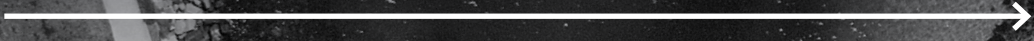


Background Report



AUGUST 2020

INTEGRATED
TRANSPORT
STRATEGY



City of
KINGSTON

Foreword

Background

The City of Kingston is home to over 165,000 people. It is located 15km south of Melbourne's central business district and spans an area from Moorabbin to Carrum to Dingley Village – covering an area of 91km².

The City of Kingston will experience significant growth in population and development over the next 15 years – with the population projected by State Government Victoria in Future (ViF) to be about 200,000 in 2036. To respond to these challenges the draft Kingston Integrated Transport Strategy (KITS) has set out a vision for a connected, integrated and sustainable transport network that is safe, healthy, accessible, reliable, and efficient.

The strategy will provide the long-term direction and guidance in integrated transport and land-use planning that will enable Council to make informed decisions about future investments, strategic planning, advocacy to state government, and policy direction to ensure that the future growth of Kingston meets the diverse needs of our residents, visitors and workers.

Historically transport has been considered as separate, competing modes. Investment has been focused on roads and car drivers, with provision for people on foot, bike or public transport a secondary consideration.

Integrated transport means a connected, sustainable, and coordinated transport system, in which land-use planning promotes convenient access to key destinations and reduces the need to travel by car. Integrated transport means local, regional and metropolitan transport agencies (and other groups) working together to deliver a range of ways people and goods can reach their destination.

The purpose of this background report is to present an evidence base that will inform the City of Kingston's Integrated Transport Strategy.

Study Results

Background

The purpose of this background report is to present an evidence base to inform the City of Kingston's Integrated Transport Strategy. The analysis below is largely an investigation of existing and future demographics characteristics of the Kingston using the Census Data i.d. population forecasts, though other sources of data are also used.

To help make the data easier to interpret, the analysis focuses on Kingston and selected neighbouring municipalities, Kingston suburbs and activity centres that have different characteristics from the municipality as a whole.

Figure A1 in the appendix shows the suburbs in the municipality.

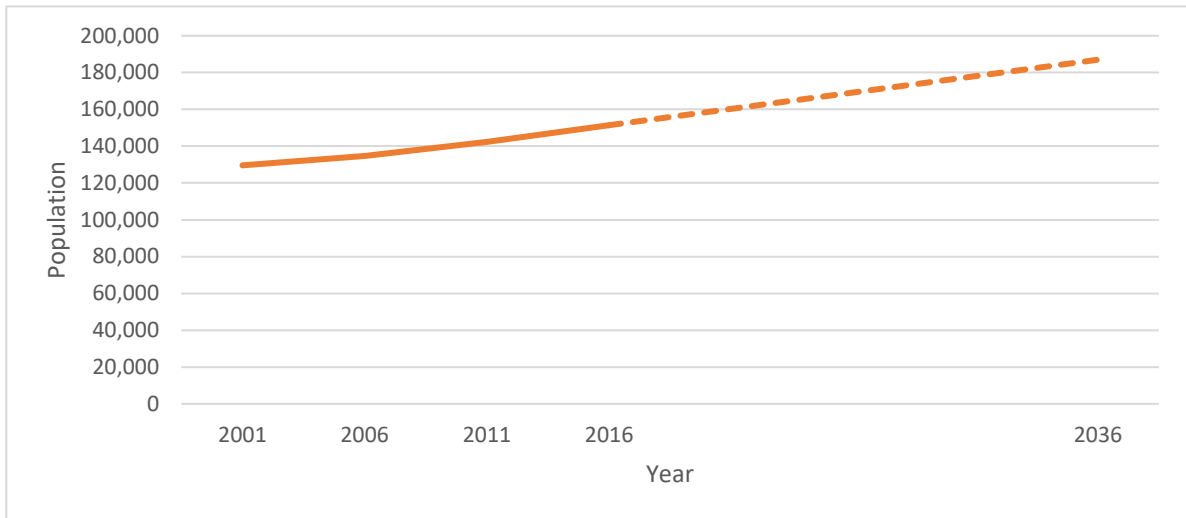
The activity centre data are based on the Statistical Area 1 (SA1 zone) census zones close to the activity centres. Figure A2 in the appendix shows the location of these activity centre zones and provides background information about SA1 zones.

Council was also able to investigate areas selected for their predominant land use – for example residential, industrial, and open space. The residential areas were further subdivided into areas close to the activity centres, station or the railway lines (shown in green in Figure A3 in of the appendix) and residential areas further away from these areas (shown in blue in the Figure).

Population

Figure 1 shows population growth Kingston. The population has grown from almost 130,000 in 2001 to about 151,000 in 2016 (a 17% increase). By 2036 the population is predicted to be 187,000 – an increase of 23% from 2016.

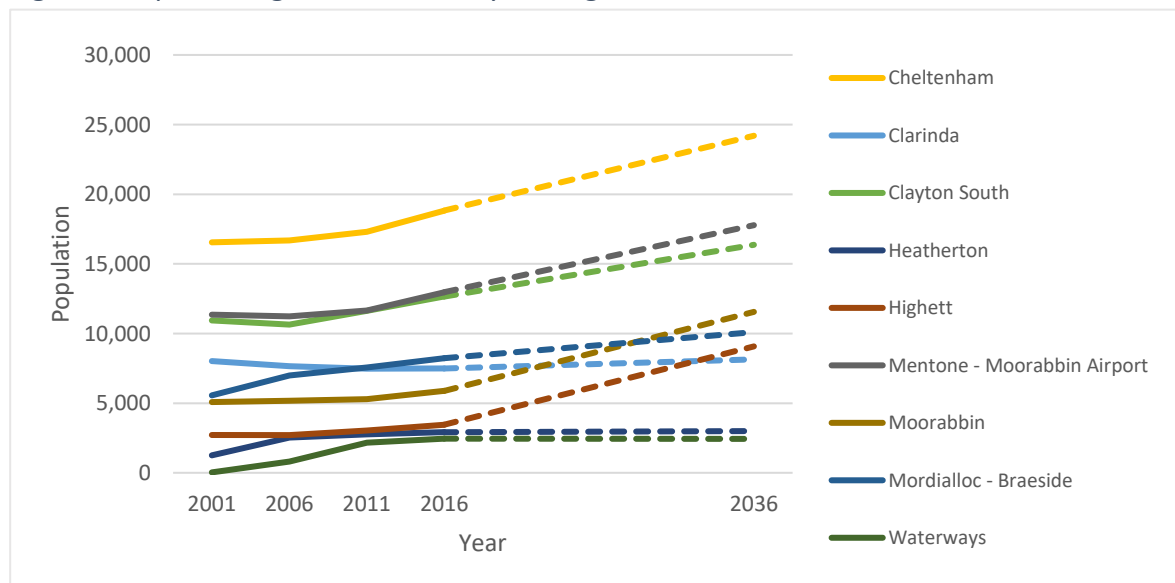
Figure 1 - Population growth in the City of Kingston



Source – Census - ID Community

Figure 2 shows population growth in the selected suburbs in City of Kingston. The Figure shows population growth will be higher in Cheltenham, Mentone, Clayton South, Moorabbin and Highett compared with other suburbs such as Clarinda, Heatherton and Waterways.

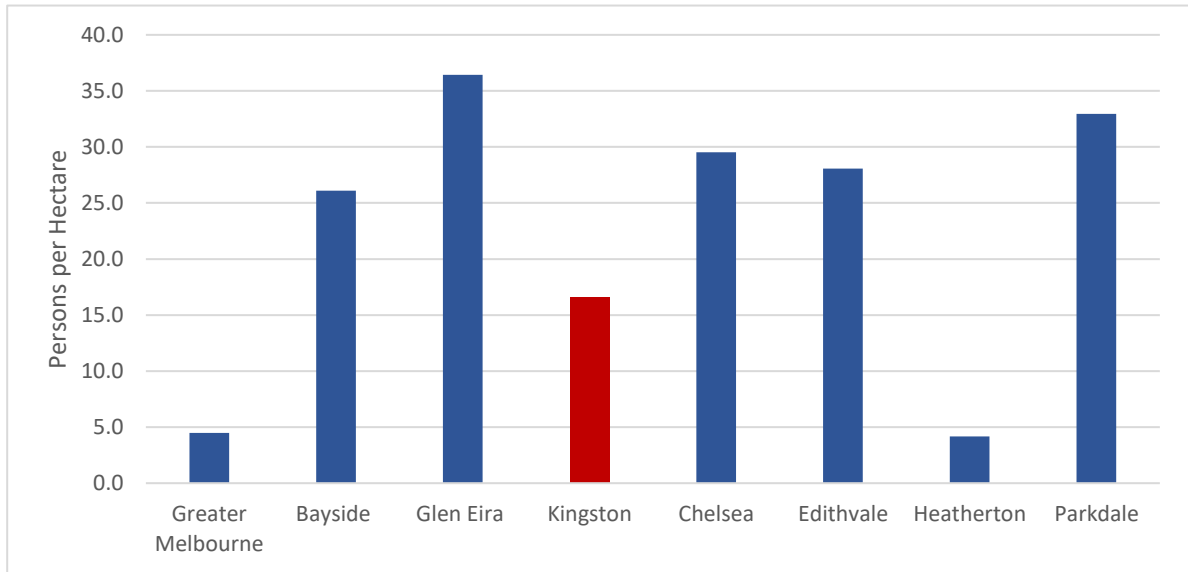
Figure 2 Population growth in the City of Kingston's suburbs



Source – Census - ID Community

Figure 3 shows Kingston has a population density of 16.6 persons per hectare. This is lower than Bayside and Glen Eira. Within the City of Kingston – Chelsea, Edithvale and Parkdale have a relatively high population density, whilst Heatherton has a low population density.

Figure 3 Population density (persons per hectare)

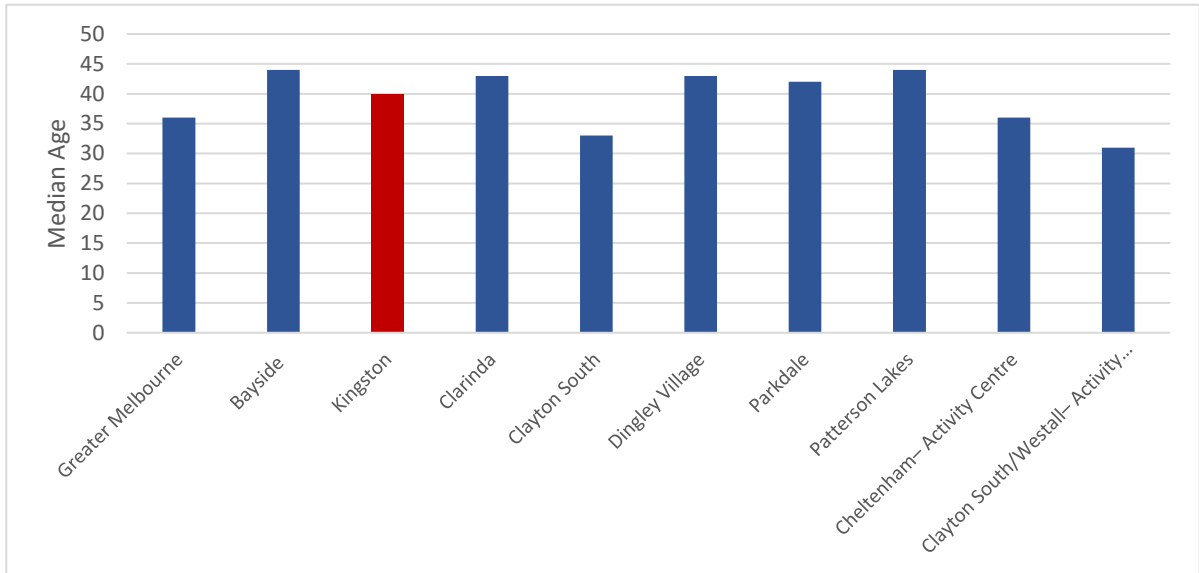


Source – Census - ID Community - 2016

How old are we?

Figure 4 shows the median age of residents in Kingston is 40. This compares with Bayside at 44, and Greater Melbourne at 36 years. Within the City of Kingston, Clarinda, Dingley Village, Parkdale and Patterson Lakes have older populations. While Clayton South, Cheltenham Activity Centre, and Clayton South/Westall Activity Centres have younger populations.

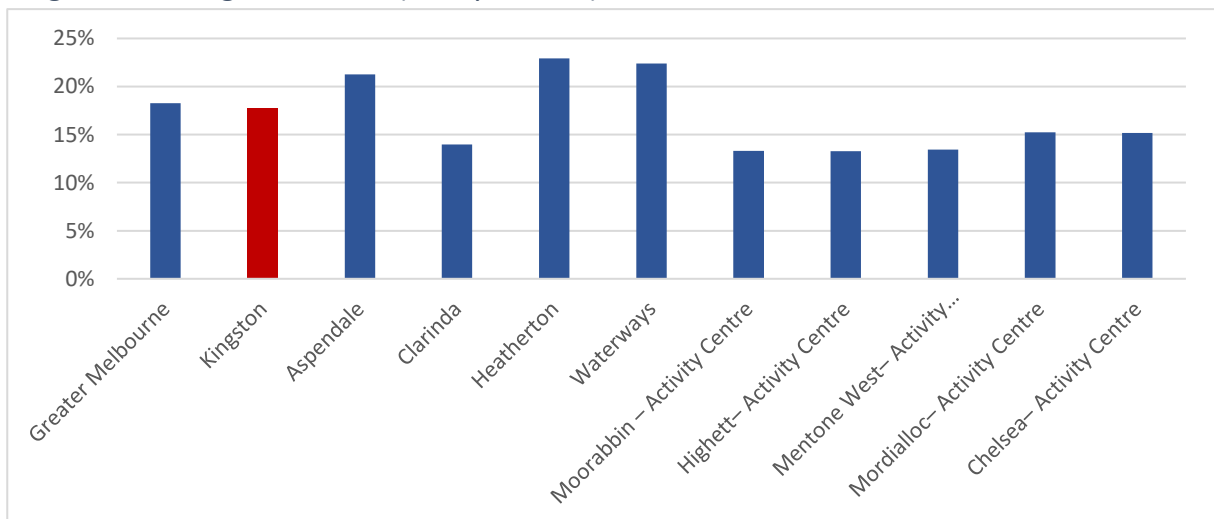
Figure 4 - Median age of residents.



Source – Census - ID Community 2016

Figure 5 shows about 18% of residents of Kingston are 0 to 15 years of age. Within the municipality, Aspendale, Heatherton and Waterway have a higher proportion of younger people, whilst Clarinda and the activity centres have proportionately fewer younger people.

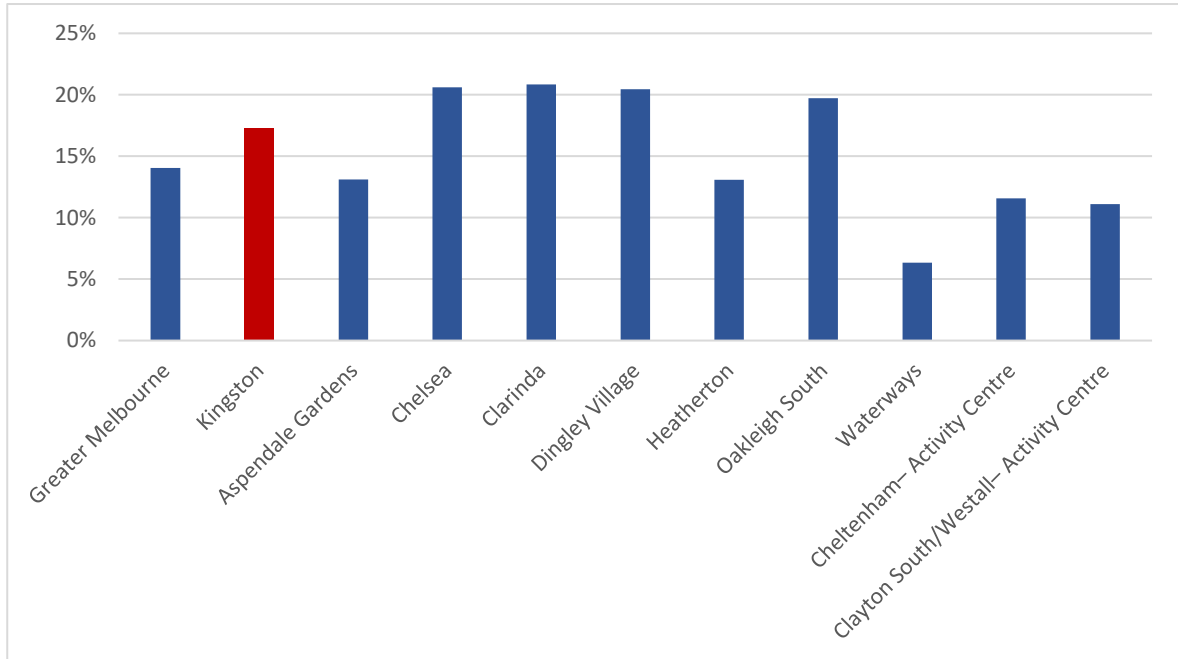
Figure 5 - Younger residents (0-15 years old)



Source – Census - ID Community 2016

Figure 6 shows about 17% of residents of Kingston are aged 65 or older. Within the municipality Chelsea, Clarinda, Dingley Village and Oakleigh South have higher proportions of older people. Whilst Aspendale Gardens, Heatherton, Waterway and Cheltenham Activity Centre and Clayton South Activity Centre have lower proportions of older people.

Figure 6 - Older residents (65 years or older)



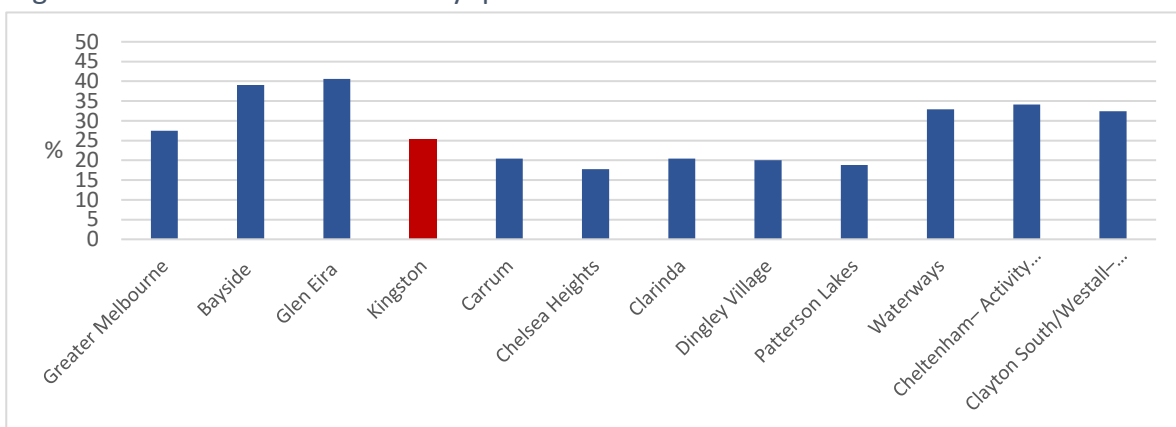
Source – Census - ID Community 2016

Who are we?

Education

Figure 7 shows 25% of residents in Kingston have a university qualification, this compares with Bayside and Glen Eira where about 40% of residents have a university qualification. Within the municipality, Waterways, and Cheltenham and Clayton South/Westall activity centres have higher proportions of residents with a university qualification. Whilst Carrum, Chelsea Heights, Clarinda, Dingley Village and Patterson Lakes have lower proportions.

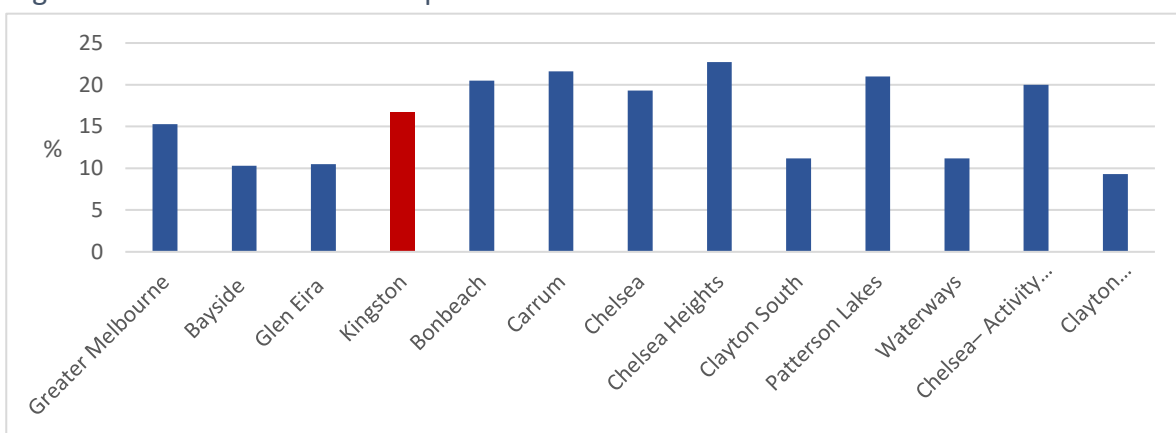
Figure 7 - Residents with university qualifications



Source – Census - ID Community 2016

Figure 8 shows 17% of residents in Kingston have a trade qualification, this compared with Bayside and Glen Eira where 10% have a trade qualification. Within the municipality, Bonbeach, Carrum, Chelsea and Patterson Lakes high proportions of residents with a trade qualification. Whilst Clayton South (both the suburb and the activity centre) and Waterways have lower proportions.

