City of
Whittlesea

Integrated
Transport Strategy
2014

Shaping the future of transport in the City of Whittlesea

Table of Contents

1. OVERVIEW

The City of Whittlesea faces a number of transport related challenges over the coming 20 years. This Integrated Transport Strategy (ITS) sets out the principles Council has adopted to address these challenges, and then identifies the action areas and priority actions necessary to move towards the desired outcomes for the municipality.

The focus of this Strategy and its Action Plan is on providing an integrated package of actions that Council, the State Government and others need to take over the coming 5 years. This will prepare the City of Whittlesea to better meet the transport needs of its residents and businesses. This action plan has been developed within a longer term strategy so that the short term actions are consistent with the long term vision for the City.

The Strategy builds on work done in 2011 that identified the major transport related challenges facing the City of Whittlesea over the coming years, the outcomes sought by Council for its community and the implications of different responses to these challenges on the achievement of these outcomes.[1] [2] The analysis showed that a significant move towards more sustainable transport modes and more timely implementation of transport actions are essential if the economic, social and environmental outcomes sought by the community are to be delivered.

The transport system comprises many modes and each mode has its strengths and weaknesses. Actions are required to improve the delivery of all modes, while giving priority to preferred modes. The approach of the ITS is to support the most sustainable modes that best deliver the task needed by the community or business, while still maximising transport choice. This means that in some instances priority is given to public transport over private cars and vice versa, in some areas pedestrians may have priority.

Although for ease of communication each mode has been discussed separately, integrated packages of actions that combine different modes, infrastructure upgrades, service changes, regulations and land use will be required to maximise the benefits from the investments made in transport.

The strategy has 10 major sections:

Section 3. Strategic context. Outlines the Council and government policy framework within which transport will be developed.

Section 4. Community context. Summarises the major influences on the demand for travel and on the potential transport responses.

Section 5. The Strategy. Provides a vision for transport and a framework for the development of action plans.

Section 6. Land Use and Transport Integration. Describes the objective, principles and role of integrated land use and transport planning in supporting the strategy. It identifies the actions that Council will take over the coming years.

Section 7. Walking. Describes the objective, principles and role of walking in supporting the strategy. It identifies the actions that Council will take over the coming years.

Section 8. Cycling describes the objective, principles and role of cycling in supporting the strategy. It identifies the actions that Council will take over the coming years.

Section 9. Public Transport describes the objective, principles and role of public transport in supporting the strategy. It identifies the actions that Council will take over the coming years.

Section 10. Roads and Freight describes the objective, principles and role of roads in supporting the strategy. It identifies the actions that Council will take over the coming years.

Section 11. Community Transport describes the objective, principles and role of community transport in supporting the strategy. It identifies the actions that Council will take over the coming years.

Section 12. Monitoring and Reporting. Sets out the monitoring and reporting of the ITS actions and outlines an implementation plan.

2. BACKGROUND

The ITS has been developed in a two stages. The first stage involved the preparation of a Transport Directions Paper in 2011 [3] that highlighted the challenges that will need to be considered by Council and the community as the ITS is developed. It identified the context within which transport planning in the City of Whittlesea will be undertaken over the next 20 years. It identified scenarios of how transport in the region could evolve and developed two packages of potential actions for implementation.

The Transport Directions Paper developed a set of transport related objectives and principles. It articulated the outcomes the ITS will strive to achieve and how the actions will be tested against scenarios on investment packages and actions. Analysis revealed that all levels of government will need to provide infrastructure and services to address an existing transport backlog and meet future needs. Ongoing commitments are essential to match future demand, and greater effort is required to increase the role of public transport, walking and cycling. A co-ordinated whole-of-Council and council/government approach that involves working with stakeholders and the community will assist in delivering the ITS.

Feedback was sought from the community on the Transport Directions Paper and via an on-line and telephone survey. The on-line survey received 70 responses and 307 telephone surveys were completed. The results of both surveys have been collated with the key findings as follows:

- Residents are heavily reliant on private vehicles for transport

- Traffic congestion is a most dominant concern for transport for all trip purposes and people feel that infrastructure has not kept pace with population growth

- Current public transport provision is insufficient to meet people's needs. This is in terms of frequency, reliability and general access

- Train is the most popular form of public transport but only a minority travel by train regularly

- Respondents would be encouraged to use public transport more often if accessibility and frequency of service was improved

- Cycling is moderately popular as a form of recreation but the majority of respondents do not ride at all

- Walking is very popular as a recreation activity

- Residents will walk to amenities and facilities when they are within walking distance, if footpaths are adequate and if there are pedestrian crossings.

- Better footpaths and more bike lanes or off-road paths were the most often cited suggestions for encouraging more cycling and walking in the municipality

- Traffic congestion and lack of access to public transport were of greater concern to residents in the northern part of the municipality than the south

Consultation for the 2013 Community Plan has reinforced the level of importance given to transport by residents in the City of Whittlesea. Of the top ten priorities identified by the community, the first two priorities were transport related. The issues raised were:

Transport quality

- The need for improved road network connections, particularly in growth corridors, to ease congestion and aid the free flow of vehicles.

- The need for improved public transport infrastructure and services, particularly rail and bus.

- The need for improved walking and cycling connections.

Transport safety

- Perceptions of poor safety at train stations, low levels of lighting, cyclist safety (particularly riding to school) and hoon behaviour on roads.

Sustainability

- Reduce carbon footprint through greater use of public transport and higher levels of local jobs.

3. STRATEGIC CONTEXT

3.1. Council Context

Council has a hierarchy of strategies and plans under the framework of its Community Plan (Figure 1). Many of these strategies and plans impact on the transport system and will in turn be impacted by transport choices. The Integrated Transport Strategy is one of the suite of Council strategies and sits beside social and environmental strategies.

Figure 1 Hierarchy of Integrated Planning
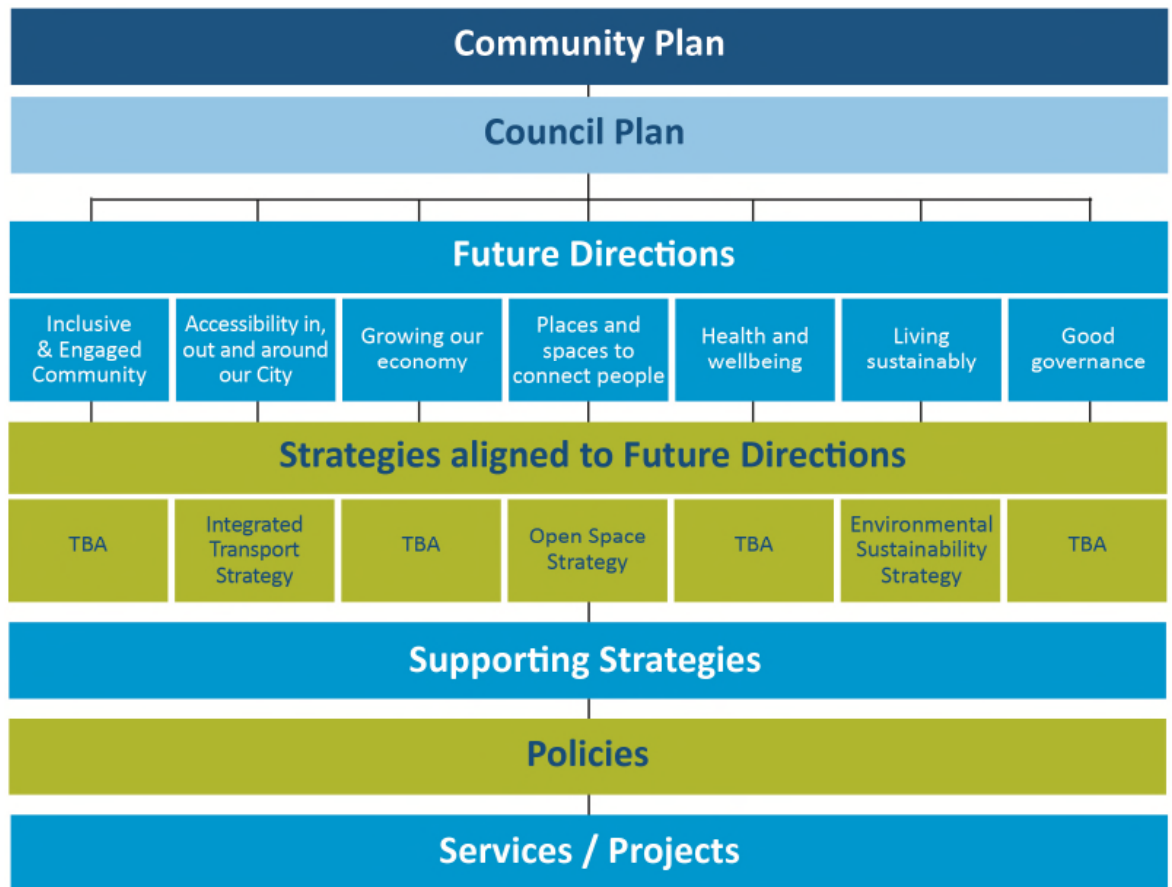
3.1.1. Council's Community Plan

Council's Community Plan sets out the long term vision to the year 2030 and articulates the community's aspirations, needs and priorities. This is articulated in the Community Plan Statement, Guiding Principles and Future Directions.

There are seven Future Directions in the Strategic Community Plan, all of which are relevant to transport planning and the preparation of an ITS.

Inclusive and engaged community. Our City is diverse and that is its strength. People from many countries with different languages, faiths and customs have made it their home. There are also urban and rural communities. When we are together we learn and grow through each other's experiences. We build skills and capacity so everyone can fully engage and participate in community life. All voices are heard and decision making takes account of all views. Our inclusive, engaged community is resilient and strong.

Accessibility. Access in, out and around our City with the purpose of providing access for all members of the community, through public transport, roads for vehicles, walking and bike pathways. The design and construction of our built infrastructure enables access for all.

Growing our economy A diverse economy offers varied career opportunities so people can live and work in the municipality. Business attraction requires infrastructure and transport planning, affordable housing, skill development and a supportive regulatory environment. We need to work on supporting and developing opportunities for local business like growing the food we need locally. Education facilities offer everyone career and skill development options. Places and spaces to connect people.

Health and wellbeing. Places, spaces and events bring people together to socialise and access services, they help build our community and an understanding and appreciation of our diversity. Our community hubs provide a central place to meet, shop, have a haircut, go to the doctor, post a letter, do banking, have coffee, visit the library and be entertained. They bring people together. Urban design develops a sense of place built on heritage. Parks and recreation facilities improve community wellbeing and can be used for events and celebrations. A cultural centre focusing on our diversity builds connections, networks, understanding and harmony. There are many pathways to bring people together in all the communities that together make our City.

Living sustainably. A healthy community that supports people through all of life's stages and cares about life-long learning has a sense of wellbeing and belonging. Health services are available locally and easily accessed in community hubs. Support is available for young people, families, the elderly and those who are isolated and disadvantaged. Communities are safe places where harm from violence, alcohol and drugs is removed. Access to education, training and information enables life-long learning for everyone.

Good Governance. Providing good governance means that the decision-making processes for managing public resources are accessible, transparent and appropriate. Council must take into consideration principles of social justice and human rights in the delivery of democratic government

3.1.2. Health and Wellbeing Plan

The Council Plan and the Municipal Health and Wellbeing Plan have been merged in *'Shaping Our Future' 2013 – 2017.*[4] This Plan is a statutory requirement under the Local Government Act.

The plan guides budget planning and allows Council to work towards ensuring the vision the community has for the municipality by 2030 is met. This approach is informed by a social model of health approach that recognises that all Council departments have a role in creating healthy outcomes for the community.

'Shaping Our Future' 2013 – 2017 recognises key Council strategies and policies which have a significant influence on community health and wellbeing, including the development of an Integrated Transport Strategy. This is in line with the population health priorities for the North and West Metropolitan Region:

- Affordable living and secure housing tenure
- Access to public transport and healthy walkable communities
- Local employment – particularly for youth
- Access to lifelong education to up-skill residents

Stakeholder consultation undertaken to inform the Municipal Health and Wellbeing Plan identified traffic congestion, public transport and community transport as key issues for the community. Consultations also highlighted the influence of transport access on other key determinants of health, such as access to education, employment and affordable housing. In response Shaping Our Future' 2013 – 2017, adopted by Council in 2013, outlines goals related to road infrastructure, walking and cycling paths, public and community transport for advocacy and action.

3.1.3. Planning Scheme

Council's Planning Scheme[5] sets out policies and provisions for the use, development and protection of land within the municipality. It is administered by Council and it is required to be maintained and up-to-date.

The ITS will enable necessary strategic work to be undertaken to amend the City of Whittlesea Planning Scheme, including:

- Identifying key transport issues and future directions for transport in the municipality

- Update local policy objectives and introduce new clauses as appropriate

- Identify Planning Scheme implementation measures to support local transport policies.

3.1.4. Environmental Sustainability Strategy

In 2013 Council adopted an Environmental Sustainability Strategy 2012-2022[6] that outlines a 10-year framework for Council and the community to work together towards a more sustainable future. It aims to protect our city's unique natural assets and quality of life, in the face of rapid urban growth.

- The strategy will address a range of sustainability issues, including climate change, land management and urban development. Elements of the strategy relevant to the ITS are:

- Climate change thinking will be integrated into all of Council's corporate, operational, planning and community functions.

- A coordinated, whole of organisation approach will be used to ensure effective and efficient climate change action is taken.

- Develop and implement a triple bottom line corporate transport policy.

Through the ITS:

- Identify and reserve appropriate corridors for the future provision of public transport

- Advocate to State Government for the provision of transport infrastructure and services to connect growth areas with services and infrastructure, local activities, places of employment, and metropolitan Melbourne.

- Use Precinct Structure Planning in the growth areas to facilitate connections between places of residence, places of employment, and to the established areas

- Improve sustainable transport options provided in the established areas

- Advocate for community transport services to meet local transport needs.

3.2. State Government Context

3.2.1. Transport Integration Act

The Transport Integration Act[7] came into force in July 2010. The Act sets out decision-making principles that are to be applied when specified organisations undertake transport planning. These are: integrated decision making, triple bottom line assessment, equity, the transport system user perspective, the precautionary principle, stakeholder engagement and community participation and transparency.

Councils are classified as 'interface bodies' under the Act. Where interface bodies make decisions that may significantly impact upon the transport system, the Act requires that they have regard to the transport system objectives and decision-making principles. The Act does not prescribe the actions that must be taken by interface bodies but the expectation is that Council planning will follow the Act's principles when designing transport processes.

3.2.2. Metropolitan Planning Strategy

Current State Government planning strategies include Melbourne 2030[8] and Melbourne@5million.[9] The State Government released the draft Metropolitan Planning Strategy – 'Plan Melbourne'[10] in 2013. The Strategy outlines growth and development priorities for Melbourne to 2050 and will have a significant impact on the future of planning and development in the City of Whittlesea. This Strategy follows the release of a Discussion Paper[11] in 2012.

The key elements of the Draft Strategy include:

- The concept of a '20 minute city' where people can access the majority of services and employment opportunities within 20 minutes

- The development of a limited number of 'National Employment Clusters' which would be a focus of government investment and development

- The rationalisation of the activity centre hierarchy to support centres that are capable of high change and investment

- For the City of Whittlesea some key positives include:

- Epping nominated as a Metropolitan Activity Centre

- University Hill designated as a Health and Education Precinct of State significance

The City of Whittlesea made a detailed submission to the Draft Strategy. The key points of Council's submission were:

- Lack of recognition of City shaping projects in the City of Whittlesea, such as Mernda rail extension and Epping North-Wollert rail extension and focus on road based initiatives

- No clear initiative on infrastructure delivery.

3.2.3. Victoria – The Freight State

Victoria, The Freight State – The Victorian Freight and Logistics Plan (VFLP)[12] outlines a series of key directions, strategies and actions intended to provide greater certainty to the private sector and to help inform business planning and investment decisions to improve freight efficiency, grow productivity and better connect Victorian businesses with their markets. To meet future challenges the Plan contains strategies and actions proposed for implementation over the next one to five years involving a combination of project delivery, project planning, network efficiency and regulatory reform initiatives.

