VICTORIA
THE FREIGHT STATE

THE VICTORIAN FREIGHT AND LOGISTICS PLAN

AUGUST 2013

State Government Victoria


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CONTENTS

FOREWORD

VICTORIA TO REMAIN FREIGHT AND LOGISTICS CAPITAL

The Victorian Coalition Government has a clear vision and a plan for ensuring that Victoria retains its status as Australia's freight and logistics capital, building for the future using our competitive strengths. This document, *Victoria – The Freight State*, sets out that vision and plan.

Our state's natural geographic advantages, and the foresight of our forebears in setting aside strategic land and corridors, have made Victoria the nation's leading state for freight and logistics. Victoria is home to Australia's largest container and general cargo port, as well as two curfew-free international airports, supported by an extensive rail and road transport network. We are rightly seen as the preferred location for national distribution, warehousing and logistics businesses.

Victoria's freight and logistics sector supports the other key sectors of our economy – particularly manufacturing, agriculture, mining, wholesale and retail commerce. The vitality of the sector also generates economic benefits for the state by servicing the needs of the broader South East Australasian economy, including southern New South Wales, South Australia, Tasmania and New Zealand.

The freight and logistics sector contributed between $19 billion and $23 billion to Victoria's Gross State Product (GSP) in 2011, representing up to eight per cent of the Victorian economy. Taking indirect and related activity in other sectors into account, as much as 15 per cent of the economy is tied up with the sector.

Because freight and logistics plays such a critical role, the efficiency of the sector's operations is a key driver of productivity throughout the broader economy. Freight and logistics efficiency not only drives direct costs for freight operators, but influences how readily these businesses can reorganise to achieve productivity improvements. Improved freight and logistics sector efficiency enables businesses across many sectors to consolidate warehousing facilities, reduce inventory costs, increase geographical market reach and create higher-value services and products.

Our state is growing fast – in population, in the scale of the economy and in the economy's freight task, which is forecast to triple between now and 2050. Containerised imports and exports are expected to more than quadruple over the next 40 years. The challenge facing Victoria is to sustainably accommodate this dramatic growth. *Victoria – The Freight State* has been carefully crafted to ensure that Victoria meets this challenge.

Our international and national gateways – our ports, airports and interstate freight terminals – are key elements of Victoria's freight and logistics system. Through their efficient operation and linkage to external and internal transport and distribution networks, Victorian businesses are able to trade freely and efficiently in the global marketplace. *Victoria – The Freight State* sets out a clear plan for accommodating the demands on these gateways to 2050 and beyond. The Coalition Government's $1.6 billion investment in expansion of capacity at the Port of Melbourne is already underway. Our plan for the development of major new capacity at the Port of Hastings as Victoria's second container port is well advanced.

The Coalition Government is also committed to ensuring that the economic development of the state is balanced between the city of Melbourne and the regions. Regional Victoria generates around a quarter of the state's economic output and one third of our exports. Victoria is the largest food and fibre exporting state, with our agricultural exports making up 29 per cent of the national total for this sector, and earning around $9 billion each year. The recently announced Transport Solutions program – part of the *Victoria – The Freight State* plan – makes immediate investments targeted at removing bottlenecks in regional supply chains, ensuring that regional businesses can readily access export ports and domestic markets and remain cost competitive.

Within the state, every effort must be made to get maximum value out of the existing transport infrastructure assets on which our freight moves. The Coalition Government has developed the Moving More with Less initiative as another component of *Victoria – The Freight State*. This program will put Victoria at the forefront of national efforts to improve the productivity of road transport operations by allowing larger combination vehicles to operate on designated sections of the network, subject to strict safety and route compliance conditions.

In metropolitan Melbourne, *Victoria – The Freight State* sets out a range of city-shaping initiatives that will see the completion of major new East-West and orbital road and rail links to support the movement of freight between major gateways and freight generating and consuming areas. These new links will also support the progressive decentralisation of heavy freight activities away from the central city area to the periphery of Melbourne, freeing land for redevelopment opportunities in inner areas.

Victoria – The Freight State highlights the importance of maintaining our road and rail network assets so that they continue to provide the level of service needed for the efficient and safe movement of freight. The Coalition Government has recently announced a $170 million package of extra road maintenance over the next three years.

Finally, *Victoria – The Freight State* addresses the need to ensure that freight efficiency is balanced with urban amenity, and looks to the role to be played by technologies in the safe and sustainable delivery of the freight task in a growing city environment.

In the longer term, *Victoria – The Freight State* sets out a vision for Victoria's regional freight network, including the delivery of high priority highway duplications and bypasses and the progressive upgrading of the rail network to take an appropriate share of freight trips.

An exciting long-term project under consideration is a new 'transcontinental link', which could see a new interstate rail connection to the main national east-west rail line via the Mildura line. This is a complex project, but one that has the potential to greatly improve interstate rail productivity by allowing 'double stacking' of trains between Perth and Melbourne, as well as connecting significant mineral sands deposits in the Murray Basin to the export ports of Geelong and Portland.

The Coalition Government was determined to make *Victoria – The Freight State* a collaborative effort with the private sector, so we consulted widely with industry stakeholders. 10 well-attended roundtables were conducted across metropolitan and regional Victoria in the second half of 2012, and the newly-established Ministerial Freight Advisory Council (MFAC) provided valuable guidance on the best way forward from an industry perspective.

This vital input from the businesses and leaders that operate (and invest in) the freight and logistics sector was supported by extensive technical work and modelling to ensure that a robust evidence base supports all the initiatives put forward in this plan.

Victoria – The Freight State combines a practical short-term approach with a clear long-term vision to ensure that Victoria remains the most productive and liveable state in Australia.

Judicious progression and delivery of initiatives contained in *Victoria – The Freight State* will be a key contributor to meeting the Coalition Government's target of infrastructure investment of 1.3 per cent of GSP (calculated as a rolling five-year average) while reducing net debt, and to progressing Victoria's economic and fiscal strategy more broadly.

We look forward to working with the freight and logistics industry, our Commonwealth and local government partners and the Victorian community to progress this important plan for our state's future.

Dr Denis Napthine
Premier of Victoria

Terry Mulder
Minister for Roads
and Public Transport

David Hodgett
Minister for Ports

1 INTRODUCTION

The purpose of the Plan

Victoria – The Freight State (the Plan) outlines the Victorian Government's long-term strategy to improve freight efficiency, grow productivity and better connect Victorian businesses with their markets, whether local, national or international.

The Plan is supported by a series of key directions, strategies and actions intended to provide greater certainty to the private sector and to help inform business planning and investment decisions. These have been developed through extensive data and evidence gathering and by listening to the views of stakeholders, including businesses operating in the freight and logistics sector, businesses that are dependent on efficient freight movements and the local government community.

Development of the Plan has been coordinated with the development of Regional Growth Plans and the Metropolitan Planning Strategy. This has ensured strong linkages between strategic land use planning and longer-term freight directions and enabled an understanding of the combined tasks of moving people and goods on common networks.

Goal, objectives and principles

The goal of the Plan is:

To maximise the contribution of the freight and logistics sector to Victoria's productivity and liveability.

To do this, the following objectives have been adopted:

- Plan for and deliver capacity at key freight gateways in a timely manner.
- Improve the efficiency and productivity of key freight network links.
- Ensure future options are secured for key freight network developments.
- Progressively decentralise freight activities from central Melbourne to selected outer industrial areas.
- Protect and enhance access to markets for regional Victoria and adjoining catchments.

The Plan is also built on the following principles:

- **Maximise efficiency of freight movements on the transport network.**

  Victoria's freight task should be delivered at the lowest possible input cost, without compromising safety.

- **Maximise the contribution of freight and logistics to overall economic performance.**

  Victoria's freight and logistics sector should be developed and managed to enhance the productivity of business supply chains and maximise the State's economic performance.

- **Ensure continuity of international and interstate gateway capacity.**

  Gateway capacity should be provided cost-effectively and in a manner that supports continued economic growth, having regard to projected long-term operational requirements, whilst minimising cost per unit of throughput.

- **Ensure integration of freight and logistics activities with other land uses.**

  Freight and logistics activity should be strategically located and operated so as to enhance the productive potential and liveability of Melbourne and Victoria as a whole, whilst promoting efficiency of movement.

- **Minimise impacts of freight and logistics activity on safety, amenity and the environment.**

  Victoria's freight task should be managed in a manner that recognises externalities and minimises impacts on the amenity of adjacent communities and the broader environment while maintaining safety for users of the transport network.

- **Maximise affordability and private sector investment.**

  Private sector investment in freight and logistics infrastructure and initiatives should be encouraged and managed in a manner that promotes affordability for governments and protects the public interest.

Implementation considerations

A high level rapid economic appraisal of the key categories of interventions proposed in the Plan (i.e. new trade gateway capacity, network efficiency measures, new rail and road links) suggests that, individually and cumulatively, they would produce significant net economic benefits for the State by 2050.

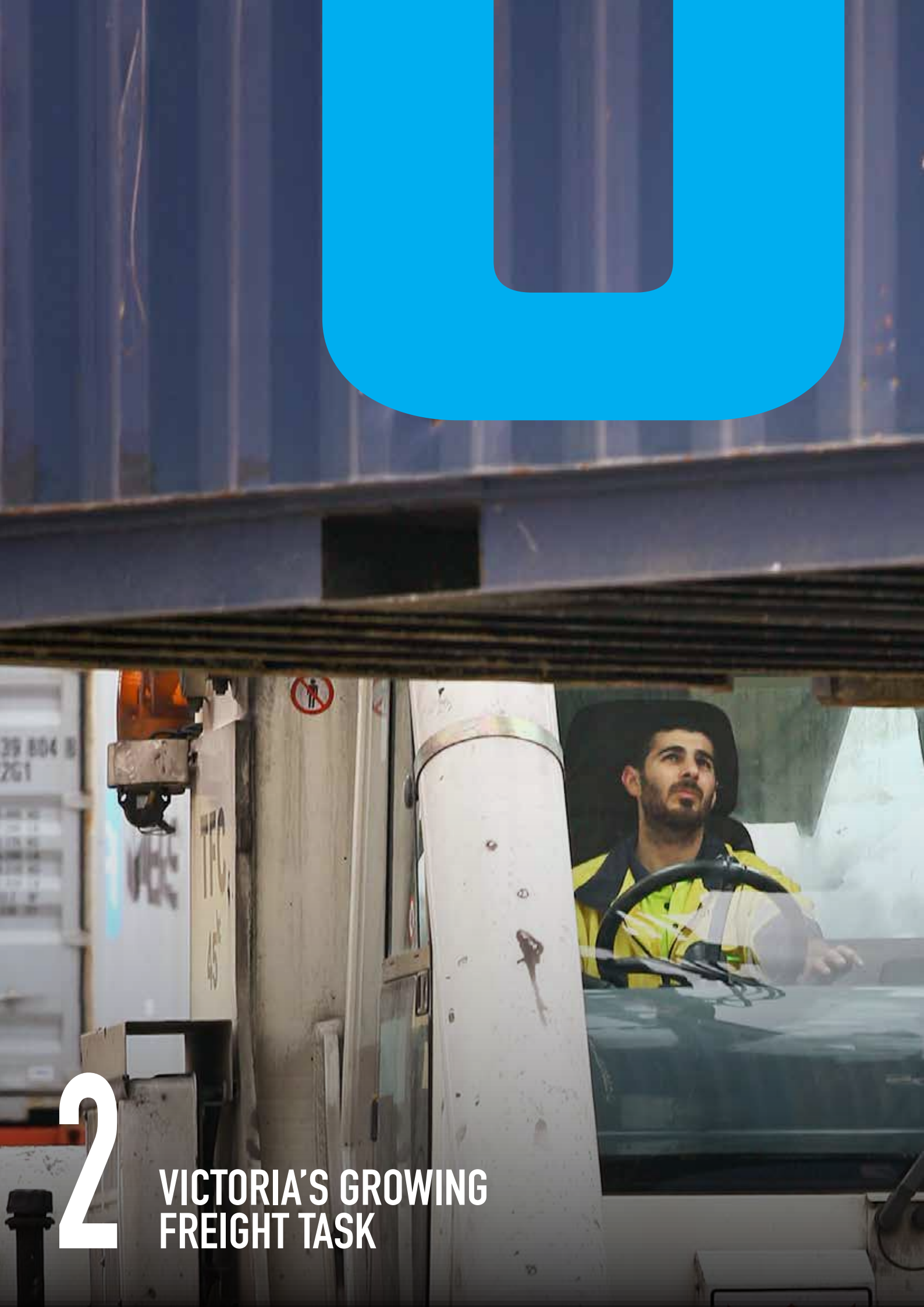
A number of key initiatives in the Plan have already been announced by the Government and funding allocations have been made to deliver them (e.g. $28 million for Transport Solutions) or progress planning and development activities (e.g. $110 million for Port of Hastings).

Decisions around remaining initiatives will be made in the context of Victoria's economic and fiscal strategy. The strategy aims to drive Victoria's future economic growth and prosperity by:

- rebuilding budget capacity
- improving productivity
- ensuring Victoria is a competitive and low-cost place to do business.

Judicious progression and delivery of initiatives contained in the Plan will be a key lever through which Government can meet its fiscal parameters of infrastructure investment of 1.3 per cent of Gross State Product (GSP) (calculated as a rolling five-year average) while also reducing general government net debt, fully funding the State's superannuation liability by 2035, and achieving a net operating surplus of at least $100 million per annum.

Within this overarching fiscal and economic context, all individual projects/initiatives requiring budget funding will be subject to future Government consideration in relation to budget capacity, business cases and the rigorous use of cost-benefit analysis. For infrastructure projects, this includes ensuring consistency with the Government's investment lifecycle and high value/high risk guidelines. For significant legislative/regulatory changes, Business Impact Assessments and Regulatory Impact Statements (or equivalent) will be undertaken where appropriate.



2 VICTORIA'S GROWING FREIGHT TASK

The size of Victoria's freight task can be analysed and understood in a number of ways. In this section, measurements of the current freight task and its projected growth to around 2050 are presented in terms of:

- container trade forecasts prepared for the Port of Melbourne Corporation (PoMC) by Deloitte Access Economics (DAE)
- mass of freight carried by distance travelled, referred to as net tonne kilometres (ntk), estimated by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) – 'top down' or macro estimates derived from a range of sources, including Australian Bureau of Statistics (ABS) surveys and census data
- mass of freight carried (tonnes), estimated through commodity based 'bottom up' research undertaken by Deloitte Access Economics (DAE) for the Victorian Department of Transport, Planning and Local Infrastructure
- road freight trips, estimated using the Department of Transport, Planning and Local Infrastructure's Freight Movement Model (FMM) – this model uses employment and survey information to estimate the daily volumes and origins and destinations of heavy truck movements within Melbourne.

All of these measures predict strong growth for Victoria's freight task out to 2050.

Container Trade Forecasts

The table below shows the current forecasts for growth in Victoria's container trade to 2046. Significant growth is expected, with the total task forecast to grow to 11.2 million twenty foot equivalent units (TEUs) – a significant increase over the 2.58 million TEUs handled in 2011-12. The Government's plan for efficiently managing the expected growth in container trade through Victoria's ports is discussed in detail at *Direction 1 – Ensuring port capacity for international containers.*

BITRE forecasts in net tonne kilometres (ntk)

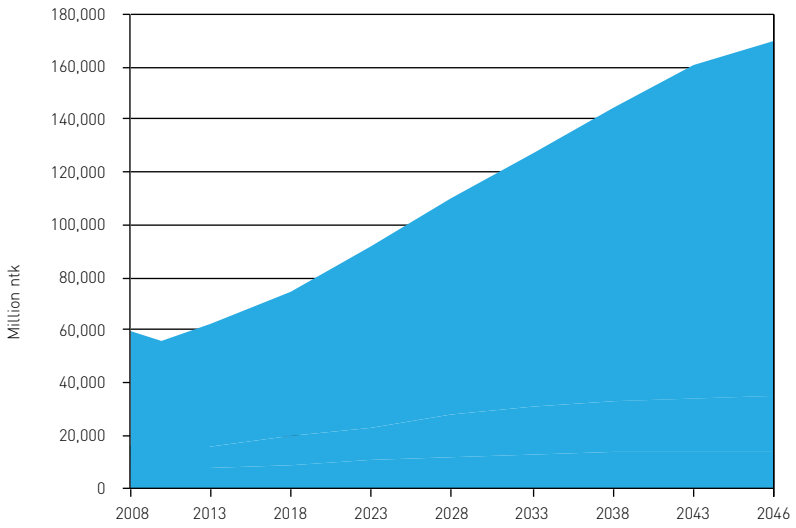
The graph below shows the forecast for the growth in Victoria's total interstate and intrastate freight task in net tonne kilometres (ntk), as calculated by BITRE derived from ABS data. The forecasts include an estimate of freight moved within Victoria and the Victorian leg of all freight moved by road, rail and sea to and from interstate destinations.

Victorian Container Trade Forecasts, 2021–2046

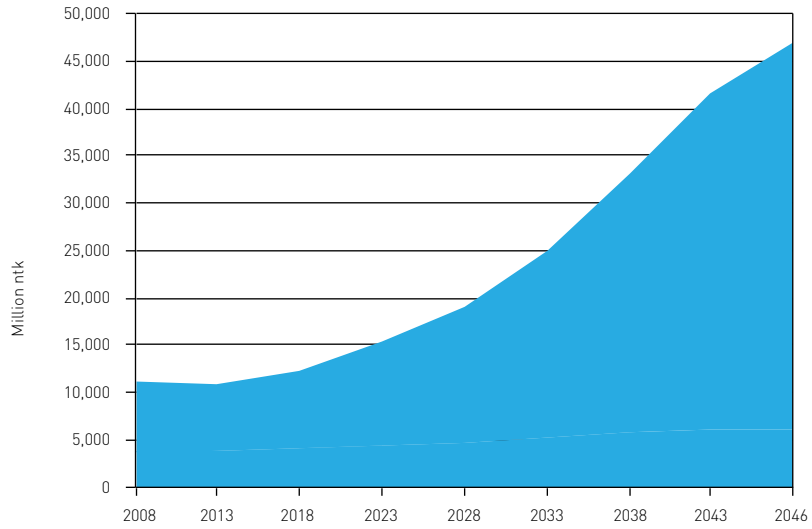
Million TEU	2021	2031	2046
International	4.0	5.6	9.6
Mainland	0.2	0.3	0.4
Tasmania	0.5	0.7	1.2
Total	**4.7**	**6.6**	**11.2**

Note: Includes full and empty containers. Source: Port of Melbourne Trade Forecasts 2010-2050 (Deloitte Access Economics, June 2011)

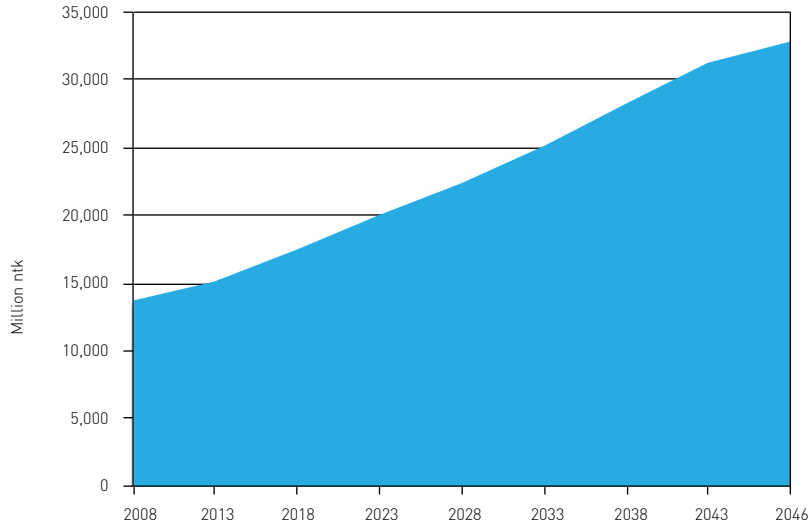
BITRE estimate of the total Victorian freight task including interstate freight 2008–2046 (million ntk)



Regional freight task (million ntk)



Metro Melbourne freight task (million ntk)



BITRE estimates the size of the current Victorian freight task at approximately 60 billion ntk per annum. The task is forecast to increase to 170 billion ntk over the period to 2046. This represents a compound annual growth rate of nearly three per cent – a rate faster than population growth and in line with long-term growth in Gross State Product (GSP).

During the past ten years the growth in Victoria's freight task has for periods been even faster, increasing by 20 per cent between 2004 and 2008 whilst GSP increased by only 13 per cent.

Relatively high rates of growth in the period to 2031 are expected to be tempered in later years as the historical relationship between economic growth and freight demand weakens.

Looking more specifically at regional freight, it is notable that this task is forecast to grow faster than Melbourne's tonne kilometre task up to 2046. Overall regional freight is set to increase by a factor of around 4.5 (an average annual growth rate of 4.5 per cent). Although regional populations are not forecast to grow as strongly as Melbourne's population, forecast strong growth in export markets is expected to support strong and ongoing growth in the regional freight task.

The Melbourne freight task in tonne kilometre terms, which is almost entirely a road task at present, is forecast to increase from around 15 billion tonne kilometres in 2012 to around 33 billion tonne kilometres in 2046 – a 2.4 per cent average annual growth rate. Whilst this rate of growth is slower than regional Victoria, at this rate it will still increase by a factor of 2.2 over today's task by 2046.

Total Victorian freight task by regional/metro (million tonnes per annum) – Deloitte Access Economics

	2012	2021	2031	2046
Regional Victoria	38	41	51	68
Metropolitan	216	274	369	582
Unallocated	93	123	170	277
Total freight task	**347**	**438**	**590**	**927**

Commodity production based forecasts

The Department of Transport, Planning and Local Infrastructure commissioned Deloitte Access Economics (DAE) to undertake an analysis of Victoria's freight task through data gathered directly from producers and distributors of goods and commodities. This 'bottom up' analysis found that 347 million tonnes of freight moved through Victoria in 2012 – a task that is forecast to grow to 927 million tonnes in 2046.

This analysis included identification of freight flows by key commodity and volume by individual region across the State. Reference to this more detailed information is included later in the Plan.

Estimates generated by this direct research 'bottom up' method account for approximately 90 per cent of the total freight volumes estimated using the more traditional 'top down' data sources. On this basis, there is a high level of confidence that the 'bottom up' analysis has identified the major freight movements within the State.

Freight Movement Model – metropolitan daily truck movement forecasts

The table to the right shows outputs from the Department of Transport, Planning and Local Infrastructure's Freight Movement Model (FMM). This model indicates that there are currently close to 300,000 truck trips generated per day around Melbourne, the majority being rigid and articulated bulk vehicles, such as flatbeds and curtainsiders. By 2046, the number of trips undertaken by heavy road freight vehicles within Melbourne is forecast to more than double, to nearly 650,000 movements a day.

Freight movement by truck type 2011–2046 (FMM 2012)

Type of vehicle	2011 – daily		2046 – daily	
	Freight truck trips	% of Total	Freight truck trips	% of Total
Rigid Bulk	192,087	66%	309,221	48%
Articulated Bulk	86,800	30%	272,473	42%
Rigid Containerised	191	< 1%	990	< 1%
Articulated Containerised	12,414	4%	66,212	10%
Total	**291,492**	**100%**	**648,896**	**100%**

The implications for freight planning

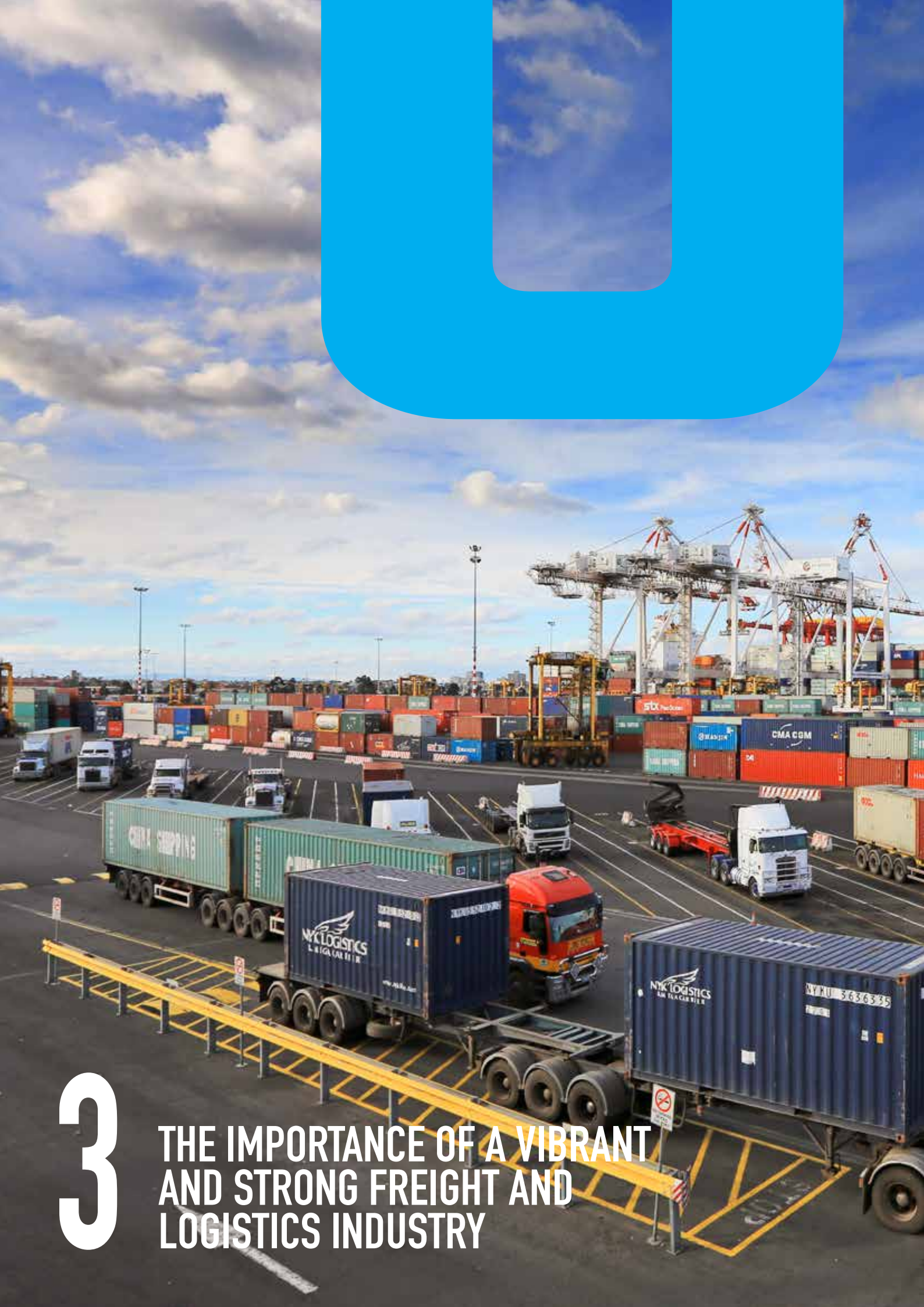
The data and projections presented here reflect an already substantial freight task, which, by various measures, is estimated to roughly triple in size by 2050. This growth, faster than population growth and broadly in line with economic growth, presents a major challenge if Victoria is to maintain a strong and competitive freight and logistics sector.

The BITRE projections also indicate a continuation of the predominant role of road in carrying the growing freight task, in particular in metropolitan Melbourne. However, it is noted that this projection represents a continuation of past trends and does not reflect the take-up of opportunities for growth in rail's role in the future. This could be driven by changes in external factors (such as increasing fuel prices and environmental considerations) and policy and strategy interventions, such as those set out in this Plan.

It will be vital to achieve an appropriate long-term balance in the roles of the different transport modes, whereby each mode is able to operate at optimum efficiency and contribute to the aspects of the freight task to which it is best suited.

A further challenge will be to ensure that existing road and rail networks are maintained to be 'fit for purpose' in the context of these growing demands from freight and other users.

Through the Plan, the Government is committed to effectively addressing these challenges.



3 THE IMPORTANCE OF A VIBRANT AND STRONG FREIGHT AND LOGISTICS INDUSTRY

The role of freight and logistics in the Victorian economy

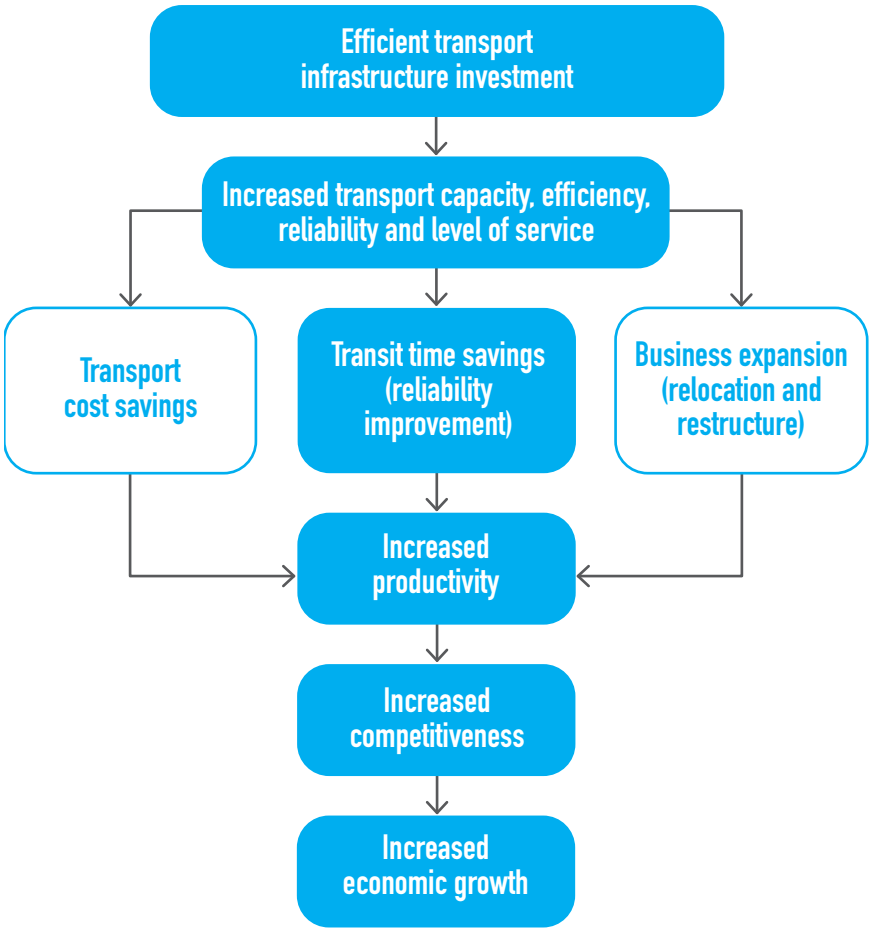
Victoria's economic development has been built on a foundation of sound transport networks and efficient freight gateways. These have provided a competitive advantage for the emergence and success of many of Victoria's key industry sectors. Victoria's 'Principal Freight Network', on which the bulk of the freight task is carried in metropolitan and regional areas (road and rail), is shown in Attachment 1 on pages 92 and 93.