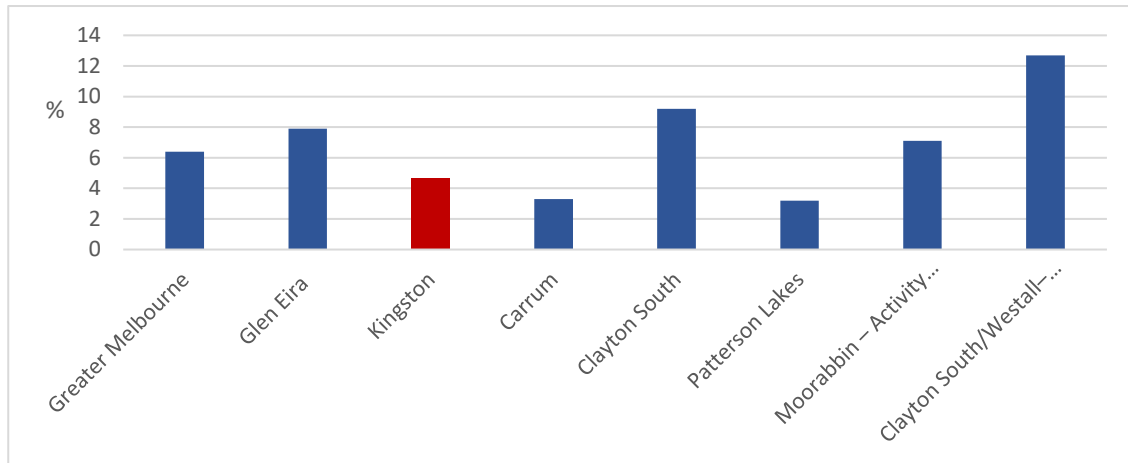
Figure 8 - Residents with trade qualifications



Source – Census - ID Community 2016

Figure 9 shows 4.7% of residents in Kingston attend university, this compared with Glen Eira where 7.9% attend university. Within the municipality, Clayton (the suburb and activity centre) and Moorabbin have higher proportions of residents attending university – due to the proximity of Monash University. Carrum and Patterson Lakes have lower proportions.

Figure 9 - Residents attending university

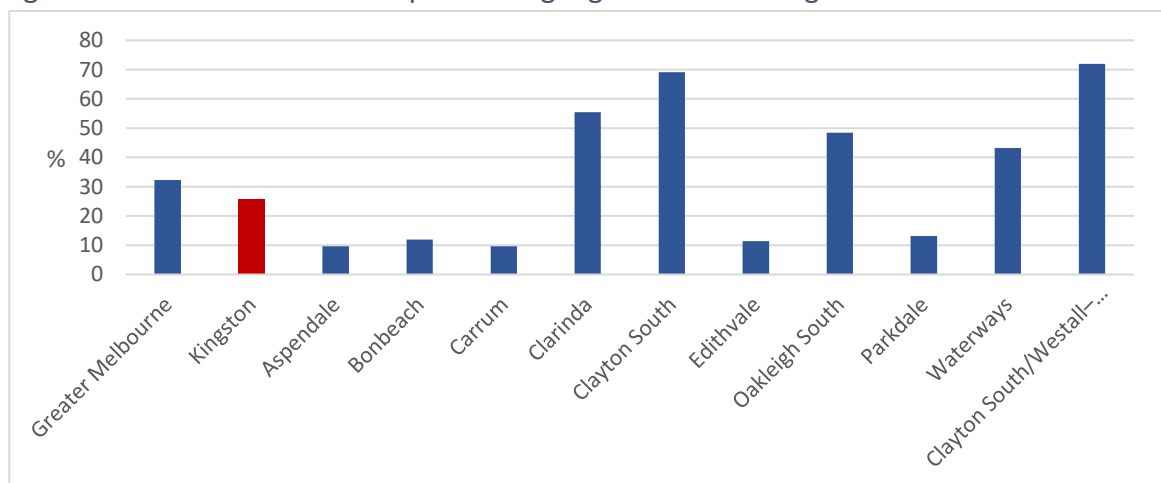


Source – Census - ID Community 2016

Language

Figure 10 shows 26% of residents in Kingston can speak a language other than English. Within the municipality, Clarinda, Clayton South (suburb and activity centre) Oakleigh South and Waterways have high proportions of residents speaking a second language, whilst Aspendale, Bonbeach, Carrum, Edithvale and Parkdale lower proportions.

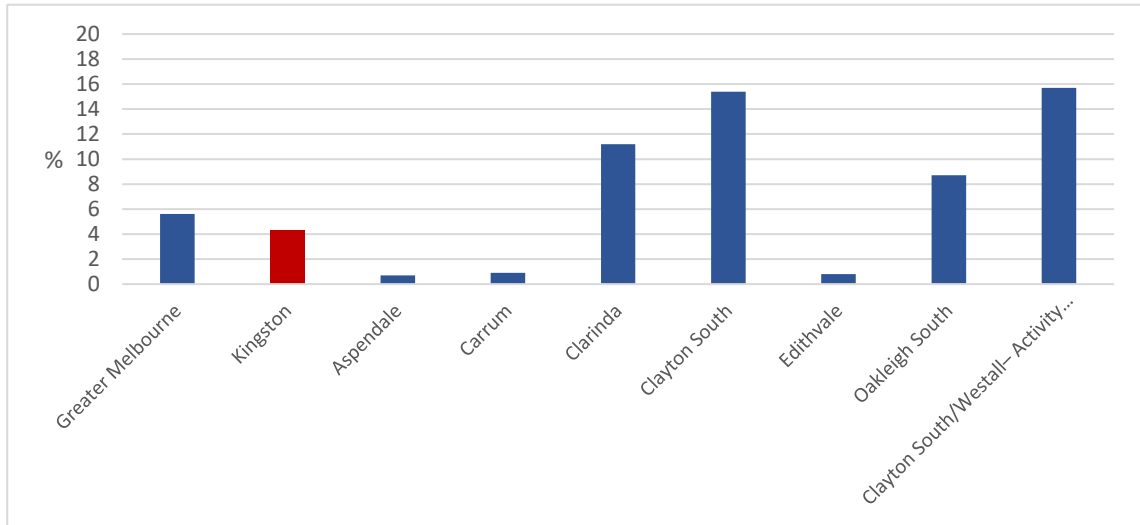
Figure 10 - Residents who can speak a language other than English



Source – Census - ID Community 2016

Figure 11 shows 4.3% of residents in Kingston are not fluent in English. Within the municipality Clarinda, Clayton South (suburb and activity centre) and Oakleigh South have high proportions of residents not fluent in English, whilst Aspendale, Carrum, and Edithvale have lower proportions.

Figure 11 - Residents not fluent in English

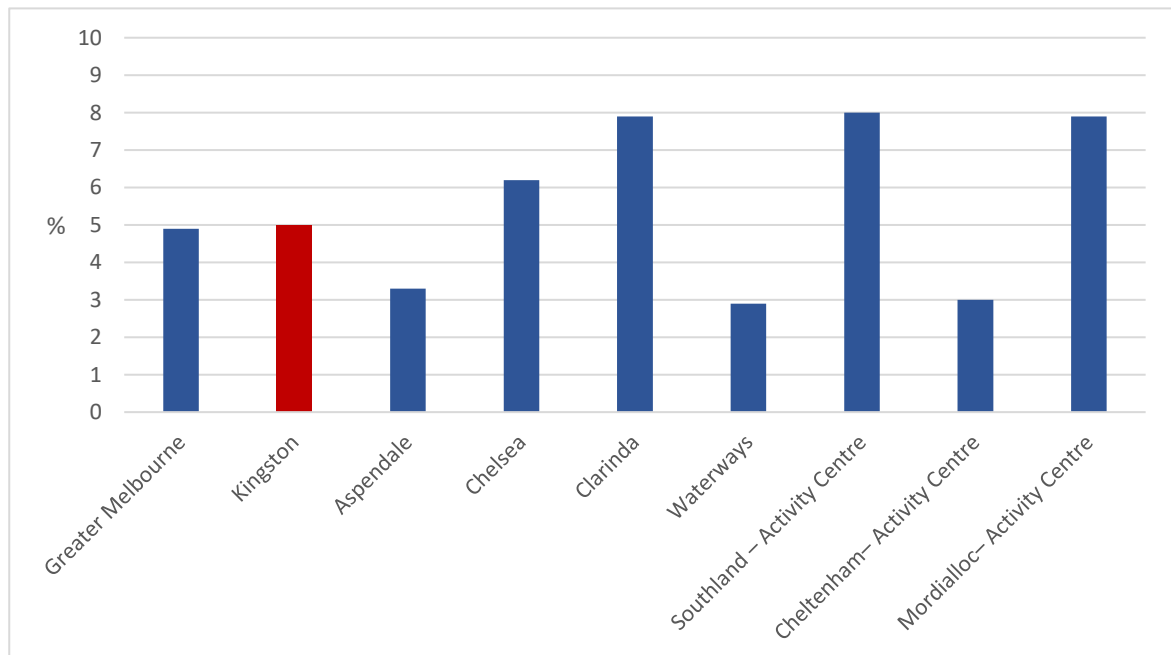


Source – Census - ID Community 2016

Disability

Figure 12 shows 5% of residents in Kingston need assistance due to a disability. Within the municipality, Chelsea, Clarinda, Southland and Mordialloc activity centres have higher proportions needing assistance, whilst Aspendale, Waterways and Cheltenham activity centre have lower proportions.

Figure 12 - Resident needing assistance due to disability

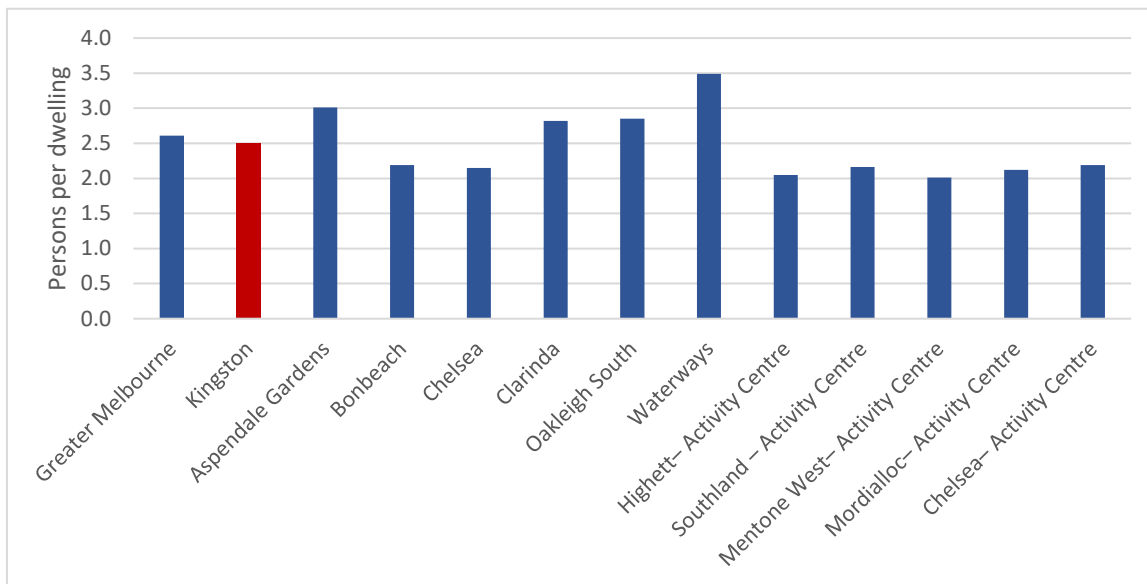


Source – Census - ID Community 2016

How do we live?

Figure 13 shows the average household in Kingston has 2.5 people per dwelling. Within the municipality, Aspendale Gardens, Clarinda, Oakleigh South and Waterways have higher household size. Bonbeach, Chelsea, and many of the activity centres have lower household sizes.

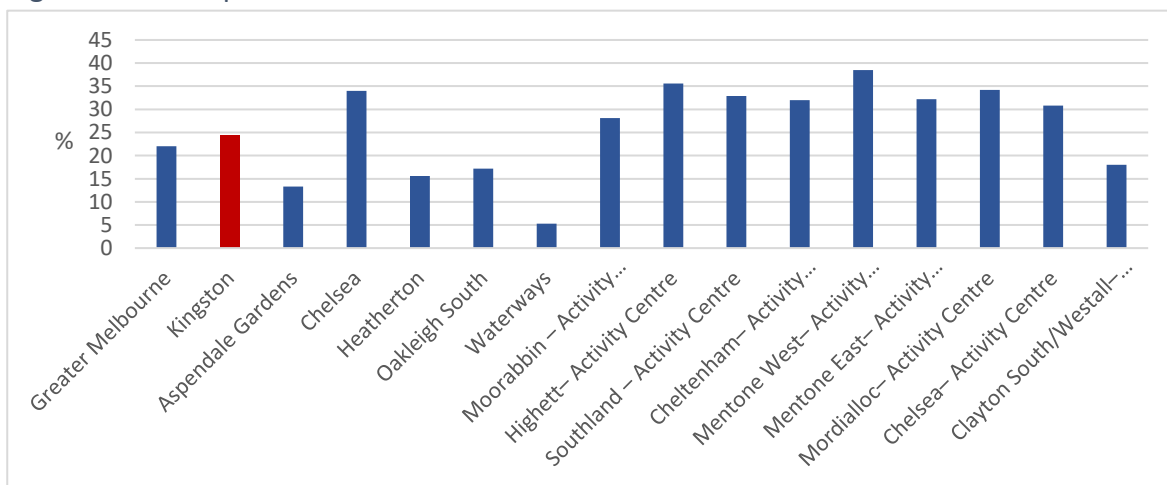
Figure 13 - Average household size (people per dwelling)



Source – Census - ID Community 2016

Figure 14 shows lone persons make up 24% of household in Kingston. Within the municipality, Chelsea and many of the Activity Centres have higher proportions of lone person households, whilst Aspendale Gardens, Heatherton, Oakleigh South and Waterway have lower proportions of lone person households.

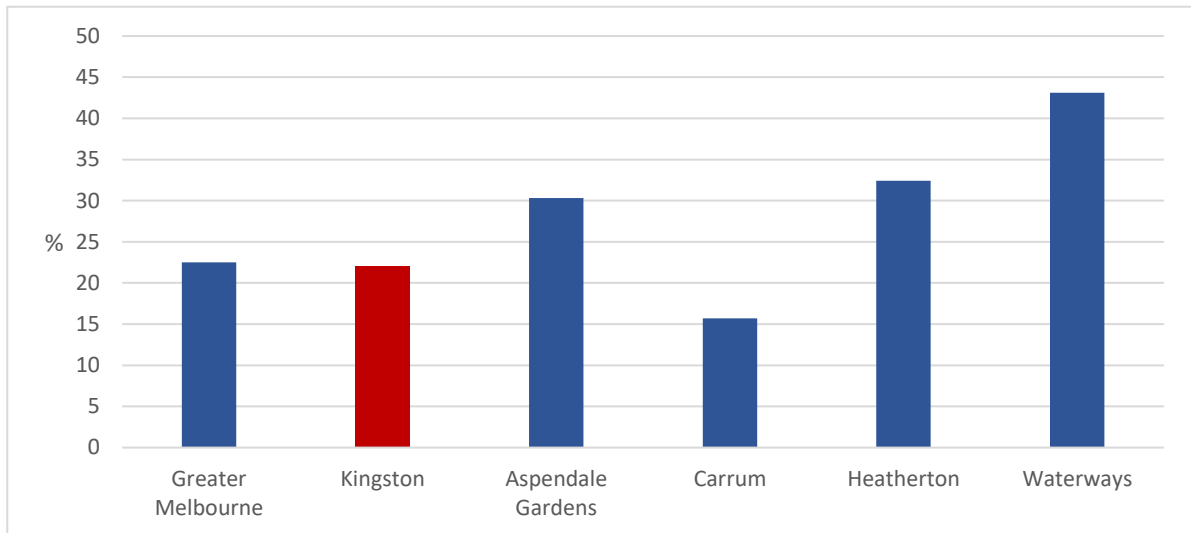
Figure 14 - Lone person households



Source – Census - ID Community 2016

Figure 15 shows couples with dependent children (aged under 15 years) make 22% of household in Kingston. Within the municipality, Aspendale Gardens, Heatherton, and Waterway have higher proportions of couples with dependent children – whilst Carrum has a lower proportion.

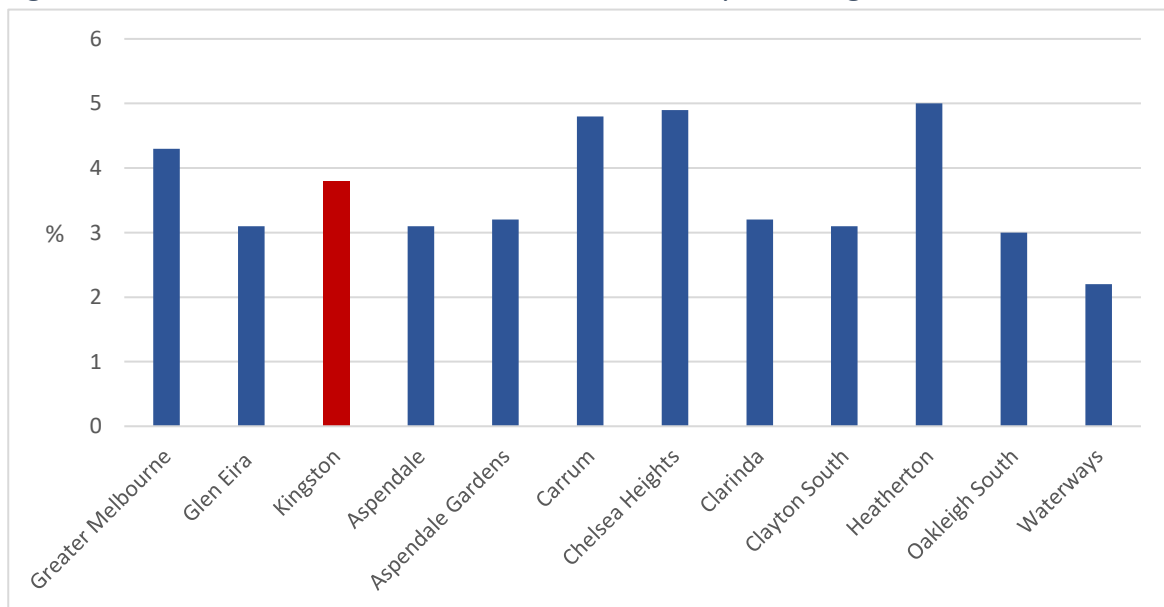
Figure 15 - Couples with children under 15 years of age



Source – Census - ID Community 2016

Figure 16 shows 3.8% of households in Kingston have one parent with children under the age of 15. Within the municipality, Carrum, Chelsea Heights and Heatherton have higher proportions. Aspendale, Aspendale Gardens, Clarinda, Clayton South, Oakleigh South and Waterways have lower proportions.

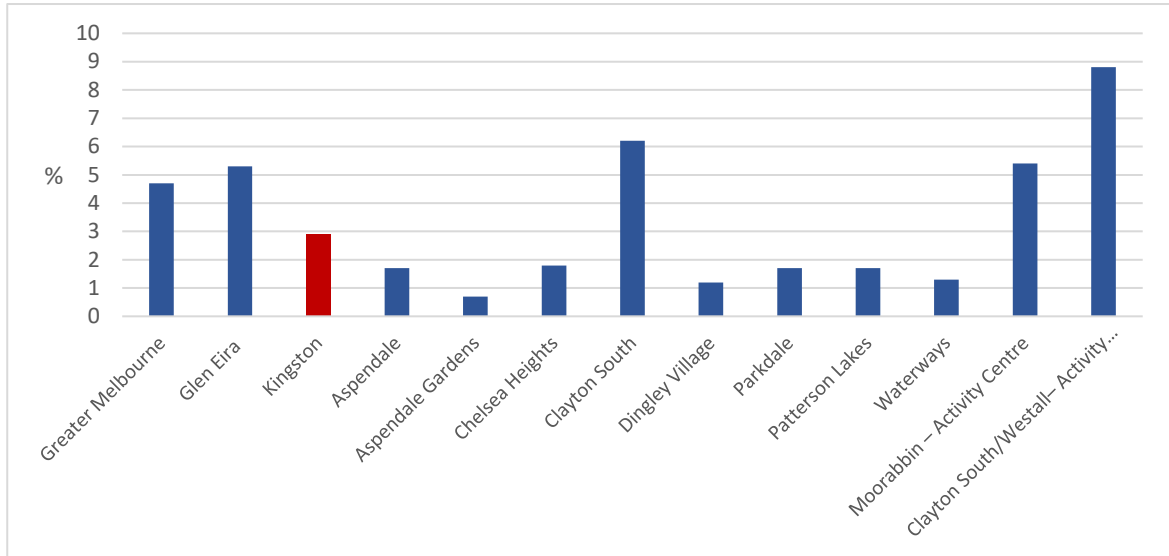
Figure 16 - One Parent Families with children under 15 years of age



Source – Census - ID Community 2016

Figure 17 shows 2.5% of households in Kingston share a house. Within the municipality, Clayton South, Moorabbin Activity Centre and Clayton South/Westall Activity centre have higher proportions - due to these areas proximity to Monash University and Tafe, whilst Aspendale, Aspendale Gardens, Chelsea Heights, Dingley Village, Parkdale, Patterson Lakes, and Waterways have lower proportions.