The strategies and actions cover:

- freight gateway capacity

- better use of the freight network

- an efficient freight network

- land use planning and protections

- planning for efficient and sustainable urban freight movements

- planning for efficient and sustainable regional freight movements

Strategies and Actions relevant to the City of Whittlesea include:

- Assess the potential role of the Beveridge precinct as an interstate freight gateway and identify land and transport corridors

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

4. COMMUNITY CONTEXT

4.1. High levels of population growth will continue

Melbourne's steady population growth is expected to continue and a high percentage of this growth will occur in the City of Whittlesea, which is the fifth fastest growing LGA in Australia. The population of the municipality is forecast to have an annual average growth rate of 2.93 per cent to 2031, with the total population increasing to nearly 297,000.[13] This equates to a population increase of approximately 70 per cent. Much of this population increase will be in the existing growth areas of Epping North and Mernda-Doreen and in the future growth areas of Wollert and Donnybrook, while the existing areas will experience more incremental change.

Figure 2: City of Whittlesea Population Growth and Projections to 2031
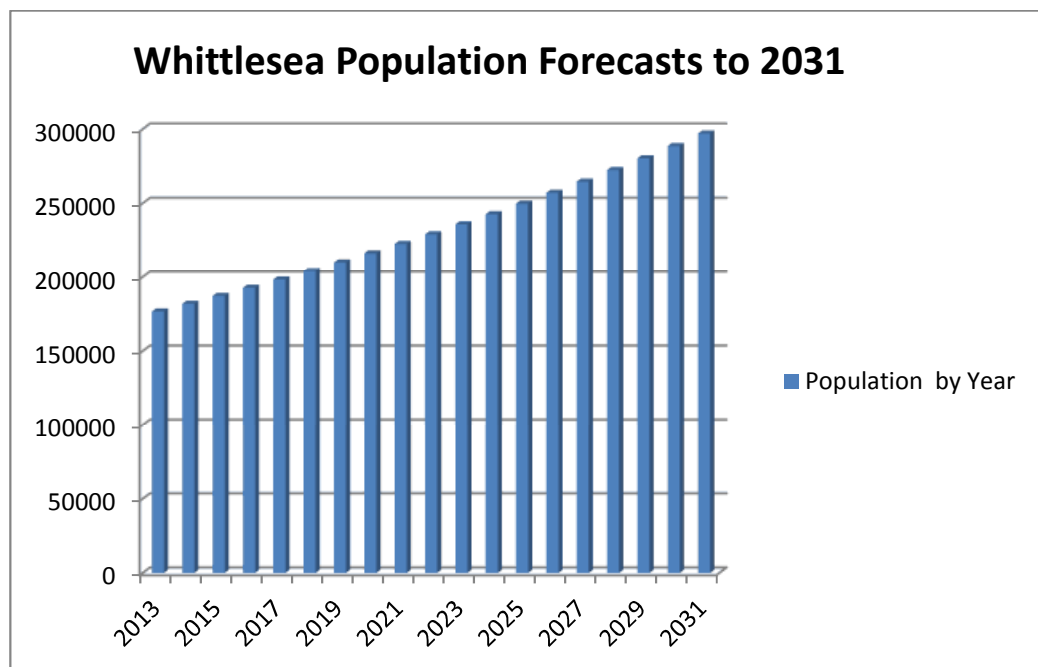
Many families are establishing themselves in the growth areas (Figure 3), with 43 per cent of households consisting of couples with children. This is much higher that the Melbourne metropolitan average of 33.6 per cent. As a result of family growth the percentage of the population that is under 19 years old is slightly higher than the metropolitan average, while the percentage of the population that is 70 or older is slightly lower than the average. However, the greatest percentage rise in age groups between 2006 and 2026 will be in the over 55 group.

The following provides a summary of the population growth trends effecting the City of Whittlesea:

- High population growth rate, resulting in a 70 per cent population increase by 2031

- A current demographic with a young population of non-driving age (below 19 year)

- A future demographic with an older population (55+)

4.2. Urban Growth will continue northwards

Urban growth trends reflect expectations on how and where land will be developed over future years. Over the life of the City of Whittlesea Integrated Transport Strategy the majority of development will occur within the current Urban Growth Boundary. Areas within the northern growth corridor (such as Epping, Mernda-Doreen, South Morang, Donnybrook and Woodstock) will be the major areas of focus for future growth within the City of Whittlesea. The forecast population growth within existing and future urban growth areas is illustrated (with accompanying household demographic information) in Figure 3. This growth will increase the demand for transport links for these residents to access the developed parts of the municipality and large areas of Melbourne.

The following provides a summary of the key urban growth trends effecting the City of Whittlesea:

- Approximately 30 per cent of the municipality is urban, while the remainder is rural.

- City of Whittlesea will be a major greenfield area for housing and employment growth.

- Majority of the urban growth will initially be concentrated around Epping North, Mernda-Doreen and South Morang and then growth will occur in Donnybrook and Wollert areas

- Growth will be uneven across the municipality, with some fully developed areas (such as Epping) undergoing regeneration, some offering infill opportunities (such as Lalor and Thomastown) and other areas being greenfield sites.

- In the longer term it is anticipated that infill development will take on greater importance as a contributor to housing supply, particularly in areas well served by public transport.

Figure 3 City of Whittlesea's current and future population to 2031

43.0%   22.9%   14.8%   12.7%

Household types
ABS 2011 Census data

couples with children (35.6% Greater Melbourne)   couples without children (23.5% Greater Melbourne)   lone person (22.5% Greater Melbourne)   one parent families (10.4% Greater Melbourne)

Beveridge

3,300 → 3,800
(rural north)

Eden Park

Whittlesea

Humevale

Kinglake West

4,600 → 6,500

Donnybrook
100 → 41,500

Woodstock

Yan Yean

15.2%

29.4%

19.4%

22.0%

9.4%

+ 4.7%

Household size
ABS 2011 Census data

Wollert
100 → 32,000

29,000 → 51,300
Doreen

Mernda

Epping North
11,400 → 44,100

South Morang
22,000 → 25,100

Epping
19,900 → 27,100

Mill Park
32,400 → 32,400

Lalor
20,700 → 26,200

Thomastown
22,100 → 25,400

13,000 → 16,300
Bundoora

established areas
existing growth areas
future growth areas
existing/future open space
green wedge areas
urban growth boundary
population (2013) → population (2031)

4.3. Outflow to jobs will continue to be high

Interface Councils (including the City of Whittlesea) will continue to play a critical role in supporting metropolitan Melbourne's economy, including accommodating 60 per cent of metropolitan population growth and 55 per cent of labour force growth over the next 15 years.

Outer metropolitan Melbourne has an imbalanced ratio[14] in the provision of local employment opportunities to the number of employed persons, with interface councils having 0.55 jobs/resident labour force participant, compared with 0.87 for the Metropolitan Statistical District as a whole and 1.1 for the non-interface Councils. Also, there is a notable lack of diversity in local job opportunities in the interface, especially with regard to professional jobs. A balanced mix of local employment provision is critical to ensuring the future prosperity of the municipality.

It is anticipated that continuation of the current imbalance between residential and employment numbers will mean that the heavy daily outflow of residents to jobs will continue.

In the City of Whittlesea freight generating sites are focussed along the Cooper Street Employment Area near the Hume Freeway area in Epping. The City of Hume on the western boundary of the City of Whittlesea is a major metropolitan freight generating area for road, rail and airfreight. Freight demand in this area is anticipated to grow into the future.

The following provides a summary of the key economic trends effecting the City of Whittlesea:

- The majority of jobs are small businesses, with 25 per cent of all businesses being involved in manufacturing.

- Employment self-containment is low. Approximately 75 per cent of the labour force that resides in the municipality leave the municipality each day for work.[15] The heaviest concentration of trips is to the City of Melbourne and suburbs to the south and the City of Hume in the west.

- Employment in the municipality is concentrated in the southern areas, particularly the Cooper Street Employment Area in Epping near the Hume Freeway, in Epping Central and South Morang and in the precinct adjacent to the Metropolitan Ring Road. There is potential for long term employment growth in the north as business development occurs around Beveridge from the proposed rail freight handling facility.

4.4. The region is heavily car dependent

The municipality has a heavy reliance of private vehicle travel: there are more dwellings with 2 or more vehicles in comparison to Greater Melbourne, and far less dwellings without a motor vehicle as illustrated in Table 1.

Table 1 Motor Vehicles per dwelling (Comparative Figures: City of Whittlesea, Greater Melbourne and Australia)[16]

Registered motor vehicles (%)	Whittlesea (LGA)	Greater Melbourne	Australia
None	5.1	9.0	8.6
1 motor vehicle	28.5	33.9	35.8
2 motor vehicles	40.3	35.5	36.1
3 or more vehicles	20.7	15.4	16.5
Not stated	5.4	6.3	3.0

Over 75 per cent of work trips are made by car and 18 per cent of residents travel for over 2 hours (Figure 4) Although extension of the rail line from Epping to South Morang has improved access for many residents, 98 per cent of residents live more than 800 metres from a rail line, with the highest future population growth proposed in the corridor north of Epping where public transport access is the poorest.

The following provides a summary of the key transport trends effecting the City of Whittlesea:

- Residents of the municipality rely more heavily on private transport than residents in many other parts of Melbourne.

- Car ownership is higher in areas that have low public transport services (outer growth areas) and is lower in areas with higher public transport services (southern established areas).

- Walking and cycling rates in the municipality are very low.

- Road freight is forecast to grow, both in absolute numbers and as a percentage of all vehicles. Freight volumes by all modes were expected to grow by almost 50 per cent between 2008 and 2020, and about 100 per cent by 2030.[17]

Figure 4 Transport Snapshot: Car dependence and journey to work
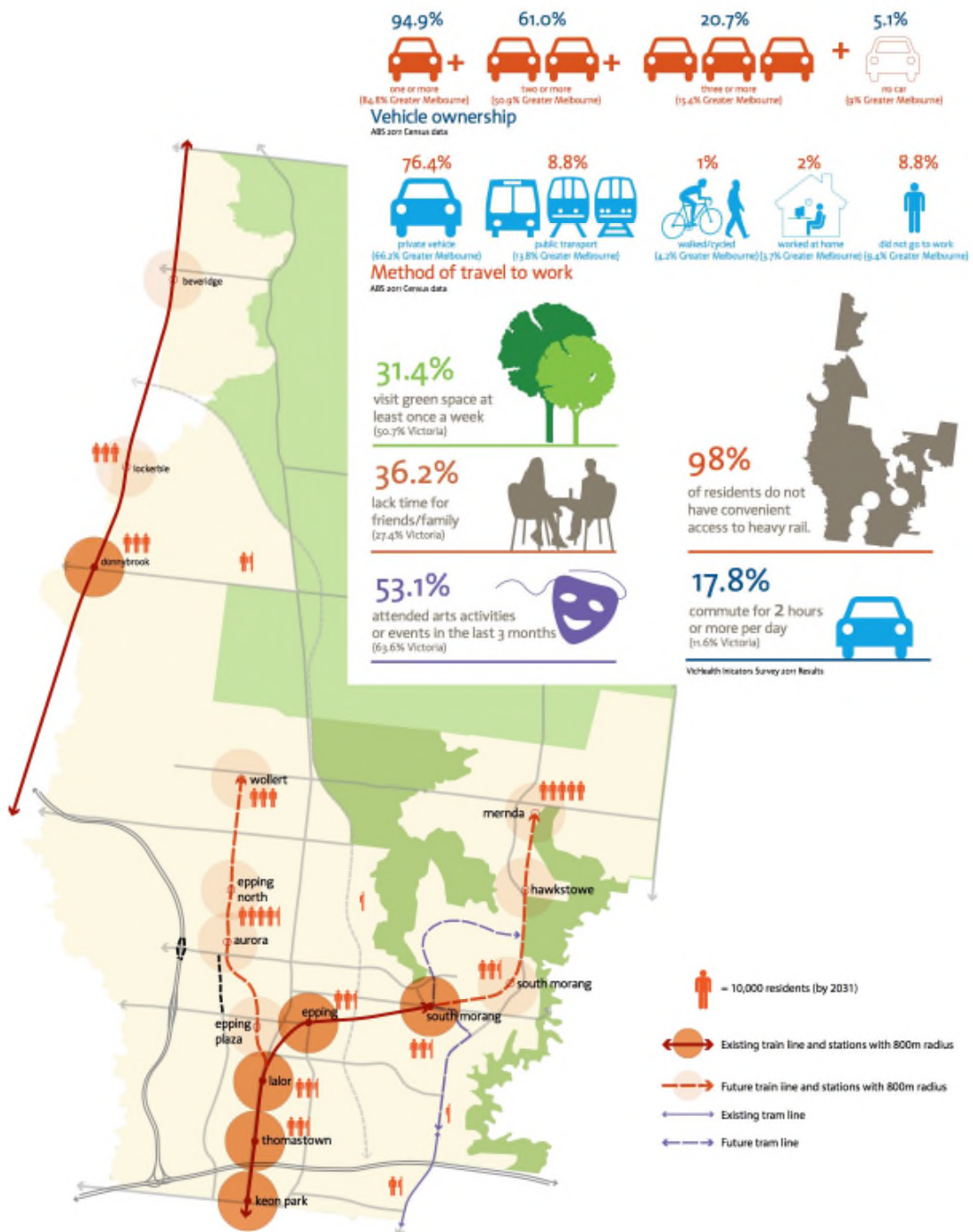
4.5. Residents suffer from social and other disadvantages.

Social trends highlight the implications of transport on the ability of different communities to access opportunities. The City of Whittlesea is the fifth most disadvantaged LGA in the Melbourne metropolitan area according to the Social Economic Indexes for Areas (SEIFA) index. [18]

The index is derived from attributes that reflect disadvantage such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. When targeting services to disadvantaged communities it is important to also look at these underlying characteristics as they can differ markedly between areas with similar SEIFA scores and shed light on the type of disadvantage being experienced.

A higher score on the index means a *lower* level of disadvantage. A lower score on the index means a *higher* level of disadvantage. At 2011, the City of Whittlesea had a SEIFA index score of 989, making it the 38th most disadvantaged LGA in Victoria and the fifth most disadvantaged in the Melbourne metropolitan area. Pockets of significantly higher disadvantage persist in parts of the municipality. The southern suburbs of Thomastown and Lalor experience the greatest levels of disadvantage with scores of 878 and 880 respectively, placing both areas in the number one most disadvantaged decile in the state

Table 2 Index of Relative Socio-economic Disadvantage from Australian Bureau of Statistics (2011) for City of Whittlesea suburbs[19]

Suburb	Score	Rank within Victoria	Decile within Victoria
Beveridge	1038	946	7
Bundoora	1026	787	6
Doreen	1098	1451	10
Eden Park	1085	1376	10
Epping	985	421	3
Humevale	1051	1084	8
Kinglake West	1045	1018	7
Lalor	879	56	1
Mernda	1059	1165	8
Mill Park	1019	719	5
South Morang	1046	1025	7
Thomastown	878	55	1
Whittlesea	1021	740	5
Wollert	1030	826	6
Yan Yean	1033	871	6

Transport Limitations were measured in the 2011 VicHealth Indicators Survey. Respondents were asked if their day-to-day travel had been limited or restricted in the previous 12 months. This revealed 30.9 per cent of persons living in the City of Whittlesea had experienced transport limitations in the previous year, compared to 24.3 per cent in the Northern & Western Metro Region and the Victorian State average of 23.7 per cent. [20]

The difference in demographic profiles in the City of Whittlesea in comparison to inner-metropolitan Melbourne (i.e. high percentage of 0-19 year olds, and future growth in 55+) leads to an increasing level of relative transport disadvantage as there are higher portions of the population who are unable to drive. Coupled with the relatively poor access to public transport, many residents continue to suffer from social and other disadvantages caused by transport isolation.

The number of residents that experience transport disadvantage is growing and this has been highlighted by an increasing demand for community transport services in the municipality. For example, during 2011-12 Whittlesea Community Connections (WCC) referrals for community transport services increased by 30 per cent, trips were 31 per cent higher and passengers increased by 46 per cent, to 2,717 covering almost 50,000 kilometres.

The following provides a summary of the key social trends effecting the City of Whittlesea:

- Transport plays an important role in determining the level of social exclusion and access to opportunities across Melbourne.

