

# Efficient urban freight

## Goal

Melbourne will have innovative and efficient freight and logistics infrastructure, optimising the flow of goods locally and globally. Melbourne's freight system will strengthen the municipality's economy. It will be environmentally sustainable, and freight traffic will be designed and managed to enhance the municipality's liveability.

## Overview

The movement of goods to and from the City of Melbourne is critically important for the city and the state's economy. The Port of Melbourne plays a central role in facilitating Victoria's import and export markets. Inner urban freight and the 'last kilometre' delivery of goods into the central city presents unique issues and opportunities for the city, which require clear policy direction.

This chapter has been arranged into two sections to enable a clear discussion relating to these two aspects of freight:

- Port freight and logistics
- Central city freight and delivery.

The Port of Melbourne is central to Victoria's import and export markets. It is Australia's busiest port and is projected to continue with significant expansion of throughput. This growth requires a major infrastructure upgrade of rail and road freight distribution systems.

In the short term, this freight growth will be taken up on road for which direct, efficient access to the metropolitan freeway/tollway network will be vital. Longer term rail capacity will be developed, including the Melbourne Freight Terminal south of Dynon Road. Urban renewal around the port and freight terminal precinct will need careful planning to ensure it does not inhibit their efficient operations.

The central city's intensive land uses require high levels of goods and services deliveries and waste collection. This freight is provided by many different operators, resulting in overall logistics inefficiencies. This strategy identifies the need to develop

more efficient solutions to reduce the overall cost of this freight task and reduce its impact on the roads and general urban amenity

## Priorities

### Enable growth, maintain and enhance efficiency

The efficient movement of freight underpins Melbourne's economic performance. As the city grows and the freight task increases, the need to facilitate and enable freight movement will be amplified.

### An intermodal, coordinated freight system

Enabling an intermodal freight system will be important for both the 'heavy' freight task and the 'last kilometre' task. Considerable efficiencies can be achieved by utilising high capacity vehicles for the distribution of goods between industrial precincts. The last kilometre freight task will demand transport which is compatible with the inner urban area.

### Compatibility with urban renewal

Planning for inner urban development, much of which is seeing a transition from industrial to mixed land use, often along or near road and rail freight routes, requires close integration with freight transport planning.



### Metropolitan principal freight network

- Freight activity areas (major, medium)
- Principal Freight Network - road
- Principal Freight Network - rail
- Port
- Airport
- Major road
- Major road project
- Metropolitan rail network
- Rail (non metropolitan)



Fig 14.0 Source: Department of Transport

# 14 Port freight and logistics

## Goal

The major freight task associated with the Port of Melbourne is enabled by efficient road and rail infrastructure.

## Context

The freight task in Melbourne is growing significantly. The carriage of goods through the Port of Melbourne is expected to quadruple to eight million TEU (Twenty-foot Equivalent Units) per annum by 2035. This freight is distributed throughout the state by road and rail haulage, across a network that is extremely important to Melbourne's economic performance. Melbourne's road network has received considerable investment over the past 50 years, which has contributed to the success and growth in port activity.

Around 200,000 containers of goods are currently shipped by rail to and from Melbourne each year. Whilst this equates to only eight per cent of total freight movement in Victoria, this saves around 130,000 truck trips. Road freight is significantly affected by congestion, as the cost of operating commercial vehicles ranges from \$32 per hour for light vehicles up to about \$75 per hour for B-doubles, compared with about \$20 per hour for a standard passenger vehicle.

As Melbourne grows a shared port-city vision, a whole of supply chain and transport network approach is required. This should ideally occur whilst maintaining the long term ability of the port to operate to its full capacity.

## Issues

### Freight conflicts with amenity

Freight and logistics associated with the Port of Melbourne involve large quantities of goods and bulk items. The vehicles carrying these goods need to be high capacity, which often means they are not compatible with inner urban land uses such as the central city

and residential neighbourhoods, specifically in Melbourne's inner west. Efficiency in the movement of goods must be optimised so as the externalities of van and truck transport do not damage inner urban amenity. Light and noise pollution from port operations can also adversely impact amenity of neighbouring land uses.