Figure 17 - Group households e.g. house sharing



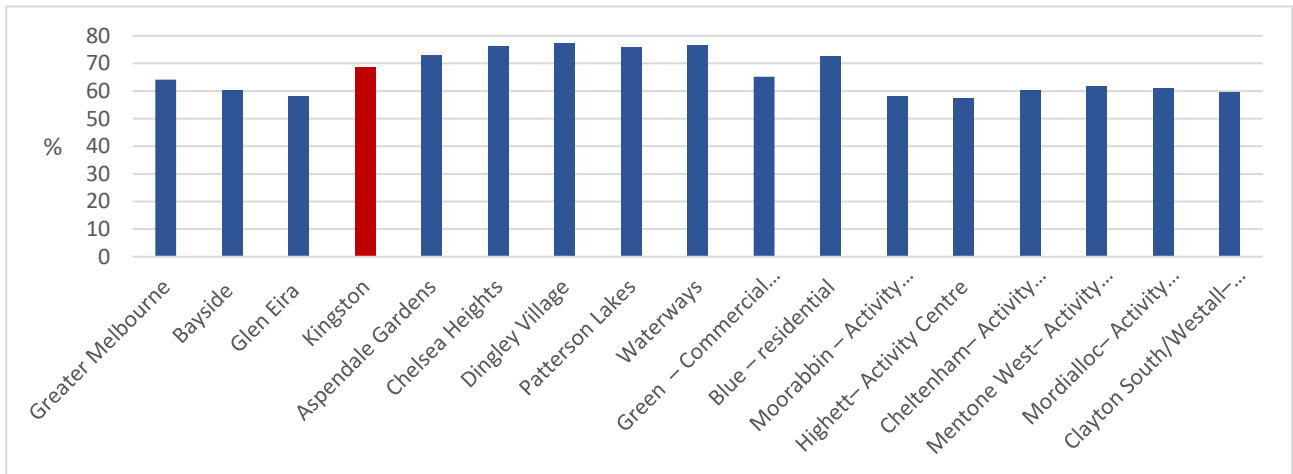
Source – Census - ID Community 2016

Transport

Travel to work

Figure 32 shows almost 69% of residents of Kingston travel to work by car, this compares with 60% in Bayside and 58% in Glen Eira. Within the municipality the activity centres have lower car use due to their proximity to railway stations, whilst areas such as Chelsea Heights, Dingley Village and Waterway have higher use. Residential areas not close to a station (the blue areas in Figure A3) also have high car use to work.

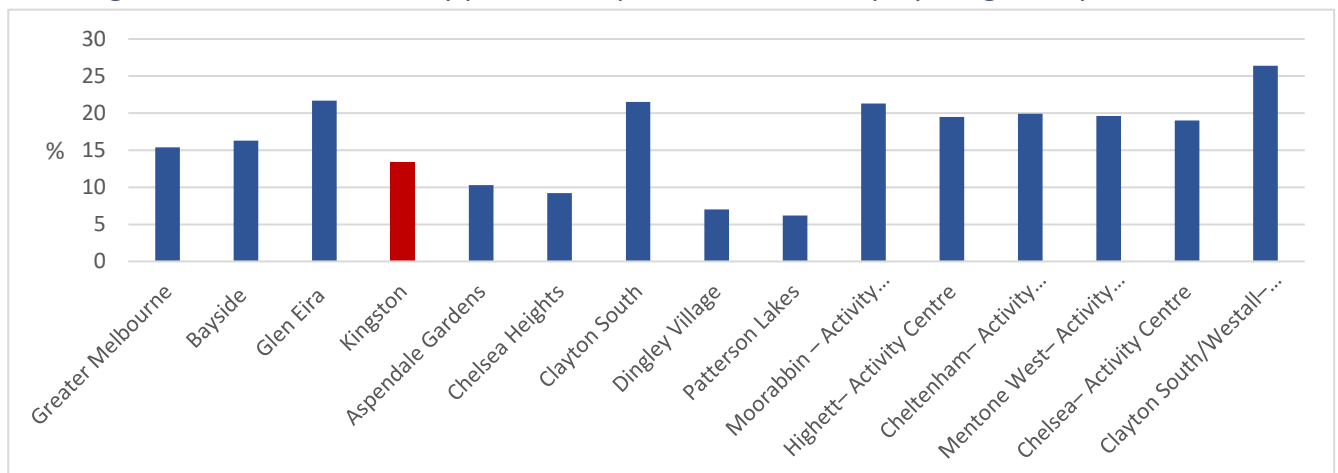
Figure 32 - Travel to work by car – residents employed aged 15 years and over



Source – Census - ID Community 2016

Figure 33 shows 13% for residents of Kingston the main mode of travel work is by public transport, this compares with 16% in Bayside and 22% in Glen Eira. Within the municipality the activity centres have higher public transport use to their proximity to railway station, whilst areas such as Chelsea Heights, Dingley Village and Paterson Lakes have lower.

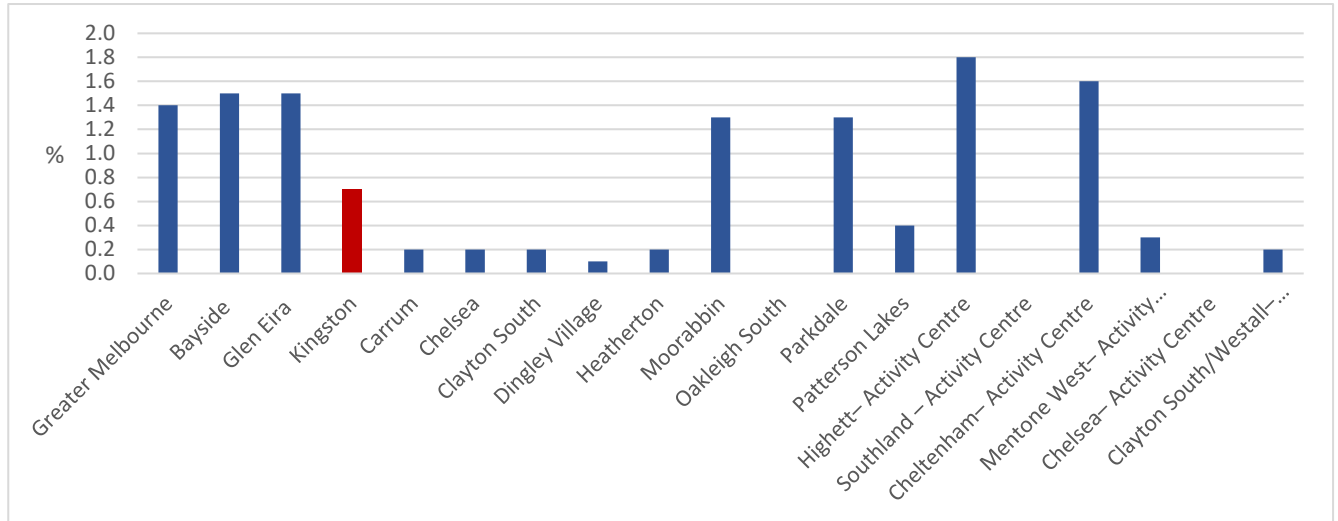
Figure 33 - Travel to work by public transport – residents employed aged 15 years and over



Source – Census - ID Community 2016

Figure 34 shows only 0.7% of residents of Kingston bicycle to work as their main mode of travel, this compares with 1.5% in Bayside and in Glen Eira. Within the municipality the Moorabbin, Parkdale, Highett activity centre and Cheltenham activity centre have higher bicycle use, whilst areas such as Carrum, Chelsea, Clayton South, Dingley Village and Heatherton have lower levels.

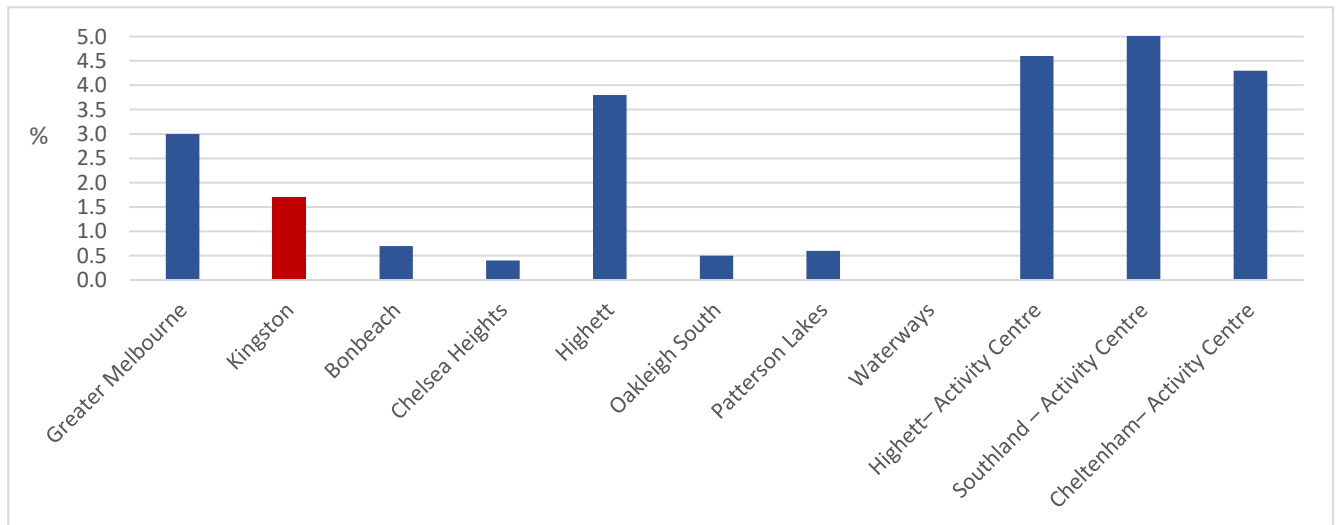
Figure 34 - Travel to work by bicycle – residents employed aged 15 years and over



Source – Census - ID Community 2016

Figure 35 shows 1.7% of residents of Kingston walk to work as their main mode of travel. Within the municipality the Highett (suburb and activity centre) Southland and Cheltenham activity centers have high walk to work rates, whilst areas such as Bonbeach, Chelsea Heights, Oakleigh South, Patterson Lakes and Waterways have lower levels.

Figure 35 - Travel to work by foot – residents employed aged 15 years and over

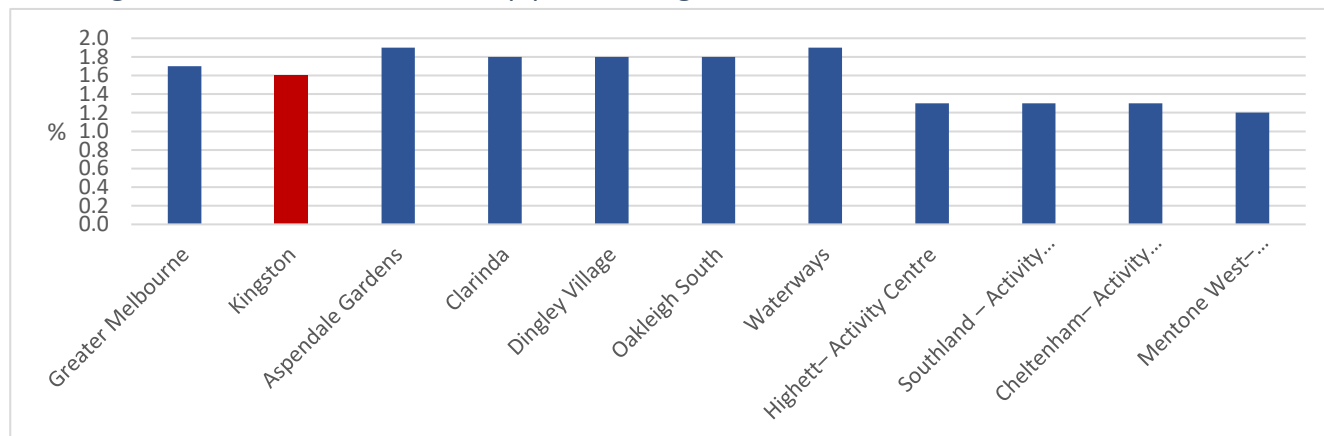


Source – Census - ID Community 2016

Car Ownership

Figure 36 shows the median car ownership in Kingston is 1.6 cars per dwelling. Within the municipality, Aspendale Gardens, Clarinda, Dingley Village, Oakleigh South and Waterways have higher car ownership rates, while the activity centres have lower rates.

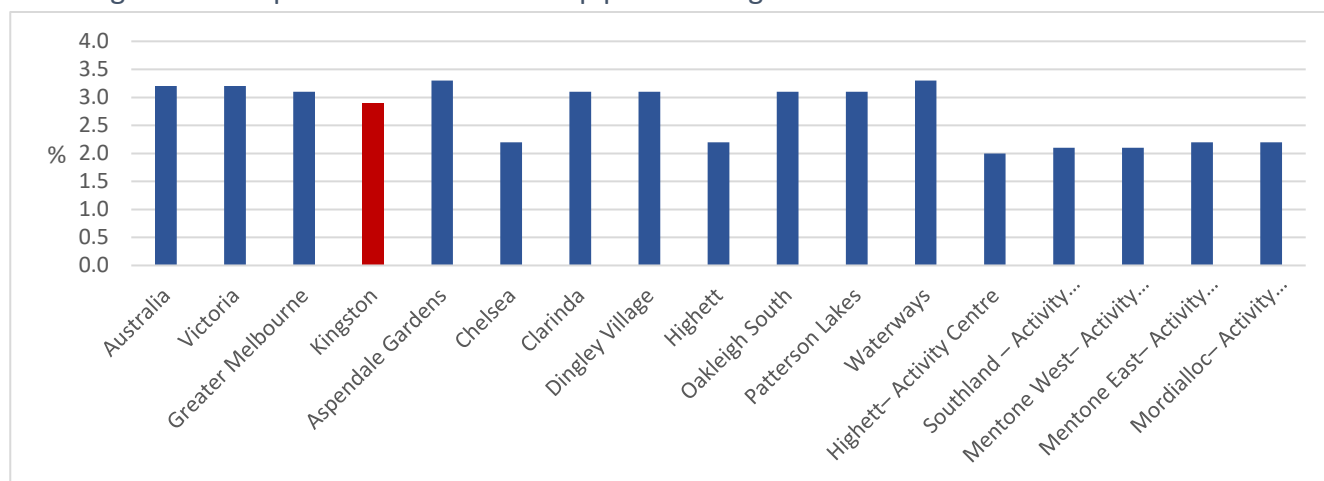
Figure 36 - Median car ownership per dwelling



Source – Census – Table builder 2016

Figure 37 shows the 85-percentile car ownership Kingston is 2.9 cars per dwelling. The 85% car ownership is the car ownership that 85% of households have the municipality (the median is the average or 50-percentile car ownership in the municipality). Aspendale Gardens, Clarinda, Dingley Village, Oakleigh South, Patterson Lakes and Waterways have higher car ownership rates, while Chelsea, Highett, and the activity centres have lower rates.

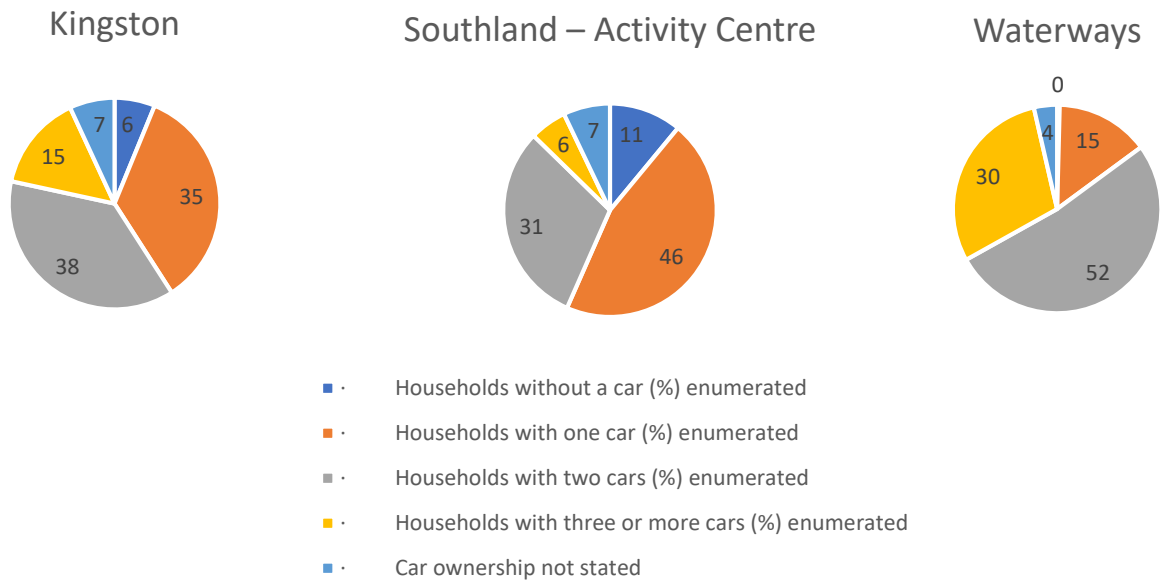
Figure 37 - 85 percentile car ownership per dwelling



Source – Census – Table builder 2016

Figure 38 shows in Kingston 6% of households in Kingston do not own a car, 35% own one car, and 38% own two cars. By comparison in Southland activity centre 11% of households own no cars, 46% own one car, and 31% of own two cars. In Waterways 0.4% of households own no cars, 15% own one car, 52% of own two cars, and 30% own three or more cars.

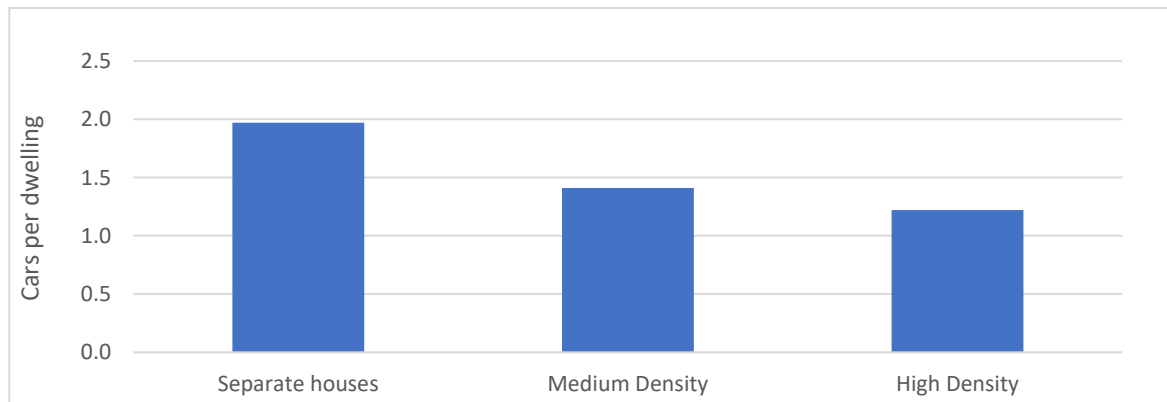
Figure 38 - Number of cars owned (% of households)



Source – Census - ID Community 2016

Figure 39 shows separate houses have higher car ownership rates (1.97 cars per household) than medium density dwellings (1.41) and high-density dwellings (1.22)

Figure 39 - Average car ownership per dwelling type



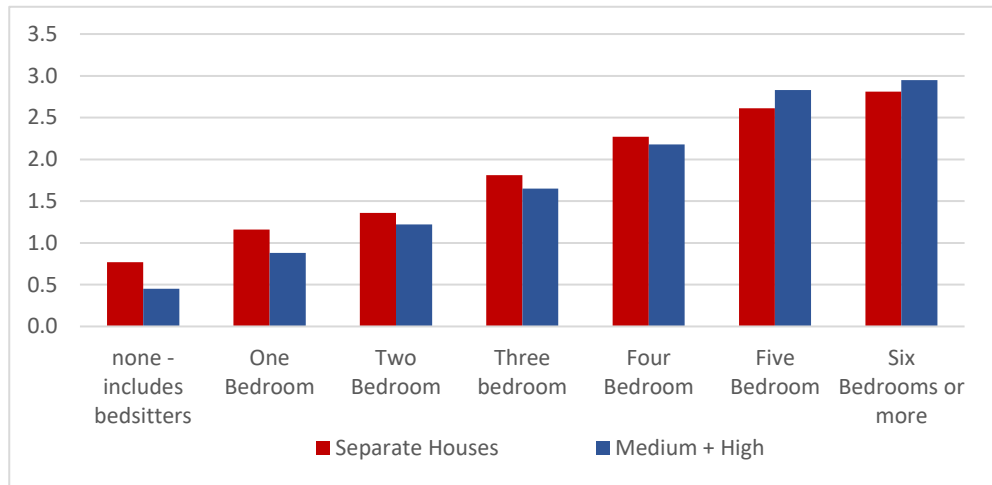
Source – Census – Table builder 2016

Note: Medium density (town houses, semidetached, flats 1 or 2 storey blocks)

High density (flats in three or more storey blocks)

Figure 40 shows separate houses have higher car ownership rates for one, two, three and four-bedroom dwellings than medium and high-density dwellings. The number of medium and high-density dwellings with no bedrooms or five or six bedrooms are small– so the car ownership rates for these types of units are unreliable. The figure shows that average ownership increases with the number of bedrooms e.g. the average car ownership for a two-bedroom house is 1.24 and for three-bedroom house is 1.76 cars. However, the number of cars per dwelling is not equal to the number of bedrooms in the dwelling e.g. a three-bedroom house has an average car ownership of 1.76 cars and not three cars.

