

# ENVIRONMENTAL DETERMINANTS OF HEALTH

Environment and amenity play a vital role in the wellbeing of a community. Factors such as where we live and the state of our environment impact considerably on physical and mental health, wellbeing and safety.

Communities need access to open space, natural environments and recreational spaces, as well as infrastructure for transport, employment, education and social connection.<sup>1</sup>

Growth areas at the urban interface of Greater Melbourne face challenges in the provision of such local infrastructure and services to meet population growth, leading to transport and housing stress, and poorer service access.

This profile compares Wyndham to areas across Greater Melbourne and Victoria on key environmental determinants of health relevant to Wyndham as a growth area, including access to open space, transport and housing.

Compared to similar growth areas, Wyndham is facing challenges and vulnerabilities in areas such as provision of open space, increasing housing diversity, rental and mortgage stress, and living pressures.

All data refers to adults aged 18+ years unless otherwise stated.



There are **fewer hectares of public open space per 1,000 population in Wyndham** compared to other Melbourne growth areas, including Hume, Whittlesea and Cardinia.



In 2014, **17% of Wyndham residents** reported that at least one member of their household travelled 90 minutes or more to get to and from work. This figure **increased to 27% in 2016**.



**55% of households in Wyndham**, have access to two or more vehicles, compared to **46% of households in Greater Melbourne**.



In 2017, **5% of morning peak hour commuter trains on the Werribee line** are breaching capacity recommendations, down from **29% of services in 2016**.



The levels of housing stress – both mortgage and rental – for low income households are slightly higher in **Wyndham** than **Greater Melbourne** and **Victoria**.

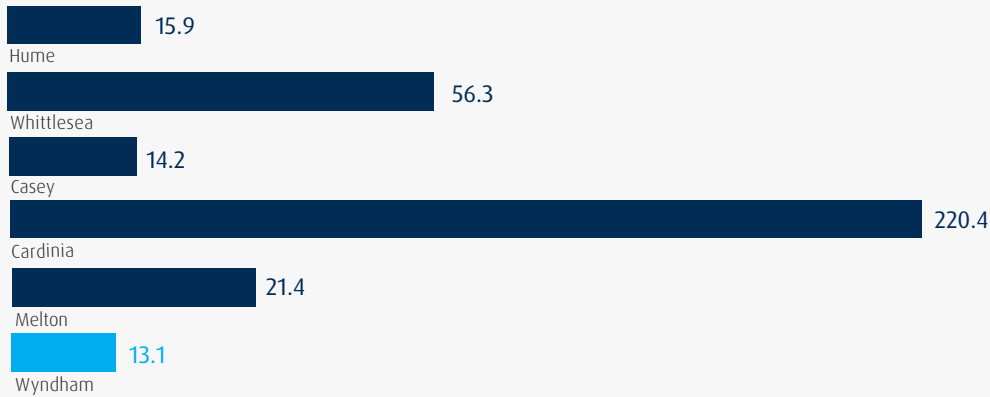


With a much higher percentage of four bedroom homes (**41%**) compared to Greater Melbourne (**25%**), and fewer two bedroom homes, there is **significantly less housing diversity within Wyndham**.



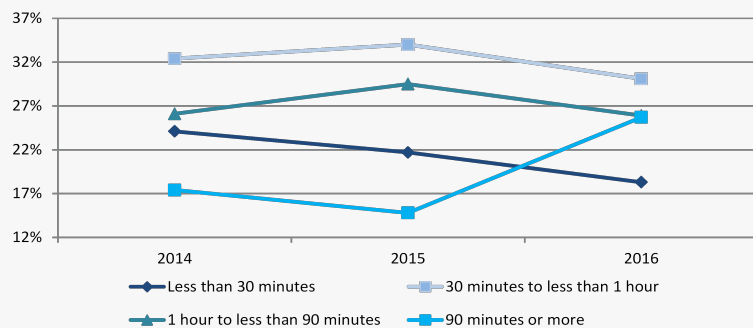
Households in Wyndham are **more vulnerable to rising costs of living** than similar households across Greater Melbourne.

