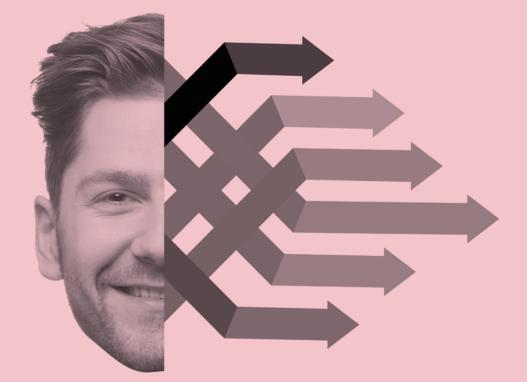
DRAFT LAST KILOMETRE FREIGHT PLAN

OCTOBER 2015







A CONNECTED CITY

We manage movement in and around our growing city to help people trade, meet, participate and move about safely and easily, enabling our community to access all the services and opportunities the municipality offers.

participate.melbourne.vic.gov.au/innovate-freight

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Issue 1 - Draft Last Kilometre Freight Plan for community consultation

October 2015

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Text to be inserted in Final Plan

INTRODUCTION

Why are we doing a last kilometre freight plan?

Last kilometre freight is at the heart of how our city works. It is the last leg of the journey of goods into our shops, cafes, restaurants, offices and homes. Efficient freight movement improves liveability, economic prosperity and sustainability.

The high number of comments made during the pre-draft plan consultation demonstrates that this issue matters to city residents and business. The community engagement process indicated that while there is no evidence of a "city-stopping" freight problem in Melbourne today, there are daily challenges and inefficiencies for freight delivery in the city that can be addressed now. There is evidence that as the central city gets busier and construction of major public transport infrastructure commences, the problems will get worse. An important aspect of this Last Kilometre Freight Plan is the process establishing clear roles and expectations about freight so business in Melbourne is well positioned to respond to change.

There are no simple solutions when it comes to managing and meeting the challenges of efficient freight movement in a central city. What works in one city may not work in another. This plan is based on the premise that the City of Melbourne can play a role in facilitating greater knowledge of how freight can be improved and how the city is changing, then the initiatives will come from the players in the supply chain in partnership with the City of Melbourne, the State and others.

This plan identifies actions to be taken by the City of Melbourne to ensure last kilometre freight is considered as our city grows and changes to protect liveability in the central city.



Figure 1: Central city study area

What does this plan address?

The last kilometre freight plan addresses the last leg of the freight journey. The phrase "last-kilometre freight" covers a vast range of shops, businesses, goods, delivery processes, technologies, locations, industries, people and vehicles.

This plan does not consider the movement of goods from international or interstate locations on ships, trains or trucks to distribution centres.

The plan is focused on the central city where most of the freight is delivered and where congestion and pressures on freight delivery are highest (see figure 1). Freight delivery is in some way relevant to almost everyone, whether we live in or run a business, come in to work or enjoy the retail and hospitality delights of the central city, we have a role in thinking about our freight future. The draft plan invites the broader community and freight specialists to step inside this process and think about how the central city can be an even better place to do business, visit, live, shop, eat and relax.

Whether delivering clothing to a boutique business in a Melbourne laneway or paper to a city office all players in the supply chain need to adhere to certain rules – there are deadlines, space restrictions, upstream and downstream requirements and limited time to get the job done. As the city grows and changes different actors will respond differently to freight challenges and will change practices as appropriate - people will make the decisions that are best for them. They will innovate, adopt technology and change processes to ensure they have the goods they need to be successful in the central city environment.



Figure 2: Central city street activities

City growth

The City of Melbourne is growing quickly with significant increases in jobs and residents in the central city. In the ten years to 2012, the number of jobs in the central city grew 25 per cent (to 220,109 people) and the residential population increased 149 per cent (to 23,867 residents). Major infrastructure initiatives such as the Melbourne Metro, new tram stops and re-routing trams will continue to transform the central city. This will trigger changes to the way everyone moves in the central city, including how freight is delivered. Figure 2 illustrates the complexity of the central city daily activity that influences freight delivery.