Figure 40 - Average car ownership by number of bedrooms



Source – Census – Table builder 2016

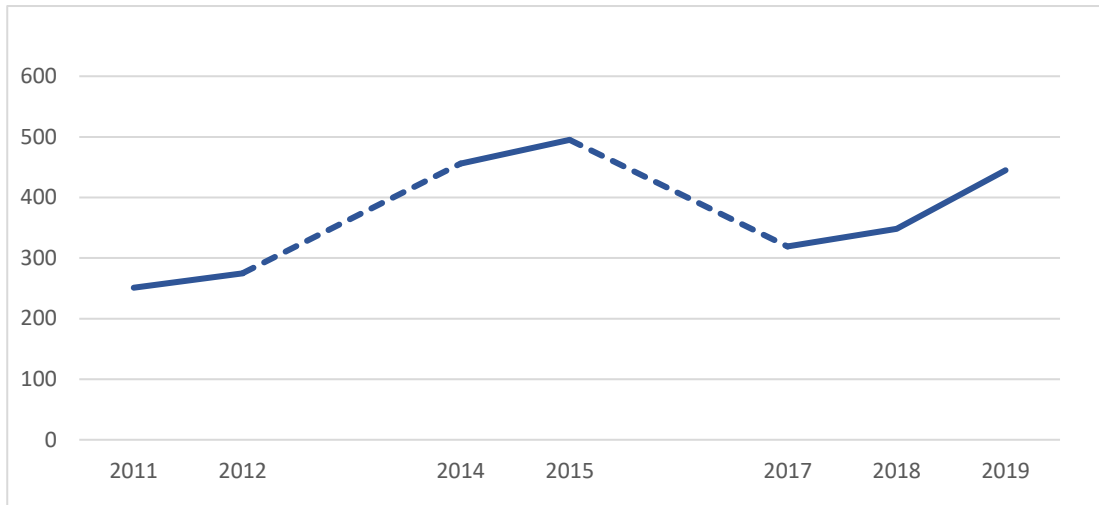
Note: Medium density (town houses, semidetached, flats 1 or 2 storey blocks)

High density (flats in three or more storey blocks)

Bicycles

Figure 41 shows the trend of cycle use in Kingston between 2011 and 2019, with higher flows in 2014 and 2015 than in other years.

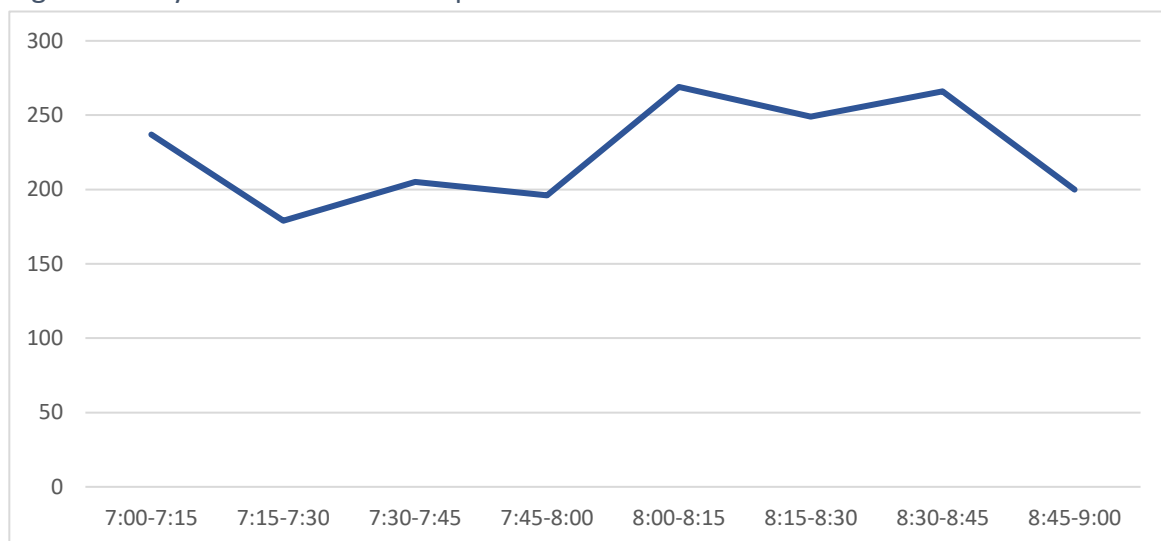
Figure 41 - bicycle counts in Kingston



Source – Bicycle Network Super Tuesday Counts – eight consistent survey sites, survey years available – morning peak.

Figure 42 shows the trend of cycle use in the morning peak in 2019, with flows peaking in the quarter hour 8:00am to 8:15am.

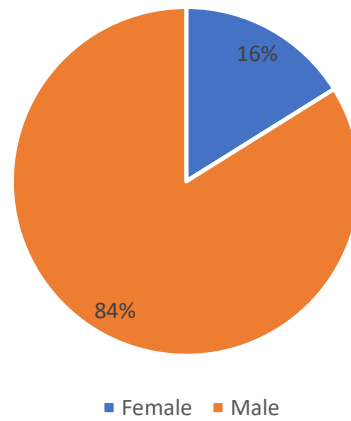
Figure 42 - Cycle trend in the a.m. peak



Source – Bicycle Network Super Tuesday Counts – 2019 – 30 survey sites.

Figure 43 shows in the morning peak in 2019, only 16% of cyclists were female.

Figure 43 - Gender of cyclists in Kingston



Source – Bicycle Network Super Tuesday Counts – 2019 – 30 survey sites.

Figure 44 shows a network of existing and possible cycle routes in the municipality. The routes have been categorized into Department of Transport's Strategic Cycling Corridors classifications (February 2018). The red routes are C1 main routes for longer distance 'commuter' connections through cities, major destinations and 'job clusters'. The blue routes are C2 primary routes connecting 'local' major activity centres and stations. The purple routes are C3 designated cycling links providing direct routes for confident cyclists. The green routes are C4 municipal links that link to longer distance routes. The yellow routes are other local routes linking to end destinations. The orange route are CR recreational routes.

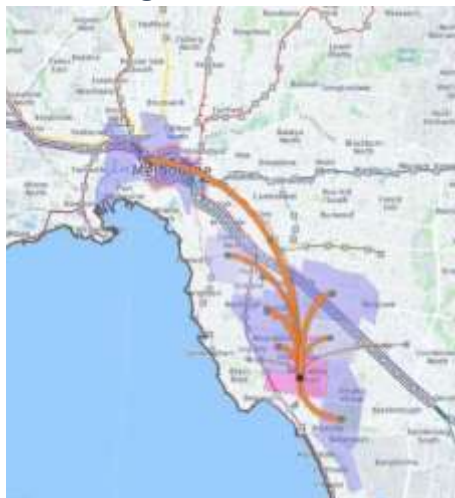
Figure 44 - Existing and possible cycle routes in Kingston



Monitoring

Figure 45 shows examples of transport mapping software developed by the City of Casey. The map to the left shows a sample of origin and destination data for the suburb of Moorabbin Airport. The map to the right is an example of public transport accessibility model developed by Casey. Council will explore the opportunities for developing similar software for the City of Kingston.

Figure 45 - Origin and destination data



Source – City of Casey/Orbica

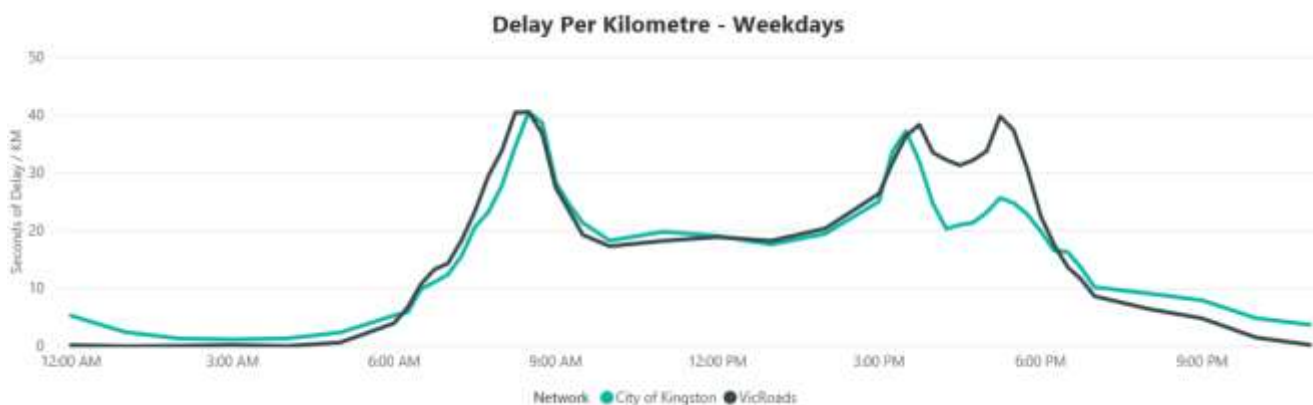
Public transport accessibility mapping



City of Casey/mapbox

Figure 46 shows an example of congestion monitoring mapping software developed by Mooven for the City of Kingston. The software enables Council to identify areas and streets where congestion occurs on the main roads network within the municipality during various times of the day.

Figure 46 - Congestion monitoring

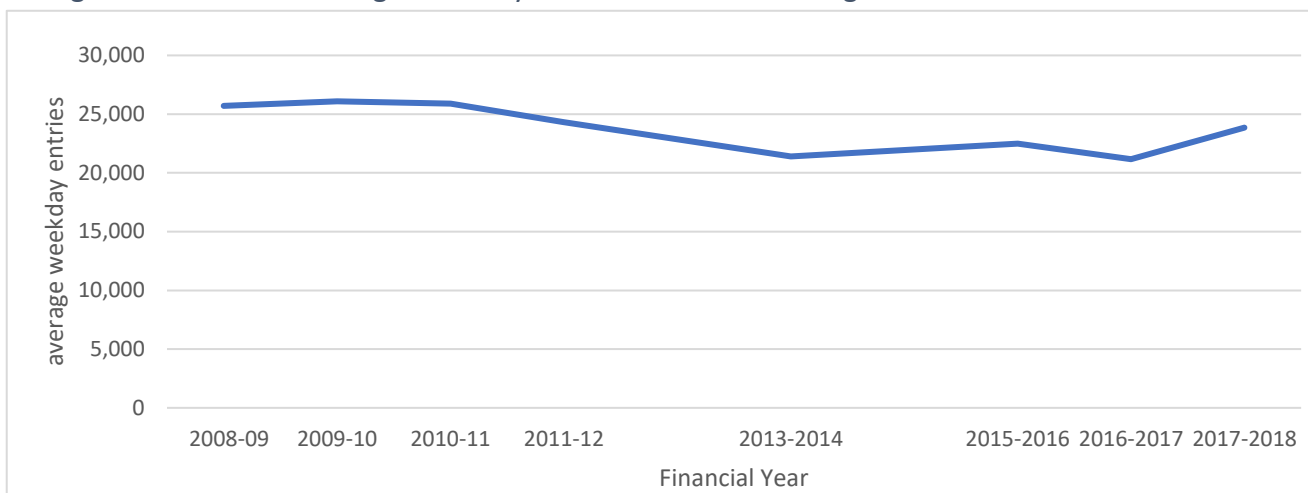


Source – Mooven

Public transport

Figure 47 shows the trend in station entries in Kingston between 2008 and 2018 – which has remained largely stable since 2013/14. Of the 30 most used bus stops in the municipality - most are close to the stations at Southland, Moorabbin, Mentone, Mordialloc, Cheltenham, Carrum, Chelsea, and Westall. Bus stops close to Tafe at Chapel Road and South Road also have high patronage.

Figure 47 - Total of average weekday station entries at 12 Kingston Stations

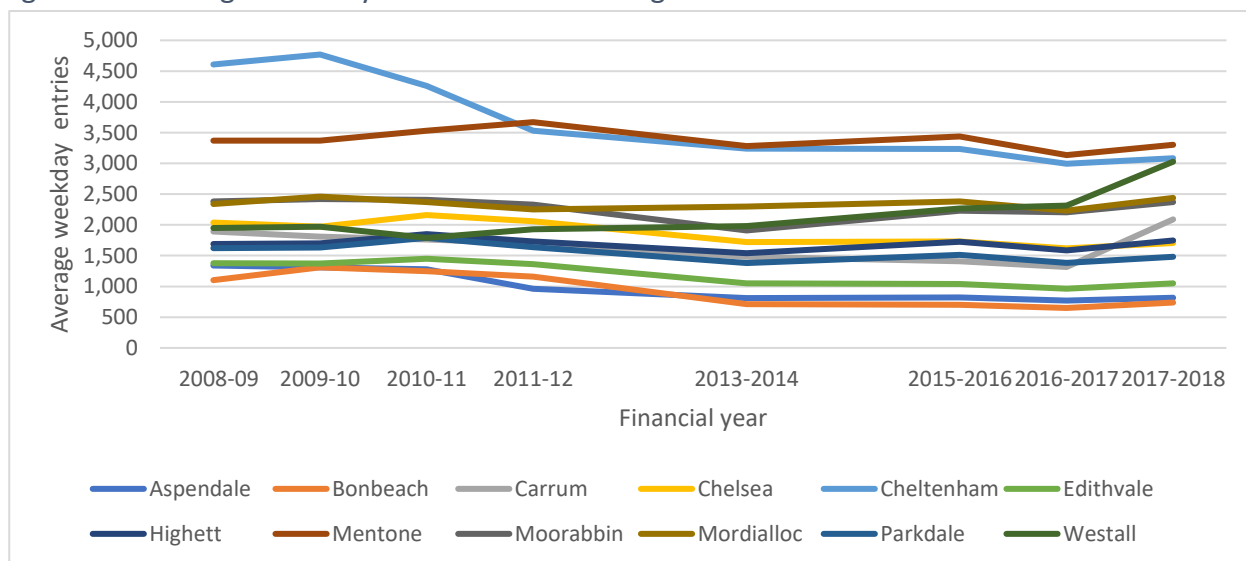


Source – Department of Transport

Notes: Excludes the new station at Southland Station 2017/2019 had 1,219 entries.

Figure 48 shows the trend of average station entry for each station in Kingston. The figure shows Cheltenham Station has seen a fall in use since 2008/09. The increase in patronage at Westall and Carrum in 2017/18 were probably linked to level crossing removal works close to these stations.

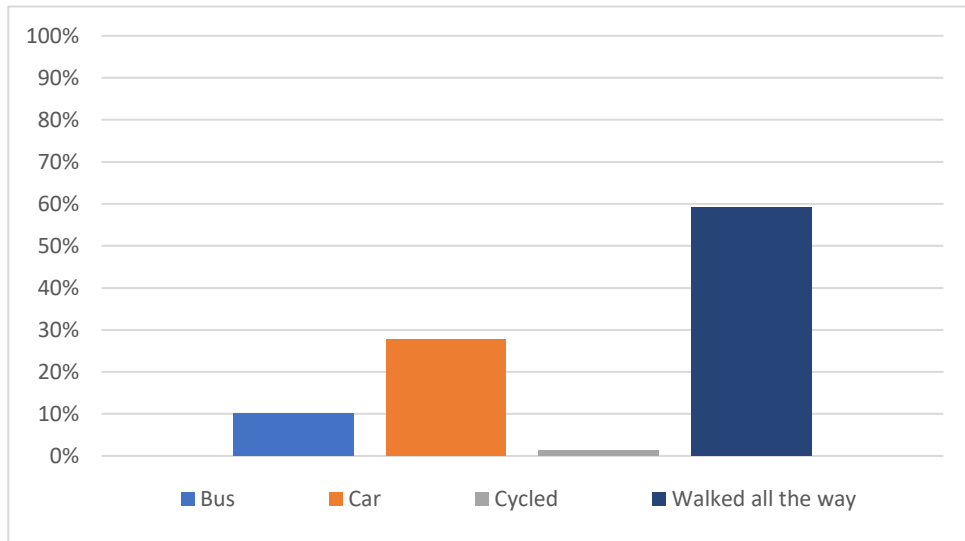
Figure 48 - Average weekday station entries at Kingston Stations



Source – Department of Transport.

Figure 49 shows how people accessed stations in Kingston. The table showed almost 60% of passengers walked all the way to the station, about 28% came by car and 10% came by bus. These proportions varied by stations – for example 23% of passengers travel to Mentone station by bus, whilst Aspendale and Carrum have about 50% of passengers using car to get to the station.

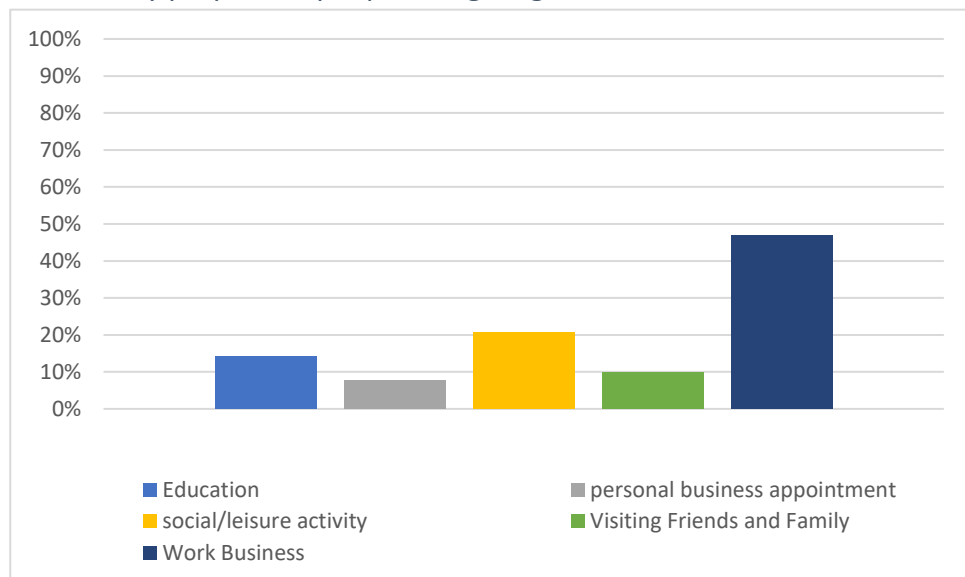
Figure 49 - How people got to stations in Kingston



Source – Department of Transport
 Notes: Weekdays 2013-2014 financial year

Figure 50 shows why people accessed stations in Kingston. 47% of passengers that used the stations do so for work. Almost 21% do so for social/leisure activities, and 14% for education.

