

May 2018

Creating liveable cities in Australia

A scorecard and priority
recommendations for Perth



 **RMIT**
UNIVERSITY | Centre for
Urban Research

 **ACU**
AUSTRALIAN CATHOLIC UNIVERSITY

 **THE UNIVERSITY OF
WESTERN
AUSTRALIA**

What makes a liveable city?

The term 'liveability' is widely used in Australia and across the world, yet it is rarely defined. We define a 'liveable' community as one that is:

'safe, attractive, socially cohesive and inclusive, and environmentally sustainable; with affordable and diverse housing linked by convenient public transport, walking and cycling infrastructure to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities' [1]

Liveable, walkable neighbourhoods can improve public health, and can increase environmental, economic and social sustainability [2, 3]. Creating healthy, liveable communities will therefore help cities achieve the United Nations Sustainable Development Goals [4] and United Nations Habitat's New Urban Agenda [5].

We have identified seven domains that help make neighbourhoods liveable:



Liveable city scorecard

In 'Creating Liveable Cities in Australia' (2017) we reviewed state government urban planning policies related to liveability in Sydney, Melbourne, Brisbane and Perth and presented the first 'baseline' measure of liveability in these cities [6].

This scorecard focuses on the results and recommendations for Perth, Western Australia based on two types of indicators mapped across the metropolitan area:

1) Policy implementation indicators

We reviewed each state's policies and identified relevant, measurable standards and targets. We then mapped and assessed how well states were implementing their policies spatially, i.e., how they were delivered on-the-ground.

The scorecard shows where Perth is currently meeting or exceeding (▲), on par (■) or falling below (▼) its policy targets.

2) National liveability indicators

We created a set of spatial liveability indicators which are aligned with urban policy and are also associated with chronic disease risk factors or health outcomes. We mapped these using data available nationally, allowing comparisons between the state capital cities.

The Housing Affordability and Employment national liveability indicators have been updated in this scorecard using the newly available 2016 Census data from the Australian Bureau of Statistics.

The scorecard shows where Perth is currently performing well (▲), on par (■) or underperforming (▼) compared to other cities.



Our main findings



- Making Perth 'liveable' is a policy objective of the Western Australian state government. Nevertheless, in some cases there is a mismatch between this aspiration and the ambition of policy targets.
- Perth has one of the best targets for the level of density required in new developments. Its target of at least 26 dwellings per hectare is enough to achieve walkable communities.
- Perth is doing well in:
 - creating smaller, more walkable street blocks
 - building a small number of walkable communities on its urban fringe
 - providing good access to larger neighbourhood and district parks within 400 m and 800 m of residences.
- However, Perth is not doing as well in implementing its policies on:
 - dwelling density
 - access to activity centres.
- Perth's public transport policy target is being achieved. But compared with other state capital cities, the policy is modest: that **60%** of residences should be within 400 m of a bus stop or 800 m of a train stop.
- So, although Perth is creating some walkable communities on the urban fringe, many of these communities are not 'liveable' because they lack access to transport, employment and infrastructure.
- **38%** of lower-income households in Perth are experiencing housing affordability stress, which appears to be spread across the entire city.
- There are no measurable spatial policies about providing local employment opportunities or encouraging walking and cycling to work. With **31%** of Perth's working population living and working in their broader local area, there is an opportunity for policies that encourage active transport for work commutes.
- There are no measurable spatial policies about food environments or for providing walkable access to supermarkets. Only **34%** of Perth's residences are located within 1 km of a supermarket.
- Promoting health and wellbeing is not included among the state objectives of Western Australia's planning legislation.

