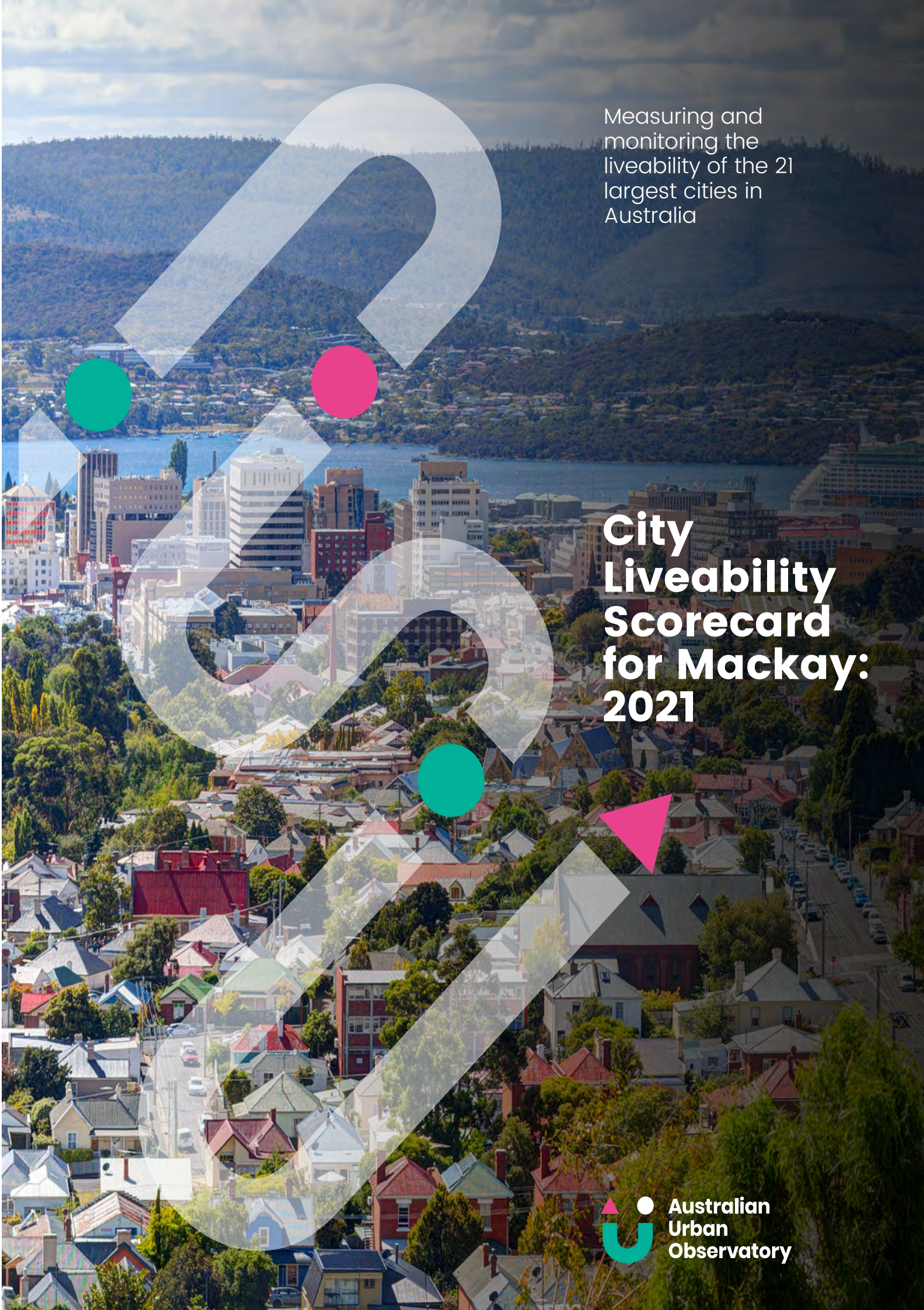

Measuring and monitoring the liveability of the 21 largest cities in Australia

City Liveability Scorecard for Mackay: 2021

Australian Urban Observatory

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Detailed Liveability Indicator data and maps can be accessed through the Australian Urban Observatory

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About this report

This report is one of a second series of City Liveability Scorecard Reports presenting indicators and maps measuring the liveability of Australia's 21 largest cities. The first series of Liveability Scorecards were based on 2018 indicator results and this second series of City Liveability Scorecards is based on 2021 indicator results.

Australian Urban Observatory City Liveability Scorecards measure and monitor city-level liveability averages over time. More detailed neighbourhood, suburb, and Local Government Area results across Australian cities are available online at auo.org.au.

Liveability Index

Walkability

Social Infrastructure Index

Public Transport

Food Environment

Alcohol Environment

Public Open Space

Employment

Housing Affordability

VAMPIRE Index

Liveability Index

Rationale

The economic, social, environmental and health co-benefits of urban liveability are recognised by all levels of government in Australia and internationally. Liveable communities are safe, socially cohesive and inclusive, and environmentally sustainable. They have affordable housing linked via public transport, walking and cycling infrastructure, to employment; education; shops and services; public open space; and social, cultural and recreational opportunities [1, 2].

