Developing Transport Infrastructure and Services for Population Growth Areas

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Victorian Auditor-General's Office

Auditing in the Public Interest

The Hon. Bruce Atkinson MLC
President
Legislative Council
Parliament House
Melbourne

The Hon. Ken Smith MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my report on the audit *Developing Transport Infrastructure and Services for Population Growth Areas*.

This audit assessed the effectiveness of state agencies in planning and delivering transport infrastructure and services for population growth areas.

The report highlights the need for urgent whole-of-government action to address the growing impacts of the state's longstanding failure to meet the transport needs of growth areas.

Yours faithfully

John Doyle
Auditor-General

21 August 2013

Contents

Audit summary

Melbourne's population is growing rapidly and is expected to reach over 5 million before 2030. A significant portion of this population will be in the outer Melbourne growth areas of Cardinia, Casey, Hume, Melton, Mitchell, Whittlesea and Wyndham.

Rapid population growth in Melbourne's growth areas has created a major challenge for the state to provide the transport infrastructure and services needed to sustainably support these communities.

A November 2009 Parliamentary *Inquiry into the Impact of the State Government's Decision to Change the Urban Growth Boundary* noted that the early provision of infrastructure is a critical factor in the long-term success of new communities.

The total cost to state and local government of providing all the infrastructure needed in greenfield sites incorporating as yet undeveloped land is estimated at approximately $36 billion over 30 years. Over $18 billion of this cost is needed in state funding for transport infrastructure and services. This excludes the cost of maintenance and renewal.

Delaying and retrofitting the required transport infrastructure and services can significantly increase this cost over time. Inadequate public transport services can also impede mobility and accessibility, and adversely impact on the environment by encouraging greater car dependence.

Growth Corridor Plans (GCP), developed in 2012 provide a high-level framework to guide the planning of new communities in the state's growth corridors. Precinct Structure Plans provide further detail of the proposed development of smaller related land areas and new suburbs.

The vast majority of funding required to deliver state transport infrastructure in growth areas relies on State Budget processes and Commonwealth contributions. The *Planning and Environment Act 1987* also establishes other mechanisms to generate infrastructure funding for growth areas. These include both development contributions that are primarily for local infrastructure—such as local roads, community facilities and open space—and the Growth Areas Infrastructure Contribution payable by land owners that will contribute to state infrastructure works including arterial roads and public transport.

Responsibility for planning and delivering state transport infrastructure and services for growth areas rests with several agencies including the Department of Transport, Planning and Local Infrastructure, the Growth Areas Authority (GAA), Public Transport Victoria (PTV) and VicRoads.

This audit assessed the effectiveness of state agencies in planning and delivering transport infrastructure and services for population growth areas. It examined whether planning for growth areas is effective in identifying current and future transport needs, and whether implementation and funding strategies support the timely delivery of required transport infrastructure and services.

Conclusion

Over many years, the state has failed to deliver the transport infrastructure and services needed to support rapidly growing communities. This is adversely impacting accessibility, and risks the future liveability of metropolitan Melbourne.

Urgent action is required to address this serious problem. Inadequate public transport and growing gaps in the road network in these communities are creating barriers to mobility, including access to critical services, education and employment opportunities.

In turn, these deficiencies are increasing car dependence, pollution and exacerbating traffic congestion at significant community cost. This both limits state productivity and the time that people can spend with their families.

Despite these growing problems, funding to address the transport needs of growth areas can take more than a generation to materialise. This longstanding disconnect between planning and funding gives credence to the perception that past statewide planning initiatives have been disingenuous.

Growing pressure on state finances heightens the need to effectively prioritise limited funds, and to develop alternative funding sources and implementation strategies to meet the growing challenge.

This audit's recommendations are focused on addressing these longstanding issues. However, they will have limited value if their implementation is not supported by a realistic and effective whole-of-government approach.

Findings

Current transport infrastructure and services in growth areas

Ongoing delays in providing transport infrastructure to growth areas means that significant investment is required to complete longstanding proposed rail and road works.

According to transport agencies approximately $6.2 billion in rail projects intended to service growth areas are yet to be funded. Almost 62 per cent of the funding required is for two projects first identified in the former Metropolitan Town Planning Commission’s 1929 *Plan of General Development* or the 1969 *Melbourne Transportation Study* for the then growth areas of Doncaster and Rowville.

While it is important to recognise that growth area projects typically require longer delivery time frames, this demonstrates that the elapsed time from initial identification of growth area rail projects to the commitment of funds often spans more than a generation.

Additionally, VicRoads advised there are number of outer suburban arterial roads currently at or beyond capacity, creating significant issues of congestion, delay and safety. It estimates that significant investment of between $4.1 billion and $5.1 billion is required to address longstanding road gaps in the more established suburbs within and around growth areas.

This situation has resulted in inadequate services, and a significant backlog of required state public transport and road infrastructure works.

There have been some notable improvements to public transport and the road network in growth areas in recent years, supported by investment of around $2.5 billion. Examples include: rail extensions and new stations; bus route upgrades; road duplications and bypasses, and freeway upgrades. Nevertheless, most growth areas remain inadequately serviced compared to the rest of metropolitan Melbourne particularly with regard to:

- **geographic coverage**—growth area residents, on average, have less than half as many public transport routes compared to other metropolitan residents and, almost one-quarter of growth area households are not within the state's target of 95 per cent of households being within 400 metres of public transport.
- **frequency of services**—growth area residents generally wait longer for bus services compared to the metropolitan Melbourne average.
- **directness of services**—growth areas have less direct routes compared to the rest of metropolitan Melbourne, which contributes to comparatively longer journey times.

The former Department of Transport undertook planning to expand bus services into newly developing areas following a series of bus service reviews between 2007 and 2010. These reviews highlighted a range of service deficiencies across Melbourne including:

- inadequate network coverage
- poor service frequency, reliability and connectivity to other transport modes
- insufficient hours and days of operation.

In response, the department prepared costed proposals for numerous additional services, however, only relatively minor service expansions in growth areas have been funded to date.

Consequently, the service improvements envisaged in growth areas have yet to be realised, leaving significant ongoing gaps.

PTV advised that $197 million of recurrent funding would be required to address the identified service gaps across metropolitan Melbourne.

Planning for transport infrastructure and services in growth areas

In the past, land use plans were often developed prior to transport planning taking place. Further, in contrast to some overseas jurisdictions, Melbourne has had a succession of land use and transport plans that have lacked continuity and have often been superseded before they are implemented. These past deficiencies have contributed to the current inadequate transport infrastructure and services in growth areas.

In September 2006, GAA was established with a key role to plan Melbourne's newest suburbs. It's recently developed GCPs and integrated Precinct Structure Plans (PSP) represent an important improvement in planning for Melbourne's growth areas.

While PSPs establish a sound framework for identifying required transport infrastructure for new suburbs, it is not evident GAA has established effective arrangements to assure all required transport standards have been adequately addressed in the development of PSPs. GAA initiated action to address this during the audit.

The above plans have strengthened integration between transport and land use. However, the absence of a supporting funding and implementation strategy integrated with broader statewide transport and land use plans remains a key shortcoming. Without such a strategy it is likely that state transport infrastructure identified within current plans will not be provided in a timely manner, and that the growing challenge of inadequate transport infrastructure in growth areas will not be satisfactorily addressed.

Further, the above arrangements relate primarily to greenfields and do not extend to addressing the growing transport infrastructure backlog in more established areas of growth councils. The absence of such arrangements impedes the development of coordinated strategies to effectively respond to these longstanding challenges.

PTV and VicRoads prepare detailed network service and operating plans to complement their strategic transport plans.

PTV is currently updating its network plans for trams and buses. The updated plans are expected to provide an improved basis for identifying future service needs and investment in the transport network. It is also developing a new Multi-Modal Coordination Policy and Strategy that has the potential to further improve the accessibility and coordination of public transport services in growth areas.

At present, only the December 2012 *Network Development Plan—Metropolitan Rail* is completed. Further work is required to finalise the tram and bus plan, and develop a priority list of infrastructure projects and associated costs over the coming decades. These plans are expected to be completed by 2014. Until PTV finalises its network plans and multi-modal strategy, their implications for current growth area public transport priorities cannot be fully assessed.

Although PTV has developed standards to determine public transport coverage, there are no equivalent minimum service standards to guide planning for the frequency and directness of public transport services.

To assist in identifying road infrastructure priorities, VicRoads has developed a useful methodology supported by clear criteria for prioritising projects in outer suburban areas. This approach has enabled it to assess and prioritise road improvement projects needed in growth areas. However, the absence of broader arrangements across the transport portfolio for prioritising related investments, means that the basis upon which these projects subsequently compete for limited state funds with other statewide transport priorities is unclear.

Prioritising, funding and monitoring the delivery of transport infrastructure

There is no clear statewide strategy for addressing the longstanding backlog of transport infrastructure for established growth areas. Consequently, there is little assurance this backlog will be addressed, or that the emerging transport infrastructure needs of new growth areas will be delivered when required. It also offers little assurance that current statewide investments in transport infrastructure are effectively targeted and soundly based.

To date, the State Budget process has failed to deliver the quantum of funding required to meet the transport needs of growth areas, and this is expected to continue into the future.

If this funding challenge is not addressed, the current situation is likely to worsen as new growth areas come online. Therefore, there is a pressing need for agencies to explore alternative financing options and strategies to address the growing transport infrastructure backlog and needs of growth areas.

It is acknowledged that limited state finances and access to funding is the principal challenge impeding timely infrastructure and service delivery. However, apart from the introduction of the Growth Areas Infrastructure Contribution in 2010 as an additional charge on landowners for contributing to state infrastructure, insufficient action has been taken by transport agencies to date to address this longstanding issue.

Most of the funding required for state infrastructure and services has traditionally relied on the annual State Budget process, which is underpinned by departmental Budget bids. The state has also sought contributions from the Commonwealth to support transport infrastructure benefitting growth areas. Additionally, in 2012 the former Department of Transport, in consultation with other transport agencies, developed a proposal to fund selected growth area projects supporting the state's recently developed GCPs. This positive initiative, however, was limited to newer growth areas and does not address the longstanding infrastructure backlog in the more established areas of growth councils.

PTV and VicRoads have developed a Benefit Management Framework to provide important insights on outcomes of public transport and road related projects. However, these insights are limited by the absence of a broader monitoring and evaluation framework which examines how well the transport infrastructure and service needs of growth areas are being met.

Recommendations

Number	Recommendation	Page
1.	That the Growth Areas Authority, in consultation with state transport agencies, finalise development of effective arrangements for transparently acquitting the Precinct Structure Plan guidelines and related transport requirements.	36
2.	That Public Transport Victoria develops minimum service standards to guide planning for the frequency and directness of public transport services.	36
3.	That the Department of Transport, Planning and Local Infrastructure, in conjunction with Public Transport Victoria, VicRoads and the Growth Areas Authority develop and implement: • a statewide framework for prioritising the delivery of transport infrastructure that reconciles broader statewide priorities against the needs of growth areas • an implementation and funding strategy incorporating alternative financing options and innovative solutions to systematically address the transport backlog and meet the future needs of growth areas • an associated monitoring and evaluation framework to assess whether the progressive delivery of transport infrastructure and services in growth areas is being achieved as planned and has been effective.	46

Submissions and comments received

In addition to progressive engagement during the course of the audit, in accordance with section 16(3) of the *Audit Act 1994* a copy of this report, or relevant extracts from the report, was provided to Department of Transport, Planning and Local Infrastructure, the Growth Areas Authority, Public Transport Victoria and VicRoads with a request for submissions or comments.

Agency views have been considered in reaching our audit conclusions and are represented to the extent relevant and warranted in preparing this report. Their full section 16(3) submissions and comments are included in Appendix B.

1 Background

1.1 Introduction

1.1.1 Melbourne's growth areas

Melbourne's population is growing rapidly and is expected to exceed 5 million before 2030 with a significant portion of this population expected to live in Melbourne's growth areas.

Under the *Planning and Environment Act 1987*, the Minister for Planning can declare any area of land within the municipal district of one or more growth area councils as a 'growth area'. The current growth area councils are Cardinia, Casey, Hume, Melton, Mitchell, Whittlesea and Wyndham.

These councils are typically located on the fringe of metropolitan Melbourne and include both established suburbs where residential subdivision and development occurred a number of years ago, and greenfield sites incorporating as yet undeveloped land.

The combined population of these areas is anticipated to be over 1.7 million by 2031, an increase of 765 000 or 77 per cent on the 2011 population.

Substantial population growth is also expected for several regional areas including Armstrong Creek in Geelong, which is expected to provide 22 000 new homes and in Ballarat West, which is expected to create 14 000 new homes.

1.1.2 The growing transport challenge

Sustained rapid population growth in Melbourne's growth areas has created a major challenge for the state to provide the transport infrastructure and services needed to sustainably support these communities.

A November 2009 Parliamentary *Inquiry into the Impact of the State Government's Decision to Change the Urban Growth Boundary* noted that the early provision of infrastructure is a critical factor in the long-term success of new communities.

The Growth Areas Authority (GAA) estimates that the total infrastructure investment required from state and local government over 30 years for greenfields is approximately $36 billion. Of this, over $18 billion is needed in state funding for transport infrastructure and services. This excludes the cost of maintenance and renewal, and of addressing longstanding infrastructure gaps in the more established precincts of growth areas including the downstream impacts in other metropolitan areas.

The cost of delaying and retrofitting the required transport infrastructure and services can increase significantly over time. This longstanding risk was acknowledged in the former Metropolitan Town Planning Commission's 1929 *Plan of General Development*.

Inadequate public transport services can also impede mobility and accessibility, and adversely impact on the environment by encouraging greater car dependence.

Increased traffic on existing roads not designed to cater for growing traffic levels can also impact road safety and transport efficiency.

The December 2012 Parliamentary *Inquiry into Liveability Options in Outer Suburban Melbourne* similarly noted that the early provision of public transport is important in providing alternatives to car transport in outer suburbs. It also found that rapid population growth in these areas has placed significant pressure on existing infrastructure and created strong demand for new infrastructure that has not yet been met. Figure 1A provides a brief profile of each growth area council.

Figure 1A
Profile of Melbourne's growth area councils

Locality and size	Growth suburbs	Population
Cardinia is located around 45 kilometres south east of Melbourne and covers 1 279 square kilometres, of which 77 square kilometres is within Melbourne's Urban Growth Boundary.	The shire contains the growth suburbs of Beaconsfield, Officer and Pakenham.	The population is estimated to increase from around 77 500 in 2011 to 142 400 by 2031, or by 84 per cent.
Casey is located around 35 kilometres south east of Melbourne and covers 397 square kilometres, of which 229 square kilometres is within Melbourne's Urban Growth Boundary.	Recently developed suburbs include Narre Warren South; Berwick South; Cranbourne; Cranbourne East, West, North and South; Botanic Ridge; Lynbrook; Lyndhurst and Clyde North.	The population is estimated to increase from around 261 200 in 2011 to 404 500 by 2031, or by 55 per cent.
Hume is located 20 kilometres north west of Melbourne and covers around 503 square kilometres, of which 223 square kilometres is within Melbourne's Urban Growth Boundary.	Developing suburbs include Craigieburn, Sunbury and Roxburgh Park.	The population is estimated to increase from around 175 600 in 2011 to 264 000 by 2031, or by 50 per cent.
Melton is located 35 kilometres west of Melbourne and covers 528 square kilometres, of which 212 square kilometres is within Melbourne's Urban Growth Boundary.	Major growth suburbs include Caroline Springs, Diggers Rest, Toolern Vale, Rockbank, Hillside and Burnside.	The population is estimated to increase from around 113 000 in 2011 to 225 800 by 2031, or by 100 per cent.
Mitchell is located around 40 kilometres north of Melbourne and covers 2 864 square kilometres, of which 81 square kilometres is within Melbourne's Urban Growth Boundary.	It is the most recent addition to Melbourne's growth areas with the majority of the shire still rural. Contains the new growth areas of Wallan and Beveridge.	The population is estimated to increase from around 36 000 in 2011 to 95 300 by 2031, or by 165 per cent.