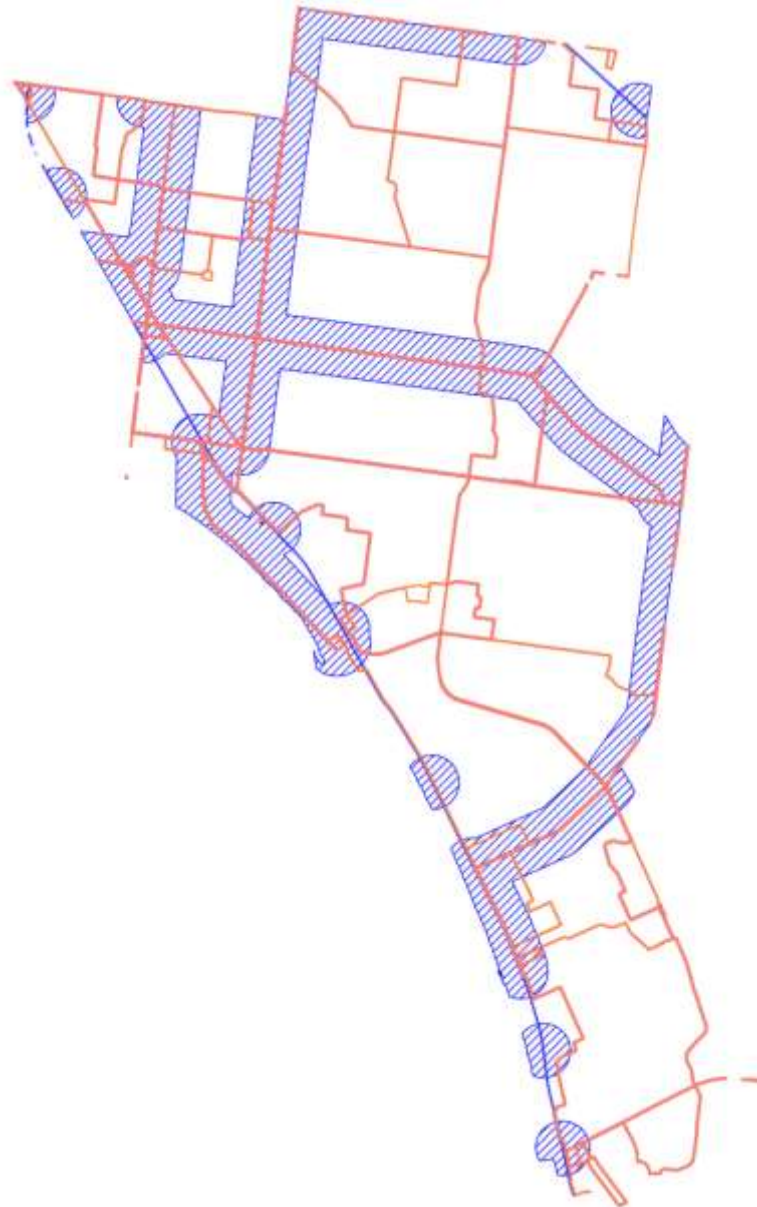
Figure 50 - The Journey purpose of people using Kingston stations



Source – Department of Transport.
 Note: Weekdays 2013-2014 financial year

Figure 51 shows a network of existing public transport routes in the municipality as well as the Principal Public Transport Network Area (PPTN). The continuous blue lines show train lines in the municipality. The continuous orange lines are bus routes. The blue hatched area shows the PPTN which includes areas within 400m of a metropolitan train station, tram network or high frequency bus service. This reflects the routes where high-quality public transport services are or will be provided. The PPTN is a statutory land use planning tool that supports integrated land use and transport planning which has been included into the Kingston Planning Scheme for assessing planning applications.

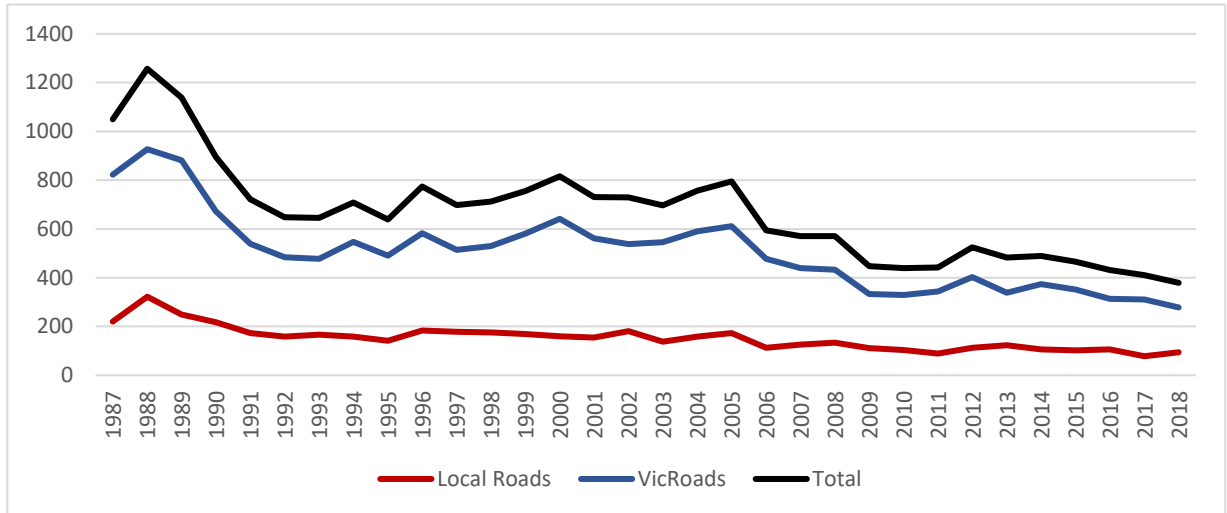
Figure 51 - Existing public transport routes in Kingston and PPTN



Casualties

Figure 52 shows the total number of people injured in road casualty crashes in Kingston has fallen from about 1,100 a year in late 1980's to about 400 a year in 2018. The figure shows that about 75% of injuries in road crashes occurred on the VicRoads network.

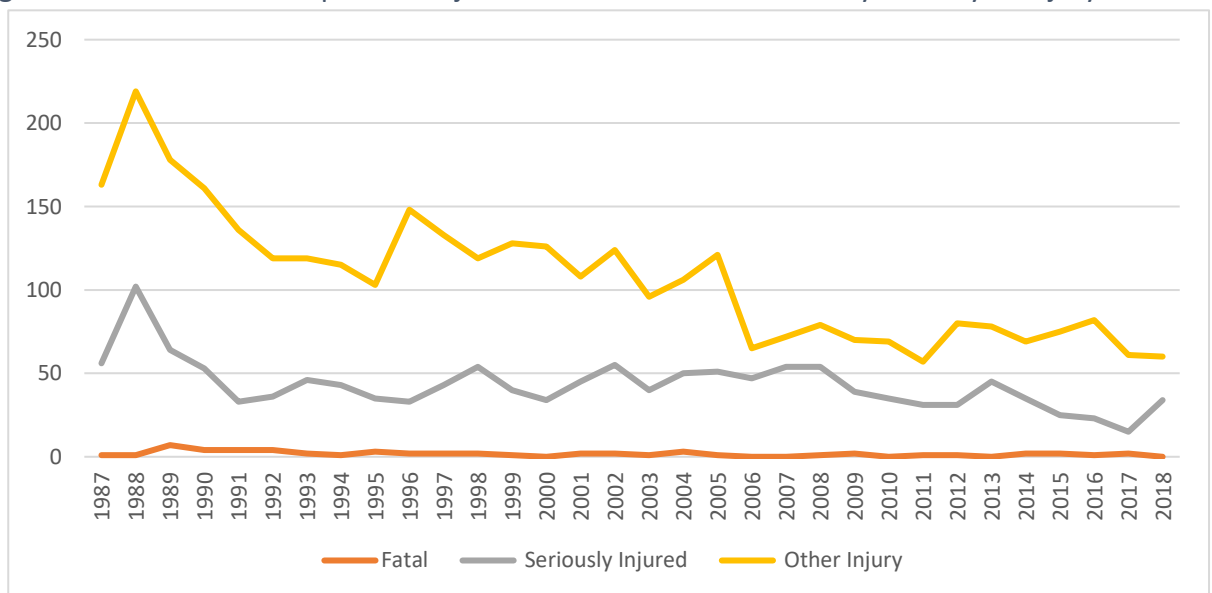
Figure 52 - The number of persons injured in road crashes in Kingston.



Source – VicRoads – Road Crash Information System (RCIS).

Figure 53 shows the severity of injuries to people injured in road casualty crashes on Kingston local road between 1987 to 2018. The figure shows about 70% of injuries are ‘other’ injuries i.e. not serious or fatal. Fatal injuries are thankfully low in numbers.

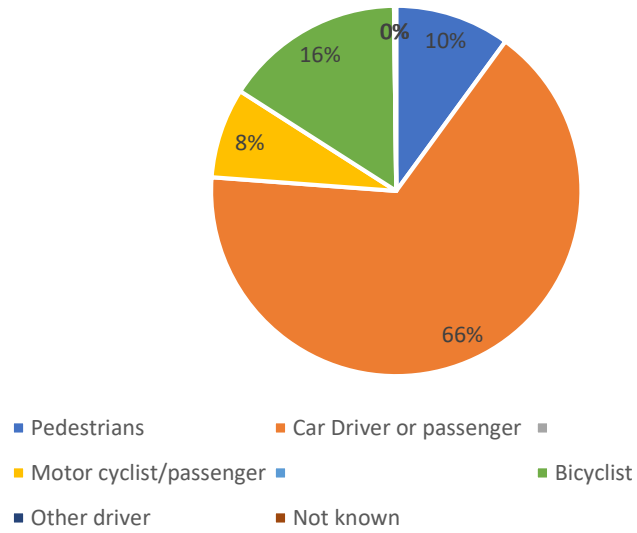
Figure 53 - The number of persons injured on local council roads – by severity of injury.



Source – VicRoads – Road Crash Information System (RCIS).

Figure 54 shows of people suffering an injury in road casualty crashes on Kingston’s local roads 66% are road drivers, almost 16% are cyclists and 10% are pedestrians.

Figure 54 - Kingston five-year casualties by user type – local roads



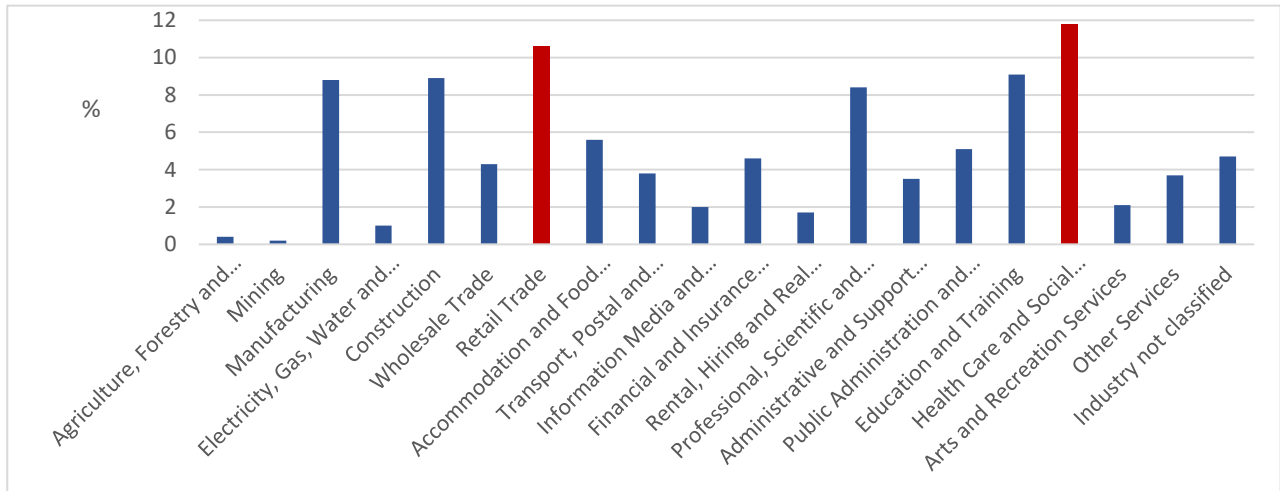
Source – VicRoads – Road Crash Information System (RCIS).
Note: 5 years from 01/07/2013 to 30/06/2018

What do we do?

Industry Profile

Figure 18 shows the industry sectors in which residents of Kingston work (which may be within Kingston or elsewhere). Almost 12% of residents of the City of Kingston work in Health Care and Social Assistance and 11% work in retail.

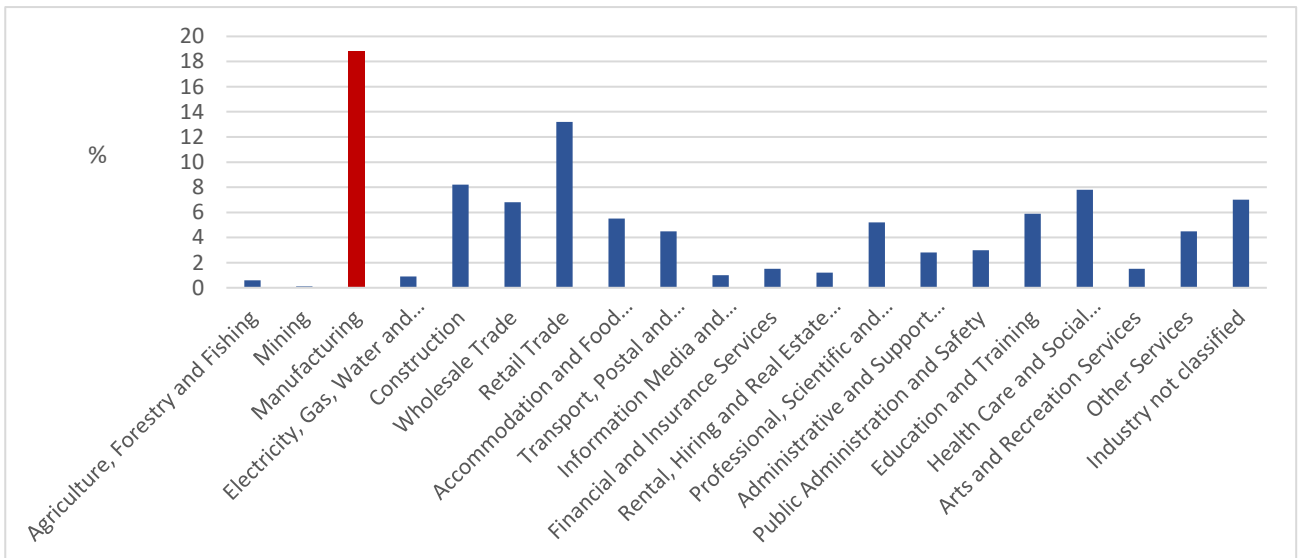
Figure 18 - Industry sectors in which residents of Kingston work



Source – Census - ID Community 2016

Figure 19 shows the employment sectors of persons employed in Kingston (regardless of where they live). The figure shows manufacturing is the largest employer in the City of Kingston, making up almost 19% of total employment.

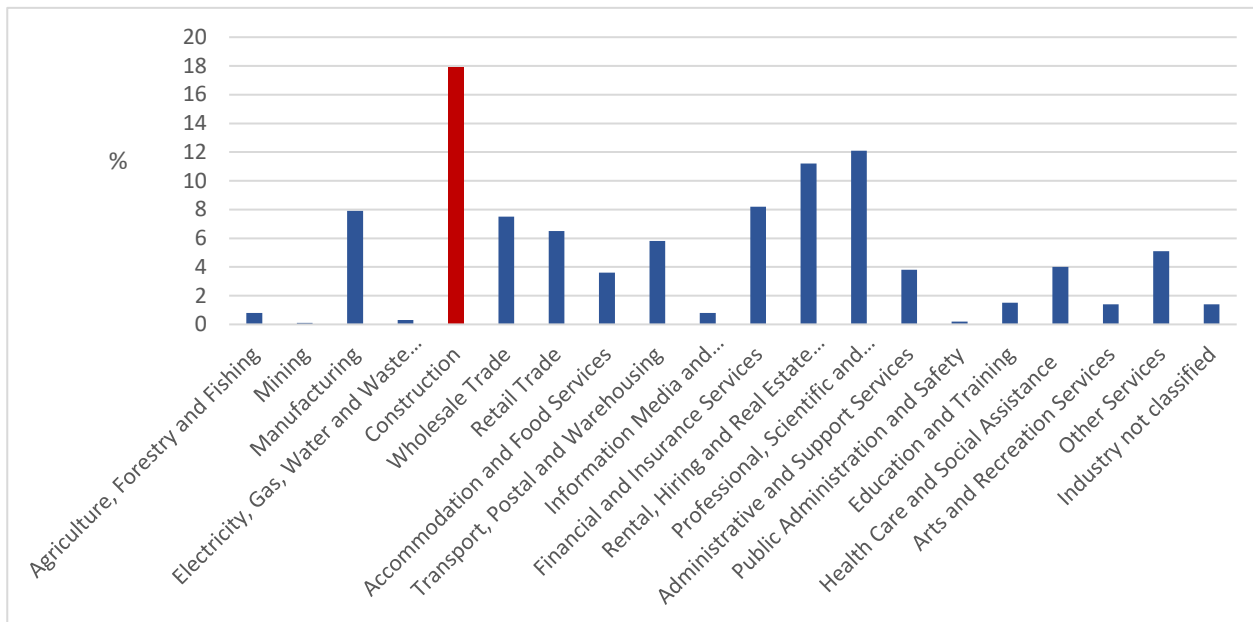
Figure 19 - Employment sectors of persons employed in Kingston (regardless of where they live)



Source – Census - ID Community 2016

Figure 20 shows the number of businesses registered in the City of Kingston, by industry. The figure shows construction industry makes up 18% of the total registered businesses in the City of Kingston.

Figure 20 - Number of City of Kingston registered business – by industry

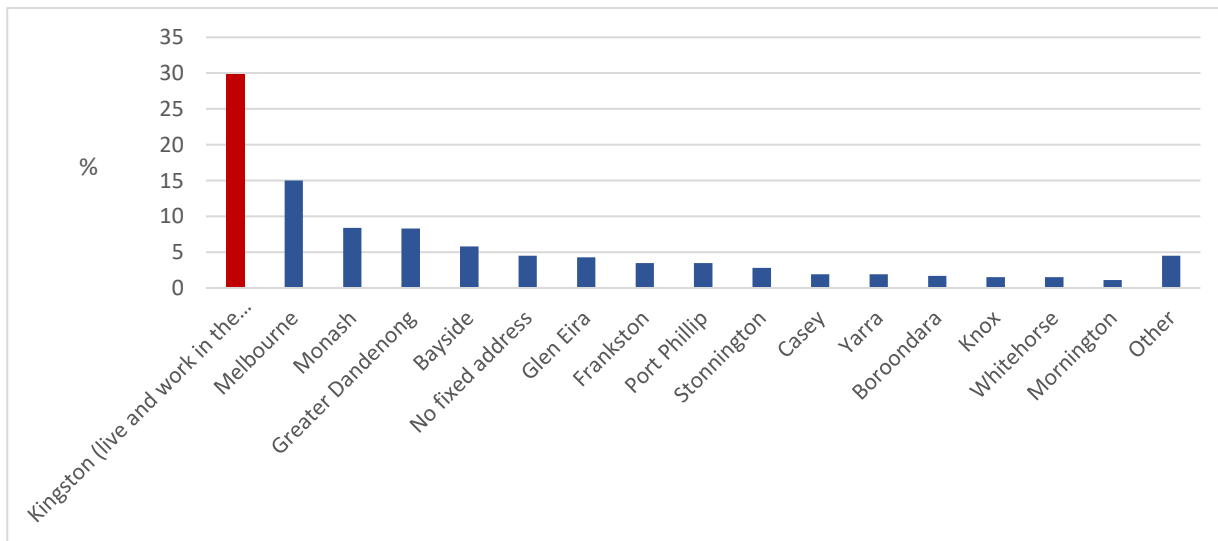


Source – Census - ID Community 2016

Local and Resident workers

Figure 21 shows the where residents of Kingston work. Almost 30% of residents live and work the municipality, whilst 15% work in Melbourne CBD.

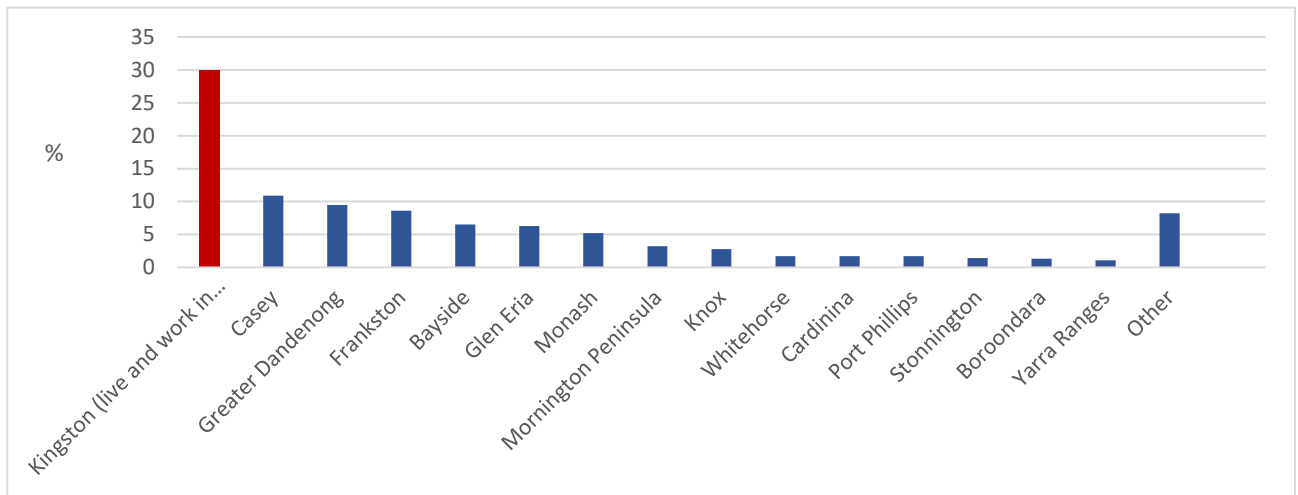
Figure 21 - Where residents of the City of Kingston work



Source – Census - ID Community 2016

Figure 22 shows the where people working in Kingston live. Almost 30% of residents live and work the municipality, whilst 11% of people working in the municipality live in Casey.

