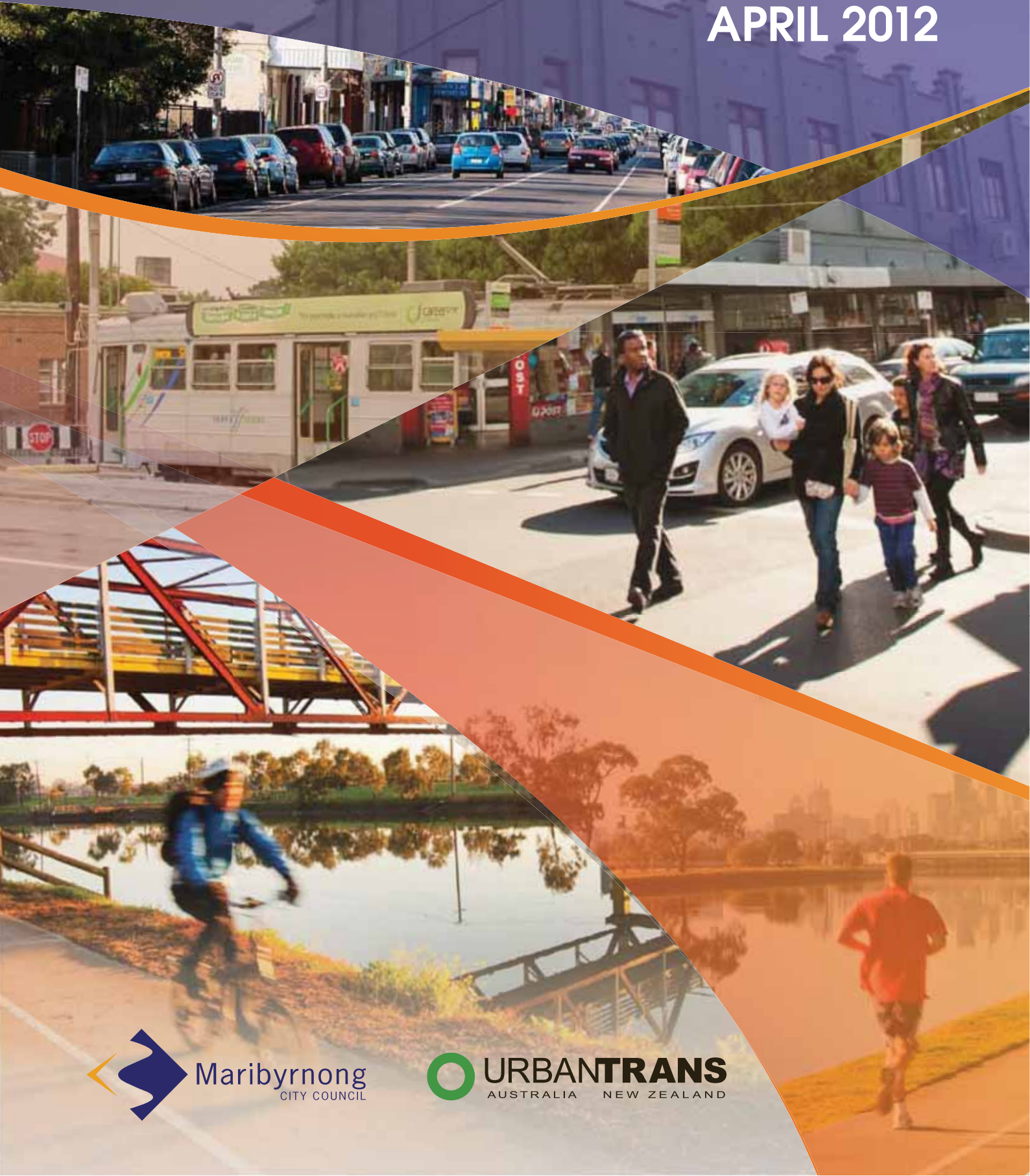


Maribyrnong Integrated Transport Strategy

APRIL 2012



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Introduction

About the Strategy

The 2011 Maribyrnong Integrated Transport Strategy (MITS) is a long-term plan that will help guide the development of Maribyrnong's transport system over the next decade. It sets out a vision for a transport network which is sustainable, equitable and convenient, in response to growth within and outside of Maribyrnong.

The strategy considers all the transport, parking, access and mobility elements that affect the municipality and outlines a series of priorities and future actions within nine key transport themes:

1. Land Use and Development
2. Walking
3. Cycling
4. Public Transport
5. Congestion Management
6. Parking
7. Freight
8. Major Projects
9. Behaviour Change

Implementation of actions under each of these themes will help to deliver a thriving and sustainable City, which meets the diverse needs of our residents, workers and visitors. Maribyrnong will be a city where it is possible for people to walk and cycle more often, and catch public transport with ease, thus relieving congestion on the road network, reducing the City of Maribyrnong's contribution to transport related greenhouse gas emissions and improving air quality.

The Integrated Transport Strategy has been developed with input from the community and a wide cross section of stakeholders. It has been supported by research and site investigations to ensure all issues and community concerns are considered.



Building on the previous MITS

The 2011 MITS builds on the previous strategy released in 2001 whose key objective was to:

Plan, facilitate and implement a transport system for Maribyrnong which is based on the principles of sustainability; quality urban form and amenity; and builds on the benefits of our inner City location with good access to public transport.

The 2001 objective will be strengthened by the 2011 MITS. The new strategy will respond to the many changes that have taken place over the last decade. Since 2001, when the first MITS was adopted, there has been a substantial transformation in transport and mobility patterns and behaviour both in Maribyrnong and the wider metropolitan area, including:

- More walking, especially within inner areas.
- Strong growth in public transport patronage.
- Significant increase in bicycle use.
- Increased 24-hour activity, particularly in activity centres, as a result of an increased mix and higher land use density.

In addition, there have been major transport and mobility policy developments enacted at all government levels. Furthermore, the change in State Government in November 2010 has been followed by a review of many of the policies and initiatives that have been adopted or been under consideration over the last decade.



The most significant developments since 2001 can thus be summarised as follows:

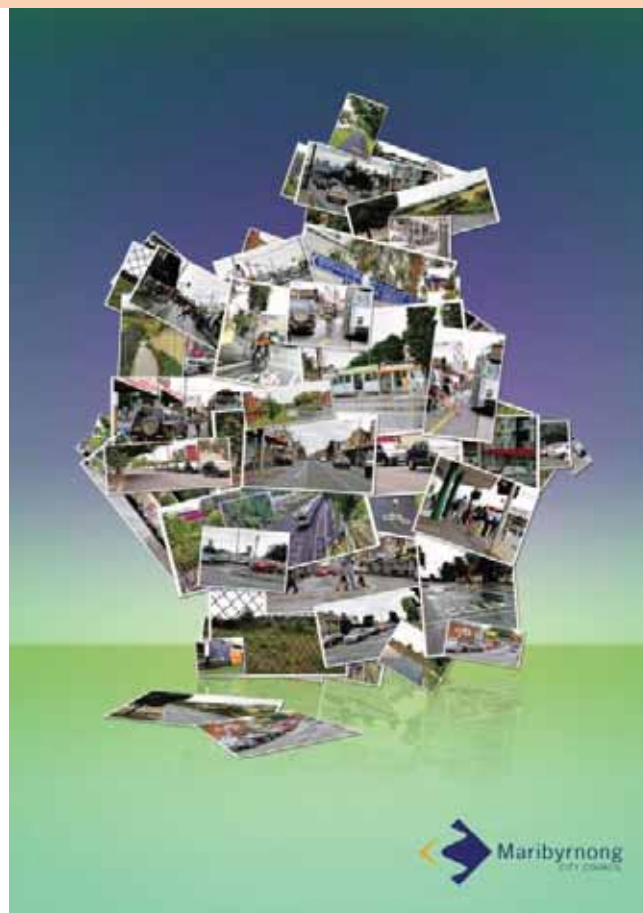
- Council's review of the local planning policy section of the Maribyrnong Planning Scheme which envisages new policy direction promoting sustainable transport for the municipality.
- The *East-West Link Needs Assessment 2007* (the Eddington Report) which recommended that planning be undertaken for a staged east-west road connection, new regional rail line and other major transport infrastructure investigations to enhance east-west connectivity.
- *Melbourne @ Five Million* which has reaffirmed the aim of a multi-centre metropolitan area by defining six Central Activities Districts. The six centres identified are Box Hill, Broadmeadows, Dandenong, Footscray, Frankston and Ringwood.
- The *Victorian Transport Plan 2008*.
- State Government strategies supporting public transport, cycling and walking (such as the *Victorian Cycling Strategy 2009* and the *Pedestrian Access Strategy 2010*).
- The Victorian government's acknowledgment in its *Climate Change Green Paper* that a reduction in emissions from transportation is an important element in meeting emission reduction objectives.
- *Freight Futures 2008* – the Victorian freight network strategy.
- The Federal Government focus (through Infrastructure Australia and its Major Cities Unit) on city planning that integrates land use and transport planning.

Many of the strategies and policies developed since 2001 by the State government are not supported by the current government, and thus no longer part of the current policy context.

Vision

Our vision is for a transport system which is convenient, safe, equitable and sustainable, achieved by:

- Integrating transport and land use planning
- Improving the pedestrian environment and linkages
- Improving connections to public transport
- Improving opportunities for cycling
- Encouraging investment in, expanding and prioritising public transport
- Increasing the efficiency of freight operations and commercial movement by directing trucks onto efficient arterial routes away from residential areas
- Addressing road congestion by prioritising space-efficient transport modes
- Reducing greenhouse gas emissions and improving air quality through efficiency improvements
- Informing people about their travel choices



Background

The Need for Action

A safe, efficient and sustainable transport system is critical to promote the liveability and prosperity of the Maribyrnong community. A number of factors affect the transport system in the municipality and present challenges to meeting the community's current and future needs.

Freight

Freight transport is influenced by production, consumption, land-use patterns, consumer behaviour and lifestyles. A number of studies around the world show strong links between a country's or region's economy (what, how much and where things are produced and consumed) and the freight task. Land-use patterns have an impact on distances travelled and number of freight trips. Changes in consumer behaviour and lifestyles (for example the increasing popularity of online shopping) can increase the demand for more personalised logistics and delivery requirements. According to a recent report by Infrastructure Partnerships Australia, these and other factors will contribute to increases in freight nationally.

A significant amount of freight travels through Maribyrnong (both by rail and road), including movements associated with the South Dynon intermodal complex, non-maritime domestic freight, trains and trucks servicing the Port of Melbourne, and other truck movements generated by the industrial and freight / logistics areas both within the municipality and in areas to the west and north. The Government's *Freight Futures* strategy forecasts that metropolitan freight task is expected to grow at 3% per annum from around 12 billion tonne kilometres (BTKms) in 2008 to approximately 17 BTKms in 2020.

Freight around the metropolitan area is currently carried almost exclusively on road and is equivalent to around 170,000 truck movements every day. Many of the freight movements through Maribyrnong take place on sensitive roads, including a number of the municipality's residential precincts, creating significant adverse impacts to the amenity of local communities. The forecast growth in freight movements over the next decade needs to be managed to minimise potential impacts to the community in terms of noise, air quality, congestion and safety.

Population Growth

Significant population growth, in excess of 30,000 new residents, is expected to occur within Maribyrnong by 2030 – as Footscray CAA continues to develop and intensification of development at Highpoint and the Maribyrnong Defence Site take place. This growth is part of over 1.1 million new residents that the State government forecasts for metropolitan Melbourne over the next 20 years (of which about half are anticipated to be in established areas and the other half in growth areas). Forecast.id estimates that a significant portion of this growth is expected to occur in the western metropolitan area, with approximately 300,000 new residents estimated for this area in the next 10 years.

Population growth will lead to increased travel demand for all trip purposes across Maribyrnong. The forecast increase in employment within Maribyrnong will impact local trip patterns and will attract travellers from neighbouring municipalities, further increasing the need for a comprehensive and multi-modal transport system.

Climate Change

The Copenhagen Accord stated that 'climate change is one of the greatest challenges of our time' and that significant reductions in emissions are required to avoid further climate change impacts. According to the Intergovernmental Panel on Climate Change, warming of the climate system is 'unequivocal' and most of the observed increase in global average temperatures since the mid-20th century is most likely due to greenhouse gas emissions from human activities. The growth in greenhouse gas emissions has been driven primarily by the burning of fossil fuels for energy and by population increases, consumption and industrial processes, transport, and land use changes.

Observational evidence shows that changes in the climate system are already affecting natural and human systems worldwide; these effects are likely to be exacerbated by the projected increase in greenhouse gas emissions. As such, there is growing global concern about climate change and its impact on people and the ecosystems on which society depends.

Transport emissions account for 17% of total greenhouse gas emissions in Victoria and are forecast to continue growing rapidly into the future. Thus, reducing transport emissions must be a primary objective for any comprehensive climate change mitigation strategy. In order to achieve this objective, three main strategies need to be pursued: reduce passenger and freight travel; promote sustainable modes; and adopt efficient technologies.

More specifically, land use planning must increase the proximity of people to jobs, education, shopping and other destinations. Furthermore, the convenience, flexibility, safety and reliability of walking, cycling and public transport must be enhanced to convince more people to leave their cars at home. Lastly, energy and emissions intensive technologies (engines, fuels and design) must be adopted for private, public transport and freight vehicles.

Carbon Neutrality

In April 2007 the City of Maribyrnong responded to the need for a greater reduction of greenhouse gas emissions and resolved to achieve carbon neutrality, as an organisation, by 2015 and to provide the opportunity for the wider Maribyrnong community to be carbon neutral by 2020. A comprehensive Carbon Neutral Action Plan for the City of Maribyrnong has been developed to help Council achieve those objectives.

The United Nations has highlighted the disproportionate impact that climate change will have on the socially and economically disadvantaged people of the world, given their inability to adapt quickly to a changing climate. There is a growing understanding of the serious social, environmental and economic consequences of ignoring the threat of human induced climate change. Thus, it is imperative that all levels of government act to reduce the risk, and the community's exposure, to the adverse consequences of climate change.

Carbon neutrality is a term used to describe the achievement of zero net greenhouse gas emissions. It is used in the context of greenhouse gas releasing processes associated with transportation, waste, energy production/consumption and various industrial processes. Greenhouse gas emissions are made up of a number of gases, each adding different levels of warming to the atmosphere. The main greenhouse gases are carbon dioxide, methane, nitrous oxide and fluorocarbons

The framework for achieving carbon neutrality involves setting objectives, identifying the appropriate technology to deliver the outcomes, creating timeframes, responsibilities and budgets, and being flexible enough to allow for adaptation to changing science, new technologies, government policies and community expectations.

People can take steps towards being carbon neutral by switching from emissions-intensive transport modes to less-intensive modes such as walking and cycling, using alternative fuels (such as biofuels) when they become widely available, and/or using renewable energy sources (such as wind and solar) that reduce or eliminate greenhouse gas emissions. Where it is impossible to avoid fossil fuels, people can focus on efficiency to reduce their fossil fuel use to a bare minimum. This will move them closer to the goal of carbon neutrality.

Best practice for organisations and individuals seeking carbon neutral status entails reducing and/or avoiding carbon emissions first so that only unavoidable emissions are offset.

Peak Oil

Transport is an essential human need as the ability to move people and goods promotes social interaction and economic prosperity, and is almost universally acknowledged to be one of the most important prerequisites to achieving improved standards of living. The current transport system is highly dependent on oil and is thus vulnerable to changes in its availability and price.

Peak oil is generally defined as the point at which the maximum rate of global petroleum extraction is reached, after which the rate of production enters continuous decline. In other words, oil production can no longer keep up with growing demand. According to the International Energy Agency, production of conventional crude oil peaked in 2006.

The impact of peak oil will depend heavily on the rate of decline and the development and adoption of effective alternatives. If alternatives are not available in time, the products produced with oil (including fuels) would become scarce and expensive. Recent international government studies state that as peak oil is approached, liquid fuel prices and price volatility will increase dramatically, and that the economic, social, and political costs will be significant.

Peak oil could affect accessibility and mobility, in particular for those communities most dependent on the automobile to meet their travel needs. Thus, the promotion of a more sustainable transport system can help to safeguard the quality of life and prosperity of our communities, especially for those living in more isolated areas or with mobility limitations.

Council has an existing Peak Oil Strategy. This strategy:

- Acknowledges that peak oil is a serious risk to the Council and Community;
- Commits Council to an oil depletion protocol with a commitment to a 3 percent reduction in oil per year starting from the 2008/09 financial year;
- Sets a reduction target for Council oil usage of 50 percent by 2025;
- Sets a target for Council of 1.5 percent per year of increasing the Eco-buy purchasing of green products; and
- Commits Council to an annual action plan that addresses both long term transition and oil shock scenarios.



Transport system – the current context

Maribyrnong is strategically positioned as the western gateway to Melbourne's central region, including the Melbourne CBD and the Port of Melbourne. The map in Figure 1 illustrates the strategic location of Maribyrnong and the interaction between key areas within the municipality and adjacent municipalities. Maribyrnong is also located on the main corridor linking central Melbourne with the substantial outer growth regions located on the western edge of the metropolitan area. Furthermore, several road and rail links to the important regional centres of Geelong and Ballarat also pass through the municipality.

Major interstate, intra-state and suburban rail routes converge at Footscray and provide the core of an excellent and well patronised public transport system, as well as opportunities for freight movement. The city is traversed by five important east-west arterial roads and adjoins the Westgate Freeway, which provide access to the Melbourne CBD, the Port of Melbourne and major road and rail freight terminals between the Maribyrnong River and the Melbourne CBD.

A number of these east-west routes are narrow, highly congested at times and generate much complaint from residents and traders about the degree of heavy truck traffic. The two available north-south arterial road routes through the City are disjointed and extremely inefficient. In addition, there are no effective north-south road routes in the 10 kilometres between City Link and the Western Ring Road. The map in Figure 2 shows 24-hour traffic volumes on key routes in Maribyrnong. The numbers represent weekday average two-way flows on these routes.

Within this framework Maribyrnong's existing transport system is under significant pressure.

At peak times, much of the arterial road system is congested, the rail system is struggling to meet demand and the tram and bus networks are slow and crowded (with their efficient operation further hampered by needing to share road space with heavy commuter traffic). Thus, the impact of accommodating generous mobility for private vehicle is significant, particularly in terms of greenhouse gas emissions, congestion and health problems due to lack of physical activity. Transport system priorities need to shift and support lower car dependency. While the central and south eastern portion of Maribyrnong is well served by the passenger rail system, and is complemented by bus services, the northern and western parts of the municipality are almost exclusively reliant on trams and buses – whose coverage and frequency could be improved.

With the significant residential and employment growth forecast for the western metropolitan growth areas, enhanced train links to the central city are essential to maintaining regional accessibility while mitigating the growth of vehicle traffic demand through the municipality. Significant population growth is also expected within Maribyrnong, as Footscray CAA continues to grow and development at Highpoint and the Maribyrnong Defence Site take place.

The Regional Rail Link (RRL) is a major new rail line that will provide capacity for enough extra train services for up to 9,000 passengers across the Melbourne and country rail networks in the peak period. It will enhance connectivity to the CBD, with Footscray strategically located as the focal point for the inner urban west. Footscray station will be enhanced with a wide range of upgraded station amenities. RRL separates regional trains from metropolitan trains – for the first time giving Geelong, Bendigo, and Ballarat services their own dedicated tracks through the suburban system from Sunshine to Southern Cross Station, increasing capacity and reliability.

Figure 1: Strategic Location of Maribyrnong and Interaction with Neighbouring Areas

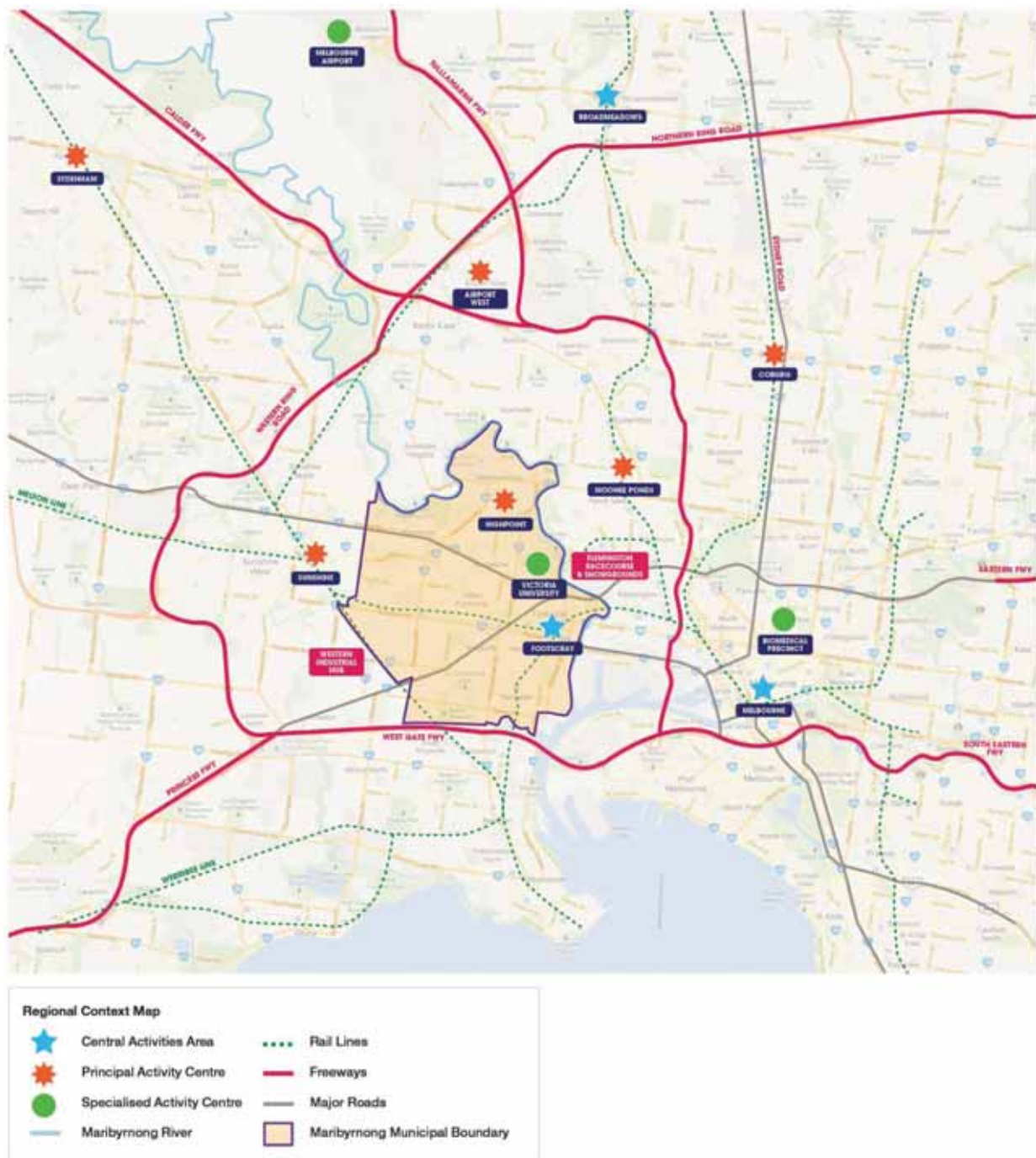


Figure 2: Traffic Volumes on Key Routes in Maribyrnong



The two tram routes within Maribyrnong (57 and 82) have the potential to provide faster and more frequent service and contribute to development along their respective corridors as well as linking key development nodes within Maribyrnong. In addition plans for the emerging “activity bridge” between the Melbourne CBD and Footscray through renewal of the Dynon North areas offers the opportunity for new public transport services along the Dynon Road corridor – potentially in the form of a new tram route linking Footscray to the CBD at Spencer Street.

Buses in Maribyrnong represent one of the main public transport choices for the local community but greater service provision and frequency is required. Many routes experience delays through sharing road space with cars. This is increasingly evident on key links such as Williamstown Road and Moore Street. The issue of a central bus interchange in Footscray is unresolved – despite the bus/train transfers being the highest in metropolitan Melbourne.

Maribyrnong is also at the crossroads of many of Melbourne’s freight movements, including movements between the Port of Melbourne, the South Dynon precinct, and the industrial areas and freight / logistics areas both within the municipality and in areas to the west and north. Many of these freight movements are not being attracted onto the freeway network and therefore take place on more sensitive roads passing through the municipality’s residential precincts. This creates significant adverse impacts on the amenity of local communities.

Following release of the East-West Link Needs Assessment (EWLNA) report in 2007, the Government commenced planning studies into projects designed to improve transport connections to support growth in the west and address truck issues. The investigations have become known as WestLink and the Truck Action Plan. Both these projects are under review by the current State government.

The map in Figure 3 shows indicative alignments for the major potential transport infrastructure investments being considered for the west and affecting Maribyrnong.

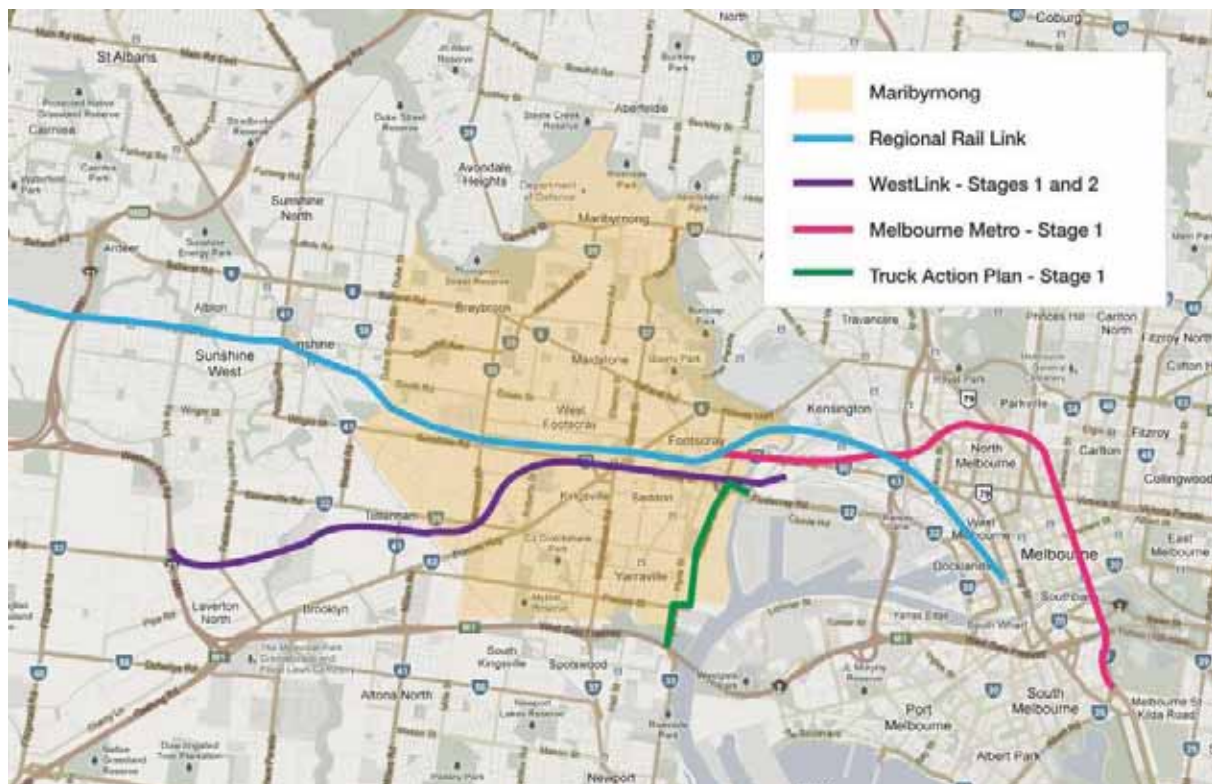
WestLink is a potential road project that would link the Port of Melbourne precinct to the Western Ring Road. The early Government planning for WestLink has identified the need for a 6-lane traffic cross-section (3 lanes in each direction). This link has been the subject of a planning and consultation study started in 2009 and expected to be finalised by the end of 2011.

The Truck Action Plan is currently envisaged a 2-stage project that aims to reduce truck traffic on residential streets in the inner-west and improve freight access from the west to the Port of Melbourne. While some planning work has been completed no funding has been allocated. The proposed road network improvements are designed to reduce truck volumes on Francis Street and Somerville Road.

Stage 1 involves the construction of new ramps connecting the West Gate Freeway and Hyde Street, enhancing access to the Port via Footscray Road. Hyde and Whitehall Streets will be upgraded and Shepherds Bridge strengthened to ensure appropriate access for heavy vehicles. Stage 2 involves an upgrade to Sunshine Road, Dempster Street and Paramount Road and has been combined with the WestLink planning study.



Figure 3: Major Potential Transport Infrastructure Investments – Indicative Alignments



Source: Adapted from State Government Planning Documents



Strategic Context

MITS complements other Council, state and federal strategy documents relating to transport.

The Maribyrnong City Council Plan 2009-2013

The Council Plan 2009-13 was developed with extensive community consultation. It outlines Council's long term vision, six key commitment areas, strategic objectives and strategies. The integration of the Municipal Public Health Plan into the Council Plan also ensures community wellbeing has a central focus. Council's long term vision is for *'a diverse, vibrant, and proud city focused on people-based places, environmentally sustainable practices, and opportunities to enhance community health and wellbeing through education, responsive services and participation in community life.'*

The six key commitment areas identified to achieve this vision are:

- Building Community Spirit, Engagement & Places
- Prosperity
- Moving Around the City
- Amenity
- Environmental Sustainability
- Organisation Performance

The areas most relevant to the MITS include:

- Moving Around the City: We will plan, implement, manage and advocate for transport and parking systems for the city that will enable people to get around safely at their destination, with a positive impact on community well-being and the environment
- Amenity: We will create a well-planned City and improve its amenity by creating streets, neighbourhoods, and public places that are safe, sustainable, well used and the pride of the community
- Environmental Sustainability: We value our precious environmental resources. In partnership with our community we will lead, trial and promote sustainable practice

Municipal Strategic Statement

The Municipal Strategic Statement (MSS) expresses Council's 10–15 year vision for the land use, planning and development of the municipality. Many of the objectives and strategies of the MSS focus on encouraging sustainable transport practices such as walking, cycling and use of public transport. The MSS introduces the ability to request green travel plans where appropriate and reflects planned improvements to the transport network, including State Government projects.

Maribyrnong Walking Strategy (2011)

The key objectives for the Maribyrnong Walking Strategy are:

1. Making walking the preferred choice of travel mode for short trips
2. Raising the profile of walking
3. Decreasing car dependency
4. Making walking more attractive and accessible for all
5. Improving walkability by an integrated approach within Council
6. Better use of planning tools to improve walkability
7. Increasing walking in the transport mode share for Maribyrnong.

The Walking Strategy lists a package of new and existing actions to improve the pedestrian environment, increase walking rates and meet identified community needs. Each action has been allocated a timescale for completion.



Road Safety Plan 2007-2011

Council adopted the Road Safety Plan in November 2007. It was developed in consultation with the community and relevant authorities. The vision of the Maribyrnong City Council Road Safety Plan 2007 to 2011 is to:

Reduce the risk of injury on our roads and paths, so that people of all ages and abilities are free to travel on the road and path network to their chosen destinations, safely and with confidence.

Actions in the Plan have been designed to:

- meet new challenges
- take advantage of new and better resources and programs
- move on from actions that may have proved difficult to implement effectively
- consolidate those actions that have been successfully implemented
- address the strategic goals of sustainability, walkability and cycling

Key themes addressed by the Plan include:

1. Coordination and leadership of road safety planning and action
2. Road safety promotion at schools and safe school travel
3. Developing and maintaining a safe road and path network
4. Young children and their families
5. Pedestrian, wheelchair and motorised scooter safety
6. Safer cycling
7. Safer driving, safer cars, and safer motorcycling



Maribyrnong Strategic Bicycle Plan

In 2004, Council adopted the Maribyrnong Strategic Bicycle Plan. This plan provides Council with a framework for improving cycling facilities within the municipality. It is a ten-year plan that identifies a bike path network for Maribyrnong and ways to promote and encourage more people to cycle more often.

Issues covered in the Plan include:

- Road safety for cyclists
- Safe cycling routes to school
- Traffic calming measures
- Community education and lighting requirements



Metropolitan Planning Strategy

The State Government has commenced development of a new metropolitan planning strategy for Melbourne. The strategy will draw on the most recent information on population growth and housing capacity. It will include a comprehensive process of community and stakeholder consultation.

State Planning Policy Framework

Through the State Planning Policy Framework, the State Government has identified Central Activities Areas (CAAs), as the focus for significant future housing and commercial development, allowing Melbourne to move away from a single Central Business District. CAAs will be the location of a substantial proportion of future employment growth and public investment in Melbourne and regional centres. Within Maribyrnong, Footscray was identified as a CAA.

CAAs are a whole of Victorian government priority and are being delivered in partnership with councils, private sector and the local community. They are expected to provide:

- Significant CBD-type jobs and commercial services
- A strong and diverse retail sector
- Specialised goods and services drawing on a large regional catchment
- Significant opportunities for housing redevelopment in and around these centres
- High levels of accessibility for walking, cycling, public transport or car by being located at a junction in the Principal Public Transport Network
- Vibrant centres of community activity with a range of public facilities

It is expected that *Melbourne @ 5 Million* will be superseded by the new Metropolitan Planning Strategy.



Transport Integration Act

The Transport Integration Act 2010 is the prime transport statute in Victoria, having replaced major parts of the former Transport Act 1983. The purpose of the Transport Integration Act is to "...create a new framework for the provision of an integrated and sustainable transport system in Victoria." It broadly seeks to unify all elements of the Victorian transport portfolio to ensure that transport and land use agencies work together towards the common goal of an integrated and sustainable transport system. Council has responsibilities as an interface body under this Act. Many of the organisations Council works with regarding transport issues are also influenced by this Act, either as transport bodies or interface bodies.



Climate Change Act

The Victorian Climate Change Act came into effect on 1 July 2011. The Act recognises the overwhelming scientific consensus that human activity is causing climate change. It also identifies the need for a collective response to climate change – with responsibility shared by all levels of government, industry, communities and the people of Victoria.

The Act highlights that Victoria is particularly vulnerable to the adverse effects of climate change and promotes early action to reduce greenhouse gas emissions in order to ease the task of long term transition to an environmentally sustainable economy.

Early action is also expected to mitigate any economic and social impacts, ensuring Victoria remains a prosperous and sustainable State (while accepting that some changes in the earth's climate are inevitable, despite all mitigation efforts).

The Act enshrines an emissions reduction target of 20% below 2000 levels by 2020 (the 2020 target) in legislation for the first time. It requires the Minister for Environment and Climate Change to ensure that this target is achieved, without specifying how it will be met.

The Climate Change Act has also led to amendments to other Acts, including the Transport Integration Act (TIA) 2010. Section 10 of the TIA now reads as follows:

The transport system should actively contribute to environmental sustainability by –

- (a) Protecting, conserving and improving the natural environment;
- (b) Avoiding, minimising and offsetting harm to the local and global environment, including through transport-related emissions and pollutants and the loss of biodiversity;
- (c) Promoting forms of transport and the use of forms of energy and transport technologies which have the least impact

on the natural environment and reduce the overall contribution of transport-related greenhouse gas emissions;

- (d) Improving the environmental performance of all forms of transport and the forms of energy used in transport;
- (e) Preparing for and adapting to the challenges presented by climate change.