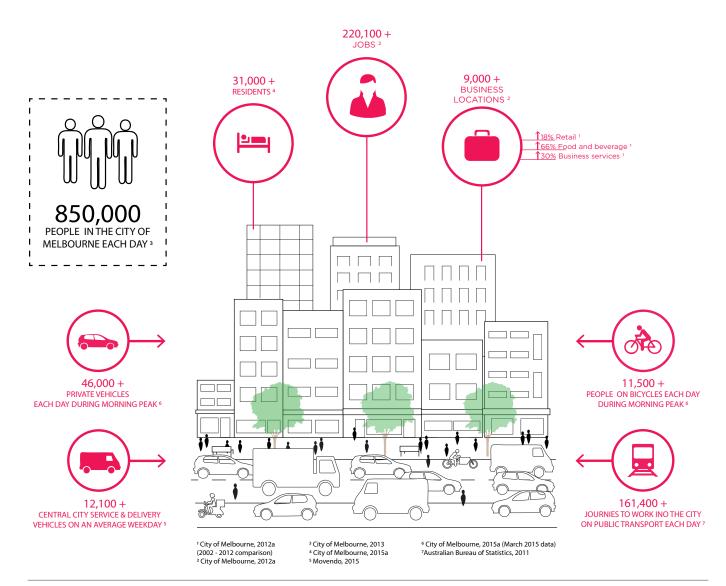


Figure 3: Central city activity

Who is responsible for what?

Freight vehicles form part of a complex and diverse inner city transport picture, mixing with people walking, riding bicycles, using public transport and driving. While freight practices may change the task of delivering goods in the city will always be the responsibility of the private sector. There are many roles undertaken in the delivery of freight. These roles have informed the development of this draft plan and an overview of the roles different actors fulfil is indicated in figure 4. The following pages provide further overview of the roles taken by the City of Melbourne, businesses, freight deliverers, residents and other agencies.

Roles	City of Melbourne	Businesses & receivers of freight	Freight deliverers	Residents	Other agencies
Leadership & advocacy	\checkmark	\checkmark	\checkmark		\checkmark
Facilitate collaboration & partnerships	\checkmark				\checkmark
Manage & regulate	\checkmark				\checkmark
Research	\checkmark	\checkmark	\checkmark		\checkmark
Communicate	\checkmark	\checkmark			\checkmark
Generate solutions		\checkmark	\checkmark		
Support innovation	\checkmark			\checkmark	\checkmark
Innovate		\checkmark	\checkmark		
Collaborate	\checkmark	\checkmark	\checkmark		\checkmark
Reduce congestion			\checkmark		

Figure 4: Last kilometre freight roles in the central city



The role of the City of Melbourne

Support innovation

Assisting businesses in the central city to be aware of last kilometre freight innovations by highlighting best practice case studies and innovative approaches to freight and supporting and encouraging businesses' efforts to test innovative and efficient freight practices.



Leadership and advocacy

Supporting and advocating for changes that will increase the efficiency of the last kilometre freight task and enhance the public realm.

Facilitate collaboration and partnerships



Partnering with and introducing key stakeholders, including community groups, precinct groups, local businesses, industry stakeholders and other government organisations to achieve the best freight outcomes to meet their needs.



Manage and regulate

Balancing freight needs with the needs of other city users and designing city infrastructure and regulations that are supportive of efficient freight and contribute to lively, convivial and safe streets for all users.



Research

Building an evidence base to guide action and decision-making including conducting research and investigating barriers to change.



Communicate

Ensuring we communicate the right information to businesses at the right time to ensure they possess the knowledge to make the best decisions.

The role of business and receivers of freight

Generate solutions

Building business resilience by identifying the best solutions to freight challenges as early as possible and identifying the information and support required to inform their decision making and to help realise the solutions.

Innovate

Adapting and responding to change with innovation. Business needs to innovate to ensure the best and most efficient delivery models are servicing their needs and their business costs are being kept down and amenity impacts minimised.

Collaborate and communicate

Collaborating with like and neighbouring business to assist innovation and identify the best solutions. Sharing information and experiences with other businesses to assist innovation.