Figure 22 - Where people working in Kingston live

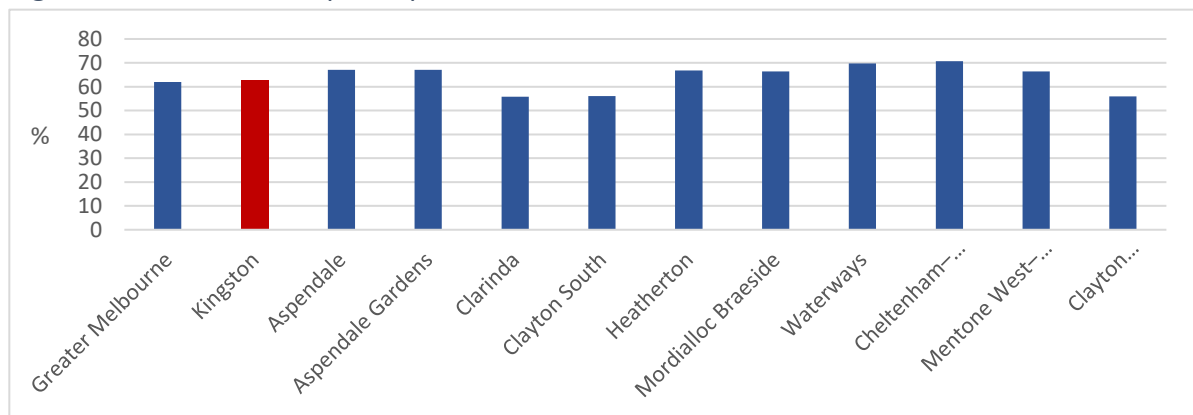


Source – Census - ID Community 2016

Labour Participation

Figure 23 shows the labour force participation rate of residents of the City of Kingston. The figure shows 63% of Kingston residents participate in the labour force. This compares with almost 70% in Waterway and Cheltenham activity centre and 56% in Clarinda, Clayton South and Clayton activity centre.

Figure 23 - Labour force participation rate

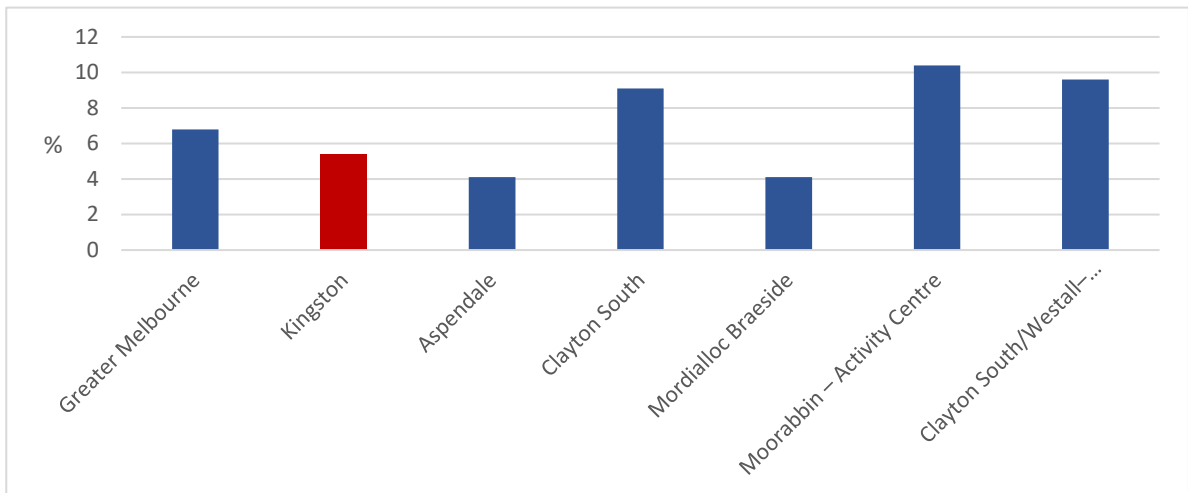


Source – Census - ID Community 2016

Note - Labour force participation rate of residents aged 15 years and over who have a full time or part time job or did not have a job but were actively looking for and available to start work compared with the total population aged 15 or more. Low participation rates generally apply to areas with high retired or student populations, while high areas indicate areas with good access to jobs and a high working age population.

Figure 24 shows 5.4% of Kingston residents are unemployed. This rate is higher in Clayton South, Moorabbin activity centre and in Clayton South activity centre and lower in Aspendale and Mordialloc.

Figure 24 - Unemployment rate of residents

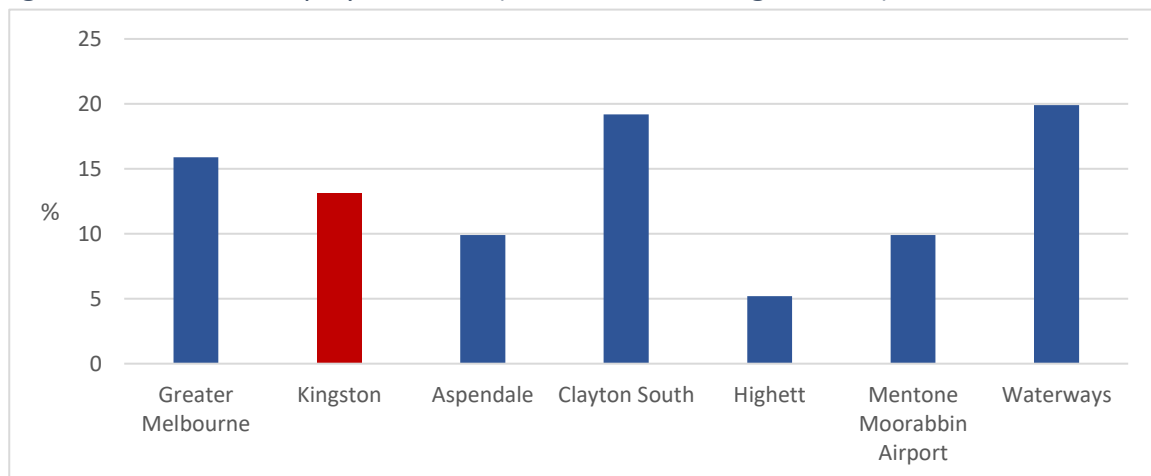


Source – Census - ID Community 2016

Note – Unemployed people are defined as those people aged 15 years and over who did not have a job but were actively looking for and available to start work.

Figure 25 shows over 13% of Kingston’s youth are unemployed. This rate is higher in Clayton South, and Waterways and lower in Aspendale, Highett and Mentone. Since the age group represents a transition from education to work, younger residents generally have higher unemployment rates that other age groups.

Figure 25 - Youth unemployment rate (% of labour force aged 15-24) residents

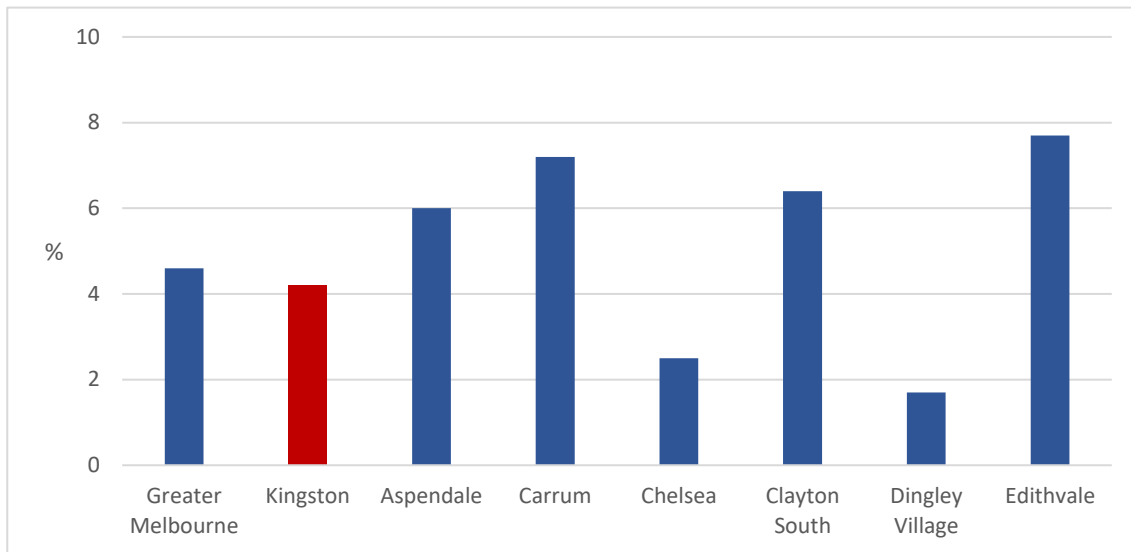


Source – Census - ID Community 2016

Note – Youth unemployment is defined those people aged 15-24 years who did not have a job but were actively looking for and available to start work.

Figure 26 shows over 4% of Kingston’s seniors are unemployed. This rate is higher in Aspendale, Carrum, Clayton South and Edithvale and lower in Chelsea, and Dingley Village.

Figure 26 - Seniors unemployment rate (% of labour force aged 55 and over) residents



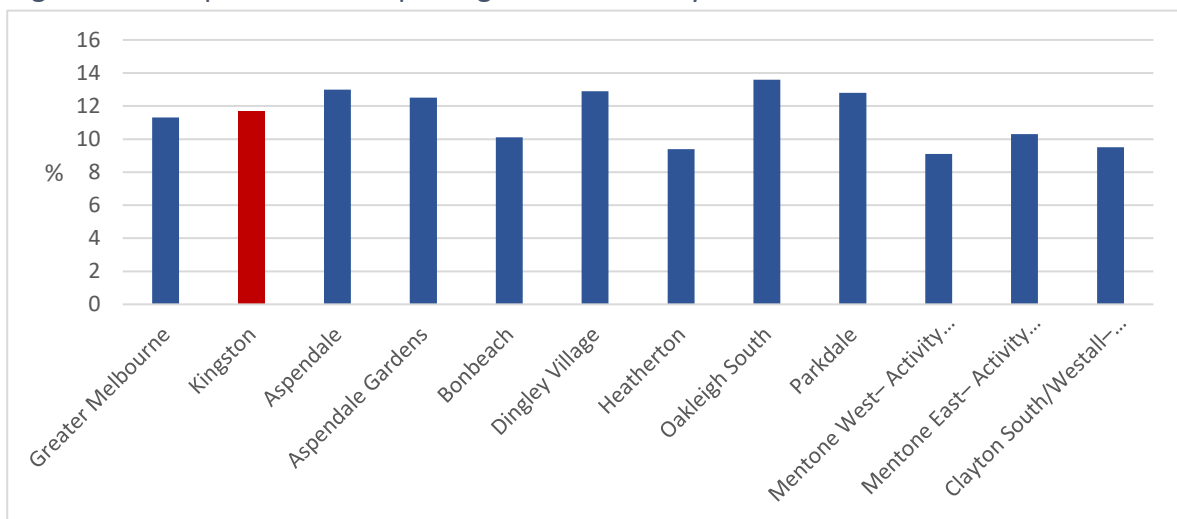
Source – Census - ID Community 2016

Note – Senior unemployment is defined as those people aged 55 years and over who did not have a job but were actively looking for and available to start work.

Unpaid Carers

Figure 27 shows almost 12% of Kingston’s residents are unpaid aged and disability carers. This rate is higher in Aspendale, Aspendale Gardens, Dingley Village, Oakleigh South and Parkdale and lower in Bonbeach, Heatherton, and in Mentone and Clayton activity centres.

Figure 27 - People who are unpaid aged and disability carers

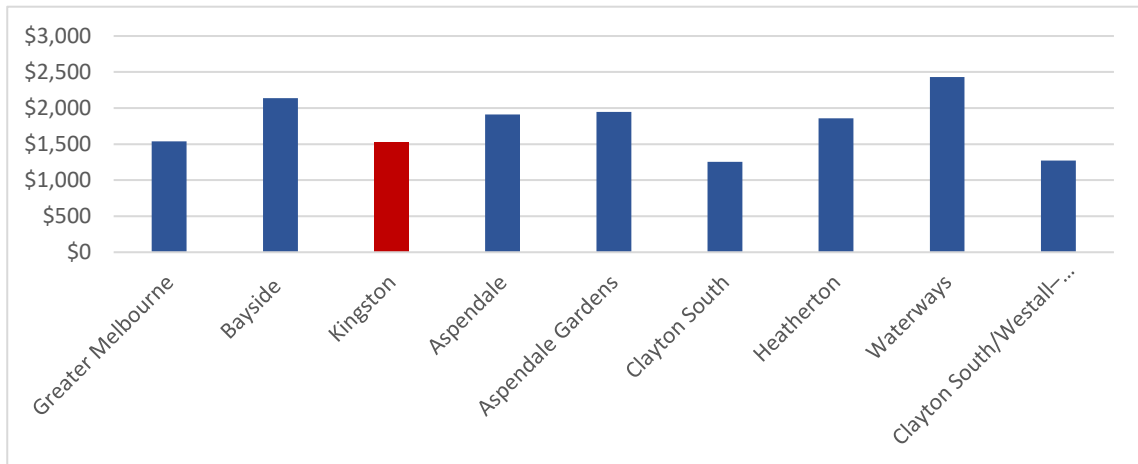


Source – Census - ID Community 2016

Income and Wellbeing

Figure 28 shows the median household weekly income of resident in Kingston is about \$1,500, this compares with Bayside where the median household weekly income is \$2,100. Within the municipality, Aspendale, Aspendale Gardens, Heatherton, and Waterways have higher median incomes, whilst Clayton (the suburb and activity centre) have lower weekly incomes.

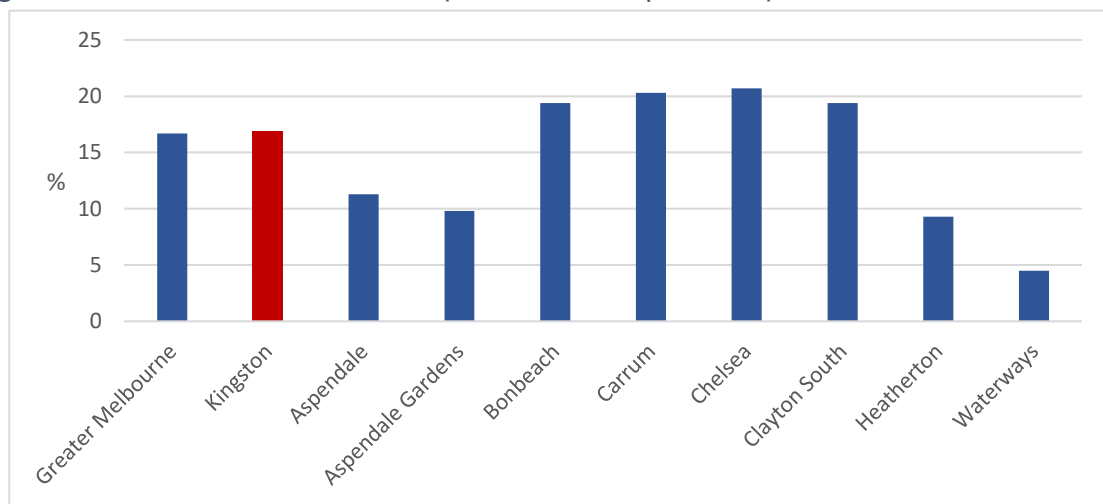
Figure 28 - Median household weekly income



Source – Census - ID Community 2016

Figure 29 shows 17% of household in Kingston have a low income. Within the municipality, Bonbeach, Carrum, Chelsea and Clayton South have higher percentages of low income households, whilst Aspendale, Aspendale Gardens, Heatherton and Waterways have lower proportions.

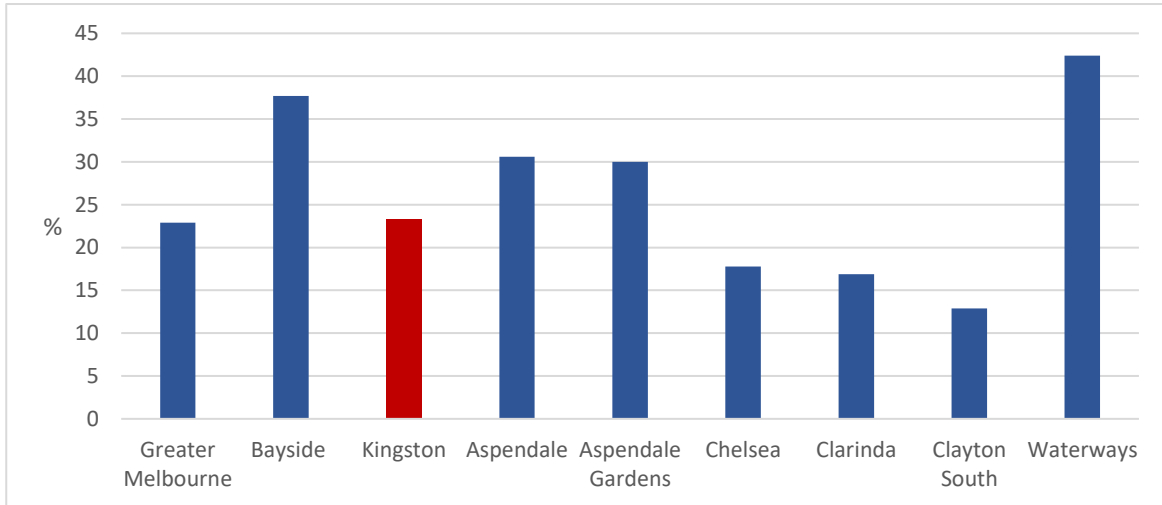
Figure 29 - Low income households (less than \$650 per week)



Source – Census - ID Community 2016

Figure 30 shows 23% of household in Kingston have a high income, which compares with Bayside where almost 38% of households have high income. Within the municipality, Aspendale, Aspendale Gardens and Waterways have higher percentages of high income households, whilst Chelsea, Clarinda, and Clayton South lower proportions.

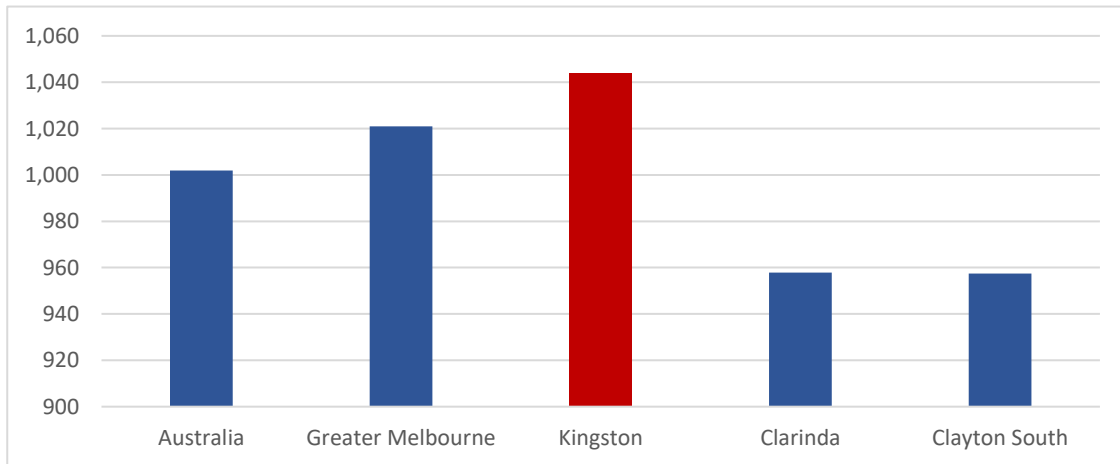
Figure 30 - High income households (more than \$2,500 per week)



Source – Census - ID Community 2016

Figure 31 shows levels of social economic disadvantage compared with the average for Australia as a whole. Clarinda and Clayton South are the most disadvantaged areas within the City of Kingston.

