



Defining density (done well)



Committee
for
Sydney

Acknowledgement of Country

The Committee for Sydney acknowledges Aboriginal and Torres Strait Island peoples as the traditional custodians of the land. Sovereignty was never ceded: this was, and always will be, Aboriginal land.



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Executive summary



Image: Newmarket, Randwick. Arcadia Landscape Architecture

It's time to rethink density's role in our future.

Sydney is rapidly changing. With record-high housing rents and property prices, major transport investments, and increasing natural hazard risks constraining where we can build, we must build smarter and make the most of our remaining urban land.

This report is the first in a series of research, events and advocacy that builds on the Committee for Sydney's 2016 work – Making great places, Density Done Well. The series will look at how to do density well from a range of different perspectives. It will seek to answer questions like:

- What does density mean in different contexts?
- What role does density play in fostering walkable, less car dependent neighbourhoods?
- Is a connection to nature possible in high-density areas?
- How can we design homes that suit diverse households in dense environments?
- Can we deliver more affordable housing, and housing that is affordable to live in?
- How can places remain loved and familiar as they go through change?

As the first report in the series, the purpose of 'Defining Density' is to start with some basic facts and comparisons to help shake off some of the baggage surrounding density, and to provide a shared understanding of what it means.

This report explores what density means, Sydney's relative population density at international, inter-state and inter-suburb levels and the relationship between density and amenity.

Comparing Sydney's density globally, nationally and amongst itself points to five main lessons:

- 1. Density comes in all shapes and sizes**
Higher density doesn't always mean taller buildings. Terraces, manor homes, and walk-up flats can gently increase neighbourhood density.
- 2. More density, more public life**
Higher density enhances public life by creating more public and semi-public spaces. As population density rises, investment in public spaces and active high streets becomes more crucial. Economically, feasibility is also buoyed by increased density—more people living in an area means more customers and opportunities for retail and hospitality to flourish, attracting further investment in the public realm.

3. We can be making better use of Sydney's existing stations

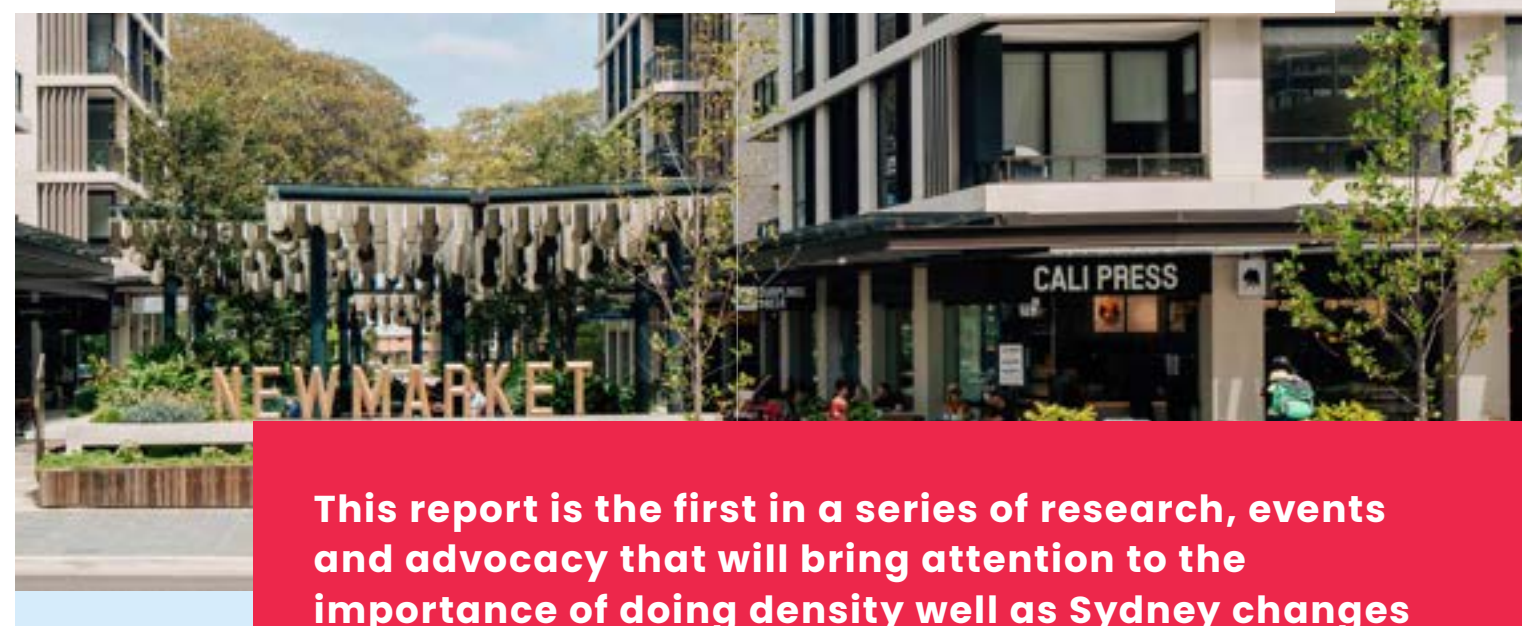
Sydney's population density around rail stations is low compared to other cities. Continuing to focus on transport-oriented development will help us catch up with global cities.