The need to move freight around is a cost inherent in the production and sale of physical goods. Lowering this cost enables the economy to produce goods that may otherwise have been less competitive. The savings from lower transaction costs due to efficient freight and logistics in turn flow through to productivity gains across the economy, and can be a major contributor to economic growth over the long term.

The diagram to the right illustrates the relationship between improvements in freight transport performance and economic growth.

A reduction in transport costs incurred by freight carriers is the most obvious 'first-order' benefit of investments in transport network efficiency. However, as set out in the table on the right, there are significant flow-on benefits potentially accruing to freight owners, which are not always fully appreciated or taken into account. It has been estimated that these flow-on benefits could average an additional 15 per cent on top of the direct transport benefits.

Role of freight and logistics in the Victorian economy



Effects of improved freight transport	
First-order benefits	Immediate cost reductions to carriers and shippers, including gains from reduced travel times and increased reliability
Second-order benefits	Reorganisation-effect gains from improvements in logistics; quantity of output changes, quality of output does not change
Third-order benefits	Gains from additional reorganisation effects, such as improved quality products, new products or some other change
Other effects	For example, facilitation of regional specialisation resulting in increases in employment or rate of growth of regional income

The freight and logistics sector as a whole is estimated to have directly contributed between $19 billion and $23 billion to Victoria's GSP in 2011, or between six per cent and eight per cent of the total Victorian economy. When indirect and related activity from other sectors is also included, 'transport and logistics' activity has been estimated to contribute as much as 15 per cent of total Victorian GSP.

Industries that rely heavily on efficient freight connections, such as manufacturing, wholesaling, warehousing, retailing and food and agriculture have also traditionally made a significant contribution to Victoria's economy and will continue to do so into the future.

However, there have been notable shifts over the last 20 years in the mix of activity across the Victorian economy that present challenges for Victoria to retain its traditional position as Australia's leading freight and logistics State.

Since the mid-1990s, Victoria's economy has been transitioning from one that was mostly focussed on manufacturing and the local production of goods to one that increasingly reflects the transport, warehousing and distribution of goods that are imported into Victoria. It should be noted, however, that whilst manufacturing no longer occupies the dominant position, it is still the second largest industry sector and continues to play a vital role in Victoria's economy, contributing over nine per cent of GSP. Agricultural, Forestry and Fishing industries in which Victoria continues to produce above its per capita share of national output, have remained consistent key contributors to the State's economy.

In general, Victoria's economic mix today is much more evenly spread across a range of sectors than it was 20 years ago and not as dominated by the manufacturing sector. This diversification is expected to continue over the next 40 years and the economy is unlikely to return to being heavily centred on one or two sectors.

The freight and logistics strengths that Victoria has developed as a base for industries that traditionally rely on efficient freight connections have the potential to service a wider range of economic sectors in the future, and therefore to remain a key economic advantage for the State.

Understanding and building on Victoria's competitive advantages

Victoria has a pre-eminent national role in freight and logistics. The Port of Melbourne is Australia's largest container and general cargo port, despite the fact that New South Wales has a larger population than Victoria, and Melbourne is widely acknowledged by industry as the preferred location for the establishment of national distribution centres (NDCs).

Confirming this position, a recent analysis of pallet movements – an important freight movement indicator – shows that Victoria exports some 18 per cent more loaded pallets to other parts of Australia than it imports. All other states except NSW are net importers of palletised goods – and even NSW exports only approximately four per cent more than it imports.

However, we cannot take our pre-eminent position for granted – other states are catching up.

Victoria's traditional competitive advantage for freight and logistics is based on a number of factors. Some of our natural advantages include:

- our location at the south-east corner of the continent, well positioned to serve as a trade gateway for South Australia, southern NSW, Tasmania and New Zealand as well as our own needs. About 70 per cent of Australia's total population is located in Victoria, NSW, South Australia, Tasmania and the ACT

- extensive areas of flat land around Melbourne, especially to the north, west and south east, well suited to transport and warehousing operations
- a well-trained and accessible labour market supporting a large manufacturing sector, combined with a strong agricultural sector providing the scale necessary for efficient freight and logistics operations.

There is also a range of advantages that are more open to influence through government policy direction that have been equally vital to growing the role of Victoria's freight and logistics sector, including:

- a legacy of well-planned land use allocations and transport corridor reservations
- a strong supply of large parcels of relatively cheap industrial land supported by sound land release policies
- efficient, well-located freight precincts with good transport network access
- an extensive, high-quality road network
- a legacy of extensive regional rail network infrastructure, providing potential for efficient connection of primary products to ports and international markets
- two curfew-free international airports
- a large, efficient and accessible capital city port with shipping channels recently deepened to 14 metres
- as-of-right access to around 99 per cent of the arterial road network for B-Double trucks, resulting in efficiency gains and reduced freight costs.

The Government's economic and fiscal strategy

The Government's economic and fiscal strategy aims to secure Victoria's position as a leading state and a regional economic centre, realising the opportunities emerging from Asia's growth.

The strategy sets out a clear and strong action agenda, positioning Victoria as:

- the State with the strongest finances
- the State with the most cost competitive government sector
- the State best positioned to accommodate and sustain growth and expansion
- the Australian capital of the knowledge economy, with the most skilled workforce
- the State with the strongest health, science, medical research and technology sectors
- Australia's most globally-focussed economy
- a State with world-class strengths in business services, food and fibre, freight and logistics, manufacturing, tourism, major events and cultural services
- Australia's arts and cultural capital.

The strategy emphasises the relationship between the success of Victoria's economy and the State's national leadership in the freight and logistics sector. More specifically, it identifies Victoria's freight and logistics sector as an economic strength in its own right. The other economic strengths it identifies in Victoria all depend in key ways upon the strength of the freight and logistics sector.

These strengths include:

- a diverse and flexible economy – which can only exist with the support of flexible and efficient systems for moving the materials and goods that form the essential inputs and outputs of a range of key business sectors in the economy
- being Australia's largest exporter of food and fibre – which is dependent on efficient access to export markets via port and airport gateways and their connecting road and rail networks
- supporting Australia's largest manufacturing centre – which is reliant on efficient freight solutions to supply input materials and transport finished products to both domestic and international markets.

4 SECURING VICTORIA'S POSITION AS THE LEADING STATE FOR FREIGHT AND LOGISTICS

Strategy overview

The Government's strategic Plan to secure Victoria's position as the leading State for freight and logistics involves identifying and building on our competitive advantages to sustainably accommodate growth.

This approach recognises that the overarching and enduring challenge facing the State's economy and, therefore, the freight and logistics sector, is that of ensuring that Victoria is "the State best positioned to accommodate and sustain growth and expansion".

We need an efficient freight sector to reduce the costs of doing business in Victoria, but also to grow those freight and logistics activities that service interstate and international customers in order to grow Victoria's market share of the national freight and logistics sector.

The Plan largely focusses on actions to contain or reduce costs to businesses and consumers through a more efficient transport sector, but these actions will also help to grow Victoria's share of the logistics industry. Strong performance by Victoria in this sector will also benefit national economic performance and competitiveness.

To build on Victoria's competitive strengths and maintain its leadership position, it is necessary to ensure that Victoria can:

- effectively plan for and deliver adequate gateway capacity (ports, airports and interstate rail terminals)
- maximise the productivity of existing networks for freight users while maintaining safety and amenity for the community
- introduce progressive enhancements in network capacity to improve access for freight users to freight gateways and industrial precincts where production and logistics activities are concentrated
- effectively and sustainably manage urban freight movements and their community interfaces
- effectively and sustainably manage regional freight movements to ensure efficient access for producers to markets and promote balanced economic growth across the State
- effectively integrate planning for freight with broader transport and land use planning, including early identification and protection of future freight precincts and corridors to accommodate projected growth.

In tackling these challenges, the Government recognises the importance of forming and maintaining strong partnerships with private sector participants in the freight and logistics sector – the businesses that actually move the freight and their customers – to ensure that initiatives are relevant and practical and founded on an accurate understanding of supply chains and their drivers.

Partnerships with other levels of government (local councils, other State Governments and the Commonwealth Government) are also vital to ensure an integrated approach to freight network planning and management and to optimise the allocation of resources to improve the efficiency and capacity of the network.

To this end, the development of the Plan has involved extensive consultation with freight and logistics industry participants across the State through a series of ten 'stakeholder roundtables'. The Government has also actively sought the views and input of the Ministerial Freight Advisory Council (MFAC) and will continue to use the expertise of this key advisory body as the Plan is implemented.

Providing freight gateway capacity

The Government's highest priority for securing Victoria's long-term leadership in freight and logistics is to ensure that adequate gateway capacity exists for moving both international and interstate freight in and out of the State. Well-functioning freight gateways – our ports, airports and rail terminals – support both the efficiency and market share priorities. Failure to provide capacity when it is needed will mean congestion, disruption and a cost to business and the economy.

This Plan sets out a clear strategy for increasing port capacity to meet expected demand for containers, the most rapidly growing and valuable of the port trades. This means investing in expanded capacity at the Port of Melbourne in the short term and then later (mid-2020s), creating additional capacity at the Port of Hastings to service expected demand up to and beyond 2050. It is expected that before 2050 constraints will emerge on the ability of the Port of Melbourne to handle the larger ships expected to be operating at that time. This means some trade through the Port of Melbourne will likely need to be relocated.

The Government will also work with public and private port managers and industry to ensure port capacity is available for essential bulk and break bulk trades, such as grain, mineral sands, woodchips, petroleum, chemicals and motor vehicles, which are also vital to Australia's export performance.

Air freight is playing an increasing role in facilitating international and domestic trade, particularly for high-value, time-sensitive commodities such as fresh produce bound for the rapidly growing Asian markets. The Government's Plan is to ensure that Victoria moves forward with assured access to two 'curfew-free' international airports – Melbourne (Tullamarine) and Avalon – to efficiently service continued growth in this freight mode.

In terms of interstate gateways for domestic trade, the emphasis of the Plan is on ensuring that intermodal terminal capacity is provided to meet projected strong growth in the interstate rail task. In the medium term (beyond 2020), a replacement facility will be required to accommodate interstate rail freight from the Dynon Rail Terminals, which are likely to become increasingly congested and inefficient over the next decade. This presents the opportunity to locate a new, larger and more efficient terminal – the Western Interstate Freight Terminal (WIFT) – to the west of Melbourne, closer to customers operating large warehousing and distribution centres servicing both regional and interstate markets. This could in turn allow the eventual creation of an interstate 'rail bypass' of central Melbourne to relieve road and rail congestion pressures on the inner parts of the transport network.

In the long term (beyond 2040), depending on demand, the potential exists for another major interstate terminal to be established to the north of Melbourne, near the intersection of the main interstate north-south road and rail corridors and the proposed Outer Metropolitan Ring (OMR) Transport Corridor.

The Plan will ensure that planning is progressed to identify and protect sites and corridors necessary to turn these project proposals into realities when required to meet increased trade demand.

Getting better use out of the existing transport network for freight

Victoria has an extensive, high-quality transport network of roads and rail lines servicing a range of transport needs. For the most part this is a 'shared network', with freight users sharing with private cars and public transport users.

Although there are points in the network where congestion or infrastructure bottlenecks are creating significant inefficiencies for freight, which will require significant asset investment to rectify, there is significant potential to improve the productivity of the network through lower cost policy, regulatory, pricing or technological interventions.

For example, Victoria has led the way with the introduction of larger combination B-Double 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.

Through the *Moving More with Less* initiative, the Government is extending access to the network to more productive High Productivity Freight Vehicles (HPFVs) – starting with vehicles designed for lighter 'cubic' freight – in a manner and at a pace that guarantees the highest safety standards and retains public confidence.

For rail, the Government will continue to progress a program of strategic investments in priority freight links on the regional rail freight network. For example, increased axle loadings and speed standards will, in turn, increase the efficiency and productivity of services supporting regional export markets.

More generally, the introduction of new technology has the potential to leverage greater productivity out of the existing networks for all users, including freight. The *Managed Motorways* program is a current example of technology being used to successfully increase the carrying capacity of key freeway links. Similarly, new signalling technology offers the potential to achieve greater capacity on existing rail tracks. In the longer term the ability for information to be shared between vehicles, and between vehicles and infrastructure, offers the potential for more substantial gains.

Under the Plan, the Government intends to pursue a national leadership role by partnering with the private sector to accelerate the roll out of new technologies, which improve freight productivity on the transport network.

Another obvious opportunity for the improved utilisation of the transport network by freight is availability of spare off-peak capacity on both the road and rail networks, particularly overnight capacity. Again, through the Plan, the Government will work with network managers and the private sector to remove obstacles (such as the lack of 24/7 receival facilities) and reinforce incentives for freight to utilise this capacity.

Finally, at a national level, the Government is committed to working with other jurisdictions and the new National Heavy Vehicle Regulator to improve the consistency and efficiency of access and charging arrangements for heavy vehicles where these reforms are expected to generate significant efficiency and productivity dividends for the freight and logistics sector.

Investing in new and enhanced network links for freight

Most of Victoria's freight task is carried on the road network. This will continue to be the case as the great majority of freight movement, particularly in urban areas, cannot be readily serviced by rail. In addition to measures to improve access to the network by freight vehicles, a number of enhancements are necessary to maintain freight efficiency in the face of growth of general traffic as well as the freight task. A summary of the proposals that support the freight network being considered by the Government can be found in Attachment 2 on page 94.

The Government's highest priority for the road network is the delivery of a new East West Link Road to relieve pressure on the M1 corridor. In the 2013-2014 State Budget the Government committed to funding Stage One of the East West Link – the six kilometre eastern section from the Eastern Freeway to CityLink, which is the preferred first stage to meet the Government's strategic priorities. Stage One addresses the most critical issues and offers the greatest scope for 'adding on' stages that would further enhance access to the port and would enable the full East West Link to be completed in the fastest time frame. From a freight perspective significant benefits will also come from a full connection from the Eastern Freeway to the M80 in the west.

Completion of the current upgrade of the M80 will enable longer-term consideration of a North East Link. The North East Link would connect the Eastern Freeway to the M80 in the north, directly linking Melbourne's industrial areas in the south east, the Port of Hastings and Gippsland with the Hume Freeway to the north.

As part of any future planning for a North East Link there will be careful consideration of transport, environmental, heritage and social issues. Any above-ground options through the Banyule Flats or a route through other environmentally sensitive areas will be precluded.

In the longer term, progressive delivery of the OMR transport corridor will be required to service population and economic growth to the west and north of Melbourne and improve freight connections. Through the Plan, the Government is confirming its commitment to protecting this key corridor.

In regional Victoria, the Government has identified a number of immediate priority projects to address bottlenecks in the freight network through the *Transport Solutions* package. This is an initiative to deliver strategic transport improvements in the short term with a strong productivity benefit. The Government has worked with local councils, industry and other agencies to identify needs and priorities for inclusion in *Transport Solutions*.

More significant road network enhancements, including major highway duplications and bypasses, have also been identified and prioritised in conjunction with Commonwealth Government funding programs.

The Government also sees a growing role for rail in providing a viable alternative to road for suitable freight tasks in strategic corridors, thereby relieving pressure on the road network.

A priority under consideration in the Plan will be to develop the South East Rail Link (SERL) proposal, which would provide a dedicated rail freight link between Dandenong and Dynon. This proposal, which will be included in future updates of the Public Transport Victoria *Network Development Plan – Metropolitan Rail*, has the potential to resolve looming capacity constraints on the Dandenong Rail Corridor, for both passenger and freight services, and to ensure that the new Port of Hastings can be effectively serviced by both broad and standard gauge rail.

Delivery of the SERL project is contingent on completion of the Melbourne Metro project, another of the Government's highest transport priorities. Whilst it is targeted at increasing the capacity of the public transport system for passengers, the Melbourne Metro project also creates benefits for freight by attracting commuter demand away from the road network, freeing it up for more efficient freight movement. For this reason, continued investment in public transport and growing its mode share is also a key part of the Government's Plan.

The Government also believes there is potential for rail to play a role in the distribution of containerised port freight in the metropolitan area. Through the Plan, we will work in partnership with the private sector to encourage the start-up of port rail shuttle operations as part of the Metropolitan Intermodal System (MIS) project.

Finally, the Government will build on investments it has already made to maintain and grow the role of regional rail freight services. A priority for consideration in the medium term will be standardisation of the Mildura line as part of a broader project to create a new 'transcontinental link' near Broken Hill, connecting to the Sydney-Perth rail line. This would enable the operation of more efficient 'double stack' freight trains between Perth and Melbourne; grow mineral sands rail freight export opportunities through the ports of Geelong and Portland; and increase competition on the network.

Managing freight delivery in an urban environment

The Government recognises that, particularly in a dense urban environment, it is necessary to ensure that an appropriate balance is struck between freight delivery efficiency and the potential amenity and safety impacts associated with these movements, such as emissions, noise and crashes.

Future delivery systems within Melbourne will need to manage a growing freight task within a 'just-in-time' environment that has the potential to create increasing conflicts between vehicles, shoppers and residents.

Through the Plan, the Government will partner with local councils, freight businesses and customers to promote better understanding of current freight delivery behaviour, investigate international experience and trial and implement innovative solutions.

Promoting efficient regional freight movements

Regional Victoria generates around a quarter of the State's economic output (around $71 billion annually) and one-third of Victoria's exports. Agricultural exports contribute 29 per cent to the national total of this sector, making Victoria the largest food and fibre exporting state, with exports worth $9 billion.

The manufacturing sector is also a key driver of regional freight demand, with growing investment in many regional locations.

The Government recognises that port connections, while crucial, are only part of the regional freight solution. A substantial amount of Victoria's regional production is either part of a value-add process across the State or consumed domestically. As a result, links to Melbourne, across regions and to interstate destinations are also critical to maintaining the competitiveness and productiveness of Victoria's regional industries.

Through the Plan, a comprehensive approach to promoting regional freight efficiency and balanced economic growth across the State will be taken, including addressing:

- access to ports, airports and markets
- cross border regulations
- bottlenecks impeding efficiency of specific supply chains
- maintenance of road service standards
- investment in the rail network
- targeted HPFV access
- servicing emerging markets, such as mineral sands, coal and forestry
- managing the impact of freight activity on the amenity of regional cities and towns.

Better integrating freight planning with transport and land use planning

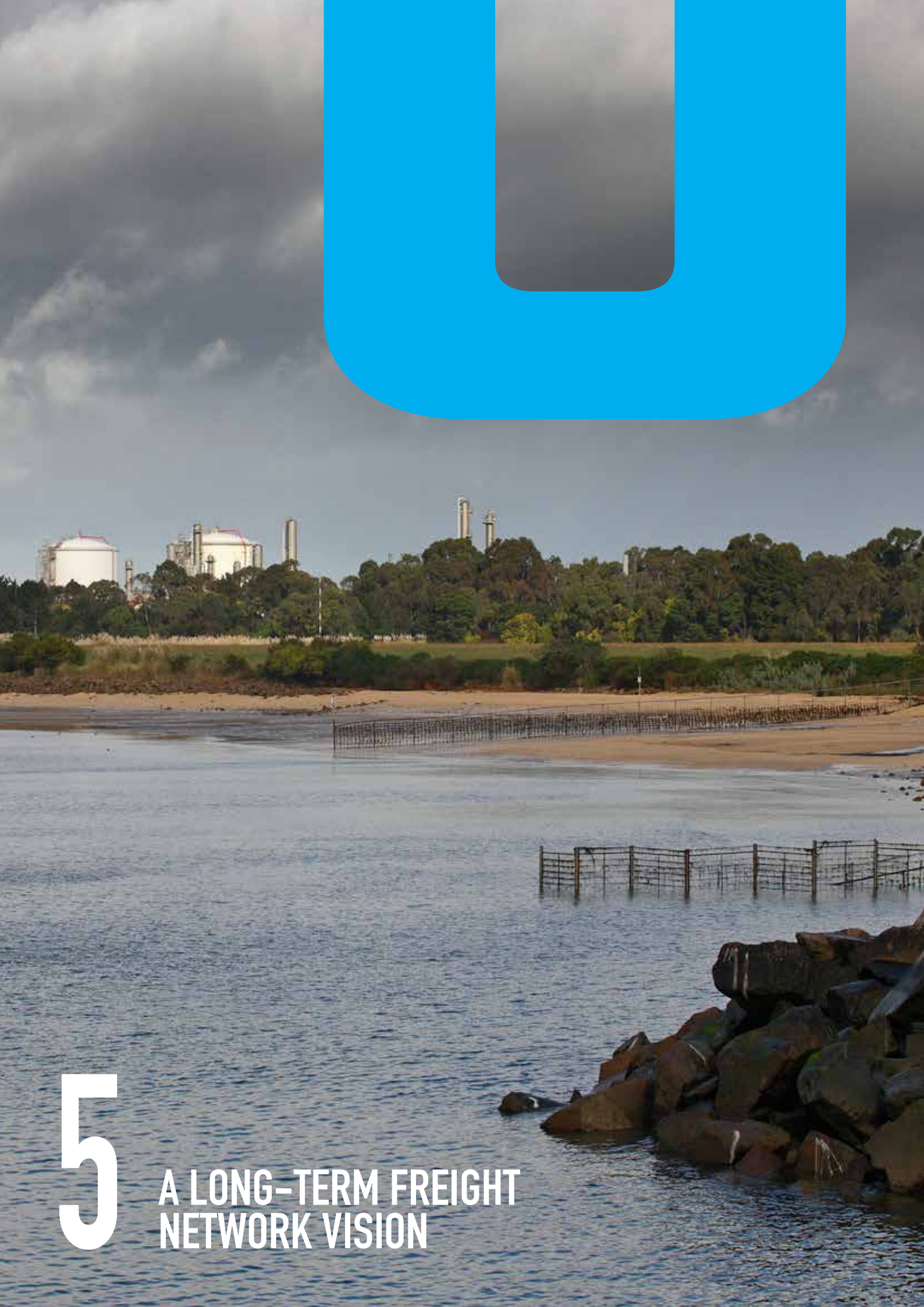
Provision for the efficient movement of freight and the conduct of freight and logistics activities must be planned in an integrated way with planning for the broader transport network and with land use planning for Melbourne and the State as a whole.

Through the Plan, the Government will give priority to identifying and protecting suitable sites and corridors that are likely to be required to accommodate future freight demand, focussing on gateways such as ports, airports and interstate rail terminals and their transport connections.

Decisions about the location of freight and logistics activities (such as port gateway locations and industrial land use allocations) can have a significant impact on other land and transport network users and, at the same time, can create new opportunities for other uses. In particular, the decentralisation of heavy freight and logistics activities away from central Melbourne would create significant urban renewal opportunities.

Decisions about road and rail network development are normally made on the basis of benefits to both people movement and goods movement, with the combined benefits generally used to determine priorities. This means an integrated approach to planning transport networks and modes is critical.

For these reasons, the development of this Plan has been closely coordinated with development of the Metropolitan Planning Strategy and Regional Growth Plans and implementation activities will be regularly reviewed in this broader policy and planning context.



5 A LONG-TERM FREIGHT NETWORK VISION

In order to guide the formation of short- to medium-term strategies and actions, it is useful to visualise long-term future scenarios that could successfully meet the goals and objectives set out in the Plan for Victoria's freight and logistics sector. Such scenarios need to meet the key challenge of sustainably accommodating projected growth in the freight task – in the broader context of growth in the State's population and economy – whilst maximising the contribution of the sector to the State's productivity and liveability.

The vision set out in this section is one such scenario, which could meet the challenge of a freight task that, by 2050, is predicted to be about three times larger than the task today. However, it is not the only possible scenario as growth projections may not be met or may be exceeded. It is also impossible to predict all of the changes in technology and the structure of the global and national economies, which may impact on supply chains and the performance of Victoria's freight and logistics sector over the coming decades.

However, the scenario outlined in the following pages does meet many of the most important requirements identified in the development of the Plan as essential for Victoria to build on its competitive advantages and maintain national leadership in freight and logistics.

The vision places a high priority on meeting demand for gateway capacity (ports, airports and interstate rail terminals) within the State; on the use of technology and regulatory/policy interventions to leverage maximum utilisation of network assets; and on the strategic upgrade of the transport network for freight to ensure efficient access to important freight origins and destinations, integrated with consideration of people movement needs. It also integrates transport and land use planning considerations to ensure consistency with long-term 'city shaping' and 'regional growth' priorities.

Based on transport and economic modelling carried out for the Plan, it is estimated that the key metropolitan freight policy and investment interventions represented in the '2050 freight vision' outlined in the following pages would boost Victoria's Gross State Product (GSP) by approximately $18 billion per annum and would add approximately 20,000 jobs by 2050. The relative impact has been estimated to be as high as $34 billion per annum by 2050 if lower population and employment growth were to occur, as a result of flow on impacts on the economy of lack of investment in freight and logistics.

Meeting port gateway capacity through investment in the expansion of the Port of Melbourne, followed by the implementation of major new container capacity at the Port of Hastings (avoiding the need for land-bridging of imports and exports via other capital city ports), is demonstrated to have the most significant benefits at a macroeconomic level. However, other key interventions proposed in the vision – including new interstate rail terminal capacity; greater use of HPFVs; development of a metropolitan intermodal system (MIS) for port freight distribution; and major new rail and road links servicing high volume freight movements – are also all assessed as having a strong positive impact on overall economic performance.

In terms of the value of benefits that would flow to the freight industry itself, the modelling indicates that benefits of up to $27.4 billion (calculated in 2012 dollars) could be realised during the years up to 2050 through implementation of the vision. The benefits would derive primarily from reduced operating costs and improved reliability achieved by more efficient use of the network and the delivery of additional network capacity to meet demand.

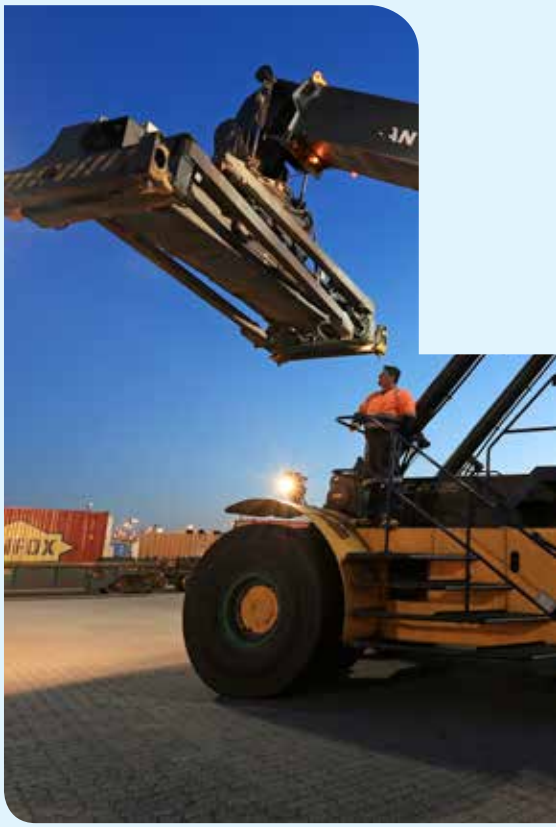
A 2050 FREIGHT VISION FOR VICTORIA

By 2050, Victoria's position as the leading State in Australia for freight and logistics is unchallenged. The freight and logistics sector is highly efficient and contributing strongly to the productive performance of Victoria's diversified, resilient economy. Food and fibre exports to Asian markets are booming, facilitated by efficient port and airport gateways and transport connections. Victoria's function as the key gateway for national distribution activities has been further consolidated and, at the same time, the 'liveability' of Victoria remains the envy of other states and is internationally recognised.

The core transport network used by freight in 2050 has been enhanced with the completion of strategic cross-city and orbital connections around Melbourne and a new rail link has been constructed to connect the Port of Hastings to the regional and national networks. At the same time, heavy freight activities have been progressively decentralised away from the inner city, reducing heavy truck trips to this strategically important area and creating opportunities for alternative, high value 'central city' land uses, which have now started to develop.

Road freight is now more efficient and less intrusive, with access to a designated network for HPFVs and the development of quieter, low emission engines. Rail is carrying more freight, especially for heavy movements from key regional production areas to the ports and for the distribution of port freight to a network of intermodal terminals in the metropolitan area.

Key elements of the 2050 freight network are summarised below.



International gateways – ports and airports

Victorian ports are now handling a record 11 million containers (TEU).

Due to physical considerations, particularly at Swanson Dock, for the handling of the 8000+ TEU container vessels now servicing the Australian trade, the through put of the Port of Melbourne has plateaued.