Figure 1A
Profile of Melbourne's growth area councils – *continued*

Locality and size	Growth suburbs	Population
Whittlesea is located 20 kilometres north of Melbourne and covers 490 square kilometres, of which 191 square kilometres is within Melbourne's Urban Growth Boundary.	It includes the developing suburbs of Epping North, South Morang, Mernda, and Doreen.	The population is estimated to increase from around 163 500 in 2011 to 287 600 by 2031, or by 76 per cent.
Wyndham is located around 30 kilometres south west of Melbourne and covers 542 square kilometres, of which 228 square kilometres is within Melbourne's Urban Growth Boundary.	Major growth suburbs include Werribee, Point Cook, Tarneit, Truganina and Wyndham Vale.	The population is estimated to increase from around 168 600 in 2011 to 340 700 by 2031, or by 102 per cent.

Source: Victorian Auditor-General's Office.

Growth area infrastructure and funding sources

The type of infrastructure required in growth areas is aligned to the staged development of an area. It comprises:

- **facilitative infrastructure**—required to enable development to proceed in greenfields, including water supply, sewer mains and the basic road network that provides access to arterial roads
- **development-linked infrastructure**—closely related to the rate of development to serve the basic needs of the new community, including local community infrastructure, schools, and land for local open space and sporting fields
- **enhanced population-linked infrastructure**—required as the population builds up and demand grows for a range of enhanced urban and social services, including arterial road upgrades, major public transport infrastructure and some types of major community health and education facilities.

Elements of facilitative and development-linked infrastructure are typically funded by developers through development contributions, by councils, or by utility service companies through their customer base.

Development contributions are payments or works in-kind by developers towards the provision of mainly local infrastructure, which typically excludes state-funded arterial roads and public transport services. Under the *Planning and Environment Act 1987*, councils can collect contributions using development contribution plans, voluntary agreements and the planning and building permit processes.

Enhanced infrastructure is funded primarily by the state but the Commonwealth may also contribute. The state's Growth Corridor Plans (GCP), released in June 2012, highlight that there is currently less certainty on the timing and provision of this funding.

1.2 Managing growth area transport needs

1.2.1 Growth area planning within the broader transport system

Growth area planning is required to take into account the transport system objectives and decision-making principles under the *Transport Integration Act 2010*. The Act came into effect in mid-2010 and requires that all decisions affecting the transport system be made within the same integrated decision-making framework and support the same transport system objectives.

Figure 1B summarises the government's vision, objectives and decision-making principles for the transport system as set out in the Act.

Figure 1B
Transport vision, objectives and decision-making principles

Vision—recognises that Victorians want an integrated and sustainable transport system that contributes to an inclusive, prosperous and environmentally responsible state.

Objectives

The transport system should:

- **promote social and economic inclusion**—minimise the barriers to people accessing the system and provide tailored infrastructure, services and support to those who find it difficult to use public transport
- **facilitate economic prosperity**—enable efficient and effective access for persons and goods, reduce the costs, and improve the reliability of transport
- **actively contribute to environmental sustainability**—protect and offset harm to the natural, local and global environment, promote less harmful forms of transport and improve the environmental performance and energy efficiency of all transport modes
- **provide for the effective integration of transport and land use**—better connect the transport system and land use to improve accessibility and make transport less costly and quicker
- **facilitate efficient, coordinated and reliable movement**—balance efficiency across the network to optimise capacity, maximise use of resources, facilitate integrated and seamless travel, and provide predictable and reliable services
- **be safe and support health and wellbeing**—work to create a system where people are safe from the impacts of system failure or improper behaviour, and which promotes forms of transport that have the least negative impact on health and wellbeing.

Decision-making principles

Agencies should have regard to the following principles:

- **integrated decision-making**—achieving objectives through coordination across government agencies and with the private sector
- **triple bottom line assessment**—taking into account all the economic, social and environmental impacts of decisions and assessing their value
- **equity**—achieving equity between persons irrespective of personal attributes or location
- **transport system user perspective**—understanding what transport users need and improving the system in ways that address these needs
- **precautionary principle**—acting to address serious environmental threats
- **stakeholder engagement and community participation**—taking into account the interests of transport system users and members of local communities through appropriate engagement
- **transparency**—providing reliable and relevant information in forms that help the community understand transport issues and the basis for government decisions.

Source: Victorian Auditor-General's Office from the *Transport Integration Act 2010*.

The objectives of social and economic inclusion, environmental sustainability, and integration of transport and land use are particularly relevant to planning for the development and delivery of transport infrastructure and services in growth areas.

1.2.2 Recent funding and planning initiatives for growth areas

Growth Areas Infrastructure Contribution

The Growth Areas Infrastructure Contribution (GAIC) was introduced in 2010 as an additional charge for contributing to state infrastructure. It is expected to collect up to $3.6 billion over 30 years and fund up to 15 per cent of the state infrastructure works in new growth areas. It applies only to land brought into the Urban Growth Boundary in 2005–06 or after 2010, and which is within a growth area council and zoned for urban development.

The GAIC is payable by the landowner and is administered by the Department of Transport, Planning and Local Infrastructure (DTPLI) and the GAA. Half of the revenue collected through the GAIC is allocated towards public transport infrastructure. GAA is currently working on possible arrangements for prioritising the future allocation of GAIC revenue in consultation with DTPLI for consideration by the state.

Public transport guidelines

In 2008, the former Department of Transport released the *Public Transport Guidelines for Land Use and Development* to support the integration of land use and public transport planning across Victoria. While not prescriptive, the guidelines assist in determining the transport infrastructure and service needs of growth areas.

Growth Corridor Plans

The GCPs developed in 2012 are high-level integrated land use and transport plans designed to guide development of Melbourne's growth corridors over the coming decades. They cover existing greenfield sites within established growth areas including land brought into Melbourne's Urban Growth Boundary in 2010.

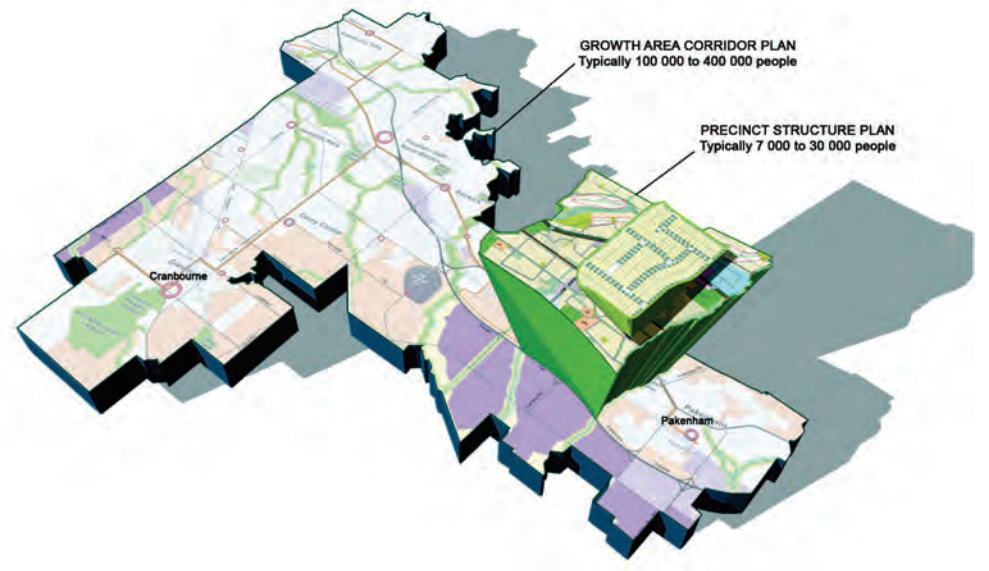
GCPs identify that Melbourne's growth corridors are expected to support up to 422 000 new dwellings, an additional 1.2 million people and enough employment-designated land to support up to 432 000 local jobs.

GCPs also indicate the presently unfunded transport infrastructure required to support urban development in growth areas, such as potential railway lines and stations, freeways, road interchanges and arterial roads.

Precinct Structure Plans

GCPs guide the preparation of Precinct Structure Plans (PSP) which provide more detail of the proposed development of smaller land areas—known as precincts—in a growth area. Figure 1C illustrates how GCPs and PSPs fit into the overall planning process for developing growth areas.

Figure 1C
Growth area planning



Source: Growth Corridor Plans: Managing Melbourne's Growth, June 2012.

PSPs typically identify:

- the proposed location of local town centres and local community facilities, such as schools
- the detailed alignment of arterial roads and connector roads that will connect into the arterial network
- local bus capable routes and more detailed planning for those elements of the public transport network, such as the location of bus rapid transit routes and rail stations, that are within the PSP area
- local open space networks, recreation facilities and bicycle and pedestrian trails
- how biodiversity and cultural/heritage outcomes are expected to be managed within the precinct
- estimated housing yields and proposed location of areas of higher density housing
- areas for local employment including areas designated to cater for the needs of local businesses
- any major sites or easements required for public utilities and other infrastructure.

A precinct infrastructure plan (PIP) that identifies the local and state infrastructure required to support the proposed development, is also produced as part of the PSP. While PIPs provide certainty over local facilitative and development-linked infrastructure via development contribution plans, they do not identify the timing and funding for state infrastructure as this is dependent on State Budget processes.

Metropolitan planning strategy

DTPLI is leading the development of a new metropolitan planning strategy (MPS) in consultation with a Ministerial Advisory Committee and stakeholders, which is due for completion in 2013.

The purpose of the MPS is to guide Melbourne's growth over the next 30 to 40 years, and related decisions about urban development, infrastructure and investment. The state's GCPs will provide input and context to the MPS on the transport infrastructure and service needs of growth areas.

Other initiatives for managing population growth

Since 2002 the state has implemented nine strategic land use and transport planning initiatives of relevance to Melbourne's population growth areas. Appendix A provides a brief chronology of recent initiatives.

1.3 Agency roles and responsibilities

Responsibility for planning and delivering state transport infrastructure and services for the growth areas rests with several state agencies. These include the GAA, Public Transport Victoria (PTV), VicRoads, growth area councils, and prior to the recent machinery of government changes announced in April 2013, the former Department of Transport and the former Department of Planning and Community Development.

From 1 July 2013, the Department of Planning and Community Development and the Department of Transport were merged to create the new Department of Transport, Planning and Local Infrastructure (DTPLI).

The government has also announced it intends to establish a new Metropolitan Planning Authority to advise on the future delivery of infrastructure and services to metropolitan Melbourne.

Department of Transport, Planning and Local Infrastructure

Under the *Transport Integration Act 2010,* DTPLI is responsible for leading strategic policy, planning and improvements relating to the transport system. It is also responsible for planning policy, and is now the lead agency for developing the MPS.

The Act requires DTPLI to collaborate with other agencies to ensure that policies and plans for an integrated and sustainable transport system are developed, aligned and implemented across all transport modes including walking and cycling.

It therefore has a key leadership role in planning and delivering state transport infrastructure to growth areas. This includes preparing annual Budget bids for proposed transport infrastructure and services.

Growth Areas Authority

The GAA was established in 2006 under the *Planning and Environment Act 1987.* Its key functions include making recommendations and reporting to the Minister for Planning on the planning, use, development and protection of land in growth areas. GAA's objectives include to:

- ensure that development in growth areas occurs in a coordinated and timely manner, such as the provision of infrastructure and services, and land for commercial and industrial uses
- promote the sustainable development of land, housing diversity and affordability, and job opportunities
- integrate land use and transport to enable the coordinated provision of a sustainable transport system for the benefit of the community.

GAA works in partnership with local councils, developers, and state planning agencies, and acts as an interface agency to plan development in greenfields. The key outputs of this work to date have been GCPs and PSPs.

Public Transport Victoria

PTV is responsible for managing the state's train, tram and bus services. PTV has key goals under the *Transport Integration Act 2010* to seek to increase the share of public transport trips as a proportion of all trips in Victoria, and to actively promote public transport as an alternative to travelling by car. It therefore has a key role in planning the delivery of public transport infrastructure and services to growth areas.

VicRoads

VicRoads is responsible for developing, operating and maintaining the state's arterial road system. This includes working in collaboration with other transport bodies and public entities to ensure that the road system operates as part of an integrated transport system which seeks to meet the needs of all transport system users.

One of its strategic priorities is to plan effective transport solutions for future residential and commercial developments in metropolitan Melbourne and regional Victoria. This involves working with land use planners to ensure that new residential and industrial areas are developed in a way that provides good transport connections.

In growth areas, VicRoads' is responsible for maintaining, managing and developing the declared arterial road network in line with the requirements of the *Road Management Act 2004*.

Local government

Local councils are responsible for land use planning and provision of local transport infrastructure such as local roads, footpaths and cycling paths in growth areas. They usually work with developers to provide this infrastructure in the early stages of the development of a growth area, typically with the construction of the first carriageways connecting the new estate with the established areas of the council.

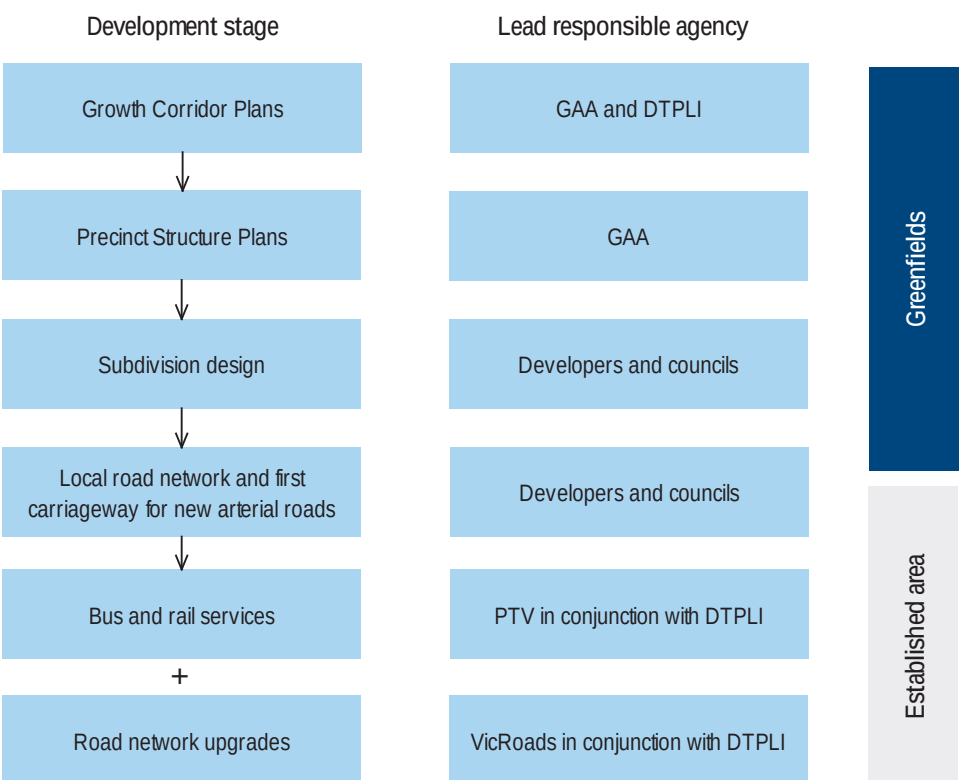
They are also responsible for maintaining and upgrading these roads until such time as VicRoads declares them to be arterial roads and takes over responsibility for their further development and maintenance.