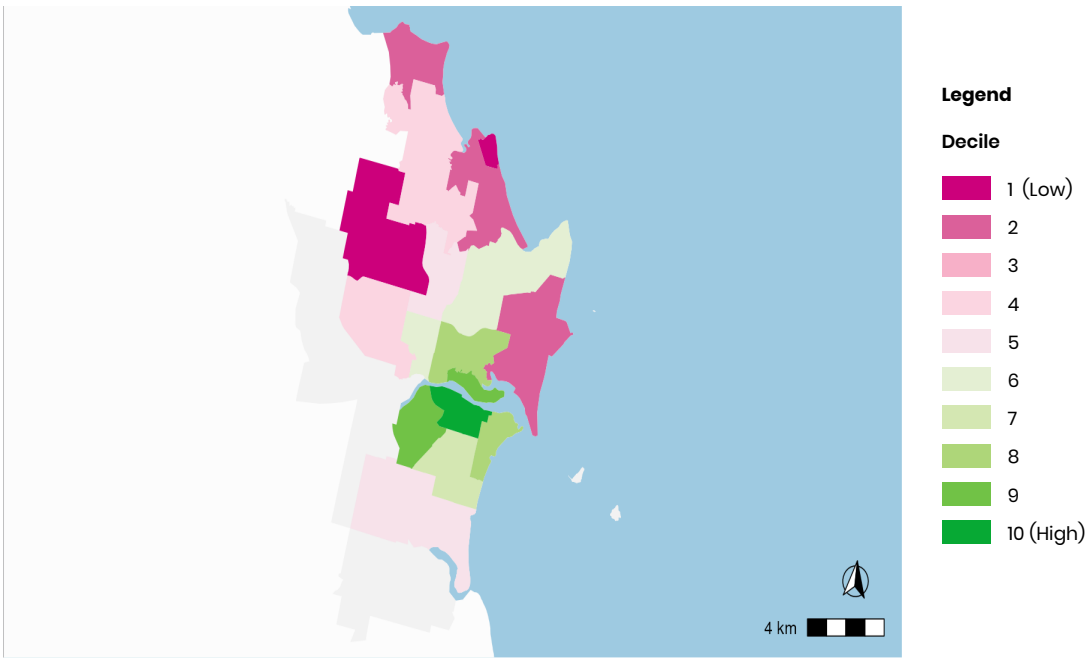
What we measured

The Liveability Index is underpinned by over a decade of research [3]. It combines six domains of liveability found to be associated with health and wellbeing outcomes: walkability; access to social infrastructure; public transport; larger public open space; affordable housing; and local employment. People who live in more liveable communities are more likely to walk, cycle and use public transport and less likely to drive. Details for the included measures are contained in Higgs et al 2019 [3].

Results

Analysis of liveability for Mackay suburbs reveals wide variation over the city with a trend towards higher liveability in the inner areas of the city and reduced liveability in outer areas of the city.

Figure 1. Liveability Index for Mackay 2021.



Walkability

Rationale

Walkability measures the ease of walking in an area. Neighbourhoods with shops and services to walk to, small blocks and good street connectivity, and higher population density tend to be more walkable [4]. Walkable neighborhoods discourage driving and increase walking, cycling and active transport use which improves levels of physical activity and reduces chronic disease outcomes [5-8].