Recommendations

We recommend that the Western Australian state government:

- undertake evidence-informed integrated transport, land use and infrastructure planning to deliver affordable housing, public transport, accessible employment and amenities; and to create walkable neighbourhoods as the foundation of a liveable city
- include measurable spatial standards in all policies, regulations and guidelines for urban planning, transport and infrastructure
- set ambitious targets for all seven urban liveability domains, with specific short-term, medium-term and long-term goals. The government should:
 - maintain and fully implement the minimum housing-density target of 26 dwellings per hectare
 - maintain and implement policies that create larger, higher-quality public open spaces
 - carefully monitor the effects of a recent shift in policies which may create smaller parks
 - set more policies and targets for public transport access, that include both proximity and frequency of service
 - develop policies and targets for enhancing the food and alcohol environment in urban policy. This could improve people's access to healthy food, and reduce the health-related and social harms caused by excessive alcohol consumption.
- adopt spatial indicators to measure and monitor the implementation of state urban policies designed to create liveable communities. The government should update these at least every five years, to coincide with the Australian Bureau of Statistics Census, and more frequently where possible.
- move towards metropolitan governance that ensures that state and local government policies are consistent, based on evidence, and designed to create healthy, liveable communities
- recognise health promotion as a 'relevant planning consideration' under Clause 67 of the Western Australian Planning and Development Act 2005. This will help local government planners create healthy, liveable communities.



Walkability

What does the policy say – and how well is it being implemented?

In Western Australia, the Liveable Neighbourhoods policy includes guidelines for:

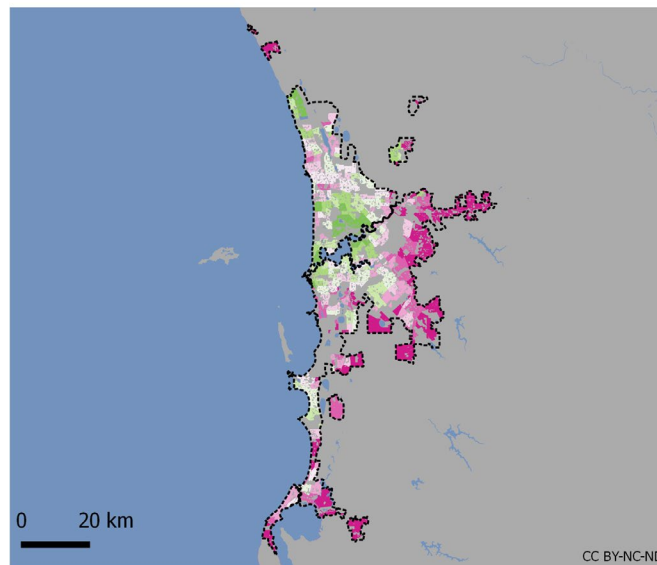
- **Access to destinations** - requires 'most' dwellings to be within 400 m of a secondary or district centre, or within 200 m of a neighbourhood centre. Perth is one of only two capital cities to have standards for access to destinations.
 - ▼ Only **10%** of residences in Perth meet this target.
- **Street connectivity** - sets targets for the length and width of blocks to create walkable street block sizes (maximum perimeter 720 m).
 - ▲ About **71%** of Perth residential street blocks meet this target.
- **Density** - specifies a minimum of 26 dwellings per hectare. This is the most ambitious of all states' targets and is consistent with levels likely to encourage walking, and to deliver better public transport services.
 - ▼ Only **2%** of Perth's suburbs meet this target.

How does Perth rate on the national liveability indicators?

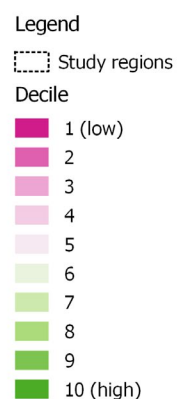
Walkability was measured nationally using a variety of indicators, shown to influence walking for transport [7]. Our combined walkability score includes dwelling density, street connectivity and access to daily living destinations within 1.6 km walking distance of home. Also presented here are indicators of access to closest activity centre and dwelling density.