The two-way consideration of amenity impacts is consistent with the National Ports Strategy. This includes a recommendation for policies, planning schemes and controls to include 'buffer' strategies for the relevant port and freight corridors and other related places. This will ensure the continued ability to conduct freight and related activities whilst minimising impacts on communities of these activities.

### Freeway capacity for east west freight

The East West Link Needs Assessment and the previous State Government's Freight Futures strategy both highlight the constraints on the road network for carrying freight across metropolitan Melbourne. Cross city, or east-west freight transport, is slowed by traffic congestion caused primarily by low occupancy passenger cars. This problem is most pronounced on the West Gate corridor at morning and evening peak times. Over reliance on the West Gate has created significant risks for industries which depend on efficient cross city freight transport, and these risks are likely to be amplified in coming years with growth in port activity.

### Metropolitan distribution of freight

There are inefficiencies in the current distribution patterns of freight to and from the port. The State Government’s 2010 discussion paper *Shaping Melbourne’s Freight Future* highlights the current practice of ‘road direct’ distribution of cargo from the Port to Melbourne’s key industrial areas, and the externalities created by an inefficient road freight system.

#### Externality costs (\$/TEU)<sup>1</sup>

	Road direct	Rail
North	21	8
West	16	7
South east	49	12

### Truck access to the freeway network

Enabling efficient links between the port precinct and the freeway network is important to ensure efficient movement of goods, and to minimise friction with other modes and land uses in the central city and residential neighbourhoods.

Freight movement across metropolitan Melbourne, especially from the port precinct to the east and south east, will continue to be an issue for the management and planning of Melbourne’s road and rail networks. The East West Link Needs Assessment (2008) highlighted the demand for cross city travel, and the increasing significance of this issue considering forecast growth in port activity.

<sup>1</sup> *Shaping Melbourne’s Freight Future, Department of Transport, 2010, p27.*

### Emissions from freight

Emissions from the freight sector are significant, mainly due to Melbourne’s reliance on road haulage to move goods throughout the city and interstate. The expected increase in freight activity in Melbourne will significantly increase CO2 emissions if current vehicle technology and distribution methods remain unchanged.

### Objectives and actions

#### Support the Port of Melbourne

The Port of Melbourne is one of the primary origins and/or destinations for freight traffic in Victoria. To maintain and enhance the performance of the port, consistent with the State Planning Policy Framework, the City of Melbourne will ensure planning scheme controls and future urban renewal opportunities respect and allow for port operations.

This includes recognition of both road and rail freight routes and the need to facilitate appropriate development along these routes, whilst maintaining efficient freight movement and port operation.

The City of Melbourne supports any investigations into the expanded use of other Victorian ports, to assist in accommodating the forecast growth in port activity. This may include a wider role for the Port of Hastings, and other strategic locations for new port facilities that enable efficient links to intermodal terminals and Melbourne’s key industrial precincts.

- 114. **Provide planning scheme support for acoustic attenuation of new dwellings and businesses adjacent to major freight routes and in the Port’s vicinity.**

### Port of Melbourne International Freight Terminal

A new Melbourne International Freight Terminal (MIFT) is proposed to be built to the north of Footscray Road in the Dynon-Port precinct.

The MIFT is planned to form the central hub of the Metropolitan Freight Terminal Network and enable the timely and efficient transfer of containers between the stevedoring terminals and rail and road shuttle services connecting the Port to intermodal terminals located in Melbourne’s key industrial areas to the west, north and south-east. Funding has been sought for this project through Infrastructure Australia.

The interfaces between the MIFT and future urban renewal areas in the inner west will need careful management. The City of Melbourne supports 24/7 operations of the MIFT, and recognises that buffering against noise and light is likely to be required for adjoining land uses.

- 115. **Action: Work with the Department of Transport on the rationalisation and modernising of the Melbourne Freight Terminal in the Dynon precinct to provide more efficient port freight logistics.**
- 116. **Priority Action: Work with the Department of Transport and the Department of Planning and Community Development to develop land use controls to ensure urban renewal near Melbourne Freight Terminal is compatible with the terminal’s operations.**

#### Prioritise freight on the freeway network

Road freight vehicles will continue to play a significant role in distributing goods throughout

metropolitan Melbourne. More efficient road freight including Higher Productivity Freight Vehicles (HPFVs) will serve more of Melbourne’s freight task. These B-Double and Super B-Double vehicles will require access and priority on the freeway network to ensure efficient travel times.