The role of freight deliverers

Innovate

Maintaining efficiency and responding to the changing central city and the needs of businesses through innovation will ensure freight delivery companies continue to service our growing central city in the most efficient and reliable means.

Reduce congestion

Consolidating deliveries and using alternative vehicles and different times of day to manage congestion in the central city through smart works procedures.

Leadership

Leading the way by providing new technologies and innovations to last kilometre freight that will serve the growing city and enhance the liveability and prosperity of Melbourne whilst reducing environmental impact.

The role of residents

Support innovation

Supporting and encouraging business and delivery companies to innovate to establish new ways to deliver freight in the central city. Being open to and adapting to change.

The role of other agencies

There are multiple government and private agencies operating in the central city managing assets to achieve the best, safest and most efficient results. The actions of these agencies can affect the way last kilometre freight is delivered. For example, by communicating in a timely and efficient way about road closures or infrastructure changes, the freight delivery industry can develop contingency plans.

Other agencies and their responsibilities include:

- VicRoads traffic light signals and Arterial Roads.
- Public Transport Victoria (PTV) public transport infrastructure, including level access tram stops.
- Melbourne Metro Rail Authority design and delivery of Melbourne Metro.
- Yarra Trams, Metro Trains and bus companies the daily operations of our public transport system.
- Utility companies the servicing and management of infrastructure. This includes emergency management response (e.g. burst water mains), but also planned maintenance works.



Major projects influencing freight

The following projects will trigger change to how freight is delivered through the central city. In the short term through construction and in the longer term as our city adapts to new transport infrastructure and an enhanced public realm.

Melbourne Metro

Our public transport system will undergo major transformation through the development of Melbourne Metro.

Melbourne Metro is planned to deliver:

- Two nine-kilometre rail tunnels from South Kensington to South Yarra, travelling underneath Swanston Street in the CBD, as part of a new Sunbury to Cranbourne/Pakenham line
- New underground stations at Arden, Parkville, CBD North, CBD South and Domain
- Train/tram interchanges at Parkville and Domain
- Rail tunnel entrances at South Kensington and South Yarra (Melbourne Metro Rail, 2015).

Major works are expected to commence on the Melbourne Metro Rail project by 2018 (Melbourne Metro Rail, 2015), these works may include road closures, reduced on-street parking and loading and changes to the public transport network.

In addition to increased rail network capacity, this project will provide new and improved access to inner Melbourne's urban renewal areas and changes to on-street public transport. This will lead to improved access to the central city, alleviating congestion and providing additional choice for central city mobility.

Tram route changes

To respond to significant population growth and increased patronage of tram services and to support the implementation of Melbourne Metro Rail, changes to Melbourne's tram routes are required. These changes will ease tram congestion on the Swanston Street Corridor and allow for tram routes to be re-distributed to other parts of the central city. This will create additional capacity and improve the level of tram service in other parts of the central city (PTV, 2015a). New tram stops and routes can affect the streetscape and may have short and longer term impacts on freight in the central city.

Level access tram stops

The introduction of level access tram stops throughout the central city will ensure people of all abilities can use our public transport system. These works will be completed to ensure Victoria complies with the Disability Discrimination Act 1982 which stipulates Victoria must achieve 100 per cent compliance by 2032 (PTV, 2015bw). Some tram stops are currently - or predicted to be - overcrowded and will need to be expanded. Some may need to be expanded to serve new longer trams. The introduction of new tram stops can affect the layout of parking and loading zones and can change traffic capacity affecting how deliveries can be made.

New bicycle lanes

The City of Melbourne is committed to making Melbourne a cycling city, "with its entire road network safe and attractive for cyclists of all ages" (City of Melbourne, 2012b). The City of Melbourne Bike Plan 2016-2020 is being developed. As new bike lanes are implemented throughout the city we need to be aware of the impact these can have on loading zones and of the opportunities new bicycle lanes and infrastructure can provide for cargo bike deliveries over the last kilometre.

Changes to Swanston Street to support the development of Melbourne Metro Rail will mean that other central city streets will play an increased role in ensuring bikes continue to be supported as a transport mode in the central city.