- Walkability in Perth is best in the inner-city areas, and declines towards the urban fringe – a common pattern in Australian cities.
- ▲ However, unlike most other Australian cities, some areas in outer-suburban Perth are highly walkable. It shows that good urban policies, properly implemented, can create higher-density, mixed-use, walkable neighbourhoods in outer-suburban areas.
- ▼ Perth's dwelling density averages nearly **12 dwellings per hectare**, which is below that of Sydney (**18**), Melbourne (**14**) and Brisbane (**13**).

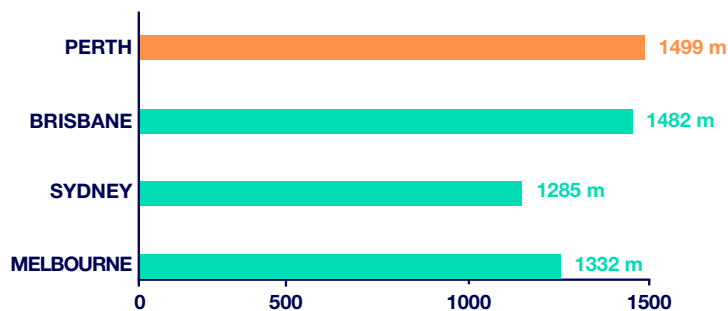
Composite walkability indicator* for suburbs within Perth



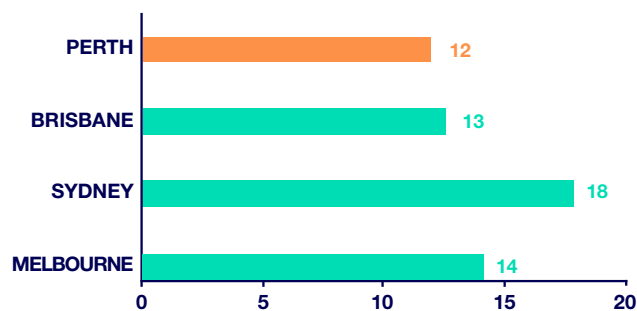
* decile score for the suburbs of Perth, combining street connectivity, dwelling density and daily living scores



- ▼ On average, residences in Perth are **1.5 km from their closest activity centre** – this is similar to Brisbane (**1.5 km**) but further than those in Melbourne and Sydney (**1.3 km**).



Average distance in meters to the closest activity centre



Dwelling density (dwellings per hectare)

Public Transport

What does the policy say – and how well is it being implemented?

In Western Australia, the Liveable Neighbourhoods policy requires **60%** of Perth residences to have nearby access to public transport: 400 m to a bus stop, or 800 m to a train station. It does not include a target for frequency of service.

This is the least ambitious target, compared with targets of **90%** in Brisbane and **95%** in Melbourne. Sydney has the most ambitious and detailed policy, and is the only one to include targets for the frequency of services.

- ▲ **64%** of residences in Perth achieve nearby access to public transport.
- ▼ However, only **54%** of suburbs meet the 60% policy target. Perth's outer north and outer east have the lowest level of public transport access.

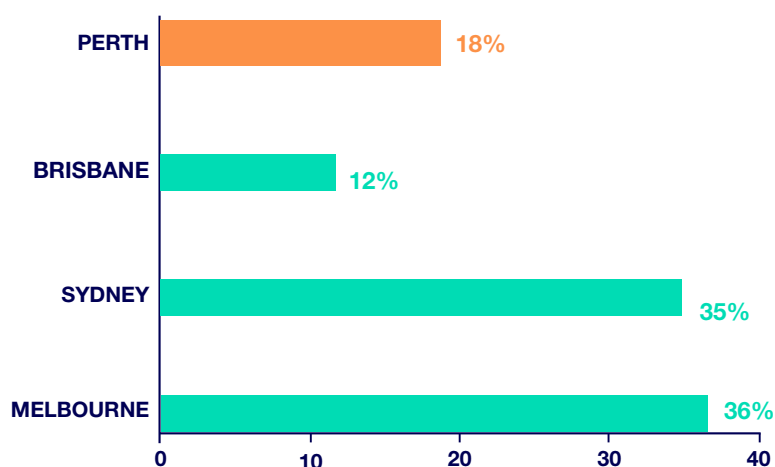
How does Perth rate on the national liveability indicator?