Australian National Cycling Strategy 2005-2010

The Australian National Cycling Strategy 2005-2010 has been developed as a coordinating framework identifying responsibilities that lie with the various levels of governments, community and industry stakeholders to encourage and facilitate increased cycling in Australia.

The Strategy identifies actions that will ensure the continued growth of this important component of Australia's transport system.

The Strategy aims to enhance the well-being of Australians by further increasing cycling specifically through:

- Increasing participation in cycling
- Improving safety for cyclists

The Strategy coordinates the resources of the three spheres of government in undertaking actions – across the areas of transport, planning, environment, health, sport and recreation and tourism – to increase cycling in Australia.

National Ports Strategy December 2010

Infrastructure Australia and the National Transport Commission developed a national ports strategy during 2010, following extensive consultation, for consideration by the Council of Australian Governments. The aim was to develop a nationally coordinated approach to the future development and planning of Australia's port and freight infrastructure. It was also hoped that a national ports strategy would help drive greater efficiencies and reduce costs in Australia's trade performance. The strategy was prepared in response to the major challenges from growth in trade facing Australia's ports and related landside logistic chains. It was also recognised that different ports face different challenges. Ensuring adequate capacity and reconciling various parties' interests is important for all ports.

The strategy recognised that ports and related land-side logistics chains are critical to the

competitiveness of Australian businesses, which rely on them to deliver business inputs and to take exports to the global market. Improvements to ports and related logistics sectors can remove barriers and transaction costs to trade, increase competition and contestability, and provide important linkages to domestic and global value chains. Consequently, the performance ports and land-side logistics chains are critical to facilitate innovation, productivity gains and economic growth in Australia.

The national ports strategy covers both bulk commodity ports and container ports, identifying:

- the most effective regulatory and governance frameworks;
- ways to improve land planning and corridor preservation; and
- the future infrastructure requirements of Australia's ports, including road and rail links.

National Urban Policy 2011

In May 2011, the Minister for Infrastructure and Transport released *Our Cities, Our Future - A National Urban Policy for a productive, sustainable and liveable future*. The Policy sets in place the Australian Government's objectives and directions for Australian cities for the decades ahead. It recognises the critical roles that State, Territory and Local Governments, the private sector and individuals play in planning, managing and investing in cities. It also highlights that the Australian Government makes decisions that impact upon urban Australia. The Policy is about how the Australian Government can facilitate better outcomes through both direct investment and by influencing the actions of others. This is the first time that an Australian Government has sought to outline its overarching goals for the nation's cities and play a role in making them more productive, sustainable and liveable.

Infrastructure Australia

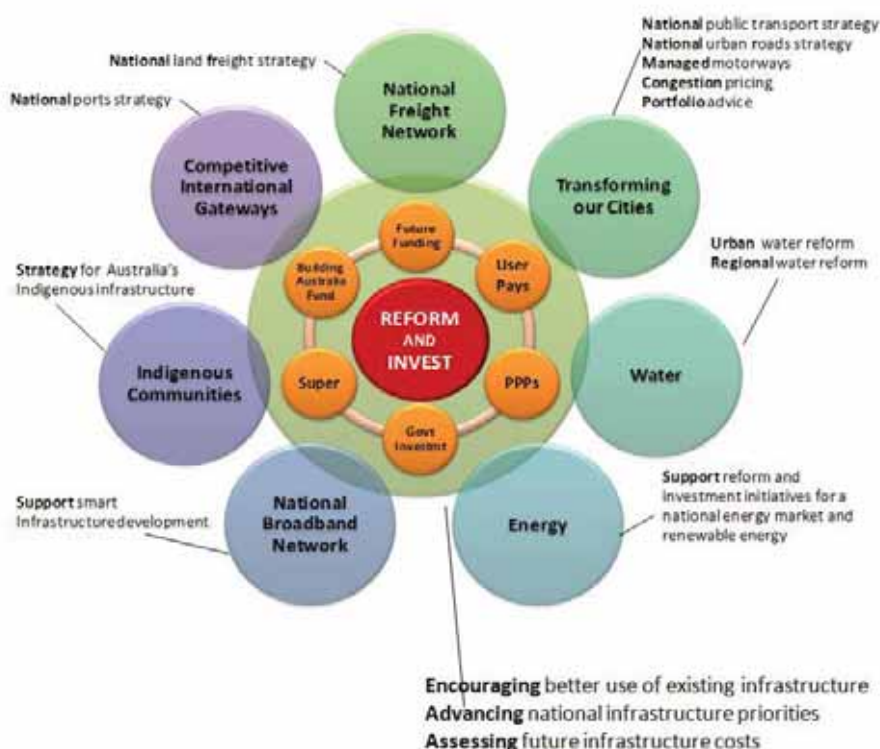
Infrastructure Australia is a statutory body, established under the *Infrastructure Australia Act 2008*. It advises governments, investors and infrastructure owners on a wide range of issues, including:

- Current and future infrastructure needs
- Mechanisms for financing infrastructure investments
- Policy, pricing and regulation and their impacts on investment and on the efficiency of the delivery, operation and use of national infrastructure networks

Infrastructure Australia's focus is on assisting Australian governments to develop a strategic blueprint for unlocking infrastructure bottlenecks and to modernise the nation's economic infrastructure. In its report to the Council of Australian Governments in December 2008, Infrastructure Australia highlighted the need to find ways to make better use of existing infrastructure, to remove bottlenecks and gaps that are holding back Australia's growth, and to identify opportunities for new capital investment. Infrastructure Australia has identified seven national infrastructure themes to provide a framework for action to meet the gaps, deficiencies and bottlenecks in our nation's infrastructure (see

Figure 4):

Figure 4: The Seven National Infrastructure Themes – Infrastructure Australia



Source: Infrastructure Australia 2011

There are nine key challenges to the delivery of national strategic and economic benefits with infrastructure reform and investment initiatives. These are:

Deliver better governance: inefficiencies and inconsistencies in governance adversely impact infrastructure operations and investment in Australia.

Create competitive markets: regulatory complexity and competitive anomalies impede the operation of efficient and competitive infrastructure markets, including the development of a nationwide world-class communications network.

One nation, one set of rules: inconsistent rules, legislation and regulations governing markets impede productivity and create unnecessary costs.

Better use of existing infrastructure: changes in the operation, pricing or utilisation of existing infrastructure to solve problems without the need for investment in additional capacity.

Climate change: in addition to requiring a shift to a low carbon economy, climate change is increasing the demand for improved infrastructure, such as efficient public transport systems and low carbon intensive methods of power generation.

Supporting our cities: improving the liveability, sustainability and productivity of Australia's major cities.

Boosting exports: increasing the productivity of Australia's international gateways, making sure that they can meet the rapidly growing freight task without adverse impacts on community amenity.

Supporting Indigenous communities: improving infrastructure in remote and regional Indigenous communities, and closing the gap in essential infrastructure and services between these and non-Indigenous communities.

Supporting rural communities: improving the quality of life and economic prosperity in rural and regional communities.

A number of initiatives being promoted by Infrastructure Australia are of direct relevance to

Maribyrnong's transport system. In particular, Infrastructure Australia believes that, to maintain the economic success and environmental sustainability of Australia's cities, the time has come for an unprecedented commitment to the creation of world-class public transport in our cities. Infrastructure Australia is therefore recommending, for the first time in Australian history, significant Australian Government investment in public transport in our cities, and funding is therefore available for public transport projects. In addition, funds are also available for other infrastructure improvement projects in areas of relevance for this strategy, such as road flow management and safety.



Transport and Sustainability in Maribyrnong

Council recognises the direct link between travel behaviour and sustainability. Excessive reliance on private motorised travel is associated with greenhouse gas emissions, air pollution, congestion, noise, social consequences, ecosystem impacts, as well as deaths, injuries and physical damage. Accordingly, the transport sector faces a challenging future, particularly given its high dependence on fossil fuels and its significant contribution to energy consumption. A shift to more walking, cycling and public transport use will therefore not only help to create a healthier community but it will also help to reduce a range of harmful emissions.

Cars are significantly more energy and emissions intensive (on a passenger-kilometre basis) than public transport; the difference is even greater relative to non-motorised transport (walking and cycling). Thus, it is essential to sharply reduce the growth in car travel, promote travel mode shift and behavioural change, and achieve greater efficiency in using currently available road space and transport infrastructure. In achieving these objectives, it will be necessary to develop an integrated transport strategy that responds to the growth expected in Maribyrnong and redefines wherever possible the transport user hierarchy (pedestrians first then cyclists then public transport users and then car drivers) to encourage a reduction in car travel and a modal shift.

Cities and countries with high levels of non-motorized travel have significantly lower transport emissions (on a per capita basis) than more car-dependent societies. Consequently, promoting a shift to more energy- and emissions-efficient modes (walking, cycling and public transport) in urban areas can considerably reduce transport greenhouse gas emissions.

Within this context, when considering Maribyrnong's current performance, it is useful to consider the mode share for two common trip types – the journey to work and travel to school.

Residents of Maribyrnong already exhibit travel behaviour that is more sustainable compared to the average for the metropolitan area. At the 2006 Census, 53.3% of Maribyrnong workers travelled to work as car drivers, compared with 61.1% across the metropolitan area. In addition 20.2% of residents used public transport against 11.7% in the wider metropolitan area.

However behaviour varies significantly across the municipality. Footscray performs best in terms of lower car dependency – with 43.1% of people travelling to work as car drivers and 28% using public transport. Footscray also exhibits some of the highest walking and cycling rates in the municipality with 5.3% and 2.6% respectively using those modes for the journey to work.



In contrast the worst performing area in terms of car dependency is Braybrook, as 60.9% of people travel to work as car drivers and 14.8% use public transport. Braybrook's walking and cycling rates are also the lowest in the municipality at 1.5% and 1% respectively. Other areas that exhibit high car dependency (with over half the proportion of people travelling to work as car drivers) are Maidstone (59%), Maribyrnong (58.8%), Kingsville (55.5%), Yarraville (54.4%) and West Footscray (53.6%). The only suburb, in addition to Footscray, where less than half the people drive to work is Seddon (47.4%). It also exhibits good public transport usage at 25.5% and walking and cycling rates are significant at 3.7% and 3.8% respectively.

Council has also examined travel patterns for school journeys. Nearly 40% of students continue to travel by car to school. Travel by bus (19%) and walking (16.7%) were the next highest transport modes. For primary schools, 38.2% of students travelled less than 1 kilometre to get to school and the majority (67.4%) travelled less than 2 kilometres to school. In comparison, only 14% of secondary students live within 1 kilometre of their school; however, a large proportion of students live within 5 kilometres (47%). Nearly a third of secondary students (31%) travelled more than 10 kilometres to get to school.

Thus, while some existing travel patterns are encouraging, it is evident that more can be achieved to increase the use of sustainable transport modes.



Pedestrian and cycling activity can play a crucial role in reducing the overall impact of transport systems and promoting long-term sustainability. Some of the main benefits that can be achieved through increased walking and cycling activity are shown in Figure 5.

Figure 5: Walking and Cycling Benefits

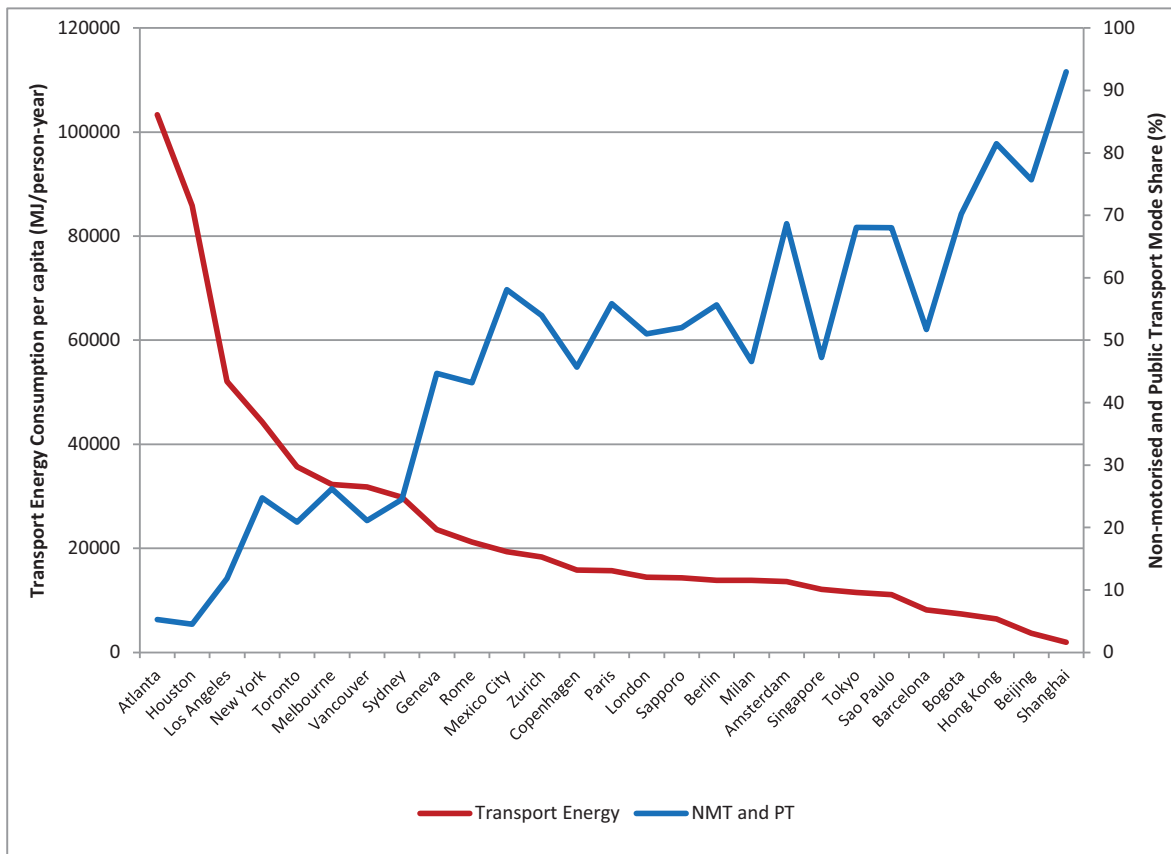


Increased levels of walking and cycling can therefore deliver significant environmental benefits. Together with higher public transport mode shares they can also significantly contribute to lowering per capita transport energy consumption. Figure 6 illustrates such a trend – by taking data from 27 major cities worldwide – across all regions. While metropolitan Melbourne’s per capita transport energy consumption is significantly lower than North

American cities such as Houston, Los Angeles and Atlanta, Melbourne still consumes significantly more transport energy (2 to 3 times as much) than cities that exhibit much higher walking, cycling and public transport usage, including Milan, Singapore, Hong Kong, Barcelona, Berlin and London.

Thus, achieving higher walking, cycling and public transport mode shares can directly contribute to a major reduction in emissions.

Figure 6: Relationship between Mode Share of Sustainable Travel Modes and Transport Energy Consumption



Source: Adapted from Mantilla and Pelosi 2010

Transport System Hierarchy

In managing and developing a safe and well-connected transport system, the City of Maribyrnong will give consideration and priority to transport modes in the following order:



Land Use & Development

The integration and coordination of land use and transport in Maribyrnong can play a crucial role in creating connected communities and promoting sustainable travel behaviour. Effective land use and transport integration will promote sustainability through an urban environment that reduces the need for travel and distances travelled, enhances access to goods, employment and services, provides a variety of equitable and affordable travel alternatives, and promotes the use of sustainable modes of transport.

Emerging Trends

The City of Maribyrnong is changing, as Melbourne's inner western suburbs experience significant residential growth and gentrification, together with changes in industry structure. The municipality – traditionally a manufacturing hub – is undergoing a significant amount of change. With the closure and redevelopment of defence and industrial sites, the municipality has experienced (and will continue to experience) considerable changes to its economy, pattern of land uses and population.

The draft Maribyrnong Economic Development Strategy acknowledges that achieving growth and balance between population and industry will be important for economic stability and to support social and community outcomes.

Achieving a sustainable Maribyrnong will be dependent upon the balance between population growth and provision of employment

opportunities to support the local population. This, in turn, will require strategic land use planning to reduce the current land-use conflicts presented within the City to encourage both residential and industry investment. It will also require appropriate densification and greater mix of land uses – where the nature of commercial/industrial uses does not pose a risk or nuisance to residents.

For more than a decade the City's population has been steadily increasing and in 2009 was estimated at nearly 70,000 people living in around 30,000 residential dwellings. Forecasts show a population increase to 103,000 by 2030.

Over the next 20 years approximately 20,000 additional dwellings will be needed within the municipality to accommodate this growth, of which around 8,500 are expected to be located within Footscray.

With an increasing proportion of Melbourne's growth expected to occur within established suburbs and at higher densities, this forecast may increase in the future.

The City has a range of housing comprising detached housing (61%), medium density (27%), and some higher density housing (4%). Recent significant developments indicate densities are increasing with more medium-density housing forms and some high-density developments, particularly within the Footscray CAA. In the future, there will be an increasing amount and overall proportion of medium and higher density housing in the municipality. The City also has a relatively high proportion of public housing stock (6%), which is predominantly located in Braybrook, Maidstone and parts of Footscray.

The future population and housing composition of the municipality will be determined to a great extent by the nature of future development. Residential growth within the municipality will be accompanied by growth in neighbouring areas, particularly in the City North and Arden Macaulay areas within the City of Melbourne (creating an activity bridge between the northern edge of the CBD and Footscray) and the throughout Hobsons Bay, including several within the northern area of this municipality.

The City has opportunities for significant residential redevelopment for the next 10-15 years that will cater for the forecast population and housing increase. Substantial, Incremental and Limited change areas have been identified in the Housing Framework Plan of the Maribyrnong Municipal Strategic Statement (MSS) (see Figure 7).

Within Maribyrnong, most of the residential development will occur on identified key strategic redevelopment sites and in the Footscray CAA and Highpoint Principal Activity Centre, while more limited change will occur in established residential areas.

Substantial residential development is expected to occur on former defence and industrial sites. Significant redevelopments are proposed for the Maribyrnong Defence Site, Kinnears site Footscray, former Defence site Beachley Street Braybrook and the Bradmill Precinct in Yarraville. Residential development within neighbourhood centres such as Yarraville, Seddon and West Footscray will be smaller in scale. Significant upgrade to transport facilities and services to support this growth is required.

The mixed use and residential developments occurring in key activity centres will continue and increase. This will extend housing choice, improve access to infrastructure, services and transport for residents and will help support and broaden the function of centres.

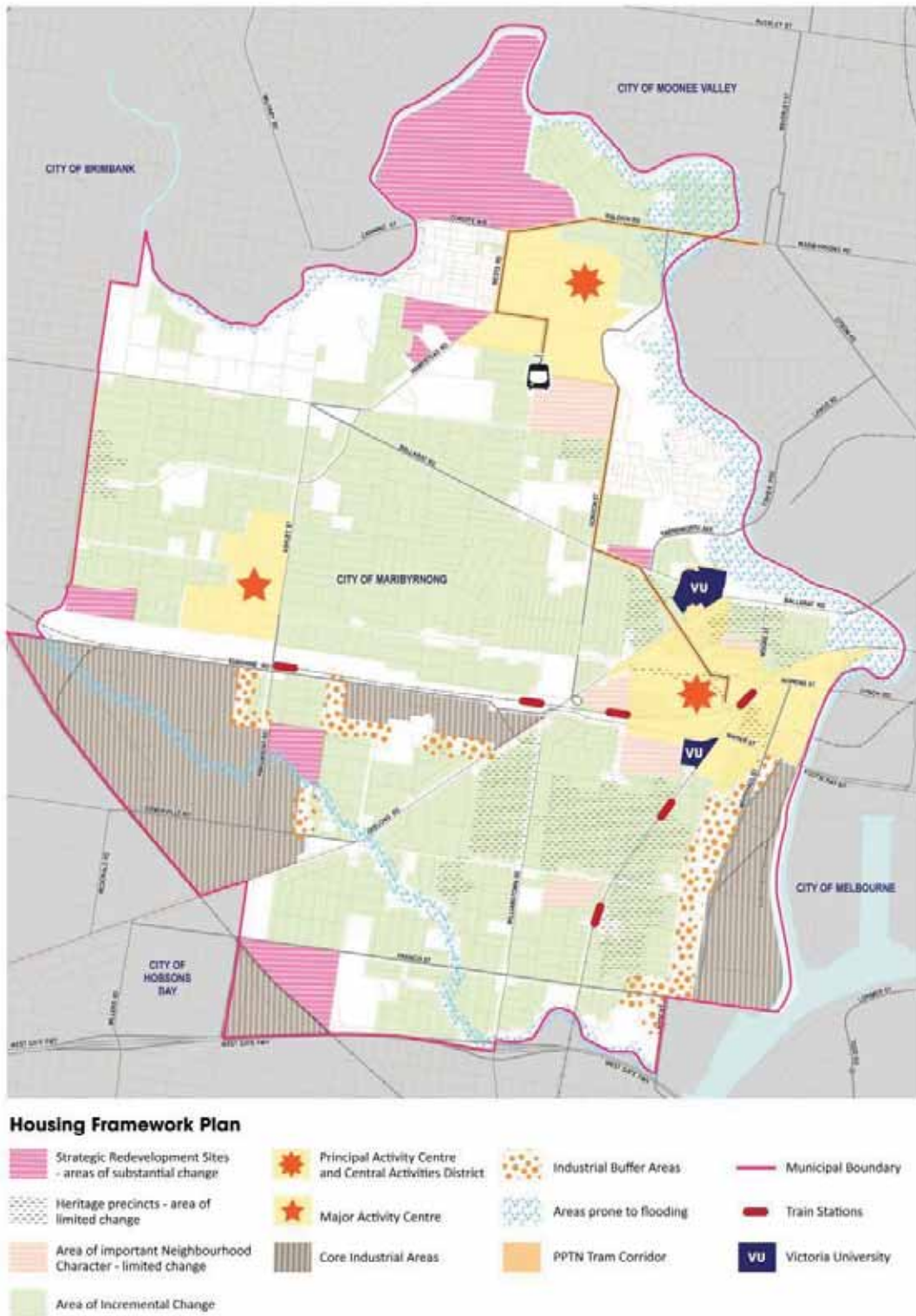
Areas with heritage significance, or an identified residential character warranting protection, are identified as limited change areas.

Other residential areas across the municipality are identified as areas of incremental change. These areas will be characterised by medium density infill development, which will be guided by preferred character statements and design guidelines.

Core industrial areas, key passenger and freight transport corridors and major hazard facilities need protection from residential encroachment to maintain their viability and prevent adverse risk and amenity impacts.



Figure 7: Maribyrnong Housing Framework Plan



Municipal Strategic Statement

In response to the growth challenge for Maribyrnong, Council has recently amended its MSS. The MSS sets the strategic direction for the City of Maribyrnong. The MSS incorporates the broader strategic directions of Melbourne 2030 and seeks to implement these directions through the local strategic vision based on the key land use and development issues within Maribyrnong.

A key policy direction within Melbourne 2030 is accommodation of growing population while ensuring protection of character and heritage. The new MSS addresses these issues in the identification of areas of substantial, incremental and limited change.

The MSS states that the City's activity centre network has limited transit orientation. Footscray and Yarraville are the only two centres with a train station in the heart of the centre. Buses serve most centres and are the main form of public transport. The majority of centres are on (or immediately adjacent to) busy roads and concentrate on exposure to passing car traffic rather than interaction with pedestrians.

At the same time, the MSS recognises that Maribyrnong's proximity to the Melbourne CBD allows for convenient access to employment, education, retail and business services. It further states that the transport network is dominated by the major east-west arterial roads and key passenger and freight rail lines that run through the municipality and provide essential links interstate.

The MSS also acknowledges that north-south road connections are limited and need upgrading to improve links between the major east-west arterial roads.

The MSS also states that Maribyrnong is generally well served by public transport, although suburbs to the north and west are not well served by rail services and are more dependent upon bus services. The city's two tram routes (57 and 82) link the Footscray CAA with the Highpoint Principal Activity Centre and provide access from northern Maribyrnong to Moonee Ponds and the Melbourne CBD. With service improvements these routes can improve the access residents have to key activity centres and employment based in the Melbourne CBD, as well as increasing the use of sustainable transport.

The redevelopment of the Maribyrnong Defence Site provides an opportunity to extend the tram route connecting Footscray and northern Maribyrnong, further improving public transport access to this area. The MSS identifies that development along this route is likely to take the form of 'development nodes' rather than continuous linear development, as is already occurring between Footscray CAA and Highpoint PAC.

The MSS also provides policy direction regarding sustainable transport and outlines the ability to require green travel plans where appropriate. Footscray CAA is identified as a transport hub making the centre suitable for encouraging less car use and reducing car parking provision in developments. The MSS provides support for car parking dispensations for developments that are well served by public transport and that prepare and implement green travel plans.

Future Growth

The new MSS provides a strong foundation for Council to appropriately and sustainably manage the anticipated growth in Maribyrnong.

The MSS sets out a clear framework for developers to deliver 'self-sufficient' and sustainable communities that provide high levels of 'proximity' (a balanced combination of density and diversity measured in terms of the accessibility to destinations for their residents).

The shorter distances between destinations in Maribyrnong will allow people to live within walking or cycling distance of some of their destinations, such as work, school, shops, and parks—and easy access to public transport to reach farther destinations. In particular, it is important where possible that local facilities such as primary schools and local activity centres are provided throughout the municipality within walking distance of residents.

Car ownership will be lower, car trips shorter and less frequent, and walking, cycling and public transport will have a larger share of the overall travel demand.

Overall, these developments should result in the smallest number of 'external' trips by 'internalising' trips, so that residents can live, work and play within relatively small contained precincts readily accessible on foot, bike and by public transport. Promoting proximity can thus effectively and readily promote transport sustainability in Maribyrnong.

The MSS provides guidance to focus on the role of activity centres as places that can encourage sustainable transport practices such as increased walking, cycling and use of public transport.

The vision for the activity centre network is for a variety of easily accessible, pleasant and safe places where people can gather, socialise, shop, work, live, be entertained and make use of many kinds of community and leisure services without having to travel far.

The MSS provides guidance to continue and increase the development of mixed use and residential communities in key activity centres. This will extend housing choice, improve access to infrastructure, services and transport for residents and will help support and broaden the function of centres.

Overall, the MSS provides a clear framework to help the City of Maribyrnong to become a popular inner city municipality with a vibrant and diverse community, a strong identity and a prosperous modern economy.

An important element for achieving this aspiration is ensuring that new development in the municipality is in accordance with DOT's *Public Transport Guidelines for Land Use and Development*. Significant government investment will be required to ensure the projected levels of development are supported by growth in public transport facilities and services.



Policy 1: Research the link between transport and activity intensity within Maribyrnong

Issues and Justification

Maribyrnong, as much of metropolitan Melbourne, is characterised by low levels of residential and employment density, relative to those of cities of similar size around the world. Recent studies in Australia and internationally show that pedestrian, bike and public transport trips increase (and car use decreases) in the presence of mixed uses of land, improved street connectivity, and higher employment and population density at the origin and the destination. Figure 8 shows data from 27 cities around the world, and demonstrates

that cities with higher levels of activity intensity (residential and employment density) generally have higher levels of walking, cycling and public transport. For example, people in cities that have activity intensity levels of around 50-100 residents and jobs per hectare (such as Geneva, Zurich, Paris Barcelona, Amsterdam, Rome and Berlin) drive between two and five times less than the average Melbournian. Therefore, by reducing the distance between destinations (mainly through increased density and mix of land uses), walking, cycling and public transport can become the preferred travel options for the majority of trips.

Figure 8: Relationship between Mode Share of Sustainable Travel Modes and Activity Intensity



Source: Adapted from Mantilla and Pelosi 2010

The 2006 Census revealed that those areas with the highest levels of residential density exhibit the most sustainable travel behaviour (see table below). Similar data has not yet been obtained for employment in each suburb.

Parts of the municipality have residential densities that, when combined with their respective job density, are expected to already be in the range of activity intensity (the combination of residential and employment density) that is most suited to support sustainable travel behaviour.

More specifically, suburbs such as Seddon (50 residents per hectare) and Footscray (over 23 residents per hectare) collectively provide jobs for around 12,000 workers – out of the municipality's total of 35,000 jobs. This represents an average job density of approximately 40 jobs per hectare across the two suburbs. Thus, the total activity densities in Seddon and Footscray are in the order of 90 and 63 residents/jobs per hectare respectively – even without taking into consideration the number of students in these areas.

These levels of activity intensity are comparable to those of many European cities that exhibit very low levels of car dependency. Not surprisingly, Footscray and Seddon perform best in terms of low car dependency for journeys to work – with 43.1% and 47.4% respectively. Additional research needs to be undertaken to establish employment data for the individual suburbs. If a correlation is found between travel behaviour and activity intensity, other precincts within Maribyrnong should be progressively developed to achieve similar levels of activity intensity accompanied by lower car use.

These findings support the goals established in the Economic Development Strategy with respect to the importance of providing employment opportunities to support the local population (as well as appropriate levels densification and greater mix of land use) to promote sustainable outcomes in Maribyrnong.

Table 1: Demographic and Journey to Work Data for Suburbs in Maribyrnong

Suburb	% of People who Travel by Car to Work	Land Area (hectares)	Population Density (people/hectare)
Braybrook	68%	433	16
Footscray	48%	501	23
Kingsville	62%	72	46
Maidstone	66%	316	19
Maribyrnong	65%	549	15
Seddon	52%	92	50
West Footscray	59%	593	16
Yarraville	59%	565	22

Source: Australian Bureau of Statistics 2006

In addition to the need to encourage a greater diversity and density of population and jobs across the identified growth areas in Maribyrnong, there is also a need to consider the travel needs students attending Victoria University. The map in Figure 9 shows the distribution of students by post code of residence. It is clear that the majority of students live outside the municipality, with the greatest concentrations found in the municipalities of Wyndham, Brimbank, Hobsons Bay, Melton, Hume and Moonee Valley.

Given the distances involved and, in some instances, the scarcity of convenient public transport services, it is not surprising that many students elect to travel by car. Availability of more affordable student housing in convenient proximity to the Victoria University campuses could help to reduce the students' car dependency. International studies show that providing a variety of housing alternatives in proximity to educational institutions is an important factor in promoting students to live close by.

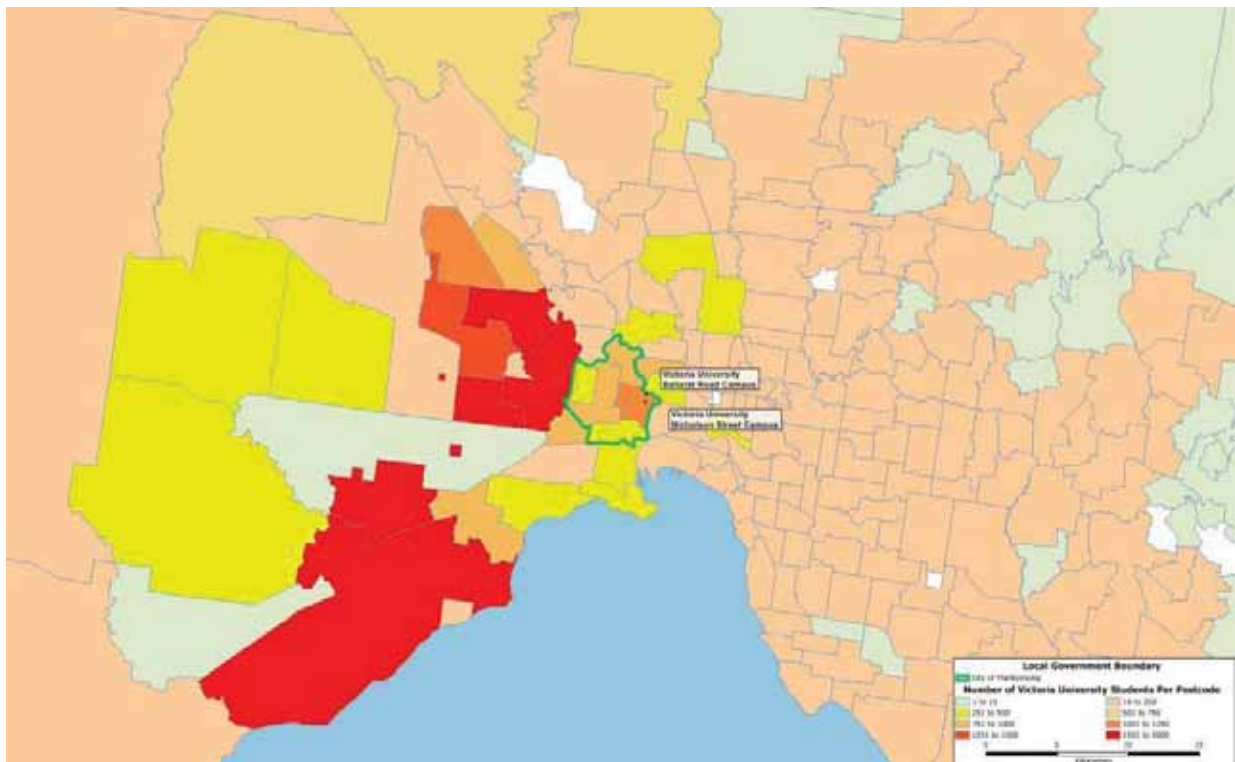
Actions

Action 1.1: Undertake further research to determine the link between travel choice and activity intensity within Maribyrnong, and to determine the most appropriate jobs and commercial uses that will promote the most sustainable travel behaviour outcomes while optimising economic vitality within the Maribyrnong social and cultural context.

Action 1.2: Collect data by suburb on employment density to understand better where and how to intervene (what types of jobs and how many in each suburb).



Figure 9: Distribution of Tertiary Students attending Victoria University



Source: Victoria University 2011



Policy 2: Require developers to contribute to the provision of sustainable transport infrastructure

Issues and Justification

There are various mechanisms in Victoria to seek contributions by developers for the provision of road and public transport infrastructure, including walking and cycling facilities, in major developments.

In inner urban areas, the relevant development mechanisms are:

- Development Contribution Plans
- Section 173 Agreements

Development contributions are payments or works in kind provided by developers towards the provision of infrastructure, such as roads, storm water run-off management systems, open space and community facilities required to meet the future needs of local residents.

The State Government is currently reforming the development contribution system to improve the way it is administered, provide greater certainty and transparency, and reduce the time and cost to prepare a contributions plan. Importantly, the new system will establish development contributions for different categories of land use, and will allow councils the ability to tailor local schedules. A reformed developer contribution system is expected to be ready for implementation in early 2012.

Development contributions have long been a fundamental part of the urban development process in Victoria and in other Australian states, with essential infrastructure being directly provided by developers for many decades.

In practice, development contributions are a means of sharing the cost of providing a community with the infrastructure that satisfies its economic and social needs. While government will continue to meet the majority of the costs for most infrastructure needs, it is important that developers contribute fairly. This is particularly relevant since many decisions by State or local government to designate, rezone or subdivide land for urban development creates significant increases in land values that developers benefit from.