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## Public Open Space - Hectares per 1,000 Population, 2016<sup>2</sup>

Open space plays an important role in our society, providing places for exercise, quiet reflection, children’s play and sports. In Wyndham, 13.1 hectares per 1,000 population is classified public open space. This is comparable to the other Western region growth area of Casey (14.2), but much less than growth areas in the east of Greater Melbourne, including Cardinia (220.4) and Whittlesea (56.3).



## Commute Time, 2014 to 2016<sup>3</sup>

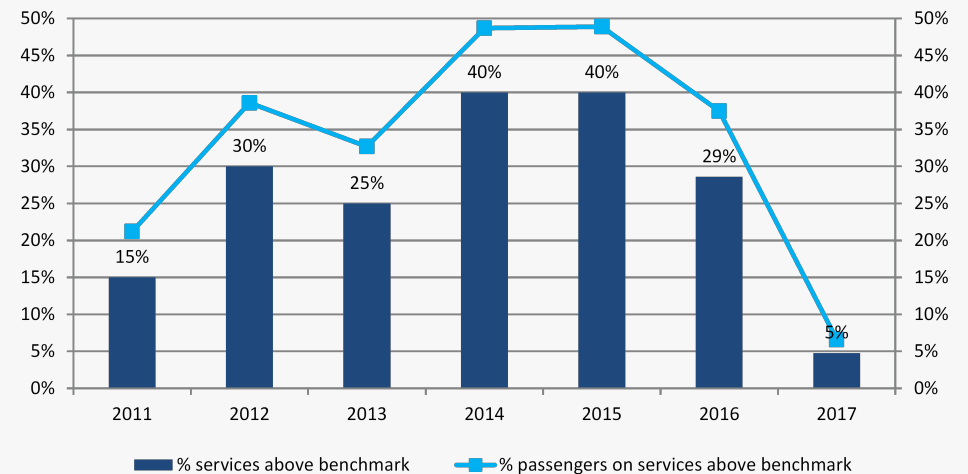
Roads and trains in Wyndham and Greater Melbourne are becoming increasingly congested as the population rapidly increases, and more and more people are travelling from the outer suburbs to the CBD for work. In 2014, 17% of Wyndham residents reported that at least one member of their household travelled 90 minutes or more to get to and from work. This figure increased to 27% in 2016. Furthermore, fewer people are travelling less than 30 minutes; down from 24% in 2014 to 18% in 2016.

<sup>1</sup> World Health Organisation, Health Impact Assessment (HIA). (2017). The determinants of health  
<sup>2</sup> Victorian Planning Authority. (2016). Open data site -VPA open space  
<sup>3</sup> Wyndham City Council. (2014 to 2016). Annual Community Satisfaction Survey  
<sup>4</sup> Australian Bureau of Statistics. (2011 and 2016). Census of Population and Housing - Quickstats  
<sup>5</sup> Public Transport Victoria. (2011 to 2017). Passenger load surveys

Area	2011 %	2016 %
Wyndham	11.4	15.3
Greater Melbourne	13.9	15.6
Victoria	11.1	12.6