With a vision for a significantly improved public transport system fundamentally integrated with land use across Melbourne, it is reasonable to plan for a shift in priority on our freeways. This will involve a shift from managing freeways for passenger transport, to improving their ability to accommodate the road freight task. In this context, Melbourne’s extensive freeway network may be able to accommodate port traffic without significant new infrastructure.

**117. Work with State Government on improving the efficiency of road freight transport, including the use of High Productivity Freight Vehicles (HPFV) and supporting their priority on the existing freeway network.**

**More freight on rail**

More goods need to be transported by rail. A switch to rail will have many benefits for Melbourne’s transport system, as well as significant economic and environmental benefits:

- Environmental benefits – rail goods transport is significantly more efficient than road haulage.
- Reduced road congestion.
- Road safety benefits from a reduction in truck traffic.
- Financial savings by avoiding the need for road construction

and maintenance, due to fewer trucks using the road and freeway network.

This increase in rail freight should be achieved with no adverse impact on the commuter rail network. Significant investment will be required to achieve a balance between these two important rail functions.

**118. Work with State Government to increase the proportion of port freight by carried by rail.**

**119. Work with State Government for extensions and new links for rail access from the western suburbs to the port, including adding capacity through the Bunbury Street tunnel.**

**Webb Dock rail**

The Municipal Strategic Statement indicates the need for rail access to Webb Dock, to support the growth of this section of the Port of Melbourne, whilst growing the share of freight carried by rail.

If the Webb Dock continues to grow, the City of Melbourne supports efforts to improve rail access to this area, to support a greater share of freight being carried by rail.

**120. Work with State Government to ensure any future rail link from Web Dock to the Melbourne Freight terminal is designed to minimise noise along the interface with Docklands.**





Fig 14.1 Containers arriving at the Port of Melbourne

# 15 Central City freight and delivery

## Goal

Central city freight and delivery systems efficiently support a vibrant central city retail, knowledge, food and entertainment economy.

Through research, collaboration and application of international best practice, Melbourne will continue to grow with the knowledge and systems to achieve highly efficient freight, delivery and waste systems in the central city.

## Context

The last kilometre freight and delivery task in the central city is extremely important to the city's economy and the services and businesses that function within it. The management of the street network has a direct influence on how and when goods can be delivered to businesses. Therefore the infrastructure supporting the delivery of goods, such as loading zones and the management practices used by the City of Melbourne, such as ephemeral street closures, must be integrated with the needs of businesses throughout the municipality.

Light commercial vehicles, which deliver much of the freight consumed in the city, make up 70 per cent of the delivery fleet and deliver 10 per cent of the freight. Increasing the efficiency of these vehicles could make an impact on congestion and improve the amenity of the central city, where space is a scarce resource.

Transporting waste out of the city will become a more important task, with the continuing growth of the central city and future urban renewal. In 2011, the City of Melbourne endorsed the Integrated Waste Management Program, which highlights how the City of Melbourne will respond to this challenge. Aspects of the Integrated Waste Management Program have been incorporated into the Transport Strategy.

Construction in the municipality will continue to influence street environments, both in the use of space for construction zones, and the amount of traffic delivering materials to development sites. Many major developments in the central

city can introduce significant amounts of construction traffic, which are often time sensitive.

Traffic associated with servicing and maintenance of utilities and buildings in the city can be substantial, and the maintenance role of these contractors is essential. Catering for such vehicles is an important consideration for the City of Melbourne.

## Issues

### Ensure efficiency

Efficient delivery of goods to destinations in the city will continue to influence the City of Melbourne's management of the street network and public realm. The flow-on effect of inefficiencies in the last kilometre freight task can lead to significant commercial losses, which can ultimately impact the prosperity of the city. Ensuring ease of access for freight and delivery vehicles will continue to be a challenge for the City of Melbourne, considering the increase in activity in the central city and demands on public space.

### Avoid conflicts with other transport modes and uses of city spaces.

With changing priorities on our street network, including more pedestrianised areas and greater priority for people, the task of delivering goods will also change. Factors such as congestion on the road network are likely to prompt innovative changes to how deliveries are made to the central city.

