



ESSENTIAL ECONOMICS

ONE MELBOURNE OR TWO?

Implications of Population Growth for Infrastructure and Services in Interface Areas

UPDATED REPORT 2017

FINAL

Prepared for
Interface Councils

by
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EXECUTIVE SUMMARY

This report has been prepared for the Interface Group of Councils by Essential Economics Pty Ltd.

The Interface Councils are a strategic grouping of ten outer local government areas (including all of Greater Melbourne's growth areas) that have joined together to promote outer Melbourne and to ensure its future as a liveable location.

The key purpose of this study is to identify long-term infrastructure and service requirements for the Interface Councils, together with associated costs, that will deliver liveability standards for Interface residents comparable to residents living in non-Interface metropolitan areas. This report represents an update of the 2013 report and includes data relating to the ABS Census 2016.

Role and Contribution of the Interface

- 1 Interface areas play an important role in supporting Greater Melbourne's economy, and this role will become more critical as Melbourne's population expands to 6 million persons and beyond over the coming 15 years.
- 2 The ongoing and future role of Interface areas includes:
 - Accommodating approximately 53% of Greater Melbourne's population growth over the 2016-2031 period.
 - Providing approximately 49% of Greater Melbourne's dwelling requirements over the next 15 years (refer to Chapter 2)
 - Supporting Greater Melbourne's labour force requirements by providing approximately 53% of labour force growth between 2016-2031 (refer to Chapter 4)
 - Responsible for 55% of Greater Melbourne's local road network, including a considerable amount of non-sealed local roads.
- 3 The Interface Group of Councils have developed a set of Strategic Development Objectives aimed at ensuring living standards for Interface residents are comparable with those experienced in Greater Melbourne's non-Interface areas. To achieve the desired outcome, improved infrastructure and services (public transport, schools, community services, and local jobs) will need to be delivered in a timely manner to remove existing disadvantage and ensure improved economic efficiency in the Interface.

Population Outlook

- 4 The State Government (DELWP) has prepared long-term population, demographic and household projections for the Interface; these projections span a time period of 15 years.
- 5 DELWP data indicates an increase of approximately +310,000 dwellings between 2016 and 2031, supporting an estimated population growth of approximately +765,000 persons in Interface Council Areas.
- 6 When demography is considered, VIF2016 data shows strong growth in the 65+ years age group underpinning total population growth in the region (growing from 12% to

16% of the total population over the 15 year period); however, the working-age cohort will remain the dominant age group with a 56% share of the total population at 2031 (a reduction from a 60% share in 2016).

Socio-Economic Benchmarking

- 7 Compared to non-Interface areas and Greater Melbourne averages, the Interface Council area is characterised by:
- Relatively high level of socio-economic disadvantage, as highlighted through SEIFA and VAMPIRE
 - Relatively low average incomes
 - Relatively low educational outcomes
 - Relatively high level of youth disengagement with regard to higher education and workforce participation
 - Significant deficit in the provision of local employment opportunities
 - Relatively low provision of professional jobs
 - Relatively high unemployment rates
 - Relatively low provision of higher order medical services (hospitals)
 - Relatively low provision of preschool services
 - Relatively low provision of arts and cultural services (libraries, arts centres etc.)
 - Poor provision of public transport options
 - Heavy reliance on vehicle-based travel.
- 8 When long-term trends are considered, the following observations are made:
- Disadvantage has increased in the Interface compared to non-Interface areas (SEIFA 2006 to 2011)
 - Median incomes have grown at a slower rate in the Interface compared to non-Interface areas (2006 to 2016)
 - The gap in educational outcomes and youth disengagement has narrowed slightly between Interface and non-Interface areas (2006 to 2016)
 - While local job provision ratio has increased slightly in the Interface, the gap in job provision between Interface and non-Interface areas has widened – with the deficit of white collar jobs in the Interface increasing over time (2006 to 2016)
 - Unemployment levels have worsened in the Interface, compared to non-Interface areas (2006 to 2016)
 - The gap in the provision of health jobs (2006 to 2016) and hospital beds (2011 to 2014) has increased slightly between Interface and non-Interface areas
 - The gap in the provision of arts and cultural facilities and library services has increased between Interface and non-Interface areas (2006 to 2016)
 - The use of public transport has increased slightly in the Interface, but at a lower rate of increase than that observed for non-Interface areas (2006 to 2016)

- Reliance on vehicle-based travel in the Interface has increased compared to non-Interface areas (vehicle registrations and vehicle ownership, 2011 to 2006)

Future Infrastructure Service Requirements and Costs

9 Significant infrastructure and other resources will be required to ensure Interface Council areas are adequately provided for in order to close the gap with non-Interface Council areas, and to ensure improved economic, social and liveability outcomes are achieved for the Interface Councils, as well as for the overall State. Costs of some \$10.9 billion are estimated to be involved to 2031 (in constant 2016 prices) for the provision or upgrading of many infrastructure components and services in Interface areas, as indicated in the Table A. This estimate is based on reducing the gap between the Interface areas and non-Interface areas by 50%, which should be the aspiration in social equity terms.

Table A: Estimated Costs Associated With Providing Key Infrastructure and Services, Interface Councils, 2016-2031

Component	Units Required	New Buildings Required	Estimated Costs* (by 2031)
Kindergarten / Preschool	9,970 places	100 buildings	\$100 million
Primary School	85,110 places	340 buildings	\$760 million
Secondary School	64,570 places	120 buildings	\$720 million
Hospitals	2,180 beds	29 buildings	\$1,175 million
Libraries	8,470m ²	17 buildings	\$24 million
Public Transport	+162,000 users		\$8,124 million
Total			\$10,903 million or \$10.9 billion (rounded)

*Costs include land purchase, building construction, carparking, landscaping and site works.

State Economic Benefits of Infrastructure and Resource Funding

- 10 Significant socio-economic costs associated with congestion impacts on individuals, business, infrastructure and the environment have been identified by the BTRE.
- 11 Over the coming 15 years, cumulative congestion costs are estimated to be approximately \$42 billion in the Interface.
- 12 In contrast, the cost of providing key infrastructure over this period is estimated at \$10.8 billion, or just 25% of the cumulative congestion costs. Importantly, the provision of greater numbers of local jobs, community services and public transport options in the Interface would be expected to contribute significantly to reducing congestion and associated costs, as reliance on private vehicle-based travel declines.
- 13 The provision of infrastructure and services outlined in this report would be expected to contribute to the delivery of approximately 33,000 additional jobs in the Interface in the next 15 years, and assist in meeting a share of the overall employment target of 310,000 jobs over the period 2016 to 2031.

- 14 The provision of higher-order services including major hospitals, further education facilities, schools and aged care facilities would considerably improve liveability in the Interface Councils area, making these localities more attractive for professional job-seekers and their families, and more attractive for investors and those establishing new or expanded businesses.
- 15 Other benefits associated with enhanced infrastructure and service provision in the Interface can be expected to include an improved balance of white- and blue-collar employment opportunities, improved health and education outcomes, reduced pressure on local and regional road infrastructure, and improved environmental outcomes.

INTRODUCTION

Background

This report has been prepared for the group of Interface Councils by Essential Economics Pty Ltd. The analysis presents an update of the 2013 report and provides an assessment of trends for key socio-economic indicators over the period 2006 to 2016.

The Interface Council group comprises the ten contiguous local government areas (LGAs) that form metropolitan Melbourne's outer urban ring, and mark the interface of 'city' and 'country'.

As such, the Interface Councils have a dual identity that makes them part-urban and part-rural. This presents unique challenges for planning, growth and economic development in outer urban municipal areas, as Interface Councils generally do not have access to the same resources or infrastructure as do other metropolitan Councils, and do not qualify for most forms of regional assistance, despite being 90% rural in character.

In addition to confirming recent trends relating to the socio-economic indicators in the Interface, this report identifies long-term infrastructure and service requirements for Interface Councils, together with their associated costs, that will deliver liveability standards for Interface residents comparable with their non-Interface counterparts. This evidence-based analysis will allow the Interface Councils to advocate to Federal and State departments for funding and other support to ensure the required level of infrastructure and services are delivered in a timely manner.

Objectives

The objectives of this report are:

- Identify trends in key Interface socio-economic indicators over the past decade and benchmark the indicators against non-Interface metropolitan council areas and metropolitan Melbourne.
- To project the implications of population growth in Interface Councils on their resources and infrastructure requirements.
- To estimate infrastructure and service needs and associated costs required to meet population growth projections and to close the provision gap with non-Interface Councils.
- To identify benefits to the State of ensuring an equitable level of service provision in Interface Councils.

This Report

This report is organised in the following chapters:

- Chapter 1: Role and Contribution of Interface Councils
- Chapter 2: Population Outlook
- Chapter 3: Socio Economic Profiling and Benchmarking
- Chapter 4: Future Infrastructure and Service Requirements and Costs
- Chapter 5: State Economic Benefits of Infrastructure and Resource Funding

1 ROLE AND CONTRIBUTION OF INTERFACE COUNCILS

1.1 Introduction: Membership and Purpose

The Interface Councils of Melbourne are a consortium of outer LGAs that have come together to promote outer Melbourne and to ensure its future as a liveable location. The member Councils, in alphabetical order, are as follows:

- The Cities of **Casey, Hume, Whittlesea and Wyndham**; and
- The Shires of **Cardinia, Melton, Mitchell, Mornington Peninsula, Nillumbik and Yarra Ranges**.

The group is operationally distinct from other groupings of Councils, and is unique in having a membership base that covers Melbourne's geographic east, west, south and north.

The group includes all seven growth area LGAs – Cardinia, Casey, Hume, Melton, Mitchell, Whittlesea and Wyndham – but the participation of Mornington Peninsula, Nillumbik and Yarra Ranges emphasises that the issues which bring the group together extend beyond just urban development planning issues, and include much higher-order questions relating to the dual-identity of Melbourne's Interface as the home of both urban *and* rural communities.

1.2 Location and Geographic Context

Melbourne, like most Australian capital cities, is a 'city of suburbs'. The official metropolitan area, as defined by the Greater Melbourne Greater Capital City Statistical Area (GCCSA) in the Australian Standard Geographical Classification, has a large geographic footprint, as illustrated in Figure 1.1.

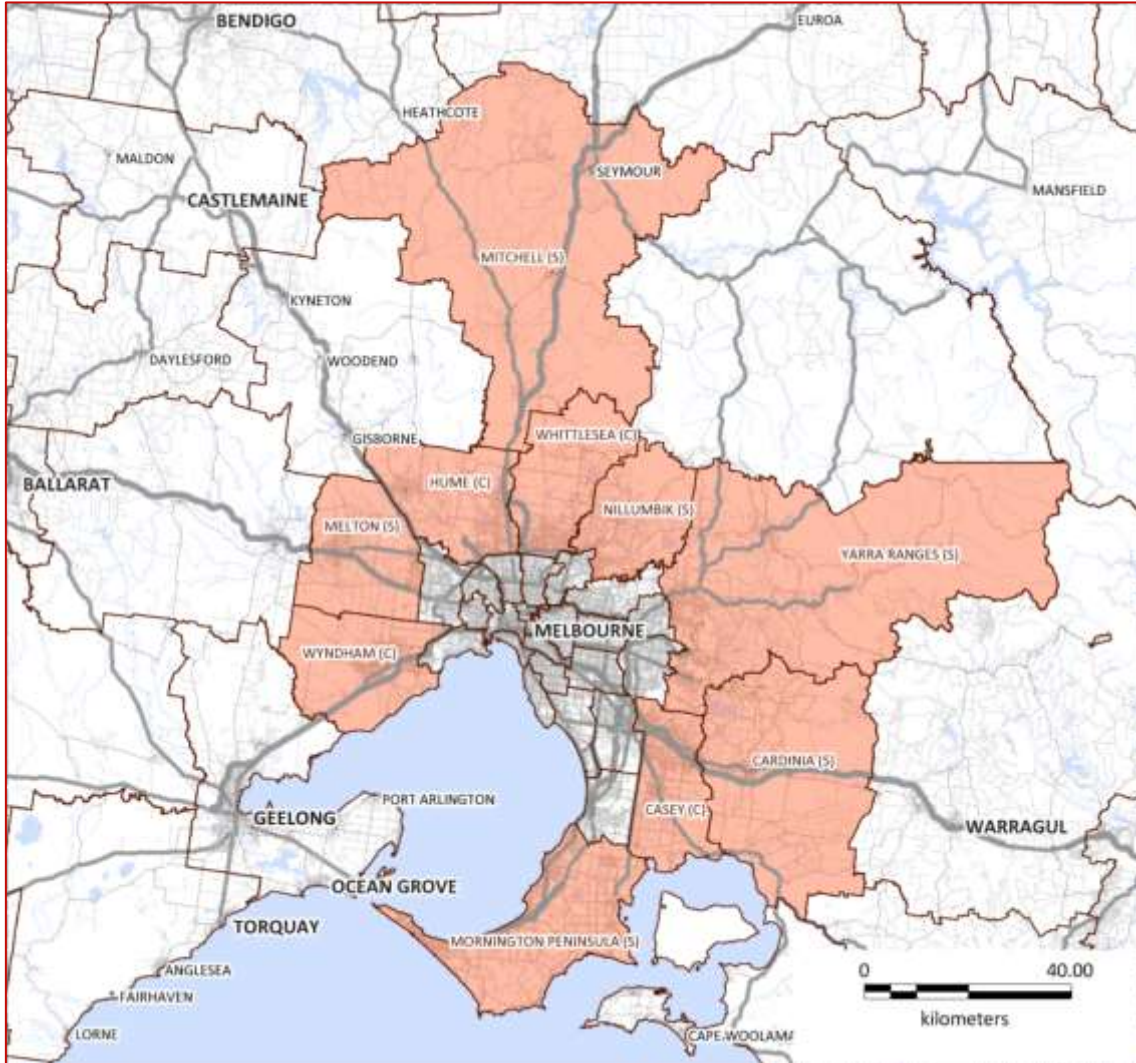
Melbourne's population increased by approximately 860,000 persons over the past decade (2006-2016), creating significant demand for new housing and placing new growth pressures on the Interface Councils in particular. As a result, the State Government has made successive changes to the city's Urban Growth Boundary (UGB), and has established the Urban Development Program (UDP) to help ensure the suitable provision of residential and industrial land supply.

Recognising that changing settlement and development patterns are reshaping the city's boundaries, the Australian Bureau of Statistics (ABS) has recently redefined the functional extent of the metropolitan area by replacing the former Melbourne Statistical Area (MSD) with the Melbourne GCCSA. The GCCSA brings areas to the north of the Statistical Division into the spatial and geo-economic definition of Melbourne for the first time, including parts of Mitchell Shire.

ABS publications and Census results (2011 onwards) now use the new GCCSA boundary to define Melbourne, and this highlights the importance of understanding and responding to changes in Melbourne's social and economic geography, especially at the fringe.

Figure 1.1 shows the location of the Interface Councils with reference to metropolitan Melbourne and the surrounding peri-urban area.

Figure 1.1: Location of Interface Council Areas



Source: Essential Economics Pty Ltd

1.3 Identity of Interface Councils

The Interface sub-region, like all of Melbourne's metropolitan sub-regions, is in large part defined by its geography and in particular by its location relative to the Melbourne Central Business District (CBD). This in turn influences land values, land uses, population trends, and the socio-economic activities and well-being of local residents.

In a geographical sense, the Interface connects *urban* and *suburban* Melbourne with *peri-urban* Melbourne. In other words, the Interface could be viewed as a doughnut-shaped ring that bridges the inner and middle city with the hinterland. Most importantly, the majority of Interface Councils consider themselves to be *part of the city*, as opposed to the peri-urban, which is adjacent to the city.

In view of its distance from Melbourne CBD and the central activities core, the Interface has an economic and social interdependency with places other than the traditional city centre, such as middle and outer metropolitan activity centres (e.g. Dandenong), peri-urban towns (e.g. Romsey), and in some cases regional towns or cities (e.g. Warragul). As such, the character of the Interface combines both urban and rural elements.

Traditionally in Melbourne, young families and new migrants have generally looked to the urban fringe in search of affordable housing and as a pathway to home ownership, noting that the once-affordable inner city areas have long since undergone gentrification. The Interface areas continue to play the same role today in terms of providing relatively lower-priced land and housing. During the population boom of the previous decade (2006 to 2016), when Melbourne's population grew by approximately 860,000 persons, approximately 50% or 445,000 persons made their home in the outer suburbs. This includes a higher-than-average proportion of young families and culturally and linguistically diverse communities. As a result, socio-economic indices and most other social and economic indicators (e.g. SEIFA, VAMPIRE) usually show lower levels of material and societal well-being in Interface areas compared with other areas of Melbourne.

A good deal of diversity exists *within* the Interface, too. The ten member Councils are far from being the 'same' as each other, and differences exist for reasons such as their location in respect to different sides of the city, their different histories, and their different local economies. For example, Hurstbridge and Diamond Creek in the Shire of Nillumbik have been the home of settled communities since the mid-nineteenth century, and this contrasts profoundly with parts of the growth area Councils to the west of Melbourne which are developing large new communities from scratch.

However, the Interface Councils as a group have a strong common interest in ensuring that their communities remain strong and do not get overlooked simply because they have a mixed identity of urban, suburban and rural characteristics.

1.4 Supporting Melbourne's Growth and Liveability

The Interface Councils make a significant ongoing contribution to supporting the economy, sustainability and liveability of Melbourne, and of Victoria as a whole. Their function and role in the metropolitan area is distinct from that of the inner city and the middle ring of suburbs and – in a time of strong population growth and structural economic change in Australia – the importance of the Interface Councils in terms of their socio-economic and environmental role is increasing rather than decreasing.

In particular, four aspects of the Interface region help to define its important strategic contribution to the quality of life in Melbourne:

- Supporting population expansion
- Providing significant new residential supply
- Generating a sizable new labour force to support Greater Melbourne's economy
- Supporting the management and maintenance of local roads.

Interface areas are also responsible for most of the Greater Melbourne’s agricultural land and management of green wedge land.

Supporting Population Expansion

Having been regarded as one of the world's most liveable cities for two decades, Greater Melbourne has attracted more overseas immigrants than any other Australian city in recent years. Interstate relocations to Greater Melbourne have also increased. The Interface has been crucially important to ensuring that sufficient quantities of affordable housing have been available. This has helped to accommodate population growth, support Victoria's economic growth, and maintain liveability across the whole metropolitan area.

Table 1.1 shows that between 2006 and 2016 the ten Interface Councils accommodated 440,250 new residents of Greater Melbourne's new residents, whereas the other twenty-two Councils accommodated 427,190 new residents. In other words, a minority of Councils – the ten Interface Councils – facilitated around 51% of the city's population boom.

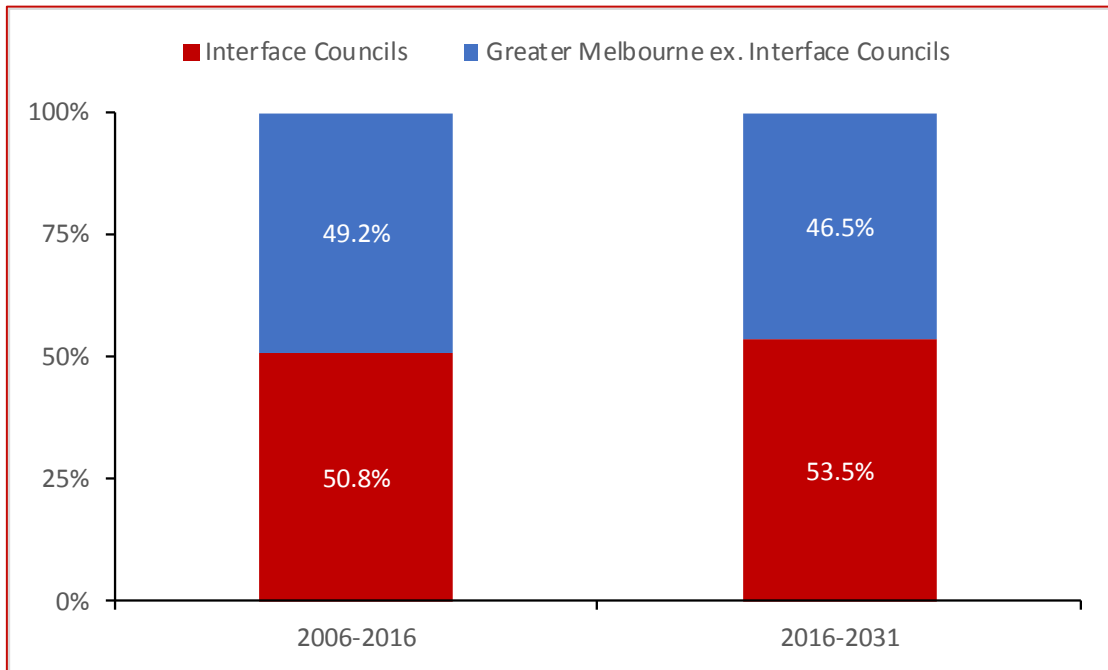
Table 1.1: Historic and Projected Population Trends, Selected Locations 2006 to 2031

	2006	2016	2031	Change 2006-16	AAGR 2006-16	Change 2016-31	AAGR 2016-31
Interface Councils	1,130,380	1,570,630	2,335,750	+440,250	+3.3%	+765,120	+2.7%
Greater Melbourne ex. Interface Councils	2,630,380	3,074,010	3,723,040	+427,190	+1.5%	+665,470	+1.3%
Greater Melbourne	3,760,760	4,664,640	6,058,790	+867,440	+2.1%	+1,430,590	+1.8%

Sources: ABS Census of Population and Housing, 2006 & 2016; Victoria in Future 2016
 Notes: AAGR - Annual Average Growth Rate.
 Figures rounded

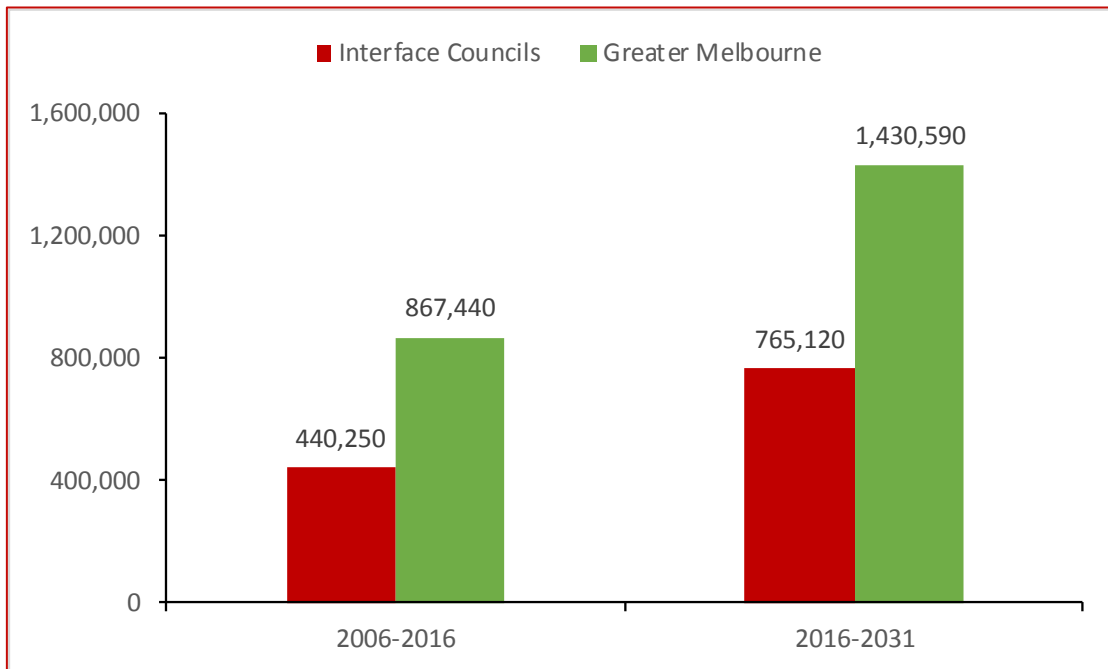
The trend for Interface Councils to do the 'heavy lifting' in terms of facilitating population growth is expected to continue to 2031, as Greater Melbourne's population approaches – and then exceeds – 6 million people. The Interface Council areas are anticipated to accommodate approximately 53% of Greater Melbourne's population growth over the coming 15 years – an additional 765,120 persons out of total increase of 1, 430,590 persons – according to State Government projections (Victoria in Future 2016). This data is shown in Figures 1.2 and 1.3, and the population outlook is discussed in greater detail in Chapter 3.