As activity and development in the Central City zone has intensified, the location of the Port of Melbourne at the centre of Melbourne's transport network – a traditional advantage for freight – has also become an increasing challenge to the efficient functioning of land-side transport connections.

The Port of Hastings has capacity for around nine million TEU, with additional trade handled through the Port of Melbourne. Reduced heavy freight activity in the Swanson-Dynon precinct has created opportunities for alternative uses of inner city land adjacent to the CBD.

Avalon Airport has developed as Melbourne's second major international airport, complementing Melbourne Airport. Although air freight is still handled at both locations, Avalon's potential as the preferred gateway for dedicated freight services is emerging due to its excellent land transport connections, land availability and accessibility for high value regional produce exports to the Asian markets. An appropriate site for a new airport to serve south-east Melbourne and Gippsland has also been identified and required planning protections for its development are in place.

Interstate gateways

Interstate domestic trade flows between Melbourne and the other state capitals have grown rapidly, reflecting Victoria's strong economic growth and pre-eminent national distribution function. There are now approximately two million TEU of interstate containers being handled by rail.

The Dynon Rail Terminals have been closed for some years and the major interstate rail terminal is now the Western Interstate Freight Terminal (WIFT), located in the west of Melbourne, close to large concentrations of warehousing and national logistics operations.

The WIFT itself is now approaching capacity and planning is well advanced to commission a second major interstate rail terminal at the Beveridge Freight and Logistics Precinct, to the north of Melbourne. This precinct has already been functioning for several years as a major road-based hub for interstate freight from the north.

Key network links

Road

A fully functioning *Managed Motorway* system is now in place across Melbourne's entire freeway network, maximising effective network capacity and enabling priority access for freight and high occupancy passenger vehicles. The freeway network has also been widened to remove bottlenecks at key locations, with efficient freight movement a significant driver of this investment.

Access for freight vehicles to inner Melbourne for pick up and deliveries has been facilitated by increased use of public transport by commuters to and from the inner city, freeing up road space.

Cross-city freeway capacity, originally provided solely by the M1, has now been effectively supplemented by the full East West Link, providing an alternative connection from the Eastern Freeway to the M80.

The North East Link connection is now also in place between the eastern end of the M80 and the Eastern Freeway/East Link, for the first time completing a fully functioning ring road for Melbourne.

This completed orbital route is being heavily utilised to transfer freight between new 'decentralised' gateway locations (e.g. Hastings and WIFT) and other major freight and logistics precincts, which have progressively migrated to the periphery of Melbourne.

Work is also underway to complete the final stages of a new Outer Metropolitan Ring (OMR) Road to service the north and west of Melbourne, where population and industrial activity have expanded rapidly over the preceding decades. The OMR Road will ultimately be complemented by the E6 arterial, connecting the Hume Freeway near Beveridge directly to the easterly section of the M80.

The Western Port Highway has been progressively converted to freeway standard for its entire length servicing heavy demand generated by the Port of Hastings and providing an efficient connection for regional commodity exporters.

The Principal Freight Network in Melbourne operates on preferred traffic routes where, under the SmartRoads framework, priority is given to the needs of freight by time of day, making the best use of available road capacity.

As well as continued development of high standard facilities on the National Land Transport Network in regional Victoria, other regional freight routes, such as the Henty and Hamilton Highways, have been upgraded and are providing a high level of service for users.

Rail

Although the road network will still be carrying the majority of the metropolitan freight task, rail is now playing a more significant role.

Short, efficient container trains are shuttling freight from the main container port terminals to a well-established network of metropolitan intermodal terminals. These services are competitive with road for high volume movements and relieve pressure on key cross-city road links.

The terminal network, initially established with strong private sector input to service container flows to and from the centrally located Port of Melbourne, has since been adapted to perform a similar function for the Port of Hastings.

Metropolitan terminals to the south east, which had initially utilised spare off-peak capacity on the Dandenong Rail Corridor, are now serviced by the South Eastern Rail Link (SERL), which was constructed in conjunction with completion of the Melbourne Metro project, creating a separate dedicated dual gauge freight connection between Dandenong, Dynon and the rail corridors to the north and west of the city.

The SERL is also providing the necessary capacity to service increasing demand for regional exports through the Port of Hastings and regional passenger services from Gippsland. A freight rail line connecting to the Port of Hastings has been constructed in the median of the Western Port Freeway.

The regional rail network has also been progressively upgraded and rationalised, with priority lines now supporting the higher axle loads and operating speeds necessary for efficient, competitive rail operations. As a result, record volumes of heavy produce for export are now being carried to the ports by rail, supporting Victoria's leading role as a global food and fibre producer.

The Mildura line is now standardised and forms part of a new 'transcontinental link' on the national rail network, connecting to Perth to the west and Sydney/Brisbane to the north. As well as supporting more efficient 'double stack' operations for interstate trains into Melbourne, the link is carrying significant volumes of mineral sands from the Murray Basin for export through the ports of Geelong and Portland.

The main north-south leg of the interstate rail network is now carrying a higher mode share of freight, supported by efficient new terminal capacity at the WIFT and at Beveridge in the north. These terminals are being complemented by new, more efficient interstate terminals, including Moorebank to the south-west of Sydney.

A new rail line in the Outer Metropolitan Ring (OMR) corridor is under construction and, when complete, will provide a full bypass of central Melbourne for interstate freight. This will free capacity for other freight and passenger uses in the inner part of the rail network.

Regional Victoria

Regional Victoria's role as a driver of the Victorian economy has continued to grow. Increased global demand for safe and reliable sources of fresh food has driven a significant expansion in intensive food production across Victoria, supported by advanced farming techniques and technologies.

As a result of policies to manage the growth of Melbourne and encourage a 'State of cities', the proportion of Victorians now living in regional Victoria has also grown. Key centres including Geelong, Warrnambool, Ballarat, Bendigo, Mildura, Shepparton, Wodonga, Horsham, Wangaratta and Latrobe City have grown in size and importance, attracting larger businesses and creating local jobs. More Victorians now live and work in the regions rather than having to rely on the Melbourne employment market.

The freight network has been upgraded to support the expanded economic role of the regions. This has included progressive enhancement of key freight links (e.g. road widenings, duplications, bypasses and targeted rail upgrades) to provide additional capacity where required. Infrastructure service standards have been maintained through consistent, targeted maintenance programs. Partnerships with local councils and industry to better target investment have been a key to the success of infrastructure and network development strategies.

Orbital links around Melbourne are providing improved access to markets for regional businesses and key cross-regional and cross-border connections have been upgraded to more efficiently connect primary producers to points of manufacture and value add in growing regional centres.

Freight vehicles and technology

Improvements in technology are contributing to improved productivity and safety in the movement of freight.

The majority of the State's freeway network (which constitutes the core of the Principal Freight Network) has been adapted or upgraded to accommodate larger combination, High Productivity Freight Vehicles (HPFVs).

Within Melbourne, these larger vehicles have ready access to designated freeways and arterial roads, but 'last kilometre' connections to origin and destination points remain strictly controlled to protect local amenity. Last kilometre connections in both metropolitan Melbourne and regional Victoria have been identified and developed through cooperative planning processes between local councils, VicRoads and industry.

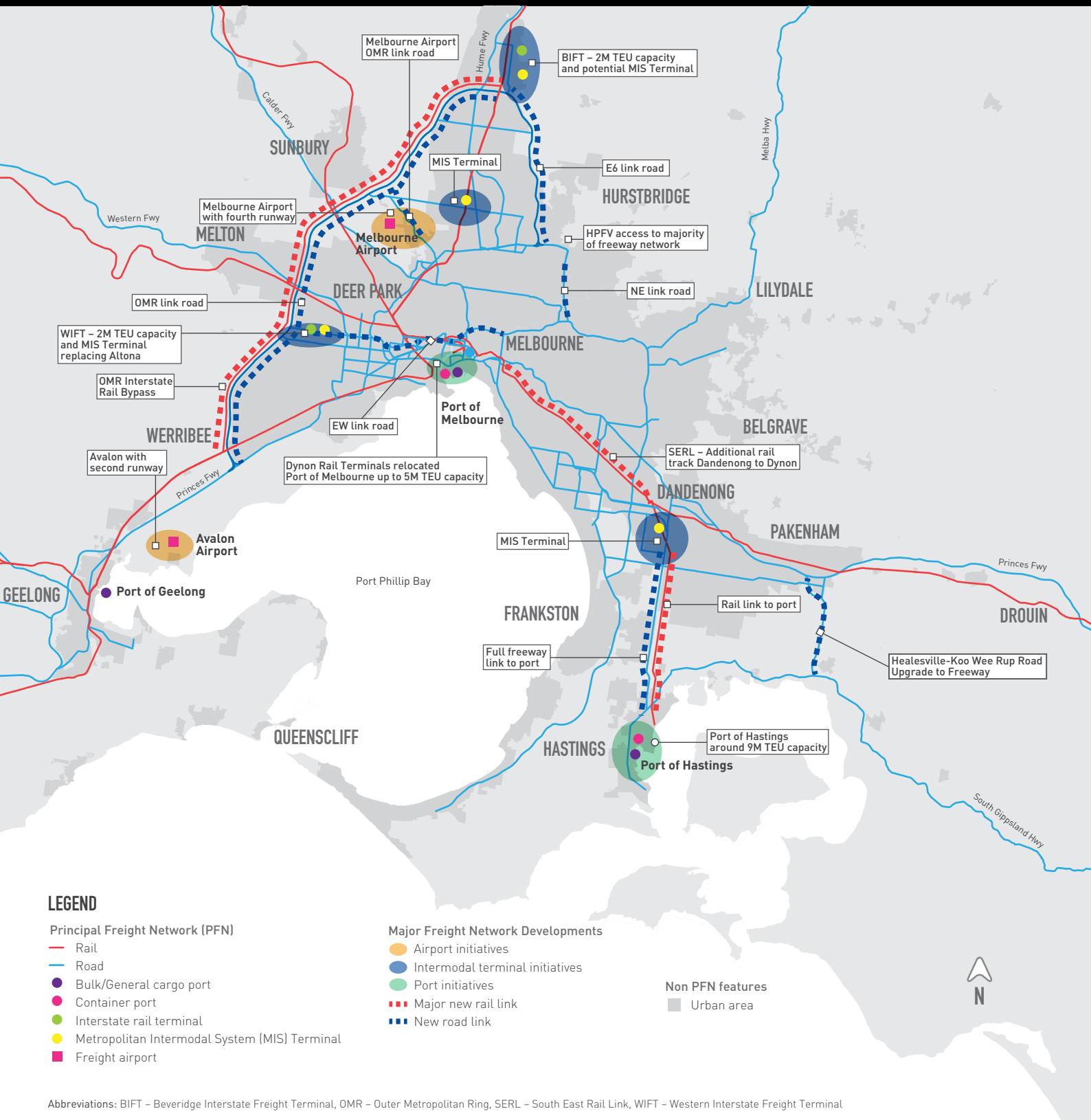
Adoption of 'in-vehicle telematics' technology – now compulsory under National Heavy Vehicle Regulator (NHVR) regulations for all trucks over a designated size operating within metropolitan Melbourne – is being used as a tool to effectively manage route and mass compliance.

Safety and productivity are also being enhanced through the use of cooperative ITS technologies, which has, for example, enabled reduced vehicle headways on some key routes. Trialling of trucks that are 'virtually linked' by electronic guidance systems has also commenced on select freeway links.

Melbourne's expanded and thriving CBD and other major retail precincts are being serviced by strategically located 'freight consolidation centres' from which deliveries to stores are staged. Deliveries are being made by fleets of low impact, electric vehicles operating overnight from the consolidation centres.

Rail-based technology has also evolved significantly with more sophisticated signalling, train control and train operating systems. Lower noise and emission engines are now also deployed on the network. These improvements have enhanced the productivity of rail freight and enabled safe and efficient mixed traffic operations where separation of rail freight from passenger services has not been warranted.

LONG-TERM METROPOLITAN FREIGHT NETWORK VISION



LEGEND

Principal Freight Network (PFN)
- Rail
- Road
- Bulk/General cargo port
- Container port
- Interstate rail terminal
- Metropolitan Intermodal System (MIS) Terminal
- Freight airport

Major Freight Network Developments
- Airport initiatives
- Intermodal terminal initiatives
- Port initiatives
- Major new rail link
- New road link

Non PFN features
- Urban area

Abbreviations: BIFT – Beveridge Interstate Freight Terminal, OMR – Outer Metropolitan Ring, SERL – South East Rail Link, WIFT – Western Interstate Freight Terminal

LONG-TERM REGIONAL FREIGHT NETWORK VISION

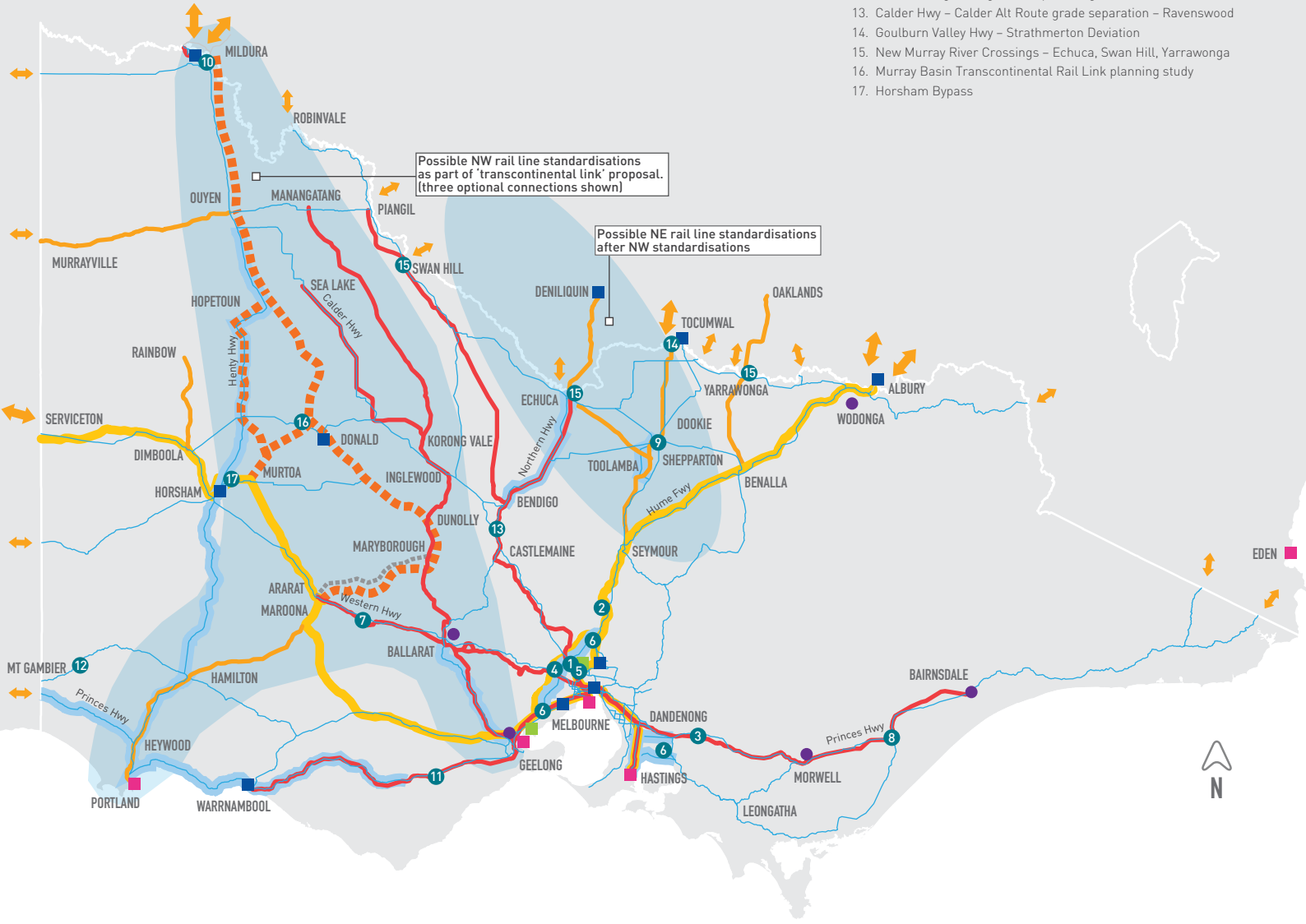
LEGEND

Principal Freight Network (PFN)

- Nationally significant standard gauge
- Options for standard gauge connection to Mildura
- Other standard gauge rail
- Broad gauge rail
- Rail not in service
- Road
- Road upgrade or addition
- Intermodal terminal
- Additional intermodal terminal
- Airport
- Port
- Interstate rail/road connection

Completed Nation Building Projects

1. Calder Fwy – Calder Park Drive Intersection Grade Separation
2. Hume Freeway Upgrade – Kalkallo to Beveridge
3. Princes Hwy East Upgrade – Nar Nar Goon to Longwarry Nth
4. Western Fwy Upgrade and Safety Improvements – Rockbank to Melton
5. Tullamarine Fwy Widening – Between Calder Fwy and Airport
6. Growth Areas – Priority Transport Package
7. Western Hwy Duplication – Ballarat to Stawell
8. Princes Hwy East Duplication – Traralgon to Sale
9. Goulburn Valley Hwy – Shepparton Bypass
10. Sturt Hwy – Mildura Truck Bypass
11. Princes Hwy West – Winchelsea to Colac
12. Green Triangle Freight Transport Program
13. Calder Hwy – Calder Alt Route grade separation – Ravenswood
14. Goulburn Valley Hwy – Strathmerton Deviation
15. New Murray River Crossings – Echuca, Swan Hill, Yarrawonga
16. Murray Basin Transcontinental Rail Link planning study
17. Horsham Bypass



6 KEY DIRECTIONS

FREIGHT GATEWAY CAPACITY

Direction 1 – Ensuring port capacity for international containers

In 2011-12 the Port of Melbourne handled a record 2.58 million twenty foot equivalent container units (TEU), confirming it as Australia's largest container port, with 37 per cent market share of national container trade.

Although future growth projections of around 4-5 per cent per annum are somewhat lower than the 7-8 per cent growth rates regularly experienced over the past 20 years, trade growth is still expected to be more rapid than other market segments – such as break bulk (e.g. motor vehicles, steel), dry bulk (e.g. grain, cement) and liquid bulk (e.g. petroleum, chemicals) – and higher than overall trade and economic growth. By 2050 it is estimated that demand for container handling at Victoria's ports will increase to over 11 million TEU.

Modelling work has confirmed the importance to Victoria's economy of continuing to grow capacity within the State to meet container handling demand, rather than relying on 'land-bridging' international containers from other capital city ports. This work shows that Victoria's economy (in terms of GSP) could benefit by as much as $34 billion per annum by 2050, provided that additional container handling capacity is constructed within the state to meet demand beyond the current expansion project at the Port of Melbourne.

The Government is committed to ensuring that Victoria has a robust and flexible long-term strategy for efficiently meeting projected growth in demand for container handling capacity to 2050 and beyond.

In April 2012, the Government announced the $1.6 billion *Port Capacity Project*, involving expansion of capacity at the two existing Swanson Dock terminals and the creation of a new container terminal at Webb Dock. The indicative configuration for the Webb Dock development is shown below.

The Webb Dock project will be completed by 2016-17 and, once the Swanson Dock expansions are also completed, will contribute to a total estimated capacity of up to 5.1 million TEU at the Port of Melbourne. Based on trade growth projections, this will be sufficient to meet demand until the mid-2020s.

To provide for demand beyond the capacity limits of the Port of Melbourne, the Government has commenced work on development of the Port of Hastings as the next container port in Victoria. Hastings will handle growth in trade volumes up to and beyond 2050 and, once fully developed, will be the largest container port in Australia. The Port of Hastings is well placed to perform this role in that:

- it was publicly identified for major port and industrial development over 40 years ago and has been protected in the Victorian planning system for this purpose ever since

Webb Dock Precinct

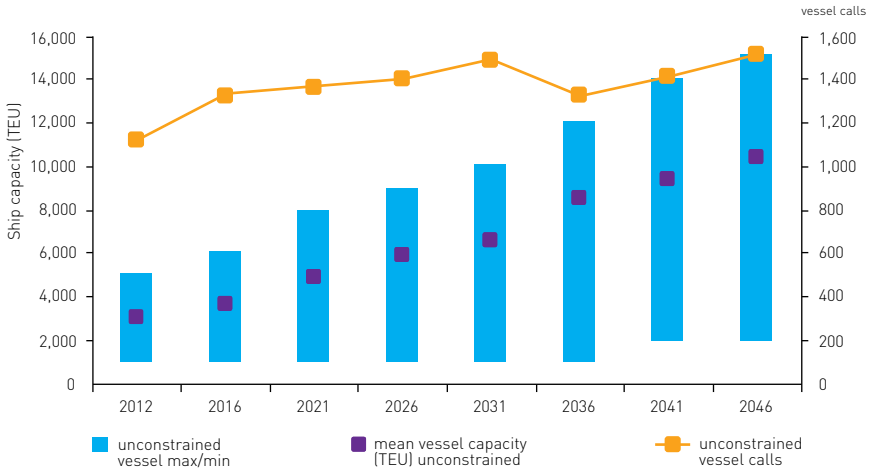
- it sits adjacent to over 3,000 hectares of land zoned for port-related use
- it has direct deep water access and is close to the major shipping lanes, allowing for reduced steaming times for ships compared to accessing the Port of Melbourne and limiting the length of approach channels to be dredged
- it is well positioned to serve key consumer markets and business/ manufacturing areas to the south and east of Melbourne
- it is already an operating commercial trading port with existing sea and land-side infrastructure in place
- there has already been extensive community consultation about options for expansion of the port and its transport connections.

Freight Precinct – Hastings

The Government has established the Port of Hastings Development Authority (PoHDA) to manage development of the Port and has recently announced an initial allocation of $110 million over four years to progress essential planning work. This will ensure that new capacity is available to meet demand requirements by the time the Port of Melbourne begins experiencing significant capacity constraints in the mid-2020s. The map above highlights the area at Hastings where planning work for the expansion of the Port is focussed.

A key advantage of the Port of Hastings will be its ability to accommodate 8,000+ TEU vessels with draughts of up to 16 metres (i.e. two metres deeper than that currently provided for at the Port of Melbourne). It is noteworthy that Port Botany and the Port of Brisbane are both planning to accommodate this size of vessel.

Ship fleet forecast



Fleet forecasting undertaken for the Plan highlights the importance of deep water access for future port planning. The figure above shows the increase in calls to Victoria by vessels requiring up to 16 metres of draught that could be expected in the case that there is unconstrained channel access. Between 2021 and 2026, it is forecast that vessels up to and above 8,000 TEU capacity, which could not currently be accommodated at the Port of Melbourne, would begin seeking access to Victorian ports. By 2036 the mean capacity of all international container vessels visiting Victoria is expected to be greater than 8,000 TEU and, by 2046, greater than 10,000 TEU.

In this context, it is noted that development of new long-term container capacity within Port Phillip Bay beyond the current Port Capacity Project would necessitate further major dredging at the Heads and in the South Channel (as well as new channel construction in the immediate approaches to the proposed site) to efficiently accommodate deeper draught vessels.

Apart from the technical difficulty and high costs associated with dredging at the Heads, as experienced during the most recent channel deepening project, environmental assessment processes are likely to be protracted and difficult and approvals may not ultimately be achievable.

The main implication of the above forecasts and likely constraints on further channel deepening in Port Phillip Bay is that the Port of Melbourne's ability to service the size of container ships wishing to visit Victoria will come under increasing pressure in the medium to long term. Increases in ship width and length, as well as depth, will lead to increasing competitiveness of facilities at the Port of Hastings. Under this scenario, the Port of Melbourne would likely begin to lose market share to the Port of Hastings in the years leading up to 2050 and, in the longer term beyond 2050, trades moving through Melbourne may eventually need to be relocated.

STRATEGIES AND ACTIONS

The Government will ensure that Victoria has capacity to meet demand for container handling to 2050 and beyond by:

1. implementing the current P*ort Capacity Project* at the Port of Melbourne to provide sufficient capacity until the mid-2020s
2. accelerating planning and development for the Port of Hastings to ensure it is operational and available to supplement the capacity of the Port of Melbourne from the mid-2020s.

FREIGHT GATEWAY CAPACITY

Direction 2 – Ensuring efficient bulk and break bulk port capacity

Victoria's ports are critical gateways for large volumes of regional commodity exports in bulk form (such as grain, woodchips and mineral sands) and manufactured products in break bulk form (such as motor vehicles, machinery, aluminium and steel products).

The ports also service critical liquid and dry bulk import trades, such as crude oil, petroleum, chemicals and cement, which are essential to the functioning of the economy.

The Port of Geelong is the largest regional port in Victoria handling in excess of $5 billion worth of trade annually.

The Port of Portland is a deep-water bulk port strategically located between the ports of Melbourne and Adelaide. It is the international gateway for the Green Triangle Region in south-west Victoria/south-east South Australia. The Port specialises in bulk commodities, particularly agricultural, forestry and mining products as well as aluminium and fertiliser. It has approximately five million tonnes in annual throughput, which is expected to grow to seven million tonnes in 2013.

The Port of Hastings also handles significant volumes of bulk liquids and gas and has spare capacity to increase volumes as the State increasingly moves to the importation of refined petroleum product.

The Government is committed to ensuring that Victoria maintains its capacity to efficiently service these trades to 2050 and beyond.

STRATEGIES AND ACTIONS

The Government will ensure that Victoria has efficient capacity to meet port demand for bulk and break bulk commodities to 2050 and beyond by:

1. working cooperatively with the private operators of the ports of Portland and Geelong to support their key role in servicing regional commodities, such as grain, woodchips, mineral sands and other products, and planning for additional capacity to service new or emerging trades as required
2. confirming the retention of existing non-containerised trades at the Port of Melbourne, such as motor vehicles, liquid and dry bulk materials for the medium term and working with industry to ensure the efficient relocation of these trades, on a commodity by commodity basis, as required in the longer term
3. working cooperatively with port managers and industry to effectively manage the emerging trend towards greater importation of refined petroleum product due to a reduction in onshore refining
4. working cooperatively with industry and port managers to facilitate the provision of bulk port capacity for the export of significant volumes of brown coal products from Gippsland in the event that commercial export opportunities are developed.

FREIGHT GATEWAY CAPACITY

Direction 3 – Ensuring efficient interstate rail terminal capacity

With population and economic growth there has also been steady growth in the volume of interstate trade moving between Melbourne and the other state capital cities to the north and west.

Whilst the majority (about two-thirds) of inter-capital freight is carried by truck on the national highway network, rail carries a significant share on the longer routes (80 per cent on the Melbourne-Perth route and 20 per cent Melbourne-Brisbane).

As fuel, labour and other operating costs of road transport increase and rail efficiency improves with progressive network investment and regulatory reform, there is potential for rail volumes to grow significantly, particularly on the most freight intensive Melbourne-Sydney route. Provision of adequate, efficient interstate terminal capacity is essential if this potential is to be realised.

Modest investment in the current interstate rail terminals located at Dynon will improve their efficiency and extend their capacity for some years, but in the medium term it is proposed to relocate this function away from the port and inner city area in order to improve operational efficiency and free up land for alternative urban development uses.

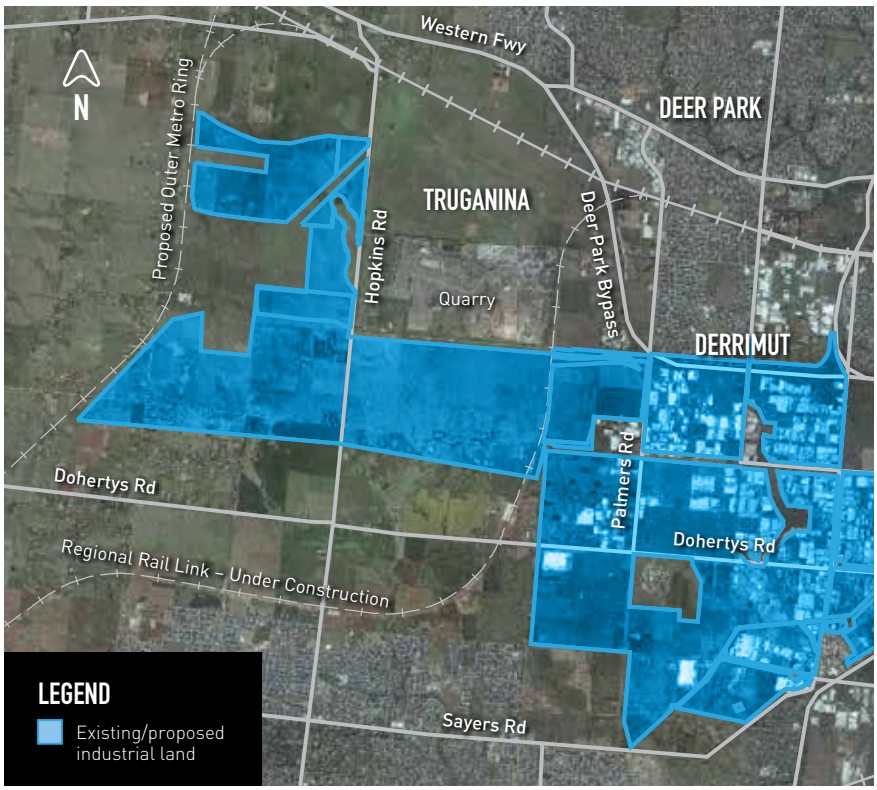
The Government has nominated the Truganina area to the west of Melbourne as a potential location for future development of interstate rail facilities. The site is very well located in relation to freight users and could provide for the establishment of a highly efficient, integrated freight and logistics precinct.