Elizabeth Street Streetscape Plan

An Elizabeth Street Streetscape Plan is currently being developed by the City of Melbourne. This will guide future streetscape improvement works along the entire length of Elizabeth Street in consultation with the community. Opportunities for freight associated with the redevelopment of Elizabeth Street are explored in *Theme 1: Local area planning.*

THEME 1: LOCAL AREA PLANNING

Last kilometre freight will be a high priority in all local area plans (such as masterplans). This will mean assessing current and future freight needs, engaging stakeholders about freight issues and considering how innovations can help deliver the freight task.

Last kilometre freight must be considered in the context of each project as different parts of the central city will have different last kilometre freight requirements and therefore different solutions. This is due to a variety of uses (retail, residential, commercial etc.) different access and building types (with some buildings being restricted through heritage and other controls) and differing character and amenity. In order to ensure freight requirements inform future structure and master plans, the following should be considered in the development of local area plans:

- Researching and communicating crash statistics for accidents involving freight vehicles in the central city.
- Undertaking freight surveying and analysis and identifying efficient ways of presenting the data.
- Supporting new freight infrastructure, including innovative and low-impact freight solutions



Figure 5: Queen Victoria Market and Elizabeth Street

Elizabeth Street

The Elizabeth Street Streetscape Plan is being prepared to accommodate improvements to the public realm and recognise Elizabeth Streets' role as a primary pedestrian spine. In addition to this, Elizabeth Street will accommodate significant changes to the public transport network as Melbourne Metro Rail is developed. Re-routing trams from Swanston Street to Elizabeth Street will require a rethink on how space on the street is used and how it will be used into the future. This will create challenges and opportunities for freight including the potential to trial new solutions. Any freight solution for Elizabeth Street will need to be integrated with surrounding areas including the Swanston and Bourke streets vehicle access permit scheme.

Queen Victoria Market

Redevelopment of the Queen Victoria Market (QVM) provides the opportunity to reinvigorate deliveries to and from this precinct, including the opening up of the near-market and the potential to incorporate last kilometre freight infrastructure.

Future projects

All projects undertaken in the central city (and other areas of the municipality) need to consider the role of deliveries and servicing to ensure appropriate infrastructure and options are identified.

Actions

1.1

Investigate the opportunity for low-impact local delivery opportunities as part of the QVM re-development. This could include the following:

- Pilot low impact vehicles for QVM goods delivery within the central city.
- Determine the feasibility of using QVM as a central distribution hub for low impact vehicles.

Investigate opportunities to maximise the use of space in the central city by looking at opportunities to reclaim unused or underutilised space for freight and logistics. This could include the following:

1.2

 This may include refurbishing unused space in central city car parks, undertaking inventory of buildings which have capacity to service surrounding businesses and reassigning on-street space.

THEME 2: PUBLIC TRANSPORT

Public transport - in combination with walking - has become the mainstay of central city mobility. It ensures we can move a large number of people into and through the city each day. Significant changes to public transport infrastructure will affect the way last kilometre freight is delivered in the central city.

Public transport infrastructure

Improvements to Melbourne's public transport network will increase personal mobility in the central city. Changes to infrastructure however, can affect the way freight is delivered through changes to loading areas (numbers of loading zones are maintained but alternate locations are sought), a reduction in on-street parking and the narrowing of streets. Therefore we need to continue to work with our partners to ensure that changes to the public transport network consider the function of the street and the impact on freight and surrounding businesses.



Figure 6: Recent introduction of level access tram stops has affected the loading process in the central city

Melbourne Metro

Melbourne Metro Rail will transform Melbourne. The project will bring up to an additional 20,000 people into the heart of Melbourne in peak hours. Two of the new stations will be in the central city – with busy entrances and connections to the street network. Building Melbourne Metro Rail will mean significant changes to the central city. This will affect everyone involved in the delivery supply chain in the central city and require a variety of responses to ensure freight continues to reach city businesses. It is also an opportunity for the city to innovate in the way it manages freight to improve future amenity and prosperity.