Figure 1.2: Interface Council’s Historic and Projected Share (%) of Greater Melbourne’s Population Growth, 2006 to 2016 and 2016 to 2031



Sources: ABS Census of Population and Housing, 2006 & 2016; Victoria in Future 2016.

Figure 1.3: Interface Council’s Historic and Projected Share (No. of Additional Persons) of Metropolitan Melbourne’s Population Growth, 2006 to 2016 and 2016 to 2031



Sources: ABS Census of Population and Housing, 2006 & 2016; Victoria in Future 2016.

Local Roads

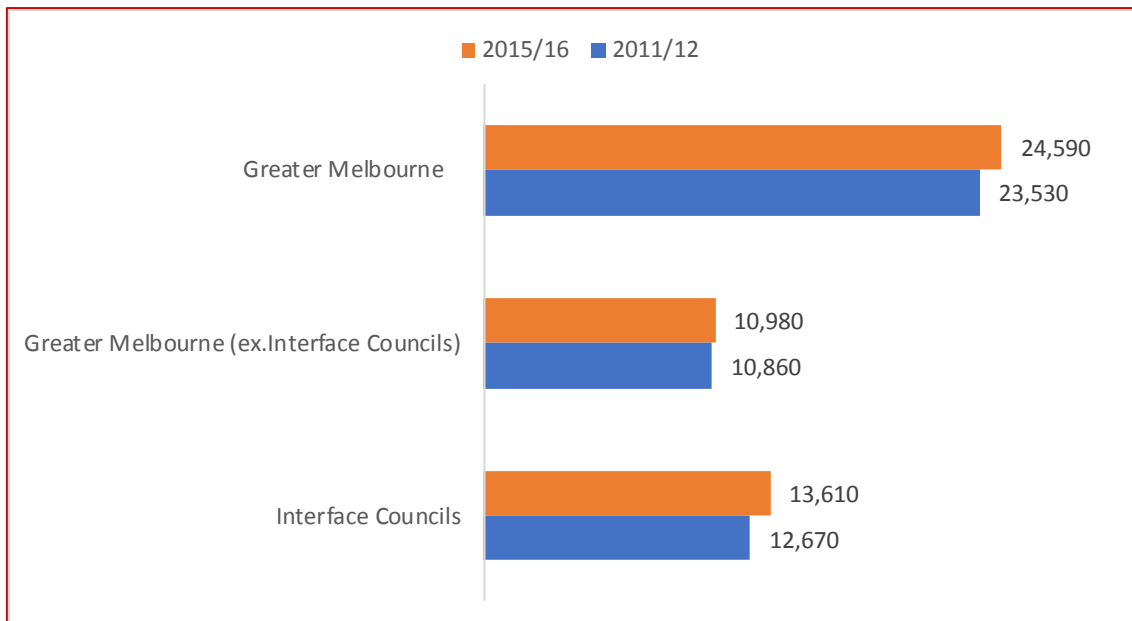
The Interface Councils are responsible for the maintenance of significantly longer lengths of local roads compared to Greater Melbourne (excluding Interface Councils). The Interface Councils are responsible for 13,610km of local roads and this represents approximately 55% of all local roads in Greater Melbourne. The length of local roads Interface Councils are responsible for has increased by 940km over the period 2011/12 to 2015/16 (only comparable data available), and the Interface’s share of Greater Melbourne local roads has increased slightly over the 5-year period from 53.8% to 55.3%. This information is in Table 1.2. and Figure 1.4.

Table 1.2: Length of Council Operated Roads, Selected Areas, 2011/12 to 2015/16

	2011/12		2015/16	
	Length of Local Roads (Km)	Share	Length of Local Roads (Km)	Share
Interface Councils	12,670	53.8%	13,610	55.3%
Greater Melbourne (ex.Interface Councils)	10,860	46.2%	10,980	44.7%
Greater Melbourne	23,530	100.0%	24,590	100.0%

Source: Victorian Grants Commission - Annual Report s (2012/13 and 2016/17)

Figure 1.4: Local Roads (KMs) Responsibility, Selected Areas, 2011/12 and 2015/16



Source: Victorian Grants Commission - Annual Report s (2012/13 and 2016/17)

Local roads usage has also increased significantly over the 2011/12 to 2015/16 period in the Interface. For example, in the Interface the number of kilometres of urban roads carrying 5,000 or more vehicles per day has increased by 70km over 5 years (compared to an increase of 40km in non-Interface areas), while the number of kilometres of rural roads carrying 1,000 or more vehicle per day has increased by 40km (compared to no increase in non-Interface

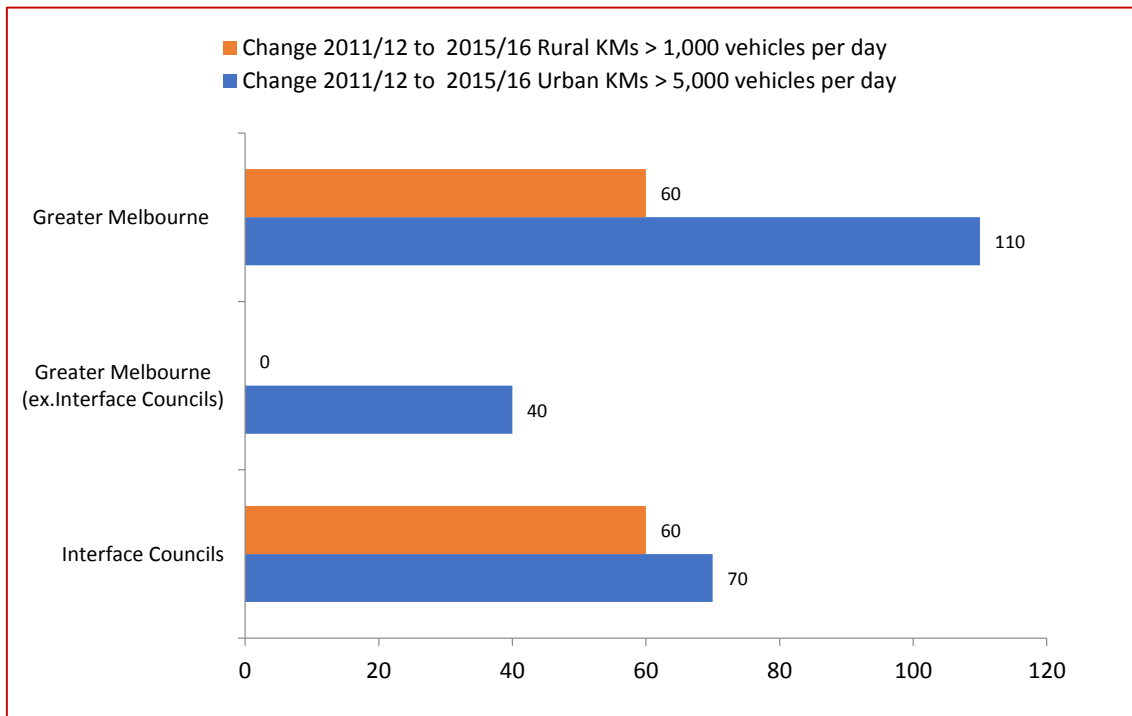
areas). This data, which is shown in Table 1.3 and Figure 1.5, highlights the increasing pressure on council-operated roads in the Interface as population numbers expand.

Table 1.3: Trends in Local Roads Usage, Selected Areas, 2011/12 to 2015/16

	2011/12		2015/16		Change 2011/12 to 2015/16	
	Urban KMs > 5,000 vehicles per day	Rural KMs > 1,000 vehicles per day	Urban KMs > 5,000 vehicles per day	Rural KMs > 1,000 vehicles per day	Urban KMs > 5,000 vehicles per day	Rural KMs > 1,000 vehicles per day
Interface Councils	380	590	450	650	+70	+60
Greater Melbourne (ex.Interface Councils)	820	90	860	90	+40	+0
Greater Melbourne	1,200	680	1,310	740	+110	+60

Source: Victorian Grants Commission - Annual Reports (2012/13 and 2016/17)

Figure 1.5: Increase in Daily Local Roads Usage (KM), Selected Areas, 2011/12 to 2015/16



Source: Victorian Grants Commission - Annual Reports (2012/13 and 2016/17)

1.5 Strategic Development Objectives of Interface Councils

Interface Councils' long-term development objectives are focused on creating liveable communities in Melbourne's outer suburbs. This means ensuring residents have access to essential services and infrastructure that underpin critical components of daily life. It is vital that communities in the Interface are not left behind as second-tier residents of Melbourne.

The potential for "Two Melbourne's" to further emerge is a result of historical underfunding of services and infrastructure in the Interface region, and an inherent inability to keep pace with rapid population growth and changing demographics. As a result, residents face significant barriers in accessing jobs, education, services and amenities compared with residents from across the rest of Greater Melbourne.

Accordingly, Interface Councils' priorities remain broad and they extend across a range of liveability domains, as follows:

- Improved social infrastructure and services, by building vital community infrastructure that enhances liveability
- Addressing transport disadvantage, including roads and public transport
- Providing more diverse jobs closer to home, to ensure the viability and sustainability of all communities in Melbourne
- Innovative housing solutions that provide greater affordable housing and housing support
- Creating walkable neighbourhoods that promote active transportation and reduce car dependency
- Building communities that provide access to affordable and healthy food options
- Preserving and managing open spaces (including green wedges) and ensuring residents have access to adequate community, sporting and culture facilities
- Addressing rural/urban funding inequity (restoring and increasing the Growing Suburbs Fund).

1.6 Summary and Implications

- 1 The Interface Councils are a strategic grouping of outer local government areas (including all of Melbourne's growth areas) that have come together to promote outer Melbourne and to ensure its future as a liveable location.
- 2 Interface Councils play an important role in supporting Metropolitan Melbourne's economy, and this role will become more critical as Melbourne's population expands to 6 million persons and beyond over the coming 15 years.
- 3 The ongoing and future role of the Interface Councils includes:
 - Accommodating approximately 53% of Greater Melbourne's population growth over the period 2016 to 2031.

- Providing approximately 49% of Greater Melbourne’s dwelling requirements over the next 15 years (refer to Chapter 2)
 - Supporting Greater Melbourne’s labour force requirements by providing approximately 53% of labour force growth between 2016-2031 (refer to Chapter 4)
 - Responsible for 55% of Greater Melbourne’s local road network, including a considerable amount of non-sealed local roads.
- 4 The Interface Councils have developed a set of Strategic Development Objectives aimed at ensuring living standards for Interface residents are comparable with those experienced in Greater Melbourne’s non-Interface areas. To achieve the desired outcome, improved infrastructure and services (public transport, schools, community services and local jobs) will need to be delivered in a timely manner to remove existing disadvantage and ensure improved economic efficiency in the Interface.
- 5 This study will analyse existing and 10-year trends in key areas of disadvantage and infrastructure and service under-provision, together with estimating requirements and costs associated with meeting population expansion needs and closing the infrastructure and service provision gap with Greater Melbourne’s non-Interface areas over the coming decades.

2 POPULATION OUTLOOK

2.1 Introduction

This Chapter explores the population outlook for Metropolitan Melbourne and the Interface Councils based on official State Government population projections (Department of Land, Water and Planning – *Victoria in Future 2016*).

The methodology used to generate these forecasts is described and a summary of population and dwelling projections for the period 2016 through 2031 is provided.

2.2 Victoria in Future 2016

Methodology

DELWP has released updated population and household projections for Victoria (*Victoria in Future 2016*) which are based on the 2015 ABS population estimates and supersede the projections published by their predecessor department in 2012.

Like the 2012 projections, the VIF 2016 projections are based on ABS Estimated Resident Population (ERP) data (June 2015 release) and focus on two main components of population change:

- Natural increase (births less deaths)
- Net migration (people moving into an area minus those moving out).

Within these components, more detailed analysis is undertaken when estimating future change, and this analysis includes:

Natural increase

- How births are affected by age structures and fertility rates
- How deaths are affected by age structures and mortality rates.

Migration

- Overseas migration
- Interstate migration
- Within-state migration

In developing projections, the DELWP analyses:

- Demographic data and housing development information;
- Victoria's economic, social and demographic trends;
- Detailed local knowledge gained through consultation with local governments, regional service providers, peers and stakeholders.

Population forecasts

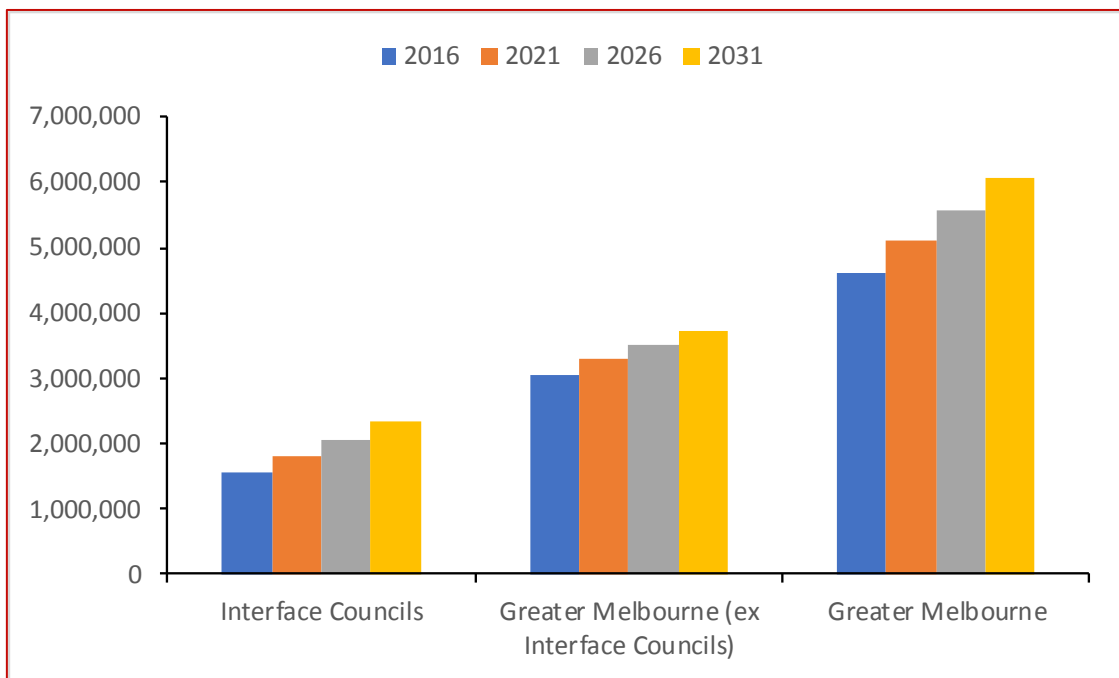
VIF 2016 data shows that over the period 2016 to 2031, the population of the Interface Councils is expected to increase from 1,570,630 persons to 2,335,750 persons, representing an increase of +765,120 persons over the period. As Table 2.1 and Figure 2.1 show, in growth terms the population of the Interface Councils is expected to expand by 2.7% pa over the period, and this compares to 1.8% pa for Greater Melbourne.

Table 2.1: Population Projections, Selected Locations, 2016 to 2031

	2016	2021	2026	2031	Change 2016-2031	AAGR 2016-2031
Interface Councils	1,570,630	1,806,500	2,070,570	2,335,750	+765,120	+2.7%
Greater Melbourne (ex. Interface Councils)	3,057,570	3,300,180	3,515,290	3,723,040	+665,470	+1.3%
Greater Melbourne	4,628,200	5,106,680	5,585,860	6,058,790	+1,430,590	+1.8%

Sources: Department of Environment, Land, Water and Planning, *Victoria in Future 2016*
 Note: AAGR - Annual Average Growth Rate; Figures rounded

Figure 2.1: Population Projections, Selected Locations, 2016 to 2031



Sources: Department of Environment, Land, Water and Planning, *Victoria in Future 2016*

Forecast Demographic Change

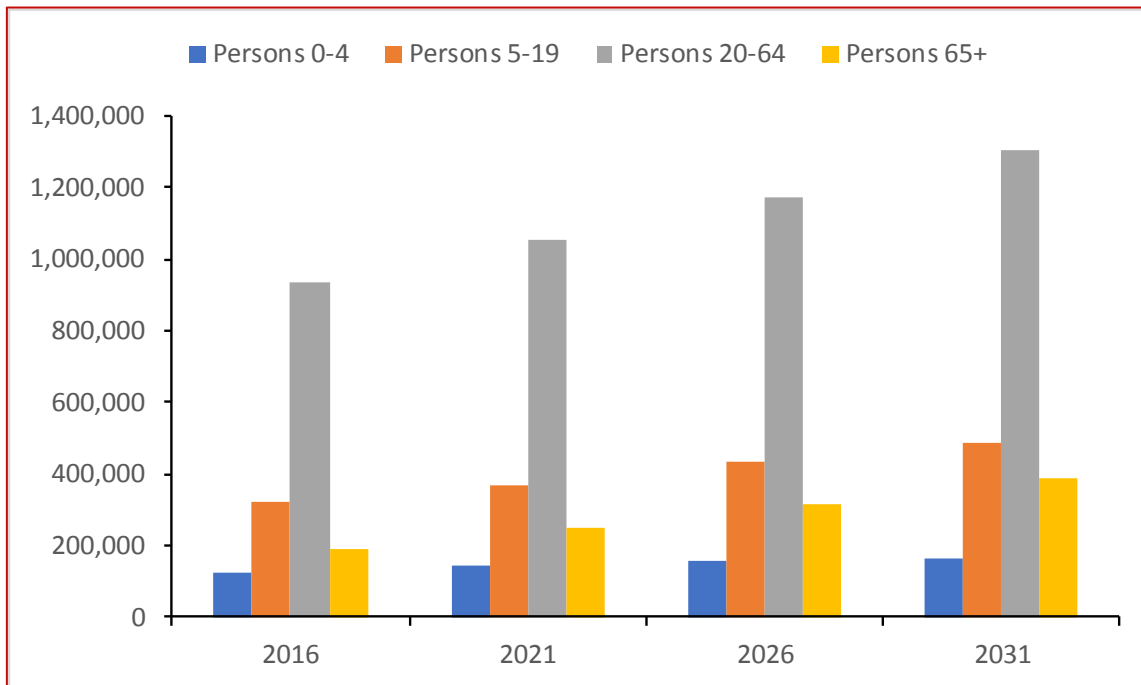
A more detailed examination of VIF 2016 data, presented in Table 2.2 and Figure 2.2, show the demographic composition of the Interface Councils by age cohort is expected to gradually change over the period 2016 to 2031. These changes are forecast to involve a reduction in the proportions of pre-school-age persons (7.9% to 7.0%) and working-age persons (59.7% to 55.8%), but a modest increase in school-age persons (20.4% to 20.8%) and a significant increase in the proportion of retirement-age persons (from 12.0% in 2016 to 16.4% in 2031).

Table 2.2: Population Projections by Age Groupings, Interface Councils, 2016 to 2031

Age Group	2016		2021		2026		2031		Change	AAGR	Change in
	No.	%	No.	%	No.	%	No.	%	2016-2031	2016-2031	Share of Population 2016-2031
Persons 0-4	123,850	7.9%	139,810	7.7%	154,390	7.5%	162,950	7.0%	+39,100	+1.8%	-0.9%
Persons 5-19	321,020	20.4%	370,110	20.5%	430,300	20.8%	486,170	20.8%	+165,150	+2.8%	+0.4%
Persons 20-64	937,260	59.7%	1,051,250	58.2%	1,173,290	56.7%	1,302,550	55.8%	+365,290	+2.2%	-3.9%
Persons 65+	188,490	12.0%	245,310	13.6%	312,590	15.1%	384,100	16.4%	+195,610	+4.9%	+4.4%
Total	1,570,620	100.0%	1,806,480	100.0%	2,070,570	100.0%	2,335,770	100.0%	+765,150	+2.7%	0.0%

Sources: Department of Environment, Land, Water and Planning, *Victoria in Future 2016*
 Note: AAGR - Annual Average Growth Rate; Figures rounded

Figure 2.2: Population Projections by Age Groupings, Interface Councils, 2016 to 2031



Source: Department of Environment, Land, Water and Planning, *Victoria in Future 2016*

Forecast Dwelling Growth

VIF 2016 forecasts total dwellings in the Interface Councils will increase from 604,560 dwellings in 2016 to 916,270 dwellings in 2031, representing an expansion of +311,710 new dwellings and an average annual dwelling growth of 2.8% over the period. This compares with 2.0% dwelling growth for Greater Melbourne, highlighting the ongoing role of Interface Council Areas in supporting population growth over the forecast period.