A large undeveloped tract of land at Beveridge to the north of Melbourne has also been assessed as having potential as another long-term freight and logistics precinct. Strategic planning for the area will aim to preserve the opportunity for a major rail terminal as the land is developed over coming decades.

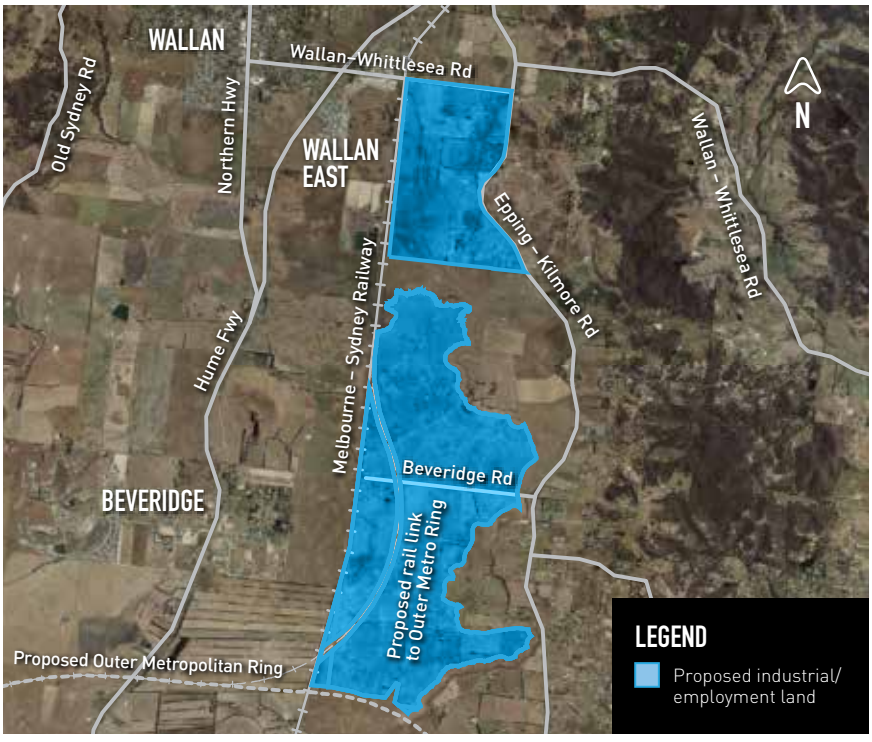
Commonwealth and State funding of $5 million has been allocated to commence business case work developing options for the future staged relocation of existing rail activity from the Dynon precinct.

The existing Dynon Rail Terminals Precinct

Potential location of the Western Interstate Freight Terminal



Potential location of a future Beveridge Interstate Freight Terminal



STRATEGIES AND ACTIONS

The Government will ensure that Victoria has efficient interstate rail terminal capacity to 2050 and beyond by:

1. working with relevant private sector operators and track managers to facilitate reinvestment in the Dynon-Tottenham precinct to efficiently meet interstate rail freight demand until the mid to late 2020s
2. completing a business case and funding application to the Commonwealth to investigate potential land and rail corridor options for the Western Interstate Freight Terminal (WIFT)
3. through the business case work, developing time frame options for the staged relocation of interstate freight activities from the Dynon precinct
4. assessing the potential long-term role of the Beveridge precinct as an interstate freight gateway and identifying land and transport access for future interstate rail freight facilities.

FREIGHT GATEWAY CAPACITY

Direction 4 – Ensuring adequate air freight capacity

The air freight task, like general freight, is expected to grow strongly in coming years. Although representing less than one per cent of import/export trade by volume, air freight accounts for over 20 per cent of trade by value. It is estimated that 368,000 tonnes of international and domestic air freight were moved through Melbourne Airport during 2010 and this task could at least quadruple by 2050.

Air freight serves high-value, time-critical supply chains – medical goods, fresh food products and manufactured parts. Providing for air freight handling capacity requires careful attention in long-term airport planning. The majority of Victoria's air freight trade is with Asian countries where growing populations and an expanding middle class, which is increasingly seeking high-protein, nutritious and luxury food products, offer opportunities, particularly for high-value food exporters in regional Victoria.

Since the early 1990s, the Victorian Government and the aviation industry have developed long-term strategies for Melbourne and Avalon airports to cater for aviation growth, inform metropolitan and regional planning and promote related economic benefits. Both Melbourne Airport and Avalon Airport are providing for capacity to handle long-term air freight growth in preparing their 2013 airport master plans.

Melbourne Airport handles more than 30 per cent of Australia's total air freight market and 36 per cent of the export market – this market share made Melbourne Australia's largest export airport in 2012. In addition to capacity on passenger flights, there are currently 21 dedicated freight services each week. The airport has key strategic advantages as the air freight hub for south-eastern Australia, including its 24-hour curfew-free operation; effective arterial road access to Melbourne's CBD and metropolitan industrial regions; extensive airline network/scheduling; and availability of land to accommodate future growth of air freight handling.

Avalon Airport is strategically located between Melbourne and Geelong adjacent to the Princes Freeway. It is curfew free and currently handles around 40 international and domestic specialist freight operations each year, notably the Melbourne Formula 1 Grand Prix, V8 Supercars and Superbikes.

The Government recognises the potential of Victoria's aviation infrastructure to grow the State's role as a gateway for international trade and cargo and, in particular, for new markets in Asia. The Government is committed to ensuring that Melbourne and Victoria continue to have convenient access to Melbourne and Avalon airports to efficiently serve both national and international freight markets.

Planning for airport capacity to meet growing demand

In late 2012, Melbourne Airport announced a preferred new third runway to be provided within ten years – an east-west runway. By 2050, it is expected that Melbourne Airport will be planning and developing its fourth and final runway. A major new freight terminal precinct will be developed to the east of the existing aircraft maintenance precinct, with good access to the M80-Western Ring Road and the Tullamarine and Calder Freeways. It is considered that planning for Melbourne Airport includes significant capacity (airside and landside) to support a growing air freight role for many years.

Up to 2050, Avalon Airport is expected to be providing a complementary international gateway whilst it plans for and develops dedicated air freight facilities.

Planning for Victoria's regional airports

There are a number of airports across regional Victoria that provide opportunities for air freight delivery. Airports with regular daily regional passenger services, such as Essendon, Moorabbin, Mildura, Portland, Hamilton, and even Mount Gambier and Albury, can handle freight. Other airports are served by air freight using chartered services. Some such as Bendigo, Warrnambool, Ballarat and Latrobe Valley may be able to support increased air freight activity in the future subject to appropriate infrastructure upgrades.

Planning and delivering efficient road and rail connections

Both Melbourne and Avalon Airports are well located with respect to the Principal Freight Network, including key national road network links. Planning is proceeding for upgraded road access to Melbourne Airport, including widening of the Tullamarine Freeway and a long-term link to the Outer Metropolitan Ring Transport Corridor. Long-term planning is also being undertaken for the establishment of passenger rail links to service both airports. These links will benefit freight by relieving congestion on the key road connections.

Ensuring our airports remain curfew free

The key focus for the Government is to ensure that the future planning and development of both airports account for their ultimate development potential; protect their 24-hour curfew-free status and operations; and minimise amenity impacts on nearby uses. The Victorian Government will continue working cooperatively with Melbourne and Avalon Airports and the Commonwealth Government to ensure that the Metropolitan Planning Strategy, G21 Regional Growth Plan and the Victorian Planning System effectively protect the operations and development of these key international gateways.

STRATEGIES AND ACTIONS

The Government will work cooperatively with the operators of Melbourne and Avalon Airports and the Commonwealth Government to ensure that Victoria maintains its competitive advantage in air freight by:

1. contributing to the 2013 Melbourne Airport Master Plan, including planning for delivery of the third runway and staged development of a new, integrated freight and logistics precinct on airport land
2. developing and commencing delivery of a plan to upgrade road connections serving Melbourne Airport and progressing plans for passenger rail connections to both airports
3. through the Metropolitan Planning Strategy and the G21 Regional Growth Plan, clarifying the broader land use and transport network context within which Avalon Airport will develop
4. assisting the operator of Avalon Airport with the development of its new Airport Master Plan, which sets out realistic proposals for the staged implementation of new capacity and the development of state-of-the-art freight and logistic handling capability
5. anticipating, monitoring and addressing, through the Victorian Planning System, potential amenity conflicts that might inhibit the curfew-free operations of Melbourne and Avalon Airports
6. assisting with the development of new markets for air freight, including new and emerging Asian markets for fresh, high-value produce.

BETTER USE OF THE FREIGHT NETWORK

Direction 5 – National Heavy Vehicle Reform

Improving the consistency of the access and charging arrangements for heavy vehicles between jurisdictions has been identified for many years as a priority for improving freight network efficiency and productivity.

A new National Heavy Vehicle Regulator commenced operation in January 2013 and will be charged with administering a single set of new, consistent national laws for heavy vehicles. The new regulator will also be responsible for the delivery of a comprehensive range of services previously delivered by state and territory road transport authorities.

Building on the establishment of the new National Heavy Vehicle Regulator, work has been underway for some years at the national level on the *Heavy Vehicle Charging and Investment Reform* process, designed to deliver an improved charging regime, greater productivity through improved access for heavy vehicles, and better investments in the road network to support related supply chains.

In July 2012, the Council of Australian Governments (COAG) considered a Road Reform Plan Feasibility Study (which found that reform was feasible if the charging regime was linked to road funding and investment) and gave approval for work to commence on potential reform options. An integrated package, including a Regulatory Impact Statement (RIS), is being developed for public comment in 2013.

The Victorian Government will continue to work with the Commonwealth Government and other jurisdictions to progress the COAG national heavy vehicle reform agenda.

STRATEGIES AND ACTIONS

The Government will continue to support national reform of heavy vehicle access, charging and investment by:

1. reaffirming its commitment to work constructively with the new National Heavy Vehicle Regulator (NHVR) to improve the consistency and transparency of heavy vehicle safety and access regulation across Victoria and Australia
2. assisting the NHVR to develop and implement relevant national policies, practices and tools
3. contributing actively to the development of the Heavy Vehicle Charging and Investment Reform process, including the development of reform options under the COAG process.

BETTER USE OF THE FREIGHT NETWORK

Direction 6 – Larger, safer, more productive trucks

Currently, road vehicles carry an estimated 84 per cent of Victoria's total land freight task in terms of tonne kilometres. In 2012 there were over 130,000 trucks registered in Victoria, accounting for approximately 44.5 billion ntk, including 14.7 billion ntk in metropolitan Melbourne (BITRE, 2012).

Over the past two decades, Victoria has led the nation with the introduction of larger B-Double combination trucks, which now have access to 99 per cent of the State's arterial road network. The ability to deploy these larger vehicles has generated significant productivity benefits for freight operators and their customers and has reduced the total number of freight trips required on the transport network.

From a safety perspective, research by the National Truck Accident Research Centre (NTARC 2013) has found that B-Doubles continue to be the safer alternative in the current heavy vehicle fleet, moving 45 per cent of the freight task in loaded tonne kilometres but accounting for only 23.6 per cent of large truck crash incidents.

Supporting the use of larger vehicle combinations – known generically as Higher Productivity Freight Vehicles (HPFVs) – for targeted high volume movements (initially mainly at current mass limits, but with permits being granted at higher masses on suitable routes) offers significant potential to further lower costs, improve safety and protect the environment by reducing the number of truck movements that would otherwise be needed.

Modelling and economic assessment undertaken for the Plan indicates a strong positive benefit cost ratio for investment in selected links on the Principle Freight Network to enable access for HPFVs.

Although there will be productivity benefits from the introduction of longer and heavier trucks, their use will be concentrated on key strategic segments of the road network. This is because they are only suited to certain commodities and uses, on specific routes, and because much of the network will never be configured in a way that is suitable for HPFVs. HPFVs are likely to be used on freeways and major highways for primary produce, intermodal containers and for transport of parts and components between major manufacturing establishments. They will supplement, but not replace, current vehicle types such as rigid, articulated and B-Double trucks.

An immediate improvement in road freight transport productivity, safety and environmental performance could be achieved if larger vehicles were allowed to operate at current mass limits on sections of the major duplicated road network, which are already suitable for longer vehicles.

This is because certain lighter commodities – paper products and empty shipping containers, for example – fill the currently permitted trucks before they reach the current truck mass limit. Because no increase in truck mass is required for 'cubic HPFVs', their introduction does not require costly upgrades to road pavements and bridges.

Through its *Moving More with Less* initiative, the Government recently announced the implementation of a 'Cubic Freight Network' for longer vehicles up to 30 metres operating within metropolitan Melbourne, and up to 36.5 metres for vehicles operating in regional Victoria. Subject to specific permits, these longer regional vehicles may also be able to travel on designated sections of the metropolitan HPFV network to access the Port of Melbourne; interstate rail terminals; or to reach de-coupling points around outer Melbourne. A map of the Cubic Freight Network is shown on page 48.

Much of the recently constructed freeway and major arterial road network has been designed for vehicles operating at higher than the current 68.5 tonne mass limit, and a number of specific routes in Victoria have already been approved for higher mass HPFV operations. These include routes originally approved for a trial of HPFV operations in Melbourne and Regional Victoria in 2009 and some other routes approved in the west of the State since 2011. Through the Plan, the Government is confirming that these routes will constitute the first step in developing a 'Mass Freight Network' for HPFVs as shown in the map on page 49.

However, the declaration of a more extensive Mass Freight Network is currently constrained by the need to strengthen key bridges and pavements, such as those along the oldest section of the Monash Freeway, which was constructed decades ago.

The Government will continue to develop a strategic Mass Freight Network for higher mass HPFVs (operating at greater than 68.5 tonnes) and work in partnership with industry and the Commonwealth Government to prioritise and deliver the necessary upgrades to infrastructure to facilitate access. In the meantime, applications to operate higher mass HPFVs on specific routes will be considered on a case by case basis.

In many cases, HPFVs will need to travel short distances over specific local and arterial roads at the beginning and/or conclusion of their journeys to access freight depots, customers or intermodal terminals. The Government, through VicRoads, will work with industry and local government to identify and prioritise suitable routes for such 'first and last kilometre' access.

The operation of cubic or higher mass HPFVs on key interstate routes will improve productivity and efficiency, especially where such vehicles are already operating outside Victoria or on interstate routes with high volumes or heavy commodities. The Commonwealth Government is currently working with Transport for New South Wales and VicRoads to develop a business case for a trial of HPFVs between Sydney and Melbourne on the Hume Freeway. This investigation is considering all relevant factors – including demand, infrastructure, safety and environmental factors – associated with the possible trial of HPFVs on the Hume. The Government will work with other jurisdictions to achieve a co-ordinated approach to the introduction of HPFVs on key interstate routes, commencing with the trial on the Hume Freeway.

As an integral part of its program to introduce larger, more productive trucks, the Government is already working with industry to develop and introduce complementary policies to support the safe operation of HPFVs in Victoria.

As part of the recent announcement of the Cubic Freight Network, the Government announced a set of conditions for access, including approval of all vehicles under the national Performance Based Standards (PBS) Scheme; GPS tracking of all vehicles under the Intelligent Access Program (IAP) to ensure route compliance; and a mandatory 90km per hour speed limit.

HPFVs are particularly suitable for the application of advanced monitoring systems and vehicle technology. Future requirements will include increasingly sophisticated on-road management and monitoring systems to ensure that they remain on the approved network and obey rules governing matters such as mass, speed and hours of operation and that they adopt best practice braking, suspension and environmental performance. Suitable technology also exists to enable HPFVs to participate in improved road pricing arrangements, consistent with the COAG reform program, as an option for funding the network capital and operating costs associated with their use.

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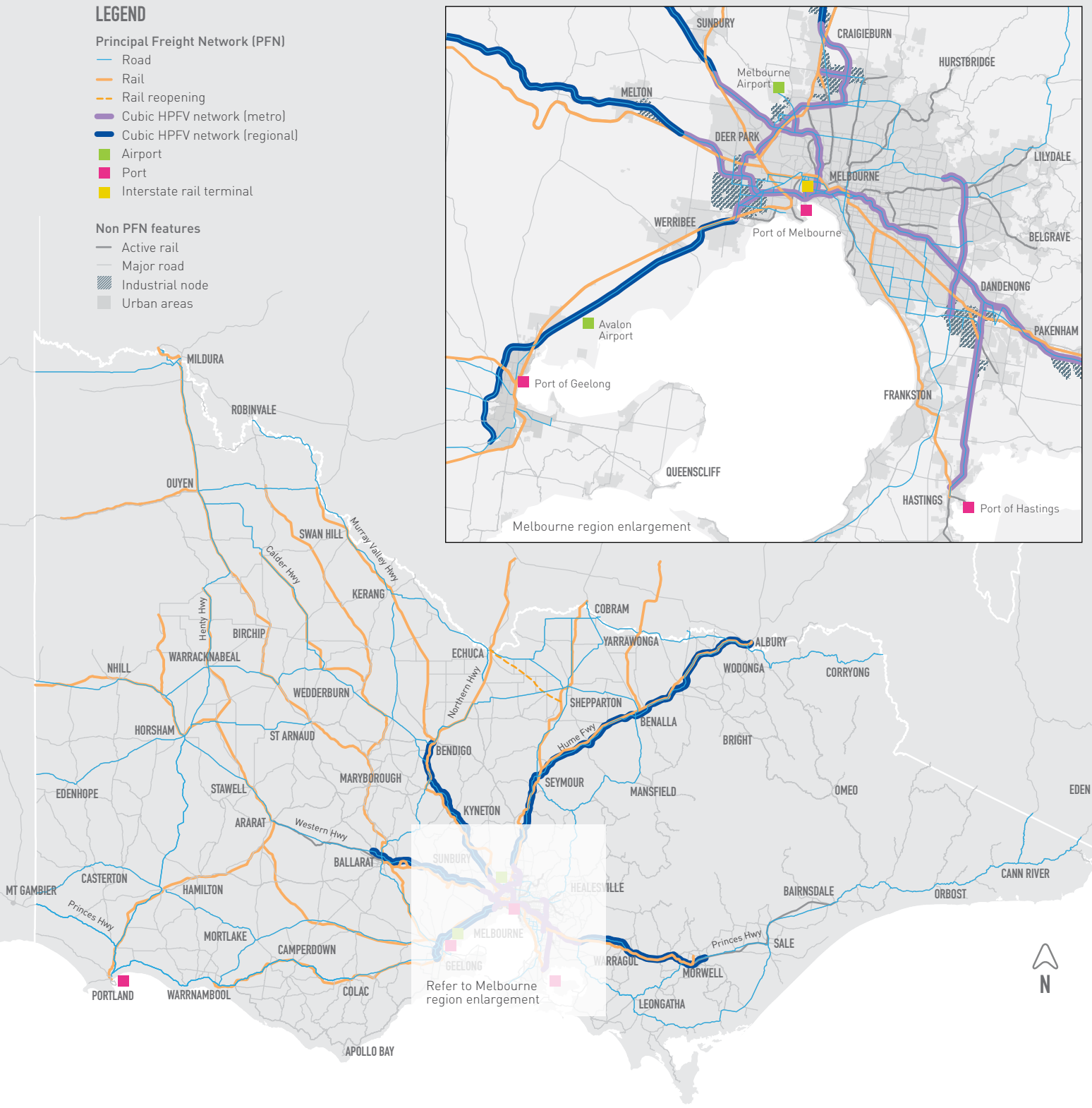
STRATEGIES AND ACTIONS

The Government will extend access to the freight network for HPFVs by:

1. implementing the *Moving More with Less* 'Cubic Freight Network' for access by longer HPFVs, which are able to operate within current mass limits, subject to vehicles being PBS compliant and operators meeting route compliance and speed limit conditions
2. identifying and progressively implementing a strategic 'Mass Freight Network' for access by HPFVs operating at higher than current mass limits, based on industry demand and suitability of the network, subject to similar conditions as those applying to the Cubic Freight Network
3. working with industry and the Commonwealth Government to deliver road network upgrades for priority routes on the High Productivity Freight Network
4. working with other jurisdictions to achieve a coordinated approach to the introduction of HPFVs on key interstate routes, commencing with the proposed trial on the Hume Freeway
5. working cooperatively with industry and local councils to identify and prioritise 'first and last kilometre' routes for HPFVs
6. in consultation with industry, developing and introducing complementary policies to support the safe operation of HPFVs in Victoria, including introduction of 'on-road management and monitoring' systems and best practice safety, noise and emission standards; and assessing road pricing approaches recommended by the COAG reform program.

CUBIC HPFV NETWORK



MASS HPFV NETWORK

BETTER USE OF THE FREIGHT NETWORK

Direction 7 – Harnessing the power of new technologies

Adoption of new technologies over the coming decades will have profound effects on productivity, safety and travel behaviour on the transport network. The ability for vehicles and infrastructure to share information has the potential to transform transport.

To retain its competitive advantage in freight and logistics, Victoria must look to be a leader in the development and deployment of new technology.

The Government can encourage this process by fostering research; allowing access to Government data; promoting information exchange activities that demonstrate the applicability and benefits of new technologies; and by partnering with industry to seed the testing and realisation of new initiatives. Through the recently released *DataVic Access Policy,* the Government has already improved access to Government data for third parties.

The Government recognises that the costs and risks associated with initial implementation of new technologies and equipment can be difficult for operators to overcome. The Government is committed to supporting industry where possible to trial and implement new technology in their businesses. In conjunction with Intelligent Transport Systems Australia and the freight industry, the Government will investigate opportunities to trial or demonstrate new technologies and systems, which highlight the potential benefits of new freight vehicle technologies and the latest Intelligent Transport Systems (ITS).

Through initiatives such as the roll out of the *Managed Motorways* program on the M1 Upgrade project, VicRoads is already well placed to play a lead role in demonstrating the benefits that can be achieved through use of ITS.

Freight can only move as quickly as the documents that control it. In the absence of effective IT systems translating data between proprietary systems, re-keying of information and data is common and often causes uncertainty and errors. For international trade movements a key challenge is ensuring transactions are not only accurate and efficient, but also safe and secure across countries. Given an average of 40 documents are generated for each international trade transaction, efficient and automatic 'single window' information systems and procedures can significantly increase the speed at which goods can move, reduce costs, improve business efficiency, and enhance the overall economic performance of a country.

STRATEGIES AND ACTIONS

The Government will foster leadership in the take up of new technologies by:

1. continuing the development and roll out of Intelligent Transport Systems (ITS) on the freeway network, including expanding the use of *Managed Motorways* technology along the M1 Freeway, the M80 Ring Road and other key routes
2. continuing to support development of third party transport network information tools and systems through the *DataVic Access Policy*
3. working cooperatively with other jurisdictions, the Commonwealth Government, the National Transport Commission and the new National Heavy Vehicle Regulator to encourage:
    - a national approach to the uptake and use of ITS and cooperative ITS (C-ITS) technologies, such as on-board telematics to monitor route and mass compliance
    - operators to modernise their vehicle fleets to incorporate new technologies to improve safety, noise and emission performance
    - a 'single window' concept for a national Port Community System
4. working cooperatively with Intelligent Transport Systems Australia and the freight industry to develop and run demonstration projects highlighting the potential benefits for the freight industry of the latest freight vehicle ITS technologies.

BETTER USE OF THE FREIGHT NETWORK

Direction 8 – Using spare overnight network capacity

Existing road freight movements are largely undertaken during daylight hours, when the demand for road capacity from other users is also high. Key links in the existing freeway and arterial networks used by freight suffer congestion, particularly in the morning and afternoon peaks, detracting from the ability of road freight operators to provide reliable, timely and efficient services to customers.

The SmartRoads framework identifies that the highest priority for freight movement on preferred traffic routes is in off-peak and overnight time periods. There is significant unused capacity on these routes at night and some operators have already begun to take advantage of this capacity. For example, approximately 50 per cent of containers are currently moved in and out of the Port of Melbourne to staging depots after hours and at night, although these depots are typically close to the Port and the subsequent, longer trip to the customer usually occurs on more congested routes in the daytime.

Transport and economic modelling undertaken for the Plan indicates that shifting ten per cent of daytime freight movements to overnight could reduce weekday vehicle hours travelled on the network by approximately seven per cent. This would translate to potential benefits for industry, which could be expected to flow through to customers, of $7.4 billion (in 2012 dollar terms) up to 2050. Currently, however, the costs that would be involved in achieving such a shift are not well understood.

There are a range of barriers and supply chain costs that inhibit the wider adoption of nighttime movements by freight operators and their customers. In particular, many freight customers find it expensive to have personnel available at night to receive or dispatch consignments. In some cases, transport operators could be granted secure access to customers' depots to pick up or deliver after hours, although this does not suit all circumstances.

LEARNING FROM INTERNATIONAL EXPERIENCE

Encouraging more off-peak deliveries

Experiences from New York City show that considerable savings can be achieved through encouraging more deliveries to be undertaken in non-regular or off-peak periods. Deliveries outside regular periods result in less traffic congestion, parking obstructions and pollution as well as reduced conflicts between pedestrians and carriers.

Results from pilot studies conducted in New York City showed that average travel speeds for night deliveries were more than twice as fast than during normal hours. Average service times were found to be more than three times as fast. Travel time savings for carriers switching to off-hours were approximately 50 minutes per delivery tour. Savings in service times per tour were between one and three hours. Travel time savings for other road users of between three and five minutes per trip were achieved. Overall economic savings between $100 to $200 million/year in travel time savings and reduced pollution were estimated.

The New York experience strongly highlights the 'freight receiver' as the primary decision maker, and thus most important influence on delivery times. In order to convince receivers to accept off-peak delivery, an adequate risk-reward proposition must be developed.

Off-peak delivery systems have good potential to be implemented as a voluntary program in key urban areas across Victoria. Establishing local stakeholder forums between operators, customers, residents and local government would be key to developing the appropriate risk-reward proposition for all stakeholders.

Another approach would be to utilise a network of 24/7 Metropolitan Intermodal System (MIS) suburban terminals to allow bulk overnight container shuttle movements over the road or rail networks, with the local pick up or delivery movement being undertaken at a time that suits the customer. Some customers may find it convenient to locate their premises in a freight and logistics precinct adjacent to the MIS suburban terminal, eliminating the local pick up and delivery movement altogether.

The Government is committed to working with transport operators, freight customers and road and planning authorities to better understand existing barriers and to facilitate better use of the road network by encouraging nighttime operations. International experience, such as the New York example, can help to inform the development of Victorian-specific measures for trialling and possible implementation.

STRATEGIES AND ACTIONS

The Government will encourage better use of spare network capacity at night by:

1. engaging with industry to identify the key drivers of existing business practices and to develop strategies, including road operating strategies, to improve the attractiveness and commercial viability of overnight operations
2. working cooperatively with local government to encourage the adoption of more flexible and consistent regulation of delivery vehicle access (e.g. delivery curfews) across local council areas
3. working with industry, local councils and relevant planning authorities to encourage the development of a network of 24/7 freight terminals operating in strategic locations around metropolitan Melbourne
4. encouraging the development of technological innovations that could reduce industry costs (e.g. labour costs) and improve the amenity performance (e.g. noise) of overnight operations, making them more attractive to industry and acceptable to local communities
5. contributing to the long-term development of alternative road pricing strategies, including assessment of differential pricing approaches (by time of day and/or by type of vehicle) that could be used to encourage overnight freight movements.

EFFICIENT FREIGHT NETWORK LINKS

Direction 9 – An efficient road freight network

Victoria's network of freeways, arterial and local roads carries the great majority of freight and forms the backbone of the State's freight network. The high standard of Victoria's road network has long been considered a competitive advantage.

Road freight currently accounts for 44.5 billion net tonne kilometres (ntk) and is forecast to grow at 3.8 per cent per annum to 2031 and then at 2.6 per cent per annum to 2046. This suggests that road freight will roughly triple over the period.

The table above right shows the split between the current interstate, metro and regional road freight tasks and the forecasts to 2046.

The Government has reaffirmed its commitment to maintaining this competitive advantage in its economic and fiscal strategy, which has as a key action to "build a world-class road network to link people, products and markets both in Melbourne and across Victoria".

However, the efficiency of the road network for freight is threatened by increasing road congestion, largely driven by growing private car travel demand. Private car travel occupies the greatest proportion of road space on most parts of the network. Increasing congestion on inner Melbourne roads has been managed over the last decade through a shift from road to rail for commuter access.

Total Road Task (million net tonne kilometres)

Year	Interstate	Metro	Regional	Total
2012	22,996	14,751	6,815	44,562
2021	34,133	18,987	9,724	62,844
2031	49,742	23,963	17,278	90,983
2046	60,964	32,814	40,818	134,596

In the future, it will be critical to continue to develop the public transport network to ensure that it remains an attractive alternative to road transport. This will have positive impacts for freight, which will benefit from reduced congestion. Modelling undertaken for the Plan suggests that if public transport mode share could be maintained at current levels whilst the capacity of the road network was increased, savings in freight vehicle travel time could produce economic benefits of nearly $5 billion to 2050 in 2012 dollar terms.

Also critical to maintaining our competitive road freight advantage is the need to progressively enhance Melbourne's cross-city and orbital connections, which will be essential to service new decentralised freight gateways and connect them efficiently to markets.

The initial focus for the Government is on completion of the M80 upgrade, which is currently under construction, followed by delivery of the East West Link, an alternative east-west road corridor to relieve pressure on the M1.

In the 2013-2014 State Budget the Government committed to funding Stage One of the East West Link – the six kilometre eastern section, from the Eastern Freeway to CityLink, which is the preferred first stage to meet the Government's strategic priorities. Stage One addresses the most critical issues and offers the greatest scope for "adding on" stages that would further enhance access to the port and would enable the full East West Link to be completed in the fastest time frame. From a freight perspective significant benefits will also come from a full connection from the Eastern Freeway to the M80 in the west.