Figure 31 - Social economic disadvantage – (1000 equal average)



Source – Census - ID Community 2016

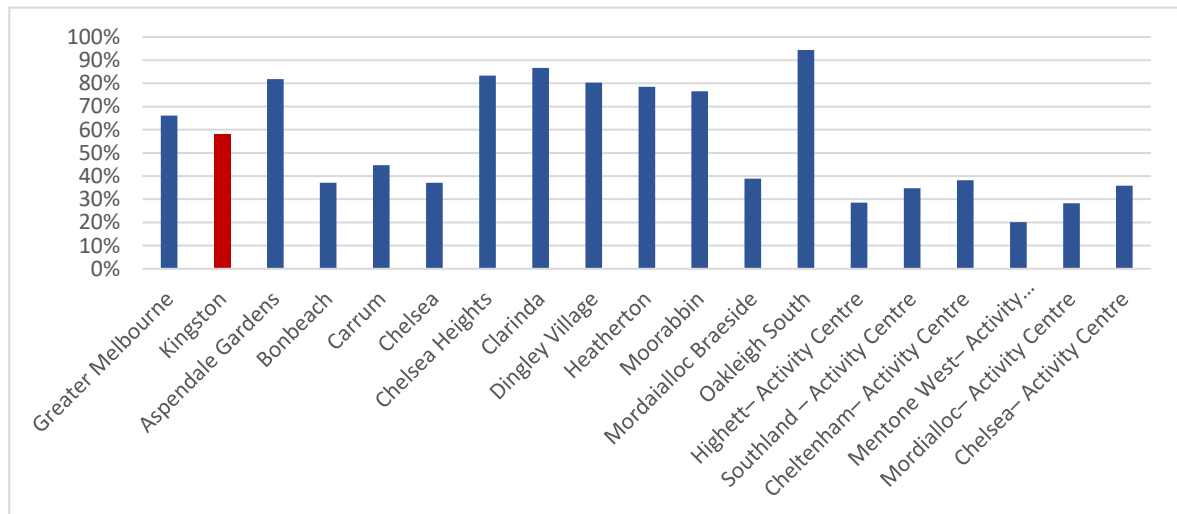
Note – Low score indicates relative disadvantage such as low income, unskilled occupation etc.

How do we live

Housing type

Figure 55 shows separate houses make up over 58% of dwellings in Kingston. Within the municipality Bonbeach, Carrum, Chelsea and the activity centres have a lower proportion of single dwellings, whilst areas such as Aspendale Gardens, Chelsea Heights, Clarinda and Oakleigh South have higher proportions.

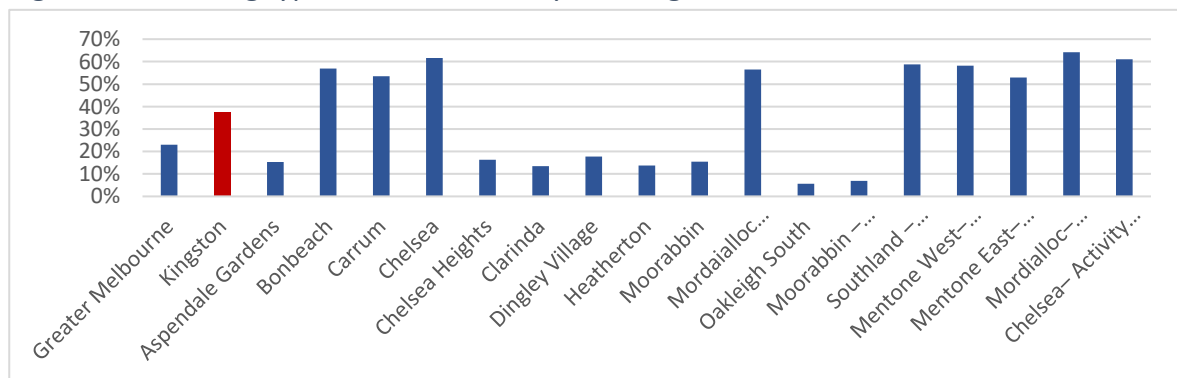
Figure 55 - Housing type – separate houses



Source – Census - ID Community 2016

Figure 56 shows medium density dwellings make up almost 38% of dwellings in Kingston. Within the municipality Bonbeach, Carrum, Chelsea and the activity centres have higher proportions of medium density dwellings, whilst areas such as Aspendale, Chelsea Heights, Clarinda and Oakleigh South have lower proportions.

Figure 56 - Housing type – medium density dwellings

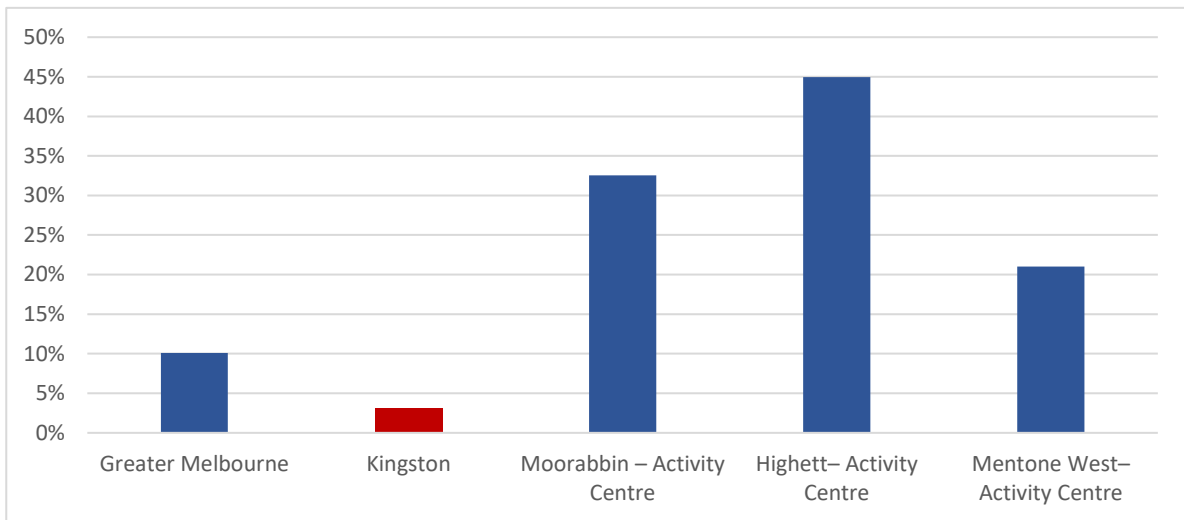


Source – Census - ID Community 2016

Note: Medium Density e.g. town houses, semidetached, flats in one or two storey blocks)

Figure 57 shows high density dwellings make up over 3% of dwellings in Kingston. Within the municipality Moorabbin, Highett and Mentone west activity centres have higher proportions of high density dwellings.

Figure 57 - Housing type – high density dwellings



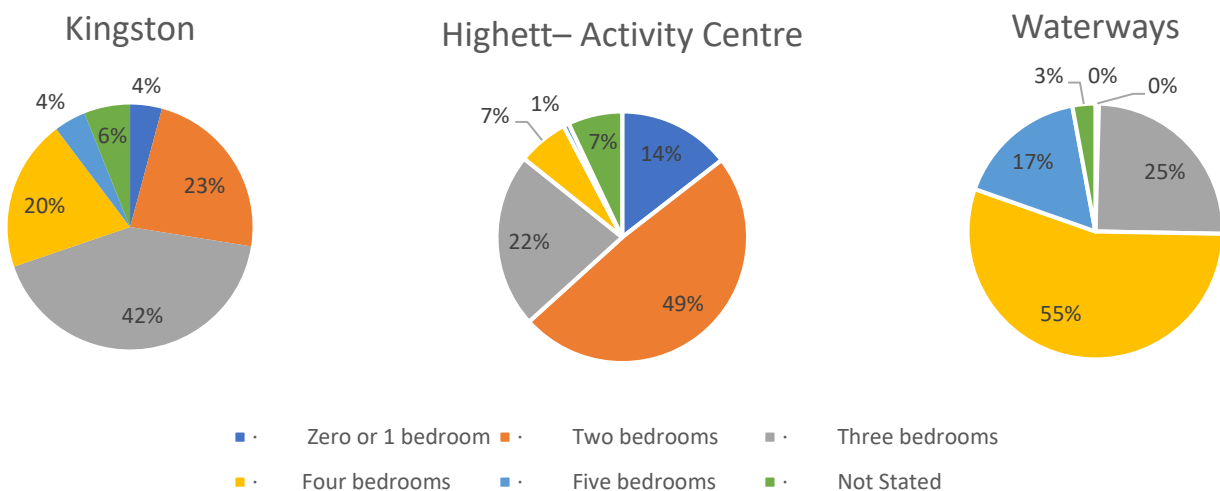
Source – Census - ID Community 2016

Note: Medium Density e.g. flats in three or more storey blocks

Number of Bedrooms

Figure 58 shows three-bedroom dwellings make up over 42% of properties in Kingston. In Highett activity centre only 22% of dwellings have three bedrooms, whilst two-bedroom dwellings make up almost 49% of dwellings and one-bedroom dwellings make up 14% of properties. In Waterways – 55% of properties have four bedrooms and 17% have five bedrooms.

Figure 58 - Number of bedrooms

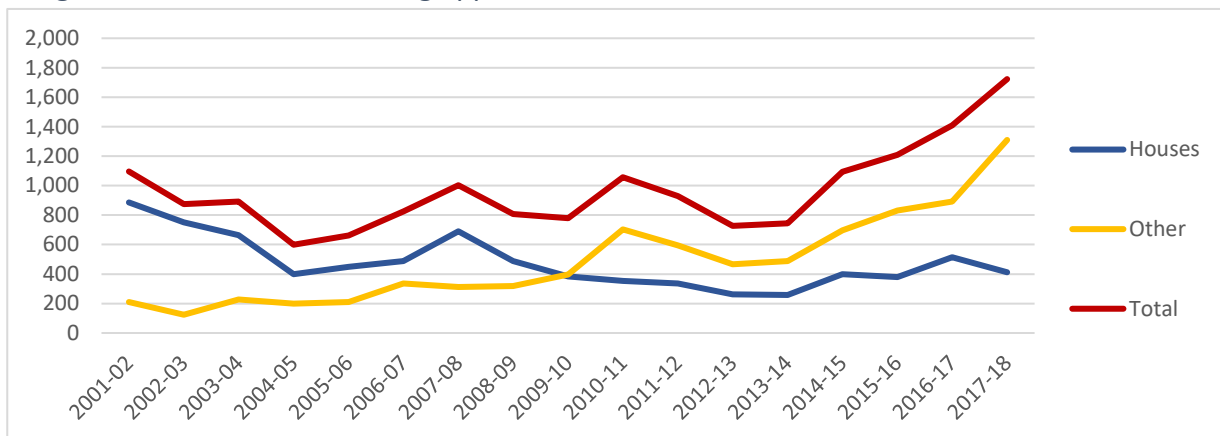


Source – Census - ID Community 2016

Residential building approvals

Figure 59 shows the number of residential housing approvals Kingston between 2001 and 2018. The chart shows the total number of approvals increased steeply from 2014. Since 2010 there have more approvals for 'other' dwelling than houses.

Figure 59 - Residential building approvals



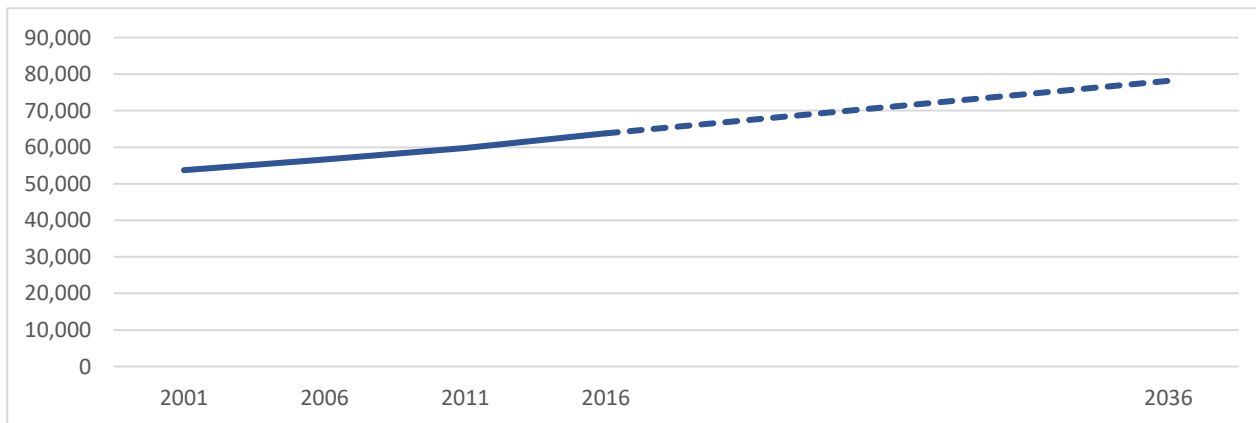
Source – Census - ID Community

Note: - House is a stand-alone residential structure, separated on all sides from other dwellings by at least half a meter. Other residential buildings are buildings other than a house containing more than one dwelling within the same structure e.g. semi-detached, terrace houses, flats, units or apartment blocks. The data counts the number of dwelling created by the issue of building permits – regardless of actual permits (e.g. a single permit for a block of 50 apartments would count in this table as 50.)

Number of Private Dwellings

Figure 60 shows the growth in number of private residential dwellings in Kingston between 2001 and 2016 and the forecast for 2036. The chart shows between 2001 and 2016 the number of dwelling increased by almost 19%. Between 2016 and 2036 this is expected to grow by a further 22%.

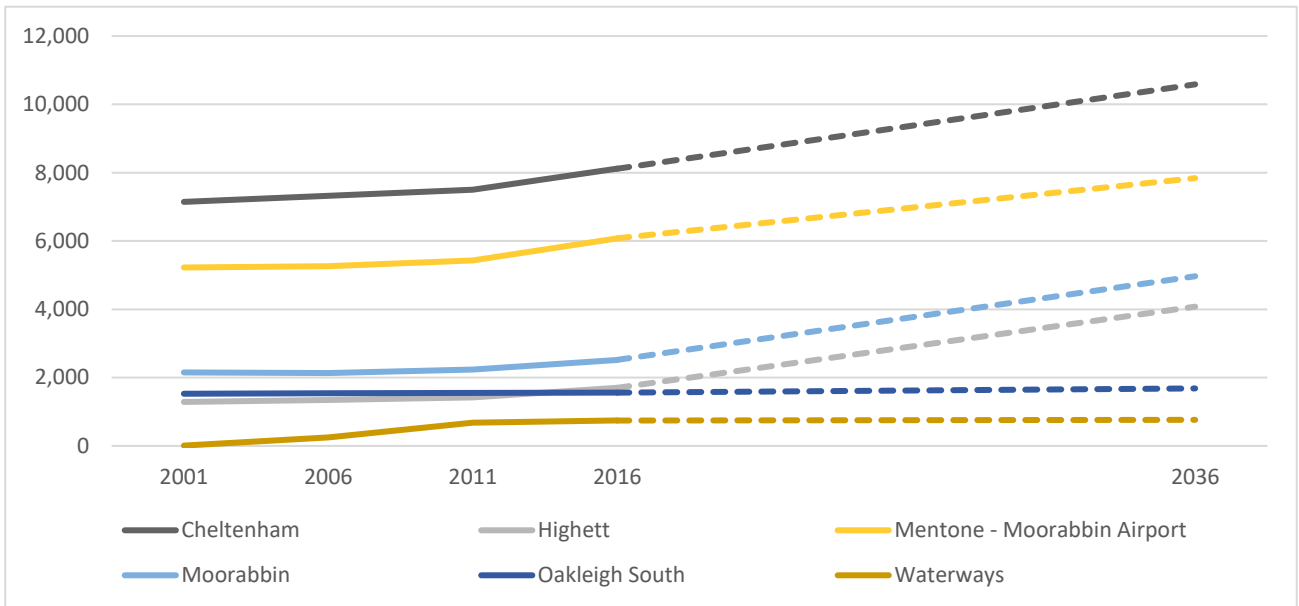
Figure 60 - Number of private residential dwellings in Kingston



Source – Census - ID Community

Figure 61 shows the growth in number of private residential dwellings in various suburbs Kingston 2001 and 2016 and the forecast for 2036. The chart shows growth the number of dwelling will be higher in Cheltenham, Mentone, Moorabbin and Highett than in suburbs such as Oakleigh South and Waterways.

Figure 61 - Number of private residential dwellings in Kingston suburbs.

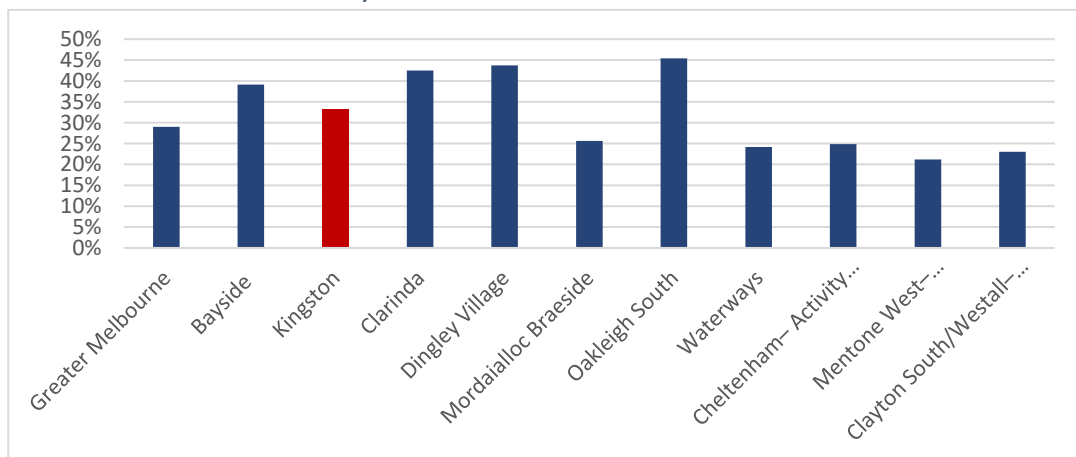


Source – Census - ID Community

Home Ownership

Figure 62 shows 33% of households in Kingston fully own their dwellings, this compares with 39% in Bayside. Within the municipality, a higher proportion of households in Clarinda, Dingley Village and Oakleigh South fully own their homes, whilst the percent is lower in Mordialloc, and Waterways.

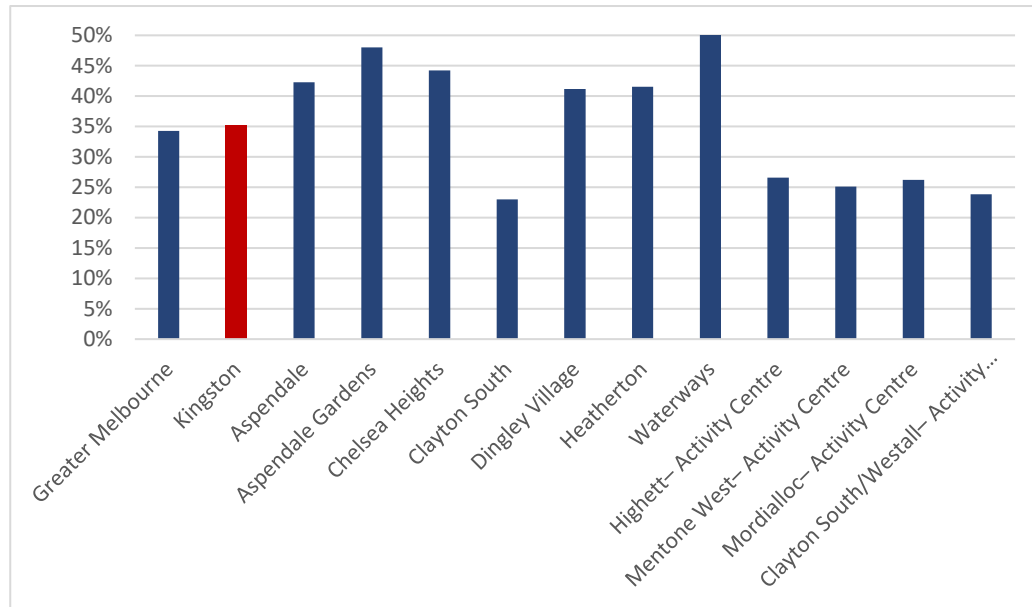
Figure 62 - Home owners – fully owned



Source – Census - ID Community 2016

Figure 63 shows 35% of households are mortgage holders. Within the municipality, a higher proportion of households in Aspendale, Aspendale Gardens, Chelsea Heights and Waterways are mortgage holders, whilst the percent is lower in Clayton South and Highett, Mentone, Mordialloc and Clayton South Activity Centres.