The Interface Councils' share of total Greater Melbourne dwelling growth over the period 2016 to 2031 is estimated to be approximately 49%.

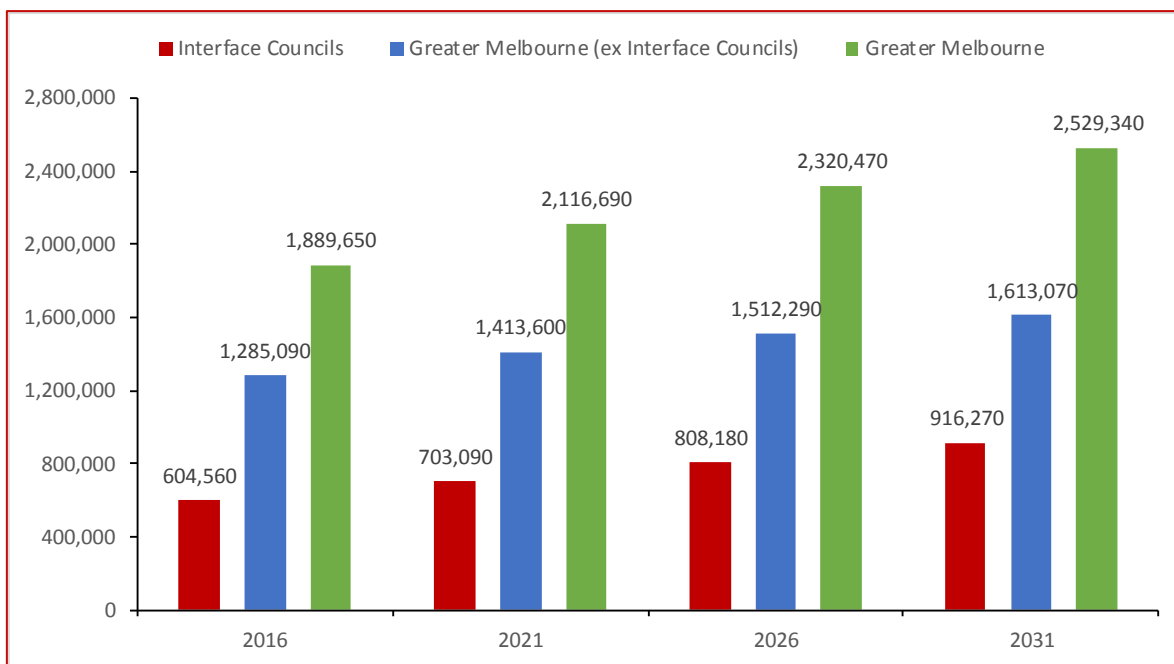
Dwelling data forecasts are included in Table 2.3 and Figure 2.3.

Table 2.3: Forecast Dwelling Growth, Interface Councils, 2016 to 2031

	2016	2021	2026	2031	Change 2016-2031	AAGR 2016-2031
Interface Councils	604,560	703,090	808,180	916,270	+311,710	+2.8%
Greater Melbourne (ex. Interface Councils)	1,285,090	1,413,600	1,512,290	1,613,070	327,980	1.5%
Greater Melbourne	1,889,650	2,116,690	2,320,470	2,529,340	+639,690	+2.0%
Interface Council's share of Greater Melbourne growth over period	-	43.4%	51.6%	51.7%	48.7%	-

Sources: Department of Environment, Land, Water and Planning, *Victoria in Future 2016*
 Note: AAGR - Annual Average Growth Rate; Figures rounded

Figure 2.3: Forecast Dwelling Growth, Interface Councils, 2016 to 2031



Source: Department of Environment, Land, Water and Planning, *Victoria in Future 2016*

2.3 Conclusions

- 1 The State Government (DELWP) has prepared long-term population, demographic and household projections for the Interface Councils; these projections span a time period of 15 years.
- 2 DELWP indicates an increase of approximately +310,000 dwellings between 2016 and 2031, supporting an estimated population growth of approximately +765,000 persons in Interface Council Areas.
- 3 When demography is considered, VIF data shows strong growth in those aged 65+ years underpinning total population growth in the region (increasing from 12% to 16% of the total population over the 15-year period); however, the working-age cohort will remain the dominant age group with a 56% share of the total population at 2031 (a reduction from a 60% share in 2016).

3 SOCIO-ECONOMIC PROFILING AND BENCHMARKING

3.1 Introduction

This Chapter provides a benchmarking assessment to show how the Interface Councils compare to the balance of Greater Melbourne (excluding Interface Councils) and Greater Melbourne against a range of socio-economic indicators (health, education, income, employment, transport etc). Based on these benchmarks, gaps in infrastructure and service provision are identified.

3.2 SEIFA

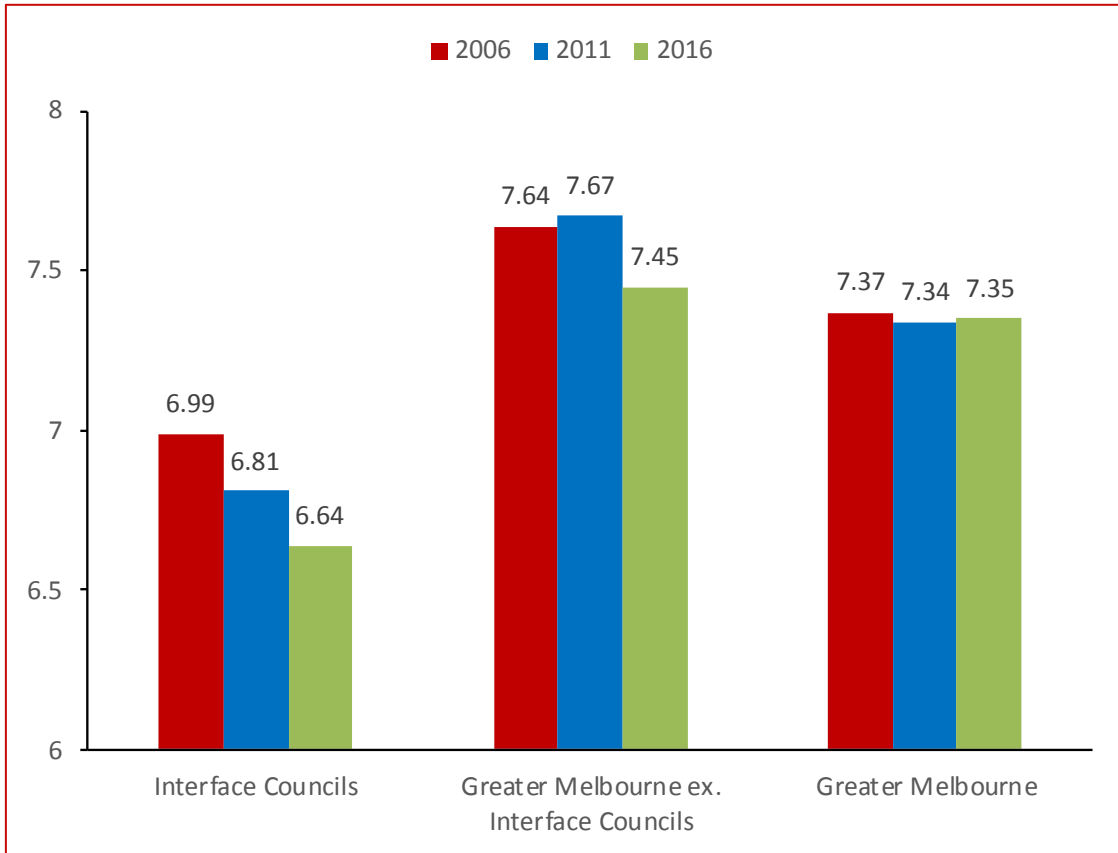
Every five years the ABS prepares a series of indices relating to social advantage and disadvantage status for each municipality in Australia. These indicators are known as Socio-Economic Indexes for Area (SEIFA) and are based on data compiled from the Census of Population and Housing. The Index of Relative Socio-Economic Disadvantage is a broad measure exclusively of disadvantage. The index has 16 input variables; the most significant include the proportions of:

- Low household incomes
- Jobless parents of dependent children
- Dwellings without internet access

Data compiled for 2006, 2011 and 2016, presented in Figure 3.1, shows that when measured in terms of decile (that, is the average score on an equal scale of 0-10 across Victoria), the Interface Councils are relatively disadvantaged (with the group falling within the 7th decile) compared to Greater Melbourne (excluding Interface Councils), with this group of Councils falling within the 8th decile, and Greater Melbourne which shows the average across all metropolitan councils and falls within the 8th decile.

This data highlights the heightened level of disadvantage in the Interface's socioeconomic environment compared to non-Interface areas and this is further explored below. Trend data between the two time periods shows a decline in the relative ranking of both Interface Councils and Greater Melbourne, but an improvement for non-Interface areas.

Figure 3.1: Index of Relative Socio-Economic Disadvantage by Decile, Selected Locations



Source: ABS Socio-Economic Indexes for Areas (SEIFA) 2006, 2011, and 2016

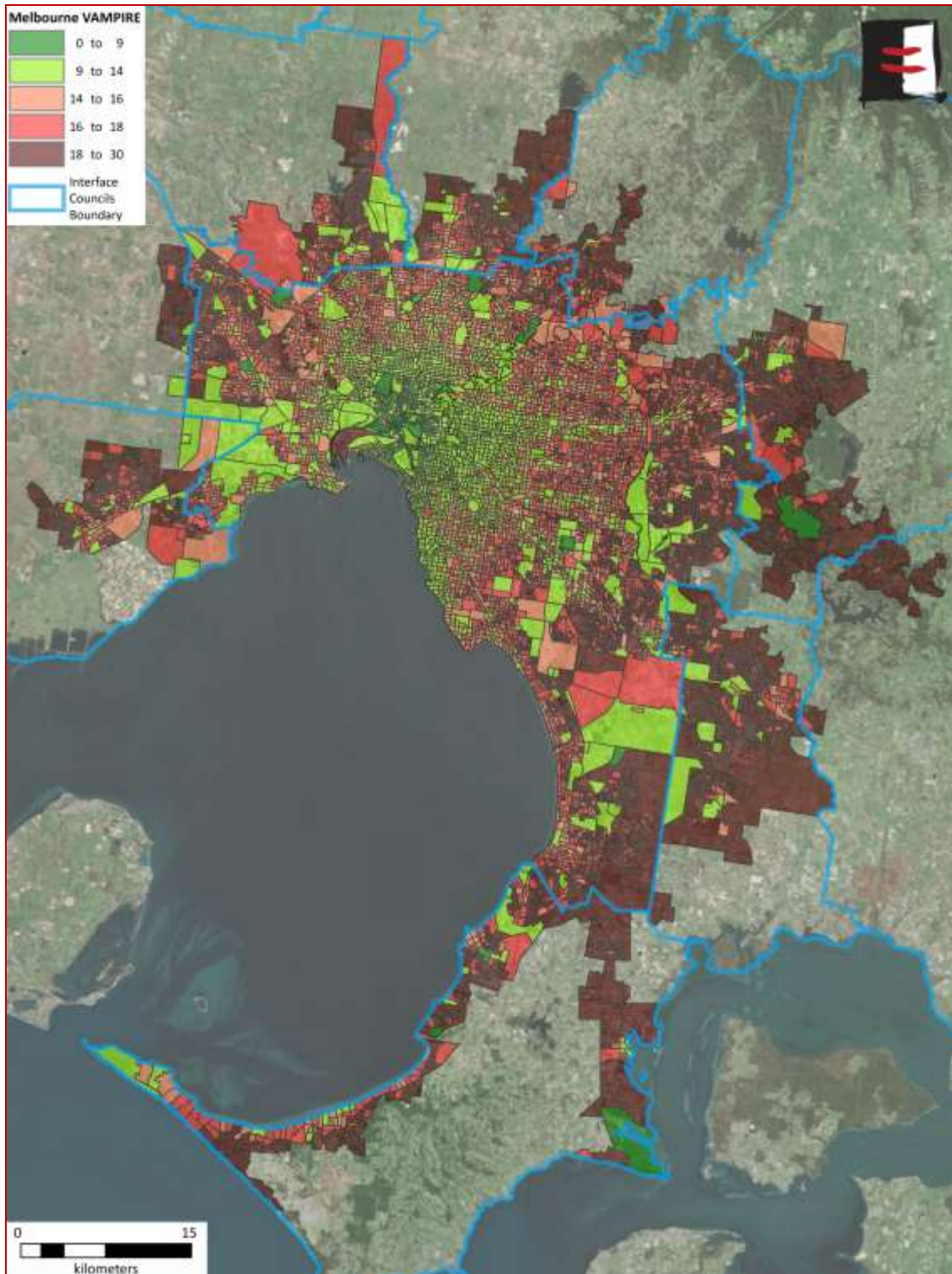
3.3 Vulnerability Assessment for Mortgage, Petroleum, and Inflation Risks and Expenditure (VAMPIRE)

The Vulnerability Assessment for Mortgage, Petroleum, and Inflation Risks and Expenditure (VAMPIRE) has been developed by Griffiths University to assist in understanding household vulnerability to key socio-economic stress factors. Specifically, VAMPIRE is an index that calculates the level of household vulnerability at the local level and is based on ABS Census data. VAMPIRE combines Census information on car dependence, mortgages and incomes at the Collector District level.

VAMPIRE data for 2011 (latest available) clearly shows that high and very high vulnerability levels (as indicated by high scores on the 0-30 index scale) are principally focused in Interface locations. In contrast, minimal and low vulnerability levels (as indicated by low scores on the 0-30 index scale) are almost exclusively focused on inner and middle ring Metropolitan areas. This data, as shown in Figure 3.2, highlights the challenges facing residents of many Interface Councils (especially in Growth Areas) associated with lack of public transport options, car dependency, and relatively high housing costs compared to non-Interface areas.

VAMPIRE trends across the period 2006 to 2011 do not appear to have changed greatly, indicating household vulnerability factors continue to be most prevalent in Interface Areas.

Figure 3.2: Vulnerability Assessment for Mortgage, Petroleum, and Inflation Risks and Expenditure (VAMPIRE) - Metropolitan Melbourne, 2011



Source: Griffith University Urban Research Program, Vampire 2011 for Capital Cities (2017)

3.4 Income

Based on Census data for 2016, Interface residents have a median personal income of \$33,240 per year; this is significantly lower than the figure for Non-Interface areas where median personal income is \$36,160 per year and approximately 9% above the Interface median.

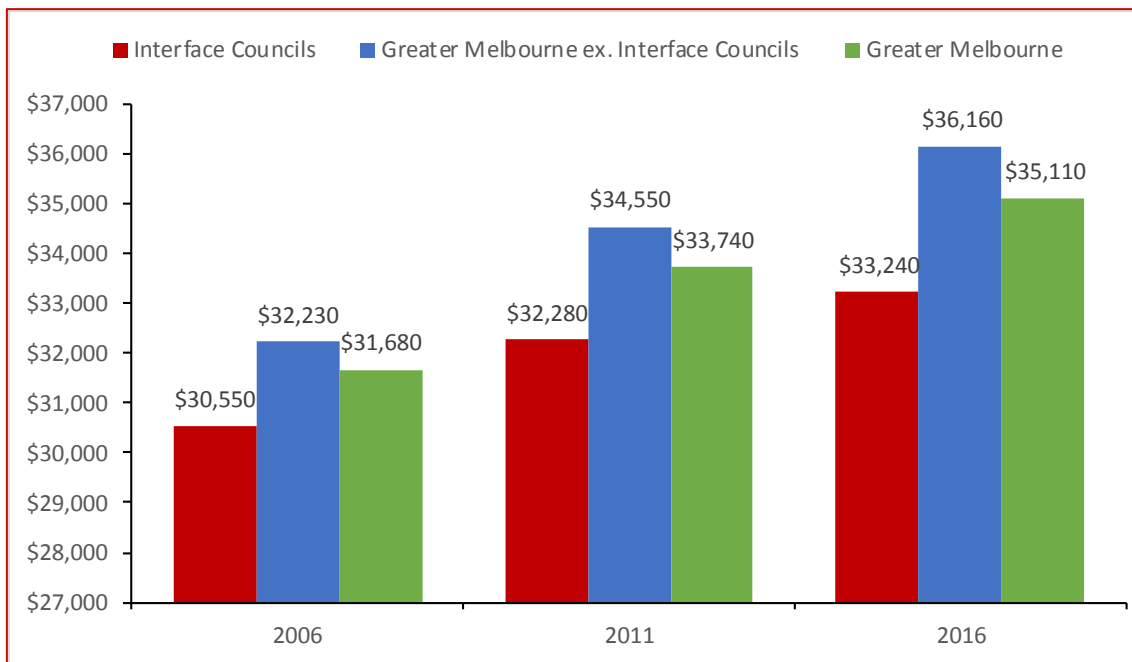
Table 3.1: Median Annual Personal Income (\$), Selected Locations, Constant 2016 Dollars

	2006	2011	2016	Change 2006-2016	Change 2006- 2016	AAGR 2006-2016
Interface Councils	\$30,550	\$32,280	\$33,240	+\$2,690	+8.8%	+0.8%
Greater Melbourne ex. Interface Councils	\$32,230	\$34,550	\$36,160	+\$3,930	+12.2%	+1.2%
Greater Melbourne	\$31,680	\$33,740	\$35,110	+\$3,430	+10.8%	+1.0%

Sources: ABS Census of Population and Housing 2006, 2011, 2016; Reserve Bank of Australia Inflation Measures; Essential Economics

Notes: AAGR = Annual Average Growth Rate
 Figures rounded

Figure 3.3: Trends in Median Annual Personal Income (\$), Selected Locations, 2006 to 2016, Constant 2016 Dollars



Sources: ABS Census of Population and Housing 2006, 2011, 2016

Between 2006 and 2016, Interface Councils experienced real growth in median incomes of 0.8% per year; by comparison, real incomes in Non-Interface areas increased by 1.2% per year over the same period. **This trend shows the gap in real income has widened between Interface and non-Interface areas over the period 2006-2016.**

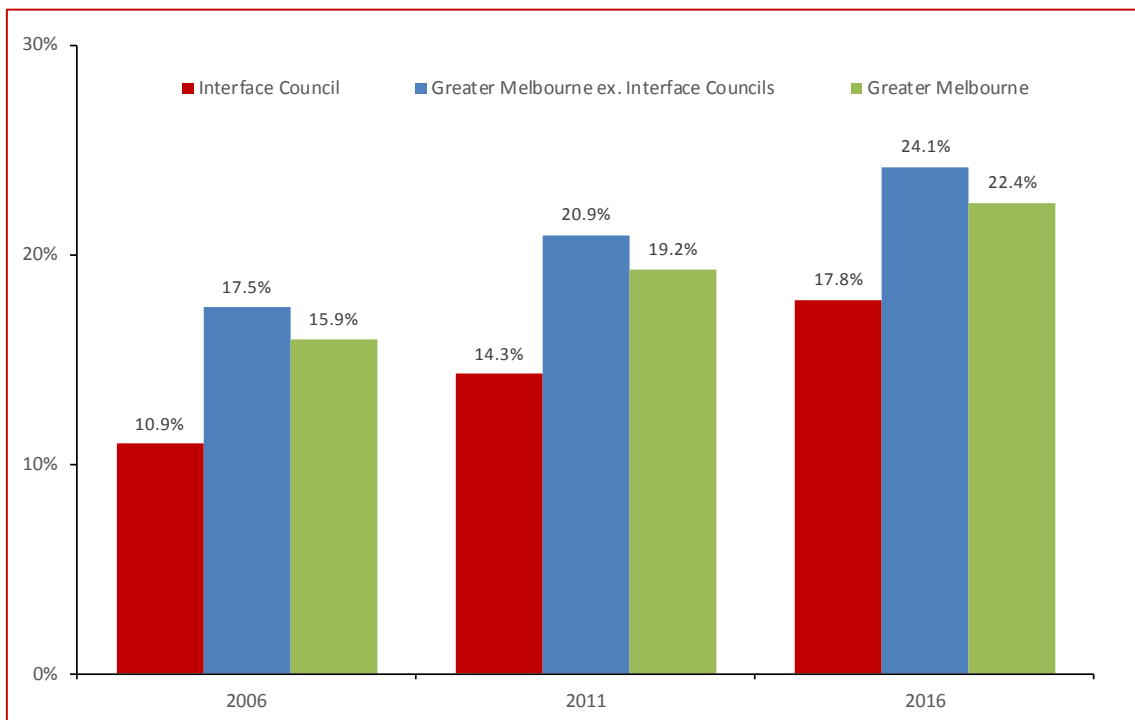
3.5 Education

Qualifications

Interface residents have significantly lower educational qualifications (as measured by post-school qualifications achieved) compared to non-Interface residents and Greater Melbourne residents overall, according to data sourced from the 2016 ABS Census.

For example, in 2016 just 17.8% of Interface residents aged 15 years and over hold a bachelor’s degree or higher qualification compared to 24.1% for non-Interface residents and 22.4% for Greater Melbourne residents overall.

Figure 3.4: Share of Post-School Qualifications for Residents Aged 15 years+, Selected Areas



Sources: ABS Census of Population and Housing, 2006, 2011, 2016

Between 2006 and 2016, the proportion of Interface residents aged 15 years and over holding a degree or higher qualification increased from 10.9% to 17.8% (+6.9 percentage points).