- Relatively longer distances to travel for social services, recreational trips and employment.

- The community is vulnerable to volatile fuel prices given the reliance on private vehicle trips.

- The City of Whittlesea has a high level of social exclusion due to the lack of transport services to many people throughout the municipality.

- Social exclusion is potentially experienced by 29 per cent of families in the municipality.

- Approximately 5.2 per cent of Whittlesea's population identified their disability status as "need for assistance" compared to 4.5 per cent for greater Melbourne.

- 11.1 per cent of Whittlesea's population recorded that they had spent time providing unpaid care or assistance to family members or others because of a disability.

- Residents in the rural areas have low or no access to transport services other than private motor vehicles

- There is growing demand for community transport services as demonstrated by Whittlesea Community Connections providing 31 per cent more trips in 2011-12 compared to the previous year.

4.6. Environmental impacts of transport will increase

Environmental trends reflect expectations on how external environmental and resource matters will impact on transport, and how transport may impact on the environment. As an outer-metropolitan area the municipality has a greater impact on the environment in terms of total energy use and green-house gas emissions, due to the greater travel distances required and high private car use. The environmental impacts of transport will continue to increase as the population rises.

If current transport policies and investment levels are continued then greenhouse gas emissions within the region could increase in the order of 270 per cent between 2011 and 2031.[21] In all scenarios tested for this strategy GHG emissions increased over the coming 20 years, but the rate of growth can be halved if more sustainable strategies are implemented.

The following provides a summary of the key environmental trends effecting the City of Whittlesea:

- Greenhouse gas emissions from transport are forecast to grow across Melbourne.

- Outer-metropolitan households undertake a relative higher number of kilometres travelled, leading to increased GHG emissions.

- Outer suburban households without access to public transport services and local employment exacerbate high car usage.

- Transport makes up approximately 21 per cent of GHG emission in the region, compared with 17 per cent across the State.

- Increasing traffic congestion may lead to reductions in air quality in parts the municipality.

- The municipality has a number of high value ecological systems that will need to be protected and this may impact the location and design of transport infrastructure.

4.7.   Travel purpose

Travel purpose illustrates travel behaviour and the major reasons why travel is undertaken. It helps understanding of the major user activities that transport needs to serve. The Victorian Integrated Survey of Travel and Activity (VISTA) [22] data is based on ongoing surveys of travel and activity across Melbourne and can be used to demonstrate travel modes and patterns, and enhance the understanding of complex travel interactions.

Table 3 Weekday Trip Purpose for the City of Whittlesea (VISTA 2009-2010)

Trip Purpose (weekday)	Percentage
Work Related	28%
Buy Something	18%
Education	11%
Social	11%
Accompany Someone	11%
Pickup/Dropoff Someone	9%
Personal Business	9%
Recreational	3%
Total	100%

Work related trips that have an origin in the City of Whittlesea account for 28 per cent of all trips on an average weekday. The destination patterns of work related trips shows where people from the City of Whittlesea are travelling to and from for work. Figure 5 shows journey to work patterns in 2011 from the ABS Census for employees leaving and entering the municipality. Approximately 18,000 residents live and work within the municipality, 42,000 live within Whittlesea but work outside and 21,000 enter the municipality for work each day.

The largest employee outflow is to the south, with approximately 19,000 people travelling to the cities of Moreland, Melbourne, Darebin and Yarra for employment. The next highest outflow is to the City of Hume with over 7,000 going to the Hume/Melbourne Airport corridor.

Figure 5 City of Whittlesea Residents Journey to Work destinations[23]

Journey to Work at 2011

Mitchell 974

Hume 7,234 / 2,992

18,457

Moreland 2,069 / 1,325

Nillumbik 2,317

Banyule 3,252 / 4,485

Melbourne 8,221

Darebin 6,126 / 2,940

Yarra 2,183
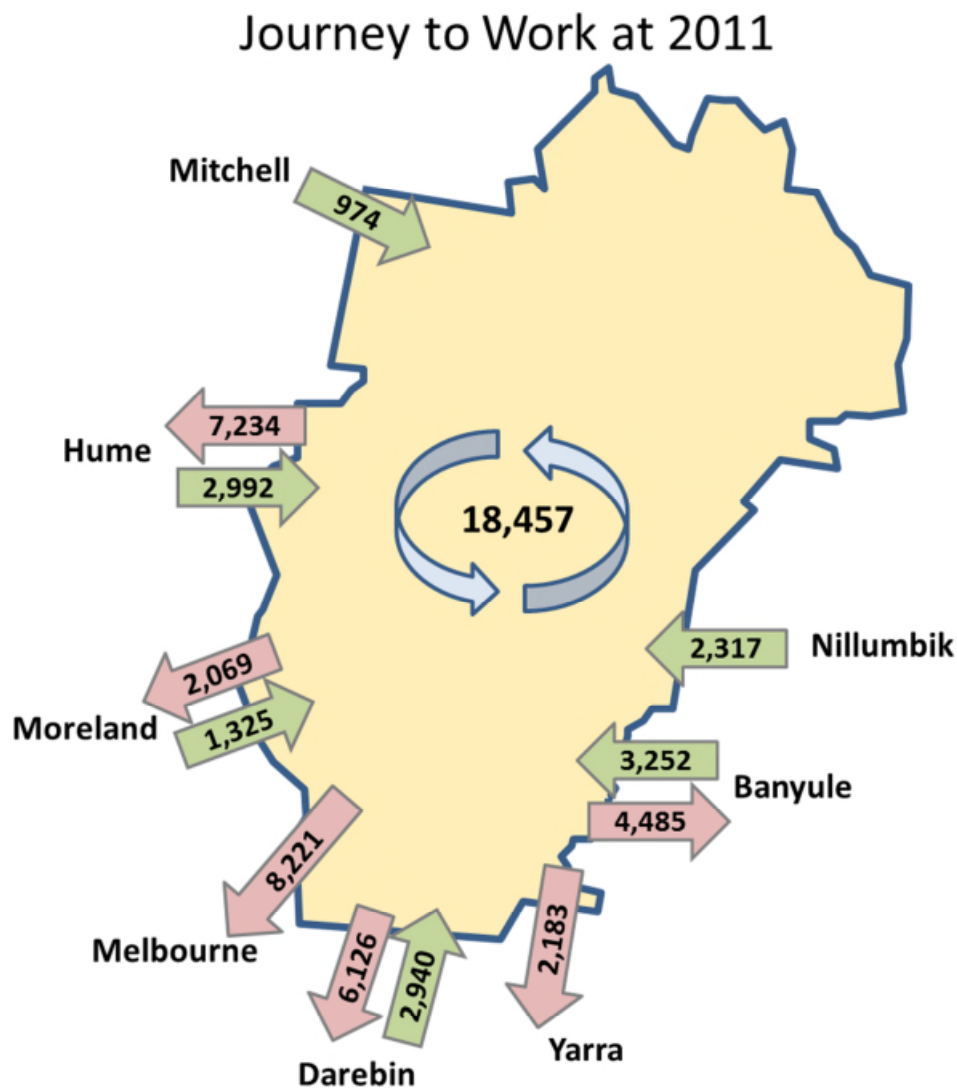
Non-work related trips with an origin in the City of Whittlesea account for 72 per cent of all trips on an average weekday. A breakdown of these trips indicates that 71 per cent have a destination in the City of Whittlesea and a further 22 per cent have a destination in the municipalities of Darebin, Banyule, Nillumbik, Hume and Moreland. [24]

The following provides a summary of the key trip and travel trends for the City of Whittlesea:

- Approximately 86 per cent of workers use private vehicles to get to work. Only 151 persons or 0.4 per cent of the working population use bicycles to access work.

- 73 per cent of students use private vehicles to get to school.

- Bicycle and walking has been decreasing as a means of accessing schools but this trend may be reversing.

- 52 per cent of non-work trips are 0-4 km in length and many could be undertaken by public transport, walking or cycling. Currently 81 per cent of these trips are made by private vehicle, compared to 70 per cent in the middle suburbs and 40 per cent in the inner suburbs.

- A majority of work related trips originating in the City of Whittlesea have a destination south of the LGA – peak periods will continue to be aligned with tidal north-south flows.

- Non work trips make up 72 per cent of trips in the municipality.

4.8. Transport choices can impact on health outcomes

Transport choice can have an impact on the health outcomes of the community. In a number of health indicators, City of Whittlesea residents fare worse than the metropolitan average. For example:

- 55.1 per cent of adults are classified as overweight or obese, compared with the Victorian average of 48.6 per cent[25]

- 12 per cent of residents have been diagnosed with heart disease, compared with the Victorian average of 6.7 per cent[26]

- 7.1 per cent residents have Type 2 diabetes, compared with the Victorian average of 4.8 per cent.[27]

- Although all of these differences cannot be directly linked to transport choices, they match the high levels of car use and low levels of walking and cycling found in the City of Whittlesea.

Table 4 Journey to Work 2011

Method of Travel to Work: One Method		
Mode	Whittlesea (LGA)	Greater Melbourne
Walk	1.60%	3.80%
Cycle	0.40%	1.70%
Private vehicle (as driver or passenger)	93.40%	80.40%

Research conducted in 2011 by the University of Melbourne with CEOs of local Councils and Regional Directors of State Government Departments identified transport as one of four population health priorities for the North and West Metropolitan Region.[28] The priorities were:

- Affordable living and secure housing tenure

- Access to public transport and healthy walkable communities

- Local employment – particularly for youth
- Access to lifelong education to up-skill residents.

4.9. Congestion and transport costs

Interface Councils will continue to play a critical role in supporting Metropolitan Melbourne's economy in the coming decades. This includes accommodating 60 per cent of metropolitan population growth and 55 per cent of labour force growth over the next 15 years.

Based on modelling prepared by the Bureau of Transport and Regional Economics, from 2011 to 2026 cumulative congestion costs in the interface are estimated to be approximately $42 billion.

In contrast, the cost of providing key transport infrastructure over this period ($9.5 billion) represents just 23 per cent of the cumulative congestion costs. The provision of more local jobs, better community services and enhanced public transport options in the interface would be expected to reduce reliance on vehicle-based travel over time.[29]

With significant population growth in the City of Whittlesea, inaction to address future transport infrastructure requirements such as roads and public transport will result in more congestion and higher transport costs for businesses and the community. Linked to this congestion are increased travel times which have an associated economic and social loss.

The following provides a summary of the key congestion trends effecting the City of Whittlesea:

- Congestion will increase in conjunction with population growth with resultant economic and social costs.

- Without infrastructure investment in roads and public transport the level of service on roads for will continue to diminish due to congestion.

5. THE STRATEGY

5.1. Vision

City of Whittlesea has an integrated transport system that supports the development of liveable, prosperous and sustainable communities. People and businesses are connected within the municipality and with the rest of Melbourne to access jobs and opportunities in ways that meet their access needs, while minimising the environmental, social and economic costs of their travel.

This vision will be achieved through the development of an accessible and integrated transport system where:

- Transport actions best meet user needs, and actions are integrated with Council's other social, economic, environmental, urban development and urban design policies and actions.

- Accessibility to regional and metropolitan activities supports the prosperity of businesses and increases the ability of residents to participate in employment and other metropolitan opportunities.

- Accessibility to local activities supports the development of vibrant communities.

- The increased use of public transport and sustainable transport modes reduces the reliance on private cars for travel while improving choice and the quality of access to activities.

Where choices are made between different modes or actions, priority will be given to supporting the most sustainable travel mode or action that can deliver the service required by users. This means that getting land use and transport integration right initially is a critical step in developing a sustainable transport system. This integration is underpinned by an effective road network and public transport system, and supported by attractive walking and cycling choices.

Figure 6 Relative sustainability of travel elements
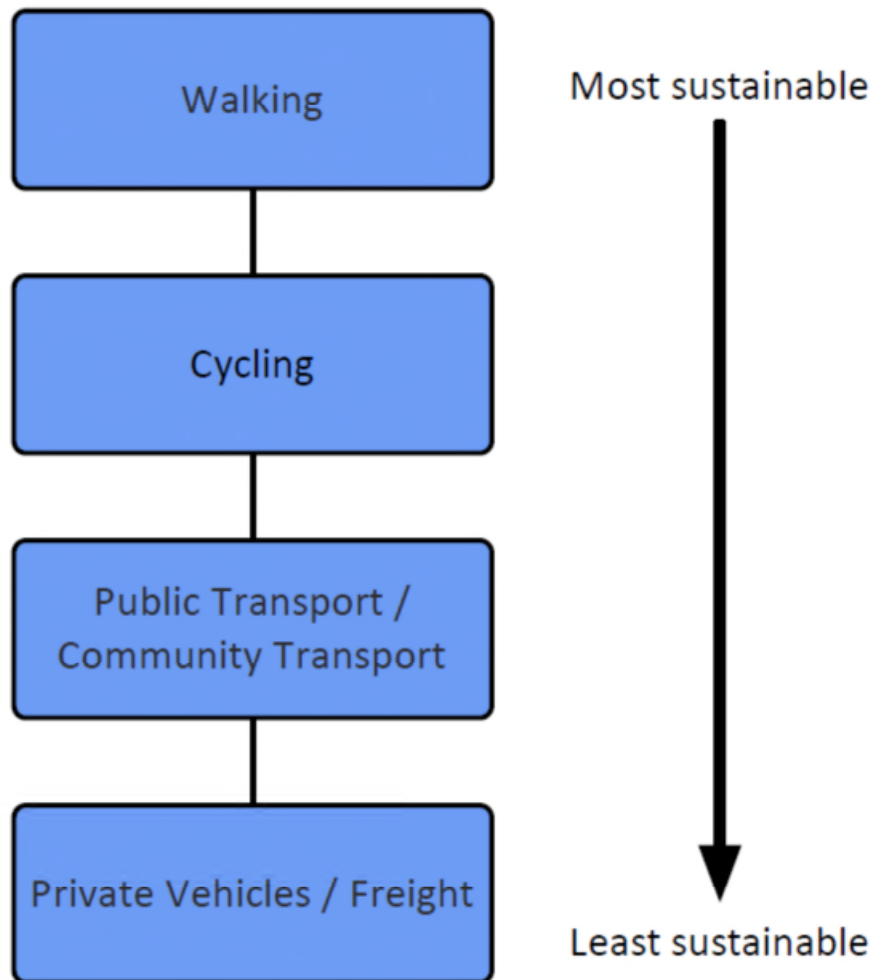
5.2. Purpose of the ITS

The ITS sets out Council's response to the future transport needs of our new and established communities. It will enable the alignment of Council's transport strategies, plans and investment priorities with State Government's priorities. This will benefit the transport needs of new and established communities to access jobs, opportunities and facilities.

The Strategy will identify priority actions and implementation methods designed to increase access to jobs, opportunities and facilities.

5.3. Structure of the ITS

Six Policy Areas have been identified to deliver the ITS and to achieve the vision for transport. Policy Areas have generally been structured by mode and land use integration. However, it is important to realise that the effective delivery of the ITS will depend on the delivery of integrated and complementary packages of actions across different Policy Areas.