4. An increase in density should be matched by an increase in amenities from the very start

Well-located homes need supporting amenities like local shops, cafes, and community infrastructure to meet local needs without building in car dependency. These are essential, not optional, for great places. It is critical that these amenities are provided from the day people move in.

5. A step-change in housing density hinges on expanded transport infrastructure

Sydney lacks a clear spatial infrastructure and land-use plan outlining how existing and future growth will be serviced by rail, rapid buses, walking, and cycling. Without this, the city will not only come to a gridlock, but inequity will also accelerate across the city.



This report is the first in a series of research, events and advocacy that will bring attention to the importance of doing density well as Sydney changes and grows.



Introduction



Images: Wadanggari Park, Arcadia Landscape Architecture

Some love it and want more; others think it's the end of the world as we know it. Density is a loaded word, but what does it actually mean?

Put simply, density is a ratio used to measure the relative concentration of something in a given area. In an urban context it often refers to the number of people who live within or use an area.

Yet, the word 'density' carries a lot of baggage, evoking different feelings in different people. To some, it's a dirty word that threatens the Australian dream of the quarter-acre block and hints of absentee landlords; to others, it conjures images of vibrant, interesting cities like Paris, Hong Kong, or New York and is something to be desired.

Your feelings about density may be influenced by how it's presented. Density data is often inconsistent, lacks meaning, and is frequently weaponised, leading to polarised views.

This report begins with the basics by defining density through consistent, comparable data. By comparing Sydney to international and national peers, and examining its own suburbs, it identifies the key elements of successful density. This sets the stage for the rest of the 'density done well' series.

The need for density done well

In 2016 the Committee for Sydney published a discussion paper: *Making great places: Density done well*. Eight years on, the paper is more relevant than ever.

Density done well sparked a conversation about where and how Sydneysiders live as we grow to a city of 8 million people, a city about the size that New York City is today. It posed three questions: will we live in a city that's 40% of London's density and maintain Sydney's sprawl? Or will we take another path that is a more 'up' than 'out'? And can we, at the same time, make Sydney a city where we all live in great places?

Since the release of *Density done well* in 2016, the urgency of these questions has increased:

- **Sydney's struggle with housing unaffordability is chronic, and we are increasingly seeing the costs.** Regardless of whether you fall into the 'lucky' category of homeowner or not, it impacts every single one of us. Aged care homes are closing in part because staff can't afford to live near them.¹ Healthcare staff are travelling over four hours to work in our hospitals.² The number of new inventions being registered as patents in Sydney is falling - how can you afford to start a start-up if you can't find a secure place to live?³

- **Our city is experiencing increasingly severe impacts of climate change.** Longer heatwaves, higher urban temperatures, more intense and sprawling fires and increased flooding events (among other natural disasters) mean that less of Sydney is as safe to live in - and the areas of traditional greenfield land release in the western and south-western suburbs are where this is being felt most acutely.
- **Since 2016, we've also lived through a global pandemic that exposed huge inequities across our city.** Some Sydneysiders learnt to love their neighbourhoods, their buzzing local high streets, beautiful local parks and beaches. While others learnt that they did not have the same levels of amenity, space and security as other parts of Sydney. Living in overcrowded homes with little sun or fresh air became more and more difficult.⁴

Whether it's to address housing unaffordability, climate change or inequality in our city, eight years on, it's clear the need for density done well is urgent. This is why the Committee is revisiting our past work, examining the concept from different perspectives.