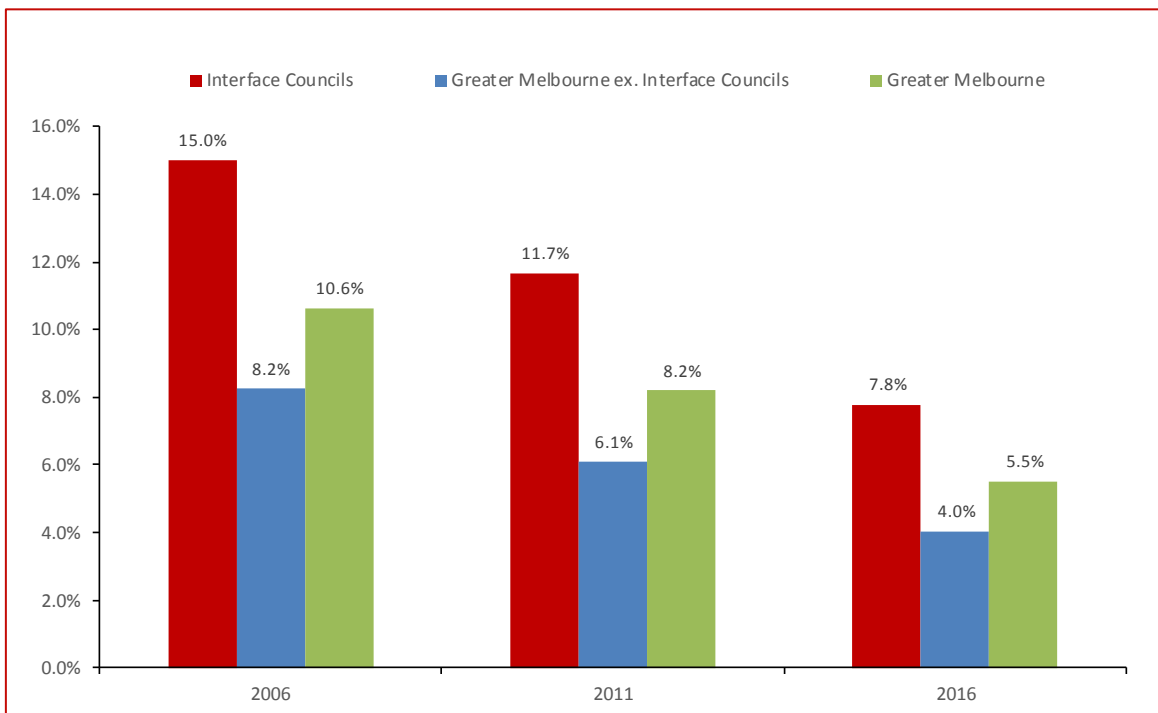
The proportion of non-Interface residents aged 15 years and over holding a degree or higher qualification increased from 17.5% to 24.1% (+6.6 percentage points).

Overall, the data shows the gap in educational qualifications between Interface and non-Interface residents has closed only slightly, from 6.6 percentage points in 2006 to 6.3 percentage points in 2016.

Youth Engagement

A significantly higher level of youth disengagement relating to further education and work participation exists in Interface Councils relative to non-Interface Councils and Greater Melbourne. According to data sourced from the Census, 7.8% of resident 17 year-olds in Interface Councils were not attending any educational institution and this compares with 4.0% for non-Interface Council areas and 5.5% for Greater Melbourne. This data is shown in Figure 3.5.

Figure 3.5: Share of 17 Year-olds Not Attending Any Educational Institution, Selected Locations



Sources: ABS Census of Population and Housing, 2006, 2011, 2016

Between 2006 and 2016, the proportion of 17 year-olds in Interface Councils who were not involved in education or participating in the workforce declined significantly from 15.0% to 7.8%.

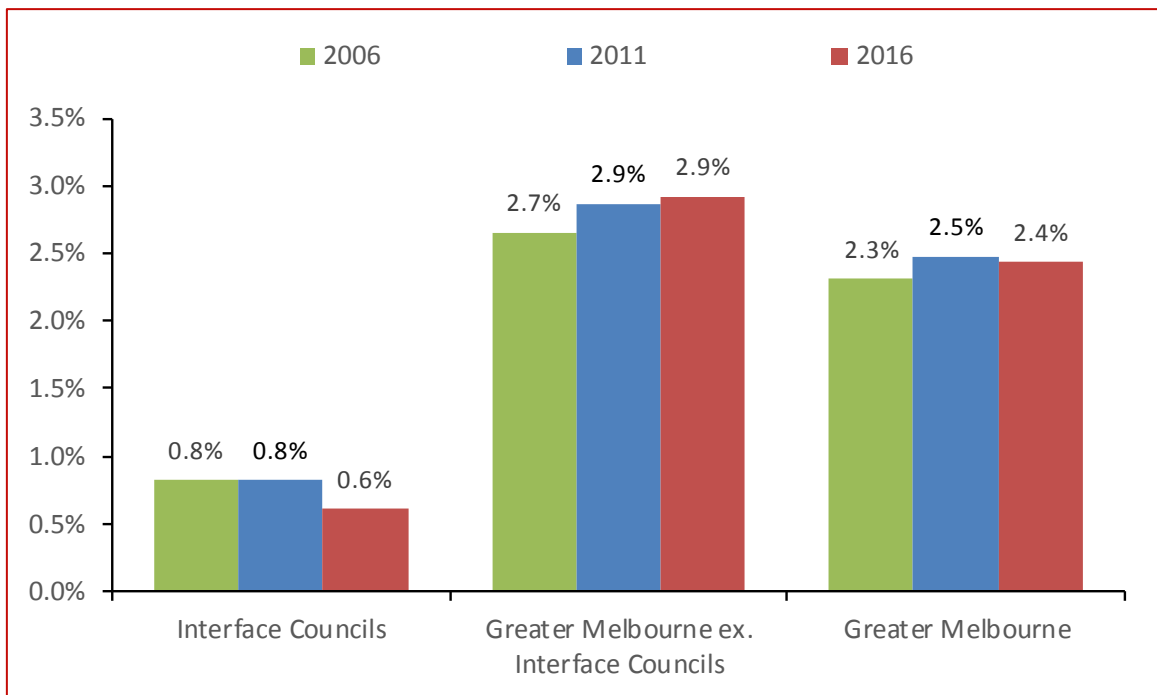
This trend is generally in line with observed data for non-Interface areas over the 10-year period, with the proportion disengaged youths in non-Interface residents declining from 8.2% to 4.0%.

Overall, the data shows the gap in youth disengagement between Interface and non-Interface areas has narrowed somewhat, from 6.8 percentage points in 2006 to 3.8 percentage points in 2016.

Provision of Tertiary Education Facilities

A proxy for the provision of services is the relative proportion of jobs located in a particular area associated with an activity. When tertiary education provision is considered, ABS Census data for 2016 shows that only 0.6% of jobs in Interface Council areas are associated with tertiary education, and this compares to 2.9% for non-Interface Councils areas and 2.4% for Greater Melbourne, as shown in Figure 3.6.

Figure 3.6: Job Provision in Tertiary Education Services (Share of Total Jobs) – Selected Locations 2006 to 2016



Source: ABS Census of Population and Housing, 2006, 2011 & 2016

Between 2006 and 2016, the proportion of tertiary jobs located in Interface areas has fallen from 0.8% to 0.6%, and this contrasts with growth in the tertiary education employment share in non-Interface areas from 2.7% to 2.9%.

This data, if used as a proxy for the availability of tertiary education facilities and services, indicates the gap in provision has increased between Interface and non-Interface areas over the period 2006-2016.

3.6 Employment Provision

Job Provision Ratio

ABS Place of to Work data (formally ABS Journey to Work) provides information on the number of jobs provided in a particular location. This data – when combined with ABS Census data relating to labour force numbers – enables an assessment of job provision or ‘employment sustainability’ to be made for a particular location. The job provision ratio is defined as the number of jobs provided in a geographical area divided by the number of resident labour force participants in that area.

Using this methodology, analysis of 2016 Census data shows the Interface Council areas have a job provision ratio of 0.57 jobs per resident labour force participant and this is only approximately one-half the provision for non-Interface areas which have 1.07 jobs per resident labour force participant. The job provision ratio for Greater Melbourne is 0.90 jobs per resident labour force participant.

As Table 3.2 and Figure 3.7 show, in 2016 the Interface Councils had a local jobs deficit of approximately 325,000 jobs, when measured in terms of employment sustainability.

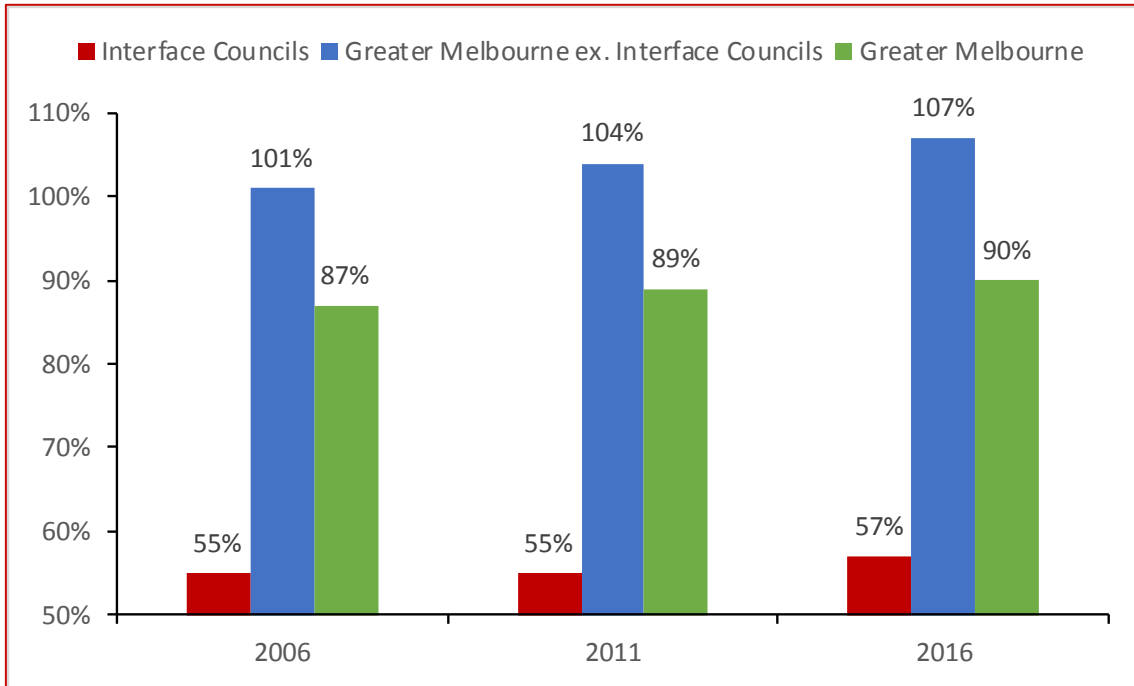
Table 3.2: Job Provision – Selected Locations, 2006 to 2016

	Interface Councils	Greater Melbourne (excluding Interface Councils)	Greater Melbourne
<u>2006</u>			
Jobs in LGA	294,920	1,253,750	1,549,750
LGA Labour Force	535,810	1,240,660	1,780,790
Local jobs deficit/surplus	-240,890	+13,090	-231,040
Job Provision Ratio	0.55	1.01	0.87
<u>2011</u>			
Jobs in LGA	335,380	1,356,920	1,682,710
LGA Labour Force	612,660	1,302,190	1,898,880
Local jobs deficit/surplus	-277,280	+54,730	-216,170
Job Provision Ratio	0.55	1.04	0.89
<u>2016</u>			
Jobs in LGA	429,790	1,616,370	2,046,160
LGA Labour Force	755,060	1,514,060	2,269,120
Local jobs deficit/surplus	-325,270	+102,310	-222,960
Job Provision Ratio	0.57	1.07	0.90

Sources: ABS Journey to Work 2006; ABS Place of Work 2011 and 2016

Note: Figures rounded

Figure 3.7: Job Provision Ratio – Selected Locations, 2006 to 2016



Sources: ABS Journey to Work 2006; ABS Place of Work 2011 and 2016
 Note: Figures rounded

Between 2006 and 2016, the job provision ratio in Interface areas has improved slightly from 0.55 to 0.57 jobs per resident labour for participant, while the jobs deficit has increased from approximately -241,000 jobs to approximately -325,000 jobs (reflecting the strong expansion of the Interface labour market over the 10-year period).

In contrast, job provision non-Interface areas has improved from 1.01 to 1.07 jobs per resident labour force participant, with the jobs surplus increasing from approximately 13,000 jobs to approximately 102,000 jobs.

Thus, over the 2006 to 2016 period only modest progress is observed in the provision of sufficient new jobs in Interface areas to improve job sustainability outcomes.

Job Provision by Occupation

Interface Councils have a relatively low proportion of local management and professional jobs (28% of all jobs), compared to non-Interface Council areas (43% of all jobs) and Greater Melbourne (40% of all jobs). This information is included in Figure 3.10. In contrast, Interface Councils provide a considerably higher proportion of local 'blue collar' jobs (35%), such as those associated with trades, technicians, machinery operators, labourers etc compared with metropolitan benchmarks.

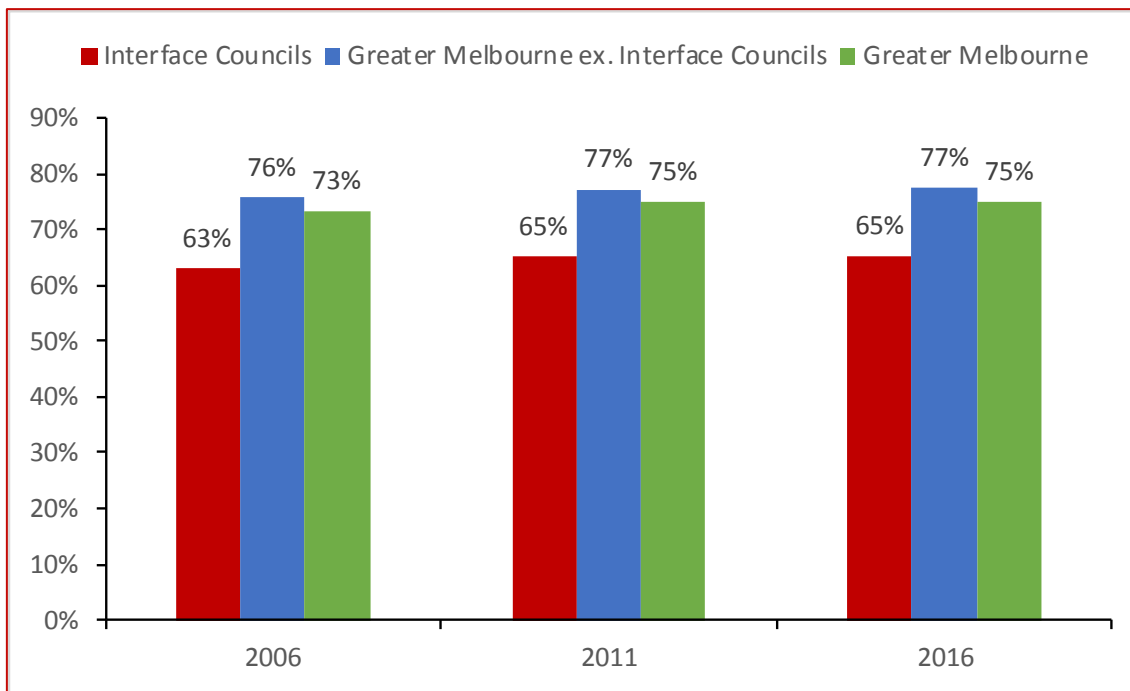
As Table 3.3 and Figure 3.9 show, 35% of local jobs in Interface Council areas can be considered 'blue collar', compared with 23% for non-Interface Council areas, and 25% for Greater Melbourne. Little difference exists in the proportions of jobs provided in community and personal services, or in clerical and sales in the Interface Councils and across Metropolitan Melbourne.

Table 3.3: Job Provision by Occupation, Selected Locations 2016

	Interface Councils		Greater Melbourne		Greater Melbourne (excluding Interface Councils)	
	No.	Share	No.	Share	No.	Share
White Collar Occupations						
Managers	48,750	11.5%	277,160	13.8%	228,410	14.4%
Professionals	70,630	16.7%	521,910	26.0%	451,280	28.4%
Community and Personal Service Workers	53,310	12.6%	209,960	10.4%	156,650	9.9%
Sales Workers	51,800	12.3%	202,790	10.1%	150,990	9.5%
Clerical and Administrative Workers	51,310	12.1%	293,400	14.6%	242,090	15.2%
<i>Sub-total</i>	<i>275,800</i>	<i>65.3%</i>	<i>1,505,220</i>	<i>74.8%</i>	<i>1,229,420</i>	<i>77.4%</i>
Blue Collar Occupations						
Technicians and Trades Workers	61,020	14.4%	235,150	11.7%	174,130	11.0%
Machinery Operators and Drivers	38,730	9.2%	114,960	5.7%	76,230	4.8%
Labourers	47,070	11.1%	155,690	7.7%	108,620	6.8%
<i>Sub-total</i>	<i>146,820</i>	<i>34.7%</i>	<i>505,800</i>	<i>25.2%</i>	<i>358,980</i>	<i>22.6%</i>
Total	422,620	100.0%	2,011,020	100.0%	1,588,400	100.0%

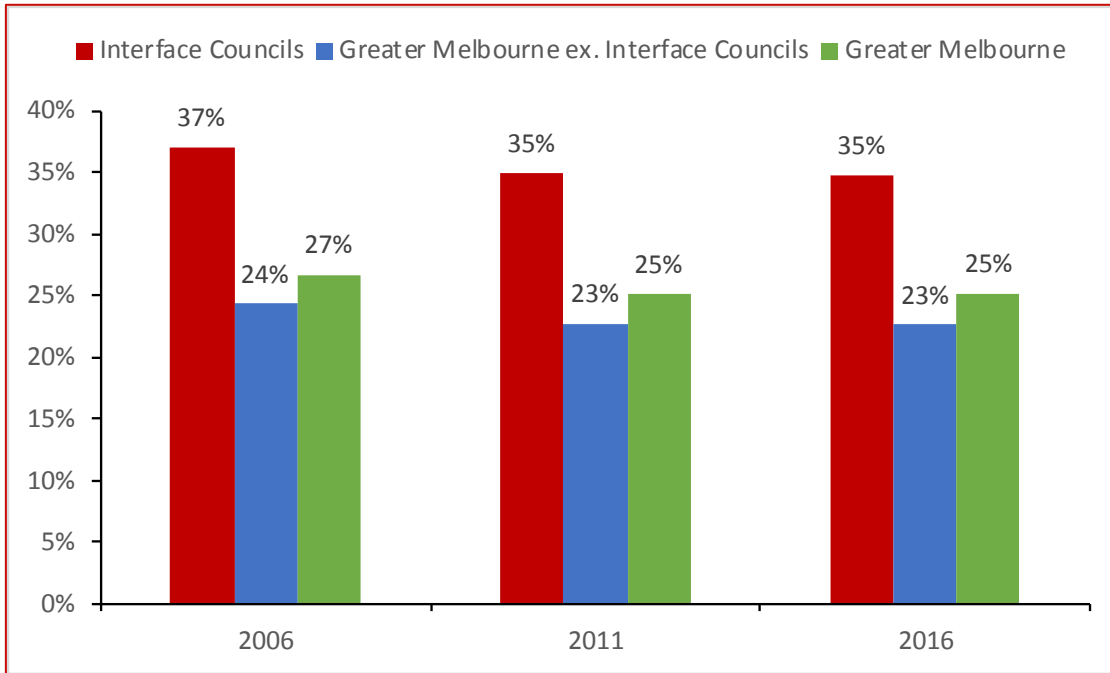
Source: ABS Census – Place of Work 2016
 Note: Figures rounded

Figure 3.8: White Collar Employment Provision (%), Selected Locations, 2006-2016



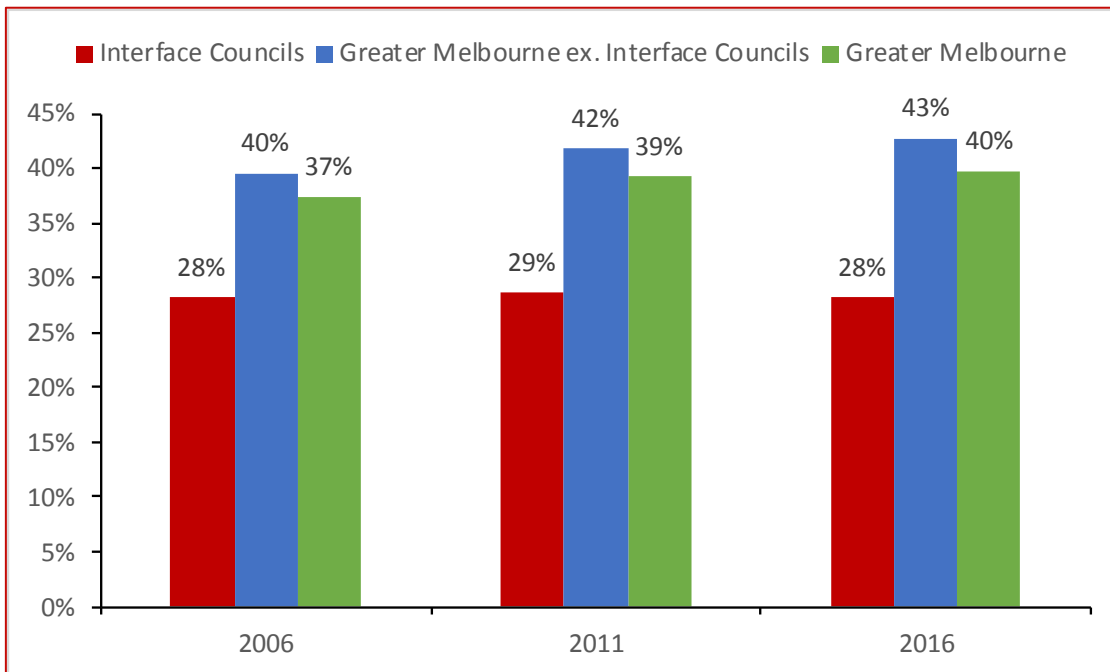
Source: ABS Census – Place of Work 2016
 Note: Figures rounded

Figure 3.9: Blue Collar Employment Provision (%), Selected Locations, 2006-2016



Source: ABS Census – Place of Work 2016
 Note: Figures rounded

Figure 3.10: Provision of Professional and Management Jobs (% Share of Total Jobs), Selected Locations 2006 to 2016



Sources: ABS Journey to Work 2006; ABS Place of Work 2011 and 2016
 Note: Figures rounded

Between 2006 and 2016, the proportion of white collar jobs located in Interface areas has increased from 63% to 65%, and the proportion of blue collar jobs has declined from 37% to 35%. This shift is broadly in line with the change observed for non-Interface areas where the proportion of white collar jobs has increased from 76% to 77%, with blue collar jobs declining from 24% to 23%. Non-Interface areas continue to have a higher proportion of white collar jobs than the Interface areas.