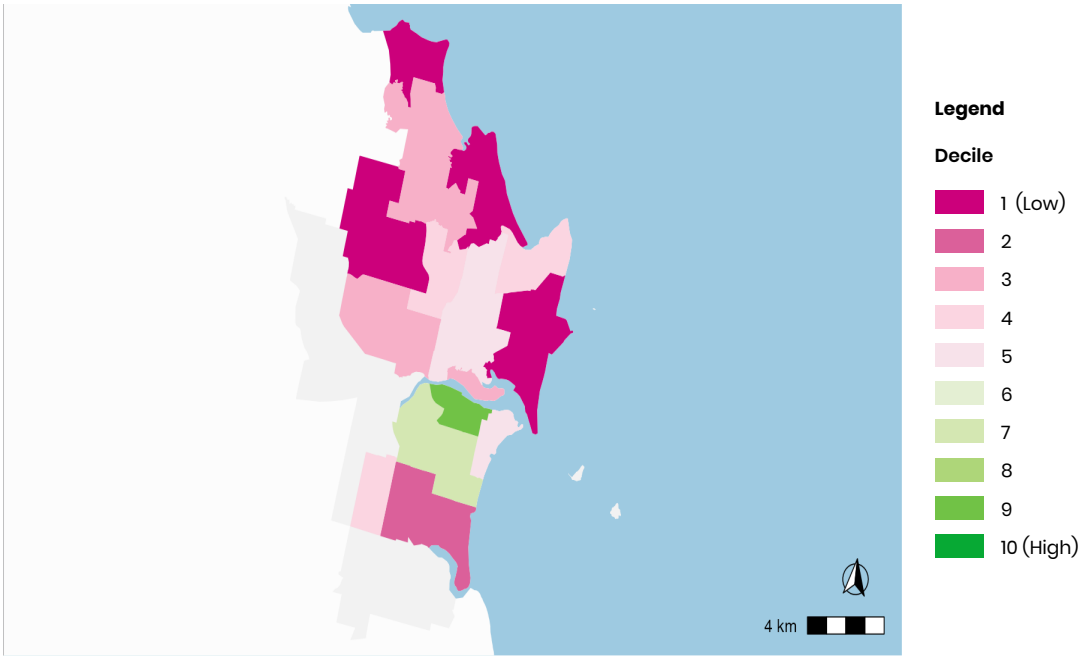
What we measured

Walkability is calculated as a composite index that includes access to daily living destinations (something to walk to), dwelling density (population needed to supply services and destinations) and street connectivity (a way to get there) within a reasonable walking distance of home [4, 9].

Results

A closer analysis of walkability across the suburbs of Mackay reveals wide variation over the city.

Figure 2. Walkability Index for Mackay 2021.



Social Infrastructure

Rationale

Social infrastructure provides access to essential community services and resources [10]. Access to a wide range of different types of social infrastructure is therefore important for the creation and ongoing development of healthy communities. High levels of access to social infrastructure are linked to increased physical activity [11] and wellbeing [10], and increases satisfaction with the local community [1] improving social interactions and mental health outcomes [12]. Social infrastructure is therefore a key component of liveability.

What we measured

The Social Infrastructure Index included access to 16 types of social infrastructure at various recommended distances from dwellings [10]. It included access to childcare facilities, community centres, libraries, aged care facilities, pharmacies, family and community healthcare, dentists and general practitioners, sporting facilities, swimming pools, outside school hours childcare, primary and secondary schools, museums or galleries, and cinemas and theatres [3].

Results

Across Australia's largest 21 cities, a wider mix of social infrastructure is available in

Rank 1
Sydney

Rank 2
Melbourne

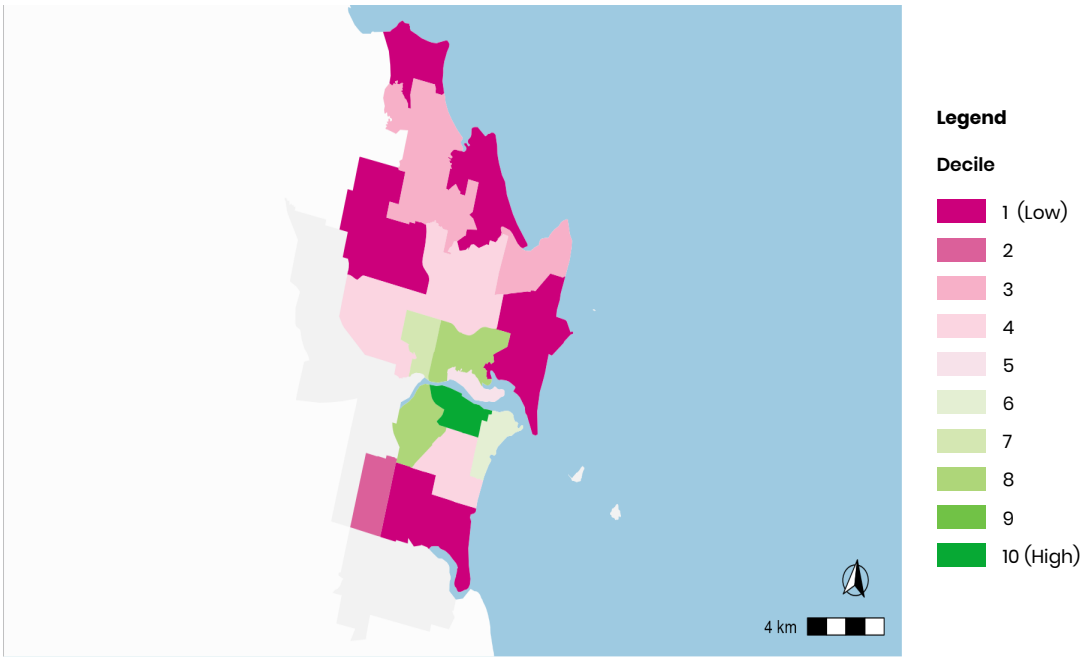
Rank 3
Adelaide

The average number of social infrastructure destinations accessible within recommended distances from dwellings across all areas of Mackay is

3 out of a total of 16

However, a closer analysis of the mix of social infrastructure across Mackay reveals wide variation across the city.

Figure 3. Social Infrastructure Index for Mackay: 2021.



Public Transport

Rationale

Living close to public transport supports health and wellbeing in a number of ways including encouraging walking, reducing dependence on driving, and providing residents with access to employment and amenities. People who live close to public transport are more likely to use it [5] and consequently achieve daily recommended physical activity. Having a public transport stop near home and work increases the likelihood of using public transport [18]. Living within 400m of a public transport stop with a service every 30 minutes is also likely to encourage more walking [19].