Figure 7 Integrated Transport Strategy Structure
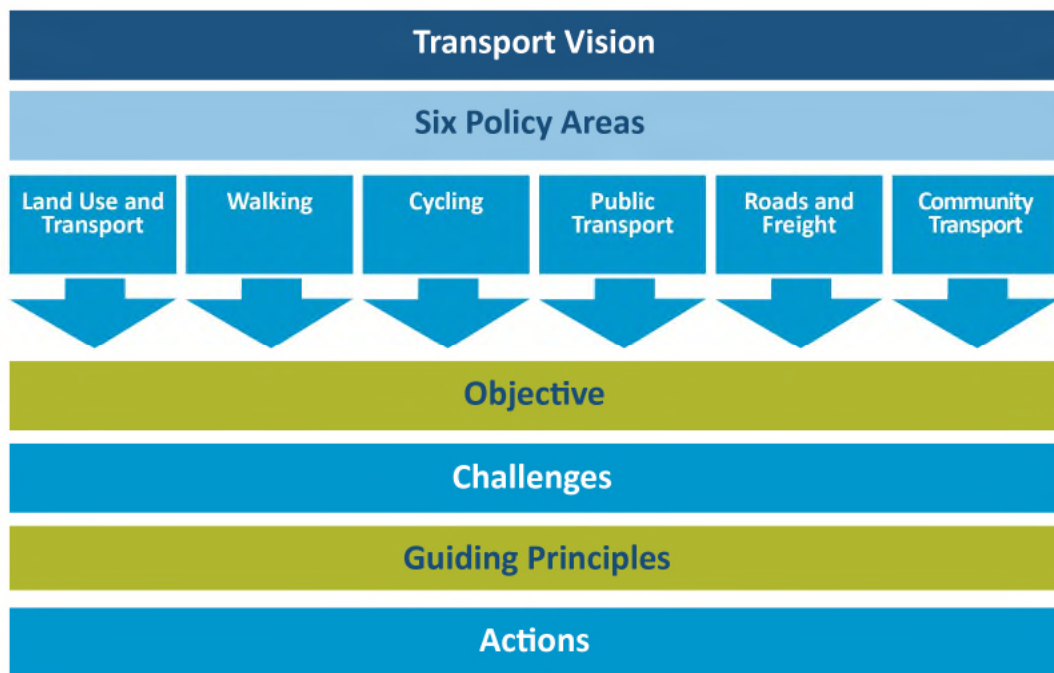
The Policy Areas and their associated objectives are:

Land Use and Transport: Urban development patterns will be supported by effective transport networks that include the provision of walking and cycling networks and the operation of public transport services to improve transport options and accessibility outcomes for all.

Walking: Council will provide a safe urban environment where walking is encouraged through appropriate infrastructure and a built environment that encourages walking.

Cycling: Council will enable the community to adopt cycling as a viable alternative to the car for a wide variety of trips within the municipality and our neighbouring municipalities, through provision of infrastructure, encouragement programs and supporting infrastructure.

Public Transport: Council will work with the State Government to provide our community with a frequent, fast, understandable and reliable public transport network that meets the diverse needs of users throughout the municipality.

Roads and Freight: Council will plan for a safe and efficient road network that meets the demands of a growing population and the travel needs of all road users and ensure that freight minimises its impact on sensitive land uses.

Community Transport: Council will facilitate and support the development and delivery of a sustainable community transport system which provides affordable and accessible transport solutions responsive to people's individual physical, social, health, financial and support circumstances.

5.4. Actions

For each Policy Area a specific objective has been identified that lists the outcomes sought. To fulfil each objective a list of actions will need to be progressed/ completed.

5.5. Delivery Roles

Successful delivery of the ITS will rely on the actions of Council and others, such as State agencies, the private sector, the not-for-profit sector or individuals. Even when others are responsible for the delivery of actions Council will often play an active role to ensure that the actions happen. Council has identified in the Community Plan the three leadership roles that it can play. These are as a provider, advocate and facilitator.

Table 5 Potential Delivery Roles of Council

Role	Council's Role	State Government's Role	Developer's Role
Provider	Council directly provides infrastructure including the construction of local roads, footpaths and cycleways. Council is constrained by its budget limitations, for example, in 2013-14 the budget for roads, drains and footpaths is $14 million. Council also regulates the land use system by approving planning permits on land development and parking.	State agencies provide public transport infrastructure and services, such as buses, trains and trams, and they provide major road infrastructure and manage major roads. For example, the recent widening of Plenty Road from Gordons Road to Riverdale Drive in South Morang cost $21.8 million.	Developers provide roads, footpaths, shared paths and open space links as agreed with Council through Developer Contribution Plans. For example in Epping North and Mernda-Doreen. In the new growth areas Council will seek developer contributions from the Growth Area Infrastructure Contribution (GAIC) for infrastructure and services such as public transport.
Advocate	Council advocates on behalf of the community for the actions that are required. For example, Council's advocacy to the State Government for the extension of rail to Mernda and Wollert, extension of local bus services and widening or improvements to arterial roads.	State Government can advocate with Council for federal funding to build major infrastructure, such as the O'Herns Road interchange with the Hume Freeway.	Developers can advocate with Council on projects such as the public transport corridor to Epping North.
Facilitator	Council facilitates the provision of the required actions by others. For example, Council facilitating regular meetings with Public Transport Victoria and VicRoads to improve integration of actions.	State strategies, such as *Plan Melbourne*, planning legislation and policies, can facilitate desirable land use and transport outcomes.	N/A

Integrated Transport Strategy

6. LAND USE & TRANSPORT INTEGRATION

6.1. Objective

Urban development patterns will be supported by effective transport networks that include the provision of walking and cycling networks and the operation of public transport services to improve transport options and accessibility outcomes for all.

6.2. Guiding principles

Growth area principles advocated by Council to the Growth Areas Authority in response to the Northern Corridor Plan[30] form a robust basis for successful integration between land use and transport planning in all areas of the City of Whittlesea. The principles relating to transport are:

- Early delivery of infrastructure: a continued commitment to providing the infrastructure necessary for healthy, vibrant, connected and sustainable communities.

- Holistic affordability: an approach to affordability that looks beyond the costs of purchasing, or renting housing to encompass the full cost of living including: access to local employment, access to sustainable transport infrastructure, and required services (education, health etc.).

- Diverse and locally accessible employment: local access to a diverse range of employment opportunities.

- Universal access (age and ability friendly): everyone can access and participate in the community in which they live regardless of age, through highly accessible subdivision and dwelling design, and accessibility features to ensure that residents are able to 'age in place'.

- Self-contained and efficient land use mix: localised mix of all necessary land uses, and access to local food supplies and high quality digital connections that are accessible by non-motorised and public transport.

- Well-designed public realm and built form: permeable neighbourhood design that provides clear and logical placement of activity centres on existing and future public transport routes, integration of open space networks into the design of neighbourhoods, distinctive design and public art at key locations.

- Walkability: permeable and activated neighbourhoods and streetscapes that are designed primarily at the human scale.

- Focus on community resources: commitment to a strong, resilient, vibrant, and connected community is implicit in choices for the location of community facilities and resources that are able to grow over time to respond to the changing needs of the community.

6.3. Role of Land Use and Transport Integration

Land use actions have a direct impact on transport, and vice versa. The integration of land use and transport is a critical aspect of achieving successful outcomes.

At the regional and municipal level decisions on land use patterns and development sequences will influence the amount of travel, travel patterns, the cost effectiveness of providing services and the viability of different transport modes.

At the local level decisions on land use and transport will affect the amenity, safety and attractiveness of areas.

The Growth Area Authority has highlighted the importance of people needing to have easy access to the widest range of jobs, education opportunities, health care, shops and services and leisure and recreation facilities. A range of transport options should be available to people. Integrated transport and land use planning is crucial to delivering economically, socially and environmentally sustainable new communities that promote more efficient patterns of living.

The strategic nomination of transport infrastructure that supports urban development so that those who live and work in Growth Corridors are able to access jobs and services and have a range of transport choices. The Growth Corridor Plans identify a mix of committed transport networks, and options for further investigation such as future railway lines and stations, freight centres, freeways, interchanges and arterial roads. They will guide the delivery of housing, employment and transport infrastructure in Melbourne's new suburbs and provide a clear strategy for the development of the growth corridors over the next 30 to 40 years.

Council has been involved in the development of the plan when the Urban Growth Boundary extensions were first announced. It should be noted that the market (demand) is often the key determinant of which areas of land are developed and the rate at which this happens. Changing market forces will have a bearing on how, when and where development occurs. This poses a challenge as to where the trunk transport provision should occur and in what form.

6.3.1. Strategic transport infrastructure as a shaper of land use growth

At a strategic level provision of major transport infrastructure can be a shaper of land use patterns. The Hume Freeway, interstate rail line and potentially the E6 will be critical transport routes for freight movement, while the suburban rail extensions and arterial road network improvements, including east-west connectivity improvements and improved connections to the growth areas, will provide a backbone for municipal and regional flows. A rail freight handling facility is proposed in the Beveridge area on the east of the interstate rail line. The new terminal will enable interstate domestic freight to terminate at Beveridge for distribution throughout Melbourne and future port activity in Geelong and Port of Hastings.

Collectively these projects have a major shaping effect but the timing of them is uncertain. At the same time they provide major opportunities for improved access for residents to other parts of the metropolitan area, regional Victoria and interstate, including job opportunities.

Major transport corridors can also be barriers to local travel and can potentially divide communities. For example, residential areas to the east of the E6 north of Findon Road would have their access to the west restricted if the E6 was built without adequate links to the suburb.

6.3.2. Developing residential and commercial areas

Residential areas

Around 30 per cent of the municipality is currently urban, with development currently concentrated at the southern end of the municipality. Over the coming 20 years this figure will increase as land within the Urban Growth Boundary is developed.

Residential development in the greenfield areas is currently focussed in the Epping North and Mernda-Doreen areas, with the area between Epping North and Wollert expected to take the bulk of the growth over the coming 10 - 20 years.

At a later stage the area around Donnybrook will become a significant residential precinct and hub for housing and economic development.

Regeneration of established urban areas, such as Epping Central, Thomastown and Lalor, is anticipated to continue at a slower rate than the greenfield development but will gradually increase over time. From a transport perspective, urban centres have greater access to existing infrastructure and should form the focus of development intensification.

Activity Centres

Activity Centres will combine a mix of land uses along with high quality urban design and architecture, public spaces (e.g. parks, public squares) and natural features to form places that are highly accessible, legible, pedestrian oriented and integrated with their surrounding catchments. Activity Centres should retain a capacity to grow and change as the region grows.

Centres play different roles and have different transport needs.

Metropolitan Activity Centres – Epping and the future Lockerbie town centre (north of Donnybrook and predominantly within the City of Hume) should at a minimum be linked to the CBD by high capacity metropolitan rail services and across the region by high capacity regional public transport. These should be designated locations for the creation of the densest urban forms and the widest range of uses that can be facilitated.

Activity Centres –South Morang, Mernda and future Wollert Centre should accommodate a wide range of shopping, employment, community, health, education and housing options, be serviced by high capacity rail and have good access to the arterial road network.

University Hill and RMIT Health and Education Precinct is designated for the development of higher order synergistic uses including higher education, research and health. The Precinct is a place of State significance and should be highly accessible via a variety of transport networks.

Neighbourhood Centres - should serve local communities and be served by local public transport services.

The City of Whittlesea has actively lobbied[31] the State Government to ensure adequate services are delivered at the same time as centres develop.

Industrial Precincts

A limited number of discrete areas have been identified as industrial precincts. These include existing areas, such as the Cooper Street Employment Area, and future areas, such as the Beveridge Interstate Freight Terminal. Road will be the primary mode of freight movement within Melbourne and quality road access between industrial areas and the arterial network for freight is essential to ensure that these areas operate efficiently.

The Victorian Freight and Logistics Plan (VLFP) designates three 'Major Freight Network Developments' including:

- Airport initiatives at Melbourne Airport and Avalon Airport

- Intermodal terminal initiatives at Western Interstate Freight Terminal and Beveridge Interstate Freight Terminal

- Port initiatives at Port of Melbourne and Port of Hastings.

The Cooper Street Employment Area is identified as an Industrial Node on the Principal Freight Network. Other non-state significant industrial areas in the municipality include Mahoneys Road- Settlement Road precinct in Thomastown and the future Wollert precinct.

6.4. Land Use and Transport Integration Issues

Rapid population growth. Due to rapid population growth the demand for transport infrastructure and services will continue to increase at a rapid rate. Provision of an effective response to this growth by Council and State Government is made difficult due to the speed of development.

Development staging. Areas across the municipality are at different stages of land development and this requires transport actions tailored to their needs. In existing developed areas changes in housing will be incremental and focussed on areas around activity centres, while employment is expected to grow in Activity Centres and industrial areas. In greenfield areas residential development will be rapid, while the growth in employment is likely to be slower.

Transport for centres. As Activities Centres grow the traffic in and around the centres will intensify and the amenity of centres will reduce unless actions are taken to increase the role of public transport, walking and cycling, and traffic movements and parking is managed. The quality of the public realm in these locations will also impact upon transport choices and market interest in development intensification in these locations.

Employment self-containment. Unless greater than expected employment self-containment is achieved the heavy daily outflow of residents to employment outside the municipality, particularly to the southern corridor to the CBD and the corridor west to the City of Hume, will continue to grow. Peak period public transport services and road capacity are required to serve this demand.

Industrial areas. Industrial areas require efficient freight access while ensuring that negative impacts on land use are minimised. Heavy freight demands will be focussed on the existing and future logistics and manufacturing areas along the Hume corridor on the western boundaries of the municipality.

Design of new areas. In growth areas sub-division designs are required that support greater use of sustainable transport modes. Development of transport infrastructure in the extended northern growth area should be consistent with Council's guiding principles.

Protecting future transport options. Provision for future transport services need to be planned for and protected when land is planned and developed. If this does not occur future options, such as a rail line to Wollert, could be built out.

Figure 8 Existing and Future Land Use and Growth Areas
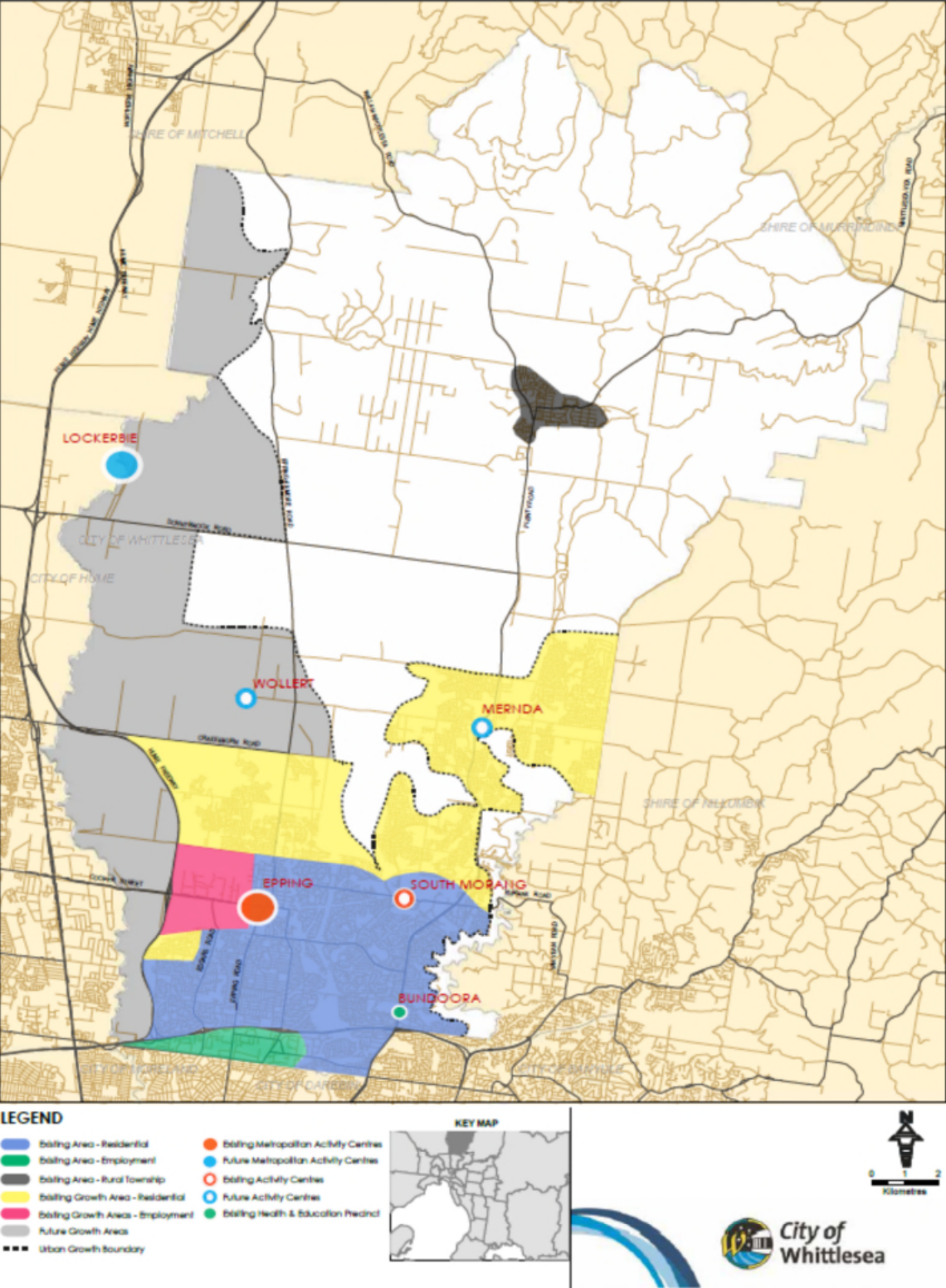
6.5. Action Areas and Actions

Action Area LUT 1. Land use and transport will be planned together

Action LUT 1.1. Plan for all transport modes in Council's land use planning processes

Provide updated planning policy guidance for integrated transport in line with the recommendations of this Strategy to help ensure future Structure Plans are consistent with the ITS principles. In particular, assessment and planning approval processes will include explicit consideration of all transport modes.