Moreover, the proportion of management and professional jobs located in Interface areas has remained static (28% of all jobs) over the five-year period, and this contrasts with proportional growth in these job categories for non-Interface areas which has increased from 40% to 43% between 2006 and 2016, as shown in Figure 4.18.

Over the past 10 years, limited progress has been made in closing the gap in the provision of white collar jobs in Interface areas compared to non-Interface areas. In fact, the data shows Interface areas have not progressed compared to non-Interface areas in terms of the white collar/blue collar jobs mix, and the Interface areas have moved backwards in the relative provision of management and professional jobs.

As Table 3.4 and Figure 3.11 show, the 2016 jobs deficit is observed across all occupations but most notably for managers and professionals (-76,240 jobs or 28% of the deficit), technicians and trades workers (-50,910 jobs or 19% of the deficit) and clerical and administrative workers (-50,180 jobs or 19% of the deficit). Overall, white collar occupations account for 64% of the jobs deficit, while blue collar occupations account for 36% of the jobs deficit.

Table 3.4: Job Deficit by Occupation, Interface Councils 2016

Occupation	Jobs Provided in Interface Councils	Local Jobs Required	Jobs Deficit	Share of Total Deficit
White Collar Occupations			No.	Share
Managers	48,750	78,710	-29,960	-38.1%
Professionals	70,630	116,910	-46,280	-39.6%
Community and Personal Service Workers	53,310	79,270	-25,960	-32.7%
Sales Workers	51,800	71,990	-20,190	-28.0%
Clerical and Administrative Workers	51,310	101,490	-50,180	-49.4%
<i>Sub-total</i>	275,800	448,370	-172,570	-38.5%
Blue Collar Occupations				
Technicians and Trades Workers	61,020	111,930	-50,910	-45.5%
Labourers	47,070	71,470	-24,400	-34.1%
Machinery Operators and Drivers	38,730	59,630	-20,900	-35.0%
<i>Sub-total</i>	146,820	243,030	-96,210	-39.6%
Total	422,620	691,400	-268,780	-38.9%
			-38.9%	100.0%

Source: ABS Census of Population and Housing 2016

Note: Figures rounded; Jobs deficit (%) refers to the proportion of jobs required

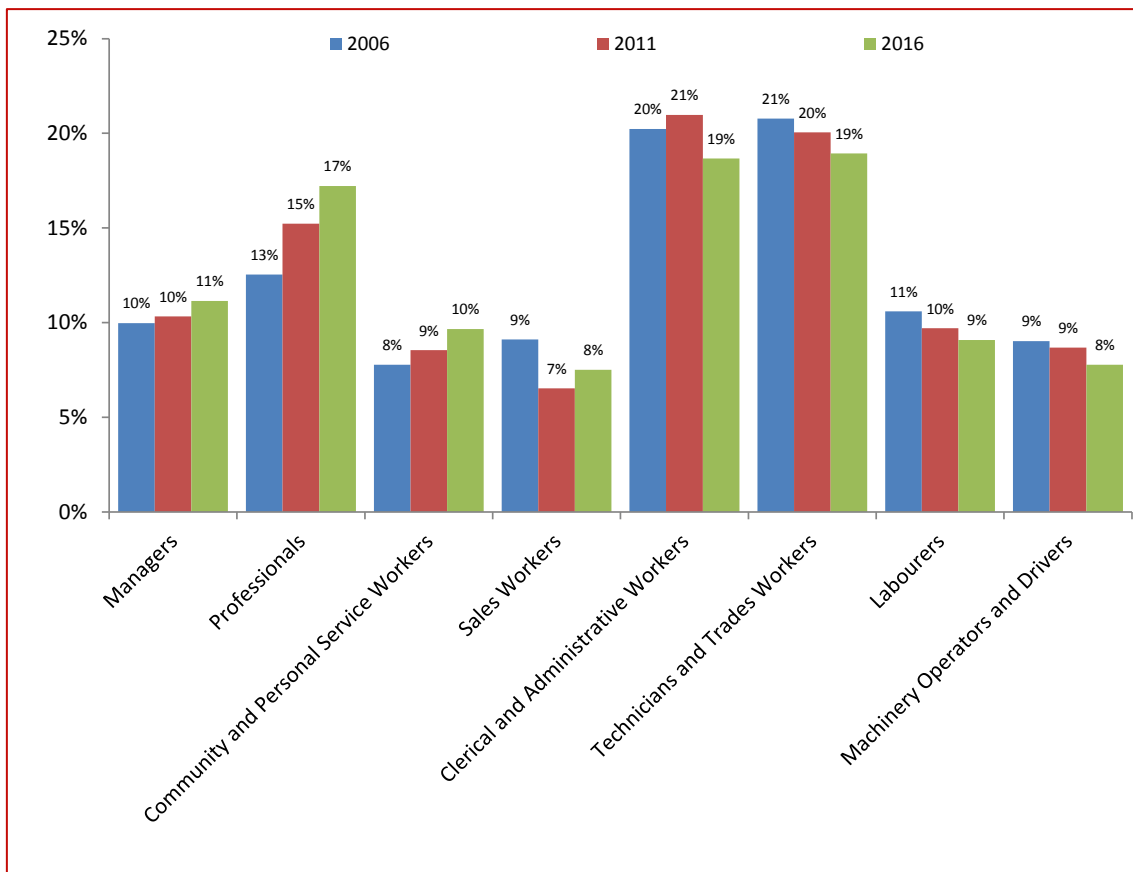
Between 2006 and 2016, the jobs deficit has increased in relation to white collar occupations in the Interface area from 60% to 64%; however, the job deficit has declined across blue collar occupations from 40% to 36% over the 10-year period.

As Figure 3.11 shows, proportionally the increased deficit in jobs over the past 10 years in the has been most pronounced with regard to management and professional jobs, which have increased from 23% of the jobs deficit in 2006 to 28% of the jobs deficit in 2016; moreover, the jobs deficit for community and personal service workers has increased from 8% to 10% over the period.

The jobs deficit has improved slightly with regard to sales workers (9% to 8%) and with regard to all blue collar occupations (as noted above).

The 10-year trend confirms the ongoing lack of job provision across the Interface and highlights the declining provision of white collar jobs proportional to the occupational characteristics of the Interface workforce.

Figure 3.11: Jobs Deficit by Occupation, Interface Councils 2006 to 2016



Sources: ABS Census of Population and Housing 2006, 2011 and 2016; ABS Journey to Work 2006, ABS Place of Work 2011 and 2016

Note: Figures rounded

Unemployment Rate

The unemployment rate in Interface Council areas is considerably higher than the Greater Melbourne average. In June 2016 the unemployment rate in the Interface was 6.6% and this compared to 5.6% for Greater Metropolitan (excluding Interface Councils) and 5.9% for Greater Melbourne, based on data published by the Department of Education, Employment and Workplace Relations which is summarised in Table 3.5. and Figure 3.12.

Table 3.5: Unemployment Rate – Selected Locations, June 2016

	2006	2011	2016
Interface Councils	4.9%	5.5%	6.6%
Greater Melbourne (excluding Interface Councils)	5.0%	5.4%	5.6%
Greater Melbourne	5.0%	5.4%	5.9%

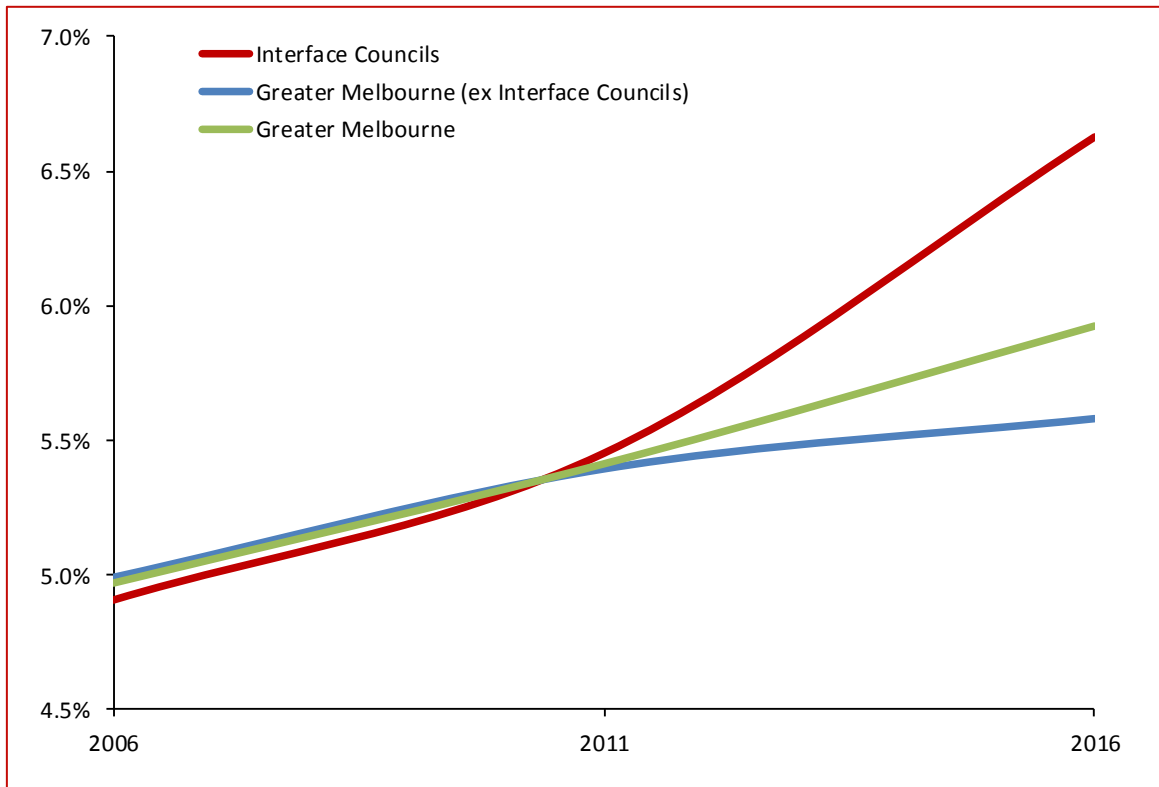
Sources: Department of Education, Employment and Workplace Relations - Small Area Labour Markets, June 2016
 Note: Figures rounded

In the 10-year period between 2006 and 2016, the unemployment rate for Interface labour force participants increased from 4.9% to 6.6%, which is significantly higher than the increase in unemployment observed for labour force participants in non-Interface areas (5.0% to 5.6%) and Greater Melbourne (5.0% to 5.9%)

The differential in the unemployment rate between Interface and non-Interface labour force participants has increased from +0.1% to -1.0% over the ten-year period, highlighting the relative uplift in unemployment as the labour force has expanded in the Interface.

This trend data highlights ongoing high unemployment levels in the Interface, which have worsened relative to non-Interface areas over time as illustrated in Figure 3.12.

Figure 3.12: Comparison of Unemployment Rates, Selected Locations, 2006 and 2016



Source: Department of Education, Employment and Workplace Relations - Small Area Labour Markets, (June Quarters 2006, 2011 and 2016)

Note: Figures rounded

Estimated Future Job Requirements

The resident labour force in the Interface Council areas is projected to expand by approximately +370,000 persons over the period 2016 to 2031, as shown in Table 3.6 and Figure 3.13. This represents approximately 53% of Metropolitan Melbourne labour force growth over the period 15-year period. Labour force growth in the Interface Council areas is projected to average of 2.7% pa over the period, which is more than double the projected labour force growth in non-Interface areas of 1.3% pa and significantly above projected labour force growth for Greater Melbourne of 1.8% pa. Under the existing patterns of job provision (job numbers, job types etc), labour force expansion of this level will most likely lead to a situation where significantly larger numbers of labour force participants in Interface areas will need to commute long distances to access employment. This situation highlights the imperative of providing a greater level employment and more diverse employment opportunities in Interface areas to improve local job provision ratios.

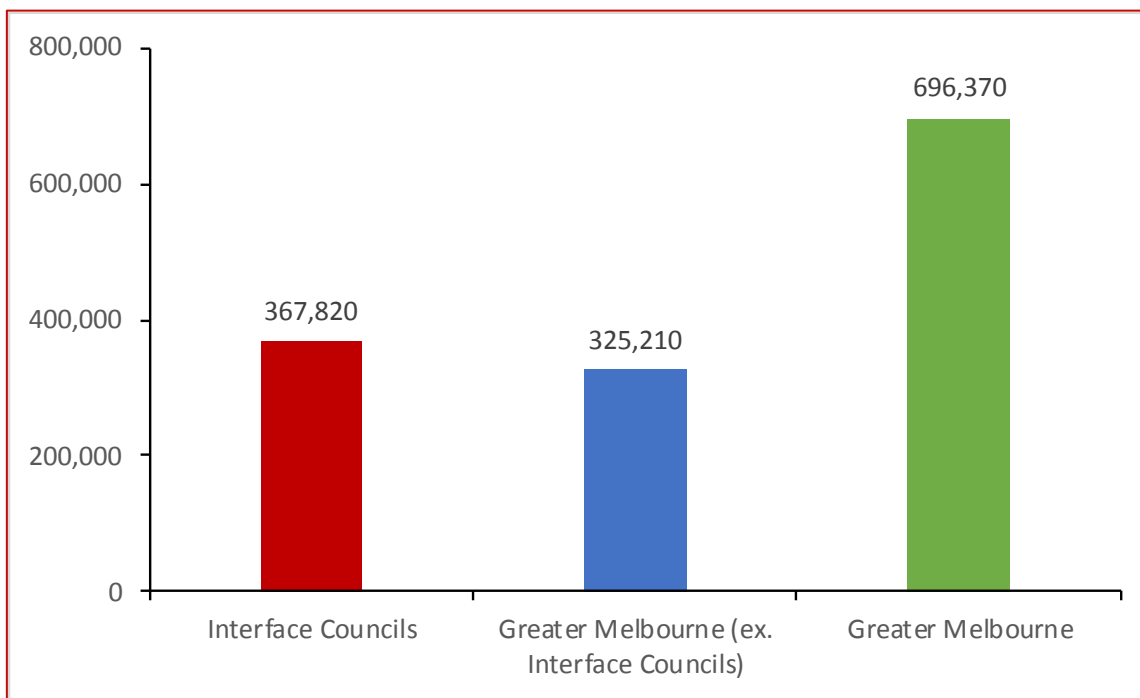
In terms of local job provision, approximately 210,000 new jobs are required in Interface Council areas if the job provision ratio remains at 0.57 jobs per resident labour force participant (refer to Table 3.2). This represents approximately 14,000 new local jobs per year (on average) over the 15-year period. Of course, this requirement will be considerably higher if Interface Councils are to achieve a higher ratio of locally-based employment more akin to the Greater Melbourne average for local job provision.

Table 3.6: Estimated Labour Force Expansion, Selected Locations, 2016-2031

	2016	2031	Change 2016-31	AAGR 2016-31
Interface Councils	755,060	1,122,880	+367,820	+2.7%
Greater Melbourne (excluding Interface Councils)	1,514,060	1,839,270	+325,210	+1.3%
Greater Melbourne	2,269,120	2,965,490	+696,370	+1.8%

Sources: Department of Education, Employment and Workplace Relations - Small Area Labour Markets (various);
 Department of Environment, Land, Water and Planning, Victoria in Future 2016; Essential Economics
 Notes: AGGR = Average Annual Growth Rate
 Figures rounded

Figure 3.13: Projected Labour Force Growth (No. of Participants) - Selected Locations, 2016-2031



Sources: Department of Education, Employment and Workplace Relations - Small Area Labour Markets (various);
 Department of Environment, Land, Water and Planning, Victoria in Future 2016; Essential Economics
 Notes: AGGR = Average Annual Growth Rate
 Figures rounded

Employment Accessibility

In 2016, approximately 87% of Interface labour force participants accessed their place of employment through the use of vehicle-based travel (car, truck, motor cycle etc). This compares with much lower proportions of vehicle-based travel for non-Interface labour force participants (70%) and for labour force participants across Greater Melbourne (75%). The figures are summarised in Table 3.7.

In contrast, only a very small proportion of Interface Council labour force participants use public transport to access their place of work (6.2%) and this is significantly lower than proportions for non-Interface Council labour force participants (16.0%) and Greater Melbourne labour force participants (12.8%).

Between 2006 and 2016, the proportion of vehicle-based travel by Interface labour force participants declined from 89% to 87%, and the proportion of workers accessing their employment by public transport increased from 4% to 6%.

Over the 10-year period, the shift from vehicle-based to public transport for Interface labour force participants has been much smaller than trends observed for non-Interface labour force participants whose proportion of vehicle-based travel has declined from 76% to 70%, with the proportion of public transport usage increasing from 12% to 16%, as shown in Figures 3.14 and 3.15.

The principal reasons for these travel to work differences includes the lack of public transport options available in Interface areas compared to non-Interface areas (this is assessed in Section 4.12), and the relatively poor levels of employment available at a local level for Interface labour force participants, resulting in increased travel requirements to access jobs.

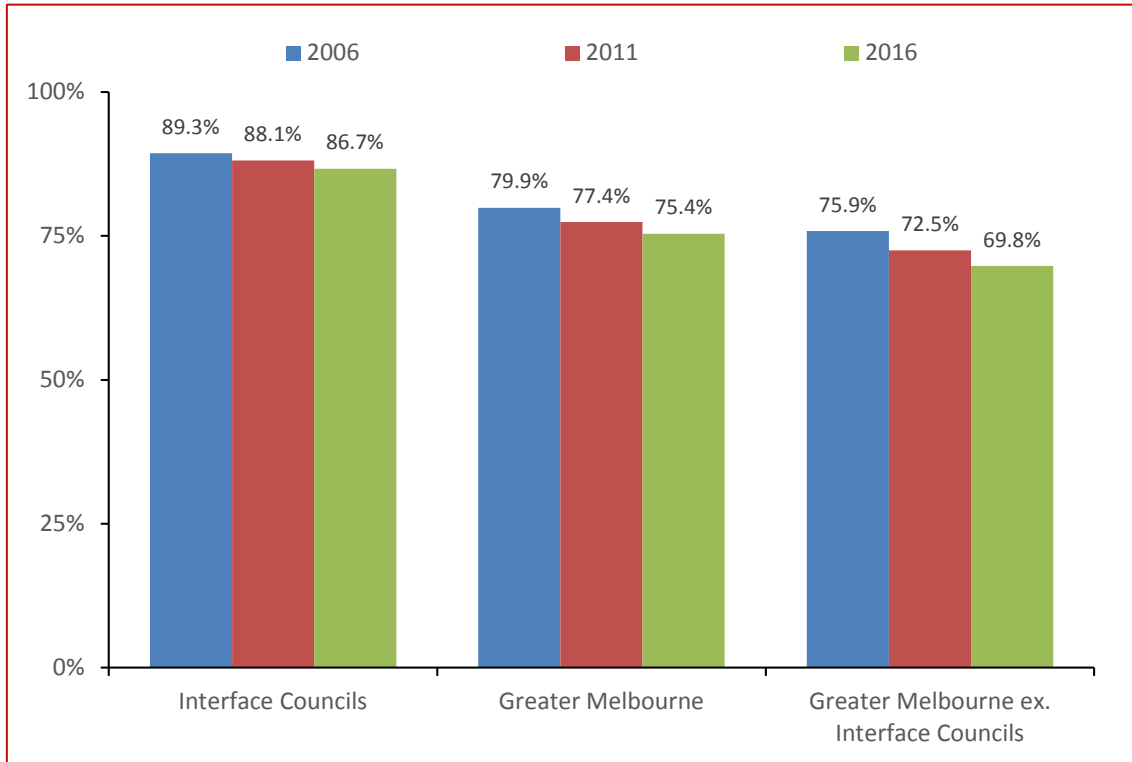
Table 3.7: Mode of Travel to Work for Labour Force Participants, by Location of Work, 2006 to 2016

	Interface Councils			Greater Melbourne (ex. Interface Councils)			Greater Melbourne		
	2006	2011	2016	2006	2011	2016	2006	2011	2016
Mode of Transport									
Train	3.3%	4.0%	5.2%	7.3%	8.5%	9.9%	6.1%	7.1%	8.4%
Bus	0.6%	0.8%	0.7%	1.4%	1.7%	1.7%	1.1%	1.4%	1.4%
Ferry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tram	0.1%	0.1%	0.1%	3.3%	3.7%	4.1%	2.3%	2.6%	2.8%
Taxi	0.2%	0.1%	0.2%	0.3%	0.3%	0.2%	0.3%	0.2%	0.2%
Public Transport	4.2%	5.1%	6.2%	12.3%	14.2%	16.0%	9.9%	11.3%	12.8%
Car driver	80.7%	80.4%	80.1%	69.2%	66.6%	64.7%	72.6%	71.0%	69.9%
Car passenger	6.5%	6.0%	5.2%	5.2%	4.7%	4.1%	5.6%	5.1%	4.5%
Truck	1.7%	1.4%	1.0%	0.9%	0.6%	0.5%	1.1%	0.9%	0.7%
Motor cycle / scooter	0.5%	0.4%	0.3%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%
Vehicle-based	89.3%	88.1%	86.7%	75.9%	72.5%	69.8%	79.9%	77.4%	75.4%
Bicycle	0.3%	0.3%	0.2%	1.8%	2.2%	2.3%	1.3%	1.6%	1.6%
Other	0.5%	0.5%	0.6%	0.5%	0.5%	0.6%	0.5%	0.5%	0.6%
Two or more methods	3.7%	4.5%	5.0%	5.3%	6.4%	6.7%	4.8%	5.8%	6.2%
Walked only	1.9%	1.6%	1.3%	4.3%	4.3%	4.5%	3.6%	3.4%	3.5%
Other methods	6.5%	6.8%	7.1%	11.8%	13.3%	14.2%	10.2%	11.3%	11.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sources: ABS Journey to Work 2011, ABS Place of Work 2011 and 2016

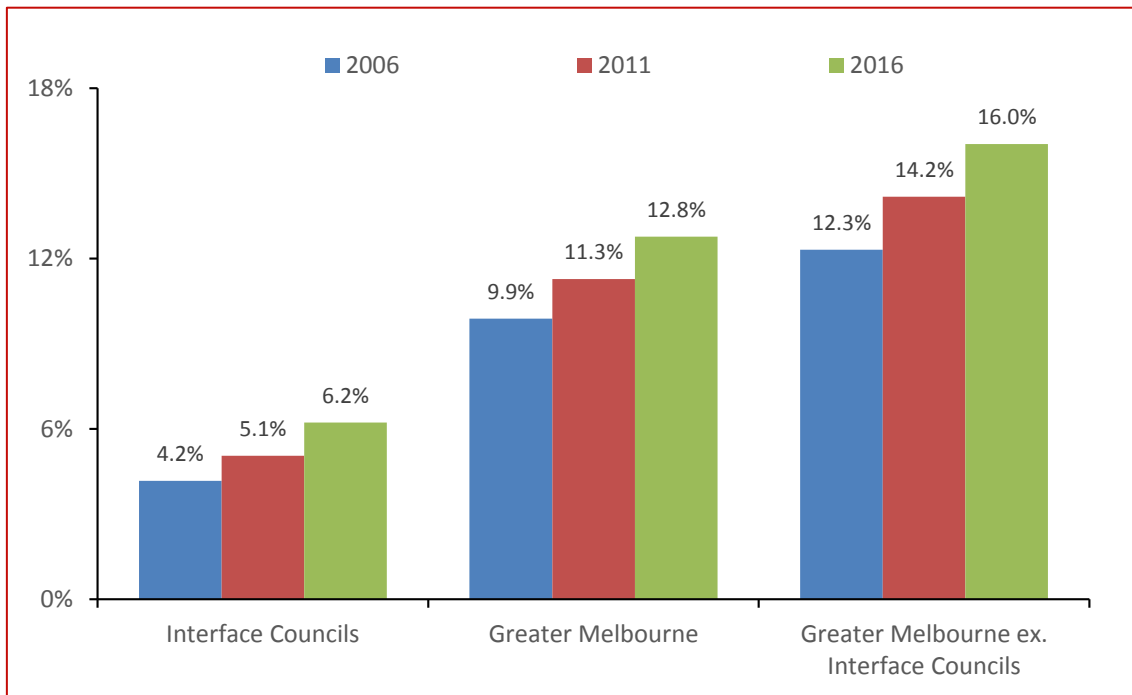
Note: Excludes labour force participants working from home, not working on Census day, and those not stating their mode of travel.
 Figures rounded

Figure 3.14: Travel to Work by Vehicle-Based Transport (% Share) – Selected Areas, 2006 and 2016



Sources: ABS Journey to Work 2016; ABS Place of Work 2011 and 2016

Figure 3.15: Travel to Work by Public Transport (% Share) – Selected Areas, 2006 and 2016



Sources: ABS Journey to Work 2016; ABS Place of Work 2011 and 2016

Commuting Distance

Workers in Outer Melbourne (which covers approximately the same geographic area as the Interface Council area) commute significantly longer distances to their place of work compared to workers living in Inner Melbourne and Middle Melbourne, according to data prepared by the Department of Infrastructure and Transport (*Population Growth, Jobs Growth and Commuting Flows in Melbourne*, Research Report 125).