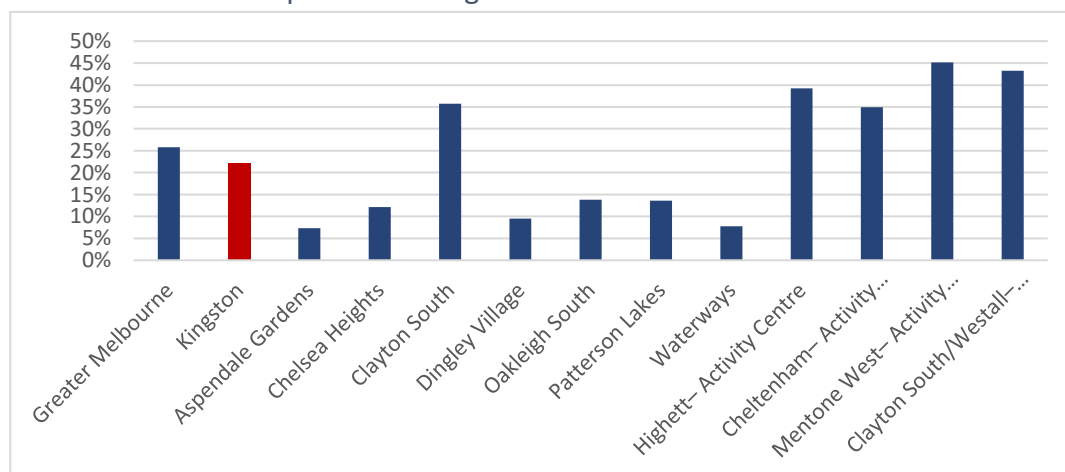
Figure 63 - Home owners – mortgage holder



Source – Census - ID Community 2016

Figure 64 shows 22% of households are private renters. Within the municipality, a higher proportion of households privately rent in Clayton South, and Highett, Cheltenham, Mentone and Clayton activity centres, whilst the rate is lower in Aspendale Gardens, Chelsea Heights, Dingley Village and Waterways.

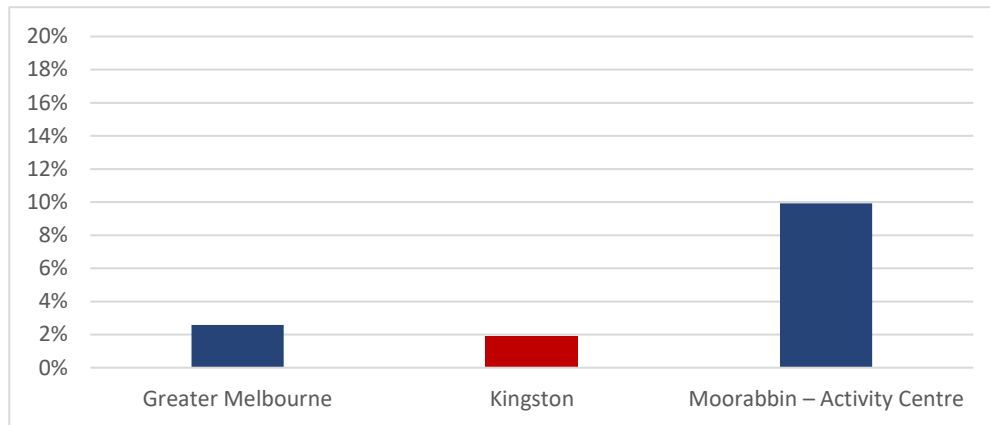
Figure 64 - Households – private renting



Source – Census - ID Community 2016

Figure 65 shows 1.2% of households are public renters. Within the municipality, 10% of households are public renters in Moorabbin Activity Centre.

Figure 65 - Households – public renting

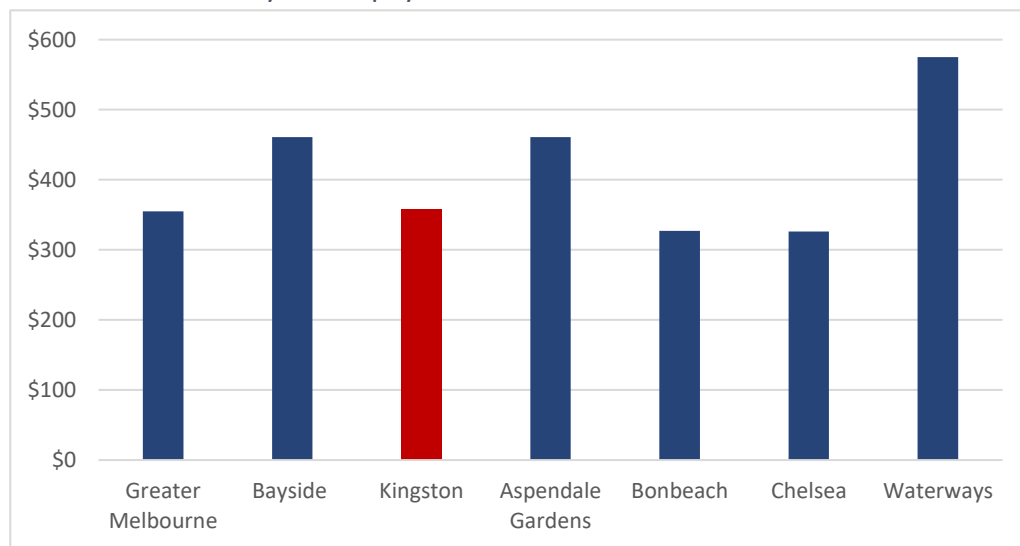


Source – Census - ID Community 2016

Housing cost

Figure 66 shows the median weekly rental payment in Kingston is \$358. This compares with Bayside at \$461. Within the municipality, Waterway has the highest median weekly rental payment of \$575, while Bonbeach and Chelsea have the lowest at about \$326.

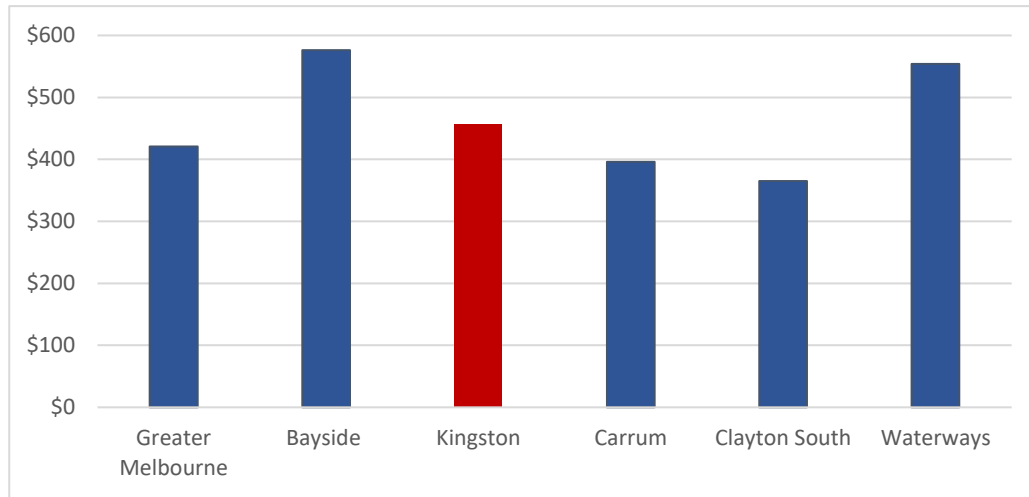
Figure 66 - Median weekly rental payment



Source – Census - ID Community 2016

Figure 67 shows the median weekly mortgage repayment in the City of Kingston is \$457. This compares with Bayside at \$576. Within the municipality, Waterways has the highest median mortgage repayment at \$554 and Clayton South has the lowest at \$365.

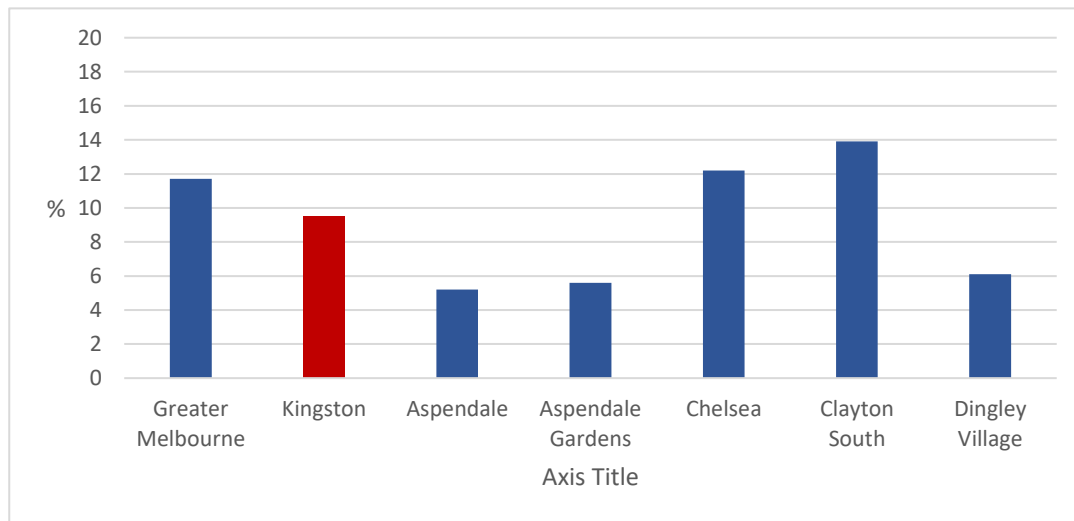
Figure 67 - Median mortgage weekly repayment



Source – Census - ID Community 2016

Figure 68 shows 9.5% of households in the City of Kingston are experiencing housing stress. Within the municipality, Clayton South has highest proportion of people experiencing housing street, whilst Aspendale has the lowest.

Figure 68 - Households in housing stress



Source – Census - ID Community 2016

Note – Housing stress – households in the lowest 40% of incomes paying more than 30% of their usual gross weekly income on housing costs.

Appendix

Figure A1 shows the suburbs in the municipality.

Figure A1 - Kingston Suburbs

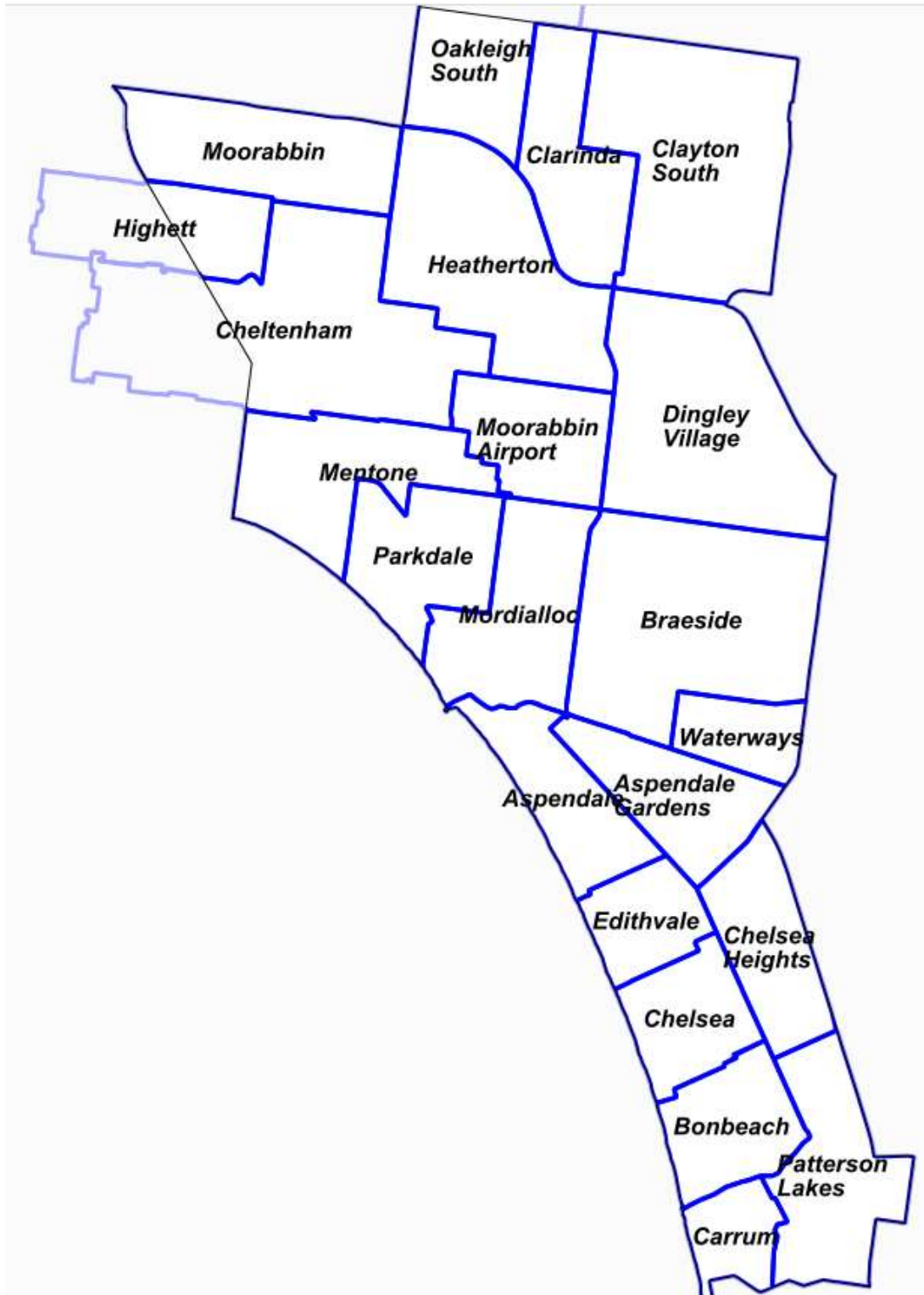
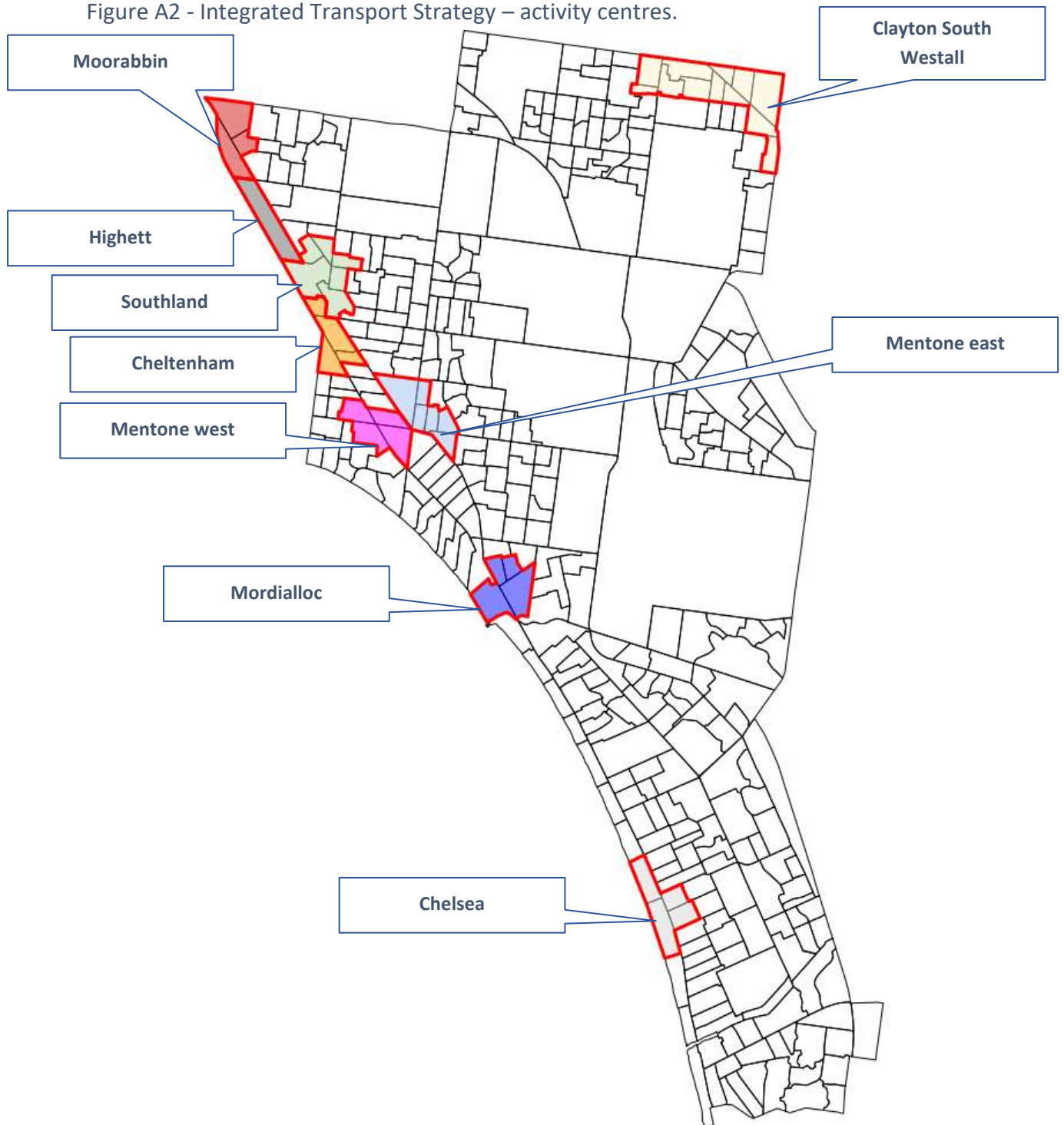


Figure A2 shows the activity centres in the municipality demarcated by the surrounding 2016 statistical area 1 (SA1) census zones.

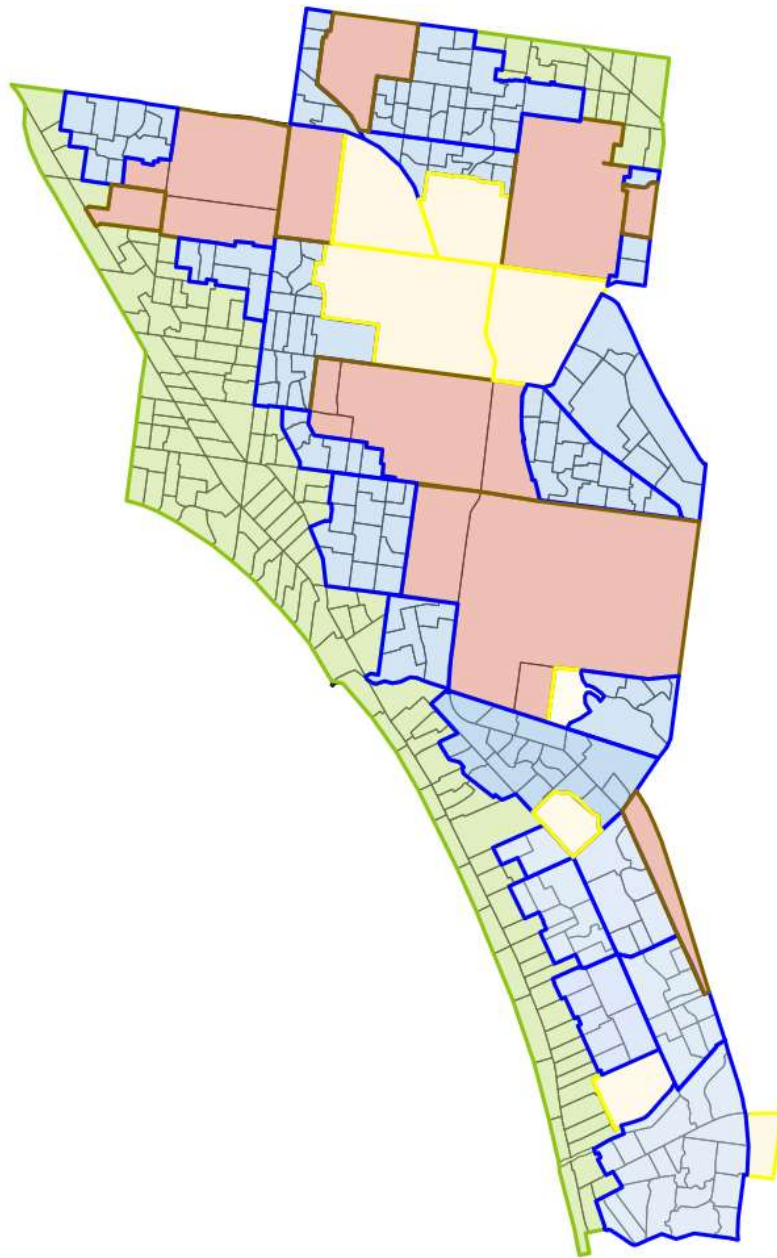
Figure A2 - Integrated Transport Strategy – activity centres.



Note: SA1 level have a population of between 200 and 800 persons with an average population of about 400 persons. This optimizes the special detail with the ability to cross classify census variables without the resulting counts becoming too small for use. SA1's aim to separate out areas with different geographical characteristics within suburb and local boundaries.

Figure A3 shows predominant land uses in the municipality demarcated by the 2016 statistical area 1 (SA1) census zones. The green areas are residential streets close to activity centres or stations (or railway lines). The blue areas are other residential streets. The brown areas are predominantly industrial areas. The yellow areas are predominantly open spaces.

Figure A3 - Integrated Transport Strategy – predominant land uses.



Note: SA1 level have a population of between 200 and 800 persons with an average population of about 400 persons. This optimizes the spacial detail with the ability to cross classify census variables without the resulting counts becoming too small for use. SA1's aim to separate out areas with different geographical characteristics within suburb and local boundaries.