The Government will also consider options for a North East Link in the longer term, connecting the M80 Ring Road to the Eastern Freeway. The Government will progress planning for this project which, once completed, will result in Melbourne having a full 'ring road' for the first time.

In the longer term, progressive construction of the Outer Metropolitan Ring (OMR) Road will provide additional orbital road capacity to accommodate planned expansion of Melbourne to the north and west.

Transport and economic modelling undertaken for the Plan indicates that delivery of these three major road projects – East West Link, North East Link and OMR – are forecast to collectively generate benefits for the freight industry of $4.3 billion in 2012 dollars to 2050. The majority of these benefits are expected to be derived from travel time savings, vehicle operating cost savings and improvements in travel time reliability as a result of having access to a completed, less congested freeway network.

Victoria's regional economies also rely heavily on efficient road transport networks to move product to and from domestic and global markets. Feedback from stakeholders in regional Victoria confirms that efficiency is maintained when roads used by freight are kept 'fit for purpose', without reduced speed limits or mass limits. Victoria's 2011 and 2012 Infrastructure Australia submissions prioritise a number of critical regional arterial road upgrades.

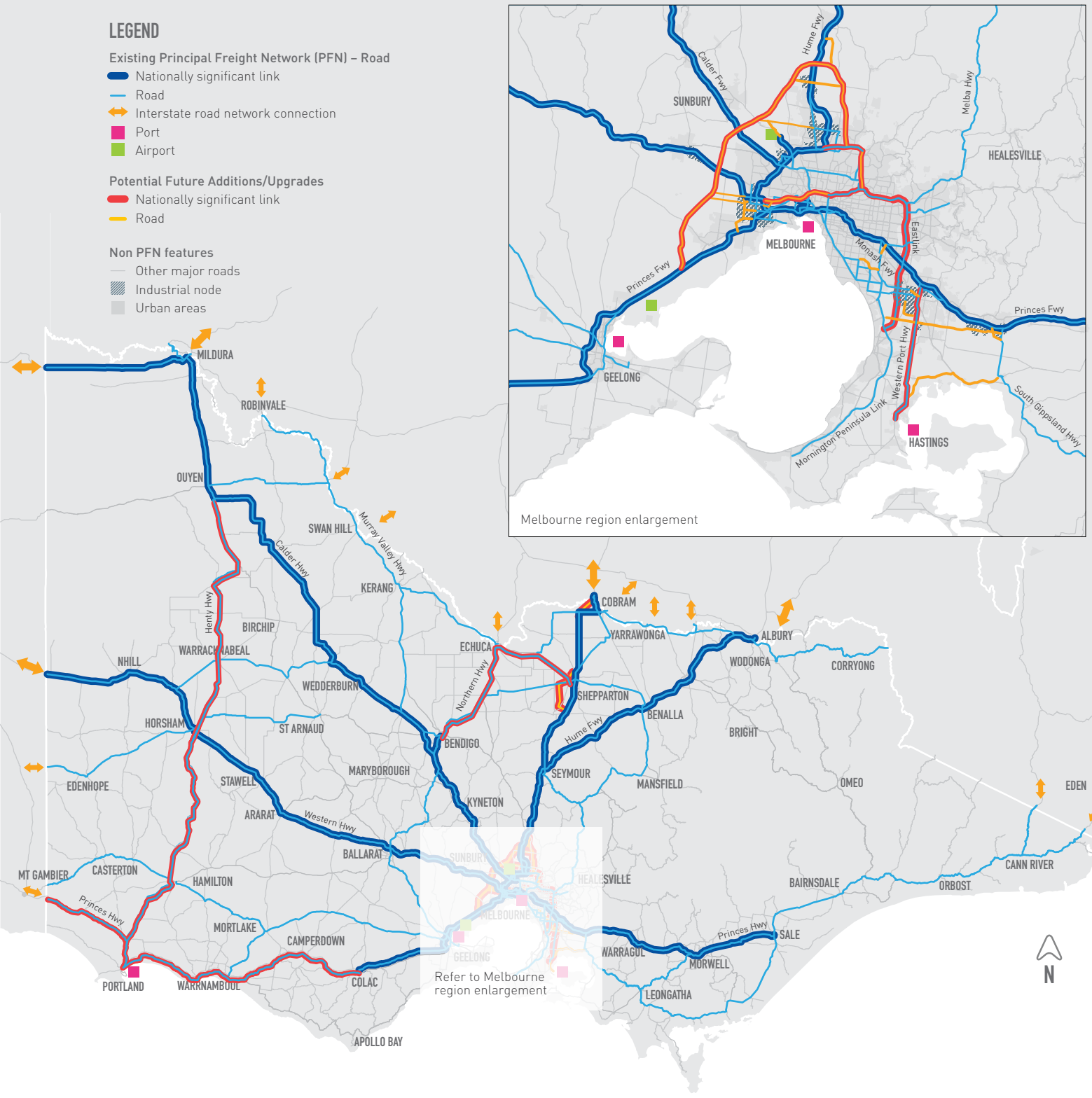
The map on page 55 shows Victoria's current Principal Freight Network – Road, with proposed and/or potential enhancements.

STRATEGIES AND ACTIONS

The Government will ensure that Victoria's road network continues to provide a competitive advantage for freight to 2050 and beyond by:

1. delivering the East West Link project to service increasing freight movements
2. completing the current M80 Ring Road project and other future targeted upgrades (e.g. interchanges, widening, *Managed Motorways* and safety improvements) of the metropolitan freeway system
3. working with the Commonwealth Government to deliver essential upgrades to major arterial roads across the State, which play a key role in servicing freight needs
4. working with the Commonwealth Government to deliver the Melbourne Metro project and other public transport capacity enhancements to relieve commuter demand and improve freight accessibility on the inner Melbourne road network and key freeway links
5. progressively upgrading the Western Port Highway to form a full freeway standard link to meet increasing transport movements generated by the growth of Melbourne's south east and the development of the Port of Hastings
6. considering options for a North East Link in the longer term, connecting the M80 Ring Road to the Eastern Freeway
7. maintaining the OMR/E6 corridor reservation and progressing the staged construction of key segments as business cases justify between now and 2050
8. working cooperatively with industry and local councils to plan, develop and maintain the Principal Freight Network and important 'first and last kilometre' connections to key freight destinations.

PRINCIPAL FREIGHT NETWORK – ROAD (WITH POTENTIAL FUTURE ADDITIONS)



EFFICIENT FREIGHT NETWORK LINKS

Direction 10 – An increased role for rail freight

The rail sector has the capacity to play a more significant role in managing Victoria's expanding freight task. Rail's current share of Victoria's total land freight task in tonnes carried is approximately three per cent, although it rises to 16 per cent when measured in ntk. The contestable freight market for which rail could compete with road is generally considered to be around 15-20 per cent in tonnes overall, although this varies across different market segments. In order for rail to start to make gains in this market, a range of barriers to efficiency need to be addressed.

Today, the transport of freight on rail in Victoria occurs across three main market segments:

- interstate domestic freight transported between Australia's mainland capitals on the standard gauge network, managed by the Australian Rail Track Corporation (ARTC)
- containerised and bulk export products from regional Victoria and southern New South Wales, transported to the trading ports of Melbourne, Portland and Geelong over the regional (broad and standard gauge) rail networks managed by V/Line and ARTC
- metropolitan movement of steel between the Melbourne Steel Terminal and Hastings on the Metro Trains Melbourne (MTM) network and Somerton on the ARTC network.

As indicated in the table above, interstate freight currently accounts for around 4.8 million ntks (or 57 per cent) of the total rail freight task and this is forecast to rise to around 71 per cent by 2046.

Total Rail Task (million net tonne kilometres)

Year	Interstate	Regional	Total
2012	4,796	3,610	8,406
2021	7,700	4,363	12,063
2031	12,161	4,837	16,998
2046	14,810	5,970	20,780

The Government's objective is to ensure the best use of existing rail infrastructure and to avoid some of the costs associated with expanding and maintaining our road network, taking advantage of the greater efficiency rail can offer in moving specific commodities over suitable routes. As the freight task grows, greater use of rail transport (for both freight and passengers) can also ease road congestion and reduce the impact of road freight transport on safety, pollution and regional amenity.

The Government will give priority to investigating provision of a South Eastern Rail Link (SERL) to provide a dual (broad and standard) gauge track between Dynon and Dandenong, operating independently of metropolitan passenger rail services. This will significantly expand capacity for freight and V/Line passenger trains on the Dandenong Rail Corridor. Subject to completion of a further southerly rail link, currently planned to be located in the Western Port Highway corridor, it will also provide for the connection of the Port of Hastings to key export markets in regional Victoria and southern NSW. SERL will be included in future updates of Public Transport Victoria's *Network Development Plan – Metropolitan Rail*.

A prerequisite for the SERL is completion of the Melbourne Metro rail tunnel, which will free up surface track capacity on the existing rail network for freight and regional passenger services travelling into and through the centre of Melbourne.

The economics of rail operations feature high fixed capital and operating costs and barriers to entry, such as heavy regulatory compliance. This means that once a commitment is made to maintaining a rail line in operating condition, the more traffic that moves over it the more commercially viable it will become, up to the point where practical capacity is exhausted. It is therefore in the interests of the Government (as the owner of the network), the community (which benefits if freight is taken off the road network) and industry (which is provided with an alternative transport option) for a co-ordinated approach to be taken to maintenance and operation of the rail network and the attraction of business to the network.

The economics of rail also means that it is generally not viable to maintain sections of the rail network unless significant traffic volumes can be guaranteed over a sustained period of time. Victoria's rail network was designed when horse-drawn transport was the principal means of moving freight on the road network and some sections of the rail network are unlikely to ever be viable given the relative attractiveness of today's road freight transport sector.

The Government will prepare a 'regional rail freight network development strategy' to provide a basis for prioritising future investments and maintaining existing lines in trafficable condition. It will also continue the Mode Shift Incentive Scheme (subject to a periodic evaluation of its effectiveness) and pursue a range of other initiatives to improve the efficiency of rail operations and attract new freight business to the operating rail network.

As an example of this approach in action, the Government recently announced a $7.1 million project to be delivered jointly with leading Australian brand food company SunRice to upgrade and reopen the Echuca to Toolamba line for rail freight. The project will involve upgrading the broad gauge track from Echuca to Toolamba and installing new signalling at the Toolamba junction so the line can be reopened for freight in late 2013.

The Government will also continue work to assess the potential of a proposed new link between the Mildura line and the main east-west transcontinental line near Broken Hill. This would require the Mildura line and some connecting lines to be standardised and would enable mineral sands from southern NSW to be railed direct to port (both Geelong and Portland), while also providing an alternative rail link to Perth, bypassing Adelaide. Construction of this link would enable highly efficient 'double-stack' container trains to operate between Perth and a new interstate rail freight terminal in Melbourne's west.

The map on page 58 shows Victoria's current Principal Freight Network – Rail, with proposed and/or potential enhancements.

STRATEGIES AND ACTIONS

The Government will support an increased role for rail freight by:

1. preserving a corridor for appropriate rail connections to the Port of Hastings, including consideration of a potential direct connection to Gippsland
2. progressing investigations and a business case for a South Eastern Rail Link (SERL), to be delivered in conjunction with the Melbourne Metro project, to provide a dedicated rail freight link between Dandenong and Dynon
3. encouraging the initiation of port rail shuttle operations by the private sector under the MIS project
4. in conjunction with the development of new interstate freight terminals to the west and then the north of Melbourne, progressively developing an interstate rail bypass of Melbourne utilising the Outer Metropolitan Ring (OMR) corridor
5. preparing a rail freight network development strategy to provide a basis for prioritising future investments
6. continuing support for the Mode Shift Incentive Scheme (MSIS), subject to regular evaluation
7. supporting annual maintenance and renewal works on Victoria's rail freight network
8. ensuring that network manager responsibilities for the freight network are embedded and monitored in relevant franchise and lease agreements
9. working with industry and network managers to:
   - identify and action initiatives to simplify arrangements for network access and regulatory compliance
   - identify and action initiatives to improve the efficiency of intermodal operations at ports
   - establish a 'rail freight facilitation unit' and improved arrangements for consultation with rail freight operators and customers on the planning and management of rail freight operations.

PRINCIPAL FREIGHT NETWORK – RAIL (WITH POTENTIAL FUTURE ADDITIONS)

EFFICIENT FREIGHT NETWORK LINKS

Direction 11 – An efficient intermodal terminal network

Intermodal terminals enable freight to be transferred from one mode of transport to another. For example, this could involve transfer of grain from trucks to trains via a bulk grain rail silo, or transfer of containers from a train to trucks at a metropolitan freight terminal for last kilometre delivery.

For freight supply chains to work efficiently and effectively, it is necessary to ensure the provision of adequate intermodal capacity and to optimise the efficiency of these operations to keep costs down and maintain timeliness and reliability of service for customers.

The Government is committed to working cooperatively with rail freight customers, rail and road operators, local councils and relevant authorities to ensure that Victoria plans for and has adequate intermodal terminal capacity, both in the regional areas and metropolitan Melbourne, to 2050 and beyond.

Through a market sounding process, the Government has established that there is strong, positive private sector interest in investing in and/or operating elements of an integrated Metropolitan Intermodal System (MIS) in Melbourne. Such operations are already well-established in Sydney and Perth and will be required in Melbourne in the future to relieve pressure on the key road connections to the centrally located port.

The Department of Transport, Planning and Local Infrastructure, Public Transport Victoria, the Port of Melbourne Corporation and VicTrack have undertaken wide-ranging technical studies to establish that the operation of a system of metropolitan intermodal terminals, linked by an efficient road and rail container shuttle service, is potentially feasible.

The Government will work with the private sector to address barriers to the initiation of MIS services, including confirmation of preferred terminal sites; network connections and access; and an efficient and reliable port interface.

Similarly, a number of factors must be successfully addressed before regional intermodal terminals can achieve viability, including the presence of sustainable ongoing demand; a well located and designed terminal; a reliable rail operation and local pick up/delivery service; and an efficient and reliable port interface. The Government will work with freight customers, operators, investors and local government to prepare a vision and implement a practical strategy for the cost-effective development of the regional intermodal terminal network, building on the lessons learnt in developing the MIS proposal.

The viability of both metropolitan and regional intermodal terminals will be considerably enhanced if the costs of local pick up/delivery can be lowered or eliminated altogether. The Government will work with industry and local government to ensure that, where practical, adequate associated land, zoned for freight and logistics activities, is available to allow high volume freight customers to locate adjacent to intermodal terminals. In this way the cost and amenity impacts of local pick up/delivery movements on the public road system are significantly reduced.

STRATEGIES AND ACTIONS

The Government will facilitate the development of an efficient intermodal terminal network by:

1. ensuring the provision of adequate interstate 'gateway' terminal capacity (refer to Direction 3)
2. supporting development of the Metropolitan Intermodal System (MIS), including:
   - working cooperatively with interested private sector parties to identify preferred terminal locations and address barriers to the initiation of MIS services
   - working cooperatively with stevedores to improve efficiency and reduce costs at the port interface
   - planning for and providing, subject to business cases, freight network infrastructure and connections necessary for the efficient and effective operation of MIS rail and road shuttle services
3. working with freight customers, operators, investors and local government to prepare a vision and practical strategy for the cost-effective development of the intermodal terminal network in regional Victoria, including investment and operating guidelines
4. subject to consistency with the regional terminal network strategy, supporting the development of business cases for terminal investment and related rail network upgrades and considering resultant funding applications
5. ensuring that, where practicable, planning for intermodal terminal development allocates adequate associated land, zoned for freight and logistics activities, to facilitate co-location of high volume users and minimise the impact of freight activities on the community.

EFFICIENT FREIGHT NETWORK LINKS

Direction 12 – An efficient pipeline network

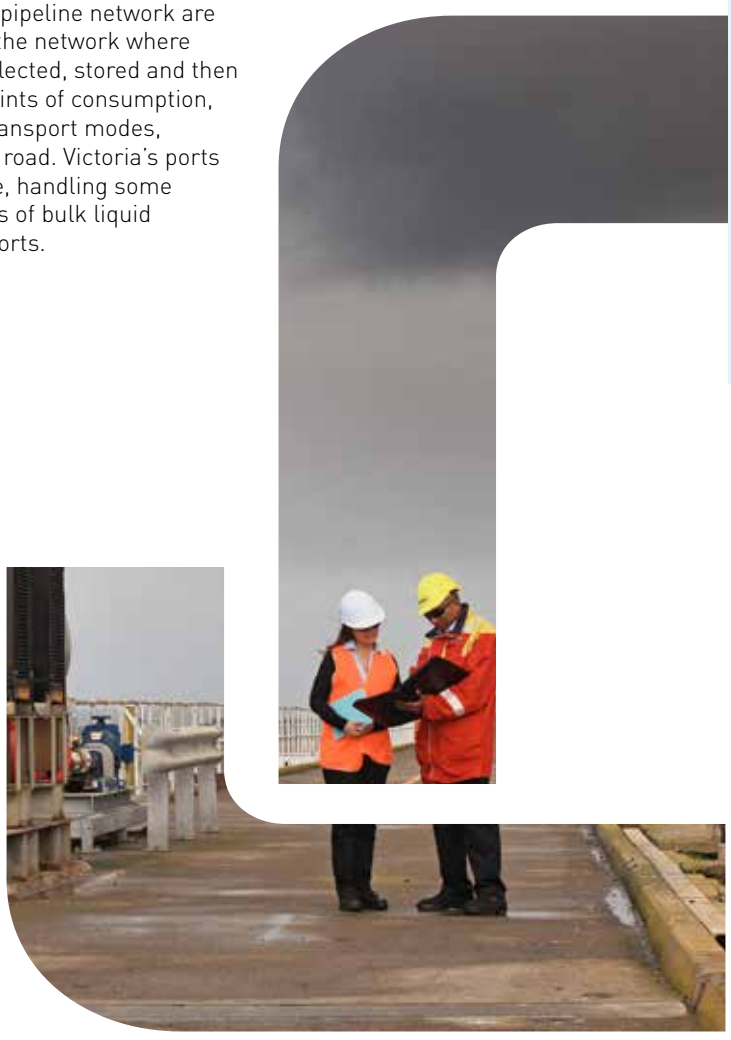
Pipelines perform a significant role in Victoria's freight network by facilitating the efficient bulk movement of large volumes of:

- liquids, such as crude oil, refined oils, petroleum/hydrocarbon products, petrochemicals and chemical products (both hazardous and non-hazardous); and
- gases, such as natural gas and ethane.

Particularly critical to the efficient operation of the pipeline network are the locations in the network where products are collected, stored and then distributed to points of consumption, often by other transport modes, such as sea and road. Victoria's ports play a major role, handling some 13 million tonnes of bulk liquid imports and exports.

As well as being a highly efficient means of transporting liquid and gaseous product, pipelines are often safer and less intrusive than other methods of transportation, particularly for hazardous or flammable materials. For such materials, freight planning should consider the benefits of pipelines over other modes, for example for the transport of aviation fuel to airports.

Victoria's current network of pipelines, shown in the map on page 61, has served the State well to date. However, changes in patterns of production, types of product, points of import/export and growth in volumes means there is a need to plan ahead effectively for the development of the pipeline network to meet future needs.

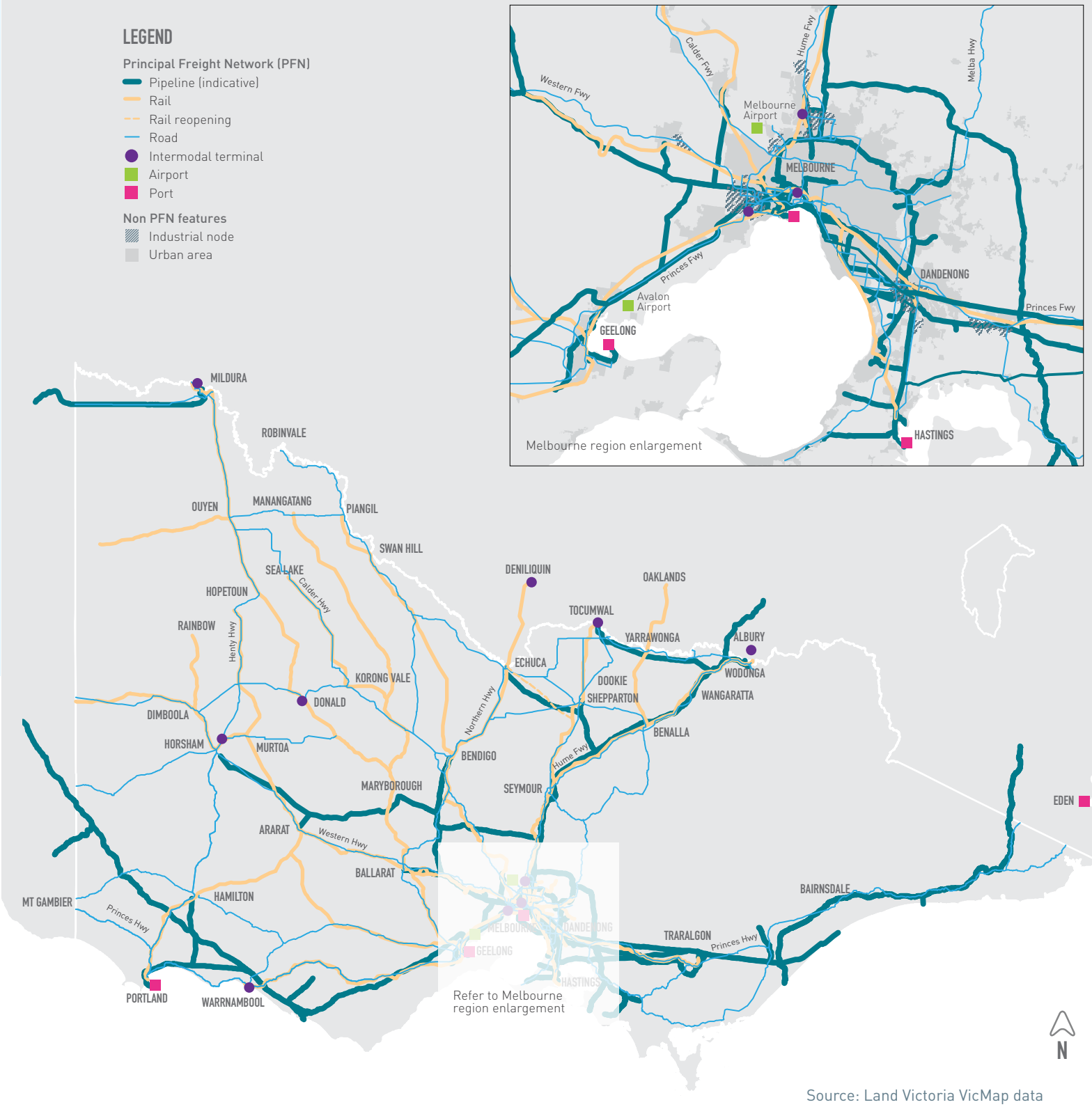


STRATEGIES AND ACTIONS

The Government will ensure that Victoria's pipeline network is efficient and adapts effectively to future demands by:

1. working cooperatively with industry and port managers to plan for and respond to emerging trends in the structure of the petrochemical industry, with likely increased reliance on imports of refined product
2. working cooperatively with industry to plan for and respond to changing patterns of domestic energy consumption, with an emerging trend to greater use of biogas fuels (e.g. natural gas) to substitute for biomass fuels (e.g. coal)
3. working cooperatively with industry and transport network managers to ensure that the potential benefits of pipelines, particularly for the transport of hazardous or flammable products, are fully considered in network and operational planning (e.g. for the supply of aviation fuel to airports).

VICTORIA'S EXISTING PIPELINE NETWORK



Source: Land Victoria VicMap data

LAND USE PLANNING AND PROTECTIONS

Direction 13 – Planning to protect existing freight operations

Maintaining curfew-free access for existing freight infrastructure is essential for handling the current and growing freight task. The encroachment of sensitive land uses near freight infrastructure can create amenity issues, leading to pressure to restrict freight activity. A more consistent and informed approach to land use planning is required to ensure that sensitive land uses are not located or designed in such a way that would expose people to unacceptable amenity impacts. Freight operators also have a role to mitigate off-site impacts when developing infrastructure and in managing freight operations.

During 2012 the Government announced its response to the recommendations of the Ports and Environs Advisory Committee (PEAC) and has made significant progress on implementation. This landmark policy initiative will, for the first time, provide consistent, robust protection against the encroachment of sensitive uses on the efficient operation of Victoria's four commercial trading ports for the duration of their working lives. The approach applies the 'reverse amenity' principle, which requires that sensitive land uses not be established in locations where amenity standards are unsatisfactory. This principle also applies to areas around chemical storage facilities at ports, particularly those classified as Major Hazard Facilities. The Ports and Environs outcomes support a key action of the *National Ports Strategy 2012* in addressing the issue of encroachment.

Port of Melbourne – Port Environs

The map above shows an example of 'Port Environs' identified by Ministerial Direction in May 2012 at the Port of Melbourne.

The Ports and Environs outcomes also involve the introduction of a new Port Zone, recognising the state significance of commercial ports. The Port Zone will be linked to each Port Development Strategy prepared by the port manager, providing more focus on port planning.

Victoria has already had in place for many years strong planning protections for Melbourne Airport, which have been instrumental in its retaining a 'curfew free' status, a significant competitive advantage for the State.

Avalon Airport has been upgraded to international airport status, thereby strengthening Victoria's overseas linkages. Specialist freight services are provided at Avalon Airport and its continuing curfew-free status will need to be formalised. The Government will continue to work cooperatively with the Commonwealth Government to prepare an Airport Environs Overlay for Avalon Airport, which complies with the acceptable noise exposure levels set through the Australian Noise Exposure Forecast System to protect the curfew-free status of this airport into the long term.

The Government is committed to leveraging off the ports and airports initiatives to develop more effective approaches to protecting other key elements of the freight and logistics system. Significant intermodal terminals, locomotive service centres and rail yards are at risk of encroachment of inappropriate development and require protection. Similarly, key road and rail links on the Principal Freight Network need better protection, as do 'first and last kilometre' freight access routes where amenity issues can be even more challenging. The use of planning controls, and emerging building controls, could assist in providing better protection against encroachment.

The rail network has, over time, been compromised at locations where corridor widths have been narrowed resulting in 'pinch points' where future additional tracks cannot be accommodated. These points represent a risk to developing capacity on the existing network. The Government is rectifying pinch points at Sunshine and Newport but other locations require assessment and response.

STRATEGIES AND ACTIONS

The Government will reinforce and build on measures to protect existing freight operations by:

1. completing the implementation of the Government's response to the Ports and Environs Advisory Committee (PEAC) recommendations, including the application of the new Port Zone and preparation of planning guidance material by end of 2013
2. investigating the applicability of a specific zone and buffer protections, similar to those adopted for ports in response to the PEAC report, to other State significant freight facilities/precincts, such as interstate rail terminals and metropolitan intermodal terminals
3. continuing to work cooperatively with the Commonwealth and other jurisdictions on the preparation and implementation of the National Airports Safeguarding Framework; undertaking a review of the Melbourne Airport Environs Strategy Plan by the end of 2013; and introducing an Airport Environs Overlay for Avalon Airport by 2016 (refer to Direction 4)
4. identifying pinch points in key rail freight corridors in metropolitan and regional locations that may constrain future capacity and developing a program to progressively remedy them
5. monitoring and reviewing the adequacy of existing measures to protect the 24/7 operation of key freight links, including last kilometre connections to ports, airports, major freight terminals and freight precincts.

LAND USE PLANNING AND PROTECTIONS

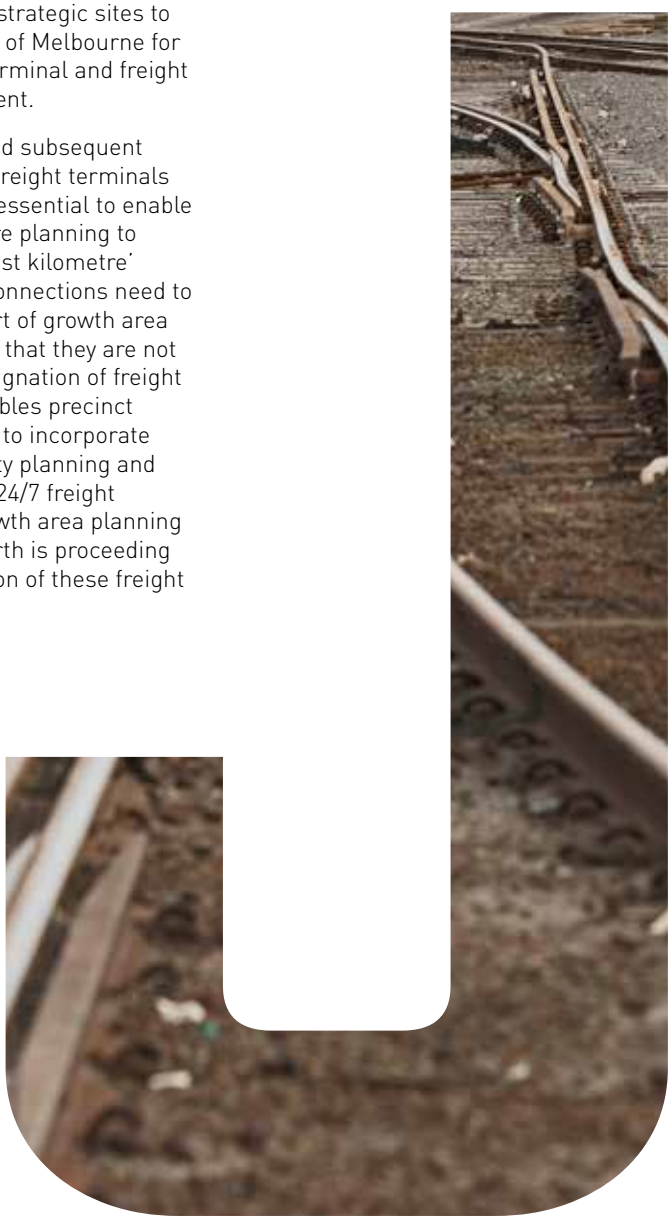
Direction 14 – Identifying and protecting future freight precincts and corridors

A key objective of the Plan is to ensure that capacity options are preserved in the Victorian planning system to accommodate projected future growth of the freight task. Planning reservations and controls put in place by previous Governments from the 1960s onwards have provided an invaluable legacy of freight gateway and network capacity for Victoria, including, for example, large areas of suitably zoned land around the Port of Hastings and provision of the East Link corridor.