Providing regular and proximate public transport also reduces liveability and health inequities. It enables people who have restricted mobility or can't drive - such as young people, older adults, people with disabilities, and people without private cars - to access services, education, and jobs. Public transport and associated active transport facilitate more sustainable mobility and healthier residents.

What we measured

We measured access to bus, train, and tram stops with an average service interval of no more than 30 minutes between the weekday hours of 7 am and 7 pm. Access was measured as the percentage of dwellings within 400m of any of these stops based on a walkable road network distance. The distance of 400m equates to a 5-minute walk and is consistent with access standards in many Australian state transport policies.

Results

Across Australia's largest 21 cities, access to regular public transport is available to more residents living in

Rank 1
Sydney

Rank 2
Canberra

Rank 3
Adelaide

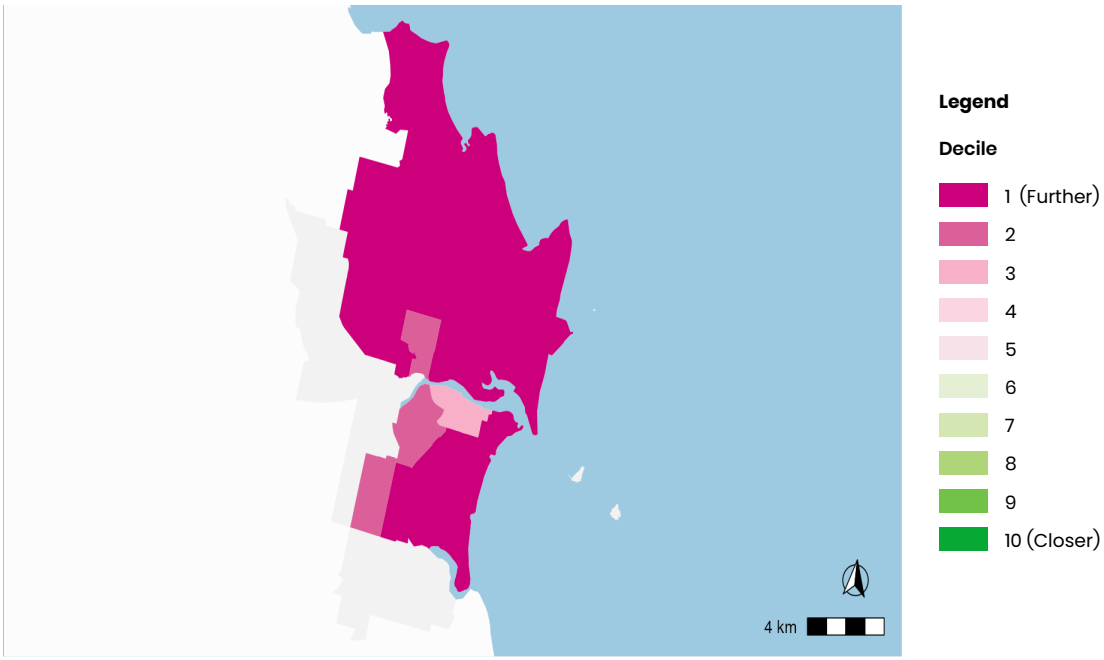
The percentage of residences with proximate access to regular public transport in Mackay in 2021 is

1%*

*This figure is based on updated methods and data and is not comparable to previously reported figures. Updated figures for previous years can be accessed through the Australian Urban Observatory.

A closer analysis of access to regular public transport across the suburbs of Mackay reveals wide variation over the city.

Figure 4. Percentage of residences with proximate access to regular public transport for Mackay: 2021.



Food Environment

Rationale

Being close to a supermarket supports healthy eating and active living by providing easy access to affordable fruit, vegetables, and healthy food within a walkable distance. People living within walking distance of a supermarket are more likely to walk or cycle instead of driving [5, 13]. Increases in physical activity from active transportation, such as walking and cycling, also reduce chronic disease risk and congestion issues. In disadvantaged areas, living within 800m of a supermarket reduces the risk of overweight and obesity [14].

What we measured

We measured the average distance to any type of supermarket. Distances were calculated according to a pedestrian accessible road network.