For example, the average commuting distance for Inner Melbourne residents is 7.5km and this compares to 19.1km for Outer Melbourne residents. Importantly, resident workers in Outer Melbourne are extremely car-reliant (refer to Table 3.7) compared with Inner Melbourne commuters, highlighting the likely significant adverse impacts on the environment, road infrastructure, congestion, vehicle costs etc associated with existing limited metropolitan public transport provision and relatively poor employment distribution in Outer Melbourne.

Data relating to commuting distance is shown in Table 3.8.

Table 3.8: Average Commuting Distance for Journey to Work and Principal Mode of Travel to Work, 2006

	Average Commuting Distance to Access Employment
Inner	7.5km
Middle	12.5km
Outer	19.1km
Greater Melbourne	14.8km

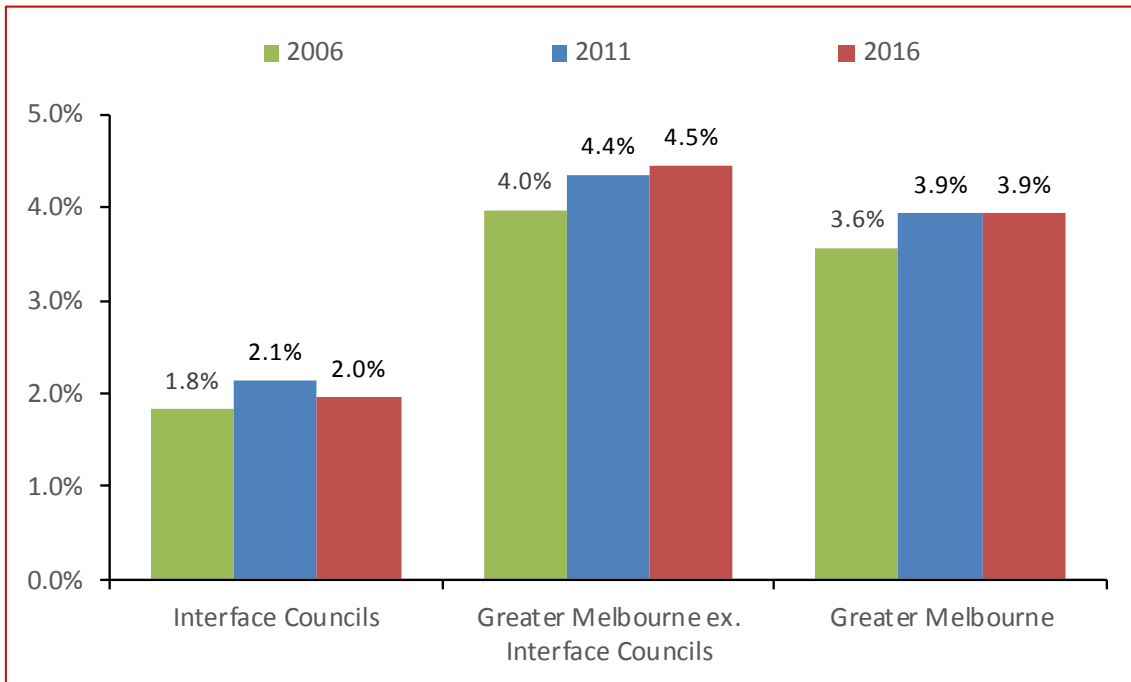
Source: Australian Government - Department of Infrastructure and Transport, *Population Growth, Jobs Growth and Commuting Flows in Melbourne*, October 2011

3.7 Health Services

Health Service Jobs

A relatively low proportion of hospital services jobs are located in Interface Council areas. ABS Census data for 2016 shows that only 2.0% of jobs located in Interface Council areas are associated with hospital services and this contrasts with 4.5% for non-Interface Council areas and 3.9% for Greater Melbourne, as shown in Figure 3.16.

Figure 3.16: Job Provision in Hospital Services (Share of Total Jobs) – Selected Locations 2006 to 2016



Source: ABS Census of Population and Housing, 2011 & 2016

Between 2006 and 2016, the proportion of hospital services jobs located in Interface areas has increased from 1.8% to 2.0%; this contrasts with growth in hospital services jobs located in non-Interface areas from 4.0% to 4.5% over the ten-year period.

This data, if used as a proxy for locally provided hospital-related facilities and services, indicates the gap in provision has not improved between Interface and non-Interface areas over the period 2006-2016.

Provision of Public Hospital Beds

Interface Council areas have a considerably lower provision of hospital beds (which includes specialist beds and psychiatric beds) compared to non-Interface Councils and Greater Melbourne. As of 2014 Interface Council areas have an estimated 10 beds per 10,000 population, which is only one-third of the allocation for non-Interface Council areas (30 beds per 10,000 population) and 46% of the ratio for Greater Melbourne (24 beds per 10,000 population). This is the latest data available and is sourced from Travis Review, 2015. These occupational patterns are shown in Table 3.9 and Figure 3.17.

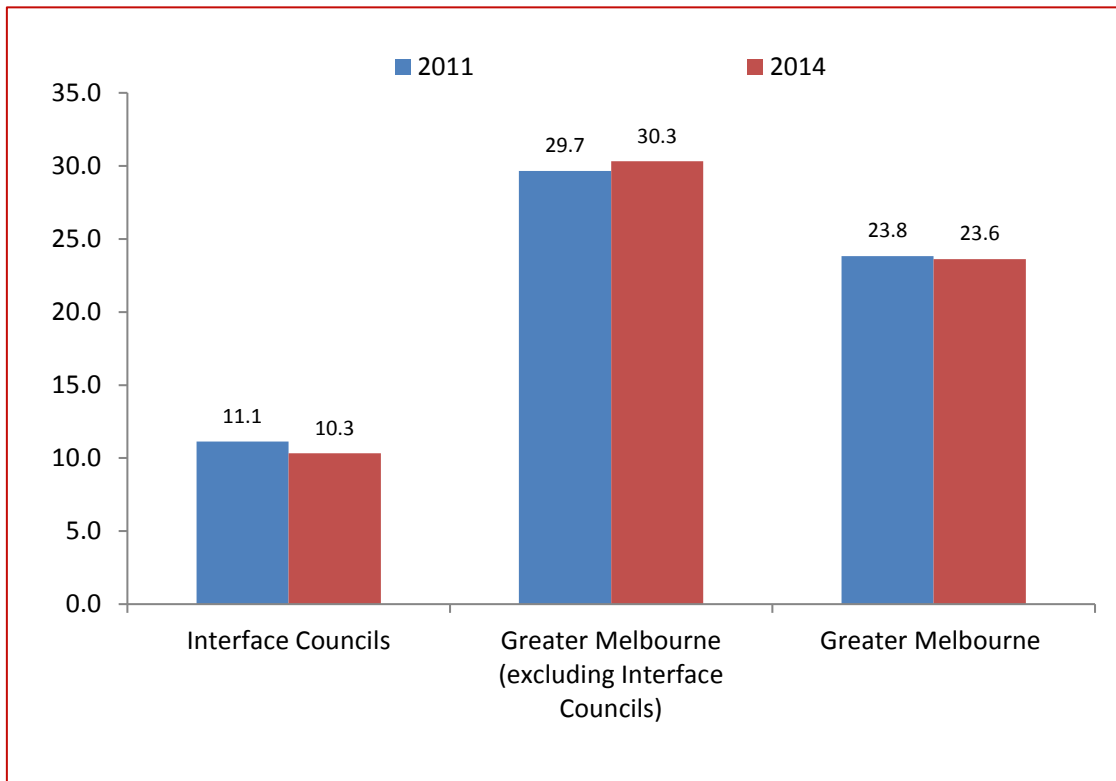
The available trend data for 2011 to 2014 shows a slight decline in the share of hospital beds located in Interface Council Areas, although a number of major hospital expansion projects are underway or nearing completion in the Interface (Casey Hospital, Northern Hospital, and Mercy Hospital Werribee). This expansion will add approximately 320 new beds in the near future, representing a 20% uplift in bed provision compared to the 2014 figure.

Table 3.9: Estimated No. of Public Hospital Beds per 10,000 Population – Selected Locations, 2011 and 2014

	2011		2014		No. of Beds per 10,000 Population
	No. of Hospital beds	Estimated Population	No. of Hospital beds	Estimated Population	
Interface Councils	1,515	1,360,900	11	1550	10
Greater Melbourne (excluding Interface Councils)	8,345	2,812,510	30	9,050	30
Greater Melbourne	9,860	4,137,430	24	10,600	24

Source: Public hospital and health services annual reports (various); Travis Review – *Increasing the capacity of the Victorian public hospital system for better patient outcomes*, June 2015

Figure 3.17: Estimated No. of Public Hospital Beds per 10,000 Population – Selected Locations, 2011 to 2014



Source: Public hospital and health services annual reports (various); Travis Review – *Increasing the capacity of the Victorian public hospital system for better patient outcomes*, June 2015

3.8 Preschool Facilities

Data sourced from the Department of Education and Early Childhood Development (<http://www.education.vic.gov.au/findaservice/Home.aspx>) has been used to estimate the number of preschool facilities located in the Interface and Non Interface areas. Note, data by number of places is not available.

As Table 3.10 and Figure 3.18 show, Interface Council areas have approximately 49 kindergarten / pre-school facilities per 10,000 persons aged 0-4 years, and this is lower than

the ratio for non-Interface Council areas (67 facilities per 10,000 persons aged 0-4 years) and Greater Melbourne (60 facilities per 10,000 persons aged 0-4 years). As the size of preschool facilities vary from location to location (i.e. growth areas may have fewer but larger purpose-built facilities developed on greenfield sites), this data needs to be treated with some caution.

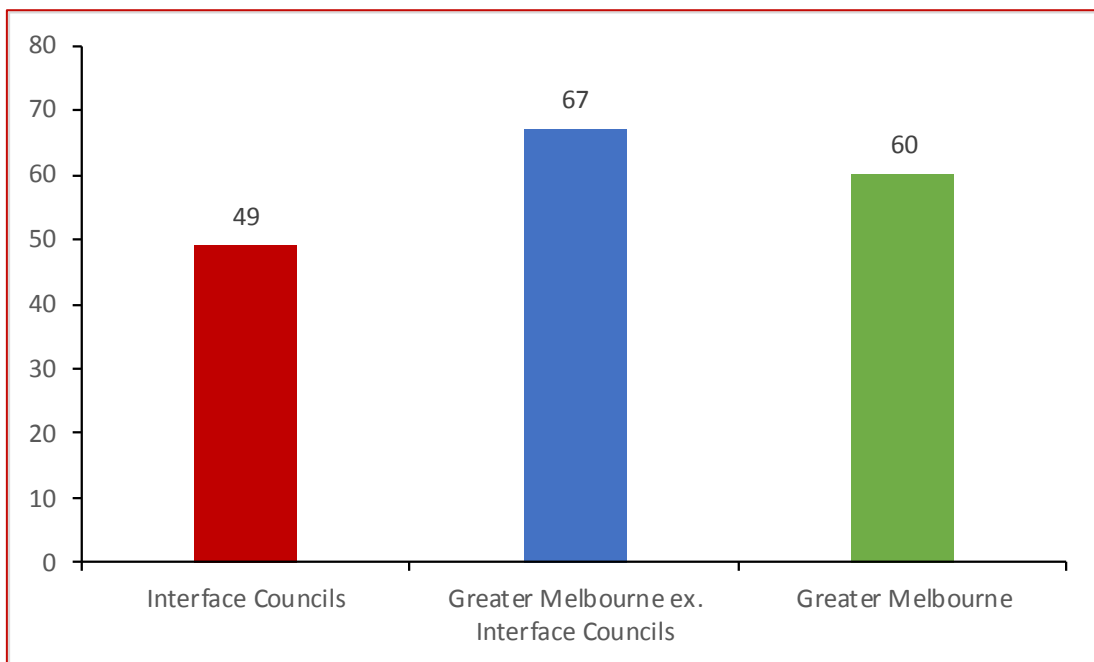
Trend data is not available for this indicator, as no consistent information is available over two reporting periods.

Table 3.10: Provision of Kindergarten/Pre-School Facilities per 10,000 persons Aged 0-4 Years, Selected Locations, 2016

	No. of Kindergartens/Pre-Schools	No. Population	No. of Kindergarten/Pre-Schools per 10,000 Persons Aged 0-4 Years
Interface Councils	590	119,410	49
Greater Melbourne ex. Interface Councils	1,130	167,760	67
Greater Melbourne	1,720	287,170	60

Sources: Department of Education and Early Childhood Development (last updated December 2015); ABS Census of Population and Housing 2016

Figure 3.18: Provision of Kindergarten/Pre-School Facilities per 10,000 Persons Aged 0-4 Years, Selected Locations, 2016



Sources: Department of Education and Early Childhood Development (last updated December 2015), ABS Census of Population and Housing 2016

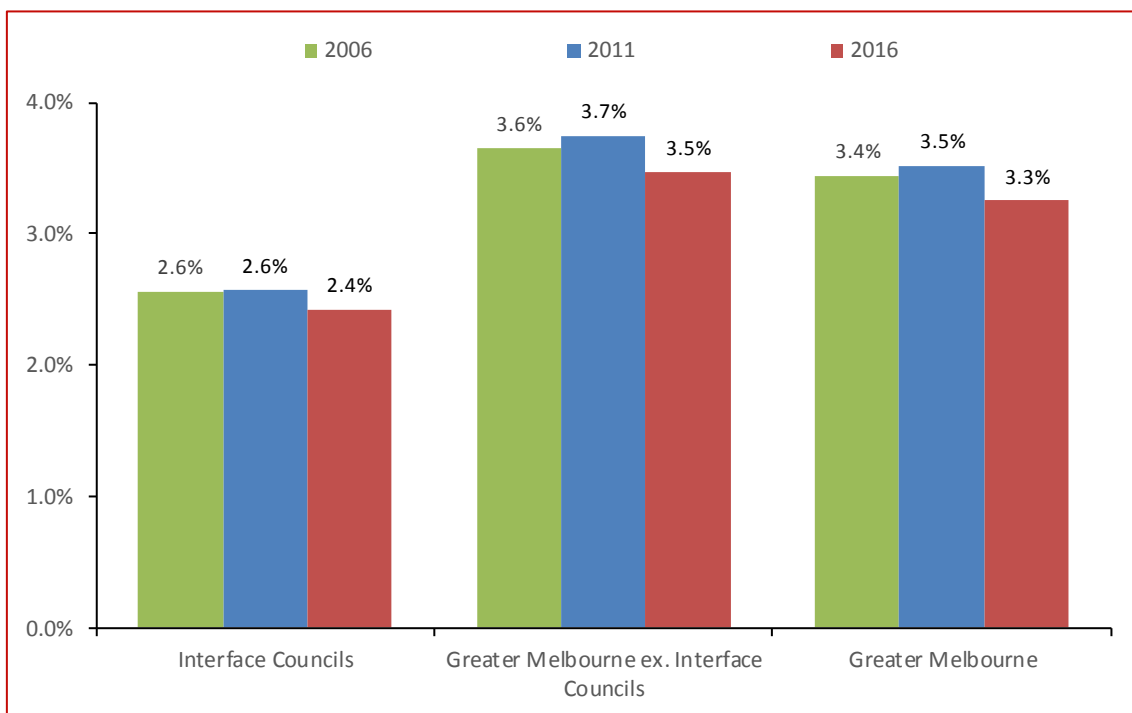
Note: Figures rounded

3.9 Public Administration Facilities

Public Administration

Interface Council areas have a relatively low proportion of jobs associated with public administration. ABS Census data for 2016 shows that only 2.4% of jobs in Interface Council areas are associated with this type of activity and this compares to 3.5% for non-Interface Councils areas 3.3% for Greater Melbourne, as shown in Figure 3.19. This data indicates that, apart from the provision of Local Government services, a generally low provision of State government, agency, justice facilities and associated jobs exists in Interface Council areas.

Figure 3.19: Job Provision in Public Administration (Share of Total Jobs) – Selected Locations, 2006 to 2016



Sources: ABS Census of Population and Housing, 2006, 2011, 2016

Between 2006 and 2016, the proportion of public administration jobs located in Interface areas has fallen (2.6% to 2.4%), which reflects a similar decline in public administration jobs in non-Interface areas (3.6% to 3.5%)

This data, if used as a proxy for public administration facilities and services, indicates the gap provision has slightly increased (from 1.0 percentage point to 1.1 percentage points) between Interface and non-Interface areas over the period 2006-2016.

3.10 Community Services

Arts and Cultural Activities

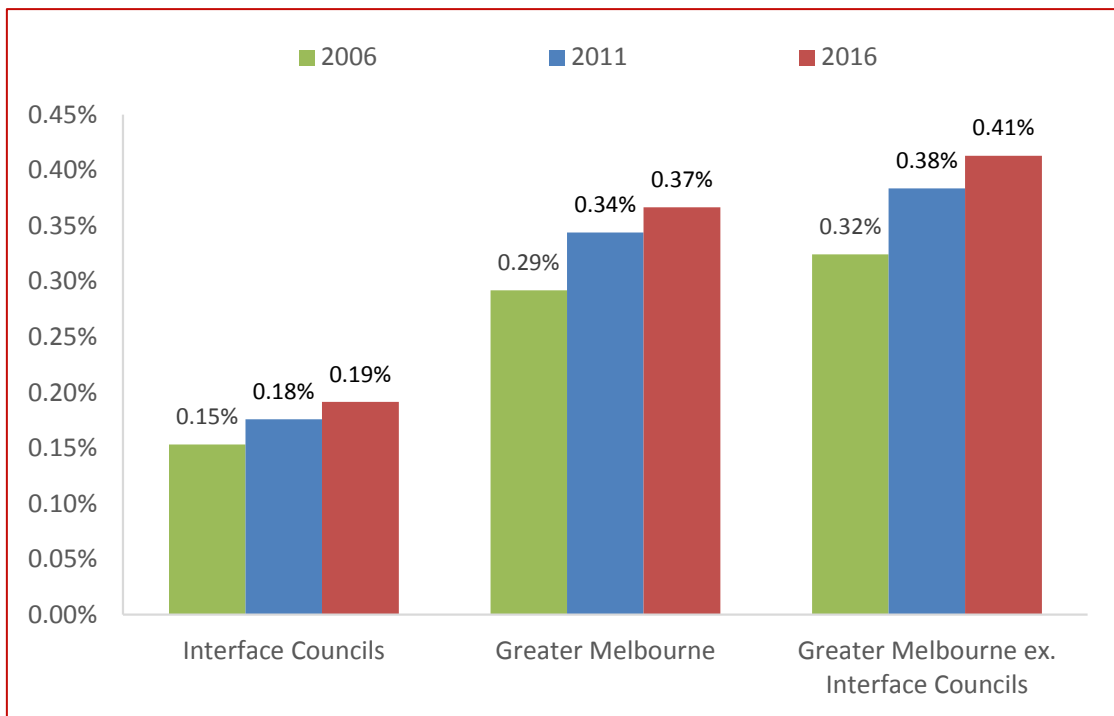
Jobs provided in the creative and performing arts (which include activities such as visual arts, dance, drama, music, creative writing etc) are used as a 'proxy' for the local provision of

facilities that support this sector. ABS Place of Work data for 2016 indicates a relative lack of arts and cultural facilities in Interface Council areas, with just 0.19% of total jobs provided in the Interface associated with the sector, which is below half the rate of provision observed for Greater Melbourne (excluding Interface Councils) at 0.41%.