Developers

Developers typically fund initial development of the local road network and provide the land and first carriageway for new arterial roads.

Figure 1D shows agency and developer responsibilities for planning and delivering state transport infrastructure and services across greenfields and established areas of growth councils.

Figure 1D
Responsibility for planning and delivering state transport infrastructure and services



Source: Victorian Auditor-General's Office.

1.4 Audit objective and scope

The objective of the audit was to assess the effectiveness of agencies in planning and delivering transport infrastructure and services for population growth areas by assessing whether:

- planning for growth areas is effective in identifying current and future transport needs and how best to respond
- implementation and funding strategies support the timely delivery of required transport infrastructure and services.

The audit included the Department of Transport, Planning and Local Infrastructure (formerly the Department of Transport, and the Department of Planning and Community Development), the Growth Areas Authority, VicRoads and Public Transport Victoria.

1.5 Audit method and cost

The audit examined the role of the above agencies in planning, coordinating and delivering transport infrastructure and services for population growth areas. It excluded local councils as they are not directly responsible for delivering state-funded road and public transport infrastructure and services.

The audit was conducted in accordance with the Australian Auditing and Assurance Standards. Pursuant to section 20(3) of the *Audit Act 1994*, unless otherwise indicated any persons named in this report are not the subject of adverse comment or opinion.

The cost of the audit was $490 000. This includes both direct and indirect internal labour, a share of corporate overheads, and the costs of printing and distributing this report.

1.6 Structure of the report

The report has three further parts:

- Part 2 examines current transport infrastructure and services in Melbourne's growth areas
- Part 3 examines planning for transport infrastructure and services in growth areas
- Part 4 examines arrangements for prioritising, funding and monitoring the delivery of transport infrastructure.

2 Current transport infrastructure and services in growth areas

At a glance

Background

Achieving good urban development outcomes for growth areas requires the timely delivery of transport infrastructure and services.

Conclusion

Past deficiencies in planning coupled with the longstanding challenge of securing state funding have resulted in a significant and growing backlog of public transport and road infrastructure works in growth areas. This is impeding economic and social inclusion, and contributing to comparatively higher levels of transport disadvantage for growth area residents relative to other metropolitan Melbourne residents.

Findings

- In recent years there have been notable improvements to public transport and the road network in growth areas with around $2.5 billion invested in related infrastructure projects. However, compared to the rest of metropolitan Melbourne most growth areas remain inadequately serviced. Specifically:
  - growth areas have substantially fewer, less frequent and less direct public transport services compared to the metropolitan Melbourne average
  - almost one-quarter of growth area households fail to meet the state's target of 95 per cent of households being within 400 metres of public transport
  - there are a number of arterial roads currently at or beyond capacity creating significant issues of congestion, delay and safety.
- The time taken to fund rail services to growth areas from first identifying the need is usually excessive—in most cases it exceeds 30 years, more than a generation.
- Significant investment of more than $10 billion is required to address the current infrastructure and service backlog. This comprises at least $6.2 billion in rail projects, most of which are longstanding, and between $4.1 and $5.1 billion in road works. In addition, recurrent funding of $197 million per annum is needed to improve bus services across metropolitan Melbourne.

2.1 Introduction

Timely delivery of the transport infrastructure and services needed to support rapidly growing new communities is vital for achieving good urban development outcomes.

The availability of suitable public transport and road infrastructure means that growth area residents are more likely to have reasonable access to jobs and services, family and community support networks and recreational opportunities.

This part of the report examines the adequacy of transport infrastructure and services in Melbourne's growth areas, and the related community impacts.

2.2 Conclusion

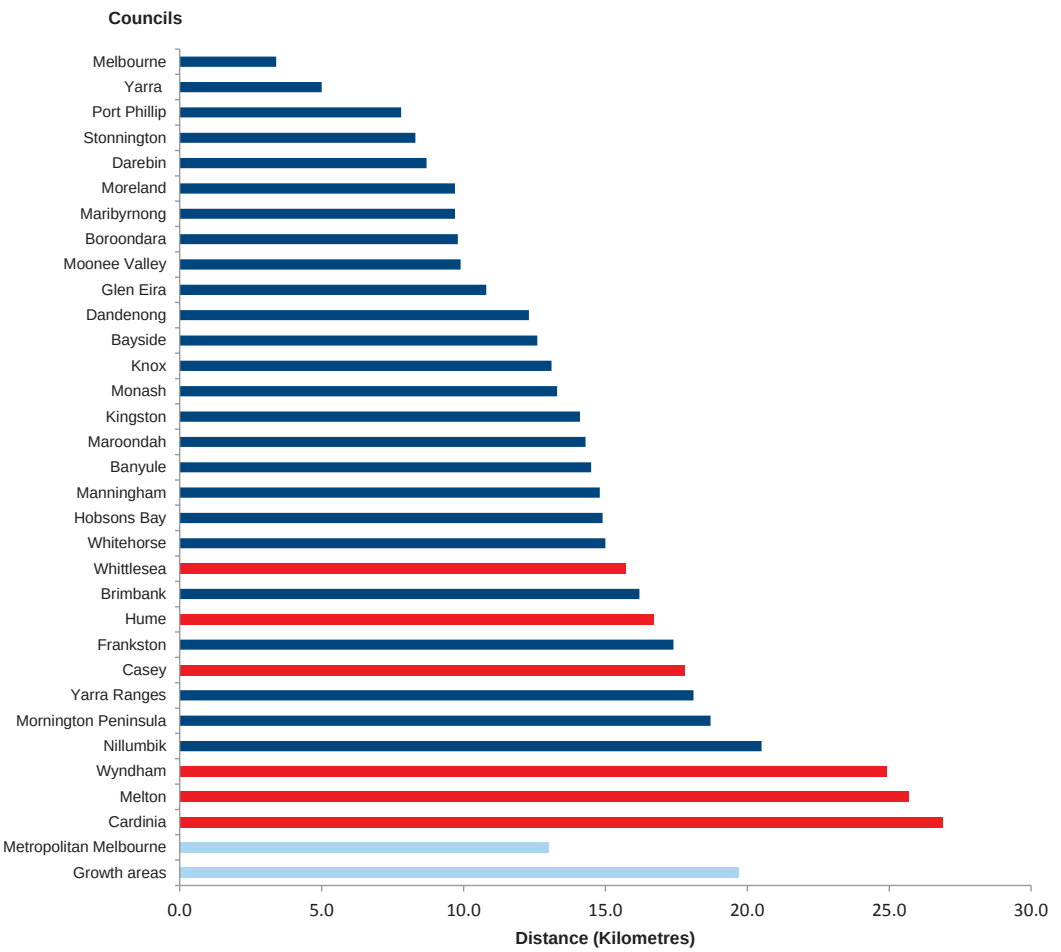
Historically, the delivery of transport infrastructure and services to Melbourne's growth areas has not kept pace with the rapid rate of population growth and land-use development. This has resulted in inadequate services, and a significant and growing backlog of much needed state public transport and road infrastructure works.

These issues have resulted from past deficiencies in planning and the longstanding challenge of securing state funding. This is impeding economic and social inclusion, and contributing to comparatively higher levels of transport disadvantage relative to metropolitan Melbourne.

2.3 The role of public transport access in disadvantage

Inadequate access to public transport in growth areas is a key barrier to economic and social inclusion and has led to comparatively higher rates of car ownership and dependency. Approximately 85 to 89 per cent of growth area residents used their own cars to travel to work in 2011 compared to Melbourne's metropolitan average of 65 per cent. Additionally, these residents typically travel longer distances to access jobs compared to those in the rest of metropolitan Melbourne as shown in Figure 2A.

Figure 2A
Median distance travelled for residents journey to work across Melbourne, 2009–10

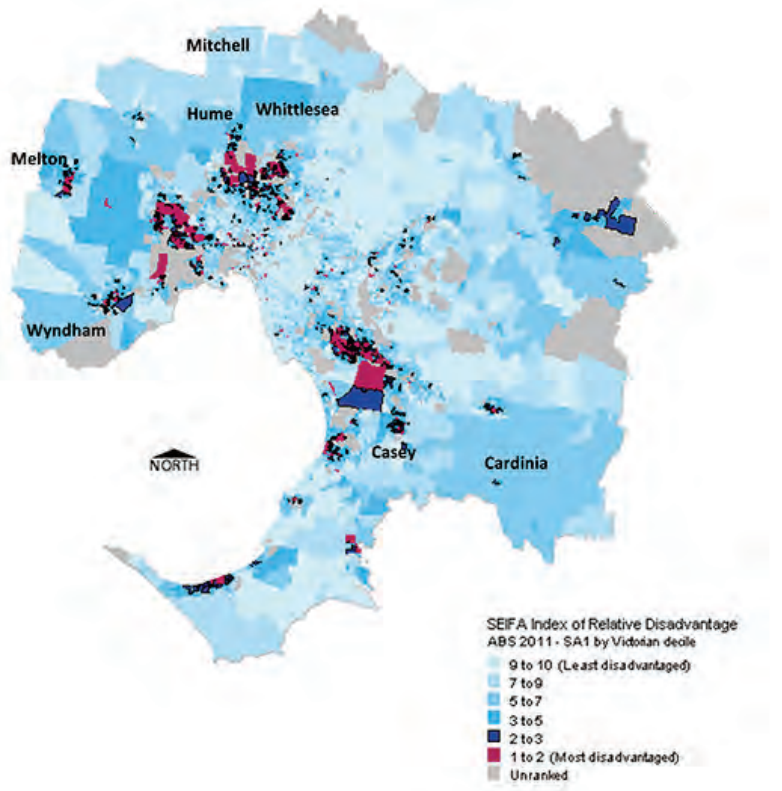


Note: Metropolitan growth area councils shown in red.
Data not available for Mitchell.
Source: The Department of Transport 2009–10 Victorian Integrated Survey of Travel and Activity.

There are several parts of Melbourne that are socio-economically disadvantaged relative to other areas due partly to poor access to public transport. These areas typically have lower scores on the Australian Bureau of Statistics *Socio-Economic Indexes for Areas (SEIFA)*. The variables used to calculate this index include income, educational attainment, unemployment and dwellings without motor vehicles.

Figure 2B shows areas of highest disadvantage shaded in red. These areas are generally concentrated around Melbourne's growth areas—in particular in the more established parts of Whittlesea, Hume, Melton and areas of Casey—where there are fewer public transport options compared to the rest of metropolitan Melbourne.

Figure 2B
SEIFA Index of Relative Socio-Economic Disadvantage, 2011



Note: Data for Mitchell relates only to areas within the Urban Growth Boundary.
Source: Department of Transport, Planning and Local Infrastructure based on 2011 Australian Bureau of Statistics Census data.

2.4 Coverage, frequency and directness of public transport services in growth areas

There have been recent improvements to the public transport network in some growth areas including the construction of new train stations and upgrade of metropolitan bus routes. Key enhancements in growth areas during the past decade which total in excess of $1.1 billion include:

- extensions to the metropolitan rail network from St Albans to Sydenham, Broadmeadows to Craigieburn and Epping to South Morang
- extension of the electrified network to Sunbury
- new stations at Lynbrook, Cardinia Road and Williams Landing
- increased coverage, span and frequency for approximately 50 bus routes.

The Regional Rail Link (RRL) which is currently under construction is also expected to benefit key growth areas by providing extra capacity and services, including new stations in the suburbs of Wyndham Vale and Tarneit.

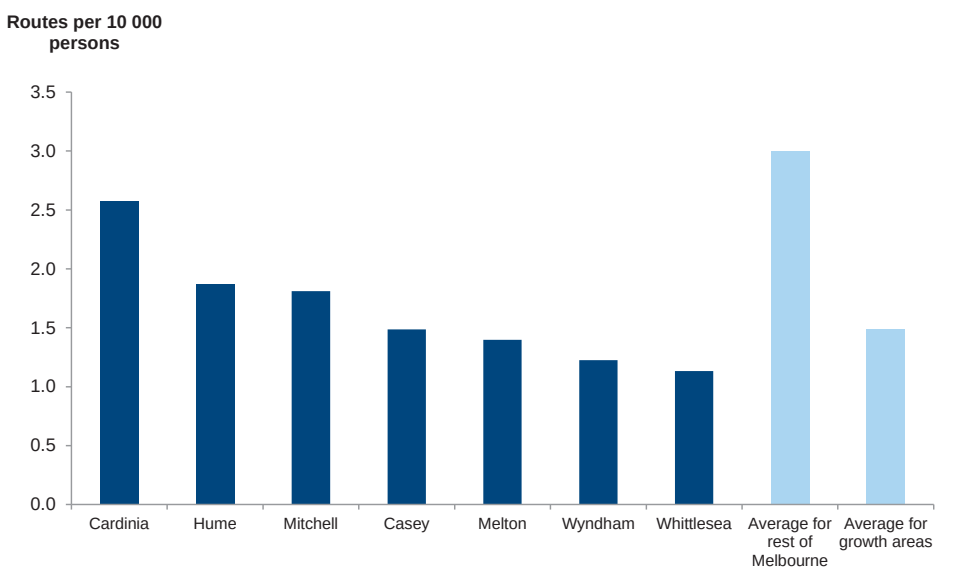
The Melbourne Metro rail tunnel project, which is planned to be completed within the next 10 years, is also expected to provide new train services to the west, north and southeast growth corridors.

However, despite these important improvements many growth areas remain inadequately serviced by public transport, particularly in regard to coverage, frequency and directness of services.

2.4.1 Service coverage

Figure 2C shows that most growth areas have fewer transport options than other areas of metropolitan Melbourne in terms of access to tram lines, train lines and bus routes. On average, residents in these areas have access to 1.5 public transport routes per 10 000 persons, which is half that currently available to metropolitan residents.