Action LUT 1.2. Reserve land and advocate for strategic transport corridors to protect options for future generations

Council will identify corridors for future transport links, and work with developers and the State Government to ensure that adequate land is protected to meet the area's future needs.

Action LUT 1.3. Review the potential for residential intensification around stations

Council will prepare structure plans and planning policy to investigate development potential along existing and planned high capacity public transport routes and major transport nodes, that maximise residential and employment numbers in these locations.

Action LUT 1.4. Applying quality urban design to make spaces attractive to users

Well-designed public spaces (e.g. streets, footpaths, malls and shop fronts) can support self-containment within the municipality by providing areas that are pleasant to be in, are safe for users, and attract economic and social activities. Council will include integrated design principles for the design of our streets, activity centres and other foci of activity, so that transport is integrated with urban design to produce attractive local places.

Action Area LUT 2. Land use and transport will be delivered together

Action LUT 2.1. Advocate for timely delivery of infrastructure and services by State Government

Council will continue to advocate to State Government for the timely delivery of transport infrastructure and services to residential and employment areas as they are developed.

Action LUT 2.2. Developer Contribution Plans will support the delivery of essential infrastructure in the growth areas and in established areas undergoing renewal

Council will work with developers to ensure the provision of adequate infrastructure to ensure the built environment complements the public realm and accessibility needs for all citizens. For example, through the implementation of the Epping Central Developer Contributions Plan, Council will seek contributions from developers through the planning permit process. In the development of the existing growth areas, Council will obtain contributions from developers through agreed Developer Contribution Plans. In the new growth areas Council will seek developer contributions from the Growth Area Infrastructure Contribution (GAIC) for infrastructure and services such as public transport.

Action Area LUT 3. Demand for unnecessary travel by car based trips will be reduced

Action LUT 3.1. Implement active transport initiatives in targeted areas to improve the health and wellbeing of the community

During 2013-14, Council will be undertaking a suite of active travel initiatives in targeted areas across the municipality with a focus on schools as settings. The types of initiatives implemented will be evidence based and targeted to the needs of the target population and may include a local social marketing campaign, active travel cultural events (e.g. such as Ride2School, SafeRoutes to School or Walk2School Days), pedestrian and/or cycle safety education programs for parents and teachers, walking and cycling audits to identify infrastructural (and attitudinal) issues, community advocacy and organisational policy development (e.g. cycle racks, showers, lockers, public transport subsidies, carpooling).

These initiatives will be evaluated and reviewed in future years and expanded for implementation in other targeted areas and, potentially, in other population groups and settings. Such initiatives seek to increased active travel in those target areas.

Action LUT 3.2. Investigate the feasibility of preparing Green Travel Plan guidelines to mitigate the transport impacts of new development proposals

Green Travel Plans can be effective in mitigating the transport impacts of significant new commercial, retail and mixed-use developments. A Green Travel Plan submitted with a planning permit application will outline targets for users to access the site using sustainable transport modes and offering incentives to do so. Public transport, walking and cycling will be encouraged. Reporting on the progress of a Green Travel Plan will be required through a monitoring plan.

Council will work with the Department of Transport, Planning and Local Infrastructure to investigate the feasibility of developing Green Travel Plan guidelines for planning permit applications.

Action LUT 3.3. Council will determine the need to develop a parking policy for Activity Centres and other high activity areas to better manage parking demand and supply

Parking is a complex and often contentious issue. Parking restrictions can moderate the level of car use in busy centres and the supply of parking spaces can create large unattractive areas in centres but excessive parking restrictions without adequate public transport alternatives can restrict people's access to centres. Parking restrictions and dispensations can all be used to modify the amount of parking provided.

Council will determine the need for a parking policy that reflects the circumstances in different activities across the municipality and the needs of different groups. Particular attention will be given to:

- On and off road parking in and around activity centres
- Parking provisions for new infill developments
- Park and ride at train stations.

7. WALKING

7.1. Objective

Council will provide a safe urban environment where walking is encouraged through appropriate infrastructure and a built environment that encourages walking.

7.2. Guiding Principles

- Walking networks should be focussed on attractions to support community wellbeing and reduce social isolation and foster economic and community development

- Walking should support the effective operation of public transport by providing convenient access to stops, stations and interchanges

- A physical environment which promotes walking should be one that is designed at the human scale, and includes provision for older people, children and mobility and vision impaired. To co-locate pedestrian, cycle and vehicle movement routes, where practical, to maximise activity and natural surveillance opportunities

- To provide convenient paths with generous proportions to encourage walking and promote natural surveillance.

7.3. Walking roles

Walking provides a low impact form of travel that can have significant health and social benefits. Route continuity, amenity, the built environment and actual and perceived safety are important characteristics that impact on the likelihood of people choosing walking and cycling over car travel. Their primary roles are:

- Providing access to local activities. For these users high levels of continuity and permeability between residential areas and local/regional activities are needed. The backbone of this network is the local street system.

- Recreational routes that are walked for enjoyment in their own right, or which lead to recreational activities. For these routes the quality of the route itself and the environments passed through is an important attractor.

Walking remains an important but largely ignored mode in planning for moving people. The City of Whittlesea has a relatively low percentage of people who walk to work (1.6 per cent in comparison to 3.8 per cent for Greater Melbourne.

The potential for walking is high. Across Melbourne approximately 38 per cent of weekday trips are less than 2 kilometres in length and walking is the most sustainable and healthiest means of travel for many of these trips. Walking contributes just 2 per cent of overall kilometres travelled in Melbourne, but it makes up 13 per cent of all trips made.[32]

Research into active transport modes (e.g. walking and cycling) outlines its potential health benefits. A recent study[33] indicates that transport and planning decisions have an impact on health issues. Promoting walking, cycling and public transport is a strategy to reduce population levels of obesity as well as risk and burden of cardiovascular disease and type 2 diabetes. The study shows that:

- Mean body mass index and waist circumference was lower among individuals with low or high levels of active transport

- The odds of hypertension were 24 per cent lower and 31 per cent lower among individuals with low and high levels of active transportation

- High active transportation was associated with 31 per cent lower odds of diabetes.

Walking regularly for 30 minutes each day offers a range of general benefits including:

- improved fitness, posture, muscle tone, strength and flexibility

- reduced risk of developing heart diseases, diabetes, osteoporosis, arthritis and some cancers

- opportunity to meet your neighbours and get to know your neighbourhood

- enjoy a greater sense of health and wellbeing and sleep better at night

- lowered blood pressure and cholesterol

- reduced risk of falls and other injuries

7.4. Walking Issues

Route continuity. Barriers to route continuity experienced in the municipality include sections of unformed paths, particularly in the growth areas due to the sporadic nature of development patterns.

Safety. Although pedestrian accidents do not show up as a major issue, perceptions of the safety risks due to a lack of infrastructure can discourage residents from walking. These deficiencies include inadequate footpaths on busy roads, inadequate lighting and sight lines and built form that does not activate street frontages. The lack of pedestrian crossings on high volume roads is a barrier to walkers accessing local destinations.

Shortage of local destinations. Walking catchments are the shortest of all modes, with the major market for walking trips under 2 kilometres in length. This means that the provision of activities within proximity to housing is essential if walking is to be encouraged.

7.5. Action Areas and Actions

Action Area W 1. Planning for walking will be integrated into all of Council's activities

Action W 1.1. Review Council's current Walking Strategy

Council developed a Walking Strategy in 2008.[34] Since that time there has been ad-hoc implementation of elements of the strategy. Given the rapid changes that have occurred in the region since 2008, and the increasing focus on walking as part of the ITS, it is timely to review the strategy and its implementation plan. This strategy review could include:

Investigation of physical and other barriers to walking, with particular focus on access to activity areas and employment areas, schools, community facilities and public transport interchanges.

A review of behaviour change initiatives undertaken at schools and workplaces to encourage walking

Development of an implementation plan and priorities.

Action Area W 2. Walking for local access will be encouraged to improve community health and wellbeing

Action W2.1. Work with schools to promote walking

Council has participated and continues to participate in walking initiatives targeted at schools and workplaces. These have included travel plans, Safe Routes to School, Part Way is Okay and Walking School Bus. These programs provide safe ways for children to gain access by walking to school and assist in reducing local car travel. Council will continue to support school based walking initiatives.

Action W2.2.Promote walking by assisting in the establishment of a walking advocacy group(s) and collaborating with agencies

Walking provides a means of increasing community health and well-being. Council will work with the local community and relevant agencies such as Parks Victoria and Municipal Association of Victoria (MAV) to encourage walking and its health benefits and to publicise local walking networks. Council will collaborate with agencies such as MAV to develop mapping tools and other initiatives to promote walking in the municipality.

Action Area W 3. Walking needs will be incorporated into all capital works projects, redevelopment of existing areas and in the planning of new growth areas

Action W3.1 Deliver and advocate for improved connectivity to activity centres, employment areas, schools, community facilities and public transport interchanges

Council will identify and implement pedestrian accessibility needs throughout the municipality, including through implementation of its capital works projects and by working with developers in the growth areas. For example, implementation of pedestrian improvements in Epping Central, Thomastown and Lalor, South Morang Activity Centre and Whittlesea township will continue to proceed as will working with developers to deliver necessary pedestrian infrastructure in areas such as Mernda Activity Centre and neighbourhood centres in Epping North. Elements to improve the walking experience include accessible footpaths, connectivity, crossing points, seating, lighting and wayfinding signage.

Council will advocate to VicRoads for reviews of the location of pedestrian crossings and to PTV re access to railway stations and interchanges. This is likely to involve the traffic signal phasing in key activity areas and crossing safety as part of its SmartRoads network planning, and support the State Government in prioritising pedestrian movements in these locations.

8. CYCLING

8.1. Objective

Council will enable the community to adopt cycling as a viable alternative to the car for a wide variety of trips within the municipality and our neighbouring municipalities, through provision of infrastructure, encouragement programs and supporting infrastructure.

8.2. Guiding Principles

- Cycling should provide a highly efficient transport option for short and medium length trips of up to seven kilometres.

- Cycling should contribute to health, economic and environmental outcomes in a similar way as walking.

- The provision of cycling infrastructure should be focussed on facilities suitable to novice or young riders.

- Supporting infrastructure, in particular wayfinding signage and bicycle parking should be provided in key locations across an entire network, if cycling is to prosper.

- Cycling networks should extend the catchment of public transport stations and interchanges.

8.3. Cycling roles

Cycling provides a low impact form of travel that can have significant health and social networking benefits. Cycling networks serve a number of different roles and route characteristics need to match these different roles. In all situations route continuity is important as diversions reduce the attractiveness of routes and the likelihood of people choosing cycling over car travel. Their primary roles are:

- **Providing access to local activities.** For these users high levels of continuity and permeability between residential areas and local/regional activities are needed. Travel patterns are often diverse as there are multiple origins and destinations. The backbone of this network is the local street system.

- **Providing cross regional and cross-city access** to employment and other major regional/metropolitan services or rail nodes. For these users high speed, direct and continuous on and off-road cycle lanes to major nodes are needed.

- **Recreational routes** that are ridden for enjoyment in their own right, or which lead to recreational activities. For these routes the quality of the route itself and the environments passed through are important attractors.

As with walking, cycling has a large potential to play a greater role in travel in the City of Whittlesea. Approximately 50 per cent of all trips are less than 5 kilometres long, a distance that can be covered comfortably by bicycle.[35]

Table 6 Bicycle Network Hierarchy

Hierarchy	Roles	Characteristics
Principal Bicycle Network	Long distance and higher speed commuter and/or long distance trips Access networks to railway station and activity areas	Direct high quality routes, often segregated bicycle only routes. Combination of on-road and off-road. Minimal disruption by traffic and pedestrians. Network for experienced riders.
Metropolitan Trails Network	Recreational trips providing scenic routes, recreational and/or social destinations e.g. parks, cafes	Routes determined by scenic features and rider interest. Routes may not be direct from origin to destination. Mostly off-road, with some on-road if necessary for route continuity. May be segregated but usually joint bicycle/pedestrian routes. Network for riders of varying experience.
Municipal Bicycle Network	Local trips within neighbourhoods	A mixture of on road in local streets and off-road to provide route continuity to local activities (schools, parks, shops) with low/zero traffic conflicts. Can be indirect and not designed for long distance riders. Safe riding environment for riders of all abilities.

8.4. Cycling issues

Route continuity. Barriers to route continuity include sections of unformed paths and discontinuous bicycle routes, particularly in growth areas due to the sporadic nature of development. This limits the potential for residents in these areas to link into the wider cycling network.

Safety. Although bicycle accidents do not show up as a major issue, perceptions of the safety risks due to a lack of infrastructure can discourage residents from cycling. These deficiencies include routes along high volume and high speed roads, where on-road bicycle lanes can appear dangerous. The lack of safe crossings on these roads reduces cyclist's accessibility to destinations throughout the municipality.

Distance. Long distances and difficult connections to neighbouring municipalities make cycling trips out of the municipality difficult.

Signage. Lack of consistent wayfinding signage, particularly on off-road bicycle routes makes it difficult for new and inexperienced cyclists to navigate safely around the network.

Figure 9 Future PBN an MTN Cycling Networks
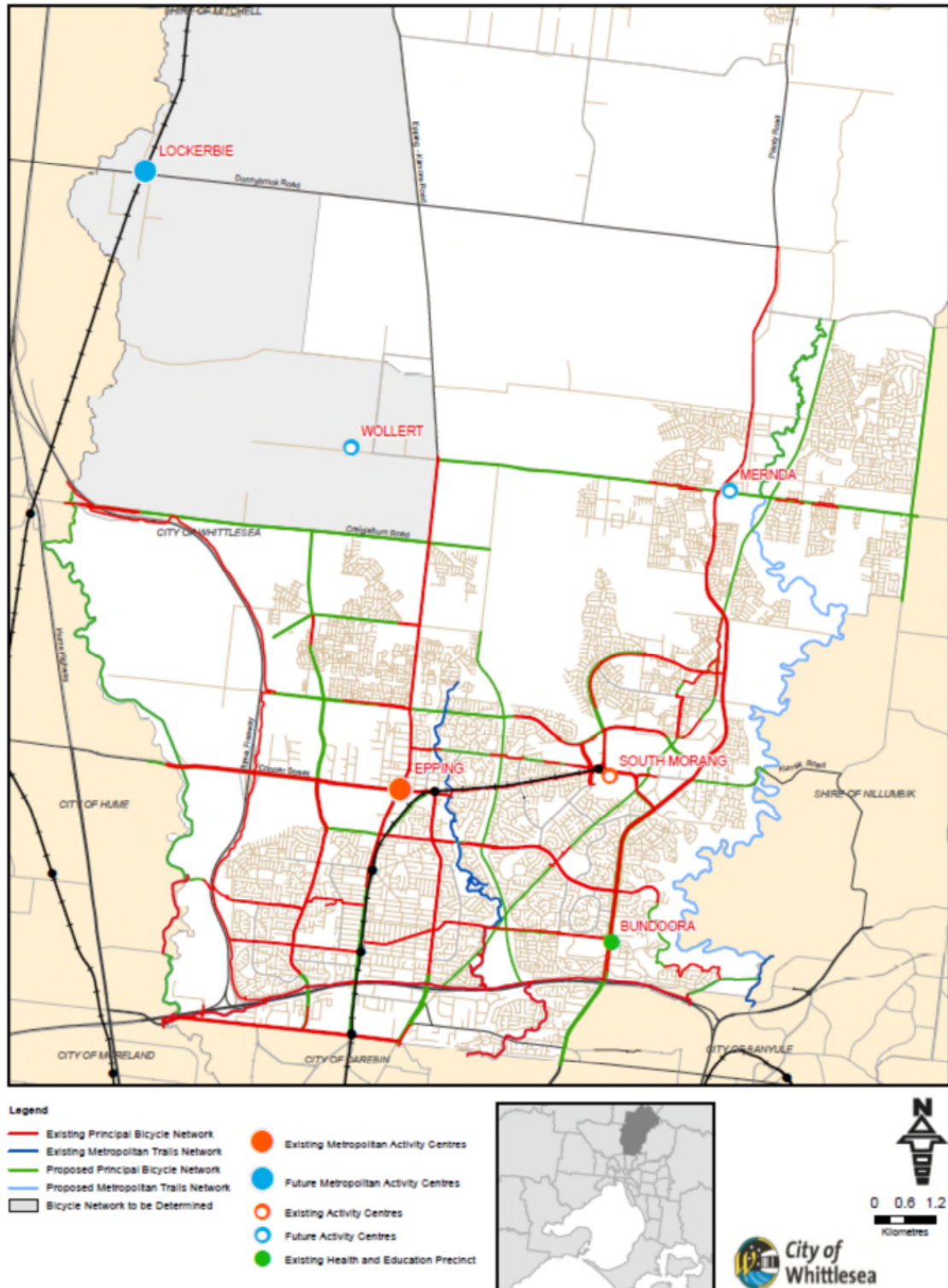
8.5. Action Areas and Actions

Action Area C 1. Planning for cycling will be integrated into Council's activities

Action C1.1. Develop a Council Cycling Plan and implement the associated projects and initiatives

Council currently does not have an up-to-date bicycle plan. There has been ad-hoc implementation of cycling actions but given the increasing focus on cycling as part of the ITS, it is timely to prepare a bicycle strategy and its implementation plan to guide development.