The preparation of a development contribution plan commences with the identification of a development area and the need for and cost of infrastructure that is required in that area. Landholders in the affected area are then required to contribute towards the cost of that infrastructure at an appropriate time – for instance when an application to subdivide a property has been approved.

Section 173 of the Planning and Environment Act 1987 allows a responsible authority to enter into an agreement with an owner of land. An agreement may set out conditions or restrictions on the use or development of the land, or seek to achieve other planning objectives in relation to the land.

The purpose of an agreement is to achieve a wider range of planning objectives for an area or particular parcel of land than is possible when relying on other statutory mechanisms. In addition, agreements can define more detailed site-specific information and include performance criteria and other innovative arrangements for use of the land.

Council should continue to work with the State government for the provision of infrastructure. However, development contributions and section 173 agreements provide viable opportunities to deliver quicker and more relevant action for a given development.

Therefore, Council should also work with developers and relevant State agencies to support the preparation of development contribution plans and section 173 agreements for future development in Maribyrnong (where appropriate), as effective mechanisms to deliver public transport, walking and cycling improvements at an early stage of development. The type of infrastructure will be dependent on the particular needs of each development, but may include construction of bus and tram stops, pedestrian connections to public transport stations and stops, and on-road and off-road bicycle lanes.

Actions

Action 2.1: Work with State agencies and developers to prepare and implement Development Contribution Plans and Section 173 Agreements (where appropriate) to provide public transport, walking and bike infrastructure. Undertake a study to determine those areas within the municipality that would benefit most from the implementation of these planning tools.



Walking

Walkability is a fundamental indicator of a city's liveability. In particular, a safe and pleasant walking environment encourages the use of public transport, has significant health benefits for those taking part, and encourages people to engage with their surroundings. A good city street is a destination in its own right – an experience as well as a thoroughfare.

Maribyrnong Walking Strategy

In 2011 Council adopted the Maribyrnong Walking Strategy (MWS) which aims to raise the priority of walking as a transport mode as well as providing direction for improving the walkability of Maribyrnong. The MWS also aims to help reduce car dependence by making walking an easy, convenient and safe way of travelling.

MITS supports the MWS and provides numerous complementary actions that support walking in the areas of land-use and public transport.

External consultation for the Walking Strategy was conducted through a community survey

which revealed that the main reasons residents walked were for leisure and fitness, to go to the shops and to get to public transport. Results showed that most people walk in local streets, along the river and in local parks for leisure and fitness. The survey identified 3 priority areas for the Walking Strategy:

- Personal Safety
- Improved Footpaths
- Lighting

The MWS sets out a series of actions designed to address the 3 priority areas.



MWS also identifies road safety as a major issue for pedestrians with Maribyrnong having a considerably higher proportion of pedestrians killed and injured than other road user types in comparison to metropolitan Melbourne. On local roads the proportion of pedestrian crashes is double that of metropolitan Melbourne (26% versus 13%) whereas on arterial roads there is less difference in the proportion of pedestrian crashes (11% versus 8%) between Maribyrnong and metropolitan Melbourne. These statistics reveal that pedestrians, despite being the most vulnerable road user group, are over-represented in road crashes. A renewed effort must be devoted to reducing pedestrians' involvements in crashes. Council's Road Safety Plan offers the ideal framework to focus on pedestrian safety issues in the municipality.

Concentrations of pedestrian crashes have been identified in the following locations:

- Footscray Central Business District
- Ballarat Road
- Geelong Road, West Footscray
- Barkly Street, West Footscray
- Somerville Road, Kingsville
- Raleigh Road, Maribyrnong
- Gordon Street, between Ballarat Road and Barkly Street

There is a disproportionate number of crashes on arterial roads and the majority of pedestrian casualty accidents occurred during the day, in dry weather conditions and where there was no form of traffic control (such as traffic lights and pedestrian crossings).

Work is underway to produce a Maribyrnong safe travel strategy to guide road safety within Maribyrnong for 2012-2017 that:

- Reinforces the transport system hierarchy set out in the Maribyrnong Integrated Transport Strategy and ensures that, in the context of addressing climate change and peak oil, the shift to more vulnerable modes such as motorcycling, walking and cycling is central to road safety planning.

- Considers the impact on safety and vulnerability of all road users, with pedestrians and cyclists identified as being the most vulnerable and causing least harm, and car and truck drivers identified as the least vulnerable (as they have the most protection) and more likely to cause greater harm in a crash with more vulnerable road users.



Policy 3: Council supports walking as the mode of choice for the Maribyrnong community

Issues and Justification

Parts of Maribyrnong have many elements to encourage pedestrians – relatively flat terrain and proximity of activity centres of various size. However, more pedestrian-priority space is required in key centres such as Footscray and Highpoint, to improve the walking environment and its connections, and recognise the contribution that pedestrians make to the life of the City.

The walking environment is equally important in local areas of the City, such as Yarraville, West Footscray, Maidstone and Braybrook, as people need to access smaller shopping precincts, schools, community centres, train stations and other public transport facilities.

In parts of the municipality it is currently unpleasant to walk due to the dominance of cars and trucks. Reducing the speed and/or the number of these vehicles will improve the walking environment.

The MSS identifies multiple objectives and supporting strategies to improve walkability across Maribyrnong. More specifically, within activity centres, the MSS promotes the creation of more consistent and active street frontages in existing precincts and as part of new developments. In multi-level developments, Council will generally support prioritisation of retail at ground level with office and/or residential uses above, subject to the particular planning policy applying to specific locations, as identified in the Maribyrnong Planning Scheme and more detailed land use documents such as structure plans.

Actions

Action 3.1: Undertake mobility audits along key pedestrian routes and at key public transport interchanges to identify design opportunities for improved access by people of all abilities, including assessment of ramp grades at road crossings.

Action 3.2: Encourage increased road space allocation for pedestrians, particularly in the activity centres.

Action 3.3: Continue to regularly review footpath condition throughout the municipality and use this information to improve footpath condition to support use by people of all abilities.

Action 3.4: Investigate the provision of additional and/or improved road crossings for pedestrians, and work with VicRoads to implement these.

Action 3.5: Within activity centres, encourage mixed land use with active street frontages and a walkable scale.

Action 3.6: Using the Department of Transport methodology as a guide, develop Principal Pedestrian Networks for the municipality beginning with high volume pedestrian areas such as activity centres. Use these to assist in future planning for pedestrians.

Action 3.7: Improve the amenity of walking environments within all activity centres.



Policy 4: Council will increase pedestrian priority across the City, including reduction of waiting times at traffic signals, particularly on wide arterial roads

Issues and Justification

Monitoring of signalised intersection performance across the municipality has revealed a number of opportunities for improvement. Many arterial road intersections are characterised by long delays before the green-man, short green-man time and short flashing clearance time (flashing red-man) to enable pedestrians to complete crossings. This results in poor levels of service for pedestrians.

Actions

Action 4.1: Collaborate with VicRoads to review and reduce pedestrian signal wait times and provide increased green-man crossing times on key pedestrian routes.



Policy 5: Council will aim to achieve a transport system with no fatalities or serious injuries in road-related traffic crashes

Issues and Justification

Pedestrian safety is a major issue in Maribyrnong as there are a considerably higher proportion of pedestrians killed and injured than other road user types in comparison to metropolitan Melbourne. No loss of life is acceptable and strong intervention is required to address this matter.

While Victoria's road safety performance has been admirable for many years and its achievements, in terms of casualty reductions, have been amongst the world's best – the rate of crash reductions has stalled and more improvement is required. Examples of alternate approaches can be found in the successful road safety programs implemented over the last 15 years

In Europe, a particularly effective road safety program is Vision Zero – started in Sweden in 1997 with a core principle that 'life and health can never be exchanged for other benefits within society'. It can be summarised in one sentence: No loss of life is acceptable. This principle contrasts sharply with the more conventional road safety approach where a monetary value is placed on life and health which is then used with a benefit-cost ratio evaluation before investing money in the road network to decrease risk of death or injury.

Vision Zero is based on the simple fact that humans make mistakes and therefore road traffic systems should take account of human fallibility and minimise both the opportunities for errors and the harm done when they occur. In other words – when a mistake occurs it should not cause injury or death. Collision speed is critical in this regard, as human bodies are subject to biomechanical tolerance limits and simply not designed to take high-speed impacts.

Pedestrians, as unprotected road users, are often involved in the most severe crashes. Research has demonstrated that where impact speeds can be reduced to 40 km/h or less, the risk of severe trauma for pedestrians and cyclists is greatly reduced.

The risks associated with the use of streets by vulnerable road users would be reduced by the introduction of a lower speed limit. Over many years, studies have shown that lower speeds result in fewer crashes and reduced severity of injuries. In general, the faster the average traffic speeds, the more crashes that will occur.

At an impact speed of 60 km/h the pedestrian has little chance of surviving a crash, whereas at an impact speed of 40 km/h the chance of survival for the pedestrian is around 80% (see Figure 10).

The increased survival probability is based upon collision speed, not travel speed. It would be expected that if a 40 km/h speed limit was installed, that the collision speed of accidents would in all likelihood be lower than 40 km/h, as most motorists would be in the process of braking.

The adoption of 40km/h speed limit zones in Victoria, in busy pedestrian precincts, has become increasingly common in recent years. Discussion is also taking place in Australia on the merits of adopting 30km/h speed limits.

Some urban areas around the world, particularly European cities, have already benefited from the introduction of 30km/h speed limits. These lower speed limits have been accompanied by significant crash reduction patterns.



The United States Department of Transportation, National Highway Traffic Safety Administration released a *Literature Review on Vehicle Travel Speeds and Pedestrian Injuries* as early as 1999 (Leaf, W.A. and Preusser D. F. US, DOT HS 809 021) which reached several key conclusions, including:

- Only 5% of pedestrians would die when struck by a vehicle travelling at 32 km/h or less; this compares with fatality rates of 40%, 80% and nearly 100% for striking speeds of 48 km/h, 64 km/h and 80 km/h
- Many pedestrian crashes would be prevented entirely if vehicles travelled more slowly as drivers and pedestrians would have more time to perceive the risk and take evasive action

In Australia, road safety experts and institutions such as Monash University's Accident Research Centre and the Transport Accident Commission have also recognised that the use of 30km/h limits in busy areas, such as school zones, can have a very significant influence on pedestrian crashes and injuries.

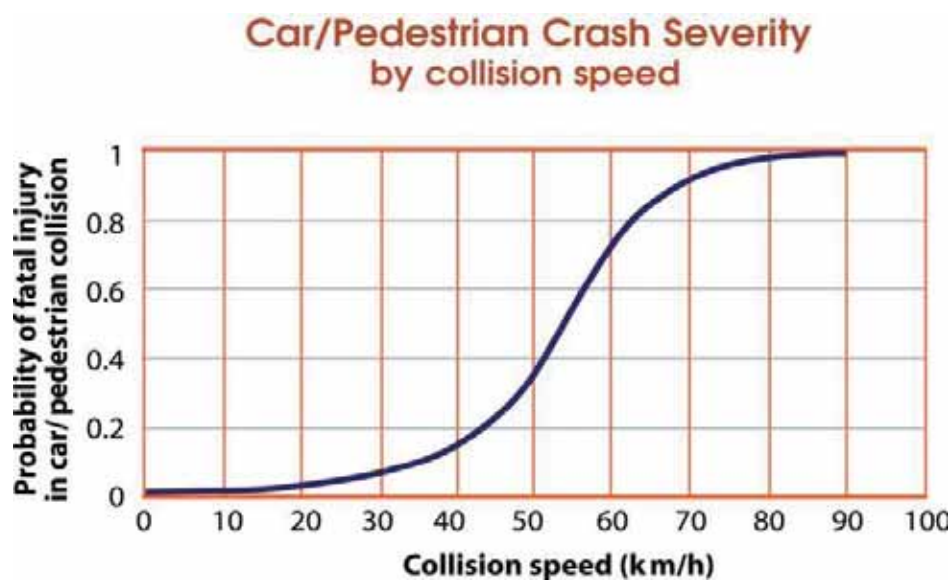
Consensus among many road safety practitioners is that authorities, in the long-term, should be aiming for 30 km/h, which would reduce the risk of pedestrian deaths by up to 95%.

In summary, on roads where pedestrian/vehicle interaction is frequent and unavoidable, speed management should be stringent. Conversely, higher speeds can be maintained on those roads such as freeways where effective separation between pedestrians and vehicles already exists (or can be implemented) and is intrinsic to the design. The Walking Strategy has already set out action to pursue lower speed limits of 40 kilometres per hour on local roads. Clearly, speed management is also required on the arterial network, as interaction still occurs between pedestrians and vehicles. Arterial roads are the locations where the majority of pedestrian accidents occur in Maribyrnong.

Increasingly, as the community learns more about what factors are involved in road injury and responses to these factors, governments and road authorities are challenged with the dilemma of how far they should tip the balance of road injury prevention to the erosion of personal freedom and restrictions to mobility.

Many road safety professionals often take for granted the idea that the highest community value is placed on safety. Some government policies and plans reflect this view, while others are more circumspect. This policy takes a clear ethical stand in favour of road safety above all other road provision objectives, including mobility and accessibility. In improving road safety, Council aims to encourage a culture of respect amongst all road users.

Figure 10: Relationship between Collision Speed and Pedestrian Fatalities



Actions

Action 5.1: Advocate to VicRoads for lower speed limits on all arterial roads in Maribyrnong to a maximum of 50 km/h. In the vicinity of schools and through activity precincts advocate for part-time 40 km/h speed limits.

Action 5.2: Advocate to VicRoads for lower speed limit on all local roads within residential areas in Maribyrnong to a maximum of 40 km/h. In the vicinity of schools and through activity precincts advocate for part-time 30 km/h speed limits.



Cycling

The City of Maribyrnong is well suited to cycling as a mode of travel, being relatively flat and with its eastern boundary being only four kilometres west of Melbourne's CBD. As a low-cost and sustainable form of transport, cycling can help reduce traffic congestion and provide convenient access to a number of destinations within and outside Maribyrnong.

Maribyrnong Strategic Bicycle Plan

In 2004, Council adopted the Maribyrnong Strategic Bicycle Plan. It is a ten-year plan that provides Council with a framework for improving cycling facilities within the municipality and identifies a bike network for Maribyrnong and ways to promote and encourage more people to cycle more often. The Plan covers:

- Road safety for cyclists
- Safe cycling routes to school
- Traffic calming measures
- Community education / lighting requirements

Through an extensive community consultation process, many actions were identified that will make cycling safer and more enjoyable in Maribyrnong. The recommended actions over a 5 to 10 year period are practical, achievable and, when implemented, will provide the City of Maribyrnong with a better connected network of on-road and off-road cycling routes.



The Plan indicated the highest priorities for developing a cycling network in Maribyrnong as follows:

- Audit of the existing Maribyrnong River trail including implementation of signage and other improvements;
- Completion of the Maribyrnong River trail;
- Federation Trail;
- Sunshine Road – Buckley Street – Napier Street on road route;
- Geelong Road route;
- Yarraville – Footscray – Stony Creek connection;
- Paths through the Waterford Green and Edgewater Estates to Footscray;
- Churchill Avenue – Mitchell Street route; and
- The Victoria Street/Pilgrim Street route.

The Plan also gives guidance for bicycle parking facilities and identifies key cycling links to adjoining municipalities. In line with Melbourne 2030, the Bicycle Plan aims to provide links to and between activity centres which provide the focus for services, employment and social interaction in Maribyrnong.



Since the 2004 Strategic Bicycle Plan was adopted new priorities have also been identified. One of the key current priorities is the completion of the bike path along the Sydenham rail corridor from Sydenham to Footscray and beyond to the CBD. This path will act as a major bike network arterial serving the western suburbs and provide opportunities for those wanting to travel to and from the inner west and the CBD.

Some sections within the City of Maribyrnong already exist, while some are currently being worked on or have been recently finished, such as the section of path between Ashley Street and West Footscray Station. However, important sections are still missing and present a variety of challenges. The missing links on this route include:

1. West Footscray Station to Shepherd Bridge – along Buckley and Napier Streets to join the Footscray Road path into Docklands and the CBD.
2. Ashley Street to Sunshine Station – this section is relatively easy to physically implement with ample space available but will require permission from VicTrack to get access to some of the land along the north side of the rail corridor, including land that is currently subject to a commercial lease. The possible alignment is unlikely to affect future rail expansion along the corridor.

Another important priority is the completion of the missing components of the Federation Trail that lie within Maribyrnong – including a linkage to the Footscray Road bike trail. Currently the Federation Trail connects Millers Road in Altona to the Werribee River (at the Princes Freeway just south of Werribee). It is the most important bike arterial route in the west – for regular commuters and recreation cyclists.

The Council's initial objective is to link the Federation Trail to the central city – from its current eastern end (at Millers Road – just north of the West Gate Freeway) to Williamstown Rd. The design for this section has been completed by VicRoads and is in the form of a 3 metre wide path.

The section between Williamstown Road and Hyde Street presents more of a challenge, particularly in view of the unresolved status of the Truck Action Plan.

Council's preference is to link the trail to the upgraded north south link along the west bank of the Maribyrnong River, providing the connection north and east to the central city and south to Scienceworks and Williamstown.



Policy 6: Council supports cycling as a key travel mode for the Maribyrnong community

Issues and Justification

Maribyrnong's long term vision for cycling within the municipality has been identified in the 2004 Strategic Bicycle Plan. This vision includes infrastructure, management and policy actions to improve cycling in Maribyrnong. Many of the actions have been implemented; however, more needs to be done to enhance the connectivity and extent of Maribyrnong's bike network and level of service, and to promote cycling as a safe and feasible travel option.

In addition, actions identified in the Walking section of this strategy will also benefit cyclists. For example, the reduction of speed limits will also help in creating a safer environment for cyclists, by reducing the speed differential between cars and bikes (a key factor for cyclist safety).

Actions

Action 6.1: Update the 2004 Maribyrnong Strategic Bicycle Plan. The new 10-year plan will identify actions for implementation to improve cycling in the municipality.

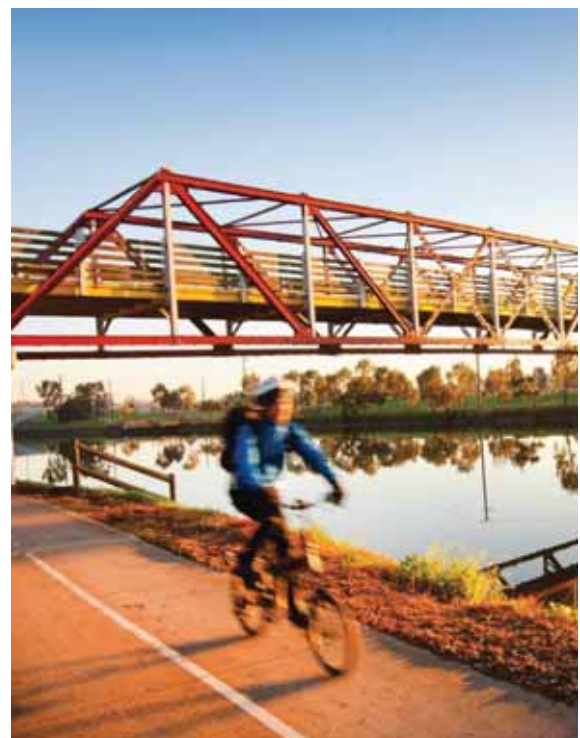


Policy 7: Council will complete a safe and connected Maribyrnong cycling network

Issues and Justification

The 2004 Strategic Bicycle Plan identified routes along arterial roads and recreational paths, as well as a fine-grain network of local routes for cyclists to access their ultimate destinations. Many of the routes have been developed; however, some key sections are still missing.

Safety and connectivity concerns discourage many potential cyclists from riding and the aim is to provide cyclists with a comprehensive network.



Actions

Action 7.1: Undertake cycling audits along key routes to identify infrastructure and traffic management opportunities for improved safety and connectivity for cyclists.

Action 7.2: Undertake cycling audits at key public transport interchanges to identify design opportunities for improved access by cyclists of all ages and abilities.

Action 7.3: Increase road space allocation for cyclists, particularly along key routes and in (and around) activity centres. When necessary to accommodate on-road bicycle lanes, traffic lanes will be narrowed.

Action 7.4: Work with VicRoads to ensure adequate physical separation of cyclists from car and truck traffic where speed limits are 60 km/h or above.

Action 7.5: Work with VicRoads to examine opportunities for grade separation of intersections on routes carrying significant freight volumes.

Action 7.6: Encourage all road users to be mindful of cyclists when driving, parking and entering and exiting cars.

Action 7.7: Work with DOT and VicTrack to facilitate the extension of the Footscray-Sunshine shared path between Ashley Street and Sunshine Station.

Action 7.8: Improve the safety of walkers and cyclists using shared paths by promoting courteous behaviour.

Action 7.9: Improve continuity of bike network by completing missing links (both within Maribyrnong as well as those key links providing connections to adjoining municipalities).

Action 7.10: Work with VicRoads to implement the Principal Bicycle Network.

Action 7.11: Develop design guidelines for all local streets (incorporating geometric standards, signage and on-road symbols) to ensure that the local street network is safe for cycling and can be effectively used, particularly by less-confident riders.



Policy 8: Council planning policy will require the provision of secure, undercover bike storage, lockers and showers in homes, workplaces and institutions



Issues and Justification

Maribyrnong has many elements to encourage cycling – relatively flat terrain and proximity to the CBD and activity centres of various sizes. In addition to needing a safe and well-connected network, cyclists also need appropriate parking and other trip-end facilities. These facilities will become an even more important element to make cycling a viable transport choice for all trip purposes as the cycling network is improved and expanded, and cycling activity continues to grow.

Actions

Action 8.1: Review the current and future demand for bike parking (in response to existing and new development) and the appropriateness (in number, distribution and quality) of current on-street bike parking facilities to identify opportunities for improvement across the municipality.

Action 8.2: Work with State government to amend the Victoria Planning Provisions to require a minimum of one off-street bicycle parking space per dwelling for all multi-unit developments. New developments should also provide adequate on-street bike parking to support visitors.

Action 8.3: Work with all shopping centres and supermarkets in the municipality to provide bike parking in immediate proximity to the respective front/main entrances.

Action 8.4: Establish design guidelines, for possible integration with the Planning Scheme, that encourage new offices and other employment locations to provide employee bicycle parking facilities within buildings in safe undercover areas immediately adjacent to work areas.

Action 8.5: Amend the Planning Scheme to allow for a reduction in the number of car parking spaces required for all non-residential uses, subject to the provision of bicycle parking and associated facilities that are in excess of the existing planning scheme requirement.



Policy 9: Council will become the leader in metropolitan Melbourne in the promotion of cycling awareness and the provision of recreation opportunities for its residents

Issues and Justification

Despite the significant benefits of cycling, its share of overall travel in metropolitan Melbourne is less than 5% of all trips. This is the result of a combination of factors, including distance between destinations and lack of safe and connected cycling facilities. Research in cities around the world has shown that lack of exposure to cycling and negative safety perceptions play a significant deterring role for cycling activity.

Countries around the world have followed the lead of several Colombian cities in implementing Ciclovias to promote cycling awareness and provide recreation opportunities. The most famous Ciclovía occurs in Bogotá (Colombia) where the concept was born more than 30 years ago. Over 100 kilometres of major arterial roads are closed to vehicle traffic and over two million people take to the street to walk, ride bicycles and play. Ciclovias challenge the presumption that major streets exist only for cars and help rethink the use of public spaces. Many activities take place along the route, including music and art events, fitness classes and food.

International experience suggests the following as general requirements for the implementation of a successful Ciclovía program (the actual requirements will depend on local circumstances):

- Advocacy coalition – group of citizens and interest groups that take the initiative to start up a program and negotiate its implementation with local authorities.
- Political commitment from local government – essential to allocate resources for setting up and operating the Ciclovía in the municipality.
- Municipal responsibilities – determine which local government office(s) is (are) responsible for coordinating the program from its inception. The local office whose responsibilities most closely align with the program should be identified.
- Project leader – identify the person or team that will, based on their technical and institutional expertise, be responsible for the program's overall development.
- Financing – municipal and State resources are needed to ensure the long-term success of the Ciclovía. Since this is a program that offers benefits to all citizens, using public resources for its implementation and maintenance can be justified. Ciclovía costs range from \$45,000 to over \$2 million per year (including operational and maintenance costs) depending on the size of the city and extension of the program. Many cities begin with small programs (at the low end of the cost range) and expand with time. Access to additional revenue from publicity and sponsorship is common in Ciclovías around the world.

In recent years, many cities around the world have adopted bike share systems as an alternative form of public transport. Bike share systems consist of a number of bikes that are made available for shared use amongst individuals who do not own any of the bikes. The system is designed for short trips across the city.

According to a recent study by the European Commission, bike share systems have been the fastest growing “mode” of transport in the world during the last 5 years. Currently, there are around 240,000 shared bikes in nearly 400 cities across four continents. New programs are planned for a large number of cities as the popularity of bike sharing continues to grow.

Melbourne deployed its bike share system in 2010. The mission of the system is to build a “safer, fairer and greener transport system for all Victorians”. Melbourne Bike Share is part of the Victoria Department of Transport’s focus on delivering transport improvements to Victoria. There are currently around 50 bike stations and 600 bikes situated in and around the Melbourne CBD. The program continues to expand and new areas in the inner city now have bike stations.

Bike sharing is a sustainable, healthy, and community-based transport option. As such, Maribyrnong residents, workers and visitors could benefit from access to shared bikes. The proximity of Maribyrnong to the CBD, together with the significant areas of activity within the municipality, makes it ideally suited for bike sharing.

Extension of the bike share scheme into Maribyrnong should first focus on key locations such as Footscray Railway Station and the two Victoria University campuses. In the long term, the system could be expanded to other locations such as Highpoint Shopping Centre, Yarraville and West Footscray Railway Stations, Western Hospital, Whitten Oval.

Actions

Action 9.1: Identify appropriate local streets to implement a Ciclovia or other cycling-focussed events on a regular weekly basis (such as on Sundays).

Action 9.2: Advocate to VicRoads for the implementation of the Ciclovia event on arterial roads across the municipality.

Action 9.3: Work with adjoining municipalities to extend the Ciclovia event across the CBD and inner northwest area.

Action 9.4: Work with Victoria University, RACV and other relevant bodies to extend the Melbourne Bike Share scheme into Maribyrnong.



Public Transport

Council supports an expansion of train, tram and bus services that facilitate population and employment growth without a corresponding growth in car use. The public transport system will provide the Maribyrnong community genuine choice for personal travel, deliver benefits for the environment, reduce road congestion and support increased walking and cycling throughout the city.

Overall Context

Maribyrnong is serviced by three metropolitan rail lines (Sydenham, Werribee and Williamstown) with 6 train stations, two tram routes (57 and 82), 21 bus routes, one NightRider route (942), and a number of regional buses and trains that stop in Footscray. The map in Figure 11 shows the metropolitan public transport services throughout the municipality.

There are several bus companies that operate services in Maribyrnong, including Melbourne Bus Link, Sita Bus Lines, Westrans Altona and Westrans Sunshine.

Key operational aspects and statistics are as follows:

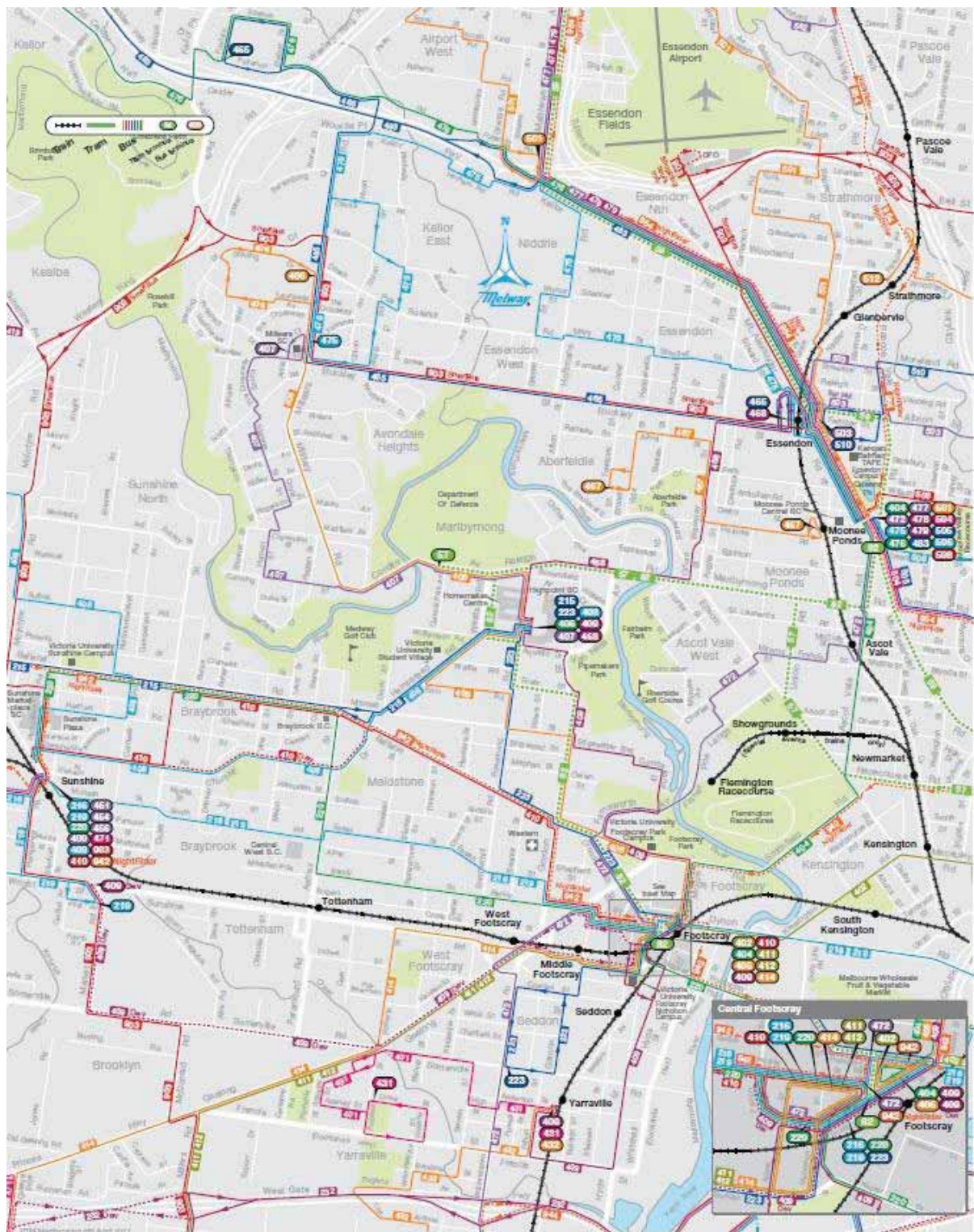
- Currently over 2,300 bus trips operate via Footscray each week.
- 13 bus routes service Footscray CAA, 6 of which are 'through' routes and 7 of which use Footscray as their terminus.
- The bus stops are located in three main areas in Footscray: Paisley Street between Leeds and Albert Streets; Leeds Street between Irving and Hopkins Streets; and Irving Street between Leeds and Hopkins Streets.

- Buses approach and depart from Footscray in all directions. There is no common path that all buses follow through Footscray CAA and not all of the bus routes currently pass Footscray Station.
- A passenger survey at Footscray Station identified 20% of passengers between 6.30am and 7.00pm travelled to the station via bus, equating to over 2,200 passenger transfers between train/bus each weekday
- The Highpoint bus interchange is located off Rosamond Rd, outside Level 3 of the Highpoint Shopping Centre (on the Myer side). Seven bus routes service the Highpoint Shopping Centre (1 of which is a 'through' route)

While Maribyrnong has a choice of public transport services and reasonable connections to the central city, the system is by no means comprehensive. Some areas are well connected but other neighbourhoods less so.

Furthermore, connections with surrounding municipalities are difficult, tram travel along routes 57 and 82 is very slow, and some of the bus services are infrequent and unreliable (as indicated by community members).

Figure 11: Public Transport Services in and around Maribyrnong



Source: Metlink 2011

Commercial and residential developments in some areas of the municipality, particularly in the western and northern sectors (such as the urban renewal areas in the vicinity of Edgewater and Victoria University Maidstone), are characterised by limited access to public transport, poor pedestrian facilities, lack of comprehensive local convenience retailing, and car dependency greater than the Maribyrnong average. Often, by the time bus services are introduced, many residents and workers in these new developments have become accustomed to using cars and it is thus difficult to achieve a transfer of these trips to public transport and other more sustainable modes.

A program of early provision of public transport linkages to new developments is required. This is relevant for all future development sites, particularly major projects such as the Maribyrnong Defence Site.

The 2006 census revealed that use of public transport is reasonably good with 21% of residents using public transport to travel to work, compared to 19% across metropolitan Melbourne. Within the municipality, the proportion of public transport usage is higher in the inner neighbourhoods – nearly 29% in Footscray and over 25% in Seddon. However it is lower than the metropolitan average, at between 15 to 18%, in areas such as Braybrook and Maribyrnong.

Maribyrnong is well placed to achieve greater public transport patronage and reduced dependency on car use as most residential areas are located within walking distance to public transport services (train, tram and bus). One of the key ways of accessing public transport is walking. In metropolitan Melbourne, walking accounts for 75%, 50% and 22% of all trips less than 400 metres, between 400 metres and 1 kilometre, and less than 2 kilometres, respectively. Effort should be made to progressively audit areas within this distance of train stations and bus and tram stops to evaluate the need to improve connections to overcome existing barriers to walking.



Consolidating directions of the 2001 MITS

The 2001 MITS recognised the complementary nature of public transport, walking and cycling and the importance of effectively integrating the three modes in promoting more sustainable travel options. When those modes are combined, they can offer a better alternative to the car. Public transport corridors should be attractive environments to attract and support pedestrian and public transport use – allowing people to replace some of the trips made by car.

The 2001 MITS identified the necessity to pursue action in a number of areas in order to achieve a more integrated approach to the development of public transport systems. This included initiatives to:

- Influence the location type and intensity of land use especially around stations
- Develop and implement design standards to improve the quality of the public environment
- Facilitate access by pedestrians and cyclists
- Facilitate intermodal transfer
- Identify key development opportunities relating to existing and future transit

While progress has been made in many areas (Footscray Station improvements, Yarraville Station bus interchange, Leeds Street tram terminus upgrade) much is still required.

The key to achieving more public transport patronage will be to identify measures to:

- Better support existing and future travel patterns and provide an improved level of service
- Ensure existing development patterns can be modified over time to provide a closer association between land use and public transport, or conversely identify public transport solutions that serve these development patterns
- Lead to development which supports investment in public transport and makes public transport more attractive for people to use

From an operational perspective, road congestion significantly affects the efficiency of on-road public transport services and there is a requirement for exclusive/separated lanes for both buses and trams and other forms of priority. However, the presence of kerbside parking (particularly when adjacent to residential properties) is a key factor making the establishment of bus lanes difficult. Often, the removal of kerbside parking creates opportunities for ThinkTram initiatives and new platform stops.

Use of vehicle tracking systems (for buses and trams) can help provide dynamic priority as vehicles approach intersections. All buses are expected to be equipped with tracking systems (GPS transponders) within the next few years.