Figure 2C
Access to public transport

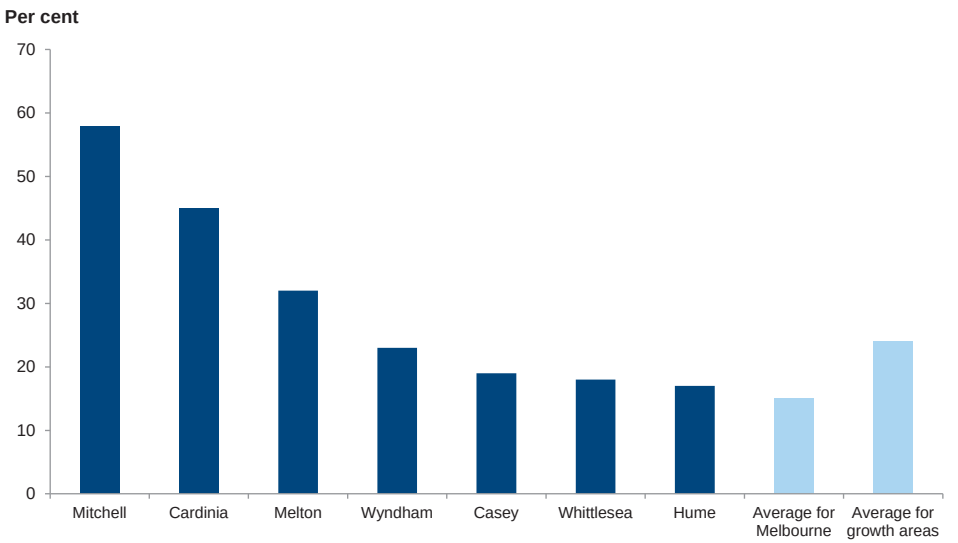


Note: Data for Mitchell and Cardinia is based on areas inside the Urban Growth Boundary. Average for metropolitan Melbourne excludes growth areas.

Source: Victorian Auditor-General's Office based on Public Transport Victoria local area travel information.

Figure 2D shows that a greater proportion of growth area households than those in metropolitan Melbourne are not within the state's target of 400 metres safe walking distance of public transport.

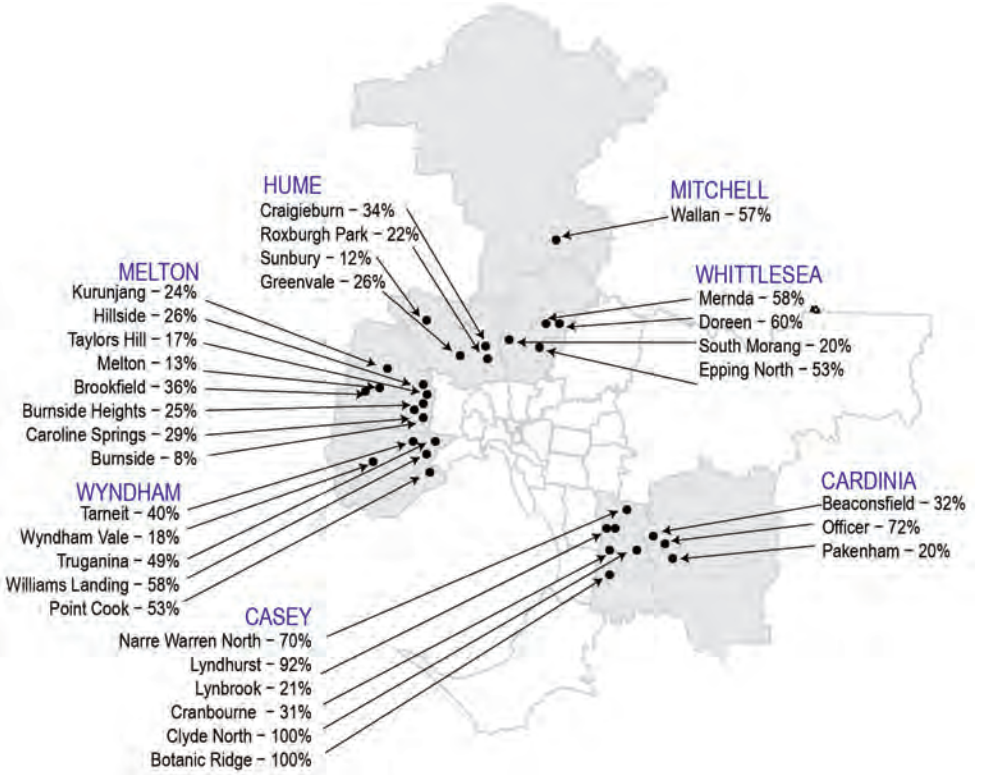
Figure 2D
Percentage of households not within 400 metres of a public transport stop, by growth area council



Note: Average for metropolitan Melbourne includes growth areas.
Source: Victorian Auditor-General's Office based on data provided by Public Transport Victoria.

It is important to note that as the percentages shown in Figure 2D are averaged across each municipality they can mask substantial localised gaps. For example, while almost one quarter of growth area residents overall are not within 400 metres of public transport, this figure can be much higher in some suburbs as indicated in Figure 2E.

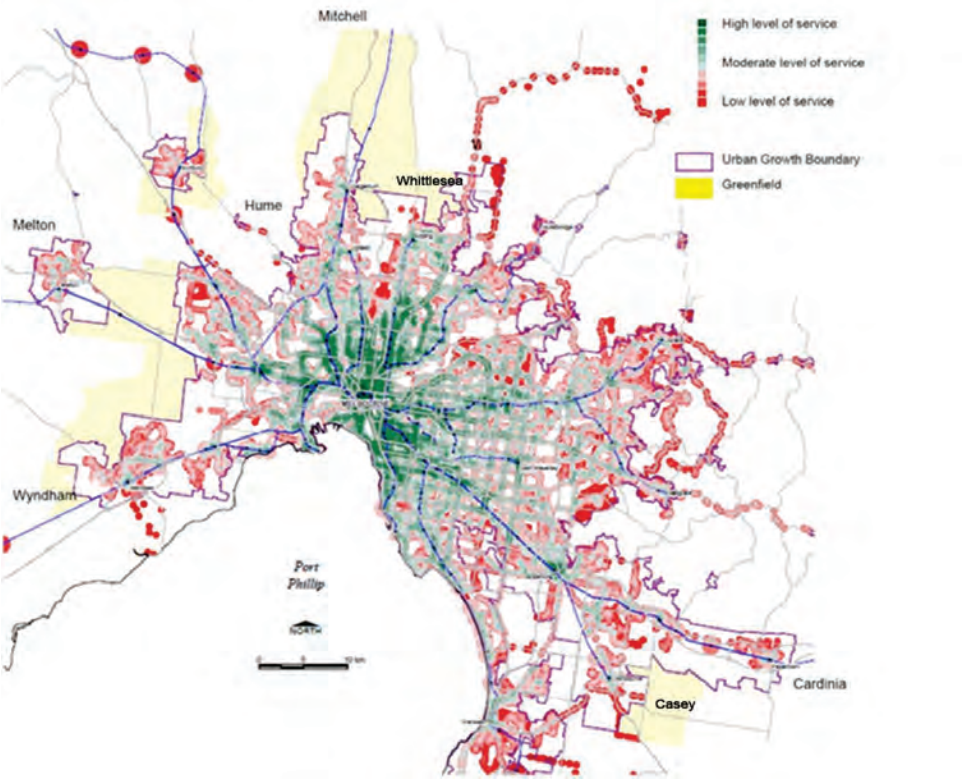
Figure 2E
Percentage of households not within 400 metres of a public transport stop, by growth area suburb



Note: Figure 2E excludes suburbs with less than 1 000 households.
Source: Victorian Auditor-General's Office based on data provided by growth area councils and Public Transport Victoria.

The current imbalance between inner and outer suburbs of Melbourne is further highlighted in Figure 2F. The red shading highlights some more established areas within growth area councils that currently have little access to public transport services. Figure 2F also indicates new growth areas, shown in yellow shading that will demand additional transport services over the next 20 years.

Figure 2F
Public transport service levels, Melbourne



Note: Land brought into the Urban Growth Boundary in 2010 is not included.
Greenfield areas shaded in yellow do not presently have public transport services as they do not have any residents.
Source: Metropolitan Bus Improvement Program—Stage 1: Business Case, Public Transport Victoria, January 2012.

Providing timely and adequate public transport services to growth areas is a significant issue. Both the Department of Transport, Planning and Local Infrastructure and Public Transport Victoria (PTV) advised that low population density and the continuing pattern of development without sufficient clustering of activities creates a major challenge for providing cost-effective public transport to growth areas. The Growth Areas Authority advised it is addressing this issue in its planning for new growth areas by focusing on increasing housing density and the clustering of destinations along potential bus routes.

It also pointed to the existing radial layout of Melbourne's transport network as a further constraint that provides a natural advantage to areas closer to the central city over outlying areas in accessing transport services.

PTV also identified as an additional challenge the need to prioritise investment in expanding the capacity of the existing public transport network before new branches into growth areas can be added.

The transport system objectives of promoting social and economic inclusion and the legislative requirement to have regard to the principal of equity are strong imperatives for state agencies to address these challenges.

2.4.2 Frequency and directness of buses services

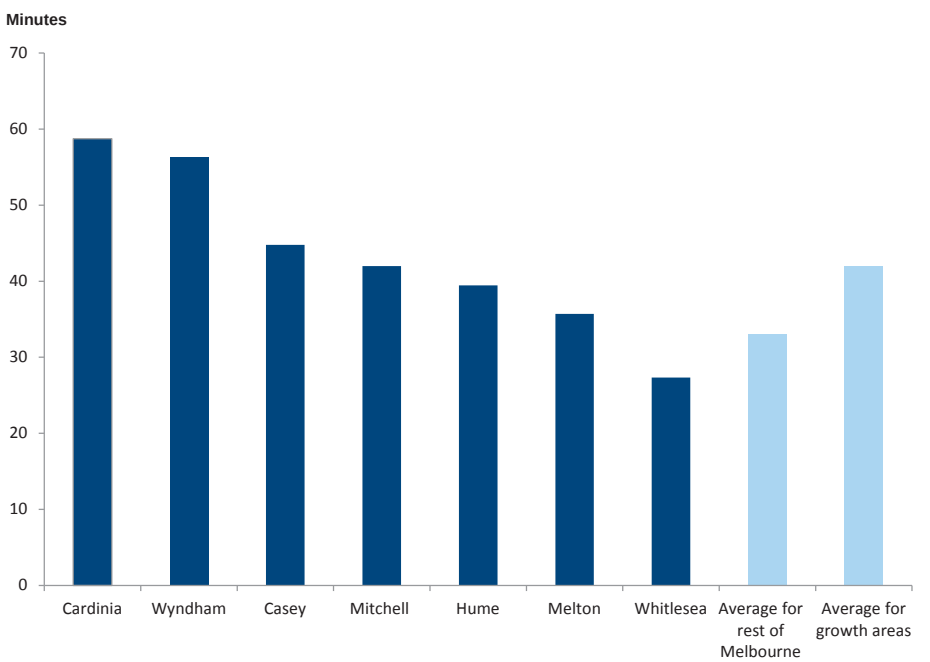
Bus services are the primary public transport mode in growth areas, providing important standalone services and delivering connections to the metropolitan rail and tram network.

Frequent and direct services are vital for providing viable alternatives to car travel and therefore for reducing car dependency. They also serve to minimise the time for connecting with rail and tram networks, and to promote a 'turn up and go' mentality where passengers need not look at timetables before they travel.

Bus service frequency

Figure 2G shows that residents in growth areas generally have less frequent bus services compared to the metropolitan Melbourne average.

Figure 2G
Average service frequency of peak bus services



Note: Frequency for services may vary during a given time period. Frequencies in Figure 2G are averaged across all peak services in growth areas.
Mitchell and Cardinia data relates to bus services inside the Urban Growth Boundary.
Average for metropolitan Melbourne also excludes growth areas.
Source: Victorian Auditor-General's Office based on data provided by Public Transport Victoria.

Directness of bus services

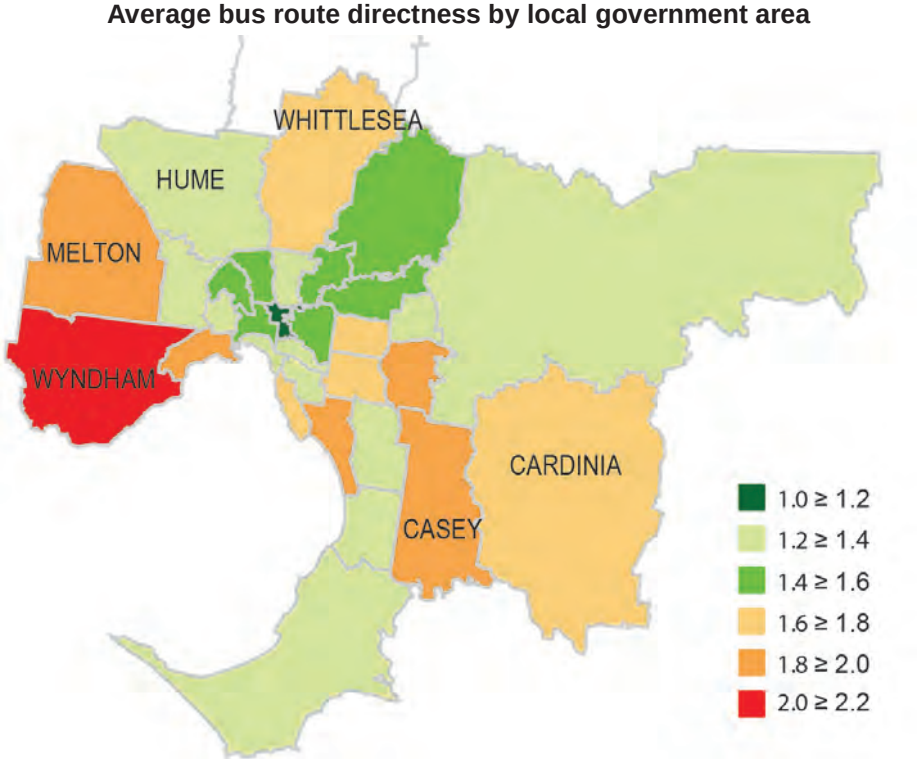
An indicator used to judge the directness of bus routes is the directness ratio, which compares the actual route length of a bus service with the most direct road routing distance between its origin and destination. For example, a directness ratio of 2 for a route indicates that the actual route length is twice the direct distance by road between origin and destination.

It is important to recognise that there needs to be a trade-off between directness and serving available areas. However, excessively indirect routes result in longer journey times and can inhibit patronage growth.

While directness ratios of between 1.1 and 1.3 are desirable, higher ratios may be acceptable for shuttle and community buses operated by councils and non-profit community providers.

Figure 2H shows that Melbourne's growth areas generally have less direct bus routes compared to the rest of metropolitan Melbourne which contributes to comparatively longer journey times.

Figure 2H
Average bus route directness by local government area



Note: Excludes Mitchell as data is unavailable.
Source: Public Transport Users Association, *Driven around the bend, Melbourne's meandering bus routes*, May 2012.

Continuing deficiencies in public transport service provision to growth areas reflects historical shortcomings with statewide planning, and longstanding challenges in securing required funding.

Figure 2I presents a case study of the Aurora Estate in Epping North which highlights these deficiencies.