This plan would focus on ways to encourage cycling for local access and health benefits to activity areas, employment areas, schools and community facilities. It would examine:

- Investigation of physical and other barriers to cycling in the municipality, with particular focus on access to local activity areas.

- Working with VicRoads, Parks Victoria, Melbourne Water and VicTrack to integrate the Principal Bicycle Network (PBN) and Metropolitan Trails Network (MTN) with Council's networks.

- Identification of cycling "blackspots" and prepare a prioritised list for consideration.

- Reviewing existing wayfinding signage, particularly around activity centres, train stations and employment areas.

- Investigation of cyclist access and end-of-trip facilities in and around activity centres, train stations and employment areas.

- Working with schools and workplaces to encourage cycling.

- Working with adjacent councils to integrate longer distance bicycle networks.

- Development of an implementation plan and priorities.

Action Area C 2. Bicycle needs will be incorporated into all transport network development and land use planning

Action C2.1 Prioritise bicycle infrastructure into Council's capital works program and land use planning to ensure funds are targeted to areas of greatest needs

Council will give a high priority to bicycle infrastructure in its infrastructure works program, with a focus on improving access to key destinations such as activity areas, employment areas, schools, community facilities and public transport interchanges. Improvements to key links include examples of:

- Darebin Creek trail
- Edgars Creek trail

- Linking Epping North to Epping Central
- Linking Mill Park Lakes to South Morang

Planning of new estates and selected established areas earmarked for urban renewal (such as Epping Central) will ensure bicycle access and infrastructure is prioritised and funded through Developer Contribution Plans.

Council will advocate to VicRoads for reviews of the location of bicycle crossings, the signal phasing in key activity areas and crossing safety as part of its SmartRoads network planning, and support the State Government in prioritising cyclist movements in these locations.

Action C2.2. Advocate for investment in the Principal Bicycle Network and Metropolitan Trails Network to match Council investment in bicycle infrastructure

Council will advocate to State agencies including VicRoads and Parks Victoria for the continued implementation of the PBN and the MTN and seek funding that at least matches Council's investment. To maximise its opportunities for grant funding, Council will undertake planning and investigation on bicycle infrastructure projects in line with the priorities to be progressed in Council's Cycling Strategy.

Action Area C 3. Cycling for local and regional access will be encouraged to improve community health and wellbeing

Action C3.1. Work with schools to promote cycling

Council participates in a number of cycling initiatives targeted at school children, including Safe Routes to School and travel plans. Council is working with Laurimar Primary School and Epping Views Primary School on such initiatives. These programs provide safe ways for children to gain access by cycling to school, while reducing local car travel and improving safety around schools. Council will continue to support school based cycling initiatives.

Action C3.2. Promote cycling in collaboration with the Whittlesea Bicycle Users Group and Bicycle Network Victoria

The Whittlesea Bicycle Users Group is a community based group whose activities include advocacy for bicycle improvements, support for bicycle users and bicycle focussed social activities. Council will continue its support of the group and its work in promotion of cycling as a viable travel mode. Council will continue to work with Bicycle Network Victoria to plan and facilitate for improved bicycle infrastructure in new and existing areas.

9. PUBLIC TRANSPORT

9.1. Objective

Council will work with the State Government to provide our community with a frequent, fast, understandable and reliable public transport network that meets the diverse needs of users throughout the municipality.

9.2. Guiding Principles

- A hierarchy of public transport services should match the different roles played by public transport.

- High capacity services should move large volumes of people directly to major destinations.

- Local services should provide social equity and access for residents to local activities.

- Areas of strong passenger demand should be served by high capacity services.

- High capacity services should prioritise direct, regular and reliable services.

- Duplication or competition between public transport services should be avoided.

- Minimal service levels (frequency, hours of operation) that match the service type should be used to plan resource levels.

- Services should be co-ordinated and integrated at public transport nodes to provide a network based on seamless connections.

- New residential and commercial areas should be designed to facilitate public transport operations.

9.3. Public Transport roles

Route based public transport has two primary roles and the design of services needs to meet these different roles. The primary roles are:

- Providing cross regional and cross city access to employment and other major regional/metropolitan services. For these customers direct, reliable and frequent services focussed on major regional routes are required.

- Providing access to local activities, in particular for those people who do not have ready access to private vehicles. For these customers high levels of accessibility between home and local/regional activities are needed. Local bus services are designed to maximise the number of houses able to access the route. In all residential areas services should be provided by regular route based services, supplemented by community transport for groups with special travel needs.

In rural communities route based services are unlikely to be viable and private vehicles will continue as the major transport mode.

Public transport services are grouped within the hierarchy described below.

Table 7 Public Transport Hierarchy

Public Transport Level	Role
Metropolitan Rail	Link the region with inner suburbs, CBD and major regional centres. Link major activity areas as part of an integrated network of cross regional and radial routes. Intensive development is encouraged around rail stations.
Premium services	Link major activity areas as part of an integrated network of cross regional and radial routes. Direct running between major nodes using arterial roads. Links to other Premium services. Land development along the route and at major nodes to support maximisation of potential patronage levels.
Connector services	Link activity centres as part of regional route. Direct running between major nodes. Land development along the route and at major nodes to support maximisation of potential patronage levels.
Coverage services	Links local properties with local activities or to high capacity services. Routes tailored within local areas to maximise passenger access. Coverage higher priority than direct running.

9.4. Public Transport issues

Service levels. Compared to the Metropolitan Melbourne average, the Interface Councils are significantly under-provided for in terms of public transport. Metlink data shows that Interface Council residents have access to 1.5 public transport routes per 10,000 population, which is half the rate of 3.0 public transport routes per 10,000 population available to Metropolitan Melbourne (excluding Interface Councils) and well below the access rate for residents of the Melbourne Statistical Division as a whole (2.5 public transport routes per 10,000 population).[36]

Bus frequency in particular is often poor, particularly local buses in residential areas where services can be 40 minutes apart. Bus services also have limited hours of operation and these hours often do not match user needs.

Access to local services. About 80 per cent of residents are within an acceptable walking distance of public transport services, however this rate is significant greater in the established suburbs at the expense of residents in the developing areas. Convenient walking access to services is also required.

Changing demand patterns. Bus services can follow inefficient and indirect routes that were appropriate when they were established but which do not match current demand patterns and user expectations.

Road congestion. Major arterial roads are becoming increasingly congested in peak periods and there is a lack of public transport priority on congested links and at intersections. This delays buses and impacts on their reliability.

Rail congestion. Congestion on the heavy rail network between South Morang and the CBD will limit the ability to increase rail service levels as passenger demand increases or to increase peak period service levels. Some capacity for additional peak services remains in the network but additional capacity is required to achieve higher frequency services and prevent overcrowding.

Government integration. Public transport planning and road planning are not fully integrated so that roads can still be designed and built without proper consideration of the opportunities to build public transport priority measures into the new works.

Rail Network Development Plan. In 2013 the State Government released a long term rail plan for Melbourne, the Network Development Plan – Metropolitan Rail.[37] The Plan sets out the government's current priorities. These priorities do not recognise the urgency of the Mernda rail extension and the Epping North/Wollert extension.

Network Development Plan - Metropolitan Rail

This plan sets out the Government's priorities for development of the metropolitan rail network over the coming decades. The broad priorities in the plan are:

1. Overcome existing constraints on the current network.
2. Introduce a metro-style system for Melbourne.
3. Extend services into growth areas.
4. Prepare for future growth and protect options.

Based on the timetable in the Plan the benefits to the City of Whittlesea over the coming 10 years will be capacity improvements at the city end of the South Morang Line. Further improvements in the line are scheduled within 15 years, and the extension of rail to Mernda is currently scheduled for 20 years. The Epping North/Wollert extension has not been recognised in the 20 year timeframe of the plan, however it is identified as a long-term project.

Timing of infrastructure and service upgrades. There is a mismatch between residential growth and installation of public transport infrastructure. For example in the Mernda-Doreen growth corridor, at 2011 there was 20,000 residents (population projected to be 50,000 by 2031) with no access to high frequency public transport.

Public Transport Victoria (PTV) is also giving priority to improving the premium bus services over the local coverage network. This approach means that the rollout of local bus services may be delayed.

9.5. Action Areas and Actions

Action Area PT 1: Advocate and assist in the improvement of public transport services to Public Transport Victoria

Action PT 1.1. Advocate for improvements to existing public transport services to more effectively align services to community needs

The need to improve existing public transport services in the municipality is critical in improving accessibility and liveability, lessening the impacts of congestion and providing environmental benefits. Council seeks the following enhancement to public transport services:

- Rail capacity upgrades along the South Morang line
- Bus network frequency, directness and reliability improvements for existing suburbs
- Improved bus network coverage for growth areas
- Upgraded bus services to growth areas prior to future high capacity network extensions.

Current bus networks have evolved over many years and may not provide the most effective patterns to meet today's needs.

Due to the importance of local bus services to residents and the concerns that can be generated when changes to routes are considered all reviews should engage in open discussion with the community as part of their process.

Council will work with PTV and adjacent Councils to provide a Council and community perspective when bus routes are reviewed in the municipality.

Action PT 1.2. Establish a Transport Panel between Council and Public Transport Victoria staff to meet regularly to improve public transport services and local accessibility and plan for key public transport infrastructure projects

Working collaboratively with Public Transport Victoria on projects and initiatives will assist Council in its land use planning and design and in planning for its own infrastructure needs. It will also assist PTV to target its resources to areas of greatest community needs, and assist Council in advocating for State and Federal government funding opportunities in the delivery of key public transport infrastructure in the municipality.

Council will also work with public transport operators to identify congestion points and implement priority measures to overcome delays.

Council will work with PTV to review access to public transport stops and interchanges by walking and cycling to improve the quality of the experience for users.

Action PT 1.3. Advocate that the State Government establish service targets for public transport that are appropriate for quality service improvements in the municipality

Higher quality services are required to meet resident needs and to attract greater public transport use. Council will advocate that PTV work with all Councils to set service targets for public transport services. This action will lead to public transport services that better match those recognised as appropriate for a quality service, and which match services provided in other areas of Melbourne. Achievement of these targets will decrease the demand for private car use, free up road space for commercial activities or allow for a reallocation of road space to other activities such as landscaping.

Once service level targets are established then they should be used as the basis for implementation plans and priority setting. Council suggests that the following service characteristics as outlined in Table 9 be considered when developing metropolitan wide targets. The frequency and span of service are aimed at provide a consistent service level across the whole day.

Table 8 Public Transport Service Level Targets

Public Transport Level	Frequency	Service span
Metropolitan Rail	Peak 5 minutes Off-Peak 10 minutes	Mon-Fri 5.00am to midnight Saturday 7.00am to midnight Sunday 8.00am to 10.00pm
Premium services	Peak 10 minutes Off-Peak 10 minutes	Mon-Fri 5.00am to midnight Saturday 7.00am to midnight Sunday 8.00am to 10.00pm
Connector services	Peak 20 minutes Off-Peak 20 minutes	Mon-Fri 5.00am to midnight Saturday 7.00am to midnight Sunday 8.00am to 10.00pm
Coverage services	Peak 30 minutes Off-Peak 30 minutes	Mon-Fri 5.00am to midnight Saturday 7.00am to midnight Sunday 8.00am to 10.00pm

Action Area PT 2. Delivery of public transport services will be integrated with land development

Action PT 2.1. Investigate the feasibility of providing interim public transport services for new areas to ensure that residents have early access to public transport

Based on current funding levels it is unlikely that route based public transport services will be able to be delivered to all new suburbs as development occurs. Council will work with PTV and developers to investigate the feasibility of trialling interim demand responsive public transport services in new development areas that are not served by route based services.

This action will test the feasibility of providing a basic level of public transport services using demand responsive services as an interim measure until route based services are provided.

Action Area PT 3: Prepare for future Public Transport expansion

Action PT 3.1: Council and PTV to jointly progress the development of the following public transport projects:

Upgrade rail capacity on the South Morang line

A deficiency of rail capacity between the City of Whittlesea and the CBD will limit the ability to transfer travel from cars to public transport in this major city corridor. This will be a particular constraint during the commuter periods. This capacity expansion is essential if the number of trains serving the South Morang corridor is to increase.

Council will support State Government approaches to Infrastructure Australia to obtain funding for improvements to the metropolitan rail network that will enable rail capacity upgrades along the South Morang line.

Development of the Mernda Rail extension

Council will assist PTV in actions that will progress implementation of the Mernda Rail extension. Initial steps will involve:

1. Reviewing land requirements along the route of the rail line between South Morang and Mernda to ensure that the corridor is protected, potential road/rail grade separations are identified, zoning along the route supports the viability of rail services and potential areas for carriage stabling and/or park and ride are identified.

2. Undertake an investigation to determine the location of stations to Mernda.

3. Undertaking work that would underpin the business case for early development of the line.

Review land requirements along the public transport corridor to Wollert

A joint Council/PTV study is required to ensure that the corridor is protected through to Wollert, potential grade separations are identified, zoning along the route supports operation of high performance public transport services, the location of the northern terminus is finalised and planning for East-West high capacity public transport routes in the corridor is integrated. Irrespective of the form of initial services the corridor designs should allow for ultimate upgrading of the route to heavy rail.

This action will ensure that the land necessary for the future development of the route is identified and will identify the next steps necessary to:

1.   Determine the form of public transport that best meets short and long term customer needs, and
2.   To build the business case for delivery of the corridor.

Development of Route 86 Tram extension

The Route 86 tram currently terminates at Plenty Road and McKimmies Road in Bundoora. An opportunity exists to extend this route to South Morang. A reservation exists for the future extension to South Morang station, the Civic Precinct and along The Lakes Boulevard.

Council will ensure the reservation is maintained and protected and undertake the following:

1.   Investigate the location of stops along the route to maximise patronage, pedestrian accessibility and land use integration
2.   Build a business case for the delivery of the corridor.