We measured public transport nationally using an indicator that combined public transport access with the frequency of service:

- percentage of residences within 400 m of a public transport stop with a scheduled service at least every 30 minutes between 7 am and 7 pm on a normal weekday.

This is a stronger predictor of walking for transport than access alone [8].

- Only **18%** of Perth residences meet this national indicator, which is substantially lower than Melbourne (**36%**) and Sydney (**35%**), but higher than Brisbane (**12%**).



Percentage of residences within 400 m of a public transport stop with a service at least every 30 mins

Public Open Space

What does the policy say — and how well is it being implemented?

In Western Australia, the Liveable Neighbourhoods policy combines proximity and size of public open space, with desirable distances from residences varying by size.

The policy requires ‘most’ residences (more than **50%**) be within 400 m of **local** public open space that measures between 0.4 hectare and 1 hectare in size.

■ **40%** of residences and **32%** of suburbs meet the target for **local** public open space.

The policy also requires ‘most’ residences (more than **50%**) be within 800 m of a **neighbourhood** public open space (between 1 hectare and 5 hectares in size), and within 2 km of a **district** public open space (between 5 hectares and 20 hectares).

▲ **89%** of residences and **88%** of suburbs meet the target for **neighbourhood** public open space.

▲ **76%** of residences and **70%** of suburbs meet the target for **district** public open space.

Perth has a relatively new proposed requirement that **100%** of residences have access to public open space within 300 m. Nevertheless, there is no evidence that this level of access in suburban settings is health-promoting and this policy should be monitored for its impact.

▼ Only **64%** of residences and one suburb meet this new target.

How does Perth rate on the national liveability indicators?

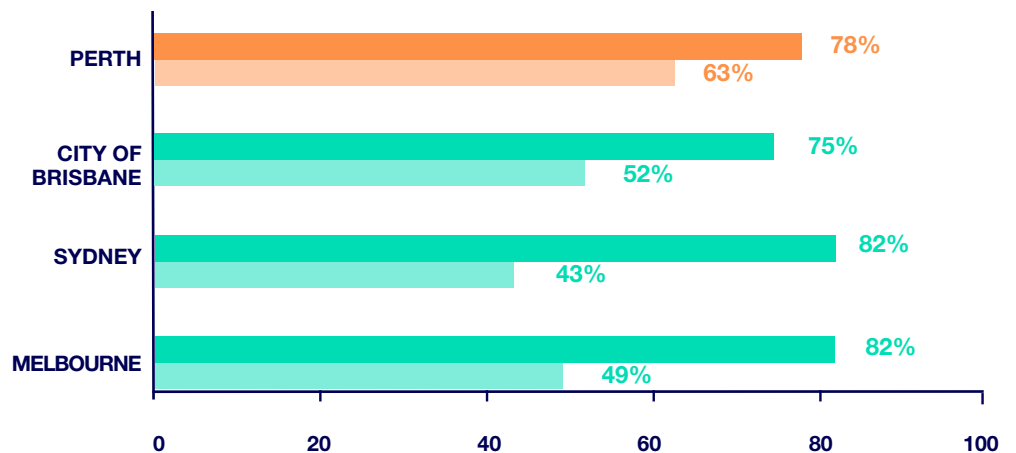
We measured public open space nationally using two indicators:

- access to a public open space within 400 m
- access to a public open space larger than 1.5 hectares within 400 m.

The latter indicator is based on evidence that smaller parks do not necessarily encourage physical activity or improve mental health [9].

■ **78%** of residences in Perth are within 400 m of a public open space of any size, behind that of Melbourne and Sydney (**82%**) but higher than City of Brisbane (**75%**).¹

▲ **63%** of residences in Perth are within 400 m of a public open space larger than 1.5 hectares, which is higher than City of Brisbane (**52%**), Melbourne (**49%**) and Sydney (**43%**).