## Journey to Work Using Public Transport, 15+ Years, 2011 and 2016<sup>4</sup>

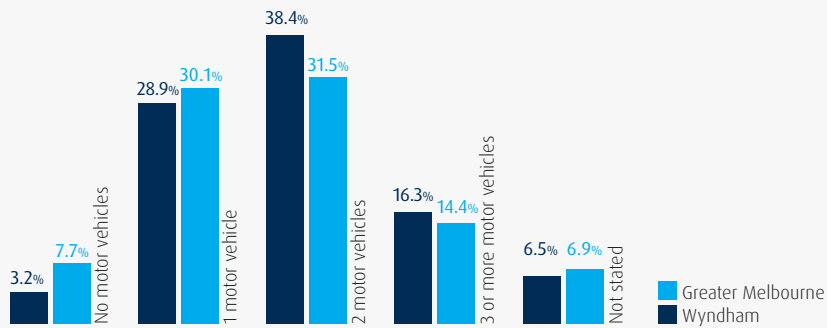
The proportion of Wyndham residents using public transport to travel to work has increased since 2011 from 11.4% of employed persons to 15.3% in 2016. Increases in public transport use have also occurred across Greater Melbourne and Victoria. In Wyndham, increased public transport could in part be due to the opening of two new train stations, Tarneit and Wyndham Vale, as well as zone 1 train fares being extended to the end of the Metro Werribee line, reducing the cost of train travel.



## Public Transport Congestion, 2011 to 2017<sup>5</sup>

Metropolitan Train Load Standard Surveys are conducted annually to measure passenger loads against benchmark standards of capacity. In 2011, 15% of morning peak hour train services on the Werribee line were above the recommended benchmark for capacity, and 21% of morning commuters were riding on these services. In 2014 and 2015, 40% of morning peak hour services were above the capacity benchmarks and almost half of all peak hour passengers were riding these trains. After the opening of the Regional Rail Link stations at Tarneit and Wyndham Vale in 2015, congestion on the Werribee line lessened. In 2016, 29% of the train services during morning peak hour were above capacity, and less than 40% of passengers were riding these trains. In May 2017, 5% (1 out of 21 train services) of morning peak hour trains were in breach of capacity benchmarks and around 7% of morning commuters were using this service.

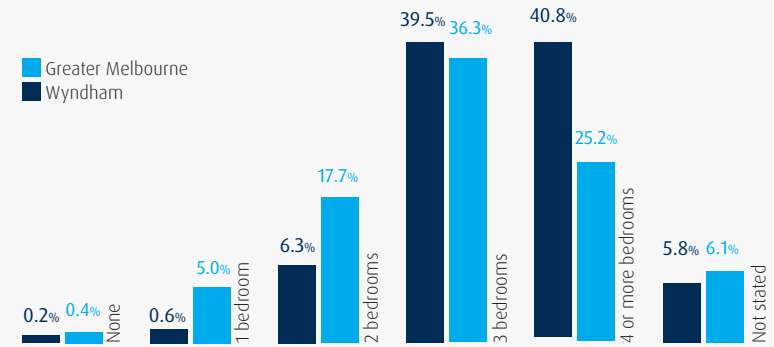
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## Car Ownership – per Household, 2016<sup>6</sup>

54.7% of households in Wyndham have access to two or more vehicles, compared to 45.9% of households in Greater Melbourne.

3.2% of households in Wyndham did not have access to a car, compared to 7.7% of households in Greater Melbourne.



## Housing Diversity - Number of Bedrooms per Dwelling, 2016<sup>8</sup>

Housing diversity refers to the range of housing types provided within a neighbourhood. In Wyndham, the diversity of housing is low.

Over 80% of dwellings have three or more bedrooms, compared to approximately 61% of dwellings in Greater Melbourne. Furthermore, compared to Greater Melbourne, there are fewer smaller homes with two bedrooms or less in Wyndham (23.1% and 7.1% respectively).

Area	Mortgage Stress (low income)		Rental stress (low income)	
Wyndham	9,508	13.5%	5,176	26.9%
Greater Melbourne	195,262	11.7%	131,431	27.4%
Victoria	255,657	11.4%	173,211	28.1%

## Housing Stress, 2016<sup>7</sup>

Rates of mortgage stress for low-income earners are similar in Wyndham, Greater Melbourne and Victoria. However, there are slightly elevated levels of housing stress in Wyndham, with approximately 13.5% of homeowners on low incomes struggling to maintain their mortgage repayments, compared to 11.7% in Greater Melbourne and 11.4% in Victoria.

