeper draught container vessels
- maintain Melbourne's competitive advantage as the lynchpin in the logistics chain for Victoria and south-eastern Australia
- benefit from economies of scale by reducing costs in the logistics chain for importers and exporters.

In addition to the specific works associated with the Channel Deepening Project, further project specific investments will be required into the future to accommodate changing vessels sizes.

Berth deepening improvements



Berth deepening improvements Legend

- Berth deepening ■
- Port of Melbourne land ■



11 Funding the Port Development Strategy

Port of Melbourne Corporation will provide the infrastructure backbone required to support the high levels of private investment needed to maintain the premier position of the Port of Melbourne into the future.

PoMC is seeking to provide the infrastructure backbone that will support the significant private investment needed to enable the Port of Melbourne to continue to satisfy Victoria's trading requirements.

The Port's development strategy includes an indicative capital investment program and funding proposals to support the required infrastructure investments.

PoMC expects that Government would only consider a direct contribution to any element of the Port Development Strategy when there is a demonstrable public benefit or an issue of state or national importance associated with a particular project. PoMC recognises that the port's growth must be largely self-funding and has developed models of future port pricing that take into account the need to fund the development of the port.

PoMC will support the required investment through a combination of appropriate pricing and growth in trade. The port's pricing is substantially below that of its major competitors and it is expected that the Port will retain its competitive position with other Australian gateway ports, even after large scale expenditures of the Channel Deepening Project.

Competition, by its nature, provides an opportunity for and promotes improvements in service levels, productivity and generates optimal pricing and cost to port users.

Within this context and, consistent with the findings of the Essential Services Commission review, PoMC commits to implementing the PDS in a manner which does not significantly reduce the benefits of competition and will actively assess the delivery method of major investment strategies to ensure consistency with the *National Competition Policy*.

Investment that safeguards and improves freight access to the port also provides substantial national benefits within the scope of the Federal Government. PoMC will work with the Victorian Government to establish priorities within the Federal Government's program for investment in transport infrastructure projects that will improve links between the port and the national road and rail network.



Port of Melbourne Corporation

Street Address
Level 4, 530 Collins Street
Melbourne Victoria 3000
Australia

Postal address
GPO Box 261
Melbourne VIC 3001
Australia

Tel: +61 3 1300 857 662
Fax: +61 3 9683 1570

Email: information@portofmelbourne.com
Internet: www.portofmelbourne.com