Figure 2I
Case study of the Aurora Estate, Epping North

Epping North is located 20km north of Melbourne's CBD within the City of Whittlesea and covers approximately 668 hectare in area. It is one of Victoria's largest integrated urban developments, and will be home to around 55 000 people within 20 years. Approximately 20 000 of these residents are located in the Aurora Estate, which is currently around one-third complete, but is expected to have over 8 000 homes by 2020.

The precinct was identified in *Melbourne 2030* as a growth area. An extension of the rail line to Epping North to serve Aurora was also proposed in 2002. The *Aurora Development Plan Part 1* which was completed in September 2003, aimed to facilitate:

- the early delivery of transport services and infrastructure
- the extension of the public transport corridor from Lalor Train Station to provide a public transport linkage between Aurora and the Melbourne CBD
- 90 per cent of dwellings being within 400 metres of a bus route.

This development was marketed by the state as an award winning master-planned community, designed for a better lifestyle in a well-connected location and environment. The sales marketing brochures stated that 'most homes will be within 200 metres of a park, 400 metres of a bus stop and 800 metres of a school and local shops'.

Despite this, public transport services remain inadequate, with only around 40 per cent of homes within 400 metres of bus stops and only one route near the estate.

Thirteen bus shelters were constructed throughout the estate in accordance with developer obligations to assure that most residents are within 400 metres of a bus stop. However, the bus shelters are not currently used because the state has yet to fund a related bus service. PTV advised that the shelters were installed as part of the estate's development without reference to PTV.

Delivery of the proposed Epping North railway line remains uncertain as PTV's December 2012 *Network Development Plan—Metropolitan Rail* lists it as an unfunded long-term project to be considered after 2032 following the development of the Melbourne Metro and other network upgrades.

One of 13 unused bus shelters in the Aurora Estate.

Source: Victorian Auditor-General's Office.

2.4.3 Review of bus services

Between 2007 and 2010, the former Department of Transport undertook a series of bus service reviews to determine service gaps and assist its planning of bus services for metropolitan Melbourne—including growth areas. These reviews focused on service standards, route coverage, service connectivity, and the effectiveness of existing transport linkages.

Figure 2J sets out key deficiencies identified in the reviews and the related consequences.

Figure 2J
Metropolitan bus service reviews, 2007 and 2010

Service deficiencies	Consequence
Hours of service operation are insufficient	Users cannot utilise public transport for activities that start or finish outside operating hours e.g. late night shopping if services finish at 5.30pm.
The days of operation are not sufficient	Users cannot access local buses for trips on some days e.g. special events on weekends.
Geographical coverage of the bus network is not comprehensive	Users need to walk a long way to the nearest bus service, which is not possible for some people.
Service frequency is poor	Users need to wait a long time between services, which constrains their planning for activities during the day.
Service reliability is poor	Issues such as road congestion cause buses to operate unreliably, resulting in missed connections and users arriving late to their destination.
Connectivity and timetable coordination between modes is not well managed	Users do not feel confident in making transfers, resulting in an underutilisation of the full public transport network.

Source: Victorian Auditor-General's Office based on metropolitan Melbourne bus service reviews.

Following this assessment, the department undertook further planning to expand bus services into newly developing areas and revised its network plans in an attempt to better meet community needs.

It also prepared costed proposals. However, to date only relatively minor service expansions have been funded for additional services. Consequently, the network service improvements envisaged in growth areas have not been realised, leaving ongoing significant service gaps.

PTV advised that the gaps across metropolitan Melbourne identified in the bus service reviews would require recurrent funding in the order of $197 million per annum to address.

It is important to note though that a number of new suburbs and bus services have been established since these reviews were undertaken. However, PTV has yet to update its assessment of the metropolitan-wide backlog, including within growth areas.

2.5 Timeliness of transport infrastructure delivery

One of the key challenges to creating new liveable communities is minimising the delay that occurs in the provision of needed transport infrastructure.

Ongoing delays in the provision of this infrastructure mean that significant investment is now required to complete longstanding proposed rail and road works.

2.5.1 Rail infrastructure

Figure 2K shows the elapsed time from when a required rail project was first identified to its actual or planned completion. It is important to note that growth area rail projects normally require longer delivery time frames to accommodate earlier work to protect associated corridors and options and to overcome network constraints limiting expansion of the network.

Figure 2K nevertheless highlights that the time taken to fund planned rail services to growth areas is usually protracted and that, according to transport agencies, more than $6.2 billion in longstanding rail projects intended to service growth areas are yet to be funded. Almost 62 per cent of this required funding is for two projects that were first identified in the 1929 *Plan of General Development* or the 1969 *Melbourne Transportation Study* for the then growth areas of Doncaster and Rowville.

Figure 2K
Examples of funded and yet-to-be-funded rail projects

Initial identification of project	Project	Current status	Years between identification and completion
Funded			
1969 *Melbourne Transportation Study*	Extension of electrified suburban rail network:		
	• Newport to Werribee	Completed in September 1984[(a)]	15
	• Broadmeadows to Craigieburn	Completed in September 2007 at a cost of $115 million	38
	• St. Albans to Sunbury	Completed in November 2012 at a cost of $194.5 million	43
2004 Metropolitan Transport Plan	• Epping to South Morang	Completed in April 2012 at a cost of $559.1 million	8
2008 *Victorian Transport Plan*	New rail stations in growth areas:		
	• Cardinia Road	Completed in April 2012	4
	• Lynbrook	Completed in April 2012	4
	• Williams Landing	Completed in April 2013 Total cost of $188.5 million for all three stations	5
	• Regional Rail Link including new stations in Wyndham Vale and Tarneit	Work commenced in 2011 and is expected to be completed in 2016 Estimated cost of $5.3 billion	8*

Figure 2K
Examples of funded and yet-to-be-funded rail projects – *continued*

Initial identification of project	Project	Current status	Years between identification and completion
Unfunded			
1929 *Plan of General Development*	New rail line for East Doncaster	PTV's December 2012 rail plan indicates the new line will be delivered by 2027 Estimated cost of $3–$5 billion	98
1969 *Melbourne Transportation Study*	New rail line for Huntingdale to Ferntree Gully (through Rowville)	PTV's December 2012 rail plan indicates a line to Rowville will be completed by 2027 Estimated cost of $800 million	58*
	New rail line for Frankston to Dandenong	No current commitment	–
2002 *Melbourne 2030*	Electrification of Melton rail line	PTV's December 2012 rail plan indicates the rail line will be electrified by 2027 Estimated cost $1.3 billion	25*
	New rail line to Cranbourne East	PTV's December 2012 rail plan indicates extension is to be considered after 2032 Estimated cost of $200 million	> 30*
	New rail line for Epping North	PTV's December 2012 rail plan indicates extension is to be considered after 2032 Estimated cost of $200–$400 million	> 30*
2008 *Victorian Transport Plan*	New rail station at Caroline Springs	Preliminary work including design, purchase of land and construction of an access road has been completed State currently reviewing construction time lines Estimated cost of $38 million	Not yet determined
	Extension of rail line to Mernda	PTV's December 2012 rail plan indicates a line to Mernda will be completed by 2032 Estimated cost of $650 million	24*

(a) Due to the length of time that has elapsed, the Department of Transport, Planning and Local Infrastructure is unable to provide an accurate cost.

Note: * Estimated elapsed time based on current projected completion date.

Source: Victorian Auditor-General's Office.

The status and future delivery of many of the longer-term rail projects identified in PTV's December 2012 rail plan remains uncertain. The plan stipulates that PTV's ability to deliver the planned projects will depend on funding from the Commonwealth and state governments.

As noted earlier, it is important to recognise that rail projects typically have long-term delivery time frames and that transport plans can alter over time due to changing patterns of urban development, revised patronage demand, or reassessment of priorities. However, Figure 2K highlights that the elapsed time from initial identification of growth area rail projects to the commitment of funds often spans more than a generation.

The ongoing delay in completing longstanding growth area rail projects is contributing to higher costs and transport disadvantage in these areas. This growing problem reinforces the importance of supporting plans with a funding and delivery strategy.

2.5.2 Road infrastructure in growth areas

Since 2007 there has been significant investment in the growth area road network of more than $1.06 billion. Examples include the Pakenham bypass in 2007 for $242 million, the Deer Park bypass in 2009 at $331 million and $120 million from the Safer Roads Infrastructure Program for various road safety projects.

Prior to this, projects such as the Craigieburn Bypass, completed in 2005 at a cost of $306 million also supported growth area development.

Additionally, the M1 Monash-CityLink-Westgate upgrade, completed in 2012 at a cost of $1.4 billion, and the $2.5 billion M80 Ring Road upgrade, jointly funded by the state and Commonwealth Governments and expected to be completed by mid-2018, also provide benefits for growth area residents.

A further $572 million was also allocated in the 2012–13 State Budget for outer metropolitan projects expected to be completed by 2016. These include the Koo Wee Rup bypass, Springvale Road Rail Grade Separation and extension to the Dingley bypass.

The state has also recently announced its intention to deliver the first stage of the East West link that will ultimately provide a new cross-city road extending across Melbourne from the Eastern Freeway to the Western Ring Road.

Figure 2L graphically illustrates the state's recent investments in road projects supporting growth areas.

Figure 2L
Road projects supporting growth areas

1	M1 Monash, CityLink and West Gate upgrade
NORTH/SUNBURY	
2	Hume Fwy/Donnybrook Rd – New interchange
3	Hume Fwy/Craigieburn Bypass – New road (2005)
4	Mickleham Rd, Barrymore Rd to Somerton Rd – Duplication
5	Vineyard Rd, Obeird Dr to Mitchells La – Duplication
6	Plenty Rd, Gordons Rd to Hawkestowe Pde – Duplication
WEST	
7	Calder Fwy/Kings Rd – New interchange
8	Kings Rd, Melton Hwy to Palmerston Cres – Duplication
9	Kings Rd, Melton Hwy to Taylors Rd – Duplication
10	Kororoit Creek Rd – Duplication, rail grade separation
11	Western Fwy/Leakes Rd – New interchange
12	Western Fwy/Deer Park Bypass – New road
13	Palmers Rd, Dunnings Rd to Princes Fwy West – Pavement rehabilitation
14	Melton-Werribee (Derrimut) Rd, Hogans Rd to Sayers Rd – Duplication
SOUTH EAST	
15	Princes Hwy East/Cardinia Rd – Intersection upgrade
16	Princes Hwy East, Pakenham Bypass – New road (2007)
17	Berwick-Cranbourne Rd, Grices Rd to Thompsons Rd – Duplication
18	Cranbourne- Frankston Rd, Hall Rd to Western Port Hwy – Duplication

SOUTH EAST *– continued*	
19	Cranbourne-Frankston Rd, Scott St to Hall Rd – Duplication
20	Narre Warren-Cranbourne Rd, Centre Rd to Pound Rd – Duplication
21	Thompsons Rd, South Gippsland Hwy, Narre Warren – Cranbourne Rd – Duplication
22	Pound Rd – Intersection upgrades South Gippsland Fwy/Hwy
23	Western Port Hwy, Cranbourne-Frankston Rd, North Rd – Duplication
24	Dingley Arterial (Dandenong Bypass), Perry Rd to Springvale Rd – New road
UNDER CONSTRUCTION	
UC1	M80 Ring Rd Upgrade – Route improvements, additional lanes
UC2	Berwick-Cranbourne Rd (Clyde Rd) – Duplication, rail grade separation
UC3	Hallam Rd, Pound Rd, Ormond Rd – Duplication
UC4	Cooper St, Hume Fwy to Edgars Rd – Widening
UC5	Palmers Rd, Princes Fwy West to Ashcroft Av – New road
FUNDING ALLOCATED IN 2012/13 BUDGET	
UC6	Koo Wee Rup Bypass – New road
UC7	Springvale Rd – Rail grade separation
UC8	Dingley Bypass – New road
P1	East-West Link – Planning

Source: VicRoads.

VicRoads estimates that significant investment of between $4.1 billion and $5.1 billion is required to address current road gaps in the more established suburbs within and around growth areas. Figure 2M shows VicRoads' estimates of the investment required across all growth areas, and that Casey alone requires in excess of $1 billion in road works.

Figure 2M
Estimated investment required to address longstanding road infrastructure needs, April 2013

Growth area council	Lower estimate ($ million)	Upper estimate ($ million)
Cardinia	375	468
Casey	1 187	1 328
Hume	758	886
Melton	207	243
Whittlesea	630	764
Wyndham	965	1 373
Total	**4 122**	**5 062**

Note: The estimates provided are based on current road and imminent infrastructure needs and do not include longer-term transport requirements as greenfield areas develop, the cost of any upgrade to the metropolitan freeway network and any downstream impacts of these projects beyond growth areas.
Note: Advice from VicRoads indicates that Mitchell's designated growth areas have no longstanding road works.
Source: Victorian Auditor-General's Office based on data provided by VicRoads.

VicRoads has provided a lower and upper estimate of the investment needed as it advised that the actual cost will depend on several factors including:

- the condition of the existing network and its location relative to future alignments i.e. whether the existing carriageway can be used or if it needs to be rebuilt
- geological and environmental issues including soil type, topography, and any contamination of the area
- the cost of existing and future services e.g. the cost of repairing or relocating utilities such as gas, water and telecommunications
- any cultural and heritage matters
- land acquisition and compensation cost
- the cost of traffic management
- the scope and staging of the infrastructure.

Implications for future investment needs

The above analysis highlights a significant and growing backlog of required investment in transport infrastructure and services, which is contributing to a growing inequity between inner and outer suburbs of Melbourne.

Significant investment of more than $10 billion is required to address this backlog, comprising:

- recurrent funding of $197 million per annum to address bus services across metropolitan Melbourne including growth areas
- capital funding of at least $6.2 billion in rail projects, most of which are longstanding
- between $4.1 to $5.1 billion to address current road gaps.

Urgent action is needed to address the challenge as ongoing delay is likely to add to the state's long-term liabilities. The unmet needs identified above can be attributed, in part, to past deficiencies in planning and the longstanding challenge of securing state funding. These issues are examined further in the Parts 3 and 4 of this report.

3 Planning for transport infrastructure and services in growth areas

At a glance

Background

Effective strategic planning is vital both for identifying the infrastructure and services needed in growth areas and for assuring liveable and sustainable communities are created.

Conclusion

There is a widening disparity between inner and outer suburbs of Melbourne in terms of available transport options. While recent improvements in planning for greenfields have the potential to mitigate this disparity, there is little evidence that state agencies have fully analysed and documented when and how all the transport infrastructure and services needed in growth area councils should be delivered.

Findings

- Growth Corridor and Precinct Structure Plans provide a sound framework for identifying transport infrastructure needs in greenfields. However, the absence of a supporting funding and implementation strategy limits their effectiveness.
- Standards have been developed to determine required public transport coverage. However, there are no equivalent minimum standards to guide planning for the frequency and directness of public transport services.
- Until Public Transport Victoria finalises its bus, tram and multi modal plans their implications for current growth area public transport priorities cannot be fully assessed.
- The Growth Areas Authority has yet to establish effective arrangements to assure all required standards have been adequately addressed in the development of Precinct Structure Plans.