The density done well series

This report is the first in a 'density done well' series, where we will be unpacking the concept through research, events, walking tours and more. It will answer questions like:

- What does density mean in different contexts?
- What role does density play in fostering walkable, less car dependent neighbourhoods?
- Is a connection to nature possible in high-density areas?
- How can we design homes that suit diverse families in dense environments?
- Can we deliver more affordable housing, and housing that is affordable to live in?
- How can places remain loved and familiar as they go through change?

As the first report in the series, 'Defining Density's' purpose is to start with some basic facts and comparisons to help shake off some of the baggage surrounding density, and what it means. It explores:

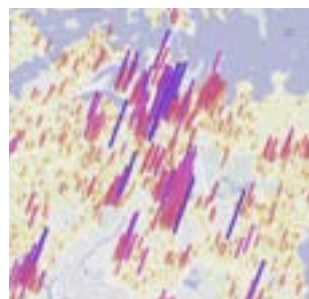
- What density is.
- Sydney's relative population density at international, inter-state and inter-suburb levels.
- The relationship between density and amenity.



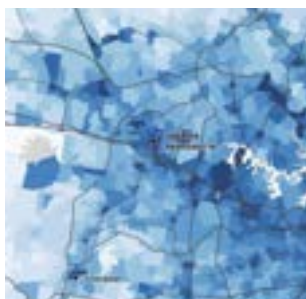
So, what is density?

In its simplest terms, density is a measure of how many things are in a given area. The more things there are, the denser the area is. It can be a useful way of understanding how one place or thing, compares to another.

In the urban context, density frequently refers to the number of people who occupy a space – usually the number of people per hectare or kilometre squared. It often focuses on residential or dwelling density, in part because planning is often focused on the delivery of new homes. However, it can also be used to express the number of jobs, trees or intersections within an area.



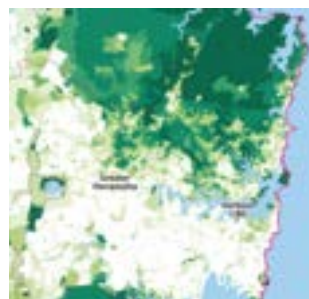
POPULATION DENSITY



JOB DENSITY



INTERSECTION DENSITY



CANOPY DENSITY



LOW



LOW-RISE MEDIUM



MID-RISE MEDIUM



HIGH

Source: Top row, left to right: Hassell, SGS Economics and Planning, Committee for Sydney and Department of Planning, Housing and Infrastructure. Bottom row: SIX Maps

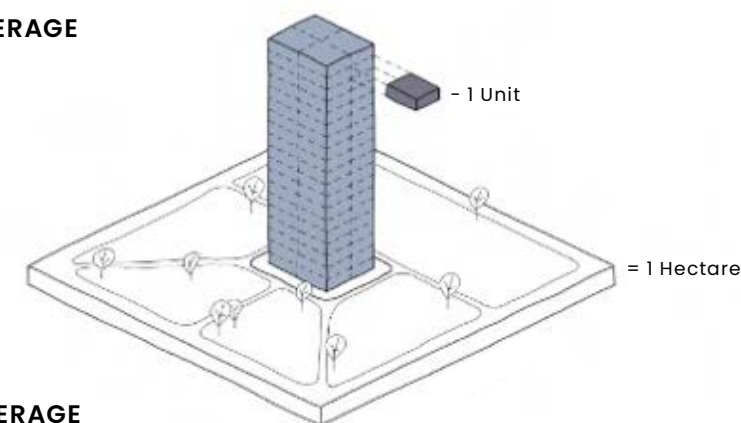
Density has also taken on a life of its own to describe housing typology and form

All forms of housing are a form of housing density. Housing density can also be expressed as low, medium, or high (among others). Doing density well applies to greenfield, low-density development, just as it refers to inner-urban very high-density development.

Housing density isn't just about tall buildings. Increasing residential density doesn't always need to equate to increasing height. It can also be about width. Three narrow terraces in Darlington would be triple the density of a house in Kellyville, while remaining at the same height.