More recently the Outer Metropolitan Ring/E6 Transport Corridor reservation has been established to accommodate the long-term population and economic growth requirements of Melbourne's western and northern corridors. The Government is continuing the work to identify and, where necessary, protect corridors that will help provide a reliable transport network over the medium to long term. This long-term planning approach is critical to underpin national as well as state economic competitiveness and is fully consistent with the development of a 'national corridor protection strategy' as proposed in the *National Land Freight Strategy 2013*.

In addition to planning for future transport corridors, the Government is committed to ensuring that new reservations are established in a timely manner to protect future freight precincts for which clear strategic justification has been established. A particular priority will be to identify and protect highly strategic sites to the west and north of Melbourne for future interstate terminal and freight precinct development.

The designation and subsequent reservation of key freight terminals in growth areas is essential to enable integrated structure planning to occur. Adequate 'last kilometre' freight transport connections need to be identified as part of growth area planning to ensure that they are not 'built out'. The designation of freight terminals also enables precinct structure planning to incorporate appropriate amenity planning and protect long-term 24/7 freight operations. As growth area planning in the west and north is proceeding now, the designation of these freight precincts is timely.



While freight planning is being integrated more effectively at ports, in Growth Corridor Plans, Regional Growth Plans and local transport plans, there are gaps in guidance material and referral provisions for freight planning in the Victoria Planning Provisions. The Government will progress the preparation of planning guidance material to promote more integrated freight planning and will give further consideration to referral arrangements for permit applications with implications for future freight operations.

STRATEGIES AND ACTIONS

The Government will ensure that significant precincts and corridors required to provide future freight capacity to 2050 and beyond are protected by:

1. in conjunction with the development of the Metropolitan Planning Strategy (MPS), identifying strategic freight precincts and links in Growth Corridors and developing robust strategies for their protection, including:
   - a suitable site and precinct for the Western Interstate Freight Terminal (WIFT)
   - a suitable site and precinct for the Beveridge Interstate Freight Terminal (BIFT) in the north
   - key rail links, including their connections to future terminals
   - key road links, including last kilometre connections to future freight precincts
2. maintaining protection of the Outer Metropolitan Ring (OMR)/E6 transport corridor
3. progressing planning investigations to secure a North East Link corridor reservation
4. in conjunction with local councils and the development of Regional Growth Plans, identifying strategic freight precincts and links in regional Victoria and developing strategies for their protection
5. revising the Victoria Planning Provisions, including the State Planning Policy Framework to:
   - promote more effective integration of planning for freight with broader transport and land use planning
   - designate future freight transport corridors and strategic freight precincts
   - acknowledge the Principal Freight Network
6. developing planning guidance material for freight precinct development, including land use buffer considerations
7. working with the Commonwealth Government to progress the development of a 'national corridor protection strategy'.

PLANNING FOR EFFICIENT AND SUSTAINABLE URBAN FREIGHT MOVEMENTS

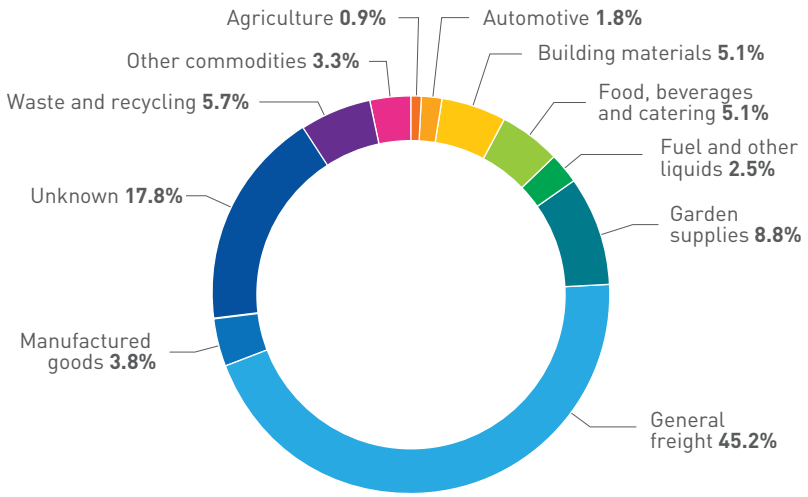
Direction 15 – Managing freight delivery in urban areas

Given the importance of efficient goods movement to the performance of Victoria's economy, the Government is committed to playing an active role in enhancing freight network efficiency and productivity. However, the Government recognises that in dense urban environments it is also critical to ensure that an appropriate balance is struck between freight delivery efficiency and the potential amenity impacts associated with these movements, such as emissions, noise and crashes.

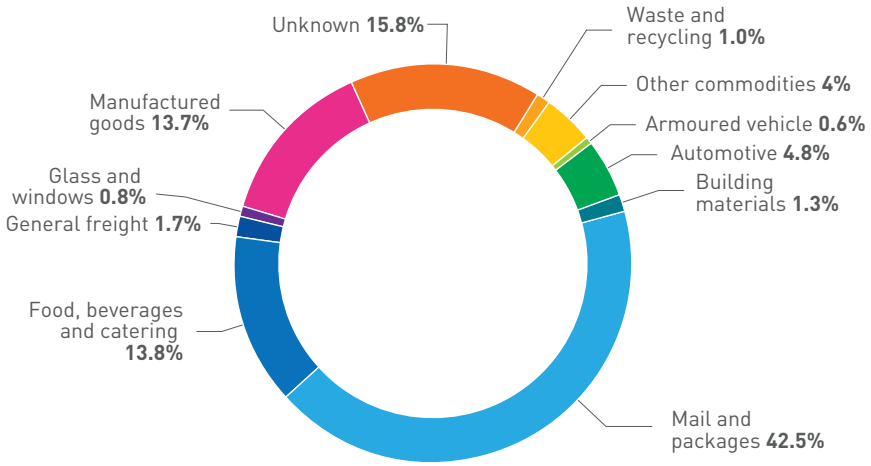
As a first step to better understand the freight delivery challenges faced in the urban environment, the Government recently completed an Australian first study to better understand the precise makeup and purpose of freight movements within the metropolitan area. This work has identified that as much as 19 per cent of all traffic on Melbourne's roads are commercial vehicles – 11.5 per cent light commercial vehicles and 7.5 per cent trucks. As might be expected, the vast majority of heavy trucks (85 per cent) were carrying freight. The figure on the right highlights that 'General freight', which includes freight moving to supermarkets and shopping centres, was the most commonly observed task carried on trucks.

More significantly, for the first time, this work has provided an insight into the movement of light commercial vehicles around Melbourne where previously there had been little real data available.

Metropolitan freight task carried by trucks



Metropolitan freight task carried by light commercial vehicles



The work highlighted that light commercial vehicles are travelling on Melbourne's roads in significant numbers. However, when the nature of the task being carried by light commercial vehicles was further investigated, it was found that nearly 75 per cent of the vehicles were engaged in delivering a service, not freight. Only a quarter of light commercial vehicles were carrying freight. Of the services that could be specifically identified, the study highlighted that trade vehicles (plumbers, builders, electricians) of all kinds were most common.

Considering the breakdown of the 25 per cent of light commercial vehicles classified as carrying freight (shown in detail above) it is notable that 'Mail and packages' is easily the largest freight type observed. This reflects growth in courier and parcel delivery services in recent years due to online shopping and 'just-in-time' delivery. Nevertheless, the study shows that such movements are still dwarfed in number by movements of service related light commercial vehicles undertaking the various tasks that keep Melbourne working every day.

This information represents a significant step forward in the understanding of the size and purpose of the freight task moving on Melbourne's roads. The work provides an insight into the complex networks and systems that are in action every day moving services and freight around Victoria's capital city. Through the Plan, the Government is committed to continue work to further grow understanding of the challenges faced in the urban environment and to inform development of action supporting an effective balance between efficiency and community liveability and amenity.

Consultation informing development of this Plan has identified a number of issues that add considerable costs to urban freight delivery operations, including inconsistent access arrangements between local government areas; different design standards used in shopping centres; and lack of adequate parking and queuing areas for trucks. Having more uniform arrangements for access to delivery points to safely accommodate larger trucks has the potential to reduce delivery costs for carriers whilst also lowering impacts for local residents.

Future delivery systems within Melbourne will need to manage a growing freight task within a 'just-in-time' environment that has the potential to create increasing conflicts between vehicles, shoppers and residents. To manage the growing urban task, innovative solutions will need to be trialled and implemented. Much can be learnt from research and analysis of current behaviour and investigating international experience. Two international examples, which the Government considers have real potential for application within Victoria, are shown in the box to the right. There is also significant scope to progress further work in partnership with industry and local governments to better understand the movement of freight in Melbourne and develop ideas for improvement.

LEARNING FROM INTERNATIONAL EXPERIENCE

Urban consolidation case study – The Binnenstadservice

An urban consolidation centre concept called Binnenstadservice.nl ('inner city service') commenced in the Dutch city of Nijmegen in 2008. The Binnenstadservice (BSS) scheme differs from other consolidation centre-based initiatives by focussing on receivers rather than on carriers. BSS results in fewer trucks entering the city centre with reduced distance being driven. After one year 98 stores in Nijmegen were using BSS and it continues to grow. There are currently nine cities in the Netherlands with the Binnenstadservice with more cities interested.

After the first year a reduction of five per cent of truck kilometres and seven per cent of truck stops was realised. Carriers deliver the goods to BSS, not the retailers. By bundling the deliveries from multiple suppliers for the store-owner and delivering the goods at the time the retailer wishes, BSS offers a service that saves the store owners time and money.

In addition to the basic service, retailers can purchase extra services at BSS, such as storage, so that retailers no longer have to use their shop to store goods or rent storage space elsewhere. BSS uses only clean transportation to deliver goods in the city centre – reducing the impact of deliveries on the central city.

Fleet Operator Recognition Scheme

The Fleet Operator Recognition Scheme (FORS) is an industry-based scheme supported by the City of London designed to provide advice to transport operators on safety, fuel use, parking infringement notices as well as vehicle and fleet performance.

The FORS is an accreditation scheme directly aimed at improving freight delivery in London through facilitating access to discounted best practice equipment, training and business services for operators. It provides a recognised standard of behaviour that encourages improvements in delivery operations. Currently approximately 39 per cent of London's regular freight fleet, comprising over 1,500 companies and operating over 128,000 vehicles, are members of this scheme.

Accreditation allows an operator to display the FORS logo on their vehicle, website, headed paper and any other corporate material they choose. Accreditation demonstrates to current and prospective customers that operators work to standards above the minimum – supporting the liveability of the community as well as providing efficient service to customers.

Reviewing curfews and access restrictions at shopping centres within Melbourne

To reduce inefficiencies in delivery operations by carriers throughout metropolitan Melbourne, there is a need to improve consistency between local government areas for truck access restrictions and curfews at shopping centres.

A review of current regulations relating to trucks accessing local roads and shopping precincts within Melbourne will be undertaken in partnership with the newly established Ministerial Freight Advisory Council (MFAC). With this new information the Government, local government and industry will for the first time have a clear and shared understanding of the true scope and detail of the last kilometre access challenge. Informed by the new information, the Government will work cooperatively with MFAC, local councils and key freight customers and operators to investigate options to improve the consistency of last kilometre access arrangements across the metropolitan area, including in relation to types of vehicles that can be used and the time of day network access is allowed.

Understanding land use freight generation

To allow the deliveries for new developments in Melbourne's central city area to be more effectively planned, a much more detailed understanding of the current nature of urban delivery patterns within Melbourne is required. By combining land use data with details of delivery patterns gained from surveys of receivers and carriers, it would be possible to develop a model of freight generation and receival for different types of land use. An example of this can already be seen in 'The Census of Land Use and Employment (CLUE)' data, which provides a picture of land use patterns of over 1,600 buildings within Melbourne's CBD.

The Government intends to progress work in conjunction with the City of Melbourne to collect and process information on current delivery patterns from receivers, carriers and shippers for a trial urban area. Details of the deliveries to receivers – including loads (type of goods, amounts, packaging, frequency, time, carrier, shipper); on-site storage (typical stock levels, capacity); security (access); personnel required; constraints (e.g. time windows, physical access); and vehicle parking locations could be collected. Details of the carriers undertaking the deliveries could also be a focus, including their routes, parking location, vehicles used (including capacity and fuel consumption), unloading equipment and shippers.

With this level of information it would be possible to develop a general model of local area freight generation and receival that could be applied to assist sustainable planning and development across metropolitan Melbourne.

Establishing Supply Chain Stakeholder forums

Last kilometre freight is a complex system. International experience clearly highlights that involvement is required from all key stakeholders (Government, operators, and customers) to develop solutions that will mitigate the urban amenity impacts of a growing freight task whilst enhancing the efficiency of deliveries in urban areas. Establishment of strong partnership forums would support development of schemes or trials to encourage more off-hours deliveries, establish consolidation centres or encourage use of alternative fuel vehicles.

The Government will work in partnership with local councils, the Municipal Association Victoria and industry to establish local area 'Supply Chain Stakeholder forums'. The potential for establishing a first such forum for the central city area will be a particular focus.

Development of 'industry-based recognition schemes' for operators and receivers

The Government will work with local councils, the Municipal Association Victoria and industry to investigate the potential to support the development of 'industry-based recognition schemes', similar to the experience in London, for both operators and receivers. The focus would be on supporting improved efficiency of deliveries whilst reducing amenity impacts. Education material based on the 'Freight Operation Recognition Scheme' and 'Delivery Service Plan' schemes from London will provide a useful basis for investigating such programs.

Prioritise investment to improve the level of service on preferred traffic routes

Further application of the *SmartRoads* framework in metropolitan Melbourne has the potential to improve the efficiency of freight delivery movements in the metropolitan area by location and time of day. Through appropriate management and investment in preferred traffic routes to support maintaining and growing the capacity of key freight routes, the Government can reduce demand pressure for freight vehicles to use local roads as alternatives to congested major routes. The Government will continue to work with industry to identify and prioritise key routes for protection and investment through the Principal Freight Network, managed through the SmartRoads framework, in addition to maintaining more general arterial road access.

STRATEGIES AND ACTIONS

The Government will promote efficient and sustainable urban freight movement by:

1. working cooperatively with the Ministerial Freight Advisory Council, local councils and key freight customers and operators to improve the consistency of freight delivery access arrangements across the metropolitan area, in terms of both types of vehicles that can be used and the time of day network access is allowed
2. working cooperatively with interested local councils to:
   - progress development of a tool for calculating freight generation characteristics of various land uses at the individual property level
   - investigate opportunities to assess and trial approaches to consolidation of deliveries to the CBD and/or other significant central activity areas and to encourage more off peak/overnight deliveries
   - trial the establishment of 'Supply Chain Stakeholder forums' for the CBD and/or other significant central activity areas, involving freight operators, receivers and other key stakeholders
3. investigating opportunities to support local government and industry to develop, trial or evaluate 'freight operator recognition schemes'
4. through the *SmartRoads* framework, prioritising investment in the arterial road network in metropolitan Melbourne to improve the level of service for freight on preferred traffic routes on the Principal Freight Network to reduce the need for diversion of freight transport on local routes.

PLANNING FOR EFFICIENT AND SUSTAINABLE REGIONAL FREIGHT MOVEMENTS

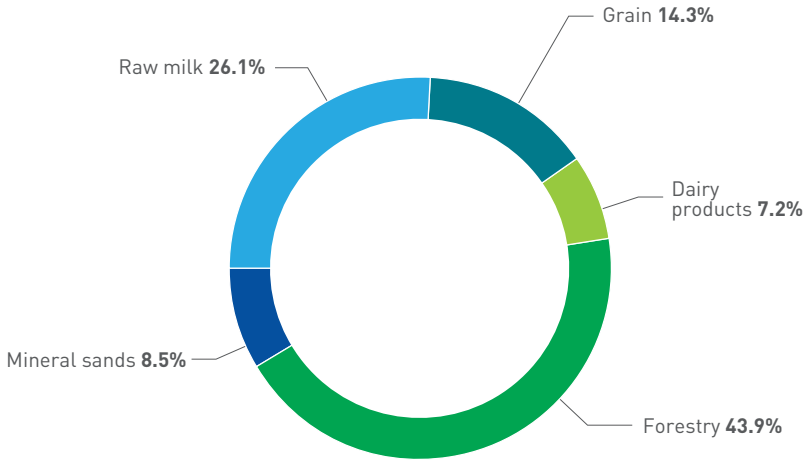
Regional Victoria generates substantial economic activity and is a key driver of Victoria's economy. With approximately one quarter of Victoria's population, largely in regional cities and peri-urban areas, regional Victoria produces around a quarter of the State's economic output, around $71 billion annually.

A major component of regional Victoria's economic output is the value of agricultural production and exports. Agricultural exports contribute 29 per cent to the national total of this sector, making Victoria the largest food and fibre exporting State, with exports worth $9 billion. Dairy is the largest goods export sector by value with $1.93 billion of exports in 2010-11, the bulk of which is moved through the Port of Melbourne.

Another key driver of freight flows is the manufacturing sector. There are a number of key regional manufacturing sectors and over the past ten years there has been investment in many regional centres. The regional manufacturing sector requires efficient transport links to Melbourne to remain competitive.

Regional Victoria also supports significant mining activity, primarily centred on coal, oil and gas, gold and mineral sands. Mineral sands mining, which is centred in the vast Murray Basin reserve in the State's north west, currently has the greatest impact on the freight network in terms of tonnage.

Relative proportions of top five commodities 2012 (tonnes pa)



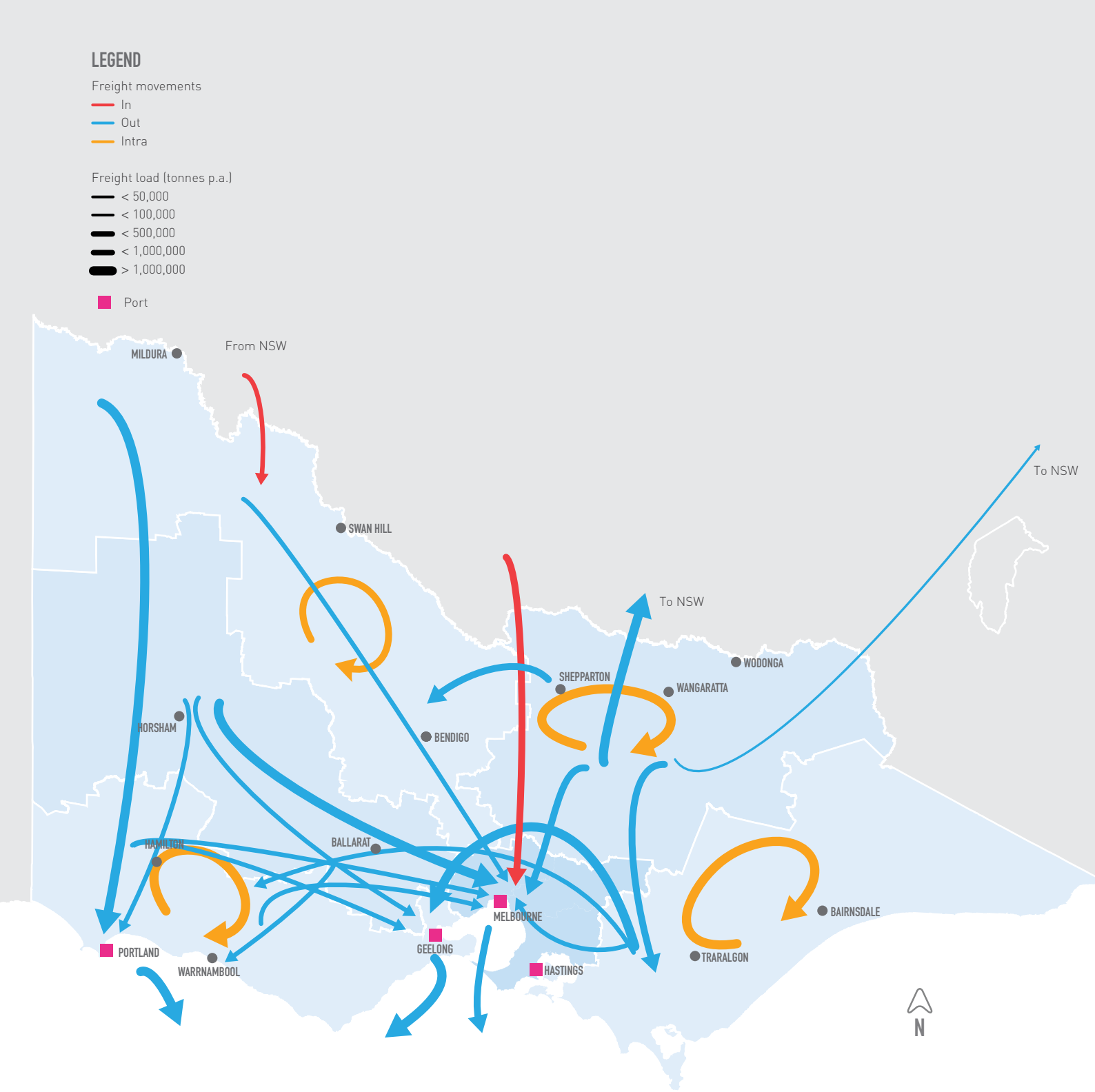
Victoria's massive brown coal reserves – 430 billion tonnes with an estimated potential economic resource of 33 billion tonnes within the Latrobe Valley – are predominantly used in electricity generation, providing 90 per cent of Victoria's electricity. However, with these brown coal reserves being relatively cheap to extract, there may also be opportunities for uses for new commodities derived from brown coal. The private sector is currently analysing the feasibility of exporting brown coal derivative products from Gippsland. Were this to occur, further significant analysis and assessment would be required to determine the supply chain requirements, including potential options for export ports.

The following table provides a breakdown by tonnage of commodities produced in regional Victoria.
The graphic above shows relative proportions of the top five commodities (24.7 million tonnes in total) and the map on page 71 shows the aggregate indicative movement by region of the top five commodities. Commodities from regional Victoria make up around one third of Victoria's exports.

Regional Victoria commodities production estimates – tonnes 2012

Industry	tonnes (2012)
Forestry	10,850,500
Raw milk	6,461,800
Grain	3,545,237
Mineral sands	2,091,737
Dairy products	1,785,228
Fertiliser	1,760,205
Food and beverage	1,545,200
Meat	1,517,455
Livestock	1,373,614
Pulp and paper	1,302,823
Cement	650,000
Mining	561,847
Horticulture	945,433
Other	3,766,753

INDICATIVE MOVEMENT BY REGION OF THE TOP FIVE COMMODITIES



Regional Victoria supply chains

Regional Victoria is well serviced by an extensive road and rail network that connects commodity-producing regions to domestic, interstate and global markets. As indicated by the strong flows to Geelong, Portland and Melbourne, transport connections to major ports in Melbourne, Geelong and Portland are critical in facilitating the export of regional Victoria's commodities.

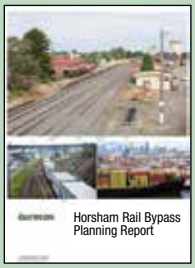
The Port of Melbourne, in particular, remains integral to supporting regional Victoria's economy, with 43 per cent of containerised exports through the port consisting of agricultural and meat products, the bulk of which originates in regional Victoria. Similarly, the ports of Portland and Geelong are critical to the State's forestry, woodchip, grain and mineral sands export industries.

While connections to ports are important for export sectors, a substantial amount of Victoria's regional production is either part of a value-add process within the State or consumed domestically. As a result, cross regional, interstate and links to Melbourne are critical to maintaining the competitiveness and productivity of Victoria's regional industries.

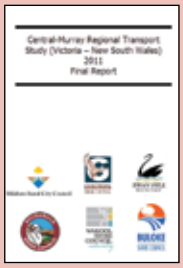
Regional transport plans and studies

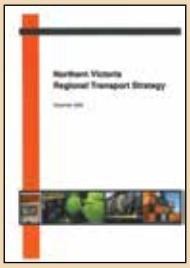
Regional transport plans and studies have been developed by councils and industry across Victoria to identify industry drivers, supply chain trends and intra-regional, cross-regional and cross-border freight movements. These plans and studies (see map on the next page) have drawn on policy and technical support provided by a range of Government departments and agencies. A small number of these strategies are still in the development phase and due for completion later in 2013.

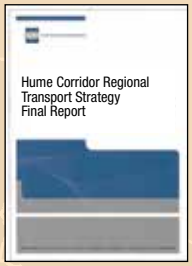
REGIONAL TRANSPORT PLANS AND STUDIES (2009–2013)

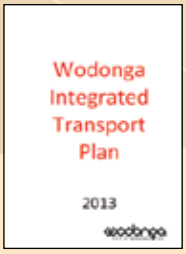


Horsham Rail Bypass Planning Report









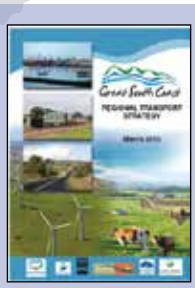
GRAMPIANS REGION

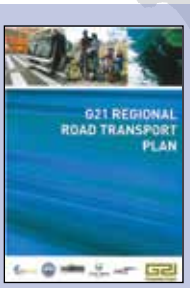
LODDON MALLEE REGION

HUME REGION

BARWON–SOUTH WESTERN REGION

GIPPSLAND REGION





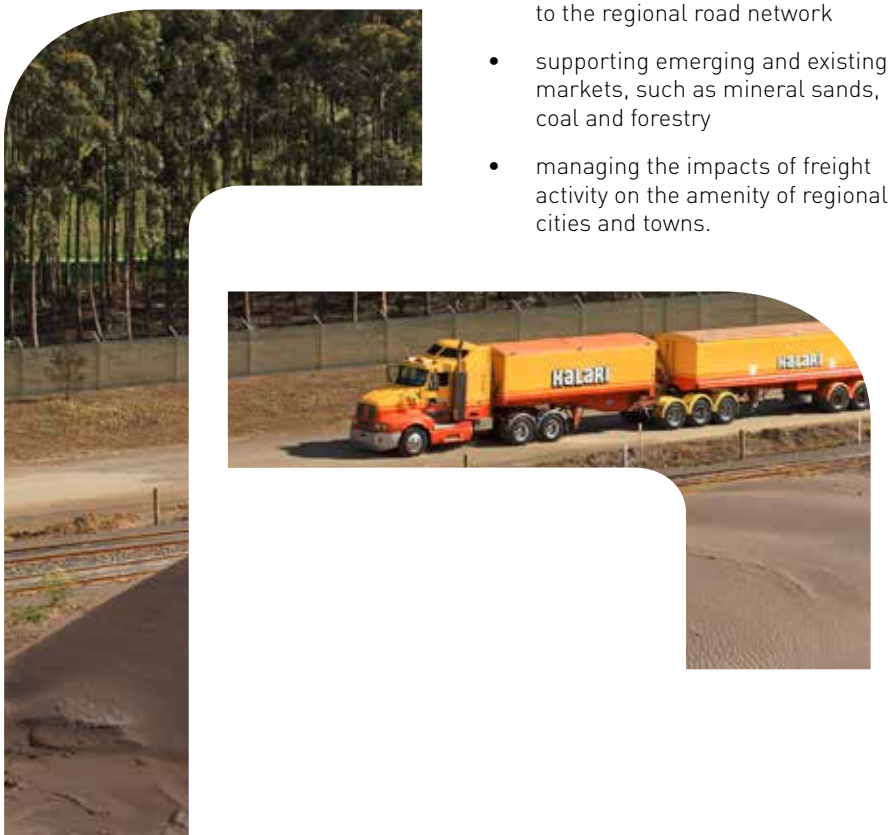
These regional transport plans and studies identify industry drivers and existing and emerging supply chain trends across the State, including:

- significant increases in the extraction, processing and exporting of mineral sands in north-west and western Victoria
- increases in cross-border freight from New South Wales, particularly rice, grain, cotton, wine and citrus
- increased movement of large componentry for the renewable energy industry, such as wind farms and gas-fired energy plants in south-west Victoria
- the transportation of livestock from southern Queensland and western NSW to northern and central Victoria, creating new north-south and east-west supply chains
- consolidation of dairy farms and ongoing investment and growth in dairy production facilities to meet rapidly growing demand for dairy products in the Asian market
- the potential development of new coal, magnesium, copper and mineral sand mines in Gippsland
- continued strong growth in the export of containerised grain through the Port of Melbourne
- strong interest in use of HPFVs to increase efficiencies and reduce costs for regional food processors and manufacturers
- growth in horticultural production in the Macalister Irrigation District in Gippsland, and in Swan Hill and Robinvale in the central Murray region
- strong growth in Victoria's softwood and hardwood plantation industry.

This aligns with key priorities in the Government's Growing Food and Fibre initiative to boost productivity and profitability in five strategic sectors – dairy, grain, red meat, horticulture and biosecurity.