Recommendations

- That the Growth Areas Authority, in consultation with state transport agencies, finalise development of effective arrangements for transparently acquitting the Precinct Structure Plan guidelines and related transport requirements.
- That Public Transport Victoria develops minimum service standards to guide planning for the frequency and directness of public transport services.

3.1 Introduction

Effective strategic planning is vital to guide future development in growth areas and for providing these communities with sustainable transport options that enhance liveability and accessibility.

This requires soundly based standards and processes for determining current and future transport needs. It also requires effective strategies for responding to these needs, including arrangements for cross-government coordination to support effective integration between land use and transport planning.

Effective long-term implementation and funding strategies are also vital for achieving the objectives of strategic plans.

This part of the report examines whether strategic planning for growth areas is effective in identifying current and future transport needs, and how best to respond. It specifically examines how agencies are addressing existing gaps in established growth areas, and how their strategic planning activities support the timely delivery of transport infrastructure and services to growth areas.

Part 4 examines the adequacy of funding and implementation strategies in more detail.

3.2 Conclusion

There is a significant and growing backlog of required transport infrastructure in the more established parts of growth area councils. While recent improvements in planning for greenfields has the potential to mitigate this in future, there is little evidence that state agencies have fully analysed and documented when and how all the transport infrastructure and services needed in existing growth area councils should be delivered.

This is contributing to a widening disparity between inner and outer suburbs of Melbourne in terms of available transport options. It also puts these communities at risk of becoming increasingly isolated and exposed to higher living costs.

Recent improvements in planning have been supported by clearer guidelines for determining public transport coverage and road design layout in new suburbs.

However, the absence of similar standards for determining the minimum public transport services required to effectively support growing communities has limited the impact of these improvements and is impeding the planning and delivery of appropriate public transport services to growth areas.

3.3 Integration of transport and land-use planning for growth areas

Historically, land use plans were often developed prior to transport planning taking place. These past deficiencies have contributed to the current inadequate transport infrastructure and services in growth areas identified in Part 2.

In September 2006, the Growth Areas Authority (GAA) was established with a key role to plan Melbourne's newest suburbs. Its recently developed Growth Corridor Plans (GCP) and integrated Precinct Structure Plans (PSP) represent an important improvement in planning for Melbourne's growth areas.

These plans have strengthened integration between transport and land use, and provide a sound framework for identifying the state transport infrastructure needs of new growth areas. However, the absence of a supporting funding and implementation strategy means plans may not be translated into services on the ground.

Recent experiences in Victoria and other jurisdictions highlight the importance of combining good strategic planning with effective implementation strategies.

Figure 3A highlights the need to address the longstanding disconnect between strategic planning and funding. The failure to address this will continue to compromise the potential long-term effectiveness of otherwise commendable statewide strategic planning initiatives.

Figure 3A
Lessons for effective delivery – insights from Victoria and other jurisdictions

Supporting plans with effective implementation

In Victoria, transit-oriented development concepts informed the Melbourne 2030 plan and influenced a number of related projects including Transit Cities, Revitalising Central Dandenong and the Aurora Development Plan.

Overseas cities that have successfully adopted transit-oriented development include Portland Oregon, Washington D.C., Toronto and Vancouver. The approach has also been successfully applied in the Adelaide suburb of Mawson Lakes where the development features residential diversity, mixed land uses, local employment and higher education opportunities, feeder buses, a pedestrian network and a rail station offering shorter journey times to Adelaide than are available by car.

In Victoria, a number of implementation challenges have compromised achievement of similar objectives to date. For example, as noted in Part 2, despite the Aurora development being marketed as an award winning master-planned community, it has limited diversity of housing stock, restricted commercial development and limited employment facilities. Additionally, proposed bus services through the estate have yet to be provided and delivery of the planned rail link remains uncertain.

Similarly, a planned tertiary education facility in central Dandenong which the 2006 business case identified as vital for supporting the redevelopment of the city centre has been significantly delayed and has yet to receive funding support—undermining the long-term objectives of the project.

These challenges illustrate some of the impacts in Victoria from the longstanding disconnect between planning and funding.

Benefits of enduring integrated transport and land use plans

Another key feature inherent in the successful development of growth areas in other jurisdictions has been the presence of enduring metropolitan land use and transport plans. In contrast, Melbourne has had a succession of different metropolitan land use and transport plans over the past 20 years. This lack of continuity has been a key factor contributing to the longstanding disconnect between planning and funding that is evident for transport infrastructure.

Recently developed GCPs and the proposed new Metropolitan Planning Strategy are positive initiatives with potential to improve growth area outcomes. Their impact, however, will depend on the extent to which they endure over the long term, and on the effectiveness of associated long-term implementation plans. If past patterns play out in the future this will not occur.

Source: Victorian Auditor-General's Office.

3.3.1 Growth corridor transport planning

GCPs are high level integrated land use and transport plans developed by the GAA in 2012 in consultation with the former Department of Transport (DOT), VicRoads, Public Transport Victoria (PTV), and growth area councils. They establish an overarching strategic planning framework to guide the future development and delivery of transport infrastructure and services to Victoria's designated growth corridors.

However, while GCPs identify the transport infrastructure required to support proposed new developments, they are not currently supported by a funding and delivery strategy.

GCPs were formulated based on key performance indicators (KPI) developed by DOT and VicRoads, in consultation with other government agencies, to guide transport planning in growth areas. They aim to focus on optimising network accessibility and transport coverage. GCPs are not static and are expected to change if required due to changed circumstances.

As the purpose of GCPs is to set the broad strategic framework to guide future development they do not define the detailed infrastructure development required. This normally occurs through the precinct structure planning and related processes.

3.3.2 Precinct structure planning

PSPs, progressively developed by the GAA since 2009, are more detailed integrated land use and transport plans for proposed individual new suburbs that are informed by relevant GCPs. Specifically, PSPs identify:

- transport routes
- detailed alignment of arterial roads
- town centre locations and open space networks
- estimated housing yields
- proposed higher density housing areas
- mixed use areas for industry and employment.

PSPs provide an opportunity to implement priorities contained within GCPs, and aim to give local communities, developers and other investors greater certainty and confidence about future development.

Similarly, the state's *Public Transport Guidelines for Land Use and Development* outline a range of transport standards that must be considered in developing each PSP. Such standards include the need for:

- 95 per cent of residents to be within 400 metres safe walking distance of a public transport stop
- bus and tram stops to be situated every 300 metres
- every home to have direct access to a principal or major activity centre by public transport, ideally with a maximum travel time of 30 minutes without changing vehicles.

However, while PSPs establish a sound framework for identifying required transport infrastructure for new suburbs, it is not evident GAA has established effective arrangements to assure that all required standards have been adequately addressed in the development of PSPs.

It is important to note that the state's transport standards are not prescriptive and need to be balanced against a range of sometimes competing considerations—this is appropriate. However, while GAA consults with other transport agencies in developing PSPs, it has no documentation demonstrating how they meet current standards. This means there is little assurance that they have been satisfactorily addressed.

GAA advised that a key challenge in this regard is PTV's refusal to show bus routes or bus stops within PSPs—contrary to the PSP guidelines—which further impedes its capacity to demonstrate compliance. PTV advised that its reluctance to stipulate bus routes relates to the practical difficulties of precisely forecasting the nature and pace of future development which can change over time, and significantly impact the accuracy of initially depicted bus routes. Consequently, PTV instead focuses on ensuring PSPs include roads capable of supporting future bus services—this is appropriate.

GAA initiated action during the audit to strengthen its internal review processes to improve assurance over its compliance with the PSP guidelines. The new procedures require stronger documentation demonstrating compliance and/or the reasons for varying from the guidelines where this is deemed appropriate.

Stakeholder consultation

Precinct Structure Planning Guidelines developed by GAA in 2009 are used to guide the preparation of PSPs. These guidelines stipulate that PSPs should be developed in consultation with the local council, relevant state agencies, service providers, community members, landowners and developers, and outline the expectations for consultation and involvement by these stakeholders.

A review of five PSPs confirmed that GAA had consulted widely with relevant stakeholders. However, there were indications that these arrangements were not always effectively implemented during the recent 2011 accelerated program of land release.

For example, two growth area councils raised concerns with GAA in 2011 that it had not given them sufficient time to provide comments on their draft PSP. One of these councils also asserted that this resulted in significant gaps in identifying the infrastructure required to support development. VicRoads also advised that the time pressures arising from this accelerated program of land release resulted in ‘rushed development, consultation and approval processes between agencies’. While GAA acknowledged the consultation period was short, it advised that extensive consultation nevertheless took place, and that the accelerated program of land release was driven by the time imperatives set by the state.

Cross-government coordination

The recent improvements in planning for greenfields have also strengthened cross-government coordination in planning and developing new communities. There are clear roles, responsibilities and accountabilities in planning—including mechanisms for consultation between agencies and with other relevant stakeholders.

However, these arrangements relate primarily to greenfields and do not extend to addressing the significant and growing transport infrastructure backlog in more established areas of growth councils. The absence of such arrangements impedes the development of coordinated strategies to effectively respond to these longstanding challenges.

3.4 Transport service planning for growth areas

PTV and VicRoads prepare detailed network service and operating plans to complement their strategic transport plans.

PTV develops network plans for each transport mode—train, tram and bus—based on its understanding of the current performance and capabilities of the network. The plans include service improvement priorities and related strategies for achieving them.

As part of VicRoads responsibilities for planning the road network, it develops arterial road network strategies and *Smartroads* network operating plans. These plans, in conjunction with GCPs and PSPs provide the basis for both reserving land for future transport uses and developing budget submissions.

3.4.1 Public transport network planning

PTV was established with the aim of improving public transport, and with a particular focus on expanding the network and ensuring better coordination between transport modes.

The *Public Transport Guidelines for Land Use and Development*, developed initially by the DOT in 2008 and now used by PTV, assist in determining the public transport infrastructure needs of Victoria's growth areas. A broad range of industry groups were consulted in developing these guidelines.

PTV is currently updating its network plans for trams and buses within the context of the strategic objectives for transport as set out in the *Transport Integration Act 2010*.

These revised plans are expected to provide an improved basis for identifying future service needs and investment in the transport network. At present only the December 2012 *Network Development Plan—Metropolitan Rail* is completed. Further work is required to finalise the tram and bus plan, and develop a priority list of infrastructure projects and associated costs over the coming decades. These plans are expected to be completed by 2014.

Bus service planning

PTV's current draft bus plan acknowledges that, historically, bus network planning for Melbourne has generally been undertaken on an ad hoc basis and in the absence of a coordinated network strategy. The local bus network has previously focused on providing coverage to fulfil the state's key target of 95 per cent of dwellings being located not more than 400 metres safe walking distance from the nearest public transport service.

While this target is sufficient for determining the required public transport coverage, there are no equivalent minimum service standards to guide planning for the frequency and directness of public transport services. This means that while some dwellings meet the proximity requirement, the route may not be supported by sufficiently timely and direct services.

PTV advised that the extent of service coverage, frequency and directness is dependent on the level of funding made available for the service, and that a comparison of service levels must be carefully applied, given that:

- in a largely radial transport network, higher levels of service will naturally be available closer to the hub with fewer services at the periphery resulting in longer and more costly services
- a balance must be struck in growth areas, where service provision including frequency and coverage will be supplied as demand and urban density develops.

Nevertheless, minimum service standards can assist in guiding agency decisions on how to strike the right balance in growth areas and to optimise value for money.

The draft bus plan aims to better integrate transport planning with land use planning, and rebalance the network with an emphasis on frequent and direct bus routes that better connect with rail and tram services. In this context, it aims to provide attractive and reliable transfer opportunities across the network, and in particular, within growth areas that are poorly serviced by other modes of public transport.

The draft bus plan proposes to replace the current key 95 per cent target with a broader set of planning principles intended to support better services outcomes. These include the use of:

- SmartBus services where feasible, which together with rail and tram, form the Principal Public Transport Network (PPTN) that provides connections to all higher order activity locations and that is available within about 800 metres of 50 per cent of dwellings
- local direct services to complement the PPTN and ensure that a direct service is available within about 800 metres of 80 per cent of dwellings
- local coverage services to integrate with community transport and ensure that the public transport network is available within about 400 metres of 95 per cent of dwellings.

PTV advised that once finalised, the new bus plan will feed into an investment strategy seeking to balance the provision of sufficient network coverage to growth areas with meeting increasing demand in established areas.

Multimodal-based planning

New York, Boston and Toronto are examples of cities that have optimised their public transport services through effective transport network design and timetabling. These cities have, for example, designed their bus network to reflect the underlying grid pattern of the urban layout, designed bus routes to connect with a subway line, and set timetables to provide guaranteed connections between train times and bus times.

PTV similarly recognises the importance of effective transport network design and timetabling. It is currently refocusing its public transport planning approach away from individual service plans towards a multimodal-based approach. PTV advised that its new Multi-Modal Coordination Policy and Strategy is being developed to incorporate the latest *Network Development Plan—Metropolitan Rail* and other modal plans as they are completed. This initiative has the potential to improve the accessibility and coordination of public transport services in growth areas.

However, until these plans are developed, particularly the bus plan, which is the primary mode of public transport for many growth areas, their implications for current growth area public transport priorities cannot be fully assessed.

3.4.2 Road network planning

VicRoads plans for the road system by identifying current and future land uses and likely road needs across the state. It also monitors the state's arterial road network performance and condition, and undertakes operational modelling of the network to further assist in identifying future road infrastructure needs.

To further assist in identifying priorities for funding, VicRoads has developed a sound methodology supported by clear criteria for prioritising road infrastructure projects in outer suburban areas. This has enabled it to assess and prioritise road improvement projects needed in growth areas.

However, once identified, these projects subsequently compete with other state transport infrastructure needs for increasingly limited state funding. VicRoads advised that a new statewide prioritisation process for road projects aligned with its strategic objectives was being developed for 2013–14, and it is expected that this process will be further refined in future years.

Recommendations

1. That the Growth Areas Authority, in consultation with state transport agencies, finalise development of effective arrangements for transparently acquitting the Precinct Structure Plan guidelines and related transport requirements.
2. That Public Transport Victoria develops minimum service standards to guide planning for the frequency and directness of public transport services.

4 Prioritising, funding and monitoring the delivery of transport infrastructure

At a glance

Background

Effective provision of state transport infrastructure and services to growth areas requires a sound prioritisation framework, an effective funding strategy and ongoing monitoring of delivery plans to assure they are achieved.

Conclusion

Delivery of transport infrastructure and services to growth areas has not been timely. Without urgent action it is likely that growth areas will continue to experience higher levels of transport disadvantage compared to other areas of metropolitan Melbourne.

Findings

- As there is no clear statewide funding and implementation strategy that addresses the long-term infrastructure needs of more established areas of growth councils there is little assurance the longstanding infrastructure backlog in these growth areas will be effectively addressed.
- Access to funding is the main challenge impeding timely infrastructure and service delivery. However, insufficient action has been taken to address this longstanding issue.
- There is no framework for evaluating, monitoring and reporting on whether planned transport infrastructure and services are delivered in a timely manner and meet the needs of growth area residents.

Recommendation

That the Department of Transport, Planning and Local Infrastructure, in conjunction with relevant stakeholders develop and implement a statewide framework for prioritising the delivery of transport infrastructure, including alternative financing options and an associated monitoring and evaluation framework.