Results

Of the 21 largest cities in Australia, the average distance to a supermarket is lowest in

Rank 1
Launceston

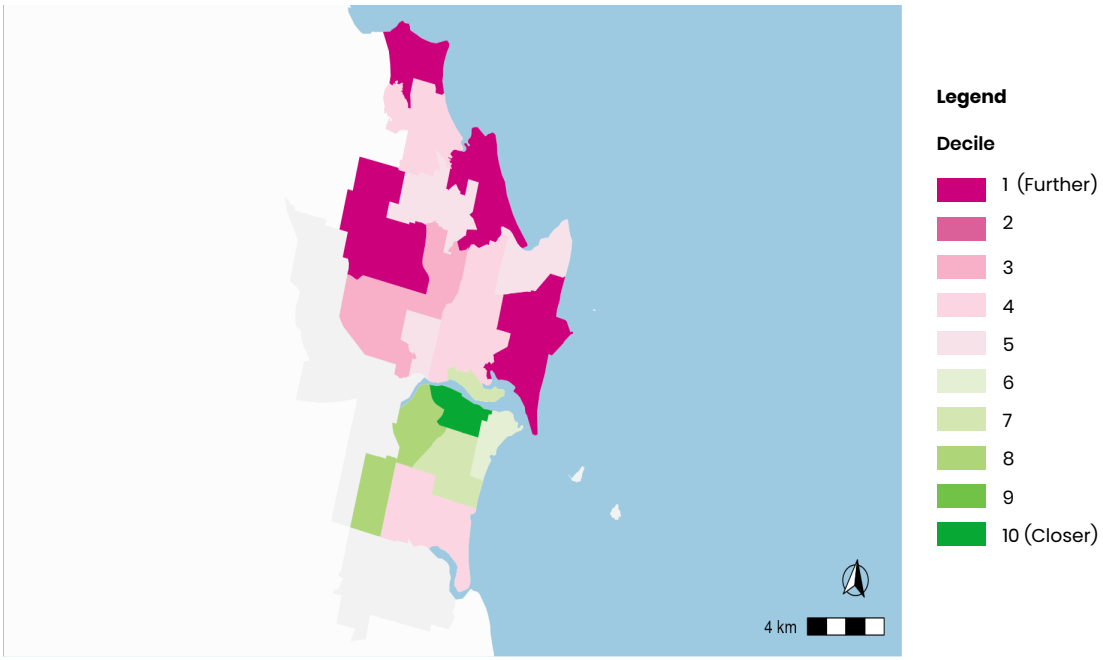
Rank 2
Canberra

Rank 3
Sydney

The average distance to a supermarket for Mackay is

1645m

Figure 5. Average distances in meters to supermarkets for Mackay.



Alcohol Environment

Rationale

Access to alcohol has been linked to harmful alcohol consumption and alcohol-related violence [15, 16]. Furthermore, alcohol outlets are more likely to be located in more disadvantaged areas [17]. For those living in disadvantage areas where there are fewer alcohol outlets, there appears to be a protective effect with enhanced self-reported health [17].

What we measured

Access to off-licence alcohol outlets was included in this report. This includes bottle shops and supermarkets where alcohol can be purchased and taken to another premise for consumption. Distances were calculated from individual dwellings using a pedestrian accessible road network.

Results

Across Australia's largest 21 cities, the average distance to an off-licence alcohol outlet is furthest in

Rank 1
Toowoomba

Rank 2
Townsville

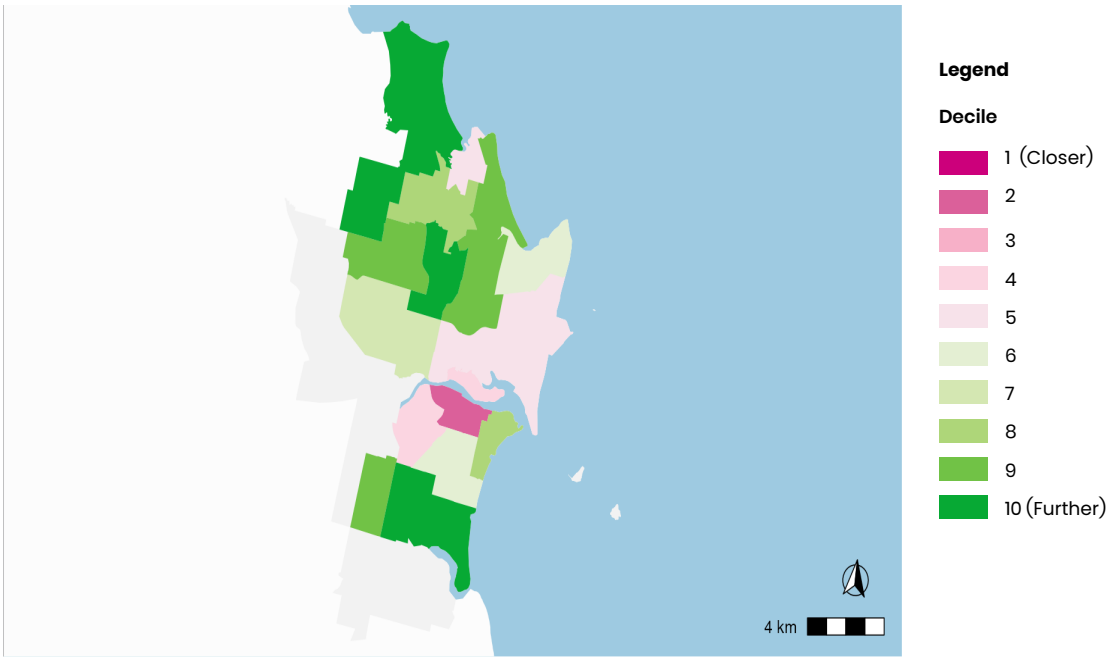
Rank 3
Mackay

The average distance to an off-licence alcohol outlet for Mackay is

1674m

A closer analysis of alcohol outlets across the suburbs of Mackay reveals wide variation over the city.