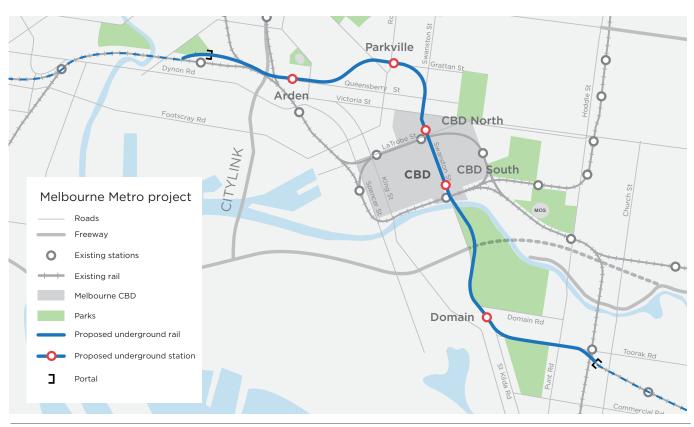


Figure 7: Proposed Melbourne Metro Rail Project alignment Source: Melbourne Metro Rail Authority, 2015

Action

2.1

Work with the State Government and our central city partners to promote efficient last kilometre freight in the planning of Melbourne Metro Rail. This could include the following:

- Facilitate improved communication and collaboration between stakeholders around the staging and development of Melbourne Metro Rail and public transport works.
- Facilitate new ways of delivering and receiving freight in response to Melbourne Metro Rail and new public transport infrastructure.

THEME 3: FREIGHT INITIATIVES

Each day, in response to rising city congestion and costs, businesses around the world are working to find cheaper, easier and more efficient ways to move goods. Raising awareness of local and global freight innovations will help local businesses improve central city freight delivery.

Cargo bikes

The City of Melbourne's Transport Strategy 2012 calls for Melbourne to become a cycling city and a city which supports efficient urban freight through increased innovative and low impact freight.

Cargo bikes are a low impact way to deliver goods. They emit no pollution. They are quieter, smaller and more transparent than trucks and so pose less of a safety threat, do not block city views and require less space in which to park. Cargo bike riders can have a strong connection to other city users because they are travelling at eye level and not inside an enclosed vehicle. Cargo bikes can be electrically assisted so they can move heavier loads.

There is an emerging cargo bike delivery sector in Melbourne and cargo bike use is growing around the world, especially in the busiest parts of cities. Because of their flexibility and relatively quick delivery times in crowded places, cargo bikes have also helped stimulate and facilitate new ways of doing business.

Pilot projects

As part of supporting business growth, development and innovation, the City of Melbourne will provide leadership, advice and support to businesses wishing to innovate. To build greater resilience among the business community and assist business continuity planning, the City of Melbourne can:

- Fund and undertake trials;
- Share lessons learnt from trials; and
- Provide support to other agencies interested in piloting projects within the central city.



Figure 8: Cargone Couriers, Melbourne

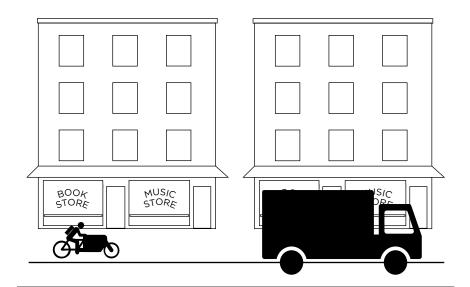


Figure 9: Visual impact of parked freight vehicles

Out of hours deliveries

The potential benefits of out of hours delivery include reduced congestion, quicker and more efficient delivery, reduced infrastructure requirements, maximising vehicle operational hours and consolidation of larger deliveries - therefore requiring fewer vehicles throughout the day.

Retiming deliveries to off-peak hours has been tried in many places around the world. The costs and benefits of out-of-hours delivery vary from city to city because every city has different people, traditions, customs, traffic conditions, buildings, street layouts and rules. To be successful, out of hours delivery must work for all players in the supply chain, including the receiver, as having people available to receive freight after hours can be a cost to businesses. Suitability for a business to receive goods out of hours may depend on their size and structure. Some industries will be better suited to out of hours delivery than others. In many cases, trials of out of hours delivery have not become permanent due to the extra costs involved.