Top bar: Percentage of residences within 400 m of a public open space
Bottom bar: Percentage of residences within 400 m of a public open space larger than 1.5 hectares

¹ In Brisbane, public open space data was only available for the City of Brisbane.

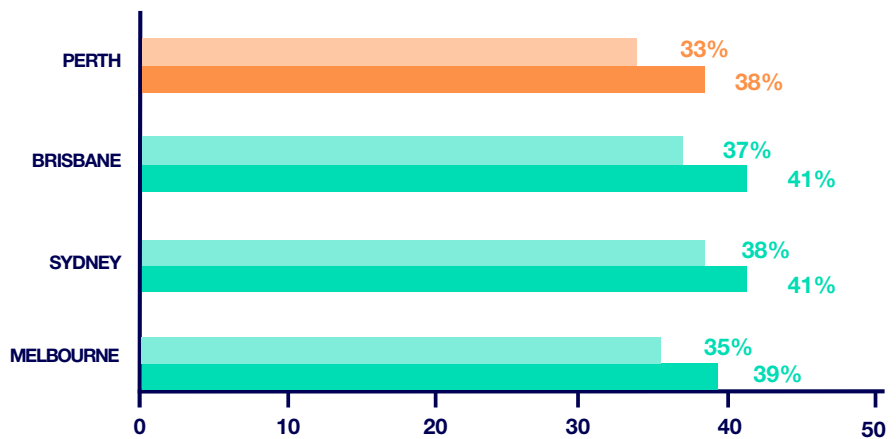
Housing Affordability

What does the policy say?

At the time of the review, we found no measurable spatial policies about housing affordability in Western Australia.

How does Perth rate on the national liveability indicator?

We measured housing affordability nationally using the 30/40 housing affordability measure. This identifies households in the bottom 40% of income that spend more than 30% of their total income on housing. The 30/40 measure is a well-known indicator of housing affordability [10], and is associated with poorer self-rated health, higher community dissatisfaction, and residents feeling unsafe [11].



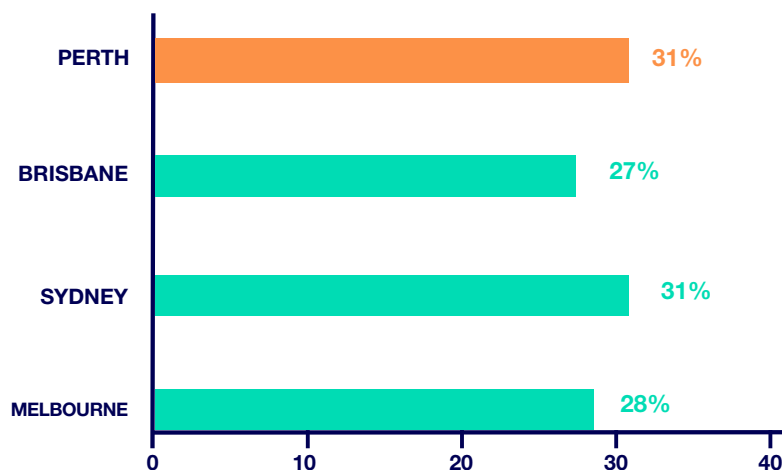
Percentage of households in the bottom 40 percent of the income distribution spending more than 30 percent of household income on housing costs

Top Bar: 2011; Bottom Bar: 2016

- Based on 2016 Census data, 38% of lower-income households

in Perth are experiencing housing affordability stress. In Perth, like most other cities, housing affordability has declined between the 2011 and 2016 Census, and suburbs with the highest levels of housing stress tend to be on the urban fringe.

Employment



Percentage of employed people living in SA2 and working in the broader SA3

What does the policy say?

At the time of the review, we found no measurable spatial policies about providing employment in local areas or encouraging public and active transport to work in Western Australia.