Figure 6. Average distances in meters to an off-licence outlet for Mackay.



Public Open Space

Rationale

Public open space includes parks, open areas, and places where people can congregate for active and passive recreation and enjoyment. Parks are one form of public open space that usually include grassed areas and gardens, and some green recreational space. Parks support both the physical and mental health of people living nearby and are important for supporting the local ecology and biodiversity of an area [21].

What we measured

Public open space was defined as urban parks greater than or equal to 1.5 hectares, since larger parks have been shown to support physical activity [22, 23]. Access was measured as the percentage of dwellings within 400m based on a walkable road network distance. The distance of 400m represents a 5-minute walk for most people.

Results

Across Australia's largest 21 cities, living within 400m of public open space of 1.5 hectares is available to more residents living in

Rank 1
Canberra

Rank 2
Newcastle

Rank 3
Gold Coast-Tweed Heads

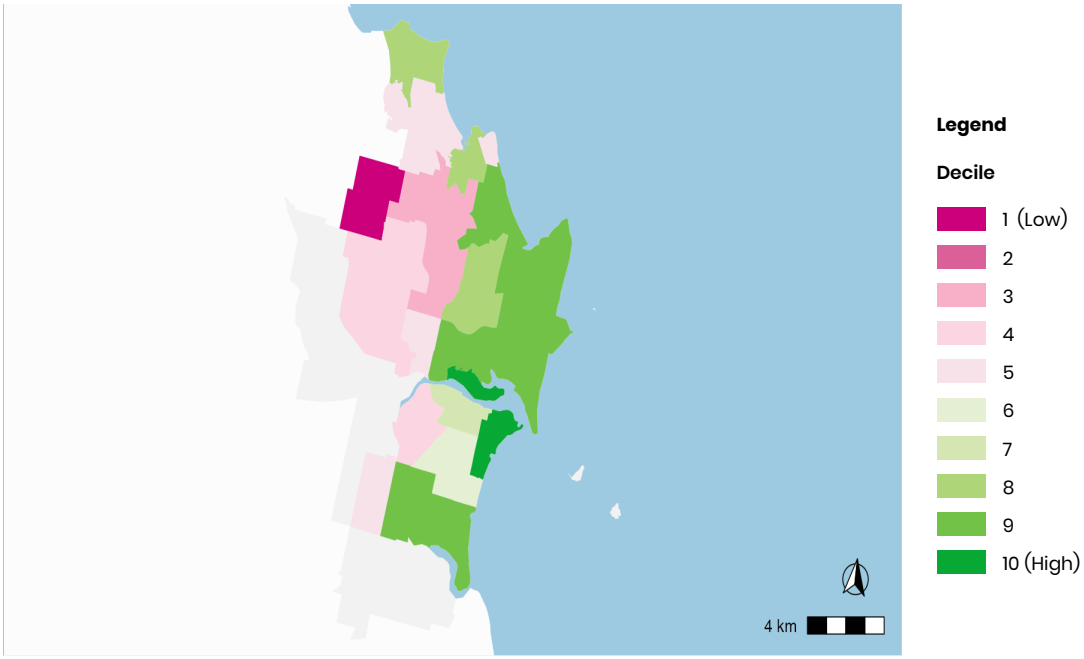
The percentage of residences living within 400m of public open space of at least 1.5 hectares in Mackay is

47%*

*This figure is based on updated methods and data and is not comparable to previously reported figures.

A closer analysis of access to public open space across the suburbs of Mackay reveals wide variation over the city.

Figure 7. Percentage of residences living within 400m of large public open space for Mackay.



Local Employment

Rationale

Accessible employment is a social determinant of health, providing workers with financial resources to support themselves and their families. Access to local employment reduces vehicle kilometres travelled, travel time, and traffic congestion on city roads. It also increases the likelihood of people using active transport such as walking, cycling, and public transport and has been associated with improved self-reported health [24]. Access to local employment with shorter travel times has the potential to support work-life balance and is associated with a reduced risk of obesity [25].

What we measured

We measured access to local employment as the percentage of residents living in Australian Bureau of Statistics Statistical Area 1 (SA1), working within a larger Australian Bureau of Statistics Statistical Area 3 (SA3). On average, SA1 areas represent approximately 400 people while SA3 areas represent between 30,000 and 130,000 people.