Between 2006 and 2016, the proportion of creative and arts jobs located in the Interface area increased from 0.15% to 0.19%; however, proportional growth in non-Interface areas has been greater, increasing from 0.32% to 0.41% (although the shares for both Interface and non-Interface are significantly small in real terms) .

This data, if used as a proxy for locally provided arts and cultural facilities and services, indicates the gap in provision has increased (from 0.17 of a percentage point to 0.22 of a percentage point) between Interface and non-Interface areas over the period 2006-2016, as shown in Figure 3.20.

Figure 3.20: Job Provision in Creative and Performing Arts (Share of Total Jobs) – Selected Locations, 2006 to 2016



Sources: ABS Census of Population and Housing, 2006, 2011 & 2016

Public Library Resources

While funding for public libraries is principally through Local Government, the State Government contributes approximately 30% of total annual libraries funding relating to operations, collections and a small amount for capital.

Interface Councils have a lower ratio of public library service points and weekly operating hours compared to non-Interface areas and Greater Melbourne.

For example, the Interface Councils have 0.25 static service points per 10,000 population, compared to 0.40 and 0.35 static service points per 10,000 population for non-Interface areas and the Greater Melbourne, respectively. Similarly, in terms of library operating hours the Interface Councils provide 12.4 hours per week per 10,000 population, which is significantly less than the 18.2 hours per 10,000 population provided in non-Interface areas and the 16.2 hours per 10,000 population provided in Greater Melbourne.

Trends in these indicators over the period 2009/10 to 2016/17 are shown in Table 3.11 and in Figures 3.21 and 3.22.

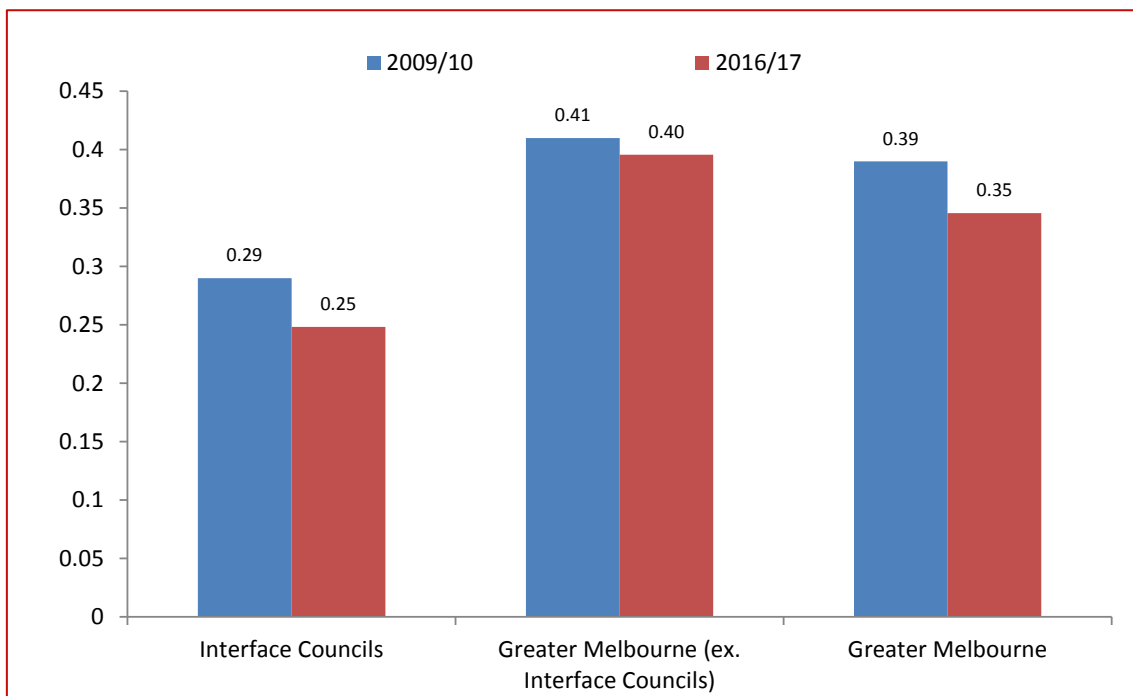
These trends highlight provision of library services has declined in Interface areas compared with non-Interface areas over the past decade.

Table 3.11: Public Library Services Points and Operating Hours, Selected Locations, 2009/10 and 2016/17

	Interface Councils		Greater Melbourne (ex. Interface Councils)		Greater Melbourne	
	2009/10	2016/17	2009/10	2016/17	2009/10	2016/17
Total number of Service Points	34	39	123	121	157	160
Operating hours per week	1,830	1,960	5,430	5,550	7,260	7,510
Service points per 10,000 population	0.29	0.25	0.41	0.40	0.39	0.35
Operating hours per week per 10,000 population	15.4	12.5	18.2	18.2	17.4	16.2

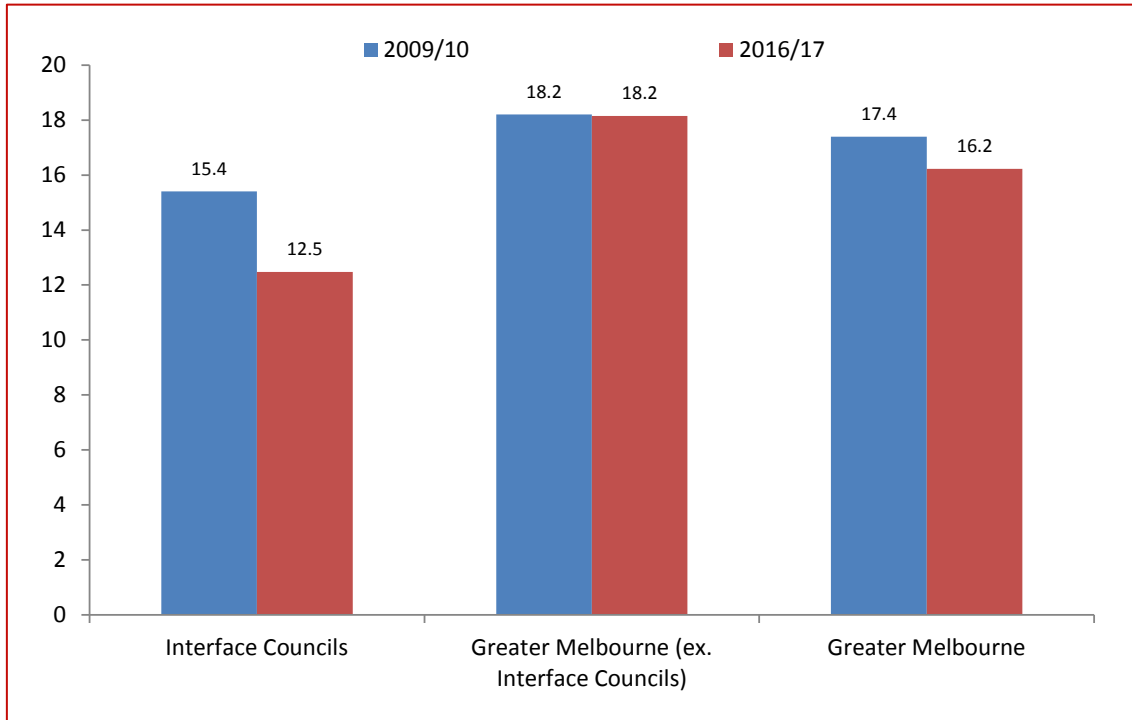
Sources: DPCD, Annual Survey of Public Libraries 2009/10; DELWP, Annual Survey of Public Libraries 2016/17

Figure 3.21: Library Service Points (Static) per 10,000 Population, Selected Areas, 2009/10 and 2016/17



Sources: DPCD, Annual Survey of Public Libraries 2009/10; DELWP, Annual Survey of Public Libraries 2016/17

Figure 3.22: Library Operating Hours (per week) per 10,000 Population, Selected Areas, 2009/10 and 2016/17



Sources: DPCD, Annual Survey of Public Libraries 2009/10; DELWP, Annual Survey of Public Libraries 2016/17

3.11 Transport

Access to Public Transport

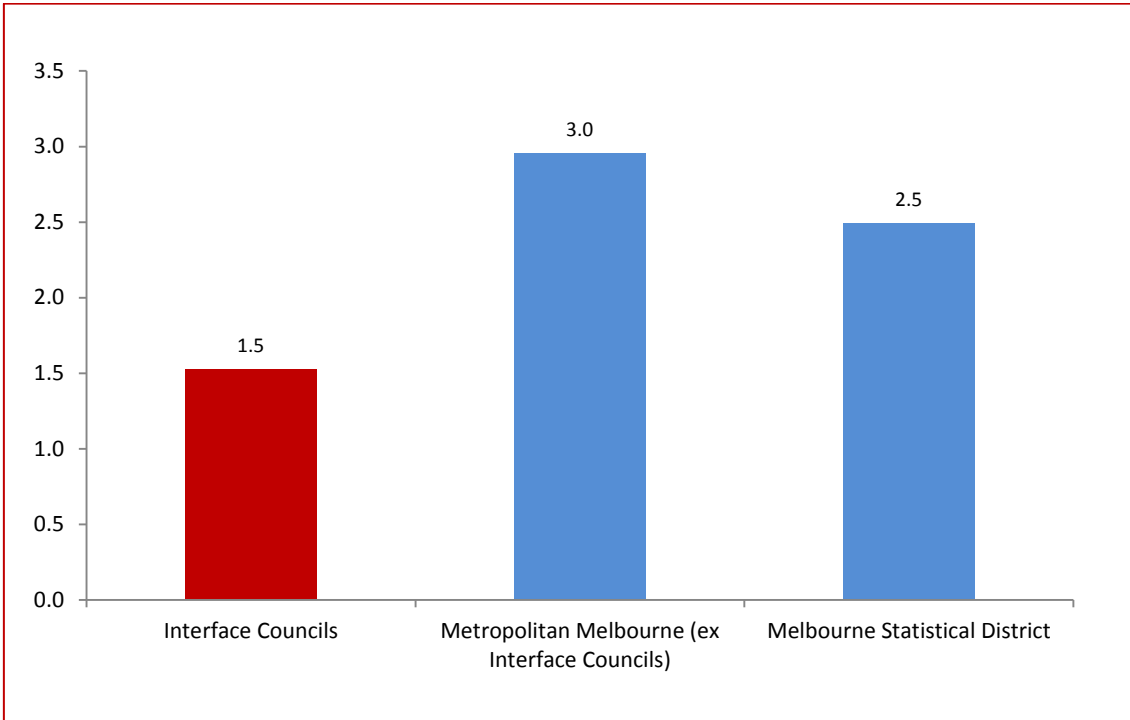
Compared to the Greater Melbourne average, the Interface Councils are significantly underprovided for in terms of public transport options. When assessed in terms of access to tram lines, train lines, and bus routes (including night bus routes), Public Transport Victoria data shows that Interface Council residents have access to 1.3 public transport routes per 10,000 population, which is only half the rate of transport access (2.6 public transport routes per 10,000 population) available to non-Interface residents and also well below the access rate for residents of Greater Melbourne as a whole (2.2 public transport routes per 10,000 population). Public transport provision data is included in Table 3.12 and Figure 3.23.

Table 3.12: Access to Public Transport Options, Selected Areas, 2011

	Access to Train Lines (no.)	Access to Tram Lines (no.)	Access to Bus Routes (no.)	Access to Nightrider Bus Routes (no.)	Access to Public Transport Routes (no.)	Access to Public Transport Routes per 10,000 Population
Interface Councils	12	0	184	12	208	1.3
Greater Melbourne (excluding Interface Councils)	69	95	603	47	814	2.6
Greater Melbourne	81	95	787	59	1,022	2.2

Source: Public Transport Victoria

Figure 3.23: Access to Public Transport Options per 10,000 Population, Selected Locations 2016



Source: Public Transport Victoria

Private Vehicle Reliance

Private vehicle reliance (as indicated by vehicle ownership and registrations) is significantly higher in Interface Council areas compared to the non-Interface areas and Greater Melbourne.

For example, Interface Council areas have 2.26 registered vehicles per occupied dwelling in 2016, and this compares to 1.89 vehicles per dwelling in non-Interface Council areas and 2.01 vehicles per occupied dwelling in the Greater Melbourne area, according to ABS regional data. The figures are shown in Table 3.11 and Figure 3.24.

Data relating to vehicle registrations per capita highlights a similar pattern, with vehicle registrations in Interface Councils (732 per 1,000 population) being significantly higher than for non-Interface Council areas (694 registered vehicles per 1,000 population) and Greater Melbourne (707 registered vehicles per 1,000 population). This data is shown in Table 3.13 and Figure 3.25.

Table 3.13: Vehicle Ownership and Registrations, Selected Areas

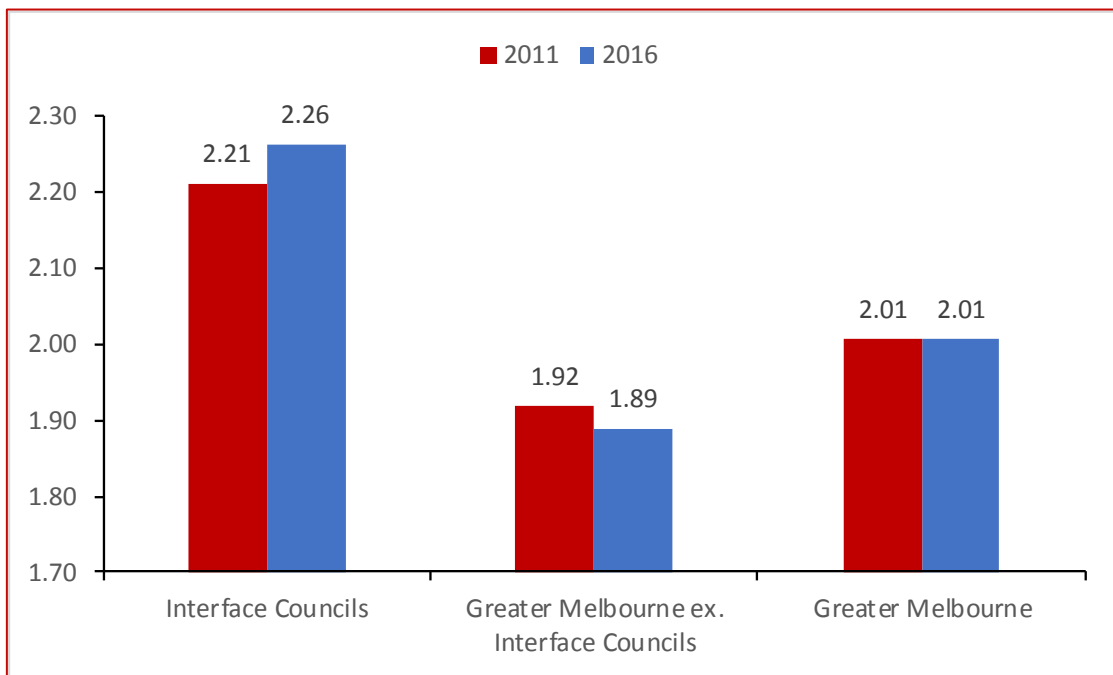
	Interface Councils		Greater Melbourne		Greater Melbourne ex. Interface Councils	
	2011	2016	2011	2016	2011	2016
Occupied Private Dwellings (OPD)	446,940	523,410	1,494,670	1,664,540	1,047,730	1,141,140
Registered Vehicles	988,000	1,184,270	2,998,400	3,340,260	2,010,400	2,156,000
Vehicles Per OPD	2.21	2.26	2.01	2.01	1.92	1.89
Vehicles Per 1,000 Population	733	732	719	707	712	694

Source: ABS Data by Region 2011-16. Note: Figures rounded

Between 2011 and 2016, the number of vehicles per dwelling in Interface areas has increased from 2.21 vehicles to 2.26 vehicles. This is a significant variation from the trend observed for non-Interface areas where the number of vehicles per dwelling has fallen from 1.92 vehicles to 1.89 vehicles.

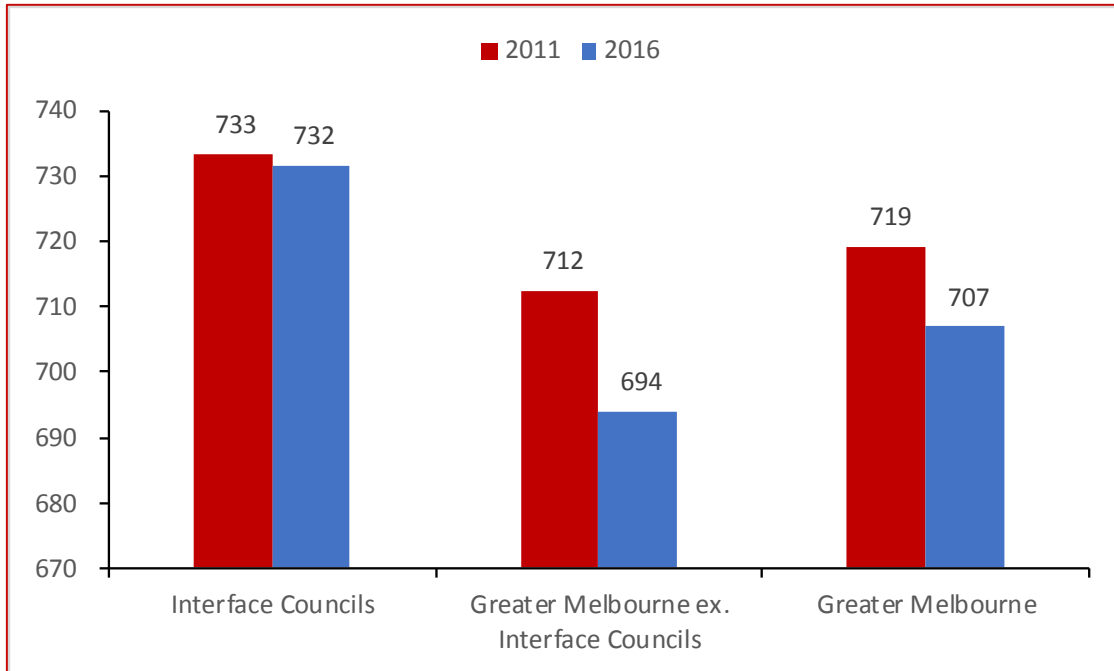
This data confirms Interface areas continue to be significantly more reliant on private vehicle travel than non-Interface areas, and suggests the difference is widening.

Figure 3.24: Vehicle Ownership per Occupied Private Dwelling, Selected Areas, 2011 and 2016



Source: ABS Data by Region 2011-2016

Figure 3.25: Vehicle Registrations per 1,000 Population, Selected Areas, 2011 and 2016



Source: ABS Data by Region 2011-2016

3.12 Conclusions

The findings of this socio-economic profiling and benchmarking analysis show that compared to non-Interface areas and Greater Melbourne averages, the Interface Council area is characterised by:

- 1 Relatively high level of socio-economic disadvantage, as highlighted through SEIFA and VAMPIRE
- 2 Relatively low average incomes
- 3 Relatively low educational outcomes
- 4 Relatively high level of youth disengagement with regard to higher education and workforce participation
- 5 Significant deficit in the provision of local employment opportunities
- 6 Relatively low provision of professional jobs
- 7 Relatively high unemployment rates
- 8 Relatively low provision of higher order medical services (hospitals)
- 9 Relatively low provision of preschool services
- 10 Relatively low provision of arts and cultural services (libraries, arts centres etc)
- 11 Poor provision of public transport options
- 12 Heavy reliance on vehicle-based travel.

When long-term trends are considered, the following observations are made with regard to available data:

- 13 Disadvantage has increased in the Interface compared to non-Interface areas (SEIFA 2006 to 2011)
- 14 Median incomes have increased at a slower rate in the Interface compared to non-Interface areas (2006 to 2016)
- 15 The gap in educational outcomes and youth disengagement has narrowed slightly between Interface and non-Interface areas (2006 to 2016)
- 16 While local job provision ratio has increased slightly in the Interface, the gap in job provision between Interface and non-Interface areas has widened – with the deficit of white collar jobs in the Interface increasing over time (2006 to 2016)
- 17 Unemployment levels have worsened in the Interface, compared to non-Interface areas (2006 to 2016)
- 18 The gap in the provision of health jobs (2006 to 2016) and hospital beds (2011 to 2014) has increased slightly between Interface and non-Interface areas
- 19 The gap in the provision of arts and cultural facilities and library services has increased between Interface and non-Interface areas (2006 to 2016)
- 20 The use of public transport has increased slightly in the Interface, but at a lower rate of increase than that observed for non-Interface areas (2006 to 2016)
- 21 Reliance on private vehicle-based travel in the Interface has increased compared to non-Interface areas (vehicle registrations and vehicle ownership, 2011 to 2006).

4 FUTURE INFRASTRUCTURE AND SERVICE REQUIREMENTS AND COSTS

4.1 Introduction

This Chapter provides estimates for employment and for infrastructure and service requirements for Interface Councils over the period 2016 to 2031. Where under-provision is identified, future requirements are set at a level to reduce the gap by 50% (or by another identified measure) over the 15-year period.

Broad cost estimates have been prepared to provide general guidance on the financial implications of providing the identified level of infrastructure and services.

4.2 Employment Requirements

Job Requirements

Based on the existing job provision ratio of 0.57 jobs per 1 labour force participant, between 2016 and 2031 a further 265,000 additional jobs will be required in the Interface Councils area.

The Victorian Planning Authority (VPA) has an aspirational target of ensuring the provision of 1 new job for every additional new household in growth areas. If this target is applied to the Interface Council areas' dwelling estimates in VIF2016 between 2016 to 2031, then approximately 310,000 additional jobs required would be required over the 15-year period.

Employment growth of this level would increase the job provision ratio to 0.66, which represents 15% growth on the existing job provision ratio. In the consultant's view, this employment growth target is realistic and achievable over the coming 15 years, especially if higher-order infrastructure and services are provided to support economic efficiency and liveability outcomes.

Employment requirements are shown in Table 4.1.