Figure 10 Existing and Proposed Public Transport Network
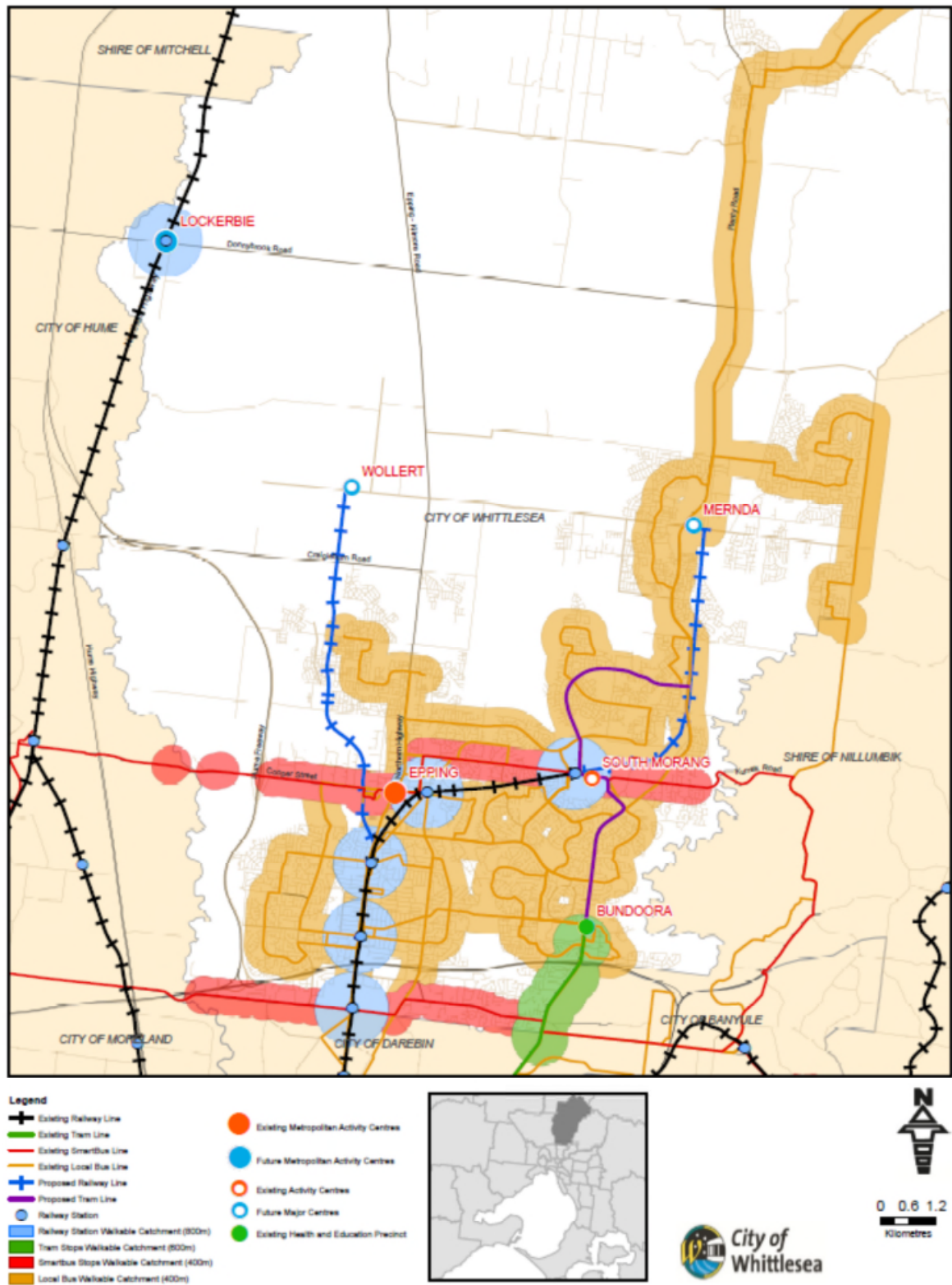
10. ROADS AND FREIGHT

10.1. Objective

Council will plan for a safe and efficient road network that meets the demands of a growing population and the travel needs of all road users, and ensures that freight minimises its impact on sensitive land uses.

10.2. Guiding Principles

- New and improved arterial roads should enable the provision of trunk public transport services between activity areas, railway stations and public transport interchanges.

- Main road capacity improvements should be provided in a timely manner to maintain and enhance access.

- Local road networks should facilitate the operation of public transport, walking and cycling.

- Road use priorities should be managed using SmartRoads principles that allocate priority road use by transport mode, place and time of day so that roads are used efficiently, and the ITS objectives are supported.

- Freight movements should be focussed onto routes appropriate to the freight task and to protect the amenity of sensitive uses and impacts on the community.

10.3. Roads and Freight roles

10.3.1. Road hierarchy

Roads form the backbone of much of the transport system. Almost all modes and users require road access at some time in a journey.

For public roads, a five-tier hierarchy classification is proposed to reflect the different roles roads play. This hierarchy reflects the role of the road and the management responsibility, between Council and VicRoads.

Table 9 Road Hierarchy

Classification	Description
Freeway	Provide regional and metropolitan linkages on access-controlled roads. The responsibility of the State Government.
State Arterial road	Provide regional and metropolitan linkages. The responsibility of the State Government.
Council Arterial road (yet to be declared)	Provide linkages between places and arterial road network; or linkages among places. Examples of places are township, suburb, shopping precinct, major sporting venue, industrial area, agricultural area, tourist attraction and any places of interest. This type of road has an identifiable origin and destination. In general, a Council Arterial road gets its traffic from multiple Connector roads. These roads may be the subject of future negotiations for reclassification to a State Arterial road.
Connector road	Primarily provide a route between and through residential, industrial, commercial and agricultural areas. They convey traffic from local roads to the link road and/or Arterial roads.
Local road	Includes a road, service road, street, court, laneway or extended driveway, which primarily provides direct access for abutting residential, industrial, commercial and rural properties. They 'feed' traffic to Link, Connector or Arterial roads. There is minor to no through traffic on an Access road.

10.3.2. Freight

Road freight is fundamental to businesses, economic activity and the provision of everyday goods. However, if not carefully planned it has the ability to limit the amenity of areas where sensitive uses are present and create land use conflicts. General access freight vehicles have a legal right to access all roads in the municipality unless road specific restrictions are applied. These restrictions are usually due to structural limitations of roads and bridges, but could include environmental or safety concerns as well as amenity, urban design and land use planning considerations. As well as general access freight vehicles more efficient High Productivity Freight Vehicles (HPFVs) are used on selected routes to provide greater productivity for industry.

Rail freight plays a limited role within Whittlesea, being primarily focussed on through movement on the interstate line and in the longer term through the proposed intermodal hub at Beveridge, which will lead to increases in road freight on roads in this area.

Not all areas require the same level of access for freight vehicles and not all roads carry the same volume of freight. A freight hierarchy focuses freight onto the most appropriate routes that meet industry needs, and reflect adjacent land use conditions. It also provides a basis for traffic and land use management.

Table 10 Road Freight Hierarchy

Hierarchy	Roles
Mass Freight Network	A limited network able to accommodate High Productivity Freight Vehicles (HPFVs) that has two components: The higher mass HPFV network where vehicles with high mass can operate on a small number of routes around the port, the inner western suburbs and the Metropolitan Ring Road. In the City of Whittlesea the Outer Metropolitan Ring Road, the Hume Freeway to Cooper Street and Cooper Street west of the Hume Freeway are part of this network. A 'Cubic Freight Network', where vehicles up to 30 metres carrying lighter products can operate, uses a limited number of major routes across the city. In Whittlesea the Outer Ring Road, the Hume Freeway and Cooper Street operate as part of this network.
Principal Freight Network	Connects interstate freight to strategically important ports, airports, industrial areas, freight terminals, intermodal terminals and hubs. Links major regions throughout Melbourne and connections to rural regions across the State. Includes the National Highway Network and other major arterials. Includes B-double routes. Carry typically high volumes of heavy freight vehicles and concentrations of road freight including high concentrations of live-haul, long distance, high capacity trucks.
Secondary Freight Routes	Provide links within regions for significant flows of freight. Provide connections from the general Local Road system and the lower order elements of the State Road system to the primary freight routes. Serve the numerous major business and freight origins and destinations within a subregion. Carry medium volumes of heavy vehicles and concentrations of road freight. May include B-double access roads between the Principal Freight Network and freight generating sites.
Other roads	Provide for use by general access vehicles, unless restricted due to structural limitations. Serve all elements of our land use pattern.

10.4. Road and Freight issues

Road congestion. Road capacity on the major arterial links between the municipality and other parts of Melbourne is limited at peak times. Analysis shows that increasing the role of non-car modes is vital to provide a sustainable transport system, but that even if an optimistic shift to public transport is achieved there is a critical need to provide additional road space to meet future road demands generated by growth.

Lack of priority measures. Public transport, freight, private cars and bicycles can be mixed together and there is little priority given to particular modes. More attention is necessary to ensure that road space is managed consistently with Council's and VicRoads strategic directions.

Land release sequencing. The lack of land sequencing tied to arterial road upgrade commitments by the State Government will have a significant impact on both the local and regional community and business. Unstructured land release spreads the demand for services over a wide area and limits the ability to target transport improvements so that the community gains the maximum benefit from the investments.

Subdivision designs. Subdivision designs that do not provide for viable bus routes, or uncoordinated development of adjacent suburbs, can mean that public transport services are unable to access or operate effectively in residential areas.

Road safety. During the five year period from January 2007 to December 2011, there were 1457 casualty crashes in the City of Whittlesea. This included 31 fatal crashes and 468 crashes that resulted in serious injury. The rate of crashes was lower than many other parts of Melbourne and there were no accident types or locations that require priority attention.

Freight. As congestion grows conflicts may develop between freight and other traffic. Negative impacts could include noise, visual and air pollution, safety and effects on sensitive land uses. At the same time the efficiency of freight operations could be compromised if freight is excessively delayed or restricted in its operations. Vehicle technology and business economics is leading towards the use of larger freight vehicles. A network that recognises freight operations and manages these movements needs to be identified as a part of this strategy.

Figure 11 Existing and Future Road Network
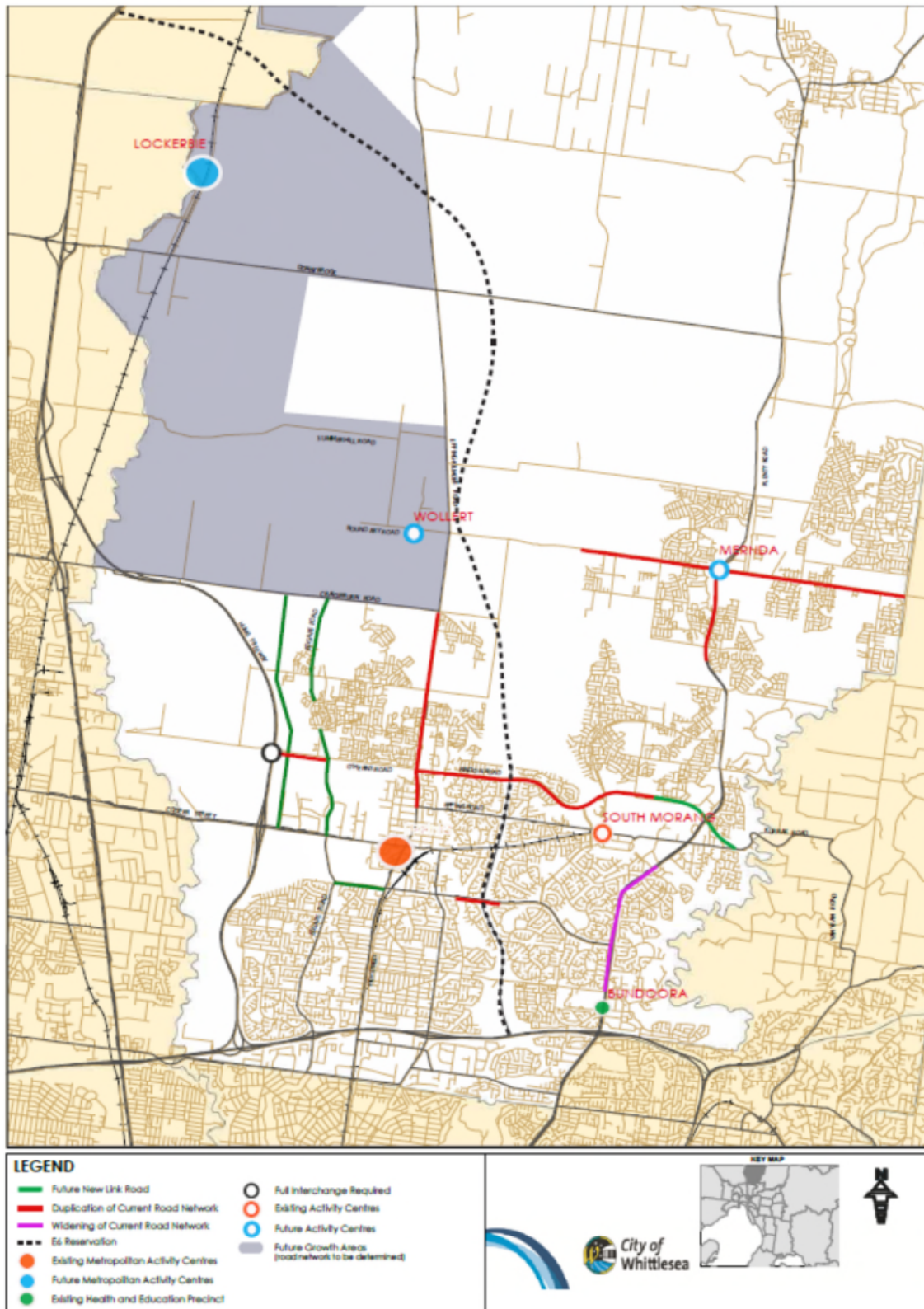
10.5. Action Areas and Actions

Action Area RF 1 Essential road links will be progressed by Council, State Government and developers

Figure 11 shows the existing and future road network for the City of Whittlesea. Investment priorities and the rate of network development will depend on land development patterns and funding levels.

Action RF 1.1. Undertake municipal wide transport modelling to determine when infrastructure needs are required and the economic, environmental and social benefits that will be provided to the community

In order to plan and budget for future Council infrastructure and advocate for State Government infrastructure investment, projects need to be underpinned by rigorous justification and analysis. Transport modelling will be able to guide decisions on project needs and timing, including pressure points on the network and the efficient allocation of road space.

The following projects will be considered:

Advocate for the interchange of O'Herns Road at the Hume Freeway and duplication of O'Herns Road to Epping Road

O'Herns Road would be a major access route to the northern side of the Cooper Street Employment Area and enable access to Epping Road and Findon Road.

Council will continue to advocate for the construction of an interchange with the Hume Freeway and upgrading of O'Herns Road to Epping Road. Council will work with VicRoads and DOT to prepare a business case for Infrastructure Australia funding for the interchange and local road network. O'Herns Road will become increasingly important as an access route to the Cooper Street Employment Area and as an access route from the Hume Freeway to Epping Road and Findon Road.

Advocate for Edgars Road extension between Cooper Street and O'Herns Road

Edgars Road has been progressively extended northwards and currently terminates at Cooper Street. An extension of Edgars Road between Cooper Street and the new O'Herns Road would take traffic off Epping Road and improve access to the Cooper Street precinct.

Upgrade Bridge Inn Road in Mernda-Doreen

In the longer term as Mernda and Epping North continue to grow Bridge Inn Road will be an increasingly important part of the arterial road network. Council will design and upgrade Bridge Inn Road between Plenty Road and Yan Yean Road. Over the longer term responsibility for the road will be transferred from Council to VicRoads and duplication will be required.

Extend Findon Road to Plenty Road

Findon Road is expected to increase in importance as an alternative east-west route through the area that links directly to the Hume Freeway via O'Herns Road and bypasses the growing South Morang precinct. Initial works would involve extending Findon Road from its current terminus at Williamsons Road through to Plenty Road.

Advocate for widening of Plenty Road from McKimmies Road to Bush Boulevard

Plenty Road is one of the most congested sections of the road network and VicRoads has been progressively extending duplication of the road northwards to Mernda-Doreen. Council will advocate for the widening from McKimmies Road to Bush Boulevard in Mill Park and the inclusion of public transport priority works and facilities for cyclists and pedestrians into the design.

Extend Childs Road between High Street and Edgars Road

Childs Road extension, known as Deveny Road, will provide an access route from Edgars Road and High Street into the Epping Central Principal Activity Centre. This will improve access from the southern and eastern parts of the municipality to Epping Central.

Action RF 1.2 Develop a Road Network Plan.

The preparation of a Road Network Plan will enable investment priorities of State and local roads to be listed in accordance with land use patterns and traffic modelling. This will benefit Council for future budgeting for road upgrades and in its advocacy to State Government for arterial road investment. It will also assist in identifying other infrastructure treatments to enhance walking, cycling and public transport and freight and logistics operations.