The evidence base contained in the regional transport studies, along with recent roundtable consultations conducted by the Department of Transport, Planning and Local Infrastructure, have informed the key regional directions in this Plan. This consultation has also identified a number of key cross-regional issues and opportunities, including:

- addressing bottlenecks impeding efficiency of specific supply chains
- addressing road maintenance and level of service issues
- providing infrastructure for efficient access to export ports and domestic markets
- harmonising cross-border regulatory anomalies, especially for heavy vehicles
- developing the rail network, including gauge standardisation and intermodal terminals
- providing targeted HPFV access to the regional road network
- supporting emerging and existing markets, such as mineral sands, coal and forestry
- managing the impacts of freight activity on the amenity of regional cities and towns.



Direction 16 – Address regional supply chain bottlenecks and network maintenance issues

The Government understands that the freight challenges in regional Victoria are not the same as they are in metropolitan Melbourne.

In Melbourne, key challenges include planning for large scale capacity constraints on key corridors and at export gateways. By comparison in regional Victoria, freight challenges more often involve specific bottlenecks along strategic supply chains rather than network-wide capacity constraints. The following page lists various projects that improve supply chain performance across regional Victoria that the Government has already funded and commenced or completed.

There are significant further opportunities in regional Victoria to improve supply chain efficiency through effectively targeted investment that will reduce business costs through more seamless transport of products to ports and markets – both domestic and global.

Transport Solutions – Addressing regional supply chain bottlenecks

Bottlenecks in regional Victoria inhibit the efficient movement of freight both in the capacity to accommodate future growth and where existing infrastructure has deteriorated to a state where it cannot accommodate the capacity for which it was designed.

The development of *Transport Solutions*, including regional consultation in 2011, involved identifying and prioritising solutions to bottlenecks in regional supply chains. This work and more recent work undertaken in development of this Plan has identified a number of current short-term issues that impact the efficiency and effectiveness of some key regional supply chains.

The bottlenecks identified include gravel roads, insufficient lanes for freight traffic, narrow roads, bridges unable to accommodate freight vehicles and the need to improve access to ports via the rail network.

The Government will seek to progressively target and address these issues through the implementation of the recently announced $28 million *Transport Solutions* package delivering 30 projects across regional Victoria over two years. With a focus on targeted projects that can achieve benefits in the short term, *Transport Solutions* will support the VFLP's long-term goals and objectives.

Network maintenance issues

A common concern reported by regional freight stakeholders is the impact of deterioration of many parts of the road freight network relied on by producers and businesses for the efficient movement of freight.

For example, some transport companies have reported an increase in fleet maintenance costs of up to 50 per cent over the last five years due to damage from degrading roads.

STRATEGIES AND ACTIONS

The Government will address regional supply chain bottlenecks and network maintenance issues by:

1. addressing bottlenecks identified in the recently announced $28 million *Transport Solutions* package supporting delivery of 30 projects
2. delivering targeted works to improve the condition of Victoria's roads
3. working with regional councils and industry to develop a targeted approach to maintenance of the State's regional road assets, which prioritise consideration of freight supply chain impacts and benefits.

The development and implementation of consistent, targeted road maintenance programs is a critical priority to ensure appropriate levels of service for the freight industry and that the network remains 'fit for purpose'.

The Government is committed to working with industry and local councils to enhance the maintenance of the regional arterial road network and to improve the targeting of investment, including, where appropriate, industry co-investment, to where the greatest supply chains benefits can be achieved. A $170 million enhanced road maintenance package was recently announced by the Government, which will be delivered over three years and includes $90 million to go towards renewing deteriorated roads by strengthening the pavement, and a further $80 million for resurfacing works to make roads more resilient.

REGIONAL FREIGHT NETWORK PROJECTS ALREADY FUNDED & COMMENCED OR DELIVERED

Horne Rd Warrnambool $8.3 million

An $8.3 million upgrade to Horne Road, Warrnambool to create a key north-south link between the Princes Highway West and the Hopkins Highway providing improved access to the Warrnambool Eastern Industrial Precinct. The project is expected to be completed in early 2014.

Beaufort Economic Growth Project $3 million

Works to mitigate the risk of future flooding, protect important state assets such as the Western Highway and open up opportunities for industrial and commercial uses of the land in the area by upgrading the culverts under the rail line at Beaufort. The project was completed in January 2013.

Dimboola-Rainbow Rail Upgrade $5.3 million

The Dimboola to Rainbow rail line was reopened in February 2012 following a $5.3 million investment by the Victorian Government and $1 million by GrainCorp, allowing an additional 120,000 tonnes of grain to be transported by rail.

Geelong Grain Loop Enhancement Project $5.6 million

In November 2012 the Government pledged $3.78 million to the $5.6 million upgrade of capacity at the Geelong Grain Rail Loop, with the remaining funds coming from GrainCorp and the Australian Rail Track Corporation (ARTC).

The project will provide for signalling upgrades and increase axle loads at the Port of Geelong Grain Loop from 19 to 23 tonnes, providing for 30 per cent more grain per train during harvest. The axle load increase was completed in March 2013.

Echuca-Toolamba Rail Upgrade $7.1 million

The Victorian Government has partnered with Australian brand food company SunRice to upgrade and reopen the Echuca to Toolamba track for rail freight. The $7.1 million joint project will involve upgrading the broad gauge track from Echuca to Toolamba and installing new signalling at the Toolamba junction so the line can be reopened for freight in late 2013.

Wodonga LOGIC Transport Project $15.8 million

The Wodonga LOGIC Transport Project will include the construction of a 24-hour service centre, a Fatigue Management Centre (large rest area) for up to 45 trucks and a secure area for the exchange of trailers at a strategic location along the Hume Freeway between Melbourne and Sydney (Australia's busiest inter-capital freight corridor). The project is expected to be completed in 2014.

Nhill Propodollah Road Upgrade CBD to Aerodrome $54,000

Part of the Transport Investing in Regions initiative, this project involved seal widening of Propodollah Road between Rupps Road and Nhill-Yanac Road. The project will improve the link between the Nhill town centre and the Nhill Aerodrome and provide improved heavy vehicle and emergency vehicle access to key industry sites. The project was completed in March 2013.

Midland Highway (Castlemaine) Bridge Upgrade $100,000

The Victorian Government has upgraded the Midland Highway railway bridge intersection including a 1.35km detour route for high vehicles. Upgrade works include electronic warning signals installed at the railway bridge in Castlemaine to improve road freight movements and reduce the number of safety incidents.

A-Double (Road Train) Access North-West Victoria Regulatory Reform

In Victoria, road trains have been allowed to operate in a small area in and around Mildura since 2010. Following an assessment of some additional arterial roads in the north west, which showed the potential for road trains to operate safely, access for road trains was extended in 2012 to include an additional nine routes.

Direction 17 – Promote efficient access for regional produce to international and domestic markets

Access to markets

The great majority of product from regional Victoria is exported through the ports of Melbourne, Geelong and Portland; is staged through Melbourne for interstate export; or is consumed in Melbourne. Melbourne Airport also plays an important role handling high-value, time-sensitive regional produce exports.

Already trains and trucks accessing destinations in Melbourne can be caught in congestion, causing significant delays and affecting driver hours and shift productivity.

Improving orbital and cross-city connections within Melbourne will provide significant benefits for regional produce accessing markets within Melbourne and the Port of Melbourne. Enhancing the reliability and turnaround times for rail movements into the Port of Melbourne needs to be a key focus.

Ensuring efficient access by road and rail to the regional ports at Portland and Geelong is also vital, including consideration of enhancements to cross-regional links providing more efficient, direct connections to these ports.

Cross-border regulations

The Victorian freight network supports significant supply chains that operate across state borders, including from the NSW Riverina; the south-east of SA; and the Eden region of NSW.

Stakeholder engagement for the Plan highlighted situations where inconsistent regulations, regarding vehicle size/weight, rail axle loadings, etc, are hindering cross-border movements. This creates inefficiency and loss of productivity.

The Government is committed to working with the new National Heavy Vehicle Regulator (NHVR); the Commonwealth and relevant state jurisdictions; local councils; and industry to identify barriers and promote more efficient cross-border freight movements.

STRATEGIES AND ACTIONS

The Government will promote efficient access to international and domestic markets by:

1. working in conjunction with the Grain Logistics Taskforce to deliver rail access improvements to the key export ports of Melbourne, Geelong and Portland
2. progressing planning for the delivery of improved orbital and cross city road connections for Melbourne, which improve access to markets for regional commodities
3. working with the National Heavy Vehicle Regulator, other jurisdictions, local councils and industry to enhance the efficiency of key cross-border supply chains.

Direction 18 – Enhance intra and cross-regional connections

All regions have at least one key high capacity interstate route, connecting Melbourne to interstate destinations. It is well recognised that these radial routes are primary connections in the freight network. Cross-regional, or non-radial routes, on the other hand, are not as well recognised in terms of their freight function.

Consultation for the Plan has highlighted a significant trend towards consolidation of production facilities across Victoria. This trend is resulting in more raw product travelling from the farm gate to points of production and value add in regional centres, with these journeys often occurring on cross-regional roads, rather than the primary radial links to and from Melbourne. It is expected that more freight trips will rely on these cross-regional links in the future.

Key cross-regional roads that support multiple industries include the Henty Highway, the Hamilton Highway, the Glenelg Highway, the Sunraysia Highway, the Murray Valley Highway, the Midland Highway, the Monaro Highway, the Sturt Highway and Maroondah/Melba Highway.

The Midland Highway from Geelong to Ballarat, Maryborough, Castlemaine, Bendigo and Shepparton is an example of a cross-regional corridor that has the potential to connect a number of growing regional industries. The growth of these industries will depend to a significant extent on the efficiency of road transport links in the corridor.

In the Grampians and Wimmera, the need for effective non-radial connections is particularly significant. Large volumes of high value agricultural and mineral sands products are creating demand for north to south movements to access ports at Geelong and Portland. These movements often have to utilise lower standard routes in the network, reducing freight efficiency and reliability.

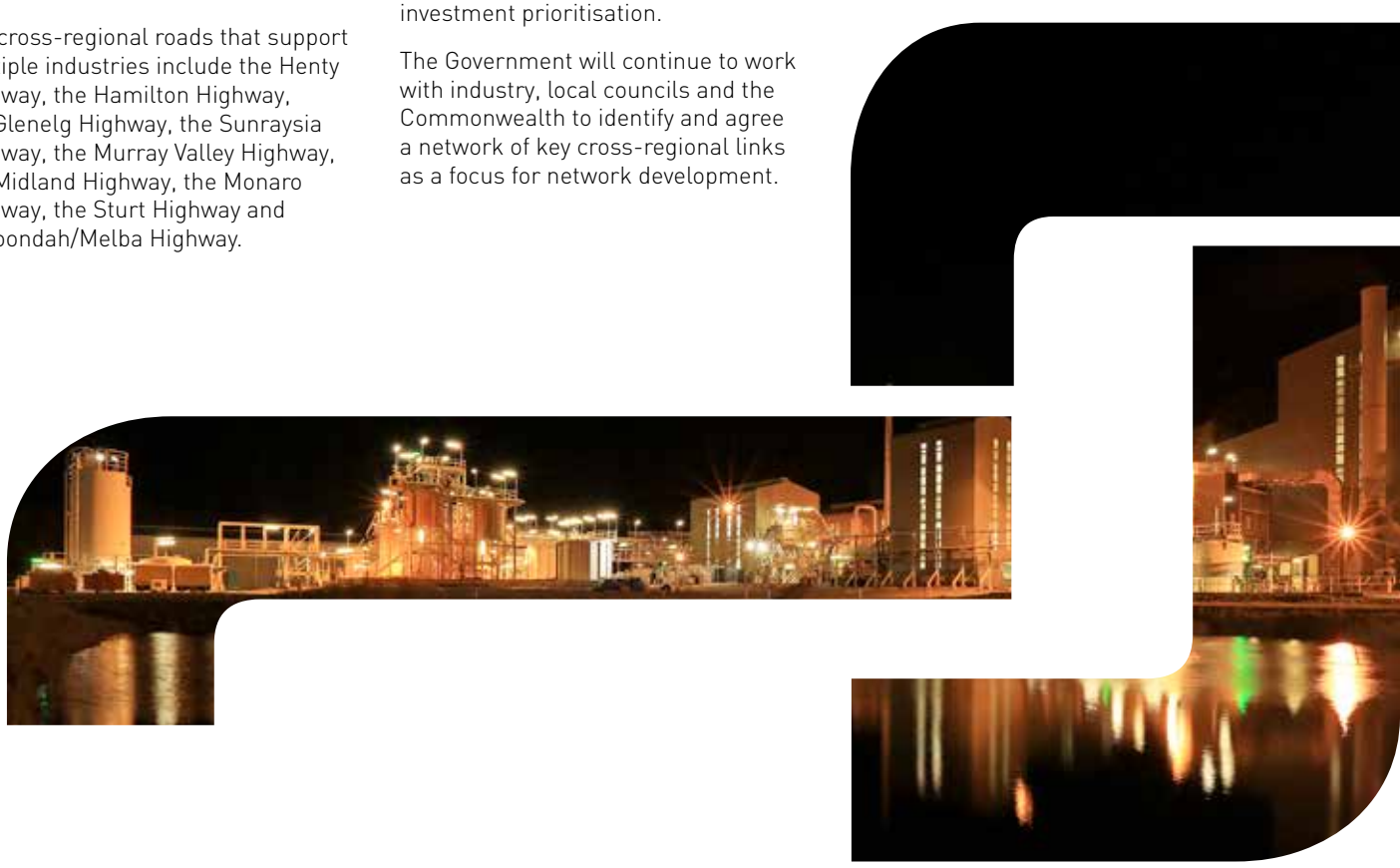
To address this issue, a more strategic and integrated approach to bulk freight movement needs to be adopted, considering both road and rail upgrade priorities. Consideration of the people-moving needs in these corridors will further influence investment prioritisation.

The Government will continue to work with industry, local councils and the Commonwealth to identify and agree a network of key cross-regional links as a focus for network development.

STRATEGIES AND ACTIONS

The Government will enhance intra and cross-regional freight links by:

1. working with industry and regional councils to identify and prioritise cross-regional connections where growing freight demand is placing pressure on road capacity, maintenance and safety and detracting from freight efficiency
2. working with road and planning authorities to protect corridors for cross-regional connections, particularly in areas subject to urban growth
3. progressively developing business cases and funding strategies to address high priority cross regional road upgrades.



Direction 19 – Promote improved rail network efficiency and increased network access for higher productivity vehicles

Whilst road is the dominant freight transport mode in Victoria, rail remains well suited to a number of critical regional commodities, including grain, logs and woodchips, mineral sands and regional intermodal rail freight. Recently the Government's response to the Grain Logistics Taskforce report was released. The response included a number of initiatives that will assist in growing rail freight volumes and keeping many heavy movements on the rail network. The initiatives include:

- funding in the 2012-13 Budget for major periodic maintenance of the regional freight network
- the Geelong Grain Loop upgrade to accommodate 23 tonne axle loads, consistent with existing load limits on the standard gauge rail network
- reviewing the business cases for targeted rail network upgrades to accommodate 21 tonne axle loads on the broad gauge network to increase productivity.

Work is progressing on these initiatives. Delivery of the Geelong Grain Loop and terminal upgrade is completed and all trains can now operate on the Geelong Grain Loop at 23 tonne axle loads. This project, combined with recently announced signalling enhancements close to the port, has the potential to result in the proportion of grain arriving at the Port of Geelong by rail increasing by up to 30 per cent.

Further standardising some parts of the regional rail freight network, where there is a sound business case to do so, remains an important strategic principle for supporting enhanced productivity in regional rail freight. The merits of standardisation of the Mildura line are currently being considered as part of creating a new connection to the interstate line between Sydney and Adelaide. Victoria will partner with the Commonwealth, ARTC and industry to commence planning for this significant new link.

Support for an increasing role for HPFVs was identified across regional Victoria as a key action for the future. Under Direction 6 of the Plan, the Government is committing to open up a strategic network for access for 'cubic' HPFVs – including longer vehicles (initially up to 36.5 metres) between key regional centres and Melbourne and along the Hume Freeway into NSW.

STRATEGIES AND ACTIONS

The Government will promote improved rail network efficiency and increased network access for HPFVs by:

1. implementing initiatives identified by the Grain Logistics Taskforce to improve the efficiency of the movement of grain on rail
2. working with the Commonwealth, ARTC and industry to develop the proposal for the standardisation of the Mildura line in the context of a new 'transcontinental' link and development of mineral sands resources in the Murray Basin
3. working with industry and local councils to develop business cases for the upgrade and/or standardisation of other priority links on the regional freight network
4. working with local councils and industry to implement the roll out of cubic HPFVs and identify future priorities for heavier 'mass' HPFV access.

Direction 20 – Manage freight amenity impacts for regional communities

Whilst Victoria's towns and regional cities will not face challenges as severe as those in metropolitan Melbourne, the impacts of freight movement on regional communities will still require careful management.

Through work with the Municipal Association of Victoria and metropolitan local councils, under Direction 15 of the Plan, the Government is seeking to develop and implement a range of measures to manage the impact of urban freight delivery. These measures will also be assessed for their applicability to regional towns and cities.

In addition to ongoing freight operational improvements, progressive delivery of new road infrastructure to bypass the worst affected towns and cities remains an important priority.

In partnership with local councils and the Commonwealth Government, the Government will continue to protect and progressively develop bypass routes in key freight corridors on the National Land Transport Network, including Ararat, Shepparton, Horsham and Beaufort.

In addition to bypasses, progressive funding and delivery of other road projects identified in Victoria's submissions to Infrastructure Australia will increase road capacity and improve safety and amenity outcomes for regional communities.

Regional Growth Plans (RGP) will also be completed in 2013, which, in conjunction with this Plan, will support the Government, local councils and industry in balancing the need for efficient freight with the liveability of regional communities.

STRATEGIES AND ACTIONS

The Government will manage freight amenity impacts for regional communities by:

1. working with regional councils and industry to consider the applicability to regional Victoria of urban freight amenity initiatives being developed and implemented within Melbourne
2. in conjunction with the Commonwealth, protecting and progressively developing town bypass routes in key freight corridors in regional Victoria, including relevant projects identified in Victoria's submissions to Infrastructure Australia
3. through Regional Growth Plans, progressing integrated transport and land use strategies and initiatives, which balance freight efficiency with liveability.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7 SUMMARY OF STRATEGIES AND ACTIONS

Priorities for Government decision making

In developing the Directions and Actions detailed in the Plan, the Government has identified key priorities, interdependencies and staging options that need to be taken into account. The identification of these priorities has been informed by economic modelling and analysis considering the costs and benefits for the freight industry of the various interventions and the flow on impacts for Victoria's overall economic performance in GSP terms.

There are multiple pathways available to achieve the sustainable development and growth of the Victorian freight and logistics sector and to maximise its contribution to the State's economy. However, a clear set of priorities for action and related decision points can be identified.

The priorities for Government decision making are:

- **PRIORITY 1** Ensure delivery of adequate port capacity for international container trades.
- **PRIORITY 2** Ensure delivery of adequate interstate rail terminal capacity.
- **PRIORITY 3** Ensure cost-effective non-asset efficiency measures, designed to improve freight efficiency and productivity on the existing network, are implemented prior to progressing capital intensive network capacity upgrades.
- **PRIORITY 4** Progress timely capital investment in new road and rail network links, particularly orbital and cross city links that complete the metropolitan network, where significant capacity constraints are identified.

The development of Priority 3 (non-asset efficiency) measures should proceed in the near term, given their potential benefits relative to the cost of delivery. The timing and staging of delivery of these non-asset initiatives is not dependent on the other three priorities and, subject to positive business cases, they would provide benefits at any time they are delivered.

In considering the relative timing of the potential investments in new network links (Priority 4), modelling work completed to inform development of this Plan clearly indicates that such investments have the potential to provide aggregate improvements in freight travel times and reliability that significantly exceed the benefits identified for the non-asset interventions.

It is acknowledged, however, that investment in such significant projects would only proceed on the basis of business cases that consider the benefits and costs for all transport system users, not only freight.

Summary of Strategies and Actions (2013-2017)

The Strategies and Actions proposed for implementation over the next one to five years involve a combination of project delivery, project planning, network efficiency and regulatory reform initiatives designed to ensure that Victoria is able to move towards achievement of the long-term goal and objectives of the Plan in a flexible and affordable manner.

The Strategies and Actions have been developed on the basis of extensive technical studies and evidence gathering, including consultation input from a wide range of industry stakeholders through the Ministerial Freight Advisory Council (MFAC) and a series of ten 'roundtables' conducted across metropolitan and regional Victoria with many key stakeholders.

All projects/initiatives requiring budget funding will be subject to future Government consideration in relation to budget capacity, business cases and the rigorous use of cost-benefit analysis.

A summary of the most significant short-term Strategies and Actions in the Plan follows:

Freight gateway capacity (Key directions 1-4)

1. Implement the 'Port Capacity Project' at the Port of Melbourne to provide sufficient capacity until the mid-2020s.
2. Accelerate planning and development for the Port of Hastings to supplement the capacity of the Port of Melbourne from the mid-2020s.
3. Work with the private ports of Portland and Geelong to support their role in servicing existing and emerging regional commodities exports and key import trades.
4. Work with port managers and industry to respond to the trend towards greater importation of refined petroleum product.
5. Work with industry and port managers to facilitate the provision of bulk port capacity for the export of brown coal products from Gippsland in the event that commercial export opportunities are developed.
6. Work with the relevant stakeholders to facilitate re-investment in Dynon-Tottenham precinct to meet interstate rail freight demand until the mid-2020s.
7. Complete a business case to enable land and a rail corridor to be secured for the Western Interstate Freight Terminal (WIFT) and confirm a time frame for the staged relocation of interstate freight activities from Dynon.
8. Assess the potential role of the Beveridge precinct as an interstate freight gateway and identify land and transport corridors.
9. Contribute to the 2013 Melbourne Airport Master Plan, including freight efficiency considerations, and delivery of a plan to upgrade the transport network serving Melbourne Airport.
10. Clarify the broader land use and transport network context within which Avalon Airport will develop and assist the private operator to develop its new Airport Master Plan.
11. Ensure potential amenity conflicts, which might inhibit the curfew-free operations of Melbourne and Avalon Airports are addressed.
12. Assist airport operators and the air freight industry to develop new markets for air freight, including emerging Asian markets for fresh, high-value produce.

Better use of the freight network (Key directions 5-8)

13. Work with the new National Heavy Vehicle Regulator (NHVR) to improve consistency and transparency of safety and access regulation and contribute to the development of the Heavy Vehicle Charging and Investment (HVCI) Reform process under COAG.
14. Implement the 'Cubic Freight Network' under the *Moving More with Less* initiative.
15. Identify and progressively declare, subject to necessary road upgrades, a 'Mass Freight Network' for access by HPFVs operating at higher mass limits.
16. Work with industry and the Commonwealth to deliver infrastructure upgrades to priority routes on the High Productivity Freight Network.
17. Work with other jurisdictions to achieve a coordinated approach to the introduction of HPFVs on key interstate routes, commencing with the proposed trial on the Hume Freeway.
18. Work with industry and local councils to identify and prioritise 'first and last kilometre' routes for HPFVs.
19. Develop and introduce complementary policies to support the safe and efficient operation of HPFVs in Victoria.
20. Continue the roll out of Intelligent Transport Systems on the freeway network, including expanded use of Managed Motorways on the M1 Freeway, the M80 Ring Road and other key routes.
21. Support development of third party transport network information tools and systems through the DataVic Access Policy.
22. Work cooperatively with other jurisdictions and the NHVR to encourage a national approach to the take up of new technologies.
23. Work with Intelligent Transport Systems Australia to develop and run freight technology demonstration projects.
24. Work with industry to develop strategies to improve the attractiveness and commercial viability of overnight operations.
25. Work with local councils to encourage the adoption of more flexible and consistent regulation of delivery vehicle access across local council areas.

An efficient freight network (Key directions 9-12)

26. Begin delivery of the East West Link project to service increasing freight movements.
27. Progress the current M80 Ring Road project and other future targeted upgrades.
28. Plan for upgrading the Western Port Highway corridor to full freeway standard to meet growth in transport demand generated by the development of the Port of Hastings.
29. Consider options for a North East Link, connecting the M80 Ring Road to the Eastern Freeway.
30. Maintain the OMR/E6 corridor reservation and assess the staged construction of key segments as business cases justify between now and 2050.
31. Work with industry and local councils to develop and invest in the Principal Freight Network and important first and last kilometre connections.
32. Work with the Commonwealth to deliver essential upgrades to major arterial roads across the State that play a key role in servicing freight needs.

33. Investigate and plan for a transport corridor for the Port of Hastings, which includes provision for adequate rail connections.

34. Progress investigations and a business case for a South East Rail Link (SERL) to provide a dedicated dual-gauge rail freight link between Dandenong and Dynon.

35. Encourage the initiation of port rail shuttle operations by the private sector under the Metropolitan Intermodal System (MIS) project.

36. Prepare a rail freight network development strategy.

37. Continue support for the Mode Shift Incentive Scheme (MSIS), subject to regular evaluation.

38. Support annual maintenance and renewal works on Victoria's rail freight network.

39. Ensure network manager responsibilities for the freight network are embedded and monitored in relevant franchise and lease agreements.

40. Work with industry and network managers to:

    - simplify arrangements for network access and regulatory compliance
    - improve the efficiency of intermodal operations at ports
    - establish a 'rail freight facilitation unit' and improved arrangements for consultation with rail freight operators and customers.

41. Work with industry and transport network managers to ensure pipeline networks are considered for the transport of hazardous or flammable products where possible.

Land use planning and protections (Key directions 13-14)

42. Complete implementation of the Government's response to the Ports and Environs Advisory Committee (PEAC) recommendations.

43. Investigate the applicability of a specific zone and buffer protections for other State significant freight facilities/precincts.

44. Work with the Commonwealth and other jurisdictions on the preparation and implementation of the National Airports Safeguarding Framework; undertaking a review of the Melbourne Airport Environs Strategy Plan by the end of 2013; and introducing an Airport Environs Overlay for Avalon Airport by 2016.

45. Identify pinch points in key rail freight corridors that may constrain future capacity and develop a program to progressively remedy these.

46. Review the adequacy of existing measures to protect the 24/7 operation of key road and rail freight links.

47. In conjunction with the Metropolitan Planning Strategy (MPS), identify strategic freight precincts and links in Growth Corridors and develop robust strategies for their protection.

48. Maintain protection of the Outer Metropolitan Ring (OMR)/E6 transport corridor.

49. Progress investigations to secure a North East Link corridor reservation.

50. Review and revise the Victoria Planning Provisions to promote more effective integration of planning for freight with broader transport and land use planning.

51. Work with the Commonwealth Government to progress the development of a National Corridor Protection Strategy.

Planning for efficient and sustainable urban freight movements (Key direction 15)

52. Work with local councils and the freight industry to improve the consistency of freight delivery access arrangements across the metropolitan area.

53. Seek partners from local government, industry and academia to trial and evaluate use of innovations, such as 'freight accreditation schemes'; 'delivery service plans'; 'delivery consolidation centres' and 'freight operators and receivers forums'.

Planning for efficient and sustainable regional freight movements (Key directions 16-20)

54. Deliver the *Transport Solutions* program.

55. Deliver other targeted works to improve the condition of Victoria's roads.

56. Work with regional councils and industry to develop a targeted approach to maintenance of the State's regional road assets as a part of delivering the recently announced enhanced road maintenance package.

57. Work with the Grain Logistics Taskforce to improve the efficiency of the movement of grain on rail and deliver rail access improvements to the key export ports of Melbourne, Geelong and Portland.

58. Plan and progressively deliver improved orbital and cross-city road connections for Melbourne, which improve access to markets for regional commodities.

59. Work with the National Heavy Vehicle Regulator, other jurisdictions, local councils and industry to enhance the efficiency of key cross-border supply chains.

60. Work with industry and regional councils to identify and prioritise cross-regional freight connections and develop strategies to fund priority upgrades.

61. Work with the Commonwealth, ARTC and industry to develop the proposal for the standardisation of the Mildura line in the context of a new 'transcontinental' link and development of mineral sands resources in the Murray Basin.