Ultimately action should target:

- Improvements to service levels on key routes (frequency, reliability and hours of service)
- Better infrastructure resulting in greater passenger comfort and convenience
- Broader awareness of services / real-time information
- Provision of public transport priority along the road network
- Co-ordination and integration of modes
- Improved interchange facilities
- Developer contributions for improved access and provision of public transport (see Land Use chapter)

River Transport

The Maribyrnong River along the eastern and northern boundaries of the municipality offers tremendous opportunity for increased activity along and on the water. However the viability of water-based transport services is uncertain based on previous experiences in Melbourne and across Australia. The potential services range from smaller private craft, water shuttles and water taxis to large commuter ferries. The main potential user groups include:

- Residents / commuters
- Schools
- Tourists
- Event visitors

Key issues that need to be resolved include:

- Location of stopping facilities (passenger pick-up points)
- Mode of arrival by passengers to the stops
- Speed of vessels on the Maribyrnong and Yarra Rivers (the existing limit of 5 knots/hour – approximately 9.25 kilometres per hour – has been set to minimise boat wake impacts, but it limits the viability of a commuter ferry service)
- Infrastructure requirements for vessels and passengers (height of bridges, berthing, moorings, jetties vessel maintenance facilities, boat launching, carparking, bus access, shelter, seating, toilets, general amenities)
- Ensuring that new facilities do not interfere with commercial shipping channels, including appropriate assessments of elements such as river capacity, interaction with commercial shipping and security.

In addition, the open space areas along the river reduce the potential catchment for river transport services.

In this context, it is probable that water transport is unlikely to be a major transport mode but it may contribute to addressing transport needs on or close to the river. In this regard, major developments along the river near Gordon Street have already capitalised on the attractions of the river through the provision of facilities such as moorings and jetties. Developments along the river in Footscray have also taken advantage of their position to promote active waterfront usage. Council should continue to encourage increased boating activity on the Maribyrnong River and support linkages to the Melbourne CBD.

The 2001 MITS had identified several initiatives in support of water transport including:

- Foster and support opportunities for water transport including water taxis and tourist recreational traffic to access Footscray along the Maribyrnong River.
- Liaise with organizations such as the Charter Boat Association and the Marine Board to co-ordinate the effective development, implementation and use of facilities and promotion of river transport services within Maribyrnong.
- Seek funding from the Boating Facilities Program, the State Boating Council and Parks Victoria as appropriate for new facilities and infrastructure on the Maribyrnong River (such as additional berthing facilities).
- Encourage developers of waterfront land to have active connections to the river for boating.
- Provision of passenger shelters, seating, lighting, information signs, pathways and rubbish bins in the Footscray wharf area.

Council should continue its support of water transport and ensure new developments such as the Maribyrnong Defence Site capitalise to the fullest possible extent on the opportunities provided by the Maribyrnong River.

Enhancing Services

Three metropolitan train lines (Sydenham, Werribee, Williamstown) and several regional routes (including Geelong, Melton/Ballarat, Sunbury, Bendigo) operate across the municipality and pass through Footscray Station, thus providing frequent train services into Maribyrnong and between Maribyrnong and the CBD during peak periods.

Patronage statistics reveal that the majority of train services passing through Footscray are close to capacity during peak times. Major intervention is required in order to boost capacity for both existing and future needs. The possible initiatives are discussed in the Major Projects chapter of this Strategy, and include Regional Rail Link, Melbourne Metro and the Melbourne Airport Rail Link.

There are two tram routes within Maribyrnong (57 and 82) that have the potential to provide faster and more frequent services and contribute to development along their respective corridors, as well as linking key development nodes within Maribyrnong. These tram services require higher capacity vehicles and greater frequency as they already experience significant congestion in peak periods. Better priority also needs to be provided where these tram services share road space with other vehicles. Enhancing the operation of route 82 between Footscray and the Maribyrnong Defence site will be crucial to supporting the high levels of development that are planned along this route within the next 10-20 years.

Maribyrnong is serviced by extensive bus routes, many of which converge on Footscray making it the second busiest suburb in the metropolitan area for bus movements. However, some of the municipality's bus services are infrequent (especially in the Braybrook area) and/or not well connected with key destinations such as train stations.

Successful bus operation is also constrained by recurring traffic congestion on many of the key roads used by buses across the municipality, during both peak and off peak periods. This causes running time and reliability issues. Particularly problematic roads include Hopkins Street, Moore Street, Williamstown Road and Barkly Street – where bus operators struggle to meet schedules having to share road space with cars.

Bus services are also affected by regular overcrowding of buses on some routes through Footscray, particularly those serving the Sunshine-Footscray corridor.

As well as alleviating overcrowding, increased bus service frequency is also required more generally to assist in providing better integration and coordination between trains, trams and buses.

In the longer term a bus link from Footscray to Melbourne Airport has also been identified as an issue requiring consideration. This should be considered in conjunction with the route planning for the Melbourne Airport Rail Link, and may provide a short term option for this corridor.



Building the network

There are some existing gaps and potential for improvement for many of the municipality's bus and tram services, including the provision of new routes.

In addition to necessary improvements to tram services 57 and 82, consideration is required for an expansion of the tram network. Plans for the emerging "activity bridge" between the Melbourne CBD and Footscray – through renewal of the Dynon North area – offers the opportunity for new tram services along the Dynon Road corridor, linking Footscray to the CBD at Spencer Street. In addition, consideration should be given to expansion of the tram network north to the Maribyrnong Defence Site (and beyond) and from Sunshine to the Highpoint Activity Centre. Longer term, an extension along Footscray Road would enhance connectivity to the CBD and other areas.

SmartBus is a premium bus service that has been designed to complement Melbourne's radial train network, by providing 'cross-town' connections along major arterial roads to train stations, tram lines, schools, universities, hospitals, shopping centres and other activity centres, together with radial routes in areas not serviced by rail.

Key aspects of SmartBus include more frequent services, extended hours of operation (to include late evening and Sunday services) improved timetable information at bus stops and priority at traffic lights (to improve reliability and speed).

SmartBuses have the ability to communicate with their depot during a journey, which allows them to provide real-time travel information to passengers at selected high-use bus stops. Bus-train interchanges also have real-time information on SmartBus and train arrival times, making journey transitions smoother.

Orbital routes were introduced to Melbourne as part of the Government's SmartBus initiative. A Blue Orbital route 904 has been proposed in the past linking Sandringham to Williamstown, which could provide a boost to north-south bus services within Maribyrnong. Although not yet implemented it is considered that this proposal still has merit and should be considered for future funding.

In addition to metropolitan buses, there may be a role for community buses and shuttle type services, including on-demand transport options. This would increase the coverage and flexibility of public transport services at a lower cost, while enhancing mobility and accessibility options for the elderly, disabled and other community groups.



Improving access to and between public transport

There are three key areas where improvements could make a substantial difference to the travel experience of public transport users within Maribyrnong.

The first is formalising key intermodal interchanges at Footscray and Highpoint. Footscray currently lacks a central transport interchange. Instead, bus services and stops are dispersed and not all routes link with the station. The spread of terminus/stopping locations in the Footscray CAA can be confusing for users.

At Highpoint, there is a central bus interchange; however, this is not collocated with either of the tram routes serving the general area. The draft Northern Maribyrnong Integrated Transport Study has explored this in more detail, recommending that the tram route be realigned to create a central intermodal interchange.

The second element requiring improvement is the facilitation of access to stations and stops by sustainable modes. This encompasses a range of proposals from improving the pedestrian environment through to the creation of better bus-train interchanges at Tottenham and West Footscray stations.

The final key area for improvement is information provision and marketing. The provision of real time information, both at stops and through mobile devices, can assist users of public transport to assess what will be the most efficient journey for them, cutting travel times and reducing the need to allow contingency time for services where reliability is variable. More generally, marketing and communication help both current users and potential users understand and navigate the system, and are essential in helping shift more trips from the car to public transport.

Improving Environmental Outcomes

Another important aspect with respect to bus operations relates to the potential use of cleaner alternative fuels to replace current diesel-powered buses. Diesel exhaust is made up of small particles, known as fine particulate matter. Fine particles pose a serious health risk because they can easily pass through the nose and throat and lodge themselves in the lungs.

The notation PM_{10} is used to describe particles of 10 micrometres or less and $PM_{2.5}$ represents particles less than 2.5 micrometres in aerodynamic diameter. PM_{10} can settle in the bronchi and lungs and cause health problems. The 10 micrometre size does not represent a strict boundary between respirable and non-respirable particles, but has been agreed upon for monitoring of airborne particulate matter by most regulatory agencies. Recent studies indicate that $PM_{2.5}$ leads to high plaque deposits in arteries, causing vascular inflammation and atherosclerosis — a hardening of the arteries that reduces elasticity, which can lead to heart attacks and other cardiovascular problems.

In response to this and other issues (such as energy efficiency and greenhouse gas emissions), DOT has commissioned a study into the availability and suitability of alternative fuels that could fuel Victoria's bus fleet. The study is assessing the costs and benefits of various alternative fuels, the barriers preventing their adoption, and measures to address these barriers. The study will deliver an assessment tool for the bus industry to help it make decisions on alternative fuels. The tool will compare the running costs and fuel consumption of diesel versus a range of different alternative fuels and the savings that can be generated by switching to alternative fuels. A similar tool has been developed for the heavy truck industry. In addition, there are also hybrid-electric buses being trialled within Melbourne.

Policy 10: Council will advocate for an enhancement of bus, train and tram services across the municipality

Issues and Justification

Overcrowding currently exists on trams, trains and buses within Maribyrnong. Greater capacity needs to be provided on these routes to meet demand. Better quality services, including improvements to frequency, reliability and hours of service need to be provided across the network to make public transport usage competitive with car travel across all of Maribyrnong. Significant improvements to reliability and travel times for trams and buses can be gained through improvements to physical space and signalling priority.

Actions

Action 10.1: Work with DOT and VicRoads to design and implement a tram priority program for route 82, to support the significant levels of redevelopment expected along this route.

Action 10.2: Provide public transport priority along the road network, in terms of physical space and management. As a first step, in collaboration with VicRoads, investigate provision of exclusive tram reservations and bus lanes on all routes affected by delays, including priority lanes where on the approach to traffic signals there are 3 or more traffic lanes in each direction.

In addition to the comprehensive route planning, active tram and bus priority at intersections should also be implemented. Areas identified for improved priority include:

- Bus and tram priority environment on Droop Street connecting the Footscray CAA to Ballarat Road.
- Bus priority treatments around Highpoint Activity Centre, including the Rosamond Road/Highpoint Ring Road intersection and potential bus lanes on Rosamond Road
- Bus priority measures in Gordon Street and Moore Street in Footscray.

Action 10.3: Work in partnership with DOT to improve service levels on the municipality's key bus, train and tram routes (frequency, capacity, hours of service and reliability), including areas such as parts of Braybrook where bus services are infrequent.

Action 10.4: Work in partnership with DOT to identify services where trams can be replaced by bigger models to increase capacity.

Action 10.5: Support harmonisation of service frequencies on different routes, ensuring that no existing frequencies are diminished as part of this process.



Policy 11: Council will advocate for the creation and extension of public transport routes to form a high quality bus, train and tram network across the municipality

Issues and Justification

Tram network improvements and expansion in the western suburbs have not been prioritised in recent years. This has led to a system that requires substantial upgrade to meet growing population demands.

A tram prioritisation program is required for Routes 82 and 57, significantly increasing service standards and frequency between Footscray, Highpoint, Moonee Ponds and Melbourne CBD, including realignment of the tram route 82 closer to Highpoint Shopping Centre and into the Northern Maribyrnong Defence Site and beyond. In addition, the potential extension of route 82 through the Dynon Road corridor would enhance connections between Footscray and the CBD.

The proposed Blue Orbital route discussed above would which would improve north-south bus services within Maribyrnong, linking the Maribyrnong Defence Site, Highpoint Activity Centre, Footscray and Yarraville to areas east and south of the municipality.

SmartBus service frequencies and standards can also be used to alleviate overcrowding on regular bus routes. Increased service levels are required between Footscray and Sunshine to overcome regular overcrowding on existing routes, making this a priority for designation as part of the SmartBus system.

Additions to the rail network, particularly heavy rail, require long term planning to ensure adequate land is set aside for this purpose. Council supports State government working with Council to plan for long term expansion of the rail corridors.

Figure 12 shows potential public transport extensions across the municipality.

Council can also work with DOT to review public transport access to schools within and outside the municipality and frequently used facilities such as places of worship.

Actions

Action 11.1: In collaboration with DOT, establish two new SmartBus services through the municipality:

- An orbital route from Williamstown to Sandringham via Footscray, Highpoint and Maribyrnong Defence Site;
- A radial route from the Melbourne CBD to Caroline Springs via Footscray and Sunshine.

Action 11.2: Work in partnership with DOT to evaluate the potential extension of tram services:

- Along Dynon Road to link existing tram routes in Melbourne's CBD along Spencer Street to the existing tram line in Footscray
- From Footscray Station along Footscray Road to join the tram line at Docklands
- Tram route 82 into Maribyrnong Defence Site and beyond
- Along the eastern side of Rosamond Road north of Williamson Road (to continue to a central public transport interchange along the western boundary of Highpoint Shopping Centre before heading west to connect to existing Wests Road tram reserve)
- Highpoint to Sunshine from the Wests Road/Williamson Road corner along Hampstead Road, Churchill Avenue, Ashley Street, South Road and Monash Street

Action 11.3: Work in partnership with DOT to review public transport access to schools, places of worship and other community facilities.

Action 11.4: In collaboration with DOT, plan for an integrated expansion of bus and tram facilities to service the Maribyrnong Defence Site redevelopment. Planning should examine the feasibility of providing at least one “Green Bridge” across the Maribyrnong River for pedestrians, cyclists and buses or trams linking with the Avondale Heights / Essendon areas.

Action 11.5: Work with DOT to ensure early availability of public transport to all new significant developments.

Action 11.6: Work in partnership with DOT to evaluate the potential expansion of the Night Rider service within the municipality.

Action 11.7: Investigate the provision of a community bus service within the municipality.

Action 11.8: Work in partnership with DOT to investigate the provision of a high frequency bus service from Footscray to Melbourne Airport as an interim measure prior to the development of the Airport Rail Link.

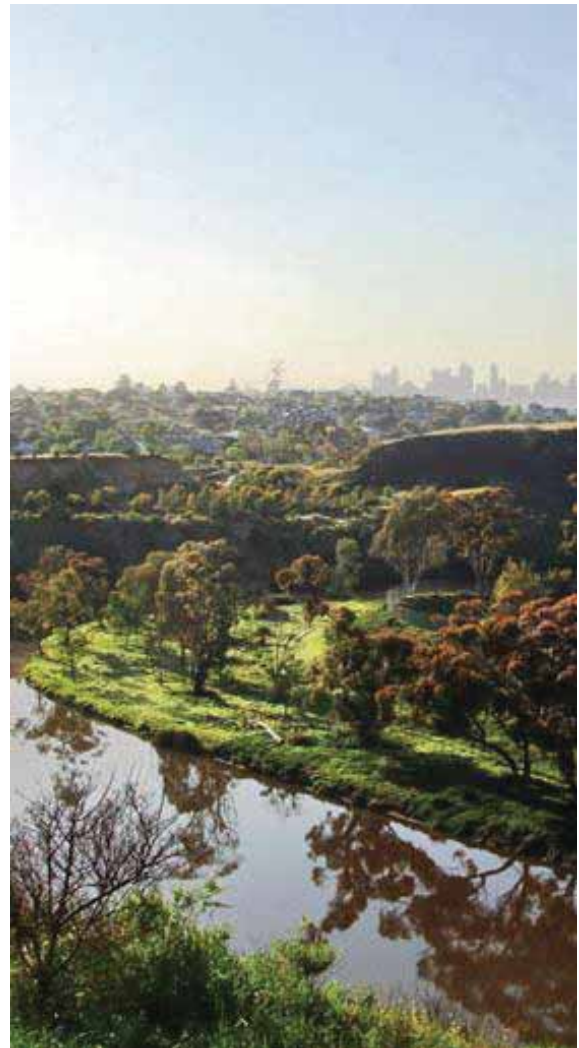
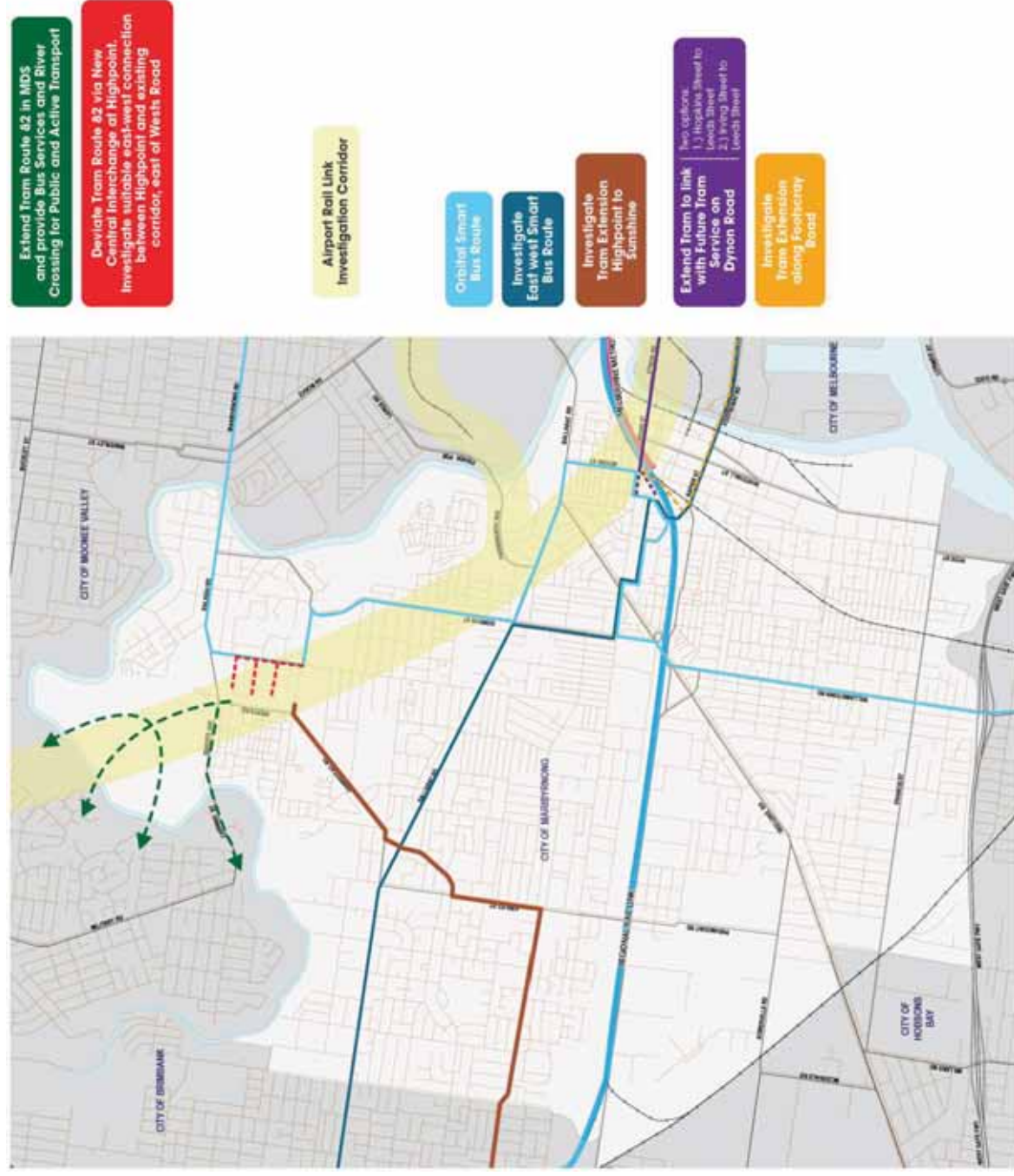


Figure 12: Public Transport Extension Initiatives in Maribyrnong



Policy 12: Council will support the establishment of a central transport interchange in Footscray and at Highpoint

Issues and Justification

The development of a central bus/tram/train interchange adjacent to Footscray Station would greatly improve connectivity and increase attractiveness of public transport services. All aspects of an interchange, including connection spaces and waiting areas need to be designed to improve passenger comfort in order to retain, enhance and support current and future patronage. Currently, Paisley Street is the main interchange for Footscray with 8 bus bays servicing 10 bus routes.

Relocating the major passenger transfer and terminating services to Footscray Station would provide improved passenger access to the public transport network and inter-modal connections, as well as allowing for reduction of bus bays in Paisley Street. However as the shopping area in and around Paisley Street is a major attractor for existing passengers, bus access will need to be maintained.

A central interchange adjacent to Footscray Railway Station will require restructure of the existing routes to allow buses to arrive and depart from either side along Irving Street. Bus routes that currently do not run via Footscray Station will require additional running time.

The interchange will need to be designed to handle high volume of buses in short periods of time. Alternative interchange designs can be considered, including managing through and terminating services, to reduce the footprint.

Options need to consider which bus routes would benefit more from a tram/bus connection. Criteria need to be defined to evaluate options, as final decisions will depend on a number of factors.

Potential criteria to be used in evaluating the relative merits of options in terms of their benefits to passengers/users include access, connection and reliability, information, amenities, and safety and security.

Actions

Action 12.1: Work in partnership with DOT to study options for establishment of a bus/tram/train interchange at Footscray Station. The interchange needs to be consistent with other plans, such as the potential tram extension to Footscray along Dynon Road.

Action 12.2: Work with key stakeholders to provide a centralised tram and bus interchange at the “heart” of the Highpoint Activity Centre.



Policy 13: Council will support improved access to stations and stops by sustainable modes

Issues and Justification

While significant investment is going into the heavy rail network, the stations, facilities and infrastructure in the inner west for rail users is poor.

Excessive reliance on car access to many rail stations in Maribyrnong is evident. This exacerbates congestion on roads leading to the various station carparks and contributes to unsafe conditions for those walking to the stations. Parking often overflows into surrounding residential and commercial areas placing pressure on local communities and limiting genuine parking opportunities in these areas.

The need for Park'n'Ride facilities at stations such as Footscray is also questionable. This station is well served by multiple buses and a tram service and passengers should therefore be encouraged to use those alternatives, rather than private cars, to access the station and bus interchange.

All stations should be viewed as multimodal interchanges and improvements pursued to make access more attractive. Significant potential exists for more passengers to use West Footscray and Tottenham stations, conditional on increases in train capacity through these stations to relieve existing passenger congestion and crowding issues.

Major upgrades and higher maintenance standards should be applied to stations, carparks and their environs. This is particularly important to cope with increased patronage and the desire to attract more people onto trains from the developing areas and activity centres.

Improvements to physical interchange facilities can also be supported by improved coordination between modes.

DOT is undertaking review of bus stop guidelines, including footpath connectivity. Areas within Maribyrnong where deficiencies have already been identified include:

- Poor public transport stops for buses along Geelong Road, which do not meet guidelines (very narrow and at an angle).
- Non-compliant ramps along Ballarat Road
- General difficulty in accessing bus stops along Ballarat Road due to heavy traffic, contributing to difficulties in accessing frequently used locations such as the Quang Minh Buddhist Centre.

More broadly, pedestrian safety and access to stops can be improved by ensuring pedestrian crossings are provided in proximity to bus stops to enable travel to and from the stop from either side of busy roads.

In recent years Council has acted to implement high quality pedestrian routes and has increased funding for footpath improvements throughout the City. Council has also encouraged new developments to include good pedestrian linkages and facilities.

Ultimately Council and Department of Transport need to work together to provide better infrastructure resulting in greater passenger comfort and convenience.



Actions

Action 13.1: Advocate for the progressive transfer of off-street commuter parking at train stations to outer suburban areas. Ensure land released through this process is masterplanned and managed to provide maximum benefit to the community from the redevelopment or reuse of the land.

Action 13.2: Support access to stations by pedestrians and cyclists by implementing a program of better design and interface between the stations/stops and their surroundings. Tottenham station should be the first priority for improvement.

Action 13.3: In collaboration with the DOT, improve the bus to train interchange at West Footscray and Tottenham stations, including provision of upgraded interchange infrastructure and rerouting of bus services where required.

Action 13.4: Seek improved coordination and integration of modes by maintaining a strong advocacy role with the Melbourne Transport Forum and the Western Transport Alliance to promote the enhancement and coverage of all public transport services.

Action 13.5: In collaboration with DOT and VicRoads deliver improvements to enhance bus stop access commencing with identified issues on Geelong Road and Ballarat Road.

Action 13.6: In collaboration with DOT and VicRoads evaluate all stops on arterial roads to ensure they can be safely accessed by pedestrians from both sides of the road.

Action 13.7: Work with DOT to improve bus and tram stop facilities across the municipality.

Action 13.8: Work with DOT to ensure that all stations, stops and vehicles are DDA compliant.

Policy 14: Council will advocate for improvements to public transport information

Issues and Justification

Public transport information provision throughout Maribyrnong has improved since the previous MITS was developed. However, there are still many opportunities to extend this to provide greater availability of real-time information to both existing and potential users.

Actions

Action 14.1: Promote broader awareness and attractiveness of public transport services by working in partnership with Department of Transport for the provision of real-time information at all bus, train and tram stops.

Action 14.2: Promote attractiveness of public transport services by working in partnership with Department of Transport for the provision of real-time information at major attractions (such as inside shopping centres and on roads with significant activity).



Policy 15: Council will support changes to public transport fuels that provide better health outcomes for our community and our environment

Issues and Justification

Exhaust from diesel engines is a widespread problem across urban areas and it significantly contributes to air pollution. The health impacts from air pollution are likely to worsen with increasing population and traffic congestion. This is particularly important for Maribyrnong given the high levels of heavy-duty freight traffic throughout the municipality.

Within this context, it is important to consider alternative fuels for buses operating in Maribyrnong, including compressed natural gas (CNG), hybrid and electric engines. For example, CNG buses have been demonstrated to have significantly lower emissions of air pollutants such as carbon monoxide, oxides of nitrogen and PM than diesel, as well as higher fuel efficiency and lower greenhouse gas emissions. As a result, CNG and electric buses are becoming more common in many cities around the world, in areas such as the United States, Asia, Latin America and Europe, in response to both air quality concerns and fuel prices.

Actions

Action 15.1: Advocate to the EPA to undertake a study to determine air pollution levels in sensitive locations along bus corridors within the municipality. The results will determine the need and priority for replacement of diesel-powered buses with alternative fuels.

Action 15.2: Advocate to the Department of Transport and bus operators to replace current diesel-powered buses with CNG, hybrid or electric buses. Priority should be given to buses operating on routes with sensitive receptors, significant freight movements and/or high air pollution levels.



Congestion Management

Maribyrnong's road network is characterised by strong east/west flows on corridors leading to the central city and the Port of Melbourne precinct. The arterial network supports significant commuter and freight traffic which affects local amenity. High volumes of traffic also affect the safety and quality of pedestrian and cyclist movements as well as the performance of road-based public transport services. Reduced reliance on private car travel within and through Maribyrnong can ease congestion on the road network allowing more efficient operation of bus and tram services.



Overall Traffic Context

The key east/west arterial routes through Maribyrnong include:

- Francis Street
- Somerville Road
- Geelong Road
- Sunshine Road
- Ballarat Road
- Raleigh Road

All these roads are at capacity in peak periods.

The east/west routes are linked by shorter lengths of north/south roads, including:

- Williamstown Road
- Whitehall Street
- Paramount Road/Ashley Street
- Moore Street
- Rosamond Road/Summerhill Road
- Van Ness Avenue/Gordon Street
- Hampstead Road/Wests Road

These north/south routes are also increasingly congested at peak times.

It has long been recognised that the provision of additional traffic capacity through road-building programs cannot, on its own, fully resolve issues of road congestion. Instead, a co-ordinated approach is required where greater efficiency is achieved by managing existing assets for enhanced performance and land use policies are integrated with transport initiatives to deliver less reliance on the use of cars and enhanced access by non-motorised modes.

Within this context, there are several considerations that are particularly relevant in managing Maribyrnong's road network:

- The system's capacity to accommodate future travel demand – there is limited opportunity to build new roads
- Setting priorities for transport modes – public transport and non-motorised modes currently receive poor levels of priority on Maribyrnong's arterial network
- Environmental and health aspects – the high volumes of commuter and truck traffic are having significant adverse impact on communities in Maribyrnong

Any action targeted at road congestion must therefore address these issues.

The development growth expected within Maribyrnong will generate increased travel demand on the east/west and north/south road corridors that are already affected by existing congestion and where there is limited opportunity for the provision of additional road space. Council's response must therefore concentrate on achieving the most efficient use of existing assets. An appropriate mechanism to achieve greater efficiency on arterial roads is the adoption of *SmartRoads* Network Operating Plans in collaboration with VicRoads.

SmartRoads is an approach that manages competing interests for limited road space by giving priority use of the road to different transport modes, both to different parts of the network and at different times of the day. Some routes or parts of the road network will be managed to work better for pedestrians while others will be managed to prioritise public transport, cyclists and cars. *SmartRoads* should ensure that decisions about the operation of the road network support land use and transport planning and better consider the effects on Melbourne's key activity centres, surrounding communities and the environment – consistent with the objectives of the Transport Integration Act.

Under *SmartRoads*:

- Pedestrians will be encouraged by facilitating good pedestrian access into and within activity centres in periods of high demand.
- Trams and buses are given priority on key public transport routes that link activity centres during morning and afternoon peak periods.
- Cars will be encouraged to use alternative routes around activity centres to reduce the level of 'through' traffic.
- Bicycles will be encouraged through further developing the bicycle network.
- While trucks will have full access to the arterial road network, they will be given priority on important transport routes that link freight hubs and at times that reduce conflict with other transport modes.

Network Operating Plans are the implementation mechanisms for VicRoads' *SmartRoads* initiative. *SmartRoads*' aim is to make best use of existing roads and ensure Melbourne's transport network continues to operate as effectively as possible into the future.

Council and VicRoads have agreed to a Road Use Hierarchy for Maribyrnong, under *SmartRoads*. This hierarchy is shown in the map in Figure 13 and identifies the priority to be assigned on key routes within Maribyrnong. However it does not show the Principal Bicycle Network as it has been under review by VicRoads for approximately 2 years and is not yet finalised.

While consensus has been reached on the *SmartRoads* framework, little progress has been made on the implementation of Network Operating Plans.

One key feature of the agreed Road Use Hierarchy is the recognition of "Future Preferred Traffic Routes" along conceptual indicative alignments for Truck Action Plan, WestLink and the Moore Street Alternative.

The conceptual alignment of Truck Action Plan just south of Footscray Road was based on an early alignment option – now abandoned. Thus, the Road Use Hierarchy map ultimately needs to be modified to reflect the new alignment.

In addition, the conceptual WestLink alignment should be extended to reflect Council's in principle support for a long tunnel to the west of Paramount Road. Furthermore, the "Preferred Traffic Route" status of Moore Street and Hopkins Street should be identified as "interim" and ultimately removed, following implementation of a Moore Street Alternative. At such time, Moore Street and Hopkins Street should be designated only as "Bus Priority Route".

Figure 13: Road Use Hierarchy in Maribyrnong



Source: VicRoads 2011

In a broader context, the need to establish a Principal Freight Network (PFN) for metropolitan Melbourne has been identified. The Road Use Hierarchy map should therefore reflect Council's preferred position with respect to the PFN. This is shown in the map in Figure 14 and highlights Council's preference to confine non-local freight movements on the freeway network. Local freight movements will continue to use other roads within the municipality to access the Principal Freight Network and local businesses and industry.

In summary, while the existing Road Use Hierarchy broadly satisfies Council's road management objectives, there are some adjustments warranted.

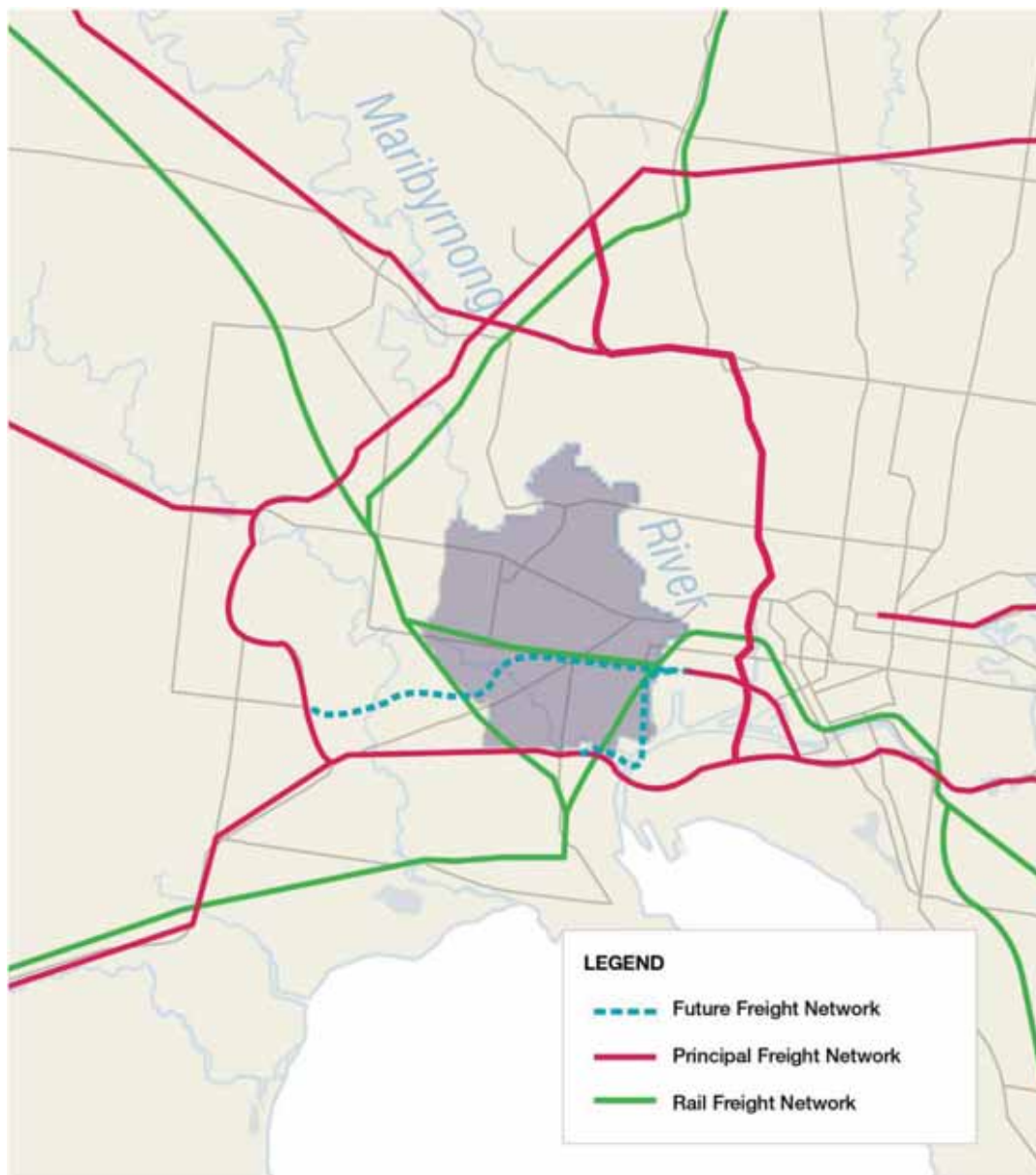
Other important areas that are not directly addressed by *SmartRoads* are travel behaviour change, sustainable transport and land use strategies. Each of these three themes is focussed on issues "off the road" while *SmartRoads* is focussed on issues that take place "on the road".