The Department of Economic Development, Jobs, Transport and Resources is working with VicRoads to understand the potential for out of hours delivery in the heart of Melbourne. The challenges are to establish a local rationale for out of hours delivery, to identify the local barriers and enablers and to identify deliverers and receivers interested in leading change. City of Melbourne has a role to play in out of hours delivery by ensuring the liveability of the city is maintained and enhanced where possible but also through the application of our regulatory procedures such as the designation and timing of loading zones and parking permits, as explored in *Theme 4: Technology* and communication and *Theme 5: Regulation.*

Actions

3.1

Encourage and support the piloting of new and innovative technologies (including vehicles) and processes and share the outcomes/lessons learnt with all stakeholders to ensure the full impact of new systems are understood and communicated. This could include the following:

- Investigate funding to support central city business and retail precincts (self-formed or other) driving innovation and developing new ways of handling freight over the last kilometre.
- Investigate the potential for the increased use of cargo bikes for goods movement in the central city.
- Promote and raise awareness about the use of cargo bikes and other freight initiatives for delivery in central Melbourne.

Work with State Government, industry and the community to overcome barriers (regulatory and other) to quiet out of hours delivery in the central city. This could include the following:

3.2

- Identify principles for out of hours deliveries to protect the liveability and amenity of the central city.
- Encourage out of hours infrastructure innovations.
- Support out of hours pilots and ensure the findings are shared with all stakeholders.
- Provide input into the EPA Victoria review of State Environment Protection Policy (control of noise from industry, commerce and trade) No. N-1 to achieve the best balance for our residential and commercial stakeholders.

THEME 4: TECHNOLOGY AND COMMUNICATION

Advanced technology and improved communication and collaboration can transform the way we experience the city and increase our reputation as a knowledge city. It can assist us in ensuring the central city space is being used as efficiently as possible. Improved communication ensures that stakeholders can make the best decisions about deliveries by having all necessary information available to them.

Technology

Rapid technology advancements are changing the way we move, eat, live and socialise. Technology will also have an increasing role in the mobility of cities and the movement of people and goods. Melbourne's central city freight systems should take advantage of 21st century technology. Intelligent transport solutions can reduce delays, improve safety, cut noise and allow the efficient sharing of scarce resources including space in the central city. Technology advancements in freight include systems for booking on and off street loading bays/zones, systems for identifying empty vehicles and connecting them to customers, new low-impact vehicles and systems for combining several deliveries into a single load.

Communication

The central city is a complex environment, with many stakeholders managing, operating and interacting within a limited space. Timely and open communication between stakeholders including agencies, business and receivers of freight and freight delivery companies will ensure all parties can be prepared and make the best decisions to meet their freight needs. It will also ensure business continuity and resilience as the central city intensifies and undergoes significant transformation.

Actions

41

Investigate new opportunities for gathering and using freight data to improve freight efficiency. This could include the following:

- Collect data and survey loading zones to evaluate their efficiency and determine if they are achieving the desired occupancy of 50 per cent at peak loading times.
- Identify alternative means for street management to achieve the most efficient use of on-street parking and loading services.
- Develop tools to understand the freight generation rates for different land uses.

4.2 fr

Ensure data which impacts on freight planning and delivery is visible and available. This could include the following:

4.3

- Share our information and data to ensure we are adaptive, agile and provide consistent and reliable information to plan ahead and enable solutions - use the right channel at the right time, for the right thing.
- Integrate our technology and information with platforms and systems used by our stakeholders.
- Work with other agencies to share their data with the public.

Investigate the use of technology to improve the efficiency of deliveries or change the way deliveries are undertaken. This could include the following:

- Investigate changes to the provision and management of on-street loading zones in Elizabeth Street.
- Investigate the development of a freight journey planner.
- Publish a freight access map of the central city showing on-street loading zones and the quiet and busy on-street parking times (informed by the parking sensors) to assist freight deliverers to make the best decision on the timing and location of their deliveries.
- Ensure advancing technology, such as driverless vehicles and drones is considered.
- Capitalise on Melbourne's hosting of the ITS (Intelligent Transport Systems) World Congress to promote the use of technology to improve the efficiency of last kilometre freight.