Results

Across Australia's largest 21 cities, more local employment is available in

Rank 1
Townsville

Rank 2
Toowoomba

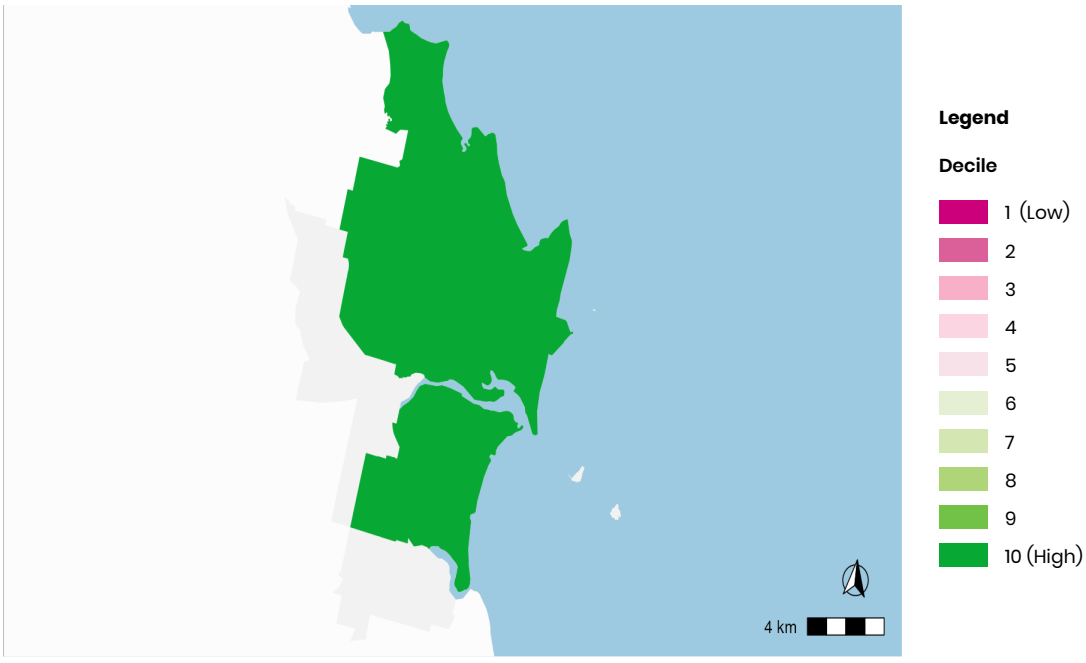
Rank 3
Mackay

The percentage living with local employment in Mackay is

88%

A closer analysis of Local Employment across the suburbs of Mackay reveals wide variation over the city.

Figure 8. Percentage living at SA1 with local employment access at SA3 for Mackay.



Housing Affordability

Rationale

Decent and affordable housing supports families by providing safe, stable and healthy shelter. Affordable housing frees up family finances for use on health care and food, and supports physical and mental health and wellbeing [26]. The 30/40 housing affordability measure [27] is associated with poorer self-reported health, higher community dissatisfaction and residents feeling unsafe [28].

What we measured

We measured housing affordability according to a refined indicator of housing stress where households in the bottom 40 percent of income spend more than 30 percent of their household income on housing costs [28].

Results

Across Australia's largest 21 cities, housing stress is most common in

Rank 1
Bendigo

Rank 2
Launceston

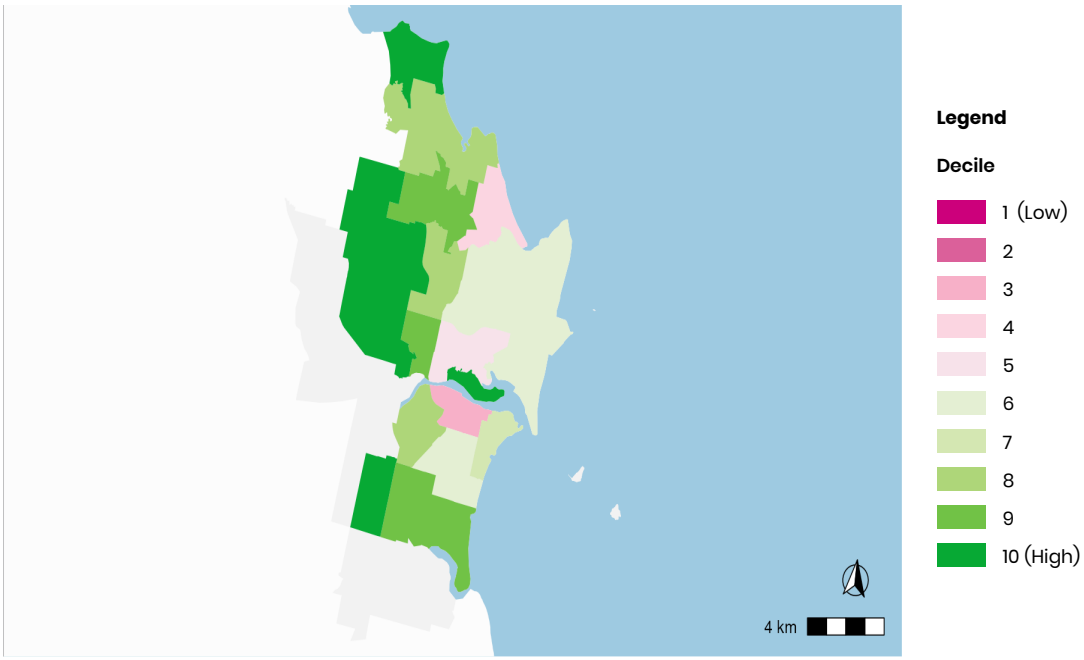
Rank 3
Adelaide

In Mackay, the percentage of households in the bottom 40 percent of the income distribution spending more than 30 percent of household income on housing costs is

29%*

A closer analysis of housing affordability across the suburbs of Mackay reveals wide variation over the city.