In practice, *SmartRoads* complements Council's initiatives and objectives on travel behaviour change, sustainable transport and land use. *SmartRoads* is essential in providing a road environment that is safe and capable of supporting the shift to more sustainable travel behaviour. Collectively, the on-road and off-road strategies can make critical contributions to reducing congestion.

Council will also need to respond to those aspects of road management that are not covered by *SmartRoads*. These are essentially issues that occur on local roads. Traffic and movement matters in these areas are best addressed through Local Area Traffic Management (LATM) programs and other complementary initiatives. There is therefore an ongoing role for Council's LATM program to manage safety issues, speeds, rat-running and other inappropriate use of local roads, as these matters are not covered by the *SmartRoads* management objectives.



Figure 14: Principal Freight Network



Source: Maribyrnong City Council and Victoria Department of Transport 2011

Policy 16: Council will work with VicRoads to prepare and deliver Network Operating Plans across the municipality in support of the SmartRoads program

Issues and Justification

Maribyrnong needs to reduce traffic congestion, improve access to activity centres and reduce the amount of through traffic travelling across the municipality. This includes protection of residential areas from the adverse effects of truck traffic by managing freight movements on a clearly defined network.

The agreed *SmartRoads* Road Use Hierarchy provides the framework for action but has to be supported by a set of Network Operating Plans that realise the intended priority for all key routes in Maribyrnong. For example, tram and bus routes in the municipality have already been designated as *Tram Priority* and *Bus Priority* respectively, yet little has been achieved in terms of achieving improved public transport performance. Trams and buses are delayed by increasing congestion throughout the network, reducing the attractiveness of these modes.

Actions

Action 16.1: In collaboration with VicRoads develop and implement Network Operating Plans for the arterial network commencing with those portions of the network within activity centres and on public transport routes.

Action 16.2: In collaboration with VicRoads and Department of Transport establish an agreed version of the Principal Freight Network to allow freight to be efficiently transported while reducing community impacts.

Policy 17: Council will work with VicRoads to improve maintenance standards of arterial roads

Issues and Justification

Council is responsible for the maintenance, repair, reconstruction and rehabilitation of local roads. Council carries out a range of road maintenance services on local roads, including minor road repairs, pothole patching, repairs following underground work by utility companies, and kerb, channel and footpath maintenance issues.

Council's maintenance obligations and the processes it will follow to ensure roads are safe and well maintained are defined in a Road Management Plan. The purpose of the Road Management Plan is to establish a management system for Council to inspect, maintain and repair the public roads for which it is responsible based on policy and operational objectives having regard to available resources.

VicRoads is responsible for road asset management for State Highways and declared Main Roads across Victoria. Road asset management involves the management of both physical assets and the aspects of the use and operation of those assets that affects asset condition. It applies to all road assets including roads, bridges, roadsides, signs, delineation, traffic control equipment etc.

VicRoads manages 22,500 kilometres of roads to ensure that safe and acceptable road conditions are maintained at the lowest total cost to the community. The trends in condition of Victoria's roads have shown substantial improvement in recent years. Victoria's roads are now smoother and transport costs are lower (as a result of reduced roughness on important and busy roads). The State Highways and Declared Main roads within Maribyrnong are shown in Figure 15:

Figure 15: State Highways and Declared Main Roads



In Maribyrnong, an important aspect when considering road maintenance is the high volume of truck traffic through the municipality, associated with freight distribution and logistics centres, wholesale markets and the Port of Melbourne. Council estimates that there are at least 20,000 truck movements (from light rigid wheel-base trucks to B-doubles) each day using roads that run through the inner western residential suburbs. Recent international studies estimate that a 40-ton truck can cause as much damage to a typical road as 60,000 cars weighing one ton.

The significant number of truck movements in Maribyrnong thus result in higher levels of deterioration of the road network than those experienced in other parts of the Melbourne metropolitan area. Road damage, in turn, has safety and transport cost implications. In response to this, there is a need for increased maintenance of the road network within Maribyrnong. Therefore, additional funds are needed to maintain the road network across the municipality.

Actions

Action 17.1: Council will advocate to VicRoads for improved maintenance of arterial roads across the municipality.



Policy 18: Council will support the Local Area Traffic Management program to protect local areas from through traffic and ensure the highest possible levels of amenity for the community

Issues and Justification

Communities across the municipality are justifiably concerned at the safety of their local streets, particularly the safety of vulnerable road users. However, it is difficult to control driver behaviour and reduce speeds on local streets solely through regulation and enforcement.

Local Area Traffic Management (LATM) schemes (also referred to as traffic calming) provide a mechanism to alter the physical environment of the local street to ensure appropriate speed and behaviour. In this context, the LATM concept applies to the planning and management of road space within a local traffic area, with the objective of improving the traffic-related safety of all road users on the local street. More specifically, LATM schemes use a combination of mainly physical measures to reduce the adverse impacts of motor vehicle use, reduce accidents, alter driver behaviour and improve conditions for non-motorised street users.

Council has conducted LATM studies in the past, the most recent being in the Seddon area (2011). The installation works of the proposed Seddon LATM projects have been spread over a three year period through 2013.

Actions

Action 18.1: Continue to implement a program of LATM schemes in the municipality's residential precincts to complement the program of Network Operating Plans.

Parking

The Maribyrnong municipality has a complex mix of land uses and parking and access in the area is a critical issue. Many areas within Maribyrnong experience high on-street parking demands, reducing accessibility to key destinations. Some residential areas, in proximity to commercial, retail and institutional uses are exposed to parking by non-resident vehicles. Many visitors to the municipality's activity centres have the option of driving, given the established availability of parking. This is particularly evident at Highpoint which has over 6,200 parking spaces and, to a lesser degree, Footscray, which has around 2,000 spaces servicing the CAA. The management of parking needs to enhance accessibility through discouragement of long-term commuter parking while supporting legitimate short-term parking requirements. Managing parking supply and demand in Maribyrnong will promote access to destinations, while influencing travel mode choices that promote sustainable outcomes for the municipality.

Background

Council can act to reduce parking pressures by influencing the time of travel, mode choice and quantity of trips undertaken in the municipality. This can be pursued most effectively by the adoption of a parking strategy that:

- 1) Discourages long-term commuter parking, while retaining maximum flexibility and convenient access to parking for groups with particular needs such as disabled motorists;
- 2) Redefines and formalises existing residents' access to on-street parking, while limiting the availability in the number of permits;
- 3) Provides convenient short-term parking in support of delivery vehicles, service vehicles, shoppers and business customers; and
- 4) Manages parking associated with Victoria University and the Western Hospital to relieve pressure on surrounding residential areas.

The main existing parking issues include:

- At Victoria University and the Western Hospital there is insufficient off-street parking within these institutions to fully cater for students, staff and visitors. Consequently, significant on-street parking demands are manifested in certain precincts of Footscray competing and overlapping with the demands generated by local businesses and, in some areas, train commuters. These excess demands also affect amenity in surrounding residential streets as motorists seek free parking opportunities. The number of students driving to Victoria University is partly a function of the proportion of students attending the university who live outside Maribyrnong.
- The removal of an informal train commuter car park from West Footscray Station has resulted in parking spillage into nearby residential streets and the Whitten Oval.
- The Mervyn Hughes and Henry Turner Memorial Reserves offer car parking with fees of \$1.50 per hour or \$8.00 per day.

These fees are higher than other parts of the municipality. Most University students avoid parking in these areas preferring to seek free parking opportunities in nearby residential streets. The existing "2 hour parking limit" in many of the surrounding residential streets allows students to attend 2 hours of classes before moving their vehicles if staying longer.

- Yarraville Village experiences high parking occupancies. There are relatively few off-street car parking spaces available and many of the popular attractions such as the Sun Theatre, restaurants, cafes and shops do not provide off-street customer car parking.
- Train commuters who reside in outer western suburbs drive to West Footscray Station in order to pay the reduced cost of a Zone 1 fare. In a broader context, the presence of some off-street car parking at stations within Maribyrnong encourages some people to drive to stations in the expectation of securing a parking space. On those occasions that commuters are unable to find a parking space in the station carparks they may spill into surrounding residential areas.
- Demand for parking at Highpoint Shopping Centre occasionally results in traffic congestion and long queuing on surrounding roads especially on weekends and busy shopping periods such as Christmas.
- Vehicle idling while parked is a significant source of air pollutants (particularly in the case of diesel engines) and greenhouse gas emissions. It also contributes to increases in fuel consumption and its associated cost.

In response to these issues, Council needs to act in a number of areas, including:

- Parking Management
- Mobility Management
- Parking Policy

Policy 19: Council will operate a resident priority parking scheme with a maximum number of permits per household

Issues and Justification

The structure of the existing resident priority parking scheme (particularly the relative ease of obtaining multiple residential parking permits per household – up to 4, including a maximum of 2 visitors' permits) could encourage high car usage rates in Maribyrnong compared to areas where residents do not have the ability to park cars in proximity to their homes – such as the Melbourne CBD and other inner city precincts. The number of permits available is higher than most other inner city municipalities. The first two permits are issued free of charge, the third permit costs \$35.50 per annum and the fourth permit costs \$51.50 per annum. A review of the scheme is required in order to ensure a consistent, integrated and sustainable approach across the municipality. The goals of a review of the resident priority parking scheme, should include:

- Setting the number of permits per household at an optimum level – that supports the lowest possible car usage rates
- Regulating visitor permits
- Clarifying areas where permit holders may park

In areas such as Footscray, Council has already been restricting parking permits and residents in new developments that have received parking waivers during the planning process are not entitled to resident parking permits.

The locations where residents are permitted to park are currently ambiguous and potentially unclear for both residents and enforcement officers. Technically residents are only permitted to park in their own street. However, in practice residents often resort to parking on side streets when their own streets are full.

Some exclusive “Resident Only” parking restrictions exist in some areas; however it is current Council practice not to install any new restrictions of this form.

A revised resident parking scheme based on a ‘zone’ system may be more appropriate. The creation of a Resident Permit Parking ‘zone’ system would provide the following benefits:

- Remove any ambiguity of where parking is permitted
- Provide increased flexibility for residents in circumstances where they are unable to find parking within their own street

The matter of whether a ‘zone’ system should replace the current resident parking scheme should be the subject of a formal review by Council. The review should include an examination of the type and role of visitor permits. This should address the issue of visitor permits not always being used correctly for their intended purpose. Parking for legitimate visitors of residents, which may include friends, relatives, deliveries, tradespeople needs to be maintained. Voucher schemes have been widely used in other municipalities, such as the City of Melbourne to cater for the needs of visitors.

Actions

Action 19.1: Undertake a review of the Resident Parking Scheme in 2011/2012, with particular emphasis on the following features:

- Two permits per household for residents linked to specific vehicle registrations, not including visitor permits
- Either a lower number of permits for visitors or creation of a voucher system to accommodate the needs of residents' visitors
- Consideration of the merit of allowing parking within zones rather than single streets
- Discontinuance of resident-only parking zones
- Ending permit eligibility for residents of new developments with more than one dwelling on a lot from a specified date

Action 19.2: Undertake consultation and communication to improve community awareness of the changes to the Resident Parking Scheme.

A community awareness program should precede implementation of any changes to the Resident Parking Scheme. A communication plan for advising residents of eligibility to the Resident Parking Scheme may include:

- Updating of Council's web-site to reflect the proposed changes
- Information forwarded to Real Estate Agents to allow incorporation in new tenant kits.
- Issuing of rates notices to include advice about the Scheme including alternative parking and access options available for residents and their visitors.
- Notices be attached to parking signs relating to the Resident Parking Scheme suggesting reader obtain detailed information of eligibility by visiting the Council's web-site or contacting Customer Service.
- Use of legal agreements, where appropriate. For example, where the applicant for a planning permit and Council agree to a reduction of parking requirements for residential development, an agreement may require the owner to advise prospective tenants and owners that residents of the property are excluded from the Resident Parking Scheme.



Policy 20: Council will review the fees for resident parking permits

Issues and Justification

Each residential household is currently eligible to apply for a maximum of four residential parking permits, which may include a maximum of two visitors' permits. The first two permits are issued free of charge, the third permit costs \$35.50 per annum and the fourth permit costs \$51.50 per annum. These fees are currently well below the market value of commercial unreserved off-street parking. However, a simple increase in permit fees to more closely reflect the real cost of on-street parking is considered inequitable, given that many residents are not able to provide parking on site.

Other Australian municipalities charge higher fees than Maribyrnong. Sydney charges over \$100 per annum for permits and the City of Melbourne generally charges \$20 for the first permit and \$80 for the second permit. The City of Yarra charges \$27.50 for the first permit, \$60 for the second permit and \$92 for a third permit.

Council should investigate appropriate permit fee increase levels for Maribyrnong.

Actions

Action 20.1: Review the fees for Resident Parking Permits.



Policy 21: Council will review fees for on-street parking for visitors

Issues and Justification

A review of fees for on-street parking for visitors is required to improve the performance of parking in Maribyrnong. The use of ticket parking improves compliance and reduces the work-load on enforcement officers. This would also discourage longer term parking in favour of legitimate short term visitors. Residents would continue to be exempt from both the time limit and parking fees.

Actions

Action 21.1: Investigate the installation of time-limited fee parking (ticket machines) prioritising streets that exhibit high demand for parking. A review should be undertaken to determine the locations where this is needed and the cost to be charged to visitors for parking.



Policy 22: Council will participate in the review of carparking provisions within the Victoria Planning Provisions.

Issues and Justification

In August 2007, an Advisory Committee was appointed by the Minister of Planning to provide advice on car parking issues and to recommend amendments to Clause 52.06 of the Victorian Planning Provisions to reflect current parking requirements. The brief to the committee included:

Review the land uses, rates and measures in the Car Parking Table of Clause 52.06 to:

- Update the rates and measures
- Include rates for uses that are now common, and
- Harmonise the uses listed in the Table with VPP land use terms.

The report provided by the committee contains recommended revisions to Table 52.06.5 which largely recommend lower car parking rates across most land uses, with further reductions applicable in activity centres. These reduced parking rates are considered appropriate for Maribyrnong. A range of lower parking rates already apply in the Footscray CAA following a review in 2009.

The Minister for Planning has recently appointed a new Advisory Committee to review the recommendations of the 2007 Committee.

Actions

Action 22.1: Provide a submission to the 2011 review of parking provisions, and subsequently advocate for the implementation of supported changes.

Policy 23: Council will promote the availability and affordability of both off-street and on-street parking to reduce pressure on the use of on-street parking.

Issues and Justification

There is some spare capacity within commercial and Council-managed off-street parking facilities. Public awareness of the availability of these parking spaces is not widespread. Council also has the opportunity to utilise its electronic monitoring of on-street parking to identify, advice and direct motorists to areas of on-street parking availability.

A parking guidance system could be developed to create greater awareness of all public off-street and on-street parking.

Actions

Action 23.1: Develop and implement, in partnership with car park owners/operators, a parking guidance system to include all main public off-street car parks in activity centres and other areas of high demand.



Policy 24: Council will review parking fees in selected off-street car parks, in order to reduce pressure on the use of on-street parking in sensitive local areas.

Issues and Justification

Council should review the pricing of parking within the Mervyn Hughes and Henry Turner Memorial Reserves car parking areas, which are located in the vicinity of Victoria University. These Council-managed off-street parking areas feature parking fees of \$1.50 per hour or \$8.00 per day. As such, many university students avoid parking in these areas and search for free parking opportunities in residential streets instead. A reduction in parking fees may encourage higher occupancy levels to attract motorists away from parking in surrounding residential on-street areas, while also increasing Council parking revenue.

Actions

Action 24.1: Investigate parking occupancies in Mervyn Hughes and Henry Turner Memorial Reserves to determine whether reduced parking fees should be implemented.



Policy 25: Council will establish “idle-free” zones throughout the municipality

Issues and Justification

The tens of thousands of motorists who drive vehicles every day within and across Maribyrnong can take steps to reduce air pollution, greenhouse gas emissions (that contribute to climate change) and fuel consumption, while saving money.

An operating vehicle emits a range of gases from its tailpipe into the atmosphere, including carbon dioxide (CO₂), the principal greenhouse gas that contributes to climate change. Vehicles produce other emissions, such as volatile organic compounds (VOCs), carbon monoxide (CO) and oxides of nitrogen (NO_x), which are known to contribute towards air pollution and smog.



Multiple factors can affect the fuel consumption and emissions of a vehicle, including driving style and behaviour, vehicle acceleration, braking and driving speed, overall age and operating condition of a vehicle, temperature, weather, traffic, road conditions, as well as drive systems and powered accessories (e.g. air conditioning).

One of the easiest actions that motorists can take to reduce fuel consumption and emissions is to avoid unnecessary idling. In fact, one of the most powerful arguments in favour of reduced idling is an economic one. For a vehicle with a 3-litre engine, every 10 minutes of idling costs 300 millilitres in wasted fuel.

Studies around the world have shown that reducing idling can have a significant impact on reducing fuel consumption (and its associated cost) and greenhouse gas emissions. With respect to air pollutants, in the case of petrol engines there is no substantial difference between idling versus turning off the engine restarting it. However, in the case of diesel engines (particularly relevant for Maribyrnong given the significant heavy vehicle traffic within the municipality), reducing idling can significantly reduce particulate and NO_x emissions.



Idling emissions are of special concern in the case of diesel-powered school buses, since children are much more susceptible to diesel exhaust than healthy adults because they breathe more air relative to their body weight and their respiratory systems are still developing. A recent study conducted by researchers at Yale University in the United States showed that children are exposed to unhealthy levels of diesel exhaust and that the increased levels are directly related to idling school buses. Therefore, limiting engine idling time whenever practical can make a significant impact on protecting the health of students as well as bus drivers, teachers and other school staff. Overall, it is estimated that idling for more than 10 seconds uses more fuel and produces more greenhouse gas emissions than restarting the engine. However, turning off the vehicle to avoid idling can also result in higher maintenance costs and extra wear and tear for the vehicle starter and battery. The break-even point to offset any incremental maintenance costs is under 60 seconds.

Thus, a vehicle's impact on the environment can be lowered by simply prohibiting idling if a motorist is stopped for more than 60 seconds, except while in traffic. In this situation, turning off an engine has minimal impact on the starter system, and idling for more than 10 seconds uses more fuel than it takes to restart a vehicle. The money saved by motorists on fuel should more than offset any potential increase in maintenance costs.

The most common situations when motorists idle their vehicles include:

- Waiting for passengers
- Stopping at railway crossings
- Waiting to park
- Running quick errands
- Sitting in drive-through lanes
- Waiting to refuel or to have the car washed
- Stopping to talk to an acquaintance or friend
- Preparing to leave the house

The simple act of switching engines off will save on fossil fuel usage, reduce greenhouse gas and air pollutant emissions, and save drivers money.

A number of cities in Europe, United States and Canada have implemented comprehensive idling reduction programs. The guidelines for turning engines off are 10 seconds in Italy and France, 20 seconds in Austria, 30 seconds in the United States, 40 seconds in Germany and 60 seconds in the Netherlands. These programs have been implemented at local, state and national level in different countries, and have been very successful in reducing emissions of air pollutants and greenhouse gases, and in saving fuel.



Actions

Action 25.1: In collaboration with VicRoads and other agencies, develop an Idle-Free Zone program for Maribyrnong (for both heavy-duty and light vehicles) to encourage motorists to turn their vehicle engines off when not driving. The program should begin by designating schools as idle-free zones (e.g., buses and private vehicles waiting in queue during drop off and pick up at school). Hospitals and other sensitive areas should follow, with consideration for the program then being extended to business and commercial districts, parks, and neighbourhoods.



Action 25.2: Educate drivers and the community about the impacts of idling (fuel consumption, emissions, and noise) and the benefits from turning off your engine while waiting.

Policy 26: Council will support the expansion of car sharing in Maribyrnong

Issues and Justification

The popularity of car sharing schemes across Melbourne has increased significantly in recent years. Car sharing allows registered members to book and rent a 'pool' car for, generally, short term usage, typically ranging from a few hours to a day or two. Car sharing is most effective in mixed-use areas with good public transport, cycling and pedestrian networks, which make it possible for residents and workers to undertake most of their daily activities without a car, while offering the flexibility of car usage for special occasions. Car sharing can also be effective as an alternative to owning a second car.

Three car sharing vehicles (located on-street) are currently available within Maribyrnong. By comparison, in inner Melbourne there are currently around 130 on-street spaces provided to support car share vehicles. The City of Melbourne plans to support an increase to 300 car share spaces within 5 years of which at least 50 would be located in the CBD.

Maribyrnong's proximity to the central city and increasing density and diversity of land uses offers significant potential for increased use of car sharing vehicles. Car share companies should be encouraged to expand their services in Maribyrnong. In support of this aim, strategies to encourage increased uptake of car sharing need to be pursued by Council.



Actions

Action 26.1: Support the provision of at least one car sharing space to be installed on-street adjacent to all new high density residential and commercial developments.



Action 26.2: Exempt car sharing vehicles from parking fees in all Council-controlled off-street carparks.

Action 26.3: Explore mechanisms to extend parking privileges to car sharing vehicles (similar to vehicles displaying Resident Parking Scheme permits) – in selected areas throughout the municipality in support of short-term parking access while avoiding unintended consequences such as long-term commuter parking.

Action 26.4: Explore mechanisms to provide car share parking spaces (in addition to car share 'pods') in highly sought after locations as an incentive to car share users. These parking spaces would not be associated with a particular vehicle or car share company, but could only be used by car share vehicles.



Freight

Council supports the efficient movement of freight on agreed routes across the municipality. However, while the on-road movement of freight partly reflects the growing economy in the west, as well as in the broader region, truck movements need to be better managed in order to avoid adverse health and safety impacts on residential communities. This is particularly evident in the south eastern part of the municipality, where excessive truck traffic continues to affect the amenity of residential areas.

Background

The impact of on-road freight movements on Maribyrnong's residential areas was recognised in the 2001 MITS. Truck traffic through the municipality has long been associated with the large industrial estates both within and adjacent to Maribyrnong, the presence of freight attractors such as freight distribution and logistics centres, and wholesale market and Port of Melbourne activities in the Footscray Road precinct. The 2001 MITS promoted a package of initiatives to alleviate adverse community impacts. Actions were principally focused on advocacy with State Government agencies for increased use of appropriate arterial roads, introduction of truck curfews to protect sensitive routes, as well as increasing the role of rail in carrying freight.

While some improvement has occurred over the past decade, problems still persist – fuelled by a steady growth in freight traffic which is forecast to continue over coming years. In addition, currently only a few streets in the municipality have truck curfews in operation (as shown in Figure 16).

One generator of truck traffic, the Port of Melbourne, experienced 2.393 million twenty foot equivalent units during 2010/11, an increase of 7% from the previous financial year. Council estimates that there are at least 20,000 truck movements each day (light trucks to B-doubles) using roads that run through the inner western residential suburbs. The cost of these truck movements for the City is very high and includes:

- Road safety considerations associated with trucks on both local and arterial roads
- Significant negative health effects linked to diesel-burning engines
- Environmental costs associated with emissions
- Sleep disturbance from increased truck traffic through the night and use of engine brakes
- Potential for truck-induced vibrations to damage houses
- Increased maintenance of the road network
- Lower property values adjacent to heavily used truck routes and poorly located transport depots or terminals

Figure 16: Current Truck Curfews in Maribyrnong

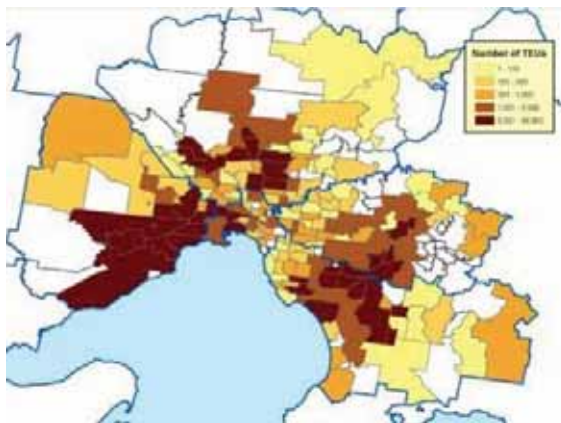


Analysis of the origins destinations of Port of Melbourne and Dynon Rail precinct freight imports and exports, found much of the traffic coming from the west and north, both within and outside metropolitan Melbourne.

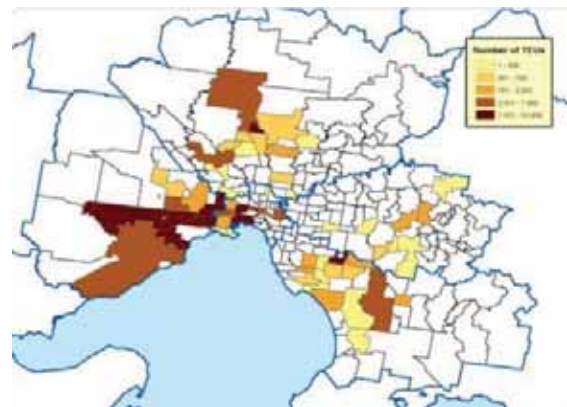
The 2009 Container Logistics Chain Study shows that 87% of full import containers are delivered to destinations located in the metropolitan Melbourne area, while 54% of export containers have origins in the metropolitan area (Figure 17).

Figure 17: Destinations and Origins of Import and Export Containers

Import Containers Destinations



Export Containers Origins



Source: Port of Melbourne 2009

It has been established that the majority (91%) of the freight import trips shorter than 50 kilometres originating from the Port of Melbourne are undertaken by road, while around 89% of trips that included a rail leg travelled more than 600 kilometres from Melbourne.

The road network linking the Port of Melbourne and domestic freight terminals to Maribyrnong does not effectively provide separation of truck movements from sensitive residential areas. While much road-based freight traffic is able to use arterial roads in Maribyrnong there is also some occasional spillover onto local streets.

Furthermore, sections of arterial roads are located in predominantly residential neighbourhoods (Francis Street, Williamstown Road, Moore Street) and truck movements in these areas are undesirable. Alternative routes need to be established, in order to safeguard residential amenity.

This is especially necessary given that the capacity of many of Maribyrnong's arterial roads has already been reached.

The State Government has considered a package of initiatives to address the adverse impacts of freight movements through Maribyrnong. These initiatives include WestLink and the Truck Action Plan. A planning study has commenced for WestLink – seeking to define a freeway-standard route to connect the Port of Melbourne to the Western Ring Road, avoiding the inner west via a tunnel under Footscray. Following consultation, a preferred alignment was selected for further analysis but no project funding has been identified. The Truck Action Plan is a series of currently unfunded road improvements, principally designed to reduce truck volumes on Francis Street and Somerville Road and provide better connectivity to the West Gate Freeway.

The Truck Action Plan involves a number of initiatives, including:

- New ramps connecting the West Gate Freeway and Hyde Street, enhancing connectivity to the Port of Melbourne via Footscray Road
- Upgrade of Hyde and Whitehall Streets
- Strengthening of Shepherds Bridge to ensure appropriate access for heavy vehicles
- Upgrade to Sunshine Road, Dempster Street and Paramount Road

While the status of the State Government's major projects remains uncertain, Council must continue to pursue actions to protect local streets and residential areas, as well as to develop freight solutions for the broader road network.

A key area requiring attention is Moore Street, which features predominantly residential land uses, but is used by trucks to travel between Ballarat Road and Hopkins Street. An alternative route needs to be established – possibly in the form of a new underground road connection to the east of Moore Street, intersecting Ballarat Road just west of Lynch's Bridge and crossing the Maribyrnong River north of Dynon Road to ultimately link into the Port precinct via Dynon Road. Such a connection would be designed to relieve congestion on Moore Street by relocating truck traffic onto a more convenient and direct route. Council will therefore continue to work with key stakeholders to reduce the incidence of through truck traffic in the residential streets of the municipality, including:

- Identifying the primary routes for trucks, over dimensional vehicles and hazardous materials
- Developing a freight movement network using the non-residential arterial roads and the freeway road network
- Identifying better locations for existing freight generating land uses and freight handling centres (such as container storage sites and inland ports), noting that these may be outside the municipality

- Realising the potential to increase the role of rail in the movement of freight

Freight related issues cannot just be considered on a municipal basis. As Victoria's population and economy continue to grow, the freight task will continue to expand (the number of tonnes of freight moving around Melbourne by road has been forecast to almost double by 2030 from current levels). Recognising these pressures, the Government prepared the *Freight Futures* strategy, a long term plan for addressing freight issues across the state. *Freight Futures* recognises that the movement of freight is primarily a private sector activity and that the Government's role is best focussed on aspects of the task on which it can have a material and beneficial impact. For this reason, *Freight Futures* does not attempt to address every aspect of freight supply chain development and management, but rather focuses on the freight network – its planning, delivery and management.

Freight Futures estimates that approximately 60% of Victoria's freight tonnage begins its journey within the metropolitan Melbourne area. The metropolitan freight task, which is expected to grow at 3% per annum from around 12 billion tonne kilometres (BTKms) in 2008 to approximately 17 BTKms in 2020, is currently carried almost exclusively on road.

Currently, there are an estimated 170,000 truck movements around metropolitan Melbourne every day. In addition, a further 40,000 trucks enter and leave Melbourne every day. Close to 10% of these trips are generated from the Port of Melbourne, Dynon rail precinct and the Melbourne Wholesale Fruit and Vegetable Market. Direct movements to and from the Port of Melbourne alone account for 5% of all metropolitan truck movements.

The growth in the overall freight task is partly linked, in Maribyrnong, to the total container trade through the Port of Melbourne. Victorian port trade is forecast to increase to around 8 million twenty-foot equivalent units (TEUs) by 2035 (from around 2 million TEUs in 2009).

Transformational improvements to productivity in road and rail modes will be needed to support this expanded port task.

A key feature of *Freight Futures* is therefore the establishment of Victoria's Principal Freight Network – a high quality, high capacity, well connected, flexible and sustainable freight network (see Figure 14 in the Congestion Chapter).

Various drivers of change have been identified in *Freight Futures* that are of immediate relevance to Maribyrnong and the freight task through the municipality.

One such driver of change is the increased use of intermodal solutions. Intermodal solutions, especially road/rail, can provide more efficient ways to move freight from origin to destination, cutting dwell times and avoiding road congestion. Connectivity to intermodal operations can occur at hubs that may be at a local, regional or interstate level. If the combination of modes can meet customer service requirements, then intermodal services can be an effective alternative to single mode only operations.

The existing intermodal terminals that are most relevant to Maribyrnong are located at Laverton, Altona and Somerton. These terminals allow freight to be moved by rail and then transported a relatively short distance by road to its destination. These intermodal terminals typically handle grain and containerised freight. The State Government has proposed the development of a Metropolitan Intermodal System (MIS), an integrated system of freight terminals in each of Melbourne's major industrial areas and at the Port of Melbourne, linked by efficient, high capacity rail and road shuttle services. The preferred option involves the establishment of three principal rail-road intermodal terminals to the west, north and south-east, plus a number of complementary road-road terminals sited to take advantage of concentrations of freight activity which are less accessible to rail.

Another key initiative identified as part of the MIS is the establishment a new interstate rail terminal at Donnybrook/Beveridge. The most significant part of the Dynon freight task relates to domestic interstate freight handling at the South Dynon rail terminal. However, there is no operational reason for non-port-related domestic freight to be handled immediately adjacent to the port as it significantly increase truck traffic throughout the inner area. Thus the relocation of domestic interstate rail freight handling from South Dynon to an alternate terminal site in the Donnybrook/Beveridge area will enable interstate domestic freight (which currently travels through the metropolitan area to Dynon) to terminate at Donnybrook/Beveridge for distribution throughout Melbourne – allowing an earlier dispersal of truck traffic rather than creating truck demand and adverse amenity impacts in the already congested inner road network. In this context, Council supports the establishment of a new interstate rail terminal initiative at Donnybrook/Beveridge. The MIS also proposes the establishment of a Western Interstate Freight Terminal to allow relocation of domestic intermodal freight handling from South Dynon. Interstate domestic freight, which currently travels through the metropolitan area to Dynon, will be able to terminate at Donnybrook/Beveridge for distribution throughout Melbourne. This will reduce the need for some larger trucks to travel into the City.

The use of rail shuttles between the intermodal terminals and to the inner city, particularly the Port, would shift trips currently being undertaken by trucks to a more sustainable mode of transport. Intermodal terminals also provide an opportunity to improve the efficiency of freight movements and reduce their impacts on local residents. As with the proposed Donnybrook terminal discussed above, where freight does not have a nearby origin or destination, intermodal terminals outside the inner-metropolitan area can also remove trips from areas such as Maribyrnong, reducing the freight impacts on the community.

Another area where significant improvements can be made is the increased use of next generation High Productivity Freight Vehicles (HPFV). Larger freight vehicles can actually mean less traffic, as they can move more freight at lower cost in fewer vehicles. Since the mid-1970s, advances in road freight vehicle performance have made it possible for articulated truck mass limits to rise from 30 tonnes Gross Vehicle Mass (GVM) to 68 tonnes GVM (for a 25 metre B-Double operating at Higher Mass Limits). The use of next generation High Productivity Freight Vehicles could further increase the GVM and their use in Victoria is being reviewed under the national Performance Based Standards (PBS) program for heavy vehicles. Under the PBS framework these larger vehicles will also be safer – there are 11 safety standards that PBS vehicles must meet in order to be accredited which are designed to ensure that these vehicles are generally safer than vehicles designed under the existing prescriptive regulatory system.

Council supports in principle the introduction of next generation High Productivity Freight Vehicle (HPFVs). It recognizes that although B-Doubles have delivered a significant efficiency benefit in handling Victoria's and Australia's freight task, this benefit is being outstripped by continued growth. If HPFVs are not introduced, it is likely that the volume of articulated vehicles travelling through Maribyrnong will significantly grow.

Furthermore, Council recognises the benefits of having next generation HPFVs operate in inter-peak hours and, increasingly at night, making it necessary for the MFTN to be accessible on a 24/7 basis. It is therefore necessary to restrict the road-component of the MFTN to freeways and non-residential arterials only to protect the ongoing viability of these routes.

Concentration of heavy freight movements on the MFTN is expected to reduce such movements on the remainder of the arterial road network and improve amenity for communities, such as Maribyrnong, that are currently affected by truck traffic.

Another key area critical to the movement of freight is rail rolling stock performance, size and technology. Over recent years the length of interstate freight trains has increased from 1500 metres to 1800 metres, together with an increase in the permissible axle load – which determines the maximum loading of individual wagons – to 21 tonnes and in some cases up to 23 tonnes. These advances have resulted in an increase in the productivity of interstate trains. On the other hand, the standards for Victorian intra-state regional freight trains have not advanced since the 1970s. Regional freight trains are typically less than 1000 metres long and operate at only 19 tonne axle loads, restricting their productivity and viability compared with road transport, which has advanced considerably over the past three decades. Although handling longer, heavier freight trains presents various challenges to rail and terminal infrastructure, these challenges will need to be addressed on the intrastate network to achieve similar productivity improvements as have been experienced by trucks. As rolling stock noise from freight rail transport can have significant impacts on residential communities and other sensitive receptors, planning for increased rail freight will need to find ways to mitigate these impacts.