Action RF 1.3 Prepare advocacy plans including the development of business cases on a precinct basis on new and improved road infrastructure and work with State and Federal governments to seek funding opportunities

Collaborating with State and Federal Governments on essential road infrastructure will assist Council in preparing business cases for external funding opportunities. Advocating for road infrastructure projects in the context of overall economic and community benefits is important in selling the merit of projects. It may also assist in publicising the projects to the community and business so they can assist in advocacy to governments.

Action Area RF 2. The road network will be managed consistently with the ITS to ensure benefits for all road users

Action RF 2.1. Work with VicRoads to plan and implement SmartRoads to manage roads consistent with transport and land use priorities

SmartRoads provides a tool for VicRoads and Council to identify the objectives for road links and networks, to identify modal/land use priorities and to develop management plans consistent with these objectives. The benefits include greater priority to trams and buses on designated routes, more opportunities for walking and cycling and improvements to the operation of roads and identification of major freight routes. SmartRoads hierarchy has been developed in the southern part of the municipality but this is yet to be extended to the newer areas. In the south the network strategy is yet to be applied at the operational level. Two actions will be given priority:

Expand the SmartRoads network to major roads in the growth areas that are not already classified or where a review may be appropriate. This will identify modal priorities for each route and provide an agreed basis for the future development and management of key roads in the developing parts of the municipality. These networks will then be included into Council's planning scheme.

Council will work with VicRoads, PTV, public transport operators and land owners to develop detailed operating plans on key routes. Priority will be given to a pilot in High Street, with Epping Road, McDonalds Road and access to modal interchanges in South Morang and Epping expected to follow.

Council to advocate to VicRoads on the need for an Implementation Plan to prioritise and fund the SmartRoads Plan.

Action RF 2.2. Manage local roads to improve amenity and safety for users and ensure consistency with SmartRoads principles

At a precinct level, Council will ensure consistency between land use and transport outcomes by:

- Managing local roads in a consistent manner.

- Ensuring improvements to sustainable modes (walking and cycling) are prioritised and in accordance with land use planning aims and urban design principles

- Ensuring the efficient operation of bus networks

- Continuing to monitor road safety outcomes

- Identifying priorities to improve safety and amenity for all users

- Investigating and prioritising locations for reduction in speed limits including expanding the 40km/h zones to activity centres.

Action RF 2.3. Update Council's Road Safety Strategy and implement the associated projects and initiatives

Council will undertake a revised Road Safety Strategy with the aim of reducing the risk of injury on our roads and paths, so that people of all ages and abilities, by any mode, are free to travel to their chosen destinations safely

Council will work collaboratively with the community and stakeholders and internal departments towards achieving the following four objectives:

- Make the municipality safer for vulnerable road users (pedestrians, cyclists, motorcyclists)

- Reduce the effect of high impact road users (vehicle, passengers, trucks)

- Work in partnership with key stakeholders to promote active travel and improve road safety

- Measure and monitor road safety outcomes

Action Area RF 3. Plan for future road network improvements

Action RF 3.1. Establish a Transport Panel between Council and VicRoads staff to meet regularly on the development of key infrastructure projects and initiatives in the City of Whittlesea

Working collaboratively with VicRoads on projects and initiatives will assist Council and VicRoads in their planning and budgeting for Council's own infrastructure needs. It will also assist Council in advocating for State and Federal Government funding opportunities in the delivery of key State road infrastructure in the municipality.

Action Area RF4. Manage road freight

Action RF 4.1. Plan and manage freight access networks for efficient freight movement whilst minimising impacts on sensitive land uses

The municipality has a number of State Government and Council roads where B-doubles are permitted to operate. As the freight generating areas, such as Cooper Street Employment Area, expand and truck technologies change it will be appropriate to review access arrangements to ensure that they reflect operating conditions and so that freight movements do not create land use conflicts with sensitive uses.

Council will conduct a bi-annual review of Council and State Government heavy vehicle routes in the municipality, in association with VicRoads, to ensure that these routes reflect traffic and land use changes.

Action RF 4.2. Ensure industrial areas are designed to meet current and emerging freight vehicle demands

The design of freight generating areas and their access routes can impact on the cost of freight operators and local businesses. Council will implement guidelines for the assessment of freight generating areas that recognises the requirements of freight operators, businesses and surrounding land uses.

11. COMMUNITY TRANSPORT

11.1. Objective

Council will facilitate and support the development and delivery of a sustainable community transport system which provides affordable and accessible transport solutions responsive to people's individual physical, social, health, financial and support circumstances.

11.2. Guiding Principles

- Be flexible and tailored to a person's individual circumstances and priorities where barriers to accessing other transport modes exist.

- Be a key strategy to increase social inclusion and reduce isolation.

- Reduce transport barriers to accessing service, programs, education, training employment, community activities and events.

- Support people to gain confidence and ability to use mainstream transport options

- Give priority to people most vulnerable to isolation and social exclusion.

- Extend the effectiveness of health and wellbeing infrastructure, programs and services and reduces rates of demand for costly health and support services.

- Provide flexibility to the transport system as it can adapt more quickly to changing demographics than fixed infrastructure transport systems.

- Provide additional community services and benefits including opportunities for volunteerism, access to an affordable fleet of vehicles for community groups, and the provision of transport information and coordination.

11.3. Community Transport roles

Community transport provides accessible transport for residents who experience exclusion from a diverse range of activities due to barriers accessing other forms of transport. Community transport's primary purpose is to support people's social connection and inclusion and to promote independence health and wellbeing. It is a not for profit service where operational surpluses are reinvested in meeting community transport needs. Specific services include:

- **Assisted Transport** – door-to-door transport provided to people who require assistance with transport and mobility in order to undertake activities such as shopping, medical appointments, training, visiting family and friends, and attending functions, community events or specific activities.

- **Program Transport** - door-to-door transport provided by organisations to their clients to support access to services and programs such as Planned Activity Groups (PAG).

- **Flexible Transport** – affordable transport services provided to people whether or not they require assistance with their mobility to fill gaps in public transport provision in areas like interface municipalities in growth corridors.

- **Community group transport and vehicle hire** – destination based group travel using an affordable community transport vehicle. Examples include participants in youth groups, seniors groups and disability groups.

- **Coordination, advice and referral** – includes the provision of information and referral to alternative accessible transport options.

11.4. Community Transport issues

Sustainable funding. Secure and adequate funding arrangements need to be established in order to ensure an effective on-going community transport service for City of Whittlesea residents. Current community transport funding is insecure, inefficient and unsustainable. Funding arrangements are fragmented and target different segments of the population requiring community transport assistance. Funding is often characterised by time limited grants to meet staffing costs or once off capital fleet costs. For example Home and Community Care (HACC) volunteer coordination funding which targets frail elderly residents and people living with disabilities does not contribute to fleet capital or operational costs.

Service coordination and cost effective service delivery. Community transport services have developed by individual agencies in response to their service and client needs resulting in a fragmented and poorly coordinated service response. As a consequence resident access is inconsistent and difficult to navigate with variable service standards. Improved coordination offers the opportunity to reduce duplication of services and increase use of underutilised vehicles to develop a more effective and cost efficient community transport system.

Service Planning. Between 2011 and 2021 the 70+ population is projected to grow by 7,240 (65 per cent).[38] Without access to community transport this will result in significant growth in the numbers of people at risk of social isolation and exclusion from health and wellbeing activities. Sound evidence based planning is required to support the development of community transport to meet this future demand as well as current unmet need by people across all age cohorts.

Leadership. Despite strong leadership taken by individual agencies to develop community transport capacity in the City of Whittlesea, lack of clear leadership at the State or local level has resulted in the evolution of a fragmented and poorly coordinated community transport system. Without agreed leadership, community transport will not be adequately planned, funded and coordinated to ensure services are cost effective and able to support future needs of people to remain independent and well.

11.5. Action Areas and Actions

Action Area CT 1. Build a sustainable community transport sector in the municipality

Action CT 1.1. Seek support from partner stakeholders, including the Regional Management Forum (RMF,) to resource and support an integrated local community transport planning project

Council will seek support from relevant State Government agencies providing community transport to partner with Council and the community to undertake an integrated local community transport planning project. The purpose of the project will be to design and implement a sustainable community transport sector to complement the private and public transport sectors in the City of Whittlesea. The project will:

1. Undertake a baseline review of the community transport system including:

    - A literature review of reports, analysis and recommendations relevant to community transport in the municipality.

    - Identify the nature and quantity of future need for community transport.

    - Profile current and projected service volumes for community transport services.

    - Profile current and anticipated service users.

    - Profile the current community transport service system including service providers, operating models, target groups, funding arrangements, vehicle fleets, underutilised resources, risks etc.

    - Undertake a SWOT analysis.

2. Define the required role for community transport within the municipality based on agreed vision, values and principles.

3. Develop a realistic, cost effective and sustainable community transport model including potential partners, resources and leadership responsibilities.

4. Generate a sustainable funding model for community transport.

5. Develop and apply an agreed implementation plan.

Action CT 1.2. Develop a Council Policy on community transport

In parallel with the community transport planning project, Council will develop a community transport policy to define Council's role in facilitating and supporting the development and delivery of a sustainable community transport system.

Action CT 1.3. Audit Council's current resourcing, supporting and delivery of community transport

Council currently resources, supports and delivers community transport functions across several programs and services. An audit of these activities will inform the proposed local community transport planning project and the development of Council's community transport policy.

12. MONITORING AND REPORTING

Progress on the ITS will be continually monitored and recorded through Council's Business Plan. Firstly, actions will be reported quarterly against outputs including cost, timeliness, quantity and quality. Secondly, the impact of the ITS actions will be recognised by monitoring the benefits of positive change over time. This will be reported through the following Key Performance Indicators:

- An increase in the proportion of households in proximity to activity centres and high change areas and high quality transport options

- An increase in the proportion of the community engaged in walking

- An increase in the proportion of the community engaged in cycling

- An increase in the proportion of the community using public transport

- A decrease in the proportion of short trips made by motor vehicle

- An increase in the proportion of transport disadvantaged residents having access to community transport services.

12.1. Action Area and Actions

Action Area MR1. Continually monitor and regularly report on the output and impact of the ITS Actions

Action MR 1.1. Incorporate the ITS actions into relevant Council department's business plans and report on them quarterly.

Action MR 1.2. Adapt Council's Customer Request Management (CRM) system to record and provide data relevant to the ITS.

Action MR 1.3. Adapt the City of Whittlesea Annual Household Survey to capture transport data relevant to the ITS.

Action MR 1.4. Continue to monitor and analyse relevant transport data including VISTA and ABS Census.

Action MR 1.5. Undertake detailed survey of residents regarding of transport issues, perceptions and participation, to inform the evaluation and review of the ITS.

Action MR 1.6. Report annually to Council and the community on the progress of the ITS and undertake a full review after four years.

12.2. Implementation Plan

The ITS requires complementary action to be taken by Council, State agencies, the private sector, the not-for-profit sector and individuals. The table below lists each action by Policy Area, the priority given to each action and Council's role in progressing actions. Actions are either ongoing, Priority 1 – to be progressed during 2014-15 or Priority 2 – to be progressed during 2015-18. Council's role is either as provider, advocate or facilitator.

POLICY AREA	ACTION	PRIORITY	COUNCIL ROLE
LAND USE & TRANSPORT	Plan for all transport modes in Council's land use planning processes	Ongoing	Provider
	Reserve land and advocate for strategic transport corridors	Ongoing	Provider
	Review the potential for residential intensification around stations	Ongoing	Provider
	Applying quality urban design to make spaces attractive to users	Ongoing	Provider
	Advocate for timely delivery of infrastructure and services by State Government	Ongoing	Advocate
	Developer Contribution Plans will support the delivery of essential infrastructure in the growth areas and in identified established areas earmarked for urban renewal	Ongoing	Facilitator
	Implement active transport initiatives in targeted areas to improve health and wellbeing of the community	1	Provider
	Investigate the feasibility of preparing Green Travel Plan guidelines to mitigate the impacts of new development proposals	1	Provider
	Council will determine the need to develop a parking policy for Activity Centres and other high activity areas to better manage parking demand and supply	2	Provider
WALKING	Review Council's current Walking Strategy	1	Provider
	Deliver and advocate for improved connectivity to improve access to activity areas, employment areas, schools, community facilities and railway stations and public transport interchanges	Ongoing	Provider / Advocate
	Work with schools to promote walking	1	Provider / Advocate
	Promote walking by assisting in the establishment of a walking advocacy group(s) and collaborating with agencies	2	Advocate

POLICY AREA	ACTION	PRIORITY	COUNCIL ROLE
CYCLING	Develop a Council Cycling Plan and implement the associated projects and initiatives	1	Provider
	Prioritise bicycle infrastructure into Council's capital works program and land use planning to ensure funds are targeted to areas of greatest needs	Ongoing	Provider
	Advocate for investment in the Principal Bicycle Network and Metropolitan Trails Network to match Council investment in bicycle infrastructure	Ongoing	Advocate
	Work with schools to promote cycling	1	Provider Advocate
	Promote cycling in collaboration with the Whittlesea Bicycle Users Group and Bicycle Network Victoria	Ongoing	Advocate
PUBLIC TRANSPORT	Establish a Transport Panel between Council and Public Transport Victoria to meet regularly to improve public transport services and local accessibility and plan for key public transport infrastructure projects	1	Facilitator
	Advocate for improvements to existing public transport services to more effectively align services to community needs	1	Advocate
	Advocate that the State Government establish service targets for public transport that are appropriate for quality service improvements in the municipality	1	Advocate
	Investigate the feasibility of providing interim public transport services for new areas to ensure that residents have early access to public transport	2	Advocate
	Council and PTV to jointly progress the development of the following public transport projects: (1) Upgrade rail capacity on the South Morang line	1	Facilitator
	(2) Development of the Mernda Rail extension	1	Facilitator
	(3) Review land requirements along the public transport corridor to Wollert	1	Facilitator
	(4) Development of Route 86 Tram extension	1	Facilitator

POLICY AREA	ACTION	PRIORITY	COUNCIL ROLE
VEHICLES AND FRIEGHT	Undertake municipal wide transport modelling to determine when infrastructure needs are required and the economic, environmental and social benefits that will be provided to the community	1	Provider
	Undertake a Road Network Plan	2	Provider Advocate
	Update Council's Road Safety Strategy and implement the associated projects and initiatives	1	Provider
	Manage local roads to improve amenity and safety for users and ensure consistency with SmartRoads principles	Ongoing	Provider
	Establish a Transport Panel between Council and VicRoads staff to meet regularly on the development of key infrastructure projects and initiatives in the City of Whittlesea	1	Facilitator
	Prepare advocacy plans including the development of business cases on a precinct basis on new and improved road infrastructure and work with State and Federal governments to seek funding opportunities	2	Advocate
	Work with VicRoads to plan and implement SmartRoads on arterial roads consistent with transport and land use priorities	1	Facilitator
	Plan and manage freight access networks for efficient freight movement whilst minimising impacts on sensitive land uses	Ongoing	Provider Advocate
	Ensure industrial areas are designed to meet current and emerging freight vehicle demands	2	Provider
COMMUNITY TRANSPORT	Seek support from partner stakeholders, including the Regional Management Forum, to resource and support an integrated local community transport planning project	1	Facilitator Provider
	Develop a Council Policy on community transport	2	Provider
	Audit Council's current resourcing, supporting and delivery of community transport	1	Provider

POLICY AREA	ACTION	PRIORITY	COUNCIL ROLE
MONITORING AND REPORTING	Incorporate the ITS actions into relevant Council department's business plans and report on them quarterly	Ongoing	Provider
	Adapt Council's Customer Request Management (CRM) system to record and provide data relevant to the ITS	1	Provider
	Adapt the Whittlesea Annual Household Survey to capture transport data relevant to the ITS	1	Provider
	Continue to monitor and analyse relevant transport data including VISTA and ABS Census	Ongoing	Provider
	Undertake detailed survey of residents regarding transport issues, perceptions and participation, to inform the evaluation and review of the ITS	2	Provider
	Report annually to Council and the community on the progress of the ITS and undertake a full review after four years	2	Provider

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