How does Perth rate on the national liveability indicators?

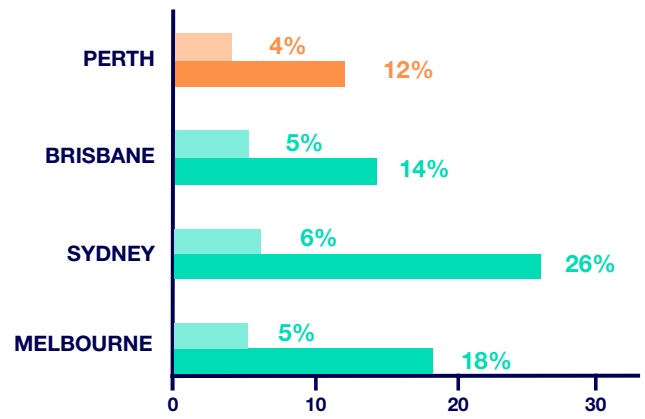
We measured employment nationally using two indicators:

- percentage of employed people living in a small local area (Statistical Area 2) working in the broader local area (Statistical Area 3)

- percentage of employed people using active transport (walking, cycling) or public transport to travel to work.

Based on 2016 Census data:

- ▲ **31%** of employed people in Perth live and work in their broader local area, which is similar to Sydney (**31%**), and higher than Melbourne (**28%**) and Brisbane (**28%**)
- ▼ However, compared with other states, Perth has the lowest proportion of employed people using active (**4%**) or public transport (**12%**) to travel to work.



Method of travel to work for employed people aged 15 and over

Top bar: Percentage using active transport
Bottom bar: Percentage using public transport

Given that over one third of employed Perth residents live and work in their broader local area, there is an opportunity to increase active and public transport journeys to work.

Food Environment

What does the policy say?

At the time of the review, we found no measurable spatial policies about creating a healthy food environment in Western Australia.

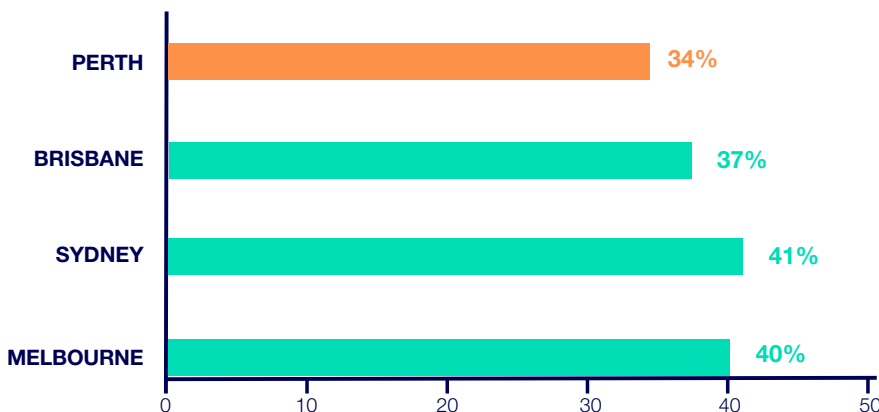
How does Perth rate on the national liveability indicators?

We measured the food environment nationally using two indicators:

- access to a supermarket within 1 km
- the healthy food ratio, measured as the percentage of healthy food outlets within 3.2 km as a proportion of all food outlets

Our previous research found modest increases in body mass index in people living in areas with healthy food ratios less than **75%** [8, 12].

- ▼ Only **34%** of residences in Perth are within 1 km of a supermarket, which is lower than Sydney (**41%**), Melbourne (**40%**) and Brisbane (**37%**).



Percentage of residences within 1 km of a supermarket

■ Perth has a healthy food ratio of **46%**, which is similar to other cities. This means just over half of all food outlets located within 3.2 km of homes are fast food outlets.