Table 4.1: Employment Requirements, Interface Councils 2011-2026

		Based on Existing Interface Job Provision	Based on VPA aspiration of 1 new local job for every new dwelling
2016	Local Jobs	430,000	430,000
	Resident Labour Force	755,000	755,000
	Job provision Ratio	0.57	0.57
2031	Local Jobs	640,000	740,000
	Resident Labour Force	1,122,880	1,122,880
	Job provision Ratio	0.57	0.66
Additional Jobs Required 2016 to 2031		+210,000	+310,000

Sources: ABS Place of Work 2016; Department of Education, Employment and Workplace Relations - Small Area Labour Markets (various); Essential Economics

Note: Figures rounded

4.3 Educational Requirements

Primary and Secondary School Places

The Department of Education advises detailed data is not available at the LGA level relating to the provision of primary and secondary school places. In view of this situation, the analysis assumes that one place per school aged child is currently being provided in the Interface Council area, noting this may overstate the existing situation where lags in provision occur.

Using this approach, an additional 85,110 primary school and 64,570 secondary school places will be required in Interface Council areas over the period 2016 to 2031. These estimates are based on Forecast id data, as VIF 2016 does not provide specific age data that aligns with primary and secondary school age groups.

ABS Schools Australia 2006 (Cat. No. 4221.0) shows that in 2006 the average primary school size in Australia was 250 students and the average secondary schools size was 540 students. Applying these ratios to required school places shows a further 340 primary schools (rounded) and 120 secondary schools (rounded) will be required in Interface Council areas over the 2016-2031 period.

Primary and secondary school requirements over the coming 15 years are shown in Table 4.2.

Table 4.2: Estimated Primary and Secondary School Places Required, Interface Councils, 2016-2031

	Primary School Places	Secondary School Places
2016	166,100 places	125,230 places
2031	251,210 places	189,800 places
Additional Places Required 2011 to 2026	+85,110 places	+64,570 places
Additional Schools Required 2016 to 2031	+340 schools	+120 schools

Sources: Forecast id (various); Essential Economics
 Note: Figures rounded

4.4 Health Requirements

Public Hospital Beds

Based on the existing provision public hospital bed provision ratio of approximately 11 beds per 10,000 population, an additional 550 public hospital beds will be required in the Interface Council area between 2016 and 2031.

To close the gap by 50% with non-Interface Council provision (30 beds per 10,000 population), a ratio of 20.5 beds per 10,000 population would need to be provided. Applying this ratio leads to an additional requirement of approximately 2,500 beds for the Interface Councils.

As noted earlier, approximately 320 new beds are set to be provided in the short-term through expansions of a number of established Interface hospitals and these are factored into bed requirements outlined in Table 4.4.

Approximately 75 beds are provided per public hospital nationally (according to the Department of Health and Ageing – *The State of our Public Hospitals report 2010*). Using this ratio, an additional 29 public hospitals are required in the Interface over the coming 15 years to close the provision gap by 50%.

Public hospital requirements are included in Table 4.3

Table 4.3: Estimated Public Hospital Beds Required, Interface Councils, 2016-2031

	Requirements using existing Interface provision ratio 11 beds per 10,000 population	Requirements to close the gap with non-Interface areas by 50% 20.5 beds per 10,000 population
2016	1,550 beds	1,550 beds
2031	2,100 beds	3,730 beds
Confirmed new supply	320 beds	320 beds
Additional Beds Required 2016 to 2031	+230 beds	+2,180 beds
Additional Public Hospitals Required 2016 to 2031	+3 hospitals	+29 hospitals

Sources: Public hospital and health services annual reports (various); Travis Review – Increasing the capacity of the Victorian public hospital system for better patient outcomes, June 2015; Department of Environment, Land, Water and Planning, Victoria in Future 2016; Essential Economics.

Note: Figures rounded

4.5 Community and Recreational Requirements

Kindergarten/Preschool

The State ratio of 255 places per 1,000 persons aged 0-4 years derived from the Productivity Commission’s Report on Government Services 2018 (based on 2016 data) has been used to estimate the existing situation.

Using this approach, an additional 9,970 Kindergarten places will be required in the Interface area over the period 2016 to 2031.

An average of 100 places per kindergarten has been used to determine future building requirements (based on an average class size of 25 students and four groups per facility). Applying this ratio shows that an additional 100 kindergartens are required in the Interface over the coming 15 years.

Kindergarten requirements are shown in Table 4.4.

Table 4.4: Estimated Kindergarten/Preschool Places Required, Interface Councils 2016-2031

Kindergarten Places	
2016	31,580 places
2031	41,550 places
Additional Places Required 2016 to 2031	+9,970 places
Additional Kindertartens Required 2016 to 2031	+100 Kindertartens
Sources:	Forecast id (various); Productivity Commission – Report on Government Services 2018; Essential Economics
Notes:	Estimated from Productivity Commission State ratios Figures rounded

Library Floorspace

The Interface Councils currently have a lower provision of library floorspace (22m² per 1,000 population) compared to non-Interface areas (28m² per 1,000 population), and this is reflected in lower service points and operating hours as shown in Table 3.9 above. Using the mid-point of this ratio (25m² per 1,000 population) as an ongoing benchmark for provision, an estimated provision of 16,840m² of additional floorspace will be required across the Interface Councils area over the coming 15 years.

This requirement represents the equivalent of 17 new public libraries, based on an average floorspace of 1,000m² per library. A lower number of individual libraries may be required, noting the trend towards larger multi-purpose facilities such as Global Learning Centres.

Library floorspace requirements are shown in Table 4.5.

Table 4.5: Estimated Library Floorspace Required, Interface Councils 2016-2031

Library Floorspace	
2016	34,450m ²
2031	51,390m ²
Additional Floorspace Required 2016 to 2031	+8,470m²
Additional Public Libraries Required 2011 to 2026	+17 Libraries
Sources:	DELWP, Victoria in Future 2016; DELWP, Annual Survey of Public Libraries 2016/17; Essential Economics
Note:	Figures rounded

4.6 Public Transport Requirements

ABS Place of Work data shows that in 2016 only 6.2% of workers located in the Interface used public transport as their main mode of travel to work, and this compares to 16.0% for non-Interface areas. These ratios are used as a proxy for general public transport use across the community.

Under the existing usage ratio (6%), provision would need to be made for 18,400 additional Interface public transport users by the end of the 15-year period.

To close the gap with non-Interface areas by 50%, public transport usage would need to increase to 11.1%. Applying this ratio, provision would need to be made for 161,890 additional Interface public transport users by the end of the 15-year period.

Public transport usage estimates are included in Table 4.6

Table 4.6: Estimated Public Transport Usage (Workers), Interface Councils 2016-2031

	Estimate based on Existing Usage (6.2%)	Estimate based on Closing the Gap by 50% Usage (11.1%)
2016	97,380 users	97,380 users
2031	144,820 users	259,270 users
Additional Public Transport Users by 2031	+47,440 users	+161,890 users

Sources: Department of Environment, Land, Water and Planning, Victoria in Future 2016; ABS Place of Work 2016; Essential Economics

Note: Figures rounded

4.7 Summary of Key Infrastructure and Service Requirements

A summary of key infrastructure and service requirements based on ‘closing the gap’ outcomes is provided in Table 4.7.

Table 4.7: Summary of Key Infrastructure and Service Requirements, Interface Councils 2016-2031

Measure	Requirement
Jobs	+310,000 jobs
Primary School Places	+85,110 places / +340 new buildings
Secondary School Places	+64,570 places / +120 new buildings
Hospital Beds	+2,180 beds / +29 new buildings
Kindergarten/Preschool Places	+9,970 places / +100 new buildings
Library Floorspace	+16,840 m² / +17 new buildings
Public Transport Usage (Workers)	+ 161,890 additional users

Source: Essential Economics – refer to Tables 4.1 to 4.6.

Note: Figures rounded

4.8 Costs

Based on the infrastructure requirements identified above, broad costs have been estimated associated with each service area. These are 'ball-park' estimates, recognising that detailed specialist analysis would be required to accurately gauge costs for each item. Nevertheless, the cost estimates are useful in providing a benchmark against which economic and social costs of ongoing congestion can be made (as described in Section 5.2). Land cost estimates have been provided by Oliver Hume Real Estate based on recent average land sales values across the growth corridors.

The analysis shows that the total cost of providing key infrastructure in the Interface Council area over the coming 15 years is approximately \$10.9 billion (in constant 2016 dollars).

The following provides a summary of costs for each service area by 2031 (with costs spread across the 15-year period 2016 to 2031).

Kindergarten infrastructure

The cost of providing infrastructure to support an additional 9,970 kindergarten places is estimated at approximately \$100m over 15 years (in 2016 dollars).

This is based on:

- Floorspace requirements of 49,850m², using a ratio of 5m² per place (derived from Growth Area Framework Plans: Activity Centre and Employment Planning, Essential Economics 2010)
- Construction costs of \$1,720 per m² (derived from Rawlingsons Australian Construction Handbook 2017)
- Land requirements of 10ha (which assumes floorspace accounts for 50% of site coverage) at an average cost of \$500,000 per ha
- 10% allocation applied to total construction and land costs to allow for carparking and external site works.

Primary school infrastructure

The cost of providing infrastructure to support for an additional 85,110 primary school places is estimated at \$760m over 15 years (in 2016 dollars).

This is based on:

- Floorspace requirements of 425,550m², using a ratio of 5m² per place (derived from Growth Area Framework Plans: Activity Centre and Employment Planning, Essential Economics 2010)
- Construction costs of \$1,520 per m² (derived from Rawlingsons Australian Construction Handbook 2017)
- Land requirements of 85ha (which assumes floorspace accounts for 50% of site coverage) at an average cost of \$500,000 per ha

- 10% allocation applied to total construction and land costs to allow for carparking and external site works.

Secondary school infrastructure

The cost of providing infrastructure to support for an additional 64,570 secondary school places is estimated at \$720m over 15 years (in 2016 dollars).

This is based on:

- Floorspace requirements of 322,850m², using a ratio of 5m² per place (derived from Growth Area Framework Plans: Activity Centre and Employment Planning, Essential Economics 2010)
- Construction costs of \$1,930 per m² (derived from Rawlingsons Australian Construction Handbook 2017)
- Land requirements of 65ha (which assumes floorspace accounts for 50% of site coverage) at an average cost of \$500,000 per ha
- 10% allocation applied to total construction and land costs to allow for carparking and external site works.

Hospital infrastructure

The cost of providing infrastructure to support for an additional 2,180 hospital beds is estimated at \$1,175m over 15 years (in constant 2016 dollars).

This is based on:

- Floorspace requirements of 218,000m², using a ratio of 100m² per bed (derived from Department of Human Services – Design Guidelines for Hospitals and Day Care Procedure Centres, 2004)
- Construction costs of \$4,800 per m² (derived from Rawlingsons Australian Construction Handbook 2017)
- Land requirements of 44ha (which assumes floorspace accounts for 50% of site coverage) at an average cost of \$500,000 per ha
- 10% allocation applied to total construction and land costs to allow for carparking and external site works.

While this estimate is expressed in terms of ‘beds’, the costs include all infrastructure associated with public hospital facilities (consulting rooms, laboratories, theatres, waiting rooms, kitchens, staff areas etc).

Library Infrastructure

The cost of providing infrastructure to support the additional demand for library services associated with population growth is estimated at \$24m over 15 years (in 2016 dollars).

This is based on:

- Floorspace requirements of 8,470m², using a ratio of 25m² per 1,000 population (derived from DELWP, Annual Survey of Public Libraries 2016/17)
- Construction costs of \$2,470 per m² (derived from Davis Langdon Blue Book 2011)
- Land requirements of 2ha (which assumes floorspace accounts for 50% of site coverage) at an average cost of \$500,000 per ha
- 10% allocation applied to total construction and land costs to allow for carparking and external site works.

Public Transport Infrastructure

The cost of providing infrastructure to support additional public transport usage of 162,000 persons (by 2031) is estimated at \$8.1 billion over 15 years (in 2016 dollars).

This estimate is based on average annual public transport capital expenditure of \$4,260 per public transport user in 2015/16 (Derived from Public Transport Victoria Annual Report 2016-17).

4.9 Conclusions

Significant infrastructure and resources – totalling the equivalent of \$10.9 billion by 2031 (expressed in 2016 constant prices) – will be required to ensure Interface areas are adequately provided with facilities and services to assist in closing the gap with non-Interface areas, and to ensure improved economic, social and liveability outcomes are achieved. Table 4.8 provides a summary of estimated requirements and costs for the period 2016 to 2031.

Table 4.8: Estimated Costs Associated With Providing Key Infrastructure and Services, Interface Councils, 2016-2031

Component	Units Required	Ratios	Floorspace Required	Unit Cost (\$ per/m ²)	Estimated Construction Cost (by 2026)	Land Required	Unit Cost (per ha)	Estimated Land Costs	Sub-Total	10% Allocation for Carparking and external Works	Total
Kindergarten/Preschool	9,970 places	5m ² per child	49,850m ²	\$1,720	\$86 million	10ha	\$500,000	\$5 million	\$91 million	\$9 million	\$100 million
Primary School	85,110 places	5m ² per student	425,550m ²	\$1,520	\$647 million	85ha	\$500,000	\$43 million	\$690 million	\$70 million	\$760 million
Secondary School	64,570 places	5m ² per student	322,850m ²	\$1,930	\$623 million	65ha	\$500,000	\$32 million	\$655 million	\$65 million	\$720 million
Hospitals	2,180 beds	100m ² per bed	218,000 m ²	\$4,800	\$1,046 million	44ha	\$500,000	\$22 million	\$1,068 million	\$107 million	\$1,175 million
Libraries	8,470m ²	25m ² per 1,000 population	8,470m ²	\$2,470	\$21 million	2ha	\$500,000	\$1 million	\$22 million	\$2 million	\$24 million
Public Transport	162,000 additional Users*	-	-	\$4,260 per new user pa (capital)	-	-	-	-	-	-	\$8,124 million
Total \$10.903 million											

Sources: Growth Area Framework Plans: Activity Centre and Employment Planning, Essential Economics 2010; Rawlinsons Australian Construction Handbook 2017; Department of Human Services – Design Guidelines for Hospitals and Day Care Procedure Centres, 2004; DEWLP – Annual Survey of Public Libraries 2016/17; Public Transport Victoria Annual Report 2016/17; Oliver Hume Real Estate; Essential Economics

Note: Figures rounded to nearest \$1 million.

* Increase public transport usage is modelled to increase gradually from 6.2% to 11.1% of the population over the period 2016-2031

5 STATE ECONOMIC BENEFITS OF INFRASTRUCTURE AND RESOURCE FUNDING

5.1 Introduction

This Chapter highlights socio-economic benefits associated with a greater level of infrastructure and service provision in Interface Council areas. The analysis identifies costs associated with congestion under a base case outcome, as well as highlighting community service employment benefits associated with the delivery of key infrastructure and services (especially higher-order services which are generally lacking in Interface Council areas).

5.2 Social Costs of Congestion

Significant social costs are associated with ever-increasing congestion levels in Australia's capital cities. These costs are especially relevant to growth areas, with the principal causes being:

- Inadequate public transport provision
- High car dependency
- Lack of sufficient local jobs (poor job self-sufficiency)
- Lack of local health, education and community services
- Lack of local recreation, cultural and leisure services

These factors lead to a situation of ever-increasing commuting by Interface residents to access employment and increased numbers of trips to meet other personal, recreational and household needs. This expanded number of journeys (and travel time) places increasing pressure on already-stretched road infrastructure and other resources and impacts adversely on liveability and work/life balance for Interface residents.

The avoidable social costs of congestion for Australia were estimated at \$17.5 billion in 2016, a figure which is forecast to increase to \$27.7 billion in 2030, according to research undertaken by the Department of Transport and Regional Service - Bureau of Transport and Regional Economics (BTRE – *Traffic and congestion cost trends for Australian capital cities*, 2016). Over this period, the avoidable social costs of congestion for Metropolitan Melbourne are expected to increase from \$4.8 billion in 2016 to \$7.6 billion in 2030 (in real 2010 Australian dollars). Note, this data relates to BTRE's lower baseline projections and can therefore be considered to be on the conservatively low side.

These estimates are calculated with respect to detailed modelling of the following variables:

- Private time costs
- Business time costs

- Additional vehicle operating costs
- Additional air pollution costs.

The social cost of congestion measures the cost difference between the estimated congestion outcome compared with the economic optimum outcome (i.e. free-flowing traffic situation).

Using the BTRE data from 2016 to 2030, estimates have been prepared for the cumulative social costs of congestion in Interface areas over this period. These calculations are based on distributing BTRE cost data on a per capita basis using DEWLP VIF 2016 population projections, but adjusting by an additional 20% to recognise greater car reliance and commuting distances observed for Interface Council areas.

Table 5.1: Estimate of Avoidable Social Costs of Congestion, Interface Councils, 2016-2030

Year	Greater Melbourne Estimated Social Cost of Congestion	Interface Councils Share Congestion (calculated on a per capita basis plus 20%)	Interface Councils Estimated Social Cost of Congestion
2016	\$4.84 billion	40.7%	\$1.97 billion
2017	\$5.13 billion	41.0%	\$2.11 billion
2018	\$5.48 billion	41.4%	\$2.27 billion
2019	\$5.79 billion	41.8%	\$2.42 billion
2020	\$6.10 billion	42.1%	\$2.57 billion
2021	\$6.36 billion	42.5%	\$2.70 billion
2022	\$6.55 billion	42.8%	\$2.81 billion
2023	\$6.71 billion	43.2%	\$2.90 billion
2024	\$6.86 billion	43.6%	\$2.99 billion
2025	\$7.00 billion	44.0%	\$3.08 billion
2026	\$7.13 billion	44.5%	\$3.17 billion
2027	\$7.25 billion	44.9%	\$3.25 billion
2028	\$7.34 billion	45.2%	\$3.32 billion
2029	\$7.48 billion	45.6%	\$3.41 billion
2030	\$7.57 billion	46.0%	\$3.48 billion
Total	\$97.59 billion	43.5%	\$42.45 billion

Sources: Bureau of Transport and Regional Economics – *Traffic and congestion cost trends for Australian capital cities*, 2016; DEWLP Victoria in Future 2016; Essential Economics

Note: Figures rounded

The BTRE analysis show a significant economic and social dividend is associated with reduced congestion costs, particularly compared to the cost of providing key infrastructure in strategic Interface locations. Based on BTRE data, a 25% reduction in cumulative congestion costs over the coming 15 years would be the equivalent to providing essential infrastructure identified for the Interface Councils area over this period.

5.3 Community Service Employment Generation

To achieve a target of 310,000 additional jobs in the Interface over the coming 15 years, employment must be generated across a wide range of sectors, and a significant amount of new investment needs to be attracted.

A key cornerstone for investment attraction is the development of high amenity and liveable communities which provide a full range of higher-order services and a diverse housing stock that attract professionals, business owners and entrepreneurs and their families to live in the area. This recognises that while intervention can support investment and employment outcomes (such as relocation of State agencies or support for a particular local industry), a vibrant small and medium-enterprise sector is critically important to sustainable employment growth in any particular location, especially as the SME sector is where most businesses and jobs are created.

The provision of infrastructure and services as outlined in this report will assist in bridging the liveability gap between Interface and non-Interface areas in Greater Melbourne, and increase the attractiveness of migration to these areas, particularly if supported by investment in improved and affordable housing products.

In employment terms, provision of this level of infrastructure is estimated to generate approximately 33,000 new jobs in Interface areas, representing 1 in 9 or 11% of the total job requirement between 2016 and 2031, as shown in Table 5.2.

In a broader employment context, important components in leveraging private sector investment and generating employment will be found in the setting of a good strategic planning base, such as:

- Precinct Structure Planning
- Activity Centre Planning
- Planning for industrial/employment land nodes
- Public Transport Planning
- Local and regional economic development strategies
- Investment attraction and facilitation strategies.

Table 5.2: Community Service Employment Generation

	Employment Ratio	Direct Jobs	Employment Multiplier	Indirect Jobs	Indirect jobs supported in Interface (30% of indirect jobs)	Total Jobs
Kindergarten / preschool	1 job per 15 places	665	1.8	530	160	825
Primary School	1 job per 10 places	8,510	1.7	5,960	1,790	10,300
Secondary School	1 job per 10 places	6,460	1.7	4,520	1,360	7,820
Hospitals	5 jobs per bed	10,900	1.9	9,810	2,940	13,840
Libraries	1 job per 75m ²	115	2.1	125	40	155
Total		26,650 jobs		20,945 jobs	6,290 jobs	32,940 jobs
Total additional jobs required						310,000 jobs
Share of total additional jobs						10.6%

Sources: ABS Input-Output tables; DEWLP Annual Survey of Public Libraries 2016/17; Essential Economics

Note: Figures rounded

5.4 Other State Benefits

A range of other benefits are associated with improved infrastructure and service provision in the Interface, and these include at least the following:

- Development of more sustainable communities in terms of providing local jobs and services
- Contribution to providing better balance of white and blue collar jobs in the Interface
- Improved health and education outcomes for Interface residents through delivery of accessible higher-order medical and learning/training resources at a local level (i.e. benefits of early intervention)
- Reduction in pressure on middle-ring suburban areas in terms of reducing pressures on their provision of health, education and community services
- Reduction in pressure on road infrastructure as more services and jobs are provided in Interface areas, thus reducing the requirement for extensive work-related and other travel
- Improved environmental outcomes due to reduced vehicle travel, higher public transport usage.

5.5 Conclusions

- 1 Significant socio-economic costs associated with congesting impacts on individuals, business, infrastructure and the environment have been identified by the BTRE.
- 2 Over the coming 15 years, cumulative congestion costs are estimated to be approximately \$42 billion in the Interface area.

- 3 In contrast, the cost of providing key infrastructure over this period is estimated at \$10.8 billion, or just 25% of the cumulative congestion costs. Importantly, the provision of greater numbers of local jobs, community services and public transport options in the Interface would be expected to contribute significantly to reducing congestion and associated costs, as reliance on private vehicle-based travel declines.
- 4 The provision of infrastructure and services outlined in this report would be expected to contribute to the delivery of approximately 33,000 additional jobs in the Interface in the next 15 years, and assist in meeting a share of the overall employment target of 310,000 new jobs over the period 2016 to 2031.
- 5 The provision of higher-order services – including major hospitals, further education facilities, schools and aged care facilities – would considerably improve liveability in the Interface Councils area, making these localities more attractive for professional job-seekers and their families, and more attractive for investors and those establishing new or expanded businesses.
- 6 Other benefits associated with enhanced infrastructure and service provision in the Interface can be expected to include an improved balance of white- and blue-collar employment opportunities, improved health and education outcomes, reduced pressure on local and regional road infrastructure, and improved environmental outcomes.

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