In Wyndham, 26.9% (over 5,000 homes) of low-income earners are experiencing rental stress.

<sup>6</sup> Australian Bureau of Statistics. (2016) Census of Population and Housing

<sup>7</sup> Ibid

<sup>8</sup> Ibid





# ENVIRONMENTAL DETERMINANTS OF HEALTH



## Vulnerability Analysis of Mortgage, Petroleum and Inflation Risks and Expenditure (VAMPIRE) Index, 2011<sup>9</sup>

### VAMPIRE Index

The VAMPIRE Index is a measure of risk to households arising from the combined impact of increased mortgage costs, rising fuel prices and inflation.

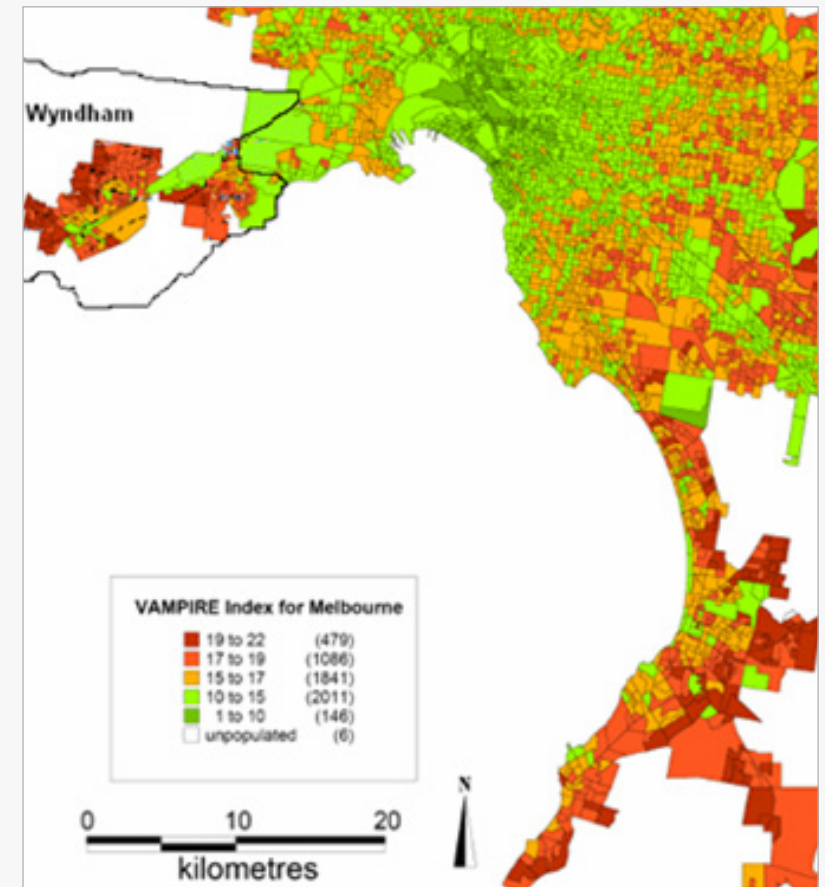
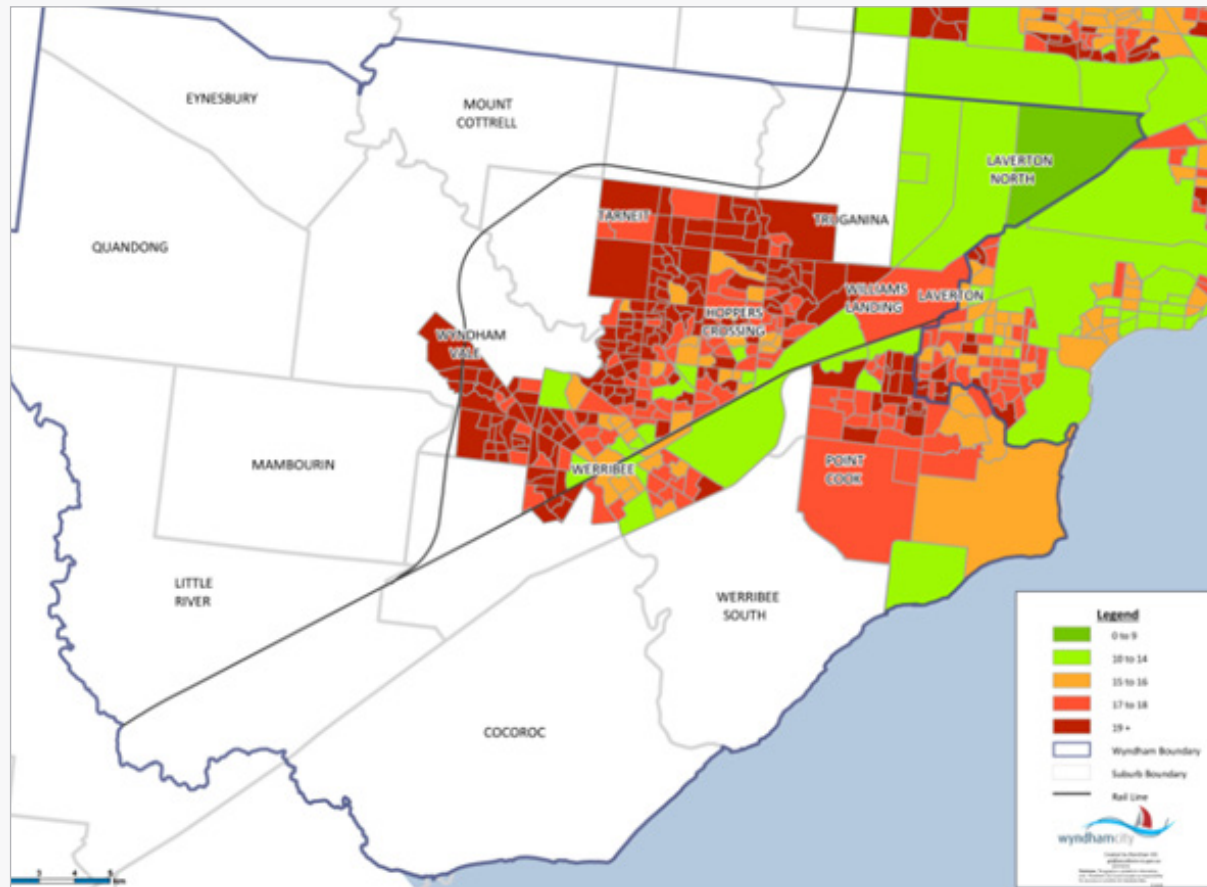
The index uses four indicator variables from the Census, which are combined to create a fuel price and mortgage vulnerability index score that can be mapped according to geographical area.

The four variables include:

- Journey to work by car,
- Households with two or more cars,
- Median weekly household income, and
- Proportion of dwellings purchased through a mortgage or rent/buy scheme.

The heat map below uses red to denote areas of high vulnerability (scores above 15) and green (scores below 15) to indicate resilience to cost of living fluctuations.

As seen in the maps, compared to much of Greater Melbourne, there are more areas of high vulnerability in Wyndham. The first heat map highlights the Wyndham suburbs most vulnerable to rising fuel and mortgage costs. Overall, the majority of Wyndham areas are particularly vulnerable to inflation. There are some small areas within Werribee, Hoppers Crossing, Point Cook and Laverton North identified in green, where vulnerability to changing costs of living is low.



<sup>9</sup> Griffith University Urban Research Program. (2011). Vulnerability Analysis of Mortgage, Petroleum and Inflation Risks and Expenditure (VAMPIRE)