- ▼ In Perth, just **6%** of suburbs have a healthy food ratio of more than **75%**, which means these suburbs have better access to healthy food relative to fast food outlets.

Alcohol Environment

What does the policy say?

At the time of the review, we found no measurable spatial policies about moderating alcohol accessibility in Western Australia.

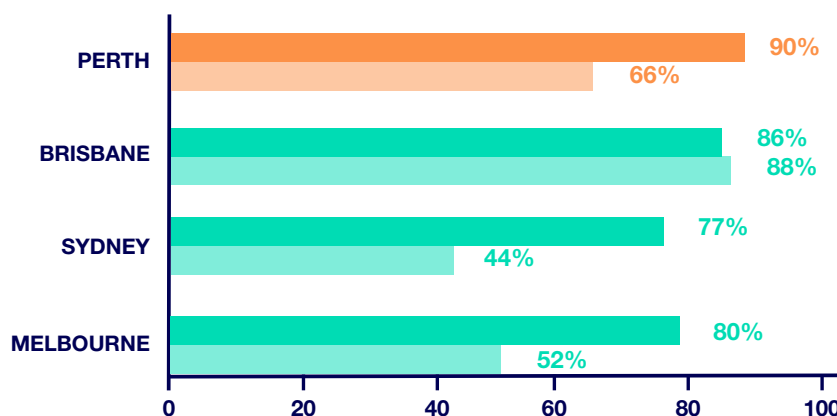
How does Perth rate on the national liveability indicators?

We measured the alcohol environment nationally using two indicators:

- percentage of residences without access to on-licence outlets (places that serve alcohol on premises, such as pubs, bars and restaurants) within 400 m
- percentage of residences without access to off-licence outlets (bottle-shops and other places that sell take-away alcohol) within 800 m.

▲ **90%** of residences in Perth are **not** within 400 m of an on-licence alcohol outlet. This is higher than Brisbane (**86%**), Melbourne (**80%**) and Sydney (**77%**).

■ **66%** of Perth residences are **not** within 800 m of an off-licence alcohol outlet. This is much lower than Brisbane (**88%**)², but higher than Melbourne (**52%**) and Sydney (**44%**).



Top bar: Percentage of residences without access to an on-licence within 400 m
Bottom bar: Percentage of residences without access to an off-licence within 800 m



² Unlike in other states, there is only one liquor licence category for off-licence alcohol outlets in Queensland: commercial hotels - which allow for up to three detached shops to be operated away from the main premises. This likely under-represents the number of outlets available, with many of these detached shops missed from the analysis.