Figure 9. Percentage of households under housing affordability stress for Mackay.



VAMPIRE Index

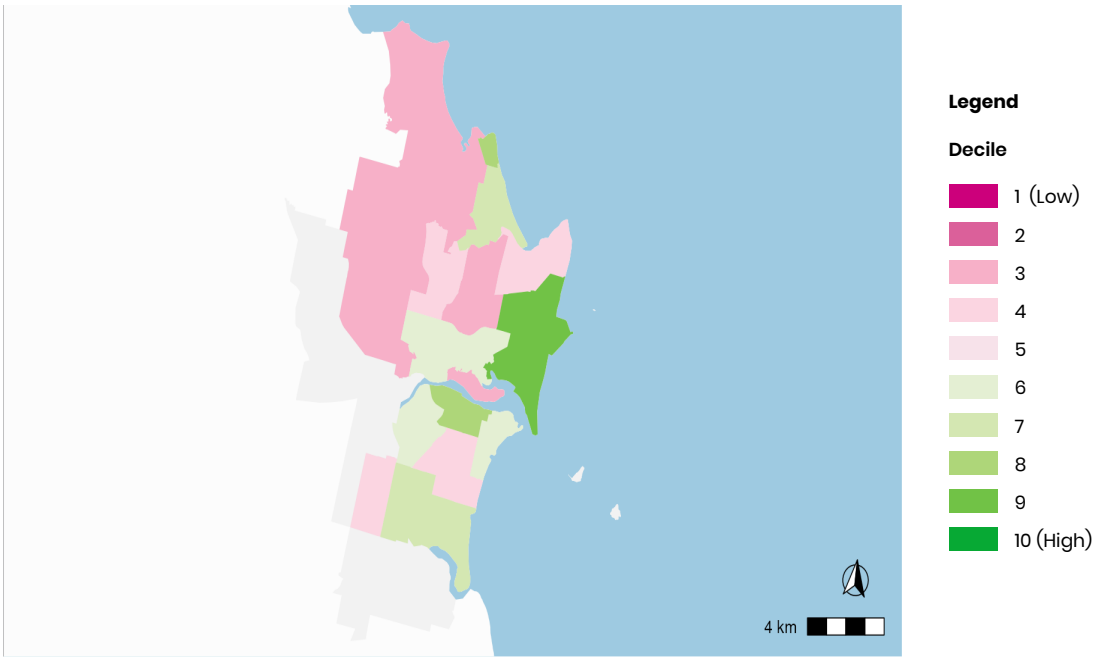
Rationale

Locational disadvantage has broad impacts on health, wellbeing and household economics. Private vehicle usage also remains a staple of Australian households facing increased costs in housing with greater distances to local services, social infrastructure and employment opportunities.

What we measured

The VAMPIRE Index [29] provides a composite index of locational Vulnerability Assessment for Mortgage, Petrol and Inflation Risks and Expenses. Developed using Australian Bureau of Statistics 2021 Census data, VAMPIRE measures: the proportion of dwellings with 2 or more cars; average household weekly income; proportion of dwellings with a mortgage; and proportion of residents commuting by car.

Figure 10. VAMPIRE Index for Mackay 2021.



Summary for Mackay

Indicator	Brief Description	Value	Change	Liveability change since 2018
Liveability	Liveability Index	See map		
Walkability	Walkability Index	See map		
Social Infrastructure	Social Infrastructure Index	3 destinations	●	Social Infrastructure stable*
Public Transport	Percentage living within 400m to regular public transport	1%	↑	Public transport improvement
Food Environment	Average distance to closest supermarket	1645 m	●	Food environment stable*
Alcohol Environment	Average distance to an off-licence alcohol outlet	1674 m	↑	Alcohol environment improvement
Public Open Space	Percentage living within 400m of public open space of 1.5 hectares	47%	●	Public open space stable*
Local Employment	Percentage living with employment access at SA3 level	88%	●	Local employment stable*
Housing Affordability	Percentage of households in the lowest 29% of household incomes spending more than 30% of income on housing	29%	↓	Housing affordability improvement
Housing Affordability	VAMPIRE Index	See map		

* stable = less than 10% difference change since 2018. Note: Liveability and Walkability changes over time have not been presented because they are constructed as relative rankings within their time periods. VAMPIRE was calculated for the first time in 2021.

Please visit the Australian Urban Observatory at **auo.org.au** for more reports covering the liveability of Australia's 21 largest cities.

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