Policy 27: Council will protect the amenity of local streets and residential areas from the impact of freight traffic

Issues and Justification

Council can play a significant role in protecting local streets from trucks travelling throughout the municipality, particularly those seeking to avoid arterial road congestion.

A combination of lower speed limits, regulatory controls and targeted movement prohibitions can be used as low-cost interventions, to manage and limit use of local roads by non-local truck traffic.

The number of trucks travelling on all roads (local and arterial) can also be reduced by supporting the establishment of the MFTN to reshape freight flows to and from the Port of Melbourne, together with increased use of HPFVs travelling on freeways and non-residential arterial roads only.



Actions

Action 27.1: Conduct traffic monitoring along local streets intersecting the main freight traffic arterial roads, to identify inappropriate truck usage patterns.

Action 27.2: Develop and implement traffic calming measures for local streets. The priorities for implementation will be determined based on a review of safety and other conditions on areas of significant freight traffic.

Action 27.3: Support use of limited key metropolitan freeways by HPFVs to link the Port of Melbourne with major industrial areas. Suitable freeways include the West Gate Freeway, CityLink, Western Ring Road and Hume Freeway.

Action 27.4: Develop and implement traffic calming and other operational measures for arterial roads in residential areas that carry significant freight traffic. These may include actions such as truck curfews, narrowing streets, reducing speed limits, installing medians and roundabouts, designating pedestrian crossings, providing landscaping, marking bicycle lanes, timing traffic signals and improving signage.

Action 27.5: Advocate to VicRoads for the replacement of existing curfew monitoring equipment with more effective modern technology.

Action 27.6: Work with DOT to explore alternative ways of moving goods, such as using pipelines to move fuels. Ensure processes and standards are in place to prevent any risk to the community from pipelines prior to their establishment.

Policy 28: Council will continue to work with the Western Transport Alliance to reach consensus on a common policy position in response to a range of freight and truck issues affecting Maribyrnong.

Issues and Justification

Western metropolitan councils are taking a lead role in an advocacy campaign to raise awareness and seek government commitment and funding for major transport improvements for the western metropolitan area. A key stakeholder group called the Western Transport Alliance (WeTAl) has been formed. This group consists of senior local government officers, VicRoads, Department of Transport, representatives from major transport companies, the Victorian Transport Association, the Transport Workers Union, and Port of Melbourne Corporation. WeTAl is reviewing forward projections of the rail and road freight task, rail commuter needs, road commuter demand and other transport requirements for the western suburbs for the next 15 – 20 years as a basis for further discussion with Government.

Actions

Action 28.1: Continue to work with the Western Transport Alliance on initiatives related to HPFVs and their routes, truck curfews to protect residential precincts, mechanisms to encourage and increase the share of rail freight and a preferred position on intermodal terminals.

Action 28.2: Develop with members of the Western Transport Alliance a common policy position and advocacy on major transport requirements for the Western Suburbs.

Policy 29: Council will work with key stakeholders to promote the creation of intermodal terminals.

Issues and Justification

The 2010 discussion paper, *Shaping Melbourne's Freight Future*, discusses the need for an intermodal solution to complement the current road-direct freight model. The study highlights the important challenges associated with Melbourne's rapidly growing freight task.

According to this study, if the current 'road direct' model remains the only method of servicing this task, truck numbers accessing the central port/Dynon area will increase rapidly and the efficiency and reliability of freight movements will be affected by exposure to increasing congestion. The external costs of truck use – greenhouse gas and particulate emissions, noise, accidents, loss of amenity – will also progressively escalate.

These developments will in turn impact on the competitiveness and 'liveability' of Melbourne as freight costs increase and are reflected in higher costs of goods to consumers and heavy truck traffic becomes a more dominant presence in the fabric of the city.

Intermodal solutions can help to address some of these challenges.

The State government has medium term plans to establish a Western Interstate Freight Terminal in the western suburbs. Council supports this proposal, providing that appropriate freight routes are used to access the facility that minimise impact on residential communities. Council also supports this intermodal terminal having the ability to pass through customs and related processes directly at this facility, bypassing the need for goods to be processed at the Port of Melbourne and allowing for quicker movement of goods out of the Port precinct.

Actions

Action 29.1: Work with DOT on the intermodal terminal site selection and associated land use and route planning to promote a solution that maximises benefits for the Maribyrnong community.

Policy 30: Council will work with key stakeholders to promote reductions in truck emissions in Maribyrnong.

Issues and Justification

Heavy-duty diesel engines from trucks release unburned hydrocarbons, carbon monoxide, sulphur oxides, nitrogen oxides, particulate matter, and other toxic compounds. Although diesel trucks account for only a small amount of hydrocarbon emissions and carbon monoxide emissions, they contribute large amounts of nitrogen oxides and particulates, both of which contribute to serious public health problems.

Emissions from vehicle operation are determined by a number of factors, including engine specifications, fuel type and driving behaviour. Emissions standards for heavy-duty engines and vehicles can significantly reduce nitrogen oxides and particulate matter from freight trucks.

Emission reductions are generally achieved through the use of pollution control devices, such as catalytic converters, and diesel fuel requirements for low sulphur content. Low sulphur fuel is needed because sulphur in fuel damages the emission control devices used to reduce nitrogen oxide emissions during fuel combustion.

Australian emission standards are based on European regulations for light-duty and heavy-duty (heavy goods) vehicles, with acceptance of selected standards from the United States and Japan. The long term policy is to fully harmonize Australian regulations with standards from the United Nations Economic Commission for Europe.

The development of emission standards for highway vehicles and engines is coordinated by the National Transport Commission (NTC) and the regulations – Australian Design Rules (ADR) – are administered by the Department of Infrastructure and Transport, Regional Development and Local Government.

Beginning in 2011, all heavy vehicles built for sale in Australia must comply with new exhaust emissions standards known as Australian Design Rule (ADR) 80/03. ADR80/03 adopts Euro 5 for diesel, LPG and NG vehicles, and accepts 2007 United States standards and current Japanese standards as alternatives. The new ADR places lower limits on noxious emissions from the engine exhaust systems of new trucks used on registered roads. Five pollutants are listed in the standards; however, the two of primary focus when considering heavy vehicles are Particulate Matter (PM) and Nitrogen Oxides (NO_x).

The emission standards apply to new vehicles including petrol (gasoline) and diesel cars, light omnibuses, heavy omnibuses, light goods vehicles, medium goods vehicles and heavy goods vehicles, as well as to forward control passenger vehicles and larger motor tricycles.

Driving behaviour has a significant impact on a truck's fuel consumption and emissions rate. The most efficient drivers get up to 35% better fuel consumption than the least efficient drivers. Therefore, promoting fuel efficient driving behaviour (including less idling, less acceleration and braking, slower speeds, more cruising, better maintenance, etc.) can significantly reduce truck pollution and greenhouse gas emissions.

Reducing air pollution from trucks is particularly relevant in Maribyrnong, given the significant levels of truck traffic. The Maribyrnong Truck Action Group survey of Yarraville and Footscray residents showed very high levels of respiratory illnesses and significant concern from local residents regarding the air quality impacts of trucks.

EPA and the Department of Sustainability and Environment (DSE) are currently conducting a review of the *Environment Protection (Vehicle Emissions) Regulations* ('the Regulations'). The Regulations are due to sunset on 29 January 2013.

The objective of the Review is to determine whether the Regulations should be remade and, if so, how they can most effectively regulate motor vehicle emissions, noise and fuel.

At a national level, on 2 July 2009, the Council of Australian Governments (COAG) agreed to establish a single national system of laws for heavy vehicles weighing more than 4.5 tonnes. These laws will be administered by an independent national regulator—the National Heavy Vehicle Regulator (NHVR). The regulator and laws are to come into effect from 1 January 2013. The current lack of a single administering body leaves operators to navigate a maze of government bodies for important decisions around registration, vehicle conditions and access. Hence, operators often face ambiguity when identifying appropriate decision makers and where to lodge an application. Though they may be sound from a state and territory perspective, the legal variations create problems for interstate operators. Even relatively small distinctions in regulation have compliance and enforcement consequences for cross-border operators. The more diversions within law, the more resources interstate operators must expend on understanding and maintaining compliance.

Actions

Action 30.1: Advocate to the EPA to undertake a study to determine air pollution levels in sensitive locations along areas of significant freight activity within the municipality. The results will inform decisions for better management of freight movements.

Action 30.2: Work in partnership with the Environmental Protection Agency and DOT to evaluate the appropriateness of emission standards for heavy duty vehicles operating in sensitive urban areas. Consider mechanisms to work towards all heavy duty vehicles operating within Maribyrnong meeting strict emission standards such as Euro 5.

Action 30.3: Work with Port of Melbourne Corporation, domestic freight terminals and transporters to implement driver education programs focused on fuel efficient driving practices. Event data recorders on trucks could be used to reward driving behaviour that promotes higher fuel efficiency and lower emissions.



Policy 31: Council will work with key stakeholders to reduce freight noise in Maribyrnong.

Issues and Justification

Noise is frequently overlooked as a form of pollution because it is ubiquitous, it has no chemical toxicity and there are no attributable deaths. Noise has demonstrable effects on sleep, stress levels and disturbance to activities such as communication and learning. The reported effects of traffic noise on people's health are wide ranging and may include psychological effects (annoyance and behaviour reactions), physiological effects (sleep disturbance, cardiovascular disorders such as high blood pressure and heart disease, hearing loss and general fatigue through sleep loss), and social effects (restrictions on people's social activities, anti-social behaviour and effects on work efficiency).

Reducing truck noise is particularly relevant in Maribyrnong, given the significant levels of truck traffic, and the fact that trucks are inherently louder than cars and light vehicles. The Maribyrnong Truck Action Group survey of Yarraville and Footscray residents showed that over half of respondents reported ongoing sleep disturbance from truck noise at night and in the early hours of the morning. The noise implications of switching freight from truck to rail also need to be considered since freight rail produces significant levels of noise.

Actions

Action 31.1: Advocate to the EPA to undertake a study to determine noise levels in sensitive locations along areas of significant freight activity within the municipality. The results will inform decisions for better management of freight movements.

Action 31.2: Work in partnership with the Environmental Protection Agency and DOT to evaluate the appropriateness of noise emission standards for heavy duty vehicles operating in sensitive urban areas.

Policy 32: Council will work with key stakeholders to minimise conflict with residential uses along freight routes.

Issues and Justification

The 2011 National Land Freight Strategy identifies urban encroachment as one of the most substantial constraints to freight, since it leads to community sentiment against freight activities. Encroachment relates to the interaction of freight and land uses, and affects both port and non-port related freight. Given growth in both population and freight, the importance of resolving issues concerning such interactions is likely to increase. Therefore, better integration of freight transport and land use planning is important for productivity, as well as for amenity. Better integration may also assist to address some 'last kilometre' issues.

The first and most important step towards protecting key freight routes and terminals is to minimise conflict. Wherever possible, routes should not therefore be designated through residential areas. Where residential uses do not currently exist, land use planning or building mechanisms should be used to ensure an appropriate level of protection for these routes. What is appropriate will differ in each case; however, this may involve additional building requirements to provide noise attenuation or zoning of land to encourage non-residential uses.

Actions

Action 32.1: Work in partnership with DOT, VicRoads, Port of Melbourne and domestic freight terminals to identify likely major future freight routes and precincts.

Action 32.2: Work in partnership with DOT, DPCD and other relevant stakeholders to develop planning guidelines for new residential developments along freight corridors (truck and rail). Residential building requirements, such as sound attenuation measures, could be implemented in those areas identified as priority freight routes.

Major Projects

It is widely recognised that Maribyrnong's existing transport system is under significant pressure. At peak times, much of the arterial road network is congested, trains are struggling to meet demand and the tram and bus networks are slow and crowded. In response, a package of major projects has been under consideration in recent years, including WestLink, Melbourne Metro, Regional Rail and the Truck Action Plan. These projects are intended to relieve existing public transport service congestion, provide for an expansion of services to accommodate projected growth and address congestion and movement of road freight in the inner west. Council also considers that a rail link to Melbourne Airport through Maribyrnong can significantly boost travel options.

Westgate Alternative

The need for a Westgate alternative was identified in the 2008 *Investing in Transport: East West Link Needs Assessment* report by Sir Rod Eddington. The report recognised that strong population growth is outstripping local employment growth in the metropolitan area's west, creating significant travel pressures as more people travel to the CBD and to the broader inner suburban area for work. The report concluded there was a need to provide improved transport connections to support growth in the west but not at the expense of downgrading the amenity of sensitive inner city precincts.

In addition to responding to the requirements arising from population growth in the outer west, it has been recognised that there is an unacceptable number of trucks travelling through Melbourne's inner west. A Westgate alternative provides the opportunity to also address this issue – by eventually providing a link between the Eastern Freeway and the Western Ring Road, thereby removing the need for non-local trucks to travel through the inner west region.

A planning and consultation study for the project, designated as WestLink, started in 2009 and is expected to be finalised by 2012.

This study is examining the form and alignment of a new road connection linking the Port of Melbourne to the Western Ring Road.

The planning has identified a preferred option for WestLink as a tunnel with an eastern portal between Dynon Road and Footscray Road in the Port of Melbourne precinct, and a western portal in an industrial area in the vicinity of Paramount Road in West Footscray (see Figure 18). This long tunnel will then connect at-grade, in a subsequent stage, to the Western Ring Road.

The final phase of the project (for which no planning activities have begun) involves connecting the WestLink terminal in the Port precinct to join the Eastern Freeway. The majority of this link would be in the form of a tunnel and its alignment is expected to travel under the Melbourne CBD's northern environs.

The early concept design for WestLink has identified the need for a 6-lane traffic cross-section (3 lanes in each direction). The planning work conducted to date predicts multiple benefits arising from the delivery of WestLink, specifically:

- Reduced pressure on the West Gate Bridge which currently carries around 160,000 vehicles per day – with that number set to grow to more than 235,000 by 2036. Critically, with an estimated 500,000 additional people expected to move to the west by 2036, WestLink is expected to help cater for future travel demand.
- Improved connectivity to and from the Port of Melbourne, Australia's largest container port. This is a desirable outcome for Maribyrnong since freight volumes are expected to increase significantly in the next 25 years.
- Reduction in the number of trucks using local residential streets in the inner-west (together with the Truck Action Plan).

Ultimately, the diversion of a large number of trucks onto the Westgate alternative, would allow Council to improve the local environment particularly for walking and cycling.

In November 2011, the Victorian Government's submission to Infrastructure Australia included the WestLink project with a new stage that would connect the Eastern Freeway to CityLink and connect CityLink to the Port of Melbourne, as well as the connection between the Port of Melbourne and the Western Ring Road.

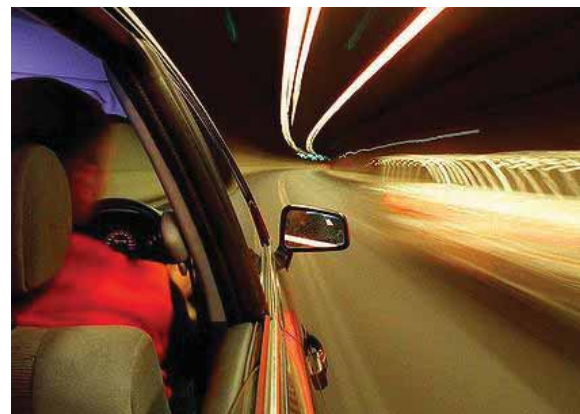
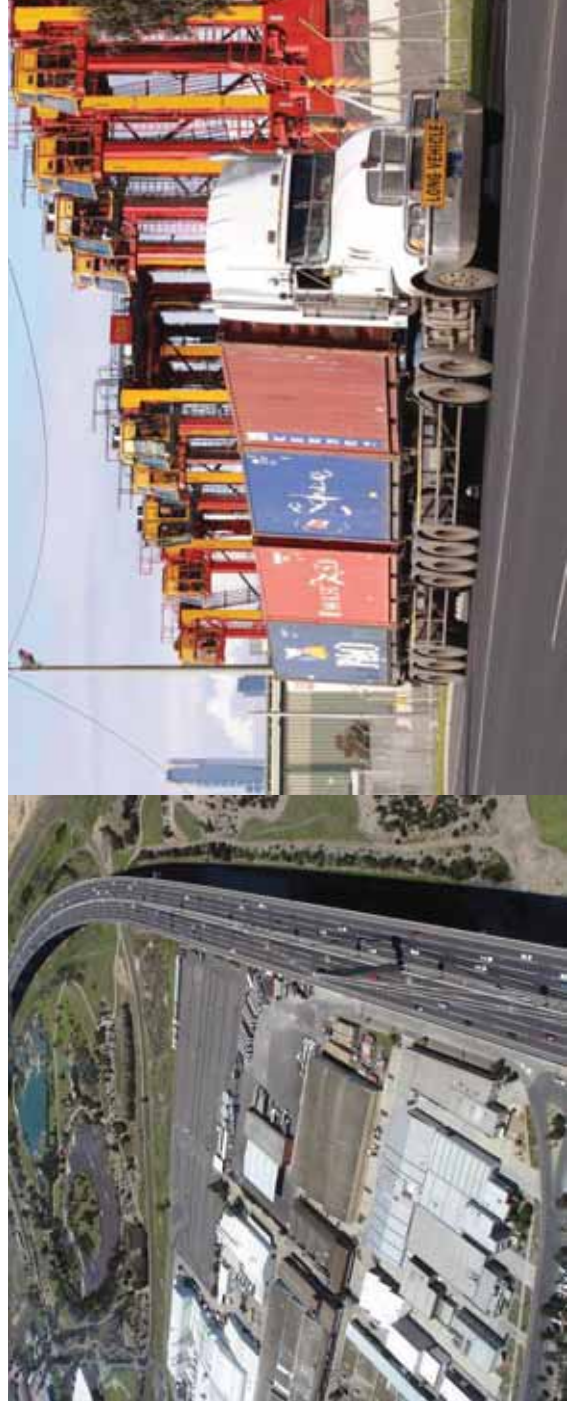


Figure 18: WestLink – Preferred Route



Source: Linking Melbourne Authority 2010



Non-Residential Freight Routes

Major planned non-residential freight routes include the Truck Action Plan (TAP), which has been used to refer to a scheme that aims to reduce truck traffic on residential streets in the inner-west of Melbourne and improve freight access from the west to the Port of Melbourne via the Westgate Freeway (see Figure 19).

The project has been subject to early planning work but is unfunded. The planning work has examined road network improvements that could possibly reduce truck volumes on Francis Street and Somerville Road by around 70%, equal to over 5,000 trucks per weekday.



The network improvements that have been examined during the planning phase include the construction of new eastbound off-ramps and westbound on-ramps connecting the West Gate Freeway to Hyde Street, enhancing connectivity to the Port of Melbourne via Footscray Road. The scheme is essentially designed to connect truck traffic from the Westgate Freeway corridor onto new non-residential designated truck routes to and from the Port of Melbourne. Hyde and Whitehall Streets would be upgraded and Shepherds Bridge strengthened to ensure appropriate access for heavy vehicles.

The establishment of a route to divert trucks from Moore Street to a tunnel connecting Ballarat Road (near Lynch's bridge) to Dynon and Footscray Roads has also been considered. Given the sensitive nature of this area, an at-grade option would be undesirable.

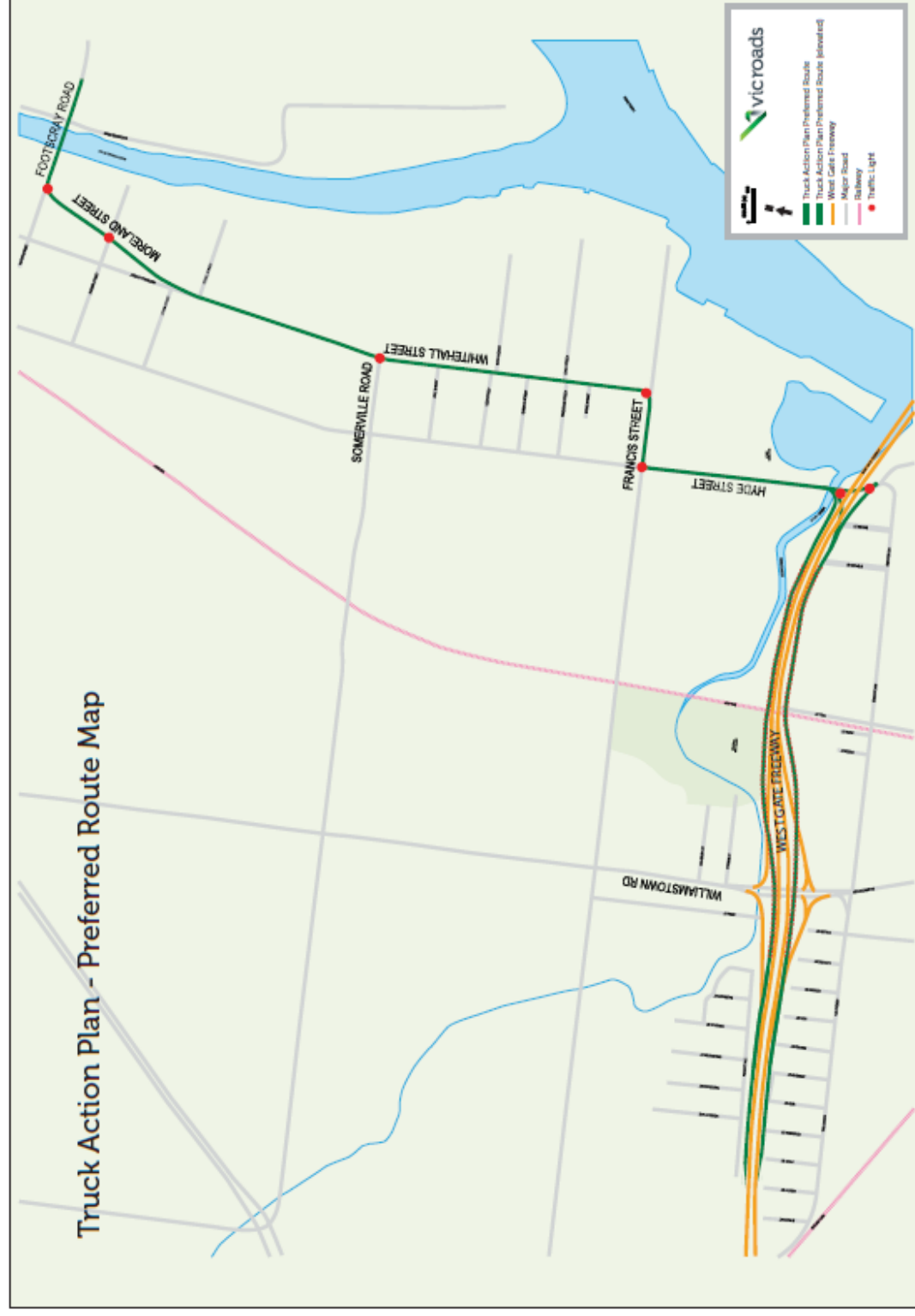
These routes would broadly satisfy Council's objective to reduce truck traffic on routes through sensitive residential neighbourhoods.

Other options were also considered during the preliminary planning process, including additional eastbound on-ramps and westbound off-ramps, which were eventually discounted on account of constructability, cost and environmental issues.

The removal of a large number of trucks from roads within the municipality, offers a unique opportunity to improve the local environment for other modes of transport – particularly walking and cycling with the potential to reallocate road space from cars and trucks to pedestrians and cyclists.

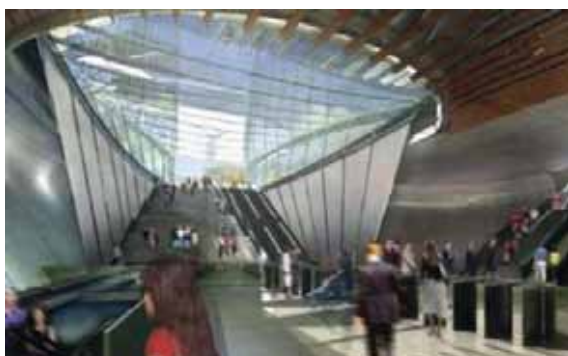


Figure 19: Truck Action Plan – Preferred Route



Melbourne Metro

Melbourne Metro is a project, currently at initial planning investigation stage, which assesses the construction of an east-west rail tunnel across Melbourne. The rail tunnel could deliver increased capacity into the CBD from the highly congested rail lines in Melbourne's west and north. It would provide greater access between Footscray, the western suburbs and the CBD and would also provide new access to the strategic economic clusters of biotechnology and education in Parkville and information communications technology in St Kilda Road.



The project would also build on the infrastructure provided by the Regional Rail Link. The Metro rail tunnel would help address congestion on Melbourne's busiest rail corridors creating additional space for more than 14 trains each hour on the Craigieburn, Sydenham (Sunbury), Werribee, Williamstown and Upfield lines. This would deliver around 12,000 more passengers each hour. Metro's initial planning envisages a two stage metropolitan rail tunnel. The first stage, shown diagrammatically in the map in Figure 20 would travel above ground from Footscray station then enter a tunnel near South Kensington railway station, extending to Domain Interchange via Parkville, Melbourne CBD and St Kilda Road. The project also includes the work necessary to prepare the Arden precinct in North Melbourne for urban renewal, thus helping to connect inner-city precincts more effectively with one another and the CBD.

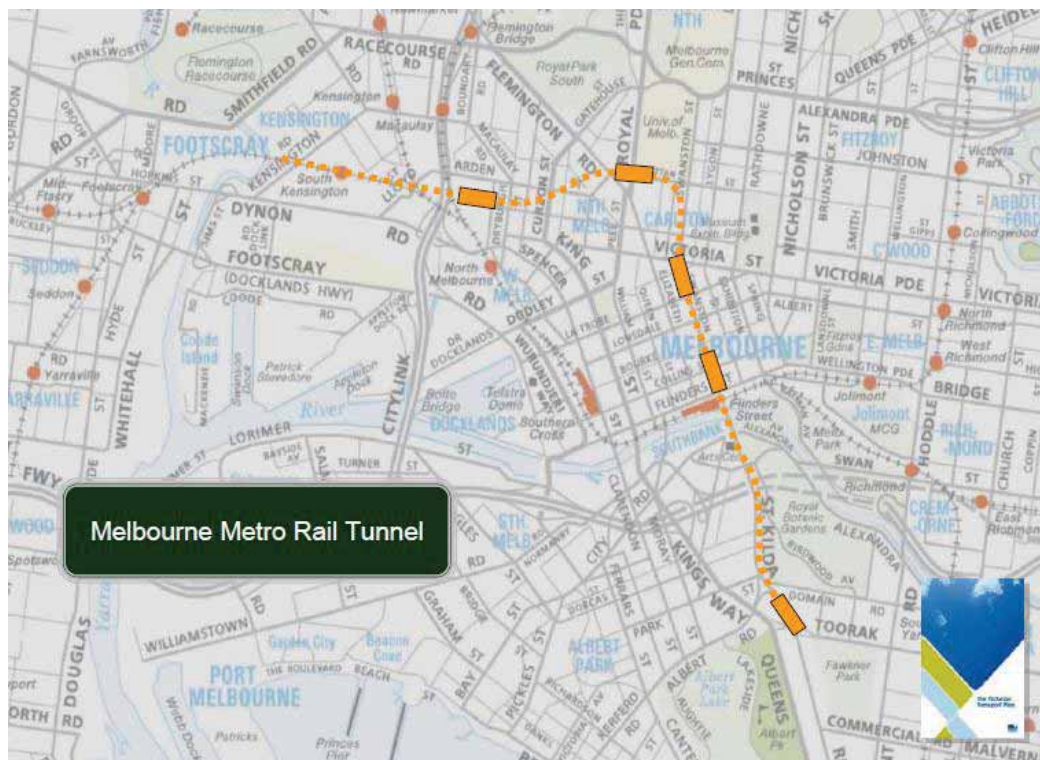


The second stage is a longer term stage potentially linking the tunnel from Domain Interchange to Caulfield.

Government has provided funding to undertake the initial detailed planning. In November 2011 it also included the Melbourne Metro project in its Infrastructure Australia submission – seeking support in recommending the project for delivery funding. In the submission, the Government identified an improved alignment to extend the proposed track from Domain to South Yarra to connect more effectively with the existing network. This new alignment will allow for a greater uplift in capacity in the short-term and presents a more cost effective option for delivery. The proposed new train path will connect the Sunshine and Dandenong rail corridors, via the Melbourne CBD. This, in conjunction with the Dandenong Rail Capacity program, will boost capacity on the two lines servicing Melbourne's busy south-east corridor (Frankston and Dandenong) as well as the lines in the north and west of Melbourne.



Figure 20: Melbourne Metro – First Stage



Source: Victoria Department of Transport 2010

Regional Rail Link

The Regional Rail Link (RRL) is a major new rail line that will provide additional train capacity for up to 9,000 passengers across the Melbourne and country rail networks in the peak period (see Figure 21). It will enhance regional connectivity to Melbourne CBD, with Footscray strategically located as the focal point for the inner west. RRL is expected to service more than 600,000 people in Melbourne's western suburbs.

Footscray station will be enhanced with a wide range of upgraded station amenities under the RRL plans. West Footscray station will also be demolished and reconstructed as a new station with improved facilities and transport connections between the station and surrounding areas.

Improvements to stations within the municipality, together with the enhanced regional connectivity provided by RRL, will offer significant benefits to the Maribyrnong community, particularly for those people within a reasonable walking distance of train stations. The map in Figure 22 shows the catchment areas around train stations in Maribyrnong, highlighting the significant number of residents, workers, students and visitors that will potentially benefit from RRL.



RRL separates VLine regional services from metropolitan trains. Each will use dedicated tracks providing more capacity to both the regional and suburban system, from Sunshine to Southern Cross Station. The separation of services is also expected to improve reliability.

RRL's enhanced train links to the central city will help maintain regional accessibility while mitigating the growth of car demand through the municipality – associated with over 600,000 new dwellings (forecast for metropolitan Melbourne over the next 20 years) and approximately 300,000 new residents (estimated for the western metropolitan area in the next 10 years).

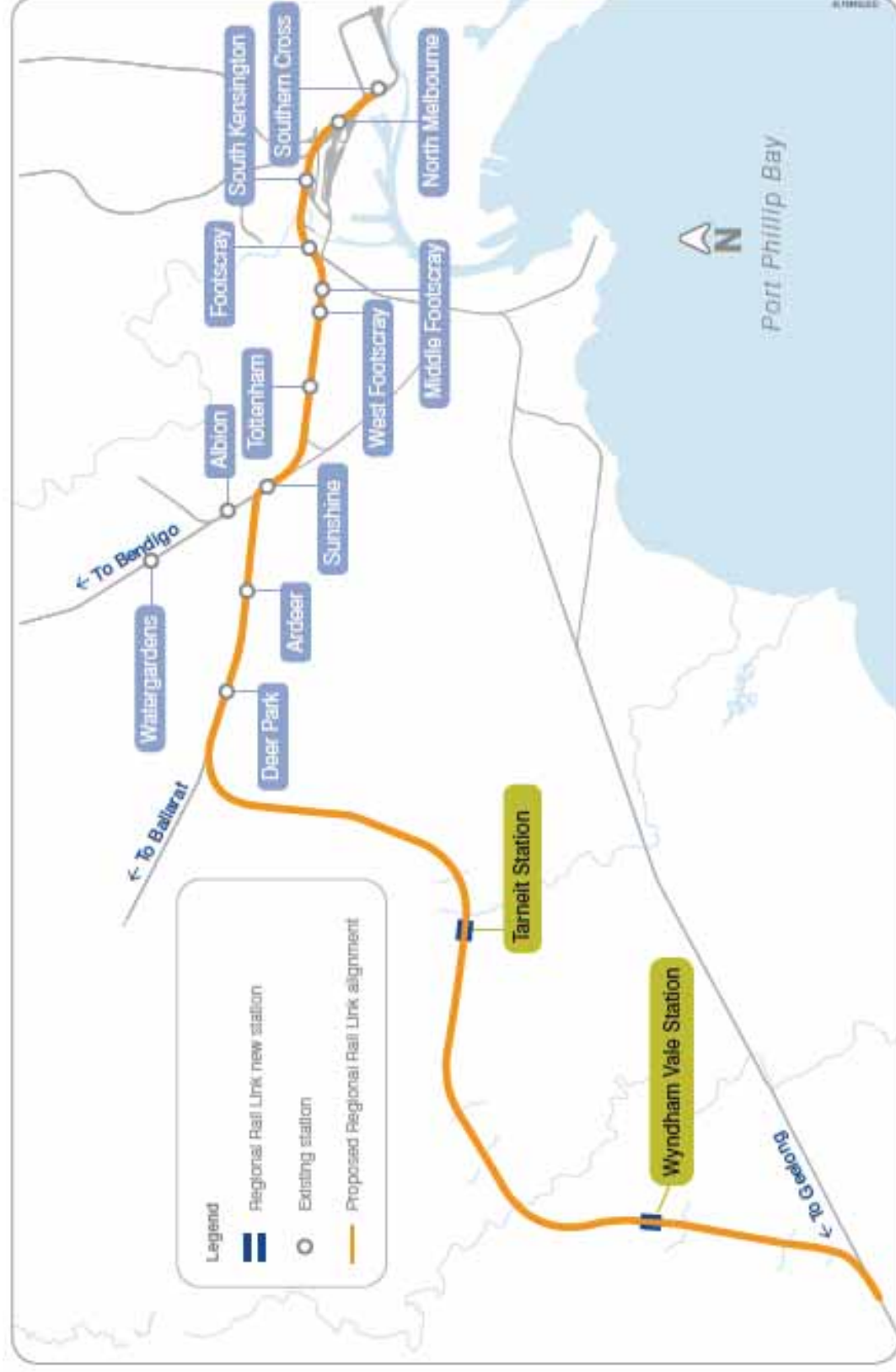
Significant population growth is also expected within Maribyrnong, as Footscray CAA continues to develop and intensification of development at Highpoint and the Maribyrnong Defence Site take place. These new residents will be able to use the additional suburban rail capacity released by the RRL project.

RRL could also allow a potential review of VLine services through Maribyrnong. Currently VLine services in peak periods are a mixture of express (typically stopping only at North Melbourne), semi-express (stopping at major destinations such as Footscray) and stopping services (stopping at all VLine stations).

The new dedicated RRL tracks will free up additional capacity that could either be used to introduce extra express services or enable additional services to stop at major destinations such as Footscray.