References

1. Lowe M, Whitzman C, Badland H, Davern M, Hes D, Aye L, et al. Liveable, healthy, sustainable: What are the key indicators for Melbourne neighbourhoods? Melbourne: Place, Health and Liveability Research Program, University of Melbourne, 2013.
2. Badland H, Whitzman C, Lowe M, Davern M, Aye L, Butterworth I, et al. Urban liveability: Emerging lessons from Australia for exploring the potential for indicators to measure the social determinants of health. *Social Science & Medicine*. 2014, 111: 64–73.
3. World Health Organization, UN Habitat. Global report on urban health: Equitable healthier cities for sustainable development. Italy: WHO, 2016.
4. United Nations General Assembly. Resolution adopted by the General Assembly: Transforming our world: The 2030 agenda for sustainable development A/RES/70/1. New York: United Nations, 2015.
5. United Nations. Resolution adopted by the General Assembly on 23 December 2016: New Urban Agenda. New York: United Nations, 2016.
6. **Arundel J, Lowe M, Hooper P, Roberts R, Rozek J, Higgs C, Giles-Corti B. Creating liveable cities in Australia: Mapping urban policy implementation and evidence-based national liveability indicators. Melbourne: Centre for Urban Research RMIT University, 2017.**
7. Saelens BE, Handy SL. Built environment correlates of walking: A review. *Medicine & Science in Sports & Exercise*. 2008, 40: 550-566.
8. Mavoa S, Badland H, Lernihan V, Boruff B, Pettit C, Astell-Burt T, et al. The Australian national liveability study final report: Development of policy-relevant liveability indicators relating to health and wellbeing and recommendations for dissemination. Melbourne: McCaughey VicHealth Community Wellbeing Unit, 2016.
9. Francis, J., Wood, L., Knuiman, M. & Giles-Corti, B. Quality or quantity? Exploring the relationship between public open space attributes and mental health in Perth, Western Australia. *Social Science & Medicine*. 2012, 74: 1570-1577.
10. Yates J, Gabriel M, Australian Housing and Urban Research Institute. Housing affordability in Australia: Collaborative research venture 3: Housing affordability for lower income Australians: Background report. 2005.
11. Badland H, Foster S, Bentley R, Higgs C, Roberts R, Pettit C, et al. Examining associations between area-level spatial measures of housing with selected health and wellbeing behaviours and outcomes in an urban context. *Health & Place*. 2017, 43: 17–24.
12. Feng X, Astell-Burt T, Badland H, Mavoa S, Giles-Corti B. Modest ratios of fast food outlets to supermarkets and green grocers are associated with higher body mass index: Longitudinal analysis of a sample of 15,229 Australians aged 45 years and older in the Australian National Liveability Study. *Health & Place*. 2018, 49:101-110.
13. Foster S, Trapp G, Hooper P, Oddy WH, Wood L, Knuiman M. Liquor landscapes: Does access to alcohol outlets influence alcohol consumption in young adults? *Health & Place*. 2017, 45: 17–23.
14. Livingstone M. Alcohol outlet density and harm: Comparing the impacts on violence and chronic harms. *Drug & Alcohol Review*. 2011, 30: 515–23.

Creating liveable cities in Australia: A scorecard and priority recommendations for Perth

Paula Hooper ^{1,2}
Julianna Rozek ^{1,3}
Lucy Dubrelle Gunn ^{1,3}
Melanie Lowe ^{4,6}
Jonathan Arundel ^{3,5,6}
Carl Higgs ^{3,5,6}
Rebecca Roberts ^{3,5,6}
Billie Giles-Corti ^{1,3}

¹ NHMRC Centre of Research Excellence in Healthy Liveable Communities

² Centre for the Built Environment and Health, The University of Western Australia

³ Healthy Liveable Cities Group, Centre for Urban Research, RMIT University

⁴ Australian Catholic University

⁵ The Australian Prevention Partnership Centre

⁶ Clean Air and Urban Landscapes Hub, National Environmental Science Programme

The full *Creating Liveable Cities in Australia* (2017) report can be found at:

<http://cur.org.au/project/national-liveability-report/>

This research has been funded by the Clean Air and Urban Landscapes Hub of the Australian Government's National Environmental Science Programme, The Australian Prevention Partnership Centre and the NHMRC Centre of Research Excellence in Healthy Liveable Communities.

This work is licenced under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia Licence. To view a copy of this licence, visit: <http://creativecommons.org/licenses/by-nc-nd/3.0/au/>. Any maps reproduced as part of this project must include attribution and citation.



Suggested Citation

Hooper P, Rozek J, Gunn LD, Lowe M, Arundel J, Higgs C, Roberts R, Giles-Corti B. *Creating liveable cities in Australia: A scorecard and priority recommendations for Perth, Melbourne*: RMIT University, Centre for Urban Research, 2018.

Enquiries regarding this report may be directed to:

Healthy Liveable Cities Group, RMIT University, City Campus
Building 15, Level 3, 124 La Trobe Street
Melbourne VIC 3000
E hlc@rmit.edu.au
P 03 9925 4577



Centre for Urban Research
Building 15, Level 4
RMIT University City campus
124 La Trobe Street
Melbourne VIC, 3000
Australia

T: +61 3 9925 0917
E: cur@rmit.edu.au

www.cur.org.au