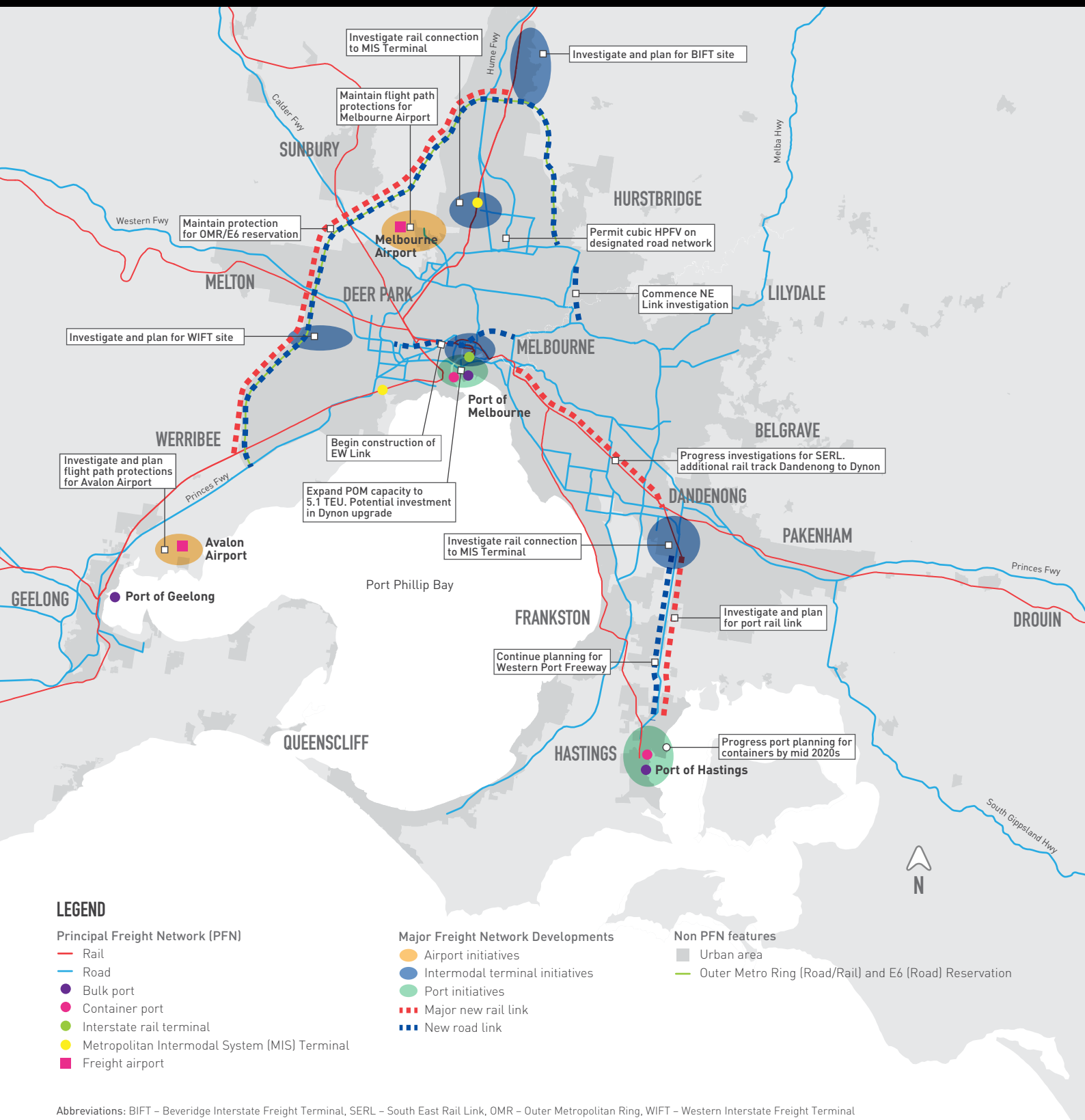
62. Work with industry and local councils to develop business cases for the upgrade and/or standardisation of other priority links on the regional freight network.

63. Work with regional councils and industry to consider the applicability to regional Victoria of urban freight amenity initiatives being developed and implemented within Melbourne.

64. In conjunction with the Commonwealth, progress planning and development of town bypass routes in key freight corridors in regional Victoria.

65. Through Regional Growth Plans, progress integrated transport and land use strategies and initiatives, which balance freight efficiency with liveability.

SHORT-TERM (2013–2017) METROPOLITAN FREIGHT NETWORK ACTIONS



Abbreviations: BIFT – Beveridge Interstate Freight Terminal, SERL – South East Rail Link, OMR – Outer Metropolitan Ring, WIFT – Western Interstate Freight Terminal

SHORT-TERM (2013–2017) REGIONAL FREIGHT NETWORK ACTIONS

LEGEND

Principal Freight Network (PFN)

- Rail
- Rail reopening
- Road

Non PFN features

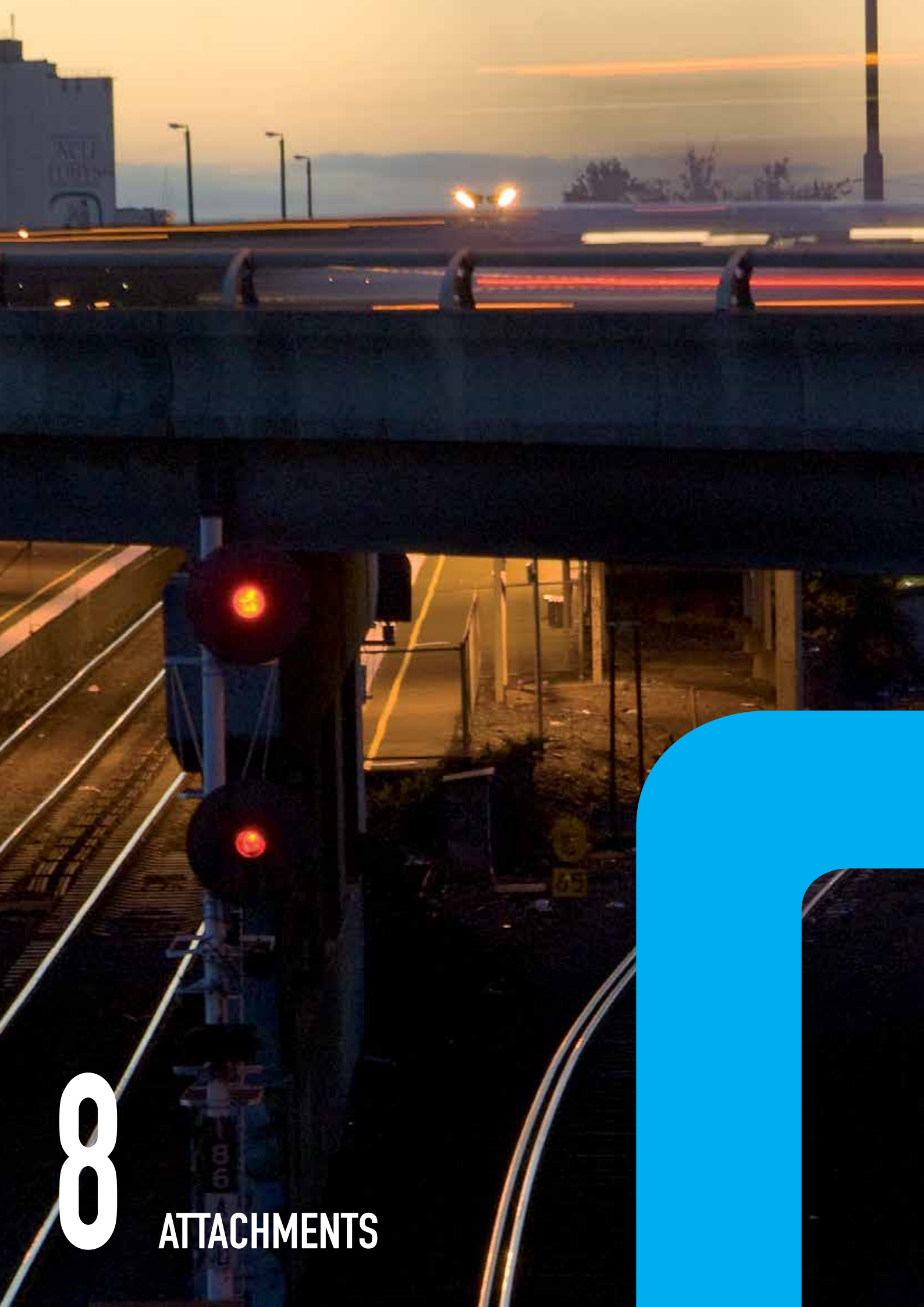
- Active rail
- Major road

INFRASTRUCTURE AUSTRALIA PROJECTS 2012 Submission

1. Calder Fwy – Calder Park Drive Intersection Grade Separation
2. Hume Freeway Upgrade – Kalkallo to Beveridge
3. Princes Hwy East Upgrade – Nar Nar Goon to Longwarry Nth
4. Western Fwy Upgrade and Safety Improvements – Rockbank to Melton
5. Tullamarine Fwy Widening – Between Calder Fwy and Airport
6. Growth Areas – Priority Transport Package
7. Western Hwy Duplication – Ballarat to Stawell
8. Princes Hwy East Duplication – Traralgon to Sale
9. Goulburn Valley Hwy – Shepparton Bypass
10. Sturt Hwy – Mildura Truck Bypass
11. Princes Hwy West – Winchelsea to Colac
12. Green Triangle Freight Transport Program
13. Calder Hwy – Calder Alt Route grade separation - Ravenswood
14. Goulburn Valley Hwy – Strathmerton Deviation
15. New Murray River Crossings – Echuca, Swan Hill, Yarrawonga
16. Murray Basin Transcontinental Rail Link planning study
17. Horsham Bypass planning

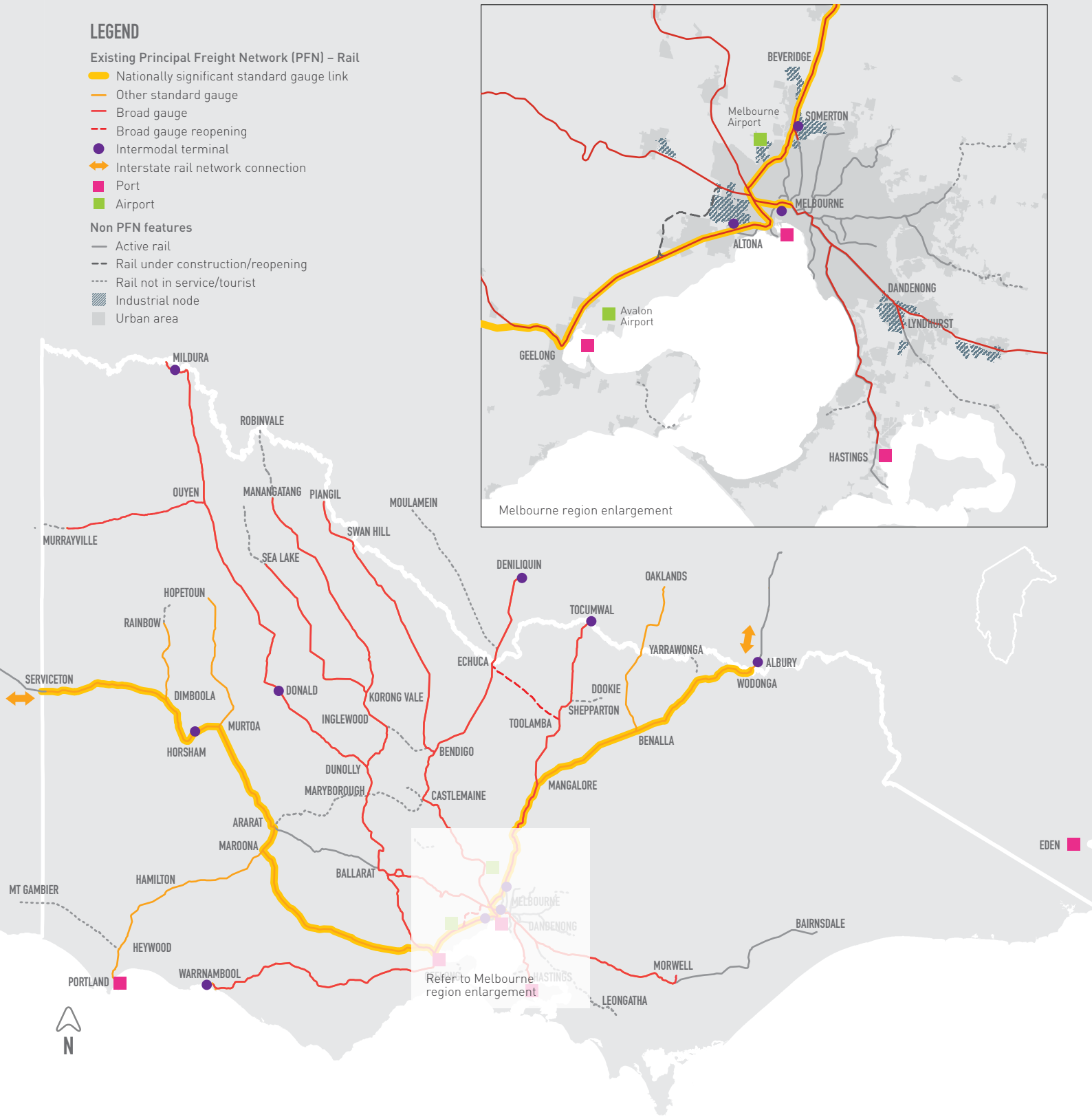
TRANSPORT SOLUTIONS PROJECTS

1. Bridge on Casterton-Naracoorte Rd over Mosquito Ck – Bridge Strengthening
2. Fullertons Rd, Poolaijelo – Reconstruction and Road Widening
3. Princes Hwy West, Heywood to the SA Boarder – Truck Rest Area/Parking Improvements
4. Sturt Hwy, Cullulleraine – Truck Rest Area/Parking
5. Condah-Hotspur Upper Rd, Condah
6. Princes Hwy West, Dennington – New Intersection Signals at Lindsay Street
7. Princes Hwy West, Dennington – New Intersection Signals at Rooneys Road
8. Calder Hwy/Donald – Swan Hill Rd Dumosa – Truck Rest Area/ Parking Improvements
9. Sea Lake-Swan Hill Rd & Campbell St, Swan Hill – New Intersection Signals
10. Old Beech Forest Rd, Gellibrand to Beech Forest – Pavement Rehabilitation
11. Dereel-Mount Mercer Rd, Dereel – Road Widening
12. Bridge on Boort-Pyramid Rd Over Flume Ck – Bridge Strengthening
13. Bridge on Bridgewater-Maldon Rd Over Bradford Ck – Bridge Strengthening
14. Murray Valley Hwy/Airport Rd – Intersection Reconfiguration, Kerang
15. Spargo Creek Road, Bolwarrah to Barkstead, Bolwarrah – Road Widening
16. Bridge on Bendigo-Pyramid Rd Over Sydney Flat Ck – Bridge Strengthening
17. Bayside Rd, North Geelong – Delineation/Signage Improvements
18. Signal automation between North Geelong and Dunolly
19. Princes Fwy West (Geelong Bound Off Ramp/Beach Road) Avalon – Intersection Improvements
20. Major Culvert on Hume Fwy, Clonbinane - Bridge Strengthening
21. Echuca-Kyabram Rd/Kyabram-Nathalia Rd
22. Island Rd, Cardinia
23. Bridge on Benalla-Yarrawonga Rd - Bridge Strengthening
24. Davies Dobsons Rd – Various Improvements
25. Hazeldean Rd, Cloverlea – Intersection Improvements
26. Nerrena Rd, Leongatha to Dumbalk – Intersection Improvement & Realignment
27. Hume Fwy – Various – Install Truck Rest Area Vacancy Information System (TRAVIS)
28. Kancoona South Rd – Various Improvements
29. Murray Valley Hwy, Huon – Overtaking Lanes
30. Princes Highway East Club Terrace – Truck Rest Area/Parking Improvements

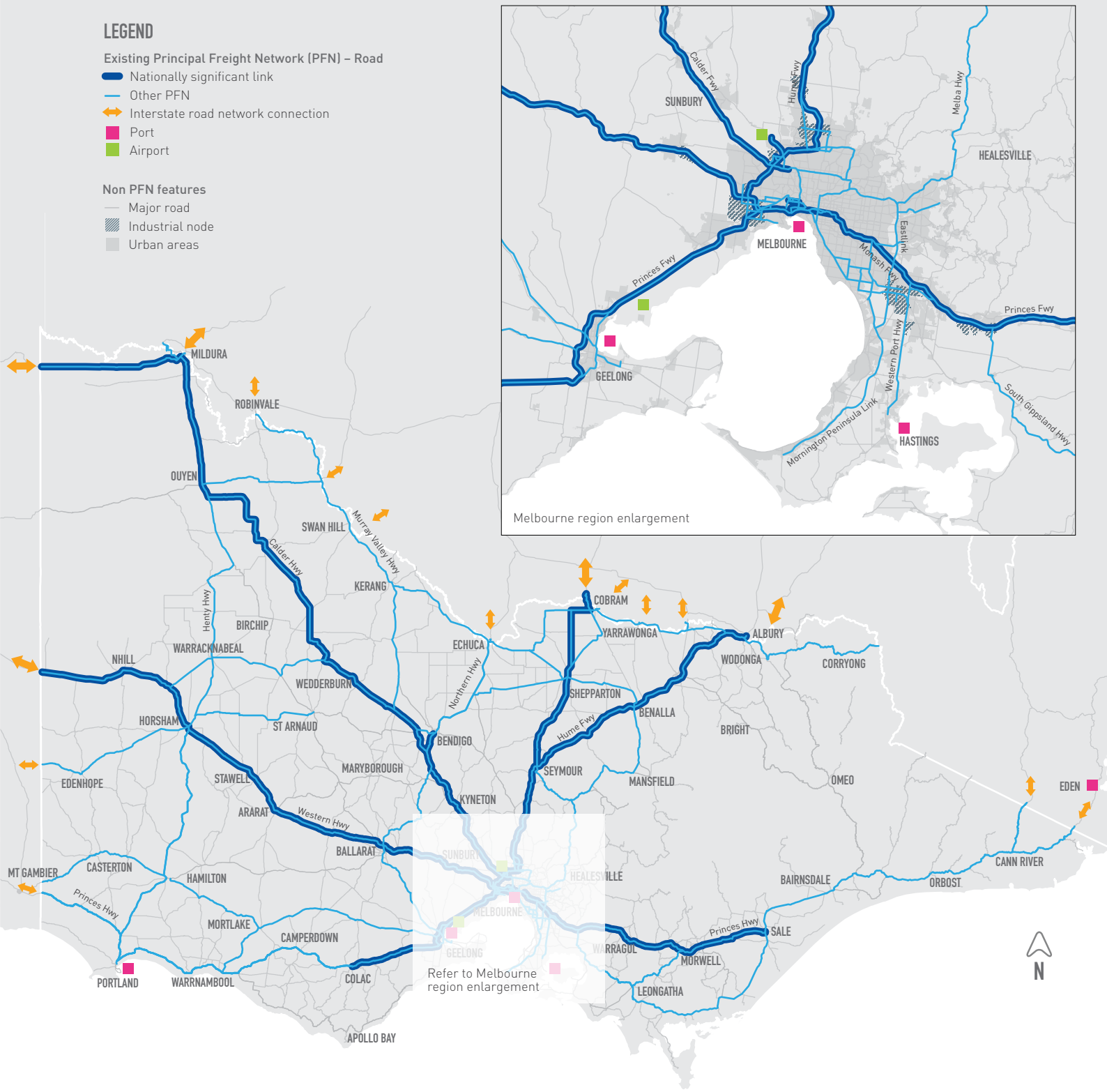


8 ATTACHMENTS

VICTORIA'S EXISTING PRINCIPAL FREIGHT NETWORK – RAIL



VICTORIA'S EXISTING PRINCIPAL FREIGHT NETWORK – ROAD



Proposals under consideration that support the freight network

Melbourne Metro – construction of a nine-kilometre rail tunnel between South Kensington and South Yarra, including five new stations at Arden, Parkville, CBD North, CBD South and Domain.

Port of Hastings – planning for and construction of the Port of Hastings as an international container port, including planning for transport links such as the Western Port Highway.

Dandenong Rail Capacity Program – staged construction of a series of projects along the Dandenong Rail Corridor, including priority grade separations, signalling upgrades and platform lengthening to allow the running of high-capacity trains.

Western Interstate Freight Terminal – construction of an interstate freight terminal and freight precinct in Melbourne's west, including a standard gauge rail link to the interstate rail line.

M80 Upgrade – completion of the staged upgrade to the M80 Ring Road between Laverton North and Greensborough.

Removing Level Crossings – a progressive program of level crossing removal in strategic corridor across metropolitan Melbourne.

Growth Areas – Priority Transport Package – package of transport initiatives in Melbourne's growth areas such as the upgrade of arterial roads and public transport corridors.

Managed Motorways – progressive roll out of intelligent transport systems technology across Melbourne's freeway network.

Western Highway Duplication – Ballarat to Stawell – completion of the Western Highway duplication from Ballarat to Stawell.

Princes Highway East Duplication – Traralgon to Sale – continuation of the corridor upgrade, including the duplication of highway sections between Traralgon and Sale.

Shepparton Bypass – construction of a bypass of Shepparton on the Goulburn Valley Highway.

High Productivity Freight Vehicles Upgrade Package – staged upgrades of key freight routes to cater for 77.5 tonne quad axle B-double configuration HPFVs.

High-Capacity Signalling Project – development and roll out of new high-capacity train signalling technology across existing rail lines (such as Dandenong Rail Corridor) and on future rail links (such as Melbourne Metro).

Outer Metropolitan Ring Transport Corridor – planning and corridor protection – transport corridor reservation and protection to provide long-term orbital capacity for the metropolitan transport network.

Calder Freeway – Calder Park Drive – this project will upgrade the existing at-grade intersection at Calder Freeway–Calder Park Drive with a grade separated interchange.

Hume Freeway – Kalkallo to Beveridge – removal of unrestricted at-grade access on the Hume Freeway between Kalkallo and Beveridge.

Princes Highway East – Nar Nar Goon to Longwarry – removal of unrestricted at-grade access on the Princes Highway East between Nar Nar Goon and Longwarry North.

Western Highway – Rockbank to Melton – removal of unrestricted at-grade access on the Western Highway between Rockbank and Melton.

Sturt Highway – Mildura Truck Bypass – the construction of a truck bypass of Mildura on the Sturt Highway.

Green Triangle Freight Transport Program – a program of road upgrade projects in south-west Victoria and south-east South Australia, particularly timber roads.

Calder Highway Alternative Interchange at Ravenswood – grade separation of the existing Calder Highway Intersection at Ravenswood, near Bendigo.

Goulburn Valley Highway – Strathmerton Deviation – realignment of a 20km section of the Goulburn Valley Highway at Strathmerton. The project would be phased after the construction of a Shepparton Bypass.

Metropolitan Intermodal System – the development of a series of metropolitan intermodal terminals networked by high-capacity road and rail links, including connections to metropolitan container ports.

Transport Solutions – projects identified through the Victorian Government's *Transport Solutions* framework that address supply chain bottlenecks in regional Victoria, including those that support the timber industry. A more detailed list of projects proposed to be delivered through the *Transport Solutions* Program is shown on the next page.

Horsham Bypass – long-term priority for the construction of a Western Highway bypass of Horsham based on planning work carried out under the Nation Building Program.

Tullamarine Freeway Widening – widening of the Tullamarine Freeway between the M80 Ring Road and Melbourne Airport.

North East Link – longer-term consideration of options for a link between the Metropolitan Ring Road at Greensborough and the Eastern Freeway.

Murray River Crossings – Echuca, Swan Hill and Yarrawonga – sequenced construction of new bridges at Echuca, Swan Hill and Yarrawonga, with the initial priority at Echuca.

Projects to be delivered through the *Transport Solutions* Program (see map on page 89)

Bridge Strengthening and Culverts

Bridge strengthening for the following bridges:

- Bridge on Casterton – Naracoorte Rd over Mosquito Creek (1)
- Bridge on Boort – Pyramid Rd over Flume Creek (12)
- Bridge on Bridgewater – Maldon Rd over Bradford Creek (13)
- Bridge on Bendigo – Pyramid Rd over Sydney Flat Creek (16)
- Major Culvert on Hume Fwy, Clonbinane (20)
- Bridge on Benalla – Yarrawonga Rd (23).

Upgrading Timber Road Projects

Scope of works include road widening, intersection improvements, drainage improvements, structure upgrades, sealing, resheeting and signage improvements.

Roads included are:

- Fullertons Rd, Poolaijelo – reconstruction and road widening (2)
- Old Beech Forest Rd, Gellibrand to Beech Forest – pavement rehabilitation (10)
- Dereel-Mount Mercer Rd, Dereel – road widening (11)
- Spargo Creek Rd, Bolwarrah to Barkstead, Bolwarrah (15)
- Davies Dobsons Rd – various improvements (24)
- Hazeldean Rd, Cloverlea – intersection improvements (25)
- Kancoona South Rd – various improvements (28).

Princes Hwy West, Heywood to the SA Border – Truck Rest Area/Parking Improvements (3)

Construction of a new rest area and upgrade an existing rest area.

Sturt Hwy, Cullulleraine – Truck Rest Area/Parking (4)

Construction of two truck parking spots catering for B-doubles and HPFVs opposite Lake Cullulleraine general store.

Condah – Hotspur Upper Rd, Condah (5)

This project involves both the widening and strengthening of the Condah-Hotspur Upper Road including the Crawford River Bridge to improve safety for timber trucks, school buses and passenger vehicles.

Princes Hwy West, Dennington – New Intersection Signals at Lindsay Street (6)

Installation of new signals and minor changes to the intersection layout.

Princes Hwy West, Dennington – New Intersection Signals at Rooneys Road (7)

Installation of new signals and minor changes to the intersection layout.

Calder Hwy/Donald – Swan Hill Rd Dumosa – Truck Rest Area Improvements (8)

Installation of toilet facilities at the existing rest area.

Sea Lake-Swan Hill Rd & Campbell St, Swan Hill (9)

Installation of new signals and minor changes to the intersection layout.

Murray Valley Hwy/Airport Rd, Kerang (14)

Reconfigure the intersection by realigning Airport Road and constructing a new intersection on the Murray Valley Highway for Airport Road and Boundary Street bound right turning traffic and remove the section of Boundary Street between Airport Road and Murray Valley Highway.

Bayside Rd, North Geelong (17)

Improve traffic flow for freight vehicles accessing the Port of Geelong. In particular, the widening of the curve on the Princes Highway West southbound off ramp will greatly improve access to the Port of Geelong for large freight vehicles as they will be able to enter Bayside Road without mounting the kerb and channel and adjacent footpath.

Signal Automation at North Geelong and Dunolly (18)

The project will replace the North Geelong C Signal Box (C-Box), which controls access to the Geelong Grain Loop and Corio Independent Goods line (CIGL), with an automated system. The project will also upgrade signalling at Dunolly to remove the need for a signal operator for trains to use the Sea Lake or Manangatang grain lines.

Princes Fwy West (Geelong Bound Off Ramp/Beach Road) Avalon (19)

Modify Geelong bound off ramp right turn onto Beach Road. Remove existing damaged kerb and channel and replace with mountable kerb and channel, enabling trucks to access Beach Road without having to ride the kerb.

Echuca-Kyabram Rd/Kyabram-Nathalia Rd (21)

This project involves modifying the intersection to facilitate the turning movement of large trucks, which are required to make the manoeuvre as a result of nighttime restrictions through the residential area.

Island Rd, Cardinia (22)

This project involves construction and sealing of 2.5 kilometres of Island Road connecting Koo Wee Rup Road to Lea Road.

Nerrena Rd, Leongatha to Dumbalk (26)

Minimal works at the Nerrena Road and South Gippsland Highway to improve the alignment for B-Double trucks to turn right from Nerrena Road on the South Gippsland Highway.

Hume Fwy – Various – Install Truck Rest Area Vacancy Information System (TRAVIS) (27)

The development and installation of TRAVIS on the southbound carriageway of the Hume Freeway between Wodonga and Benalla to improve the usage of rest areas by drivers of heavy vehicles and enable drivers to plan their rest stops more safely and efficiently.

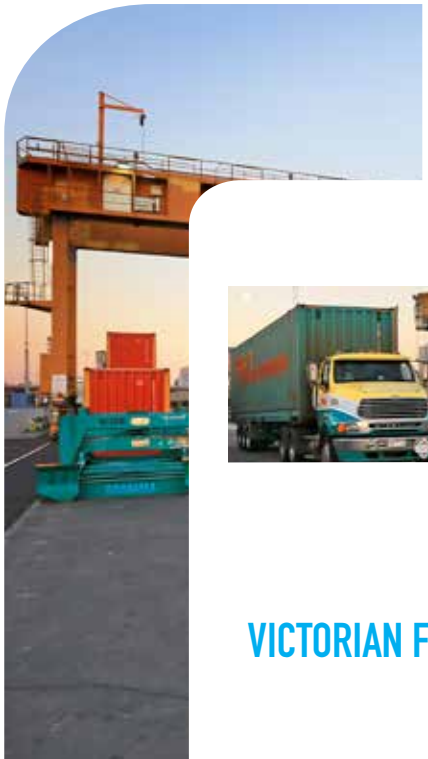
Murray Valley Hwy, Huon – Overtaking Lanes (29)

Installing a double overtaking lane at Sandy Creek, Huon.

Princes Hwy East, Club Terrance – Truck Rest Area/Parking Improvements (30)

The project scope includes the following:

- upgrade the pavement and seal the existing facility with designated parking bays for eight B-Double (26m) trucks (currently only informal parking exists)
- improve entrance and exits points to allow for B-Doubles
- install street lighting.



GLOSSARY OF ACRONYMS

ABS	Australian Bureau of Statistics
ARTC	Australian Rail Track Corporation
BIFT	Beveridge Interstate Freight Terminal
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BSS	Binnenstadservice Scheme
CIGL	Corio Independent Goods line
C-ITS	Cooperative Intelligent Transport Systems
CLUE	Census of Land Use and Employment
COAG	Council of Australian Governments
DAE	Deloitte Access Economics
DTPLI	Department of Transport, Planning and Local Infrastructure
FMM	Freight Movement Model
FORS	Fleet Operator Recognition Scheme
GPS	Global Positioning System
GSP	Gross State Product
HPFV	High Productivity Freight Vehicle
HVCI	Heavy Vehicle Charging and Investment
IAP	Intelligent Access Program
ITS	Intelligent Transport Systems
MFAC	Ministerial Freight Advisory Council
MIS	Metropolitan Intermodal System
MPS	Metropolitan Planning Strategy
MSIS	Mode Shift Incentive Scheme
MTM	Metro Trains Melbourne
NDC	national distribution centre
NHVR	National Heavy Vehicle Regulator
NTARC	National Truck Accident Research Centre
ntk	net tonne kilometres
OMR	Outer Metropolitan Ring Road
PBS	Performance Based Standards Scheme
PEAC	Ports and Environs Advisory Committee
PFN	Principal Freight Network
PoHDA	Port of Hastings Development Authority
PoM	Port of Melbourne
RGP	Regional Growth Plans
RIS	Regulatory Impact Statement
SERL	South East Rail Link
TEU	Twenty foot equivalent unit
TRAVIS	Truck Rest Area Vacancy Information System
VFLP	Victorian Freight and Logistics Plan
WIFT	Western Interstate Freight Terminal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