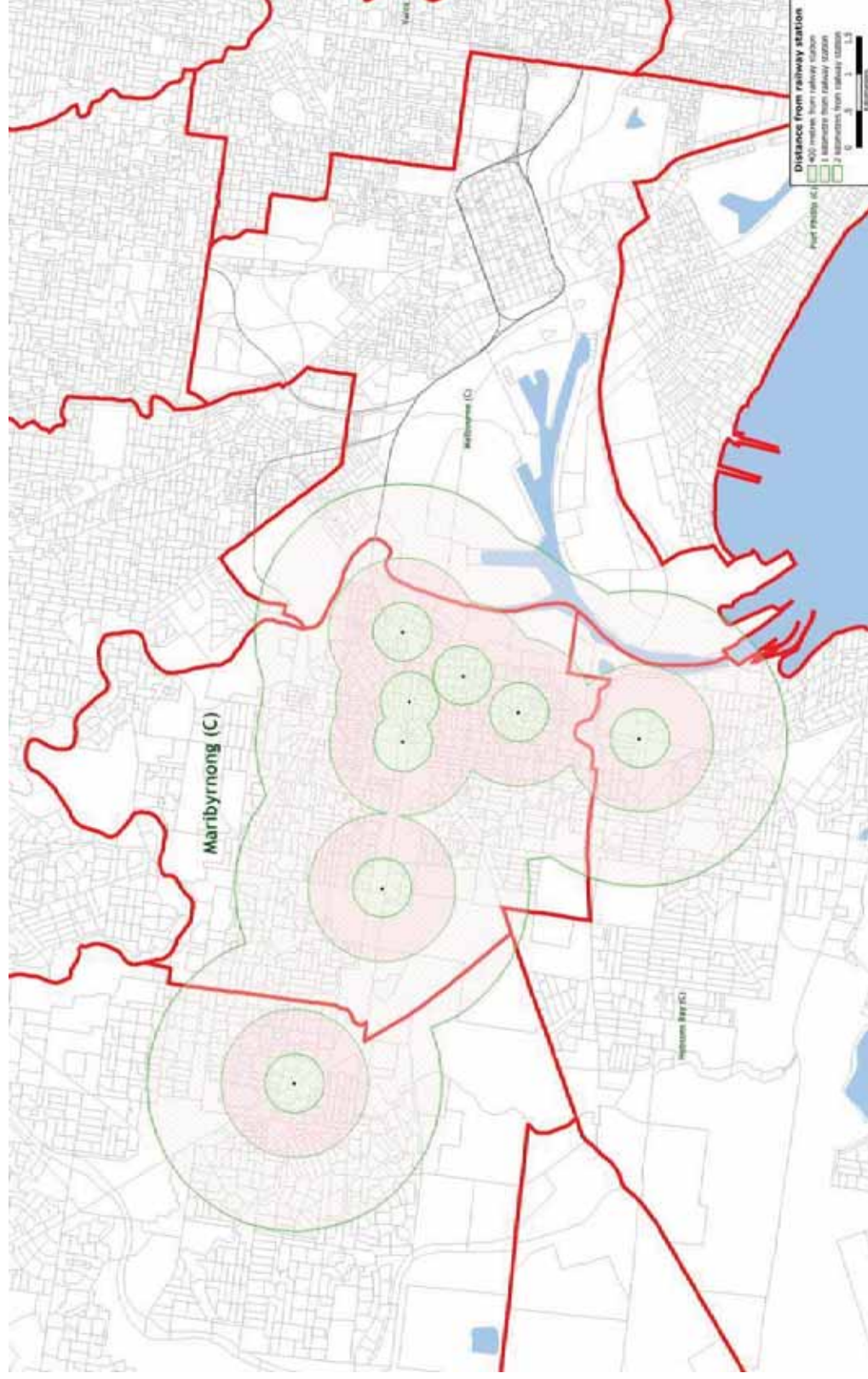


Figure 21: Regional Rail Link Alignment



Source: Victoria Department of Transport 2010

Figure 22: Catchments around train stations in Maribyrnong



Airport Link

A railway link to Melbourne Airport has been under consideration since the 1960s but the project has failed to be implemented. The State Government is reviewing the feasibility of an Airport railway link and has set aside funds to undertake a planning study.

There are currently a number of public transport options to travel to and from Melbourne Airport. The Skybus service is a regular bus service from Southern Cross Railway Station to the airport, with a 10 minute daytime service frequency. The average journey time is approximately 20 minutes. There are also numerous other options to and from the airport, including shuttle bus services from centres such as Geelong, Ballarat, Frankston and Dandenong. There are also four metropolitan bus services to Melbourne Airport including SmartBus Route 901.

A railway link could use a number of potential route alignments. Two main options have previously been investigated. The first is a route via Footscray station branching off the Albion–Jacana freight line to the airport. The second is a route via the Craigieburn line, which would involve the construction of a new railway spur from the main railway line north of Broadmeadows. Although the Albion option remains the default option and planning controls were introduced to support it, the Regional Rail Link project will preclude this going ahead as planned. An alternate option is also possible – an alignment from Footscray station to Melbourne Airport via Highpoint Shopping Centre and Maribyrnong Defence Site. The majority of this option, through Maribyrnong, would be in the form of a tunnel. Linking Footscray CAA to the Airport would provide a catalyst for new accommodation, hospitality and other tourist-related services in Footscray. It would also provide additional public transport services in areas of the municipality that are not currently serviced by heavy rail, such as Highpoint. A further variation would connect North Melbourne station and run via Flemington Racecourse, Highpoint, Maribyrnong Defence site, Avondale Heights and Keilor East.

The Northern Maribyrnong Integrated Transport Strategy (NMITS) has also recognised that the absence of rail services close to Northern Maribyrnong represents a significant transport limitation at present, and one that is likely to require the long-term resolution as more residential and commercial land uses are provided within the Activity Centre and at the Maribyrnong Defence site.

NMITS argues that strong efforts need to be made to broaden the choice of public transport opportunities to/from the Activity Centre, particularly into and out of the Melbourne CBD. To achieve this aim, NMITS proposes that primary consideration should be given to the extension of heavy rail services either as an extension on the Craigieburn line beyond Flemington station or as a spur to the Sydenham line. Either of these options may be feasible and could form part of a rail line that extends beyond Highpoint Shopping Centre to Melbourne Airport and/or the fast rail connection between Melbourne and Sydney.



Policy 33: Council supports, in principle, the construction of a new road as a Westgate alternative primarily in the form of a tunnel through Maribyrnong.

Issues and Justification

Many of the arterial and local roads in Melbourne's inner west carry large volumes of freight traffic servicing local industry, as well as travelling to and from the Port of Melbourne. This is having an unacceptable impact on the amenity of local communities. In addition, the West Gate Bridge currently experiences prolonged congestion particularly in the AM and PM peak periods. An alternative transport solution that significantly reduces the movement of trucks in the inner west and provides additional capacity to the West Gate Bridge is therefore justified. Implementation of a new road should be accompanied by a review of the road classification across Maribyrnong with the view of redefining the function of east/west arterial roads that are parallel to WestLink – such as Geelong Road/Princes Highway, Ballarat Road, Smithfield Road, Francis Street and Somerville Road. The priority on these roads should be assigned to public transport, pedestrians and cyclists.

Actions

Action 33.1: Advocate to the State Government for the construction of an appropriately designed Westgate alternative.

Action 33.2: Maximise benefits arising from this road by reviewing priorities established under SmartRoads and reallocating road space on existing arterial roads. This is to include:

- Implementation of truck curfews on relevant routes throughout the municipality
- Prioritisation of pedestrian and cycling movements across and along all arterial roads in Maribyrnong
- Improved priority for public transport on arterial roads

Policy 34: Council supports reduced truck volumes on residential streets.

Issues and Justification

Roads running through predominantly residential areas in the municipality's southern neighbourhoods, such as Somerville Road and Francis Street currently carry an unacceptable number of trucks. The Truck Action Plan would provide alternative infrastructure to take truck traffic along designated truck routes to and from the Westgate Freeway.

The key stage of the Truck Action Plan will be to connect the West Gate Freeway and the Port of Melbourne via a new road linking the Freeway to Hyde Street and Whitehall Street. This will allow for some further restrictions on truck movements through the inner west. The completion of Truck Action Plan and WestLink will facilitate the application of more substantive truck restrictions.

Trucks making deliveries to local addresses in the inner west will always need to be exempted from any curfew.

Once all of these elements are in place, it will be possible to introduce substantial additional restrictions on trucks using Francis Street and Somerville Road.

Actions

Action 34.1: Advocate to the State Government for the implementation of new ramps linking the Docklands Highway to the Westgate Freeway as a priority project.

Action 34.2: Ensure that the reduction of truck traffic associated with the Truck Action Plan is used to realise benefits for other transport modes on all relevant roads, including Francis Street and Somerville Road. This includes full time prohibitions on non-local truck movements on all roads south-east of Geelong Road, except new Truck Action Plan routes.

Action 34.3: Work with VicRoads to plan for an underground Moore Street alternative and advocate for its implementation.

Policy 35: Council will advocate for the delivery of the Melbourne Metro underground rail tunnel

Issues and Justification

Melbourne Metro provides the potential to allow an increase in the frequency of rail services to the central city from the western suburbs. It creates greater capacity within the inner city rail system and gives Maribyrnong residents faster access to existing and growing employment precincts along St Kilda Road and in the North Melbourne / Parkville areas.

Actions

Action 35.1: Advocate to the State Government for the implementation of Melbourne Metro, including the Stage 2 section to Caulfield.



Policy 36: Council supports the construction of Regional Rail Link

Issues and Justification

Regional Rail Link is the first major Melbourne rail infrastructure project in 80 years. It will provide a dedicated rail line for regional rail services into Southern Cross Railway Station from Geelong, Ballarat and Bendigo, separating these services from suburban rail services. Rail services on both regional and suburban lines will be enhanced leading to more reliable journey times and the ability to increase the frequency of services.

The anticipated improvement to train services needs to be complemented by a further increase in passengers from Maribyrnong – shifting from cars. This can be facilitated by enhancing pedestrian and bicycle access to all stations. The Sydenham corridor should be given priority because of its direct link to the RRL project and current conditions at stations such as Tottenham. Improvements on the Werribee and Williamstown lines should also be addressed, where current accessibility at Seddon and other stations can be significantly improved.

Actions

Action 36.1: Advocate to the State Government for the implementation of enhanced pedestrian and bicycle networks within a 2 kilometre radius of all train stations in Maribyrnong in conjunction with delivery of RRL.

Action 36.2: Work with the State Government to increase vegetation along the Regional Rail Link corridor, to improve the environment and visual outcomes of the rail project.

Policy 37: Council supports a rail link to Melbourne Airport via a new alignment servicing Highpoint Shopping Centre

Issues and Justification

A rail link to Melbourne Airport through the municipality linking Footscray station, Highpoint Shopping Centre, Maribyrnong Defence Site and Melbourne Airport will provide a significant boost to travel options for residents in the municipality's northern neighbourhoods. These communities will enjoy faster and more reliable journeys to/from Footscray CAA and Melbourne's CBD. An Airport rail link via Footscray will also help link Footscray CAA to key regional employment nodes – including the Airport itself.

Actions

Action 37.1: Review, in conjunction with the Department of Transport, the feasibility of a rail line from Footscray station to Melbourne Airport via Highpoint Shopping Centre and Maribyrnong Defence Site. A second preference could travel via Flemington Racecourse instead of Footscray Station.

Action 37.2: Explore, in conjunction with the department of Transport, opportunities to extend this route in the long term such as a route from Melbourne Airport to Defence Site, Highpoint, Flemington Racecourse, Newmarket Station, Melbourne University, Victoria Park and continuing to Doncaster.



Behaviour Change

Shifting to a more sustainable transport future for the City of Maribyrnong will require people to change their behaviour. Part of this shift will be achieved by supportive transport infrastructure, while other change will be driven by programs and policies which directly encourage behaviour change through the provision of information and incentive programs.

Background

Despite reasonable public transport usage in Maribyrnong, the proportion of walking and bicycle-riding trips for travel to work is modest at 3% and 2%, respectively. More action is needed to shift trips away from cars as these represent nearly 60% of travel to work trips (as driver or passenger).

The City of Maribyrnong has previously been the site of large scale household based travel behaviour change programs, through the delivery of the TravelSmart project in 2005 as well as associated more targeted projects at key traffic generators, such as schools, universities and new developments. At the time, the TravelSmart Maribyrnong project was one of the largest household behaviour change projects in the world, contacting 20,000 households in the municipality. Households were provided with information and incentives to choose more sustainable ways of travelling such as walking, cycling and taking public transport.

The TravelSmart project was designed to enable individuals to become more aware of their travel options and, where possible, to exercise travel choices which reduce use of private cars

Since that time, as with other Victorian local governments, the City of Maribyrnong has moved away from a comprehensive approach to delivering behaviour change programs, to the use of more targeted tools, such as travel plans.

This MITS recommends that Council concentrate on three priorities in encouraging travel behaviour change, rather than spread its energies across a range of smaller programs.

These are:

1. School travel plans
2. Green travel plans for new developments
3. Council's travel plan



Policy 38: Council will assist all schools to develop and roll out fully implemented school travel plans.

Issues and Justification

Travel behaviour change programs in schools present a unique opportunity for the City of Maribyrnong to:

- Influence the travel behaviour of children and their parents
- Build a network of local, high quality walking and cycling infrastructure
- Protect the most vulnerable members of the community

School travel plans are a structured approach to creating a culture of walking and cycling at a neighbourhood level - supported by local infrastructure improvements. As with all travel planning, school travel plans follow a set process designed to gain early and sustained stakeholder acceptance and support, and develop clear policies and programs to induce behaviour change (see Figure 23). The City of Maribyrnong can use school travel plans not only to bring about immediate behaviour change amongst the target audience of children and their parents, but also to “lock in” the gains of this behaviour through better local infrastructure as well as policy changes.

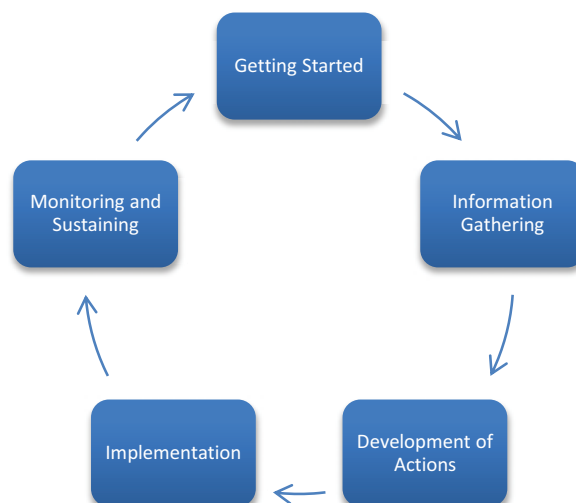
These can range from installation of safer, supervised road crossings to changes in parking access to clear away school gate traffic.

Through a travel planning program, some measures that are unlikely to be popular by themselves can be better understood, developed and implemented as part of a successful school travel plan which has already achieved desirable changes in behaviour and built a supportive school community. The school travel plan program for the City of Maribyrnong should be closely integrated with annual capital works expenditure to ensure that schools are not left waiting for infrastructure which has been identified as integral to locking in behaviour changes gains achieved through the development of the travel plan.

School travel plans require skilled staff to develop and deliver the plans in a manner which will be sustainable and gain community acceptance. Council is currently assisting one school to develop a school travel plan, Yarraville West Primary School. Past school travel plans should be updated for Christ the King Primary School and Footscray City Primary School.

To use school travel plans effectively, Council will increase its support and delivery of school travel plans to make them an integrated and effective tool within the MITS.

Figure 23: School Travel Plan Process



Actions

Action 38.1: Develop a school travel plan implementation strategy, including identification of most suitable schools and rolling schedule of deployment.

Action 38.2: Build capacity within Council to support school travel plans on the scale required.

Action 38.3: Assist with the development and implementation of two school travel plans per year, including behaviour change programs, supportive local infrastructure and policy changes.



Policy 39: Council will require the development and implementation of green travel plans for significant new developments.

Issues and Justification

Green travel plans were recognised and supported in the previous MITS and, in 2003, the City of Maribyrnong produced *Guidelines for the Development of Green Travel Plans and Transport Access Guides*, to assist property developers in producing green travel plans when they were requested by Council.

A Green Travel Plan is a management tool designed to minimise the negative impact of travel and transport on the environment. Green Travel Plans aim, through a set of mechanisms, targets and initiatives, to incorporate transport and other issues in a co-ordinated strategy.

In the current MSS, there are triggers for the development of Green Travel Plans. These arise for:

- Developments where significant car parking dispensations are sought;
- Residential developments of 60-200 lots/dwellings; and
- Any other development which in the view of the Responsible Authority is likely to generate significant travel demand.

It is also relevant to note that the Victoria Planning Provisions require preparation of an integrated transport plan (ITP) for all new major residential, retail, office and industrial developments. An ITP is a document which sets out how the various forms of transport will be integrated with land use, so that urban sustainability is optimised.



The Department of Transport considers that the following are developments which warrant preparation of an ITP:

- Residential developments of more than 200 lots or units
- New retail centres or offices of more than 10,000 m²
- Extensions of more than 10,000 m² to retail centres of more than 20,000 m²
- Any other development which in the view of the Responsible Authority is likely to generate significant travel demand

The MSS has adopted the DoT's recommended threshold levels (for the above classes of applications) as triggers for the provision of an ITP. An ITP should set out responses to all access needs:

- Walking
- Cycling
- Public transport
- Vehicles (including cars, motorcycles, trucks and emergency or service vehicles)

The ITP should emphasise delivery of a sustainable movement network addressing:

- The existing and proposed walking, cycling, public transport and vehicle networks
- Actions to enhance sustainable transport
- Proposals to optimise land use and transport integration
- Demand generation and management

In practice, Council has found that green travel plans work well as a tool to produce infrastructure which will support sustainable travel behaviours, but not necessarily for ongoing behavioural interventions. This is a common problem with green travel plans as ownership of a property is often passed onto a third party beyond the scope of the original agreement, usually between a local government and a developer. The ability for green travel plans to harness longer term behavioural interventions is linked to the type of requirement governing the development.

With the City of Maribyrnong facing increasing pressure for new housing and commercial developments, there is a need to better integrate the development and integration of effective green travel plans into Council's land use and transport planning.

Actions

Action 39.1: Update the Council *Guidelines for Development of Green Travel Plans* to provide a best-practice guide for the development of Green Travel Plans for a range of development types, including reviewing the effectiveness of green travel plans currently in place.



Policy 40: Council will lead by example in travel planning for its staff

Issues and Justification

Council has the opportunity to lead by example in travel planning for staff. Council has an existing Green Travel Plan that set sustainable travel targets for Council workers for the period 2005-2009. This plan now requires review to revise its targets and actions.

Actions

Action 40.1: Review and update Council's Green Travel Plan for staff.



Geographical Areas

The policies and actions identified in this strategy will help establish a transport system which is sustainable, equitable and convenient, in response to growth within and outside of Maribyrnong.

Municipal Wide Initiatives

The key initiatives are presented geographically – some have municipal-wide relevance whilst others are more localised and benefit the immediate region. Municipal wide initiatives include:

- Expand Nightrider bus services
- Establish two new Smart Bus routes
- Implement 40 km/h speed limit on local roads
- Implement 50 km/h speed limit on arterial roads
- Develop and implement Network Operating Plans for arterial roads
- Implement Local Area Traffic Management programs
- Review resident parking scheme
- Develop parking guidance system
- Develop idle-free zone program
- Support carshare initiatives
- Define the Principal Freight Network
- Work with Western Transport Alliance to identify preferred routes for major transport projects in the western suburbs
- Work with the Environmental Protection Agency to reduce air pollution and noise from heavy-duty vehicles in Maribyrnong

In order to readily identify the key local and regional initiatives, the municipality has been divided into 3 sectors. These are precincts defined by major arterial road corridors that run through the municipality.

- **Sector 1.** North of Ballarat Road, incorporating key sites such as Highpoint and the Maribyrnong Defence Site (MDS).
- **Sector 2.** Between Geelong Road and Ballarat Road; this sector includes the major industrial and manufacturing areas of the municipality and has a number of potential redevelopment sites.
- **Sector 3.** South of Geelong Road, capturing Footscray CAA, Yarraville Village and the Bradmill Estate.

The 3 sectors are shown in Figure 24. The key initiatives at a municipal level have been mapped in Figures 25-27 (by sector) and are summarised below.



Figure 24: Three Geographic Sectors in Maribyrnong



Sector 1 Initiatives

Significant development is expected in coming decades in this sector of the municipality. Much will take place in and around the Highpoint Activity Centre. In this precinct, development is envisaged to incorporate the retention and expansion of the existing retail uses within the Activity Centre, together with the addition of significant residential and commercial land uses. Substantial new housing is also expected on the Maribyrnong Defence Site. Collectively, the level of land use development being contemplated is expected to make Highpoint Activity Centre one of the largest Principal Activity Centres in Melbourne.

Council's Northern Maribyrnong Integrated Transport Strategy (NMITS) has been prepared to encourage the use of sustainable travel modes for access to and circulation around the Activity Centre (by improving walking, cycling and public transport provision and diversifying land use). Currently, travel to and from the Activity Centre occurs primarily by private (road-based) vehicles, with the car mode split equal to approximately 88%. This outcome is likely driven by the travel patterns of customers visiting Highpoint Shopping Centre; which represents the major land use in the Activity Centre.

In response to the anticipated long-term growth at Highpoint, NMITS outlines a number of desirable actions. Many of these actions, due to their size, are dependent on State and Federal Government support. The most notable of these initiatives is the provision of a rail line and station at the Activity Centre. The absence of rail services in the vicinity of Northern Maribyrnong was considered in NMITS to represent a significant deficiency, as well as a major, but not insurmountable, obstacle in the development of the Activity Centre to the extent foreshadowed in the Highpoint Structure Plan.

The NMITS suggests that the rail link may be possible either by an extension from the Flemington or Footscray lines and/or as part of a connection to Melbourne Airport or Sydney via a fast rail link.

Although the benefits of this link would need to be clearly demonstrated as part of any feasibility study, NMITS expects that if a rail link was provided directly to the Activity Centre, existing and future transport characteristics of the area would change significantly, with notable reductions in the mode split to private motor vehicle usage. This reduction could also be expected to have follow-on improvements to other public transport modes (i.e. by easing congestion on roads which have shared access with buses and trams). In addition to a rail link, NMITS proposes a new north-south Maribyrnong River crossing proposed in the form of the Ashley Street extension. Such a road link would be expected to generate a significant reduction in the amount of traffic that passes through the heart of the Activity Centre. NMITS also recommends that tram route 82 be extended into the MDS – providing better sustainable transport access to the retail heart but more importantly facilitating bus-tram interchange opportunities. Development of the MDS also offers the opportunity to establish one or more bridge crossings of the Maribyrnong River in support of public transport, pedestrian and cyclist needs. This would help integrate the northern most part of the municipality with activities and attractions in the Essendon and Avondale Heights areas and beyond.



Sector 2 Initiatives

Along with a large residential area, much of the industrial and manufacturing uses within Maribyrnong are located in this sector of the municipality. The Brooklyn/Tottenham precinct has been identified as a potential major redevelopment area. An intergovernmental working group has been established to undertake a study into this area. The purpose of the study is to:

- Review current land uses in the precinct and to gain an understanding of the current strengths, weaknesses, opportunities and threats facing the precinct
- Identify of a long term vision for the precinct
- Identify and evaluate the anticipated land use outcomes associated with potential WestLink alignments, and the Melbourne Metro One/Melton electrification
- Identify a preferred WestLink alignment, to assist in delivering the vision for the precinct
- Identify potential other government actions which may be required for implementation of the vision for Tottenham/Brooklyn.

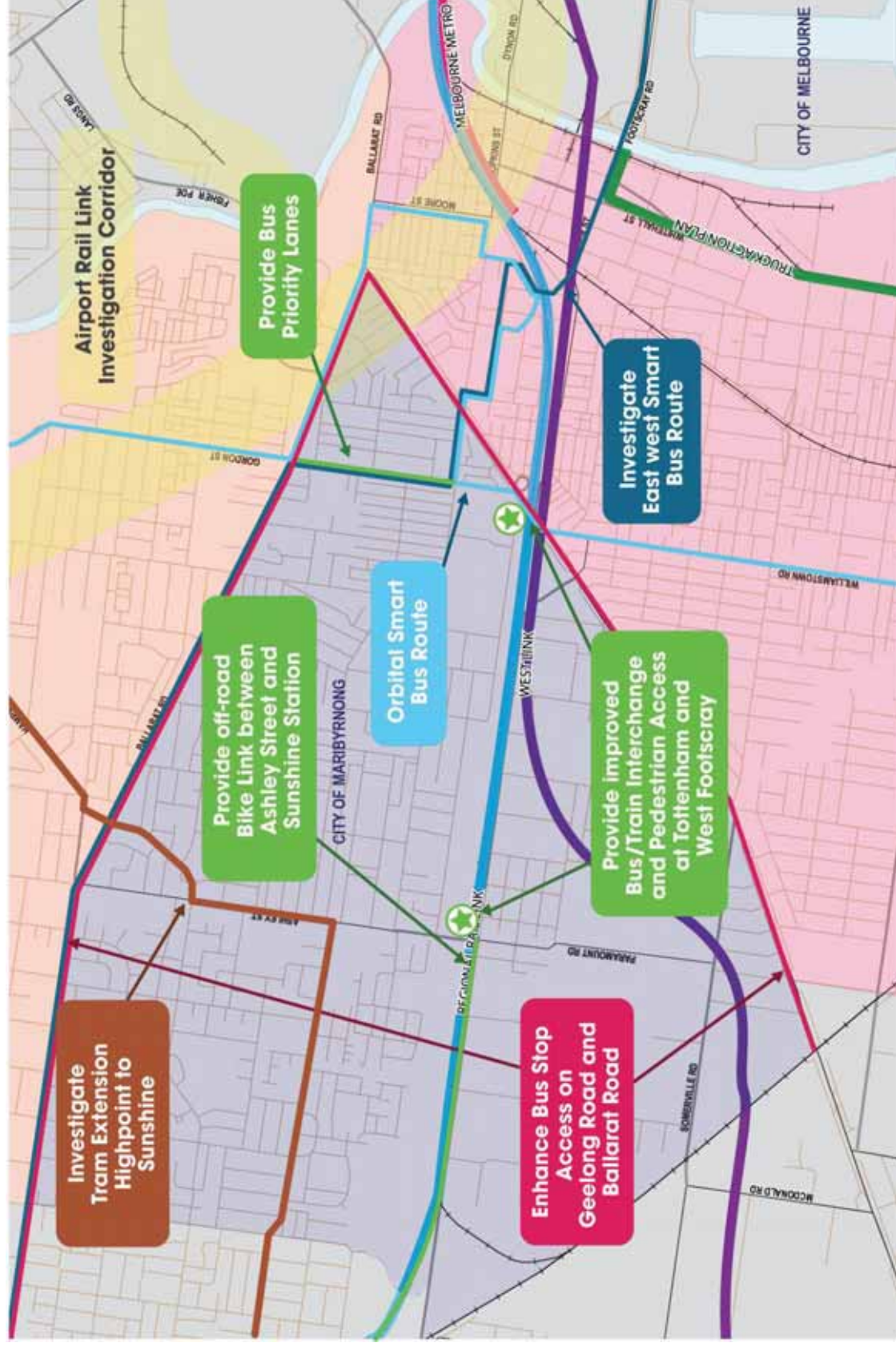
The study will also identify other strategic government roles and opportunities for the precinct. It is expected that the study will be completed within the next 12 months, to enable its findings to be incorporated into the new Metropolitan Strategy. In terms of transport, the key elements of the study will be exploring local level impacts and opportunities of some of the major infrastructure projects affecting this area.

While the Sydenham rail line bisects this precinct, greater emphasis is required to boost the attractiveness of public transport services that support this important employment district. For example, initiatives have been identified to improve access to the bus stops for the routes operating on Geelong Road and Ballarat Road. The potential for establishing a tram link between Highpoint and Sunshine will also be investigated. Bus/train intermodal improvements at West Footscray and Tottenham Stations have also been recognised.

Finally, the establishment of 2 new Smart Bus routes across the municipality will provide significant accessibility enhancement, allowing workers and residents alike a far greater choice of public transport options. Supporting this objective is the completion of an important bike link between Ashley Street and Sunshine Station



Figure 26: Key Initiatives in Sector 2



Sector 3 Initiatives

The key feature in this part of the municipality is the Footscray CAA, which is located a few kilometres west of the Melbourne CBD, on the western side of the Maribyrnong River.

Over the last decade there have been many studies conducted to engage the community in planning for Footscray's future, clarify the vision for the Footscray CAA and to set the context and policies to guide development outcomes. The latest studies include:

- (re)Visioning Footscray (2005)
- Footscray Central Activities District, Strategic Framework Report (2010)
- Footscray Access and Mobility Strategy (2008 to 2011)

Preparation of a new Masterplan for the Footscray CAA has also commenced in 2011.

All of these strategies shared a focus on the creation of a sustainable centre based on walking, cycling, public transport and high quality development



The most recent of the studies, the Footscray Access and Mobility Strategy (FAMS), updated in 2011, outlines the following objectives:

- To develop an Access and Mobility Plan for all transport modes that best meets the objectives of the Footscray Transit City whilst reflecting the broader network management requirements; and
- To identify and develop short to medium term projects that can be implemented to achieve the objectives of the Access and Mobility Plan.

The original 2008 FAMS identified that Footscray is well serviced by transport infrastructure and services. The 2011 FAMS update identified priority projects designed to build on Footscray's transport strengths:

Walking

- Reviewing signal timings in favour of pedestrians (and buses) at important intersections, particularly on Nicholson Street and Hyde Street.
- Developing a pedestrian signal crossing on Nicholson Street at Donald Street.
- Traffic calming initiatives that clearly prioritise pedestrians over other users on key routes, including infrastructure works at crossing points and lower speed limits.

Cycling

- Completion of missing links to and through the CAA on regionally significant cycle corridors, with the highest emphasis on completing the Buckley and Napier Street commuting corridor.

Buses and Trams

- Bus priority measures on principal corridors leading towards the CAA, notably Napier Street and Moore Street.
- Investigating design solutions for shared bus and tram priority on Droop Street.

Traffic

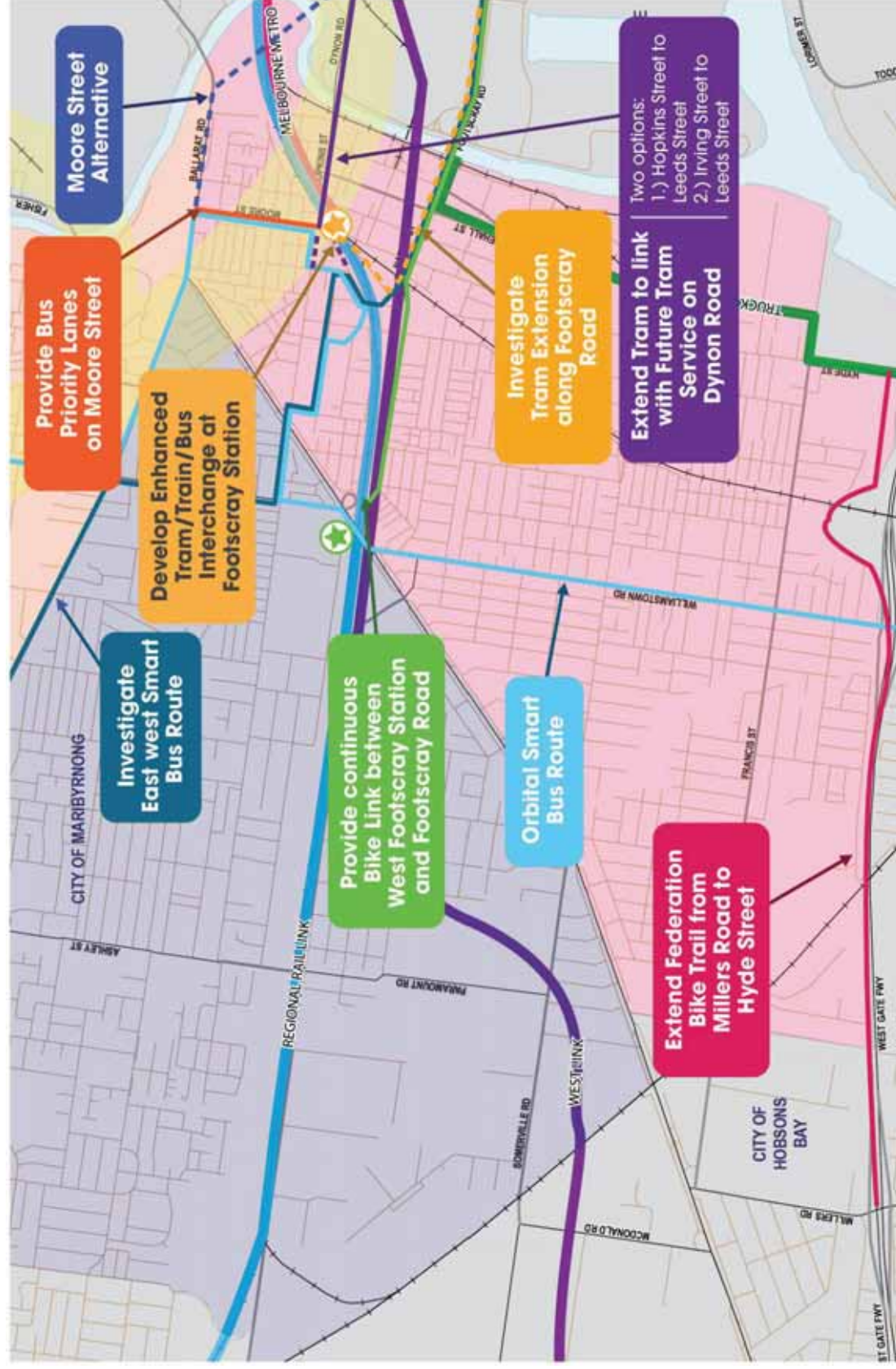
Increasing the attractiveness of the Footscray ring road to encourage traffic to avoid Hopkins and Barkly Streets and for local access.

This integrated transport strategy has also identified numerous other actions for this precinct that complement the range of initiatives that are focussed on the Footscray CAA. These additional actions include:

- Completion of the Federation Bike Trail and a number of other important bike links
- Identification of the preferred form and alignments for major projects with potential to relieve truck traffic in the municipality, such as WestLink and Truck Action Plan
- Investigation into an alternate route for trucks currently using Moore Street
- Definition of a Principal Freight Network
- On-going protection of local precincts through a program of Local Area Traffic Management schemes
- Management of the movement of high productivity freight vehicles



Figure 27: Key Initiatives in Sector 3



Implementation Plan

Evaluation Methodology

A specific evaluation methodology was developed to prioritise actions for implementation. The objective evaluation and ranking of actions allowed clear distinction between actions and informed the selection of those actions that make the greatest positive impacts on the transport network in Maribyrnong and provide the highest level of benefits to the largest number of people.

For example, actions that reduce the impact of freight activity in sensitive areas not only in terms of the number of movements, but also in terms of reduced speed and improved safety, received a high score. Similarly, actions in areas of high pedestrian and cyclist activity that provide improvements not only for safety, but also for access and connectivity, and that also increase walking and cycling as an alternative transport mode, received a relatively high score.

The evaluation methodology consists of a set of prioritisation criteria, weights and ranking processes and scores. These were developed to be closely aligned with Maribyrnong's transport, planning and infrastructure goals for the next ten years. Relevant data and information from previous Council, State and Federal documents, along with the information collected through the stakeholder and community engagement activities, was used in this process.

The evaluation methodology enabled Council to select actions that are both achievable and that deliver the best possible community outcomes within the given resources.