If delivering to the city is inefficient, the risks to economic performance can be significant. This means the City of Melbourne's role in providing space for deliveries is



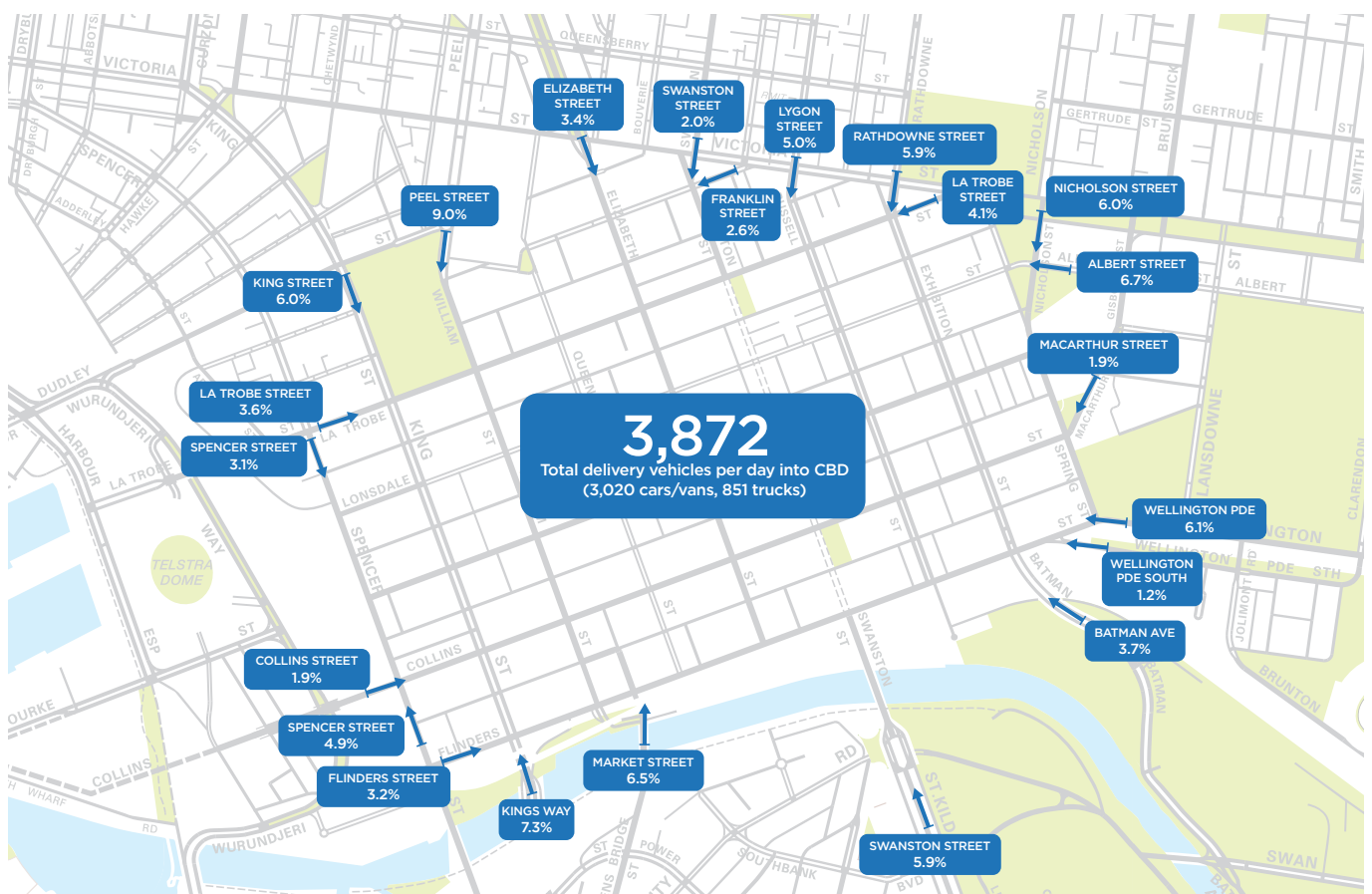


Fig 15.1 Total delivery vehicles per day into Melbourne CBD, 2012

closely related to the viability of business operations in the city.