Support and encourage ongoing communication and engagement between all stakeholders to deliver better outcomes. This could include the following:

4.4

- Facilitate the early provision of information so businesses have the best opportunity to respond to change.
- Seek the views of stakeholders to identify appropriate freight solutions.
- Develop a platform where all stakeholders can share advice and experiences, to encourage innovation and ensure all stakeholders are aware of freight initiatives.
- Investigate the usefulness of a regular multi-agency road freight bulletin to provide information on changes to central city roads.
- Collaborate with City of Sydney and other governments to identify opportunities to improve our last kilometre freight practices.
- Collaborate with and connect stakeholders who wish to expand their operations or change their practices to increase the use of cargo bikes.
- Build business engagement and collaboration around the transformation of the public transport network.

THEME 5: REGULATION

The City of Melbourne regulates the use of streets in many ways to deliver the greatest benefit to the community. Regulating streets can be a complicated balancing act and must respond to the changing demands of users. For example, the desire for a pedestrian mall in Bourke Street required regulation to prevent private vehicle access but to permit freight vehicles at certain times.

Building design

New buildings in the City of Melbourne should be designed to provide for efficient servicing and delivery. The City of Melbourne can influence building design through:

- Determining planning applications; and
- Managing waste.

Street design

Areas of regulation undertaken by the City of Melbourne include:

- Traffic function on City of Melbourne roads;
- Allocating and positioning loading zones and on-street parking areas;
- Operating the Vehicle Access Permit Scheme in Swanston Street and Bourke Street Mall;
- Designing and constructing the public realm including footpaths; and
- Issuing permits for the occupation of roads and footpaths to support construction.

The vehicle permit access scheme, which has operated in Swanston and Bourke Streets since 1991 and 1978 respectively, prevents most vehicles using these streets except some delivery vehicles at specific times. This is to make the streets safer and more enjoyable, provide space for walking, cycling and trams and provide access for deliveries to businesses located on these streets. Some deliverers support the scheme because it makes delivery easier and more efficient. As the city grows and intensifies, the scheme will need to be managed to ensure it provides the greatest benefit to the community.

The City of Melbourne aims to have a 50 per cent or lower occupancy of loading zones in peak loading times (City of Melbourne, 2008). This low occupancy rate improves the likelihood of a loading space being available, makes it easier for freight deliverers and reduces vehicles circling and adding to city congestion. It may be possible to improve the efficiency and 'work rate' of our loading zones by using technology and improving practices relating to management of loading zones (as explored in *Theme 4: Technology and communication*).

Actions

5.1

Ensure new buildings are equipped to meet the freight requirements for receiving and dispensing goods and services. This could include the following:

5.2

- Advocate for the inclusion of loading bays for waste collection and furniture removal in non-commercial buildings, including high rise residential, via the statutory planning process.
- Encourage new buildings to integrate new technologies and infrastructure so deliveries can be made in the most efficient and effective means possible.
 This may include the use of parcel-lockers, consolidation points and quiet loading dock technology.

Investigate further opportunities to enhance the operations of central city streets to meet the objectives of the Transport Strategy 2012, Bicycle Plan 2012-2016 (and future updates), the Walking Plan 2014 and to minimise congestion and enhance central city mobility and amenity. This could include the following:

- Undertake a review of the Vehicle Access Permit Scheme. Assess the performance of the scheme, determine if it is an appropriate tool to expand into other areas of the central city and identify changes to improve the operation of the scheme including opportunities to improve efficiency through technology and training.
- Undertake a review of pricing to discourage lengthy occupancy of city streets for construction purposes to minimise the impact of long-term construction on the street environment.
- Investigate improvements to cycling infrastructure to support cargo bike deliveries in the central city.

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Supporting documents

The following documents were prepared in the development of this plan and are available through the City of Melbourne's website:

City of Melbourne (2015). Last Kilometre Freight Background Report 2015.

City of Melbourne (2015). Last Kilometre Freight Case Studies Report 2015.

City of Melbourne (2015). Last Kilometre Freight Issues and Opportunities Report 2015.

City of Melbourne (2015). Breakfast Workshop Summary 2015.

City of Melbourne (2015). Pre-draft Consultation Summary 2015.

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