This can only be achieved if the evaluation methodology:

- Allows for clear differentiation between actions to inform safety investment decisions
- Addresses all relevant decision-making criteria
- Is transparent
- Is able to withstand scrutiny by the technical community and the public
- Is easy to use
- Can be readily understood by all potential users



Criteria for Prioritisation

The criteria used for prioritising the actions identified in this strategy are as follows:

- **Benefit-Cost:** relatively lower cost improvement actions that provide the greatest reductions in social crash costs receive higher priority. The *Benefit-Cost Index* from the 2010 Victorian Department of Transport *Guidelines for Cost Benefit Analysis* provides an objective measure to address transport safety costs and help establish consistent priorities.
- **Amenity Impacts:** actions that reduce the impact of activities that cause adverse amenity outcomes will receive higher priority. Rail corridor noise affects many residents as does the number of freight movements in sensitive areas. Thus, actions will be favoured that minimise truck and rail noise, vibration and emission impacts, particularly during the night time period, and improve safety through reduced speeds and other measures.
- **Mobility impacts:** actions that enhance the movement of people (across all modes) have higher priority. This could include actions that reduce congestion, improve the efficiency of public transport or promote sustainable travel modes. The focus on people movement is critical to ensure that the improvement actions selected support the efficiency and safety of the overall transport network.
- **Feasibility of implementation:** actions that have demonstrated feasibility for implementation and are expected to have long-term benefits receive higher priority. Similarly, actions that can be readily implemented and are “ready-to-go” also have higher priority. On the other hand, actions that are less well-defined and that would require extensive studies to evaluate their feasibility and potential benefits have lower priority.
- **Safety improvement potential:** actions that provide the greatest increase in safety for the largest number of people have higher priority. Importantly, this criterion focuses not only on addressing past safety impacts in locations with an existing accident history, but also in promoting future safety in other areas. This is important since safety concerns are among the most significant barriers preventing people from walking and cycling, including among those who use active travel regularly. Local and international research reveals that as walking and cycling participation increase, a pedestrian or cyclist is far less likely to collide with a motor vehicle or suffer injury or death.
- **Potential to promote sustainable travel modes:** actions that promote mode shift from motor vehicle travel to walking, cycling and public transport (in that order) have higher priority.
- **Links to existing plans and strategies:** actions that are closely linked and support Maribyrnong’s existing transport and land use plans and strategies have higher priority. Support of these plans and strategies demonstrates an appreciation of, and reflects, community aspirations. The range of actions includes those that adhere to and are consistent with transport network management plans, such as those that provide improvements on formal pedestrian and bicycle networks or constitute a logical future extension of them. This will ensure that the actions selected for implementation promote municipal goals and programs. In many cases, actions also help to deliver State programs that support Maribyrnong objectives.
- **Regional Economic Benefit:** actions that have a beneficial impact on supply chains, logistics, retailing and industry – both within and outside Maribyrnong.

A weighting system was developed in order to rank criteria relative to their importance. Each criterion was allotted a specific maximum possible score. Specifically, the more important a criterion was considered to be, the greater the number of points spread of the score.

By utilising this methodology, the criteria that were deemed of greater importance for a specific

action could receive a greater score, and therefore yield a higher ranking among the other actions. This also allows the ready and clear differentiation of similar actions.

Actions were then ranked by criteria and those with greater overall scores achieved higher prioritisation relative to other actions. The scores for the criteria are shown in Table 2.

Table 2: Action Prioritisation Criteria

Criteria	Maximum Score
Benefit-Cost	10
Amenity Impacts	15
Mobility Impacts	15
Feasibility of Implementation	10
Safety Improvement Potential	15
Potential to Promote Sustainable Travel Modes	20
Links to Existing Plans and Strategies	15
Total Score	100

Action Prioritisation

The full list of actions and criteria for rating and ranking is presented in Table 3. Additional information is also presented, including indicative cost, timing and responsibility for implementation.

Table 3: Rating of Actions

LAND USE		POLICY 1: Research the link between transport and activity intensity within Maribyrnong													
Actions	Information	Ranking Criteria													
		10	15	15	10	15	20	10	5	100	Regional Economic Benefit	Total Score			
		Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies							
		Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility											
Action 1.1:	Undertake further research to determine the link between travel choice and activity intensity within Maribyrnong, and to determine the most appropriate jobs and commercial uses that will promote the most sustainable travel behaviour outcomes while optimising economic vitality within the Maribyrnong social and cultural context	30,000	2013	Council	10	0	0	0	10	0	12	8	2	42	
Action 1.2:	Collect data by suburb on employment density to understand better where and how to intervene (what types of jobs and how many in each suburb)	30,000	2014	Council	10	0	0	0	8	0	10	10	3	41	
POLICY 2: Require developers to contribute to the provision of sustainable transport infrastructure															
Action 2.1:	Work with State agencies and developers to prepare and implement Development Contribution Plans and Section 173 Agreements (where appropriate) to provide public transport, walking and bike infrastructure. Undertake a study to determine those areas within the municipality that would benefit most from the implementation of these planning tools	50,000	2013	Council and DPCD	4	12	12	4	3	15	5	1	56		

LAND USE		POLICY 3: Council supports walking as the mode of choice for the Maribyrnong community													
Actions		Information			Ranking Criteria										
		Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score		
					10	15	15	10	15	20	10	5	100		
Action 3.1: Undertake mobility audits along key pedestrian routes and at key public transport interchanges to identify design opportunities for improved access by people of all abilities, including assessment of ramp grades at road crossings		30,000	2013	Council	10	0	0	10	0	12	8	2	42		
Action 3.2: Encourage increased road space allocation for pedestrians, particularly in the activity centres		30,000	2014	Council	10	0	0	8	0	10	10	3	41		
Action 3.3: Increase road space allocation for pedestrians, particularly in the activity centres. Aim for minimum 2 metres of clear usable footpath space – free of all permanent and temporary obstructions		20,000 per year	ongoing	Council	5	13	12	4	12	14	8	1	69		
Action 3.4: Continue to regularly review footpath condition throughout the municipality and use this information to improve footpath condition to support use by people of all abilities		30,000 per year	ongoing	Council	4	10	10	5	11	8	6	1	55		
Action 3.5: Investigate the provision of additional and/or improved road crossings for pedestrians		30,000	2015	Council	7	0	0	8	10	12	8	0	45		
Action 3.6: Work with VicRoads to provide additional and/or improved road crossings for pedestrians		30,000 per year	ongoing	Council, and VicRoads	8	8	12	3	14	16	9	1	71		
Action 3.7: Within activity centres, encourage mixed land use with active street frontages and a walkable scale		0	ongoing	Council	10	11	7	10	4	12	10	3	67		

LAND USE															
Actions				Information		Ranking Criteria									
				Indicative Cost (\$) to Council	Indicative Timing (year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score
							10	15	15	10	15	20	10	5	100
POLICY 3: Council supports walking as the mode of choice for the Maribyrnong community															
Action 3.8:	Using the Department of Transport methodology as a guide, develop Principal Pedestrian Networks for the municipality beginning with high volume pedestrian areas such as activity centres. Use these to assist in future planning for pedestrians			30000	2013-2014	Council, DOT and VicRoads	7	3	10	9	8	14	6	1	58
Action 3.9:	Improve the amenity of walking environments within all activity centres			10,000 per year	ongoing	Council	8	15	12	6	9	18	10	4	82
POLICY 4: Council will increase pedestrian priority across the City, including reduction of waiting times at traffic signals, particularly on wide arterial roads															
Action 4.1:	Collaborate with VicRoads to review and reduce pedestrian signal wait times and provide increased green-man crossing times on key pedestrian routes			0	ongoing	Council and VicRoads	9	5	13	8	13	14	10	1	73
POLICY 5: Council will aim to achieve a transport system with no fatalities or serious injuries in road-related traffic crashes															
Action 5.1:	Advocate to VicRoads for lower speed limits on all arterial roads in Maribyrnong to a maximum of 50 km/h. In the vicinity of schools and through activity precincts advocate for part-time 40 km/h speed limits			0	ongoing	Council	10	11	11	5	13	14	6	0	70
Action 5.2:	Advocate to VicRoads for lower speed limit on all local roads within residential areas in Maribyrnong to a maximum of 40 km/h. In the vicinity of schools and through activity precincts advocate for part-time 30 km/h speed limits			0	ongoing	Council, and VicRoads	10	12	9	6	11	15	10	0	73

LAND USE

CYCLING														
Actions			Information			Ranking Criteria								
			Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score
						10	15	15	10	15	20	10	5	100
POLICY 6: Council supports cycling as a key travel mode for the Maribyrnong community														
Action 6.1:	Update the 2004 Maribyrnong Strategic Bicycle Plan. The new 10-year plan will identify actions for implementation to improve cycling in the municipality		50,000	2013	Council	9	5	8	10	11	15	10	2	70
POLICY 7: Council will complete a safe and connected Maribyrnong cycling network														
Action 7.1:	Undertake cycling audits along key routes to identify infrastructure and traffic management opportunities for improved safety and connectivity for cyclists		20,000	2014	Council	5	3	12	8	10	11	7	0	56
Action 7.2:	Undertake cycling audits at key public transport interchanges to identify design opportunities for improved access by cyclists of all ages and abilities		10,000	2014	Council	5	3	12	8	10	14	7	0	59
Action 7.3:	Increase road space allocation for cyclists, particularly along key routes and in (and around) activity centres. When necessary to accommodate on-road bicycle lanes, traffic lanes will be narrowed		10,000 per year	ongoing	Council	6	10	12	6	13	14	10	1	72
Action 7.4:	Work with VicRoads to ensure adequate physical separation of cyclists from car and truck traffic where speed limits are 60 km/h or above		0	ongoing	VicRoads	6	2	13	5	14	17	5	1	63
Action 7.5:	Work with VicRoads to examine opportunities for grade separation of intersections on routes carrying significant freight volumes		0	ongoing	VicRoads	6	3	13	5	15	17	5	1	65

CYCLING

CYCLING														
POLICY 7: Council will complete a safe and connected Maribyrnong cycling network														
Actions	Information			Ranking Criteria								Total Score		
	Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit			
Action 7.6:	Encourage all road users to be mindful of cyclists when driving, parking and entering and exiting cars	5000	ongoing	Council	6	2	5	8	8	6	2	1	38	
Action 7.7:		0	2012-2014	Council, DOT and VicTrack	7	8	11	7	11	14	6	1	65	
Action 7.8:		5000	ongoing	Council	6	2	5	8	8	6	2	1	38	
Action 7.9:		0	ongoing	VicRoads	6	5	14	4	10	13	10	1	63	
Action 7.10:		0	ongoing	VicRoads	6	4	14	4	12	15	10	1	66	
Action 7.11:	Develop design guidelines for all local streets (incorporating geometric standards, signage and on-road symbols) to ensure that the local street network is safe for cycling and can be effectively used, particularly by less-confident riders	0	2015	Council	9	4	8	8	12	12	4	0	57	

CYCLING													
Actions		Information			Ranking Criteria								
		Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score
POLICY 8: Council planning policy will require the provision of secure, undercover bike storage, lockers and showers in homes, workplaces and institutions													
Action 8.1:	Review the current and future demand for bike parking (in response to existing and new development) and the appropriateness (in number, distribution and quality) of current on-street bike parking facilities to identify opportunities for improvement across the municipality	0	2014	Council	9	2	8	10	0	12	7	1	49
Action 8.2:	Work with State government to amend the Victoria Planning Provisions to require a minimum of one off-street bicycle parking space per dwelling for all multi-unit developments. New developments should also provide adequate on-street bike parking to support visitors	0	2013	Council and DPCD	9	8	14	2	0	16	7	0	56
Action 8.3:	Work with all shopping centres and supermarkets in the municipality to provide bike parking in immediate proximity to the respective front/main entrances	10,000 per year	2013 - 2015	Council	9	2	15	7	0	17	8	1	59
Action 8.4:	Establish design guidelines, for possible integration with the Planning Scheme, that encourage new offices and other employment locations to provide employee bicycle parking facilities within buildings in safe undercover areas immediately adjacent to work areas	0	2013	Council	9	0	12	6	2	15	3	0	47
Action 8.5:	Amend the Planning Scheme to allow for a reduction in the number of car parking spaces required for all non-residential uses, subject to the provision of bicycle parking and associated facilities that are in excess of the existing planning scheme requirement	0	2013	Council	8	0	12	5	0	16	6	0	47

CYCLING

Actions			Information			Ranking Criteria									
			Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	100	
						Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score	
POLICY 9: Council will become the leader in metropolitan Melbourne in the promotion of cycling awareness and the provision of recreation opportunities for its residents															
Action 9.1	Identify appropriate local streets to implement a Ciclovia or other cycling-focussed events on a regular weekly basis (such as on Sundays)		10,000 per year	ongoing	Council	9	0	0	10	5	14	4	0	42	
Action 9.2:	Advocate to VicRoads for the implementation of the Ciclovia event on arterial roads across the municipality		0	ongoing	Council	7	2	5	2	12	16	4	2	50	
Action 9.3:	Work with adjoining municipalities to extend the Ciclovia event across the CBD and inner northwest area		0	ongoing	Council and adjoining Councils	9	0	2	2	12	16	4	2	47	
Action 9.4 :	Work with Victoria University, RACV and other relevant bodies to extend the Melbourne Bike Share scheme into Maribyrnong		0	2013	Council, RACV and Victoria University	9	0	13	8	8	16	2	1	57	

Public Transport													
Actions		Information			Ranking Criteria								Total Score
					10	15	15	10	15	20	10	5	
POLICY 10: Council will advocate for an enhancement of bus, train and tram services across the municipality													
Action 10.1:	Work with DOT and VicRoads to design and implement a tram priority program for route 82, to support the significant levels of redevelopment expected along this route.	0	ongoing	VicRoads and DOT	9	0	12	5	7	12	10	1	56
Action 10.2:	Provide public transport priority along the road network, in terms of physical space and management. As a first step, in collaboration with VicRoads, investigate provision of exclusive tram reservations and bus lanes on all routes affected by delays, including priority lanes where on the approach to traffic signals there are 3 or more traffic lanes in each direction.	0	ongoing	VicRoads and DOT	7	0	12	4	3	16	6	1	49
Action 10.3:	Work in partnership with DOT to improve service levels on the municipality's key bus, train and tram routes (frequency, capacity, hours of service and reliability), including areas such as parts of Braybrook where bus services are infrequent.	0	ongoing	DOT	6	0	10	4	2	13	6	1	42
Action 10.4:	Work in partnership with DOT to identify services where trams can be replaced by bigger models to increase capacity.	0	ongoing	DOT	8	0	8	5	0	11	4	1	37
Action 10.5:	Support harmonisation of service frequencies on different routes, ensuring that no existing frequencies are diminished as part of this process	0	ongoing	DOT	8	0	12	5	6	13	8	1	53

Actions		Information		Ranking Criteria								Regional Economic Benefit	Total Score	
				10	15	15	10	15	20	10	5			
POLICY 11: Council will advocate for the creation and extension of public transport routes to form a high quality bus, train and tram network across the municipality		Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies			
		In collaboration with DOT, establish two new SmartBus services through the municipality	0	ongoing	DOT, Council and VicRoads	6	0	12	4	2	14	8	1	47
		Work in partnership with DOT to evaluate the potential extension of tram services	0	ongoing	DOT and Council	6	0	12	4	2	14	6	1	45
		Work in partnership with DOT to review public transport access to schools, places of worship and other community facilities	0	ongoing	DOT and Council	5	0	9	6	2	13	5	1	41
		In collaboration with DOT, plan for an integrated expansion of bus and tram facilities to service the Maribyrnong Defence Site redevelopment. Planning should examine the feasibility of providing at least one "Green Bridge" across the Maribyrnong River for pedestrians, cyclists and buses or trams linking with the Avondale Heights / Essendon areas.												
		Work with DOT to ensure early availability of public transport to all new significant developments	0	ongoing	DOT	6	0	10	5	2	13	8	0	44
		Work in partnership with DOT to evaluate the potential expansion of the Night Rider service within the municipality	0	ongoing	DOT	6	0	12	4	2	14	8	1	47
		Investigate the provision of a community bus service within the municipality	0	2012	Council	6	0	7	2	2	11	1	0	29
		Work in partnership with DOT to investigate the provision of a high frequency bus service from Footscray to Melbourne Airport as an interim measure prior to the development of the Airport Rail Link	0	2015	DOT and Council	5	0	7	5	2	12	7	4	42

PUBLIC TRANSPORT

PUBLIC TRANSPORT														
Actions		Information			Ranking Criteria								Total Score	
					10	15	15	10	15	20	10	5		
		Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit		
POLICY 12: Council will support the establishment of a central transport interchange in Footscray and at Highpoint														
Action 12.1:	Work in partnership with DOT to study options for establishment of a bus/tram/train interchange at Footscray Station. The interchange needs to be consistent with other plans, such as the potential tram extension to Footscray along Dynon Road	0	2013	DOT	9	4	13	4	10	16	9	3	68	
Action 12.2:	Work with key stakeholders to provide a centralised tram and bus interchange at the "heart" of the Highpoint Activity Centre	0	2019	DOT, Council and land owners	7	4	13	6	10	14	10	2	66	
POLICY 13: Council will support improved access to stations and stops by sustainable modes														
Action 13.1:	Advocate for the progressive transfer of off-street commuter parking at train stations to outer suburban areas. Ensure land released through this process is masterplanned and managed to provide maximum benefit to the community from the redevelopment or reuse of the land.	0	ongoing	DOT	10	13	12	5	2	10	4	1	57	
Action 13.2:	Action 13.2: Support access to stations by pedestrians and cyclists by implementing a program of better design and interface between the stations/stops and their surroundings. Tottenham station should be the first priority for improvement	0	ongoing	DOT and Council	6	10	10	6	8	10	8	0	58	

PUBLIC TRANSPORT

PUBLIC TRANSPORT															
Actions				Information			Ranking Criteria								
				Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	100
POLICY 13: Council will support improved access to stations and stops by sustainable modes															
Action 13.3:	In collaboration with the DOT, improve the bus to train interchange at West Footscray and Tottenham stations, including provision of upgraded interchange infrastructure and rerouting of bus services where required			0	ongoing	DOT	6	10	10	5	7	9	7	0	54
Action 13.4 :	Seek improved coordination and integration of modes by maintaining a strong advocacy role with the Melbourne Transport Forum and the Western Transport Alliance to promote the enhancement and coverage of all public transport services			0	ongoing	Council	9	0	10	4	2	10	9	2	46
Action 13.5 :	In collaboration with DOT and VicRoads deliver improvements to enhance bus stop access commencing with identified issues on Geelong Road and Ballarat Road			0	ongoing	VicRoads, Council and DOT	7	2	10	6	10	9	7	0	51
Action 13.6 :	In collaboration with DOT and VicRoads evaluate all stops on arterial roads to ensure they can be safely accessed by pedestrians from both sides of the road			0	ongoing	VicRoads, Council and DOT	7	2	10	6	10	9	7	0	51
Action 13.7:	Work with DOT to improve bus and tram stop facilities across the municipality			0	ongoing	DOT	7	3	12	6	11	10	7	0	56
Action 13.8 :	Work with DOT to ensure that all stations, stops and vehicles are DDA compliant			0	ongoing	DOT	5	0	15	7	12	10	10	0	59

PUBLIC TRANSPORT														
Actions			Information			Ranking Criteria								Total Score
						10	15	15	10	15	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	
POLICY 14: Council will advocate for improvements to public transport information														
Action 14.1:	Promote broader awareness and attractiveness of public transport services by working in partnership with DOT for the provision of real-time information at all bus, train and tram stops	0	ongoing	DOT	4	0	8	5	2	5	6	0	30	
Action 14.2:	Promote attractiveness of public transport services by working in partnership with DOT for the provision of real-time information at major attractions (such as inside shopping centres and on roads with significant activity)	0	ongoing	DOT	4	0	8	5	2	6	6	0	31	
POLICY 15: Council will support changes to public transport fuels that provide better health outcomes for our community and our environment														
Action 15.1:	Advocate to the EPA to undertake a study to determine air pollution levels in sensitive locations along bus corridors within the municipality. The results will determine the need and priority for replacement of diesel-powered buses with alternative fuels.	0	2014	Environmental Protection Agency	7	0	0	9	0	0	8	1	25	
Action 15.2:	Advocate to the DOT and bus operators to replace current diesel-powered buses with CNG, hybrid or electric buses. Priority should be given to buses operating on routes with sensitive receptors, significant freight movements and/or high air pollution levels.	0	ongoing	DOT, and bus operators	8	5	0	3	0	0	8	2	26	

PUBLIC TRANSPORT

CONGESTION MANAGEMENT															
Actions			Information			Ranking Criteria									
			Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	Benefit Cost	10	15	15	10	15	20	10	5	100
						Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit		
POLICY 16: Council will work with VicRoads to prepare and deliver Network Operating Plans across the municipality in support of the SmartRoads program															
Action 16.1:	In collaboration with VicRoads develop and implement Network Operating Plans for the arterial network commencing with those portions of the network within activity centres and on public transport routes		0	2012-2015	VicRoads and Council	9	3	14	6	12	15	10	1	70	
Action 16.2:	In collaboration with VicRoads and Department of Transport establish an agreed version of the Principal Freight Network to allow freight to be efficiently transported while reducing community impacts		0	2012	VicRoads and DOT	8	2	12	5	11	14	9	3	64	
POLICY 17: Council will work with VicRoads to improve maintenance standards of arterial roads															
Action 17.1:	Council will advocate to VicRoads for improved maintenance of arterial roads across the municipality.		0	ongoing	VicRoads	5	0	0	5	6	0	10	2	28	
POLICY 18: Council will support the Local Area Traffic Management program to protect local areas from through traffic and ensure the highest possible levels of amenity for the community															
Action 18.1:	Continue to implement a program of LATM schemes in the municipality's residential precincts to complement the program of Network Operating Plans		30,000 per year	ongoing	Council	6	6	10	7	12	16	10	0	67	

PARKING															
Actions				Information			Ranking Criteria								
				Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	100
POLICY 19: Council will operate a resident priority parking scheme with a maximum number of permits per household															
Action 19.1:	Undertake a review of the Resident Parking Scheme in 2011/2012			10,000	2012	Council	5	2	5	5	0	5	8	0	30
Action 19.2:	Undertake consultation and communication to improve community awareness of the changes to the Resident Parking Scheme.			5000	2013	Council	6	0	7	10	0	2	8	0	33
POLICY 20: Council will review the fees for resident parking permits															
Action 20.1:	Review fees for Resident Parking Permits			0	2013	Council	5	0	0	5	0	5	0	0	15
POLICY 21: Council will review fees for on-street parking for visitors															
Action 21.1:	Investigate the installation of time-limited fee parking (ticket machines) prioritising streets that exhibit high demand for parking. A review should be undertaken to determine the locations where this is needed and the cost to be charged to visitors for parking.			40,000	2014	Council	7	5	3	4	0	7	5	0	31
POLICY 22 Council will participate in the review of carparking provisions within the Victoria Planning Provisions															
Action 22.1:	Provide a submission to the 2011 review of parking provisions, and subsequently advocate for the implementation of supported changes.			0	2012	Council	9	5	3	4	0	7	5	0	33

PARKING

Actions			Information		Ranking Criteria									
			Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	100
						Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score
POLICY 23: Council will promote the availability and affordability of both off-street and on-street parking to reduce pressure on the use of on-street parking														
Action 23.1:	Develop and implement, in partnership with car park owners/operators, a parking guidance system to include all main public off-street car parks in activity centres and other areas of high demand.	under investi- gation	2013	Council	6	6	4	4	4	2	2	5	0	29
POLICY 24: Council will review parking fees in selected off-street carparks, in order to reduce pressure on the use of on-street parking in sensitive local areas														
Action 24.1:	Investigate parking occupancies in Mervyn Hughes and Henry Turner Memorial Reserves to determine whether reduced parking fees should be implemented.	0	2015	Council	6	3	4	4	6	2	0	2	0	23
Action 26.1:	Support the provision of at least one car sharing space to be installed on-street adjacent to all new high density residential and commercial developments.	0	ongoing	Council	10	0	13	9	9	0	16	0	0	48
POLICY 25: Council will establish "idle-free" zones throughout the municipality														
Action 25.1:	In collaboration with VicRoads and other agencies, develop an Idle-Free Zone program for Maribyrnong (for both heavy-duty and light vehicles) to encourage motorists to turn their vehicle engines off when not driving. The program should begin by designating schools as idle-free zones (e.g., buses and private vehicles waiting in queue during drop off and pick up at school). Hospitals and other sensitive areas should follow, with consideration for the program then being extended to business and commercial districts, parks, and neighbourhoods.	20,000	2015	Council	9	13	7	5	5	7	12	4	1	58
Action 25.2:	Educate drivers and the community about the impacts of idling (fuel consumption, emissions, and noise) and the benefits from turning off your engine while waiting.	5000	2015	VicRoads	8	11	7	9	9	10	10	4	0	59

PARKING

Actions	Information			Ranking Criteria									
	Indicative Cost (\$ to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	10	15	15	10	15	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	5	Total Score
POLICY 26: Council will support the expansion of car sharing in Maribyrnong													
PARKING													
Action 26.1:	Support the provision of at least one car sharing space to be installed on-street adjacent to all new high density residential and commercial developments.	0	ongoing	Council	10	0	13	9	0	16	0	0	48
Action 26.2:	Exempt car sharing vehicles from parking fees in all Council-controlled off-street car parks.	0	2013	Council	10	0	12	10	0	16	0	0	48
Action 26.3:	Explore mechanisms to extend parking privileges to car sharing vehicles (similar to vehicles displaying Resident Parking Scheme permits) – in selected areas throughout the municipality in support of short-term parking access while avoiding unintended consequences such as long-term commuter parking.	0	2013	Council	10	0	12	10	0	16	0	0	48
Action 26.4:	Explore mechanisms to provide car share parking spaces (in addition to car share 'pods') in highly sought after locations as an incentive to car share users. These parking spaces would not be associated with a particular vehicle or car share company, but could only be used by car share vehicles.	0	2013	Council	10	0	13	10	0	16	0	0	49

FREIGHT																	
Actions			Information			Ranking Criteria											
			Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	100			
						Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit				
POLICY 27: Council will protect the amenity of local streets and residential areas from the impact of freight traffic																	
Action 27.1	Conduct traffic monitoring along local streets intersecting the main freight traf- fic arterial roads, to identify inappropriate truck usage patterns	5,000 per year	ongoing	Council	5	8	0	8	8	0	0	6	0	35			
Action 27.2:	Develop and implement traffic calming measures for local streets. The priorities for implementation will be determined based on a review of safety and other conditions on areas of significant freight traffic	15,000 per year	ongoing	Council	6	12	8	4	12	16	5	0	0	63			
Action 27.3:	Support use of limited key metropolitan freeways by HPFVs to link the Port of Melbourne with major industrial areas. Suitable freeways include the West Gate Freeway, CityLink, Western Ring Road and Hume Freeway	0	ongoing	Council	8	12	8	3	11	9	6	3	60				
Action 27.4 :	Develop and implement traffic calming and other operational measures for arterial roads in residential areas that carry significant freight traffic	0	ongoing	VicRoads	7	12	10	2	13	15	6	0	65				
Action 27.5 :	Advocate to VicRoads for the replacement of existing curfew monitoring equipment with more effective modern technology	0	ongoing	VicRoads	10	10	0	3	5	0	0	0	28				
Action 27.6 :	Work with DOT to explore alternative ways of moving goods, such as using pipelines to move fuels. Ensure processes and standards are in place to prevent any risk to the community from pipelines prior to their establishment	0	ongoing	DOT	4	12	8	1	9	8	3	2	47				

FREIGHT

Actions			Information		Ranking Criteria										
			Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	Benefit Cost	10	15	15	10	15	20	10	5	100
															Total Score
FREIGHT															
POLICY 28: Council will continue to work with the Western Transport Alliance to reach consensus on a common policy position in response to a range of freight and truck issues affecting Maribyrnong															
Action 28.1:	Continue to work with the Western Transport Alliance on initiatives related to HPFVs and their routes, truck curfews to protect residential precincts, mechanisms to encourage and increase the share of rail freight and a preferred position on intermodal terminals		0	ongoing	Council	7	4	4	4	3	3	8	4	3	36
Action 28.2:	Develop with members of the Western Transport Alliance a common policy position and advocacy on major transport requirements for the western suburbs		0	ongoing	Council	6	6	6	6	2	4	5	4	4	37
POLICY 29: Council will work with key stakeholders to promote the creation of intermodal terminals															
Action 29.1:	Work with DOT on the intermodal terminal site selection and associated land use and route planning to promote a solution that maximises benefits for the Maribyrnong community		0	ongoing	DOT	5	5	3	4	4	4	2	7	3	33

		Information			Ranking Criteria									
Actions		Indicative Cost (\$)	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	Total Score	
					Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit		
POLICY 30: Council will work with key stakeholders to promote reductions in truck emissions in Maribyrnong														
Action 30.1:	Advocate to the EPA to undertake a study to determine air pollution levels in sensitive locations along areas of significant freight activity within the municipality. The results will inform decisions for better management of freight movements.	0	2013	EPA	8	10	0	4	0	0	3	0	25	
Action 30.2 :	Work in partnership with the Environmental Protection Agency and DOT to evaluate the appropriateness of emission standards for heavy duty vehicles operating in sensitive urban areas. Consider mechanisms to work towards all heavy duty vehicles operating within Maribyrnong meeting strict emission standards such as Euro 5.	0	2013	EPA and DOT	7	10	0	2	0	0	2	0	21	
Action 30.3:	Work with Port of Melbourne, domestic freight terminals and transporters to implement driver education programs focused on fuel efficient driving practices. Event data recorders on trucks could be used to reward driving behaviour that promotes higher fuel efficiency and lower emissions.	0	2016	VicRoads and POMC	8	8	0	6	0	0	4	0	26	
FREIGHT														

FREIGHT																		
Actions				Information			Ranking Criteria											
				Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	10	15	15	10	15	20	10	5	100			
																Benefit Cost	Amenity Impacts	Mobility Impacts
POLICY 31: Council will work with key stakeholders to reduce freight noise in Maribyrnong																		
Action 31.1:				0	2014	EPA	8	12	0	5	0	0	0	6	0	31		
Action 31.2:				0	2013	EPA and DOT	7	12	0	2	0	0	0	4	0	25		
POLICY 32: Council will work with key stakeholders to minimise conflict with residential uses along freight routes																		
Action 32.1:				0	ongoing	VicRoads and DOT	6	13	8	7	12	8	8	1	63			
Action 32.2:				0	2014	DOT and DPCD	6	13	0	5	0	0	8	1	33			

FREIGHT

Actions			Information		Ranking Criteria										
			Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	10	15	15	10	15	20	10	5	100
POLICY 33: Council supports, in principle, the construction of a new road as a Westgate alternative primarily in the form of a tunnel through Maribyrnong															
Action 33.1:	Advocate to the State Government for the construction of an appropriately designed Westgate alternative	0	ongoing	Council		10	8	11	3	4	2	6	5	49	
Action 33.2:	Maximise benefits arising from this road by reviewing priorities established under SmartRoads and reallocating road space on existing arterial roads	0	ongoing	Council		7	10	10	5	5	12	6	2	57	
POLICY 34: Council supports reduced truck volumes on residential streets															
Action 34.1:	Advocate to the EPA to undertake a study to determine noise levels in sensitive locations along areas of significant freight activity within the municipality. The results will inform decisions for better management of freight movements.	0	2014	EPA		8	12	0	5	0	0	6	0	31	
Action 34.2:	Ensure that the reduction of truck traffic associated with the Truck Action Plan is used to realise benefits for other transport modes on all relevant roads, including Francis Street and Somerville Road. This includes full time prohibitions on non-local truck movements on all roads south-east of Geelong Road, except new Truck Action Plan routes	0	ongoing	Council		8	13	11	6	9	9	6	2	64	
Action 34.3:	Work with VicRoads to plan for an underground Moore Street alternative and advocate for its implementation	0	ongoing	VicRoads and Council		8	13	10	5	7	7	5	1	56	

MAJOR PROJECTS															
Actions			Information			Ranking Criteria									
						10	15	15	10	15	20	10	5	100	
			Indicative Cost (\$) to Council	Indicative Timing (Year)	Responsibility	Benefit Cost	Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement Potential	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit	Total Score	
						10	15	15	10	15	20	10	5		
POLICY 35: Council will advocate for the delivery of the Melbourne Metro underground rail tunnel															
Action 35.1:	Advocate to the State Government for the Implementation of Melbourne Metro, including the Stage 2 section to Caulfield		0	ongoing	Council	10	12	13	4	4	14	7	5	69	
POLICY 36: Council supports the construction of Regional Rail Link															
Action 36.1:	Advocate to the State Government for the Implementation of enhanced pedestrian and bicycle networks within a 2 kilometre radius of all train stations in Maribyrnong in conjunction with delivery of RRL		0	ongoing	Council	10	12	13	7	6	16	7	1	72	
Action 36.2:	Work with the State Government to increase vegetation along the Regional Rail Link corridor, to improve the environment and visual outcomes of the rail project		0	ongoing	DOT	10	14	3	6	0	5	3	1	42	
POLICY 37: Council supports a rail link to Melbourne Airport via a new alignment servicing Highpoint Shopping Centre															
Action 37.1:	Review, in conjunction with the Department of Transport, the feasibility of a rail line from Footscray station to Melbourne Airport via Highpoint Shopping Centre and Maribyrnong Defence Site. A second preference could travel via Flemington Racecourse instead of Footscray Station		0	ongoing	DOT	10	12	15	2	4	18	7	5	73	
Action 37.2:	Explore, in conjunction with the Department of Transport, opportunities to extend this route in the long term such as a route from Melbourne Airport to Defence Site, Highpoint, Flemington Racecourse, Newmarket Station, Melbourne University, Victoria Park and continuing to Doncaster		0	ongoing	DOT	10	12	15	1	4	18	7	5	72	

MAJOR PROJECTS

BEHAVIOUR CHANGE															
Actions			Information			Ranking Criteria									
			Indicative Cost (\$ to Council)	Indicative Timing (Year)	Responsibility	Benefit Cost	10	15	15	10	15	20	10	5	Total Score
						Amenity Impacts	Mobility Impacts	Feasibility of Implementation	Safety Improvement	Potential to Promote Sustainable Travel Modes	Links to Existing Plans & Strategies	Regional Economic Benefit			
POLICY 38: Council will protect the amenity of local streets and residential areas from the impact of freight traffic															
Action 38.1	Develop a school travel plan implementation strategy, including identification of most suitable schools and rolling schedule of deployment	10,000	2013	Council	8	0	5	9	8	14	7	0	51		
Action 38.2:	Build capacity within Council to support school travel plans on the scale required	0	ongoing	Council	7	0	0	8	6	12	7	0	40		
Action 38.3:	Assist with the development and implementation of two school travel plans per year, including behaviour change programs, supportive local infrastructure and policy changes	30,000 per year	ongoing	Council	7	0	10	7	8	12	7	0	51		
POLICY 39: Council will require the development and implementation of green travel plans for significant new developments															
Action 39.1	Update the Council Guidelines for Development of Green Travel Plans to provide a best-practice guide for the development of Green Travel Plans for a range of development types, including reviewing the effectiveness of green travel plans currently in place	0	2014	Council	8	0	5	9	8	14	8	0	52		
POLICY 40: Council will lead by example in travel planning for its staff															
Action 40.1:	Review and update Council's Green Travel Plan for staff	12,000	2013	Council	6	0	4	10	3	15	8	0	46		