### Need to improve knowledge of the last kilometre freight task

Despite the significance of the white vans that deliver goods to the city, there is very little information about how the system is operating, if it is efficient, and if and how it may be able to be improved. There is a gap in understanding of the last kilometre task, due to the dispersed nature of deliveries and the wide range of participants in the industry.

### Inefficient waste transport

Some current arrangements for waste removal are inefficient and result in a loss of urban quality, especially in some of our active laneways, which are becoming more people-oriented. This has removed space traditionally used for waste collection. These laneways and 'little streets' were originally designed to accommodate deliveries and waste removal, with most buildings' freight and docking facilities oriented towards them. The City of Melbourne must ensure that these streets and laneways allow for the buildings

abutting them to receive goods and get rid of waste, whilst also supporting the active street life and laneway culture for which Melbourne is known. Innovative and creative approaches to this challenge will be essential.

### Delays to construction traffic

Large scale development in the City of Melbourne will continue, and the traffic associated with construction will require convenient and time efficient access. Delays caused by friction on the road network, specifically congestion, can have a major impact on the construction industry and the



overall cost of building in the city. Managing these issues will require site specific solutions

**Accommodating service vehicles**

Access to on-street parking for servicing and maintenance vehicles is an issue where parking demand is high. The important role of these vehicles in the city requires appropriate support in terms of parking management.

**Objectives and actions**

**Support innovative last kilometre freight solutions**

Examples of the types of innovations that may help to improve the efficiency of freight delivery, while reducing the negative amenity impacts of freight vehicles, are:

- local delivery and consolidation centres
- environmentally friendly delivery vehicles
- changing times for loading zone and delivery operation
- incentives for shared deliveries.

**121. Priority Action: Plan and implement more efficient and less intrusive freight delivery options in the central city using a street or precinct based approach.**

**122. Action: Review the impact of the Swanston Street works on delivery and waste removal. Assess how low-impact delivery and waste removal initiatives can apply to the high-intensity corridor between Swanston and Elizabeth Streets and other precincts in the city.**



*Fig 15.2 Cargo bicycles are already improving the last km freight task*

**Develop knowledge on urban freight**

There is a lack of understanding regarding the last kilometre delivery task, which makes it more difficult for government to support businesses and the delivery industry. To fill this knowledge gap, the City of Melbourne will need to work with industry to identify opportunities for specific improvements.

This will leverage the design and consultation opportunities associated with street redevelopment and structure planning projects to establish delivery and waste management opportunities.

During these projects, the City of Melbourne will work with industry stakeholders to discuss improvements to last kilometre freight and take advantage of any opportunities for innovative solutions that lessen the negative impact of deliveries on the amenity of the city, reduce delivery costs and improve efficiency.

**123. Priority Work with the Department of Transport and freight stakeholders to develop a central city last kilometre freight delivery strategy including an analysis of freight movements and options for consolidation and low impact distribution.**

**Off-street loading facilities**

By encouraging loading facilities to be located off-street, there is potential to minimise the impact of freight and delivery activity on the surrounding street network that will result from high density land use and activity. This may have multiple benefits for local amenity, daily operations on busy streets, and encourage a consolidated approach to deliveries for buildings or precincts.

**124. Action: Do an assessment of the options for planning scheme controls to encourage building developments to accommodate loading and delivery space off-street. (Action )**

### Integrated Waste Management Program

The Integrated Waste Management Program, endorsed by the City of Melbourne in May 2011, seeks to ease the issue of waste transport impacting amenity and inner urban traffic congestion. Initiatives of the program include targeted recycling for high rise residential buildings, ensuring streamlined waste contracts, and an analysis of potential vacuum waste systems.

**125. Implement the actions of the City of Melbourne’s Integrated Waste Management Program.**

### Innovative parking management

Opportunities to improve parking management by utilising new technologies will become increasingly relevant, to better understand what is happening in on-street parking spaces and better manage the system as a whole. This may improve the overall efficiency of delivery, service and maintenance vehicles, which often require very short term parking in convenient locations to their destinations.

**126. Action: Develop a strategy of on-street parking management across the municipality to improve the efficiency of deliveries.**



Fig 15.3 Handcart delivery in Melbourne CBD