4.1 Introduction

The timely provision of major state transport infrastructure and services in growth areas, comprising arterial roads, rail and buses, is the responsibility of the state. Effectively acquitting this responsibility requires a sound framework to prioritise projects, a supporting funding strategy, and ongoing monitoring of delivery plans.

This part of the report examines how well existing arrangements support the timely delivery of required state transport infrastructure and services to growth areas.

4.2 Conclusion

The delivery of transport infrastructure and services to growth areas has not been timely.

There is currently a significant and growing backlog of required infrastructure, primarily due to shortcomings in past planning and the ongoing challenge of securing state funding in a fiscally constrained economic environment. Nevertheless, insufficient action has been taken to date by transport and land use agencies to better prioritise proposed investments, and identify funding sources to address the longstanding funding gap. This, together with pressure from ongoing population growth, is contributing to increased costs for future generations and continuing high levels of transport disadvantage for growth areas.

Urgent action is therefore needed not only to identify and secure alternative funding sources, but also to develop innovative solutions to meet this longstanding and growing challenge.

4.3 Prioritising infrastructure delivery

A sound framework for prioritising infrastructure projects would help determine the relative importance of each based on benefits and costs. Additionally, such a framework could assist in identifying the types of benefits that may be claimed for projects and how they could be measured.

There is currently no clear statewide funding and implementation strategy for delivering transport infrastructure to both greenfields and more established areas of growth councils. The absence of such a strategy means there is little assurance the longstanding backlog evident in the more established areas of growth councils, or the emerging transport infrastructure needs of newer growth areas will be addressed. It also offers little assurance that current statewide investments in transport infrastructure are effectively targeted and soundly based.

The Department of Transport, Planning and Local Infrastructure (DTPLI) advised that all transport projects are considered in a statewide context, and that there is no defined rationale for specifically prioritising growth area needs. DTLPI's End-to-End Committee aims to ensure planning across the portfolio is evidenced based, and that projects and initiatives are effectively managed and focused on achieving desired outcomes.

However, the growing and substantial backlog of transport projects that are required in the more established areas of growth councils indicates that current and past arrangements have not been effective in supporting the timely delivery of transport infrastructure to these areas.

4.4 Current funding strategies for transport infrastructure

Agencies have identified access to funding as the main challenge impeding the timely provision of transport infrastructure and services in established growth areas. This has been a longstanding issue that has not been satisfactorily resolved. The Metropolitan Planning Strategy (MPS) discussion paper released in 2012 similarly recognises the need for new funding frameworks to be developed to deliver needed infrastructure, and that decisions about how new infrastructure is funded can affect when it is delivered.

Continuing uncertainty over access to adequate funding for required transport infrastructure and services is a significant risk for new growth areas which is not currently being effectively mitigated.

4.4.1 Annual State Budget allocations

Most of the funding required for state infrastructure and services relies on the annual State Budget process and the submission of Budget bids by departments. The bids have not produced the funding required to meet the transport needs of growth areas.

The current absence of a statewide framework for prioritising the delivery of transport projects means that the basis upon which growth areas compete for funding with all other transport infrastructure and service needs across the state, as well as with all other state responsibilities and commitments, is unclear. It also means that it is not clear whether the transport needs of growth areas are being adequately assessed, prioritised and funded relative to other statewide priorities.

Coupled with the practical ceiling of the state's credit rating and the significant scale of competing infrastructure investments, this increases the risk that longstanding gaps in growth area councils will not receive sufficient attention during the annual State Budget process, so that gaps will continue to widen.

Although successive transport plans identify required infrastructure projects these proposals have not always been funded by the state. For example, the previous government's 2008 *Victorian Transport Plan* identified road projects in outer suburban areas—including growth areas—totalling $1.9 billion, which was to be allocated over a 10-year period. Two Budget allocations were made in 2009–10 and 2010–11, totalling $127 million, of which around $77 million was specifically for growth areas, before the 2008 Plan was discontinued in 2010. Over the three-year period to 2013–14, only around $106 million in funding has been allocated for new outer suburban road works.

Recent growth area funding proposal

In 2012 the former Department of Transport, in conjunction with Public Transport Victoria (PTV), VicRoads and the Growth Areas Authority (GAA), developed a specific growth area transport program funding proposal, the Growth Areas-Priority Transport Package. This proposal was intended as the next step in delivering the transport networks identified in the recently developed growth corridor plans. It was underpinned by an extensive strategic assessment involving investment logic mapping, growth corridor by growth corridor assessments of need, and determination of priorities.

The funding strategy proposed a package of high priority, low cost transport infrastructure and service improvements in growth areas estimated to cost between $75 and $90 million. It highlighted a mismatch between existing services and infrastructure, and a rapidly growing population that was creating a number of key problems, including:

- local job creation increasingly lagged behind housing development causing longer commute times
- growing traffic volumes on rural roads contributed to higher levels of congestion and travel time
- high levels of car dependence placed families under considerable financial stress.

Collectively the agencies determined that a program of targeted, urgent works was needed to fulfil the state's role in delivering the benefits in growth areas. Proposed initiatives included the planning for delivery of improvements in public transport services and infrastructure, and upgrades to the local and arterial road network. The proposal identified the initiatives as responding to the above key problems and as encouraging the most efficient use of the transport network.

The proposal was a positive initiative but has yet to be funded due to the limitations of state resources, and a decision to fund other state priorities.

The substantial cost and backlog of works that has already accumulated in the more established areas of growth councils means that existing state sources of infrastructure funding will be insufficient to meet future needs.

4.4.2 Commonwealth Government funding

The Commonwealth periodically contributes to major infrastructure investments undertaken by states.

In recent years funding allocations have been informed and guided by recommendations provided by Infrastructure Australia—a statutory body established under the Commonwealth *Infrastructure Australia Act 2008* in April 2008. Infrastructure Australia's functions include evaluating proposals submitted by state and territory governments for investment in, or enhancements to, nationally significant infrastructure.

Submissions to Infrastructure Australia made by the Victorian Government in November 2011 and August 2012 indicated the state intends to keep Infrastructure Australia informed on the progress of:

- the feasibility studies being undertaken into the potential for rail links connecting Rowville and Doncaster to the metropolitan rail network
- the progress in planning for an upgrade of the Melton rail line, involving the provision of additional tracks and an electrified service.

The Melton rail project was again identified in the 2013 Infrastructure Australia submission, together with a proposal to upgrade a major growth area road.

The 2012 Infrastructure Australia submission also sought funding for proposed transport projects in growth areas identified in the former Department of Transport's Growth Areas-Priority Transport Package proposal.

Commonwealth funding for these projects is yet to be announced and remains uncertain.

4.4.3 Alternative funding sources

Increasingly limited state finances and ongoing uncertainty over Commonwealth contributions, particularly for rail projects, means there is a pressing need for the state to explore alternative funding options and strategies to address the growing transport infrastructure backlog and needs of growth areas.

If this funding challenge is not addressed, the current situation is likely to worsen as new growth areas come online. The GAA has made a preliminary estimate that the total infrastructure investment required from state and local government over 30 years for new growth areas is approximately $36 billion. This excludes the cost of maintenance and renewal. Over $18 billion of this cost is needed in state funding for transport infrastructure and services.

GAA advised it has commenced work on developing a funding strategy for new growth areas. However, to date no action has been taken by state agencies to develop a similar funding strategy to address the long-term needs of more established areas of growth councils.

Recent initiatives to develop alternative funding strategies

Growth Areas Infrastructure Contribution

The Growth Areas Infrastructure Contribution (GAIC) was introduced in 2010 as an additional charge on landowners to contribute to state infrastructure and is expected to collect up to $3.6 billion over 30 years. GAIC also provides for a developer to undertake 'works in kind' which involves the early delivery of an asset in lieu of paying the charge.

GAIC represents an important future revenue source. However, it is only expected to fund up to 15 per cent of state infrastructure works in new growth areas. In September 2012, an initial allocation of $6.9 million was provided to Casey, Hume, Melton and Wyndham councils for mostly transport infrastructure projects. As at June 2013, a total of $49.9 million had been collected.

GAA is currently working on a proposal to optimise the use of GAIC funding. In October 2012, GAA completed a draft discussion paper that outlined a new approach to funding priority economic infrastructure, including more timely delivery of basic transport infrastructure in new growth areas. This initiative recognised that early provision of transport infrastructure is essential for the development and liveability of new communities.

GAA proposed that a detailed strategic transport network development plan be prepared for new growth areas that identifies the priority transport infrastructure needs of each area. It also proposes a range of potential funding sources for addressing these needs including developer contributions, GAIC and state government allocations. GAA envisages the network development plan could clearly identify the timing and justification for investment by directly linking proposed works to the development and rollout of growth areas. For example, it could inform funding allocation decisions by prioritising the most urgent projects, matching the timing of projects to the availability of funding, and allowing targeted distribution of GAIC funds.

Though yet to be finalised the GAA proposal is a positive initiative.

While the development of an investment strategy for greenfields incorporating GAIC funds will not solve existing funding problems for established areas of growth councils, it could mitigate future infrastructure gaps in new growth areas, and their associated impact on the state's finances.

Consideration of other funding sources

VicRoads advised that projects and programs that fail to obtain state government funding are reassessed in terms of their scope and expected benefits. This may lead to lower cost proposals or a higher priority being assigned to them in future years.

VicRoads also advised that it considers non-traditional ways of delivering and financing infrastructure, including where relevant, the viability and potential for public private partnerships, and that this analysis is usually incorporated in individual business cases.

VicRoads 'case-by-case' approach to considering alternative funding sources is reasonable. However, a broader strategy focused on specifically addressing the extensive backlog of road projects in growth areas has the potential to further guide and assist this approach.

GAA also advised that it has explored alternatives to government funding via limited discussions with the private sector which to date have not identified suitable options.

The 2012 MPS discussion paper identifies a range of possible options for financing infrastructure in addition to the State Budget process. These options include borrowing, public private partnerships and project specific bonds. It is not yet clear how they will be applied to address the longstanding needs of growth areas.

Similarly the June 2013 Parliamentary *Inquiry on Growing the Suburbs: Infrastructure and Business Development in Outer Suburban Melbourne* identified a range of potential funding sources to provide infrastructure to outer suburban areas including:

- introducing broad-based usage charges, with revenues hypothecated for spending on infrastructure
- establishing a financing body to raise and manage infrastructure funds through the issuing of government-backed bonds
- establishing a dedicated infrastructure fund.

The Inquiry recommended existing systems of funding be examined.

Examples of good practice in other jurisdictions to address infrastructure funding challenges are shown in Figure 4A.

Figure 4A
Funding options—insights from other jurisdictions

Value capture

Growing cities throughout the world all face the challenge of funding the transport infrastructure and services needed by population growth areas. Some of the successful practices adopted by other jurisdictions are worthy of consideration in Victoria.

Value capture is one funding mechanism that has been successfully applied in many overseas jurisdictions such as Los Angeles, Portland Oregon, Hong Kong and London. It involves financing all or part of the cost of providing public transport infrastructure by measuring, capturing and transferring back to government some of the increased capital value that accrues to owners of properties surrounding new public transport facilities. Value capture can take the form of a local differential tax, levy or rental charge on properties.

Overseas experience has shown it is a useful method of offsetting the large capital costs of expensive public transport projects though it is rarely sufficient in itself to cover the whole cost of a major project. For example, in the current London Cross Rail project, value capture is expected to generate £4 billion of the £16 billion project cost.

Experience to date also indicates that it can generate some resistance from those who do not see themselves as benefitting from the investment. For example, in Portland Oregon some outer suburban residents in car dependent areas were reluctant to contribute to a light rail extension. As such, value capture initiatives need to be carefully targeted and well communicated through effective consultation with stakeholders.

Adopting this mechanism in Melbourne's growth areas might involve:

- pre-planned joint development and sale of government owned land adjacent to or above stations
- applying a differential rate to properties within a defined distance from transit routes
- applying a property rate within the CBD where extra rail capacity has to be provided to allow capacity for services to growth areas.

Value capture has previously been used to partly fund development of the Melbourne underground rail loop. The MPS discussion paper also recognises it as a potential new source of funding.

Figure 4A
Funding options—insights from other jurisdictions – *continued*

Air rights and joint development
Another mechanism known as air rights and joint development involves harnessing the commercial value of air rights above rail lines or stations, or a joint development in which the rail station forms part of a commercial development. It has been used internationally including at railway stations in New York and Hong Kong. It has also been used in New South Wales at a railway station precinct developed by the private sector as part of a commercial shopping centre redevelopment.

Source: Victorian Auditor-General's Office.

4.5 Monitoring the adequacy of infrastructure provision

Effectively addressing the transport infrastructure needs of growth areas extends beyond good planning to monitoring and reviewing if key actions have been implemented, and to what extent plans are on track to achieve their stated aims.

Precinct Structure Plans (PSP) are the state's main planning instrument for establishing a blueprint for the future development and investment in proposed new suburbs. PSPs have several objectives including a goal of providing better transport options. This means, for example, providing public transport and motor vehicle access to connect residents directly to activity centres, community facilities and employment centres, and providing an efficient and adequate bus service that enables residents to access jobs, goods and services.

PSPs provide a sound framework for identifying and planning the delivery of new transport infrastructure. However, there is currently no framework in place for evaluating, monitoring and reporting on whether the required transport infrastructure and services identified in PSPs are being delivered in a timely manner, or that they adequately meet the needs of residents. This risks limiting the effectiveness of PSPs and reduces accountability for their achievement.

4.5.1 Monitoring and review of development plans

GAA's Precinct Structure Planning Guidelines stipulate that growth area councils are responsible for monitoring and reviewing the implementation of PSPs in consultation with GAA and the other state agencies.

The guidelines identify two documents that form part of the PSP that are useful for monitoring its success. The Development Staging Plan indicates how development of the infrastructure and service provision will be staged. Similarly, the Precinct Infrastructure Plan specifies the infrastructure and services needed to benefit the new community, including where they should be located, who is responsible for leading delivery and how they will be funded.

However, there are currently no arrangements to systematically monitor and report on the delivery of infrastructure against PSPs. This significant oversight gap limits the capacity of state and local government agencies to effectively identify and address emerging risks and challenges to the implementation of PSPs.

Additionally, the absence of such arrangements offers little assurance that developed PSPs adequately reflect current circumstances and needs, or that they will be effectively achieved.

Current Precinct Structure Plan monitoring arrangements

Since issuing the PSP Guidelines in 2009, the GAA has progressively completed 21 PSPs, the first in October 2009.

Our examination of five completed PSPs showed that only three included a commitment to review and monitor the PSP as required by the guidelines, but how this task was to be performed was not explained. Although not a requirement, these three PSPs also committed to evaluating the effectiveness of the PSP at least every five years but without explaining how this would be performed. All five infrastructure plans included a statement indicating that GAA will jointly implement the plan with the relevant council. However, there was also no explanation describing how this task would be performed. Further, none of the PSPs included a staging plan.

GAA acknowledged that no action has been taken to develop review and monitoring processes, or a methodology for evaluating PSPs. It also acknowledged that it has yet to develop arrangements to oversee implementation of infrastructure plans. GAA advised that limited resources to fulfil these requirements of the PSP Guidelines has been an ongoing challenge.

The 2012 Parliamentary *Inquiry into Environmental Design and Public Health in Victoria* similarly identified the absence of PSP monitoring and review processes. The inquiry noted that the PSP Guidelines gave no detail about how monitoring and review is to be conducted nor what, if any, benchmarking is to occur. It recommended a review of the effectiveness of PSPs be undertaken with a particular emphasis on whether expected outcomes, including public transport infrastructure, are being delivered. The recommendation is yet to be addressed.

GAA advised during the audit that many PSPs are in the early stages of implementation making full evaluation difficult. Notwithstanding, it also advised that it intends to initiate a review of its PSP Guidelines to ensure they remain relevant and appropriate, as well as commence developing processes for monitoring and reviewing PSPs.

Other agency initiatives

DTPLI advised that it is in the process of establishing a unit to monitor the planning outcomes of the MPS. While this is a positive initiative, it is unclear to what extent it will incorporate a focus on the implementation and effectiveness of PSPs and Growth Corridor Plans.

VicRoads also advised that it has been taking steps over the past two years to improve its evaluation processes so that there is clearer understanding of the effectiveness of road infrastructure delivered in growth areas.

Since 2012–13, VicRoads has mandated use of the Department of Treasury and Finance's Investment Management Standard in project planning, delivery and evaluation. This approach involves identifying the problems and benefits at project concept stage so that these can be evaluated at project completion. A Benefit Management Framework was completed in February 2012 to provide a consistent approach to identifying investment benefits and how they contribute to government outcomes. A complementary evaluation framework is being developed to measure the realisation of benefits and outcomes, and is expected to be completed by late 2013.

Similarly PTV advised it has developed a Benefit Management Framework and implemented a post project completion evaluation process to assess project outcomes.

These are positive initiatives that will provide important insight on the outcomes of road and public transport-related projects. However, these insights will be affected by the absence of a broader coordinated monitoring and evaluation framework which examines how well the broader transport needs of growth areas are being met.

Recommendation

3. That the Department of Transport, Planning and Local Infrastructure, in conjunction with Public Transport Victoria, VicRoads and the Growth Areas Authority develop and implement:
    - a statewide framework for prioritising the delivery of transport infrastructure that reconciles broader statewide priorities against the needs of growth areas
    - an implementation and funding strategy incorporating alternative financing options and innovative solutions to systematically address the transport backlog and meet the future needs of growth areas
    - an associated monitoring and evaluation framework to assess whether the progressive delivery of transport infrastructure and services in growth areas is being achieved as planned and has been effective.

Appendix A.

Strategic planning for managing Melbourne's population growth

Recent statewide policies

Melbourne is consistently recognised as one of the world's most liveable cities, and has a long history of strategic infrastructure and transport planning.

A succession of planning documents has been released during the past decade in an attempt to manage population growth, and deliver transport infrastructure. These are summarised in Figure A1.

Figure A1
Strategic planning for managing Melbourne's population growth

Planning policy (year)	Key directions relating to managing population growth
Melbourne 2030 – Planning for Sustainable Growth (2002)	A 30-year plan, which aimed to manage urban growth and development across metropolitan Melbourne. It directed growth to activity centres and to five designated Growth Areas. It also introduced the Urban Growth Boundary (UGB), which aimed to manage the outward growth of metropolitan Melbourne.
Linking Melbourne: Metropolitan Transport Plan (2004)	The Metropolitan Transport Plan recommended a transport investment of approximately $1.5 billion to service the population growth in Melbourne's outer growth areas.
A plan for Melbourne's growth areas (2005)	The continuing population growth prompted the release of a planning policy specifically for growth areas. The plan involved a more strategic approach to future development which included: • development of long-term plans for each growth area to provide greater certainty about the direction of future growth • a new growth areas authority to help streamline processes and support councils, developers and the community to ensure new neighbourhoods were well planned and that new communities received the services and infrastructure they needed sooner • a new partnership approach to infrastructure provision • expansion of the urban growth boundary to release new land to protect housing affordability and provide land for future industrial uses and employment creation.

Figure A1
Strategic planning for managing Melbourne's population growth – *continued*

Planning policy (year)	Key directions relating to managing population growth
Meeting our Transport Challenges: Connecting Victorian Communities (2006)	This plan sought to: • provide more public transport alternatives to people living in Melbourne's outer suburbs • deliver arterial road projects across Melbourne's outer suburbs, creating better cross-town connections, boosting capacity, improving safety and reducing congestion.
Melbourne 2030 Audit Expert Group Report (May 2008)	An independent audit of Melbourne 2030 identified the need to improve integration between land use and transport planning. It recommended developing major transport infrastructure in synchronisation with land-use planning, with a 30 to 90 year lead time
Planning for all of Melbourne The Victorian Government response to the Melbourne 2030 Audit (May 2008)	Planning for all of Melbourne was released in response to the results of an audit of Melbourne 2030. The policy identified a number of priority areas for action including accelerating the planning and delivery of extensions to the public transport network to meet the needs of planned new communities in growth areas.
Melbourne 2030: a planning update: Melbourne @ 5 million (December 2008)	Melbourne @ 5 million was a response to the faster than expected growth of Melbourne's population, and was intended as a complementary document to Melbourne 2030. It identified the need to direct future growth to the north and west of Melbourne and to investigate how to extend the UGB.
Victorian Transport Plan (2009)	The plan sought to give people living in Melbourne's growth areas more transport options by expanding public transport links, including major rail extensions into growth areas. The plan also included a program for outer suburban roads.
Delivering Melbourne's Newest Sustainable Communities (July 2010)	Delivering Melbourne's newest sustainable communities was a culmination of the previous planning. A key focus of the policy was the need for integrated land use and transport planning to enable liveable communities to be created in growth areas. The policy amended the UGB to accommodate projected population growth and maintain housing affordability and introduced the Growth Areas Infrastructure Contribution to help fund state infrastructure.

Source: Victorian Auditor-General's Office.

Appendix B.

Audit Act 1994 section 16 — submissions and comments

Introduction

In accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to the Department of Transport, Planning and Local Infrastructure, the Growth Areas Authority, Public Transport Victoria and VicRoads with a request for submissions or comments.

The submissions and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Response provided by:

RESPONSE provided by the Chair and Chief Executive of Public Transport Victoria

PUBLIC TRANSPORT VICTORIA PT

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DOC/13/156029

Mr John Doyle
Auditor-General
Victorian Auditor-General's Office
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Dear Mr Doyle

PROPOSED AUDIT REPORT – DEVELOPING TRANSPORT INFRASTRUCTURE AND SERVICES FOR POPULATION GROWTH AREAS

Thank you for your letter dated 1 August 2013 enclosing your proposed audit report on *Developing Transport Infrastructure and Services for Population Growth Areas.*

As your report notes, there have been some notable improvements to public transport in growth areas in recent years including rail extensions, new rail stations and bus route upgrades. However, as your report also notes, further investment is required to meet both existing and projected demands. PTV will continue to engage with both state and Commonwealth governments to seek to secure the necessary funding to meet Melbourne's future public transport needs including in growth areas.

PTV's *Network Development Plan – Metropolitan Rail*, delivered to Government earlier this year, comprehensively describes what is needed to:

- expand the capacity of the existing rail network to meet the growing needs of the city;
- redesign rail services to maximise opportunities for seamless coordination with buses and trams; and
- extend the network to areas currently not served by metropolitan rail.

The plan points out the importance of approaching public transport improvements in an appropriately sequenced fashion. It highlights the need to prioritise rail network capacity expansions before further investments can be made in new rail lines into growth areas.

PTV looks forward to presenting equivalent network development plans for Victoria's bus and tram networks to government and the community in the coming months.

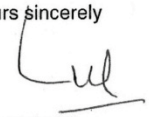
A crucial influence on the effectiveness of public transport services in growth areas is the extent to which land use planning is complementary to transport needs. Insufficient activity clustering and sparse population density can present significant practical and financial viability challenges in delivering transport services. PTV recognises the roles of the Growth Areas Authority and Department of Transport, Planning and Local Infrastructure in these areas and will continue to engage collaboratively with these agencies. PTV's bus network development plan in particular will incorporate strong themes of the need to integrate transport and land use planning.

RESPONSE provided by the Chair and Chief Executive of Public Transport Victoria – continued

Your report recommends that PTV develops minimum service standards to guide planning for the frequency and directness of public transport services. This recommendation arises in the report in the context of bus services. As PTV advised during the conduct of the audit, the extent of service coverage, frequency and directness of bus services is largely dependent on the level of funding made available. Nonetheless, PTV accepts this recommendation and notes that as part of its bus network development plan it is developing a series of principles to guide planning for bus service frequency and directness.

Thank you for giving PTV the opportunity to respond to your proposed report.

Yours sincerely



IAN DOBBS
Chair and Chief Executive

6 / 8 / 2013

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RESPONSE provided by the Secretary, Department of Transport, Planning and Local Infrastructure

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Dear Mr Doyle

PROPOSED AUDIT REPORT - DEVELOPING TRANSPORT INFRASTRUCTURE AND SERVICES FOR POPULATION GROWTH AREAS

Thank you for your letter of 1 August 2013 enclosing the proposed report on *Developing Transport Infrastructure and Services for Population Growth Areas* and for the opportunity to comment.

I acknowledge the key finding of the audit of significant and long-standing challenges in meeting transport needs in growth areas, note your recommendations and confirm that the Department of Transport, Planning and Local Infrastructure (DTPLI) will address Recommendation 3.

I am pleased that your report identifies significant improvements by DTPLI and its agencies in planning for transport in growth areas. I also note that the distinction between planning and implementation in a project's lifecycle is complex. As your report highlights, long time frames between planning and delivery is sometimes entirely appropriate. The objectives are for early, strategic identification and protection of land for future transport purposes, followed by timely delivery of transport infrastructure and services when they are needed and as part of the effective development and operation of the transport network. Long term plans also need to remain flexible to respond to changes in growth patterns, demand, government policy, the availability of funds and the broader economy.

DTPLI and its agencies have an important role in prioritising infrastructure outcomes and developing funding strategies. While ultimately matters for the Government, transport investment proposals are currently developed and prioritised on the basis of:

- Underlying and emerging demand
- Land use policy

State Government Victoria

RESPONSE provided by the Secretary, Department of Transport, Planning and Local Infrastructure – continued

- Economic benefits and costs
- Broader funding priorities in transport and related portfolios, and
- Relationship to and dependence on existing transport infrastructure.

DTPLI with transport agencies and the Growth Areas Authority, work to identify and assess needs in growth areas as part of the development of advice to Government. Each year, this results in the preparation of rigorous business cases that detail the strategic alignment, scope, benefits, costs and risks of individual proposals and their relationship to other submissions.

The introduction of the Growth Areas Infrastructure Contribution (GAIC) in 2010, the inclusion of GAIC Works in Kind provisions in 2011 to better align state infrastructure provision to the timing of development in growth areas, and a new local development contributions system (currently under development), are examples of initiatives to meet funding challenges. Successfully broadening the suite of funding and financing solutions will require strong collaboration between policy makers and the community, in conjunction with engagement with the Commonwealth Government and the private sector.

DTPLI, in partnership with its agencies (including a new metropolitan planning authority once established), will respond to Recommendation 3 by leading the development of a formalised framework that builds on and makes explicit our current rigorous processes. Growth areas and metropolitan-wide priorities, reform to the way we fund major transport infrastructure and implementation arrangements will also be key themes of the Government's upcoming *Metropolitan Planning Strategy (MPS)*. Our development of the framework will therefore be aligned with the directions and initiatives in the final MPS, *Growth Corridor Plans* and *Regional Growth Plans,* providing state-wide context.

While I agree to enhancing DTPLI's approach, the challenges of prioritising investments and funding cannot be addressed by one Department or agency, but occur through whole of Government processes. Central agencies will also continue to play a key role in assessing and advising on transport investments and funding models, while ultimately funding priorities and delivery timing remain matters for Government to determine.

Yours sincerely

DEAN YATES
Secretary

15 / 8 / 2013

Page 2 of 2

RESPONSE provided by the Acting Chief Executive, VicRoads

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Dear Mr Doyle

PROPOSED PERFORMANCE AUDIT REPORT: DEVELOPING TRANSPORT INFRASTRUCTURE AND SERVICES FOR POPULATION GROWTH AREAS

Thank you for your letter dated 1 August 2013, enclosing the proposed report on the audit of Developing Transport Infrastructure and Services for Population Growth Areas.

VicRoads is happy to continue to work with the relevant government agencies to develop and implement the recommendations.

Thank you for giving VicRoads the opportunity to respond to your proposed report.

Yours sincerely

PETER TODD
ACTING CHIEF EXECUTIVE

15/08/**2013**

Copy to: Mr Rocco Rottura by email: rocco.rottura@audit.vic.gov.au

Victoria

VicRoads ABN 61 760 960 480

PSL7

RESPONSE provided by the Chief Executive Officer, Growth Areas Authority

I 13/ 1213

growth areas AUTHORITY

16 August 2013

COR/13/6800

Mr John Doyle
Auditor General
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MELBOURNE VIC 3000

Dear Mr Doyle

DEVELOPING TRANSPORT INFRASTRUCTURE AND SERVICES IN POPULATION GROWTH AREAS

Thank you for your invitation dated 1 August 2013 to respond to the proposed performance audit report D*eveloping transport infrastructure and services in population growth areas.*

I would like to acknowledge the extensive interaction with your Office and the opportunities for comment provided during the conduct of the audit.

I also appreciate the clarity in the audit report regarding the areas of responsibility and activity of the Growth Areas Authority. This includes recognition of the improved planning outcomes being achieved through the Precinct Structure Planning processes, including the extensive consultation that occurs during their preparation.

The GAA acknowledges the recommendations. As noted in the audit report, the GAA has already commenced actions to address Recommendation 1 regarding finalisation of "development of effective arrangements for transparently acquitting the Precinct Structure Plan Guidelines and related transport requirements". We also look forward to collaborating with DTPLI and other agencies on the recommended initiatives included under Recommendation 3.

However, I note that the development of PSPs requires addressing a wide range of transport and non-transport objectives outlined in the PSP guidelines as well as the objectives of all stakeholders. This does not mean that all objectives are necessarily fully met, as the best overall outcome for a future community is likely to involve a series of compromises to achieve a good quality, balanced outcome. Any such considerations are based on extensive technical analysis and consultation with the agencies, Councils and other stakeholders engaged in completing a PSP. The GAA believes that this analysis and engagement effectively ensures all transport objectives are addressed to the reasonable satisfaction of the key stakeholders. While a transparent acquittal may assist to demonstrate this, it is not expected to materially alter the planning outcomes.

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State Government Victoria

RESPONSE provided by the Chief Executive Officer, Growth Areas Authority – continued

The GAA is aware of the critical need for early integrated land use and transport planning as the first step to inform funding decision-making and is working to provide early planning advice to Government to ensure growth in the State can be matched to new infrastructure.

Yours sincerely

PETER SEAMER
CHIEF EXECUTIVE OFFICER

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