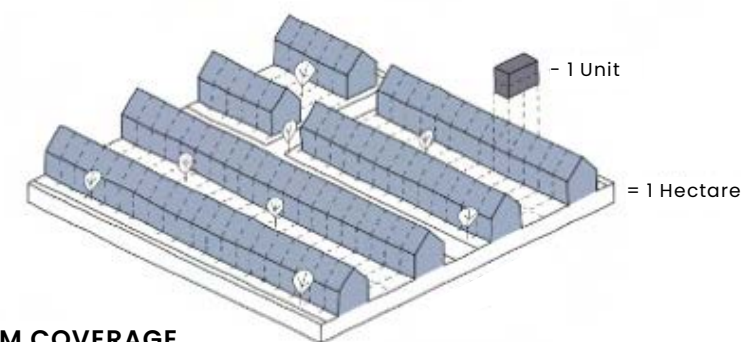
HIGH RISE, LOW COVERAGE

Density - 75 dw/ha



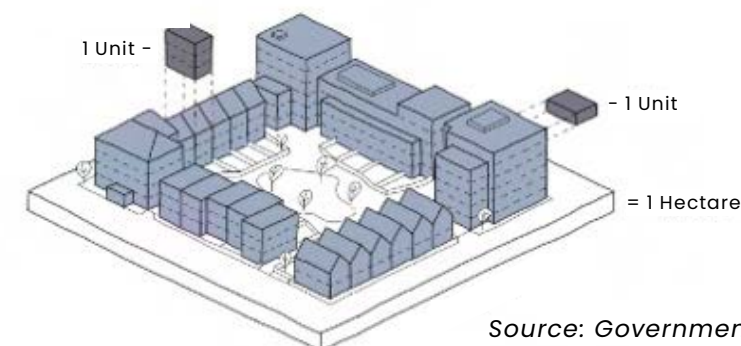
LOW RISE, HIGH COVERAGE

Density - 75 dw/ha



MEDIUM RISE, MEDIUM COVERAGE

Density - 75 dw/ha



Source: Government Architect NSW



Building on a decade of advocating for density done well

Over the last decade, the Committee for Sydney has been a consistent voice in the discussion about the importance of density to Sydney's future.

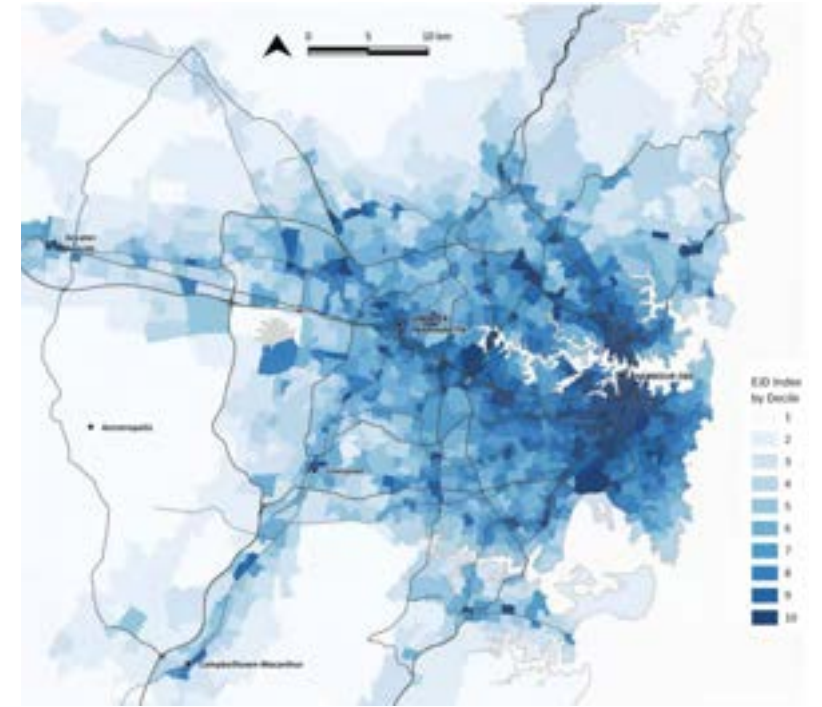
Our focus has not just been on why density is important, but why good density is important and what it looks like. Our research has explored what is at the core of great places, how we can rethink station precincts, what makes successful high streets and the costs to Sydney if we do not address the wicked challenge of housing unaffordability. Core to all of this has been a consistent call for Density Done Well.

Here is a recap of the key themes that have emerged from the past decade:



Density is more than dwellings

Density isn't just about people and dwellings; it's also about job concentration. Sydney CBD has Australia's highest job concentration, or 'economic agglomeration.' When job connectivity via public transport is factored in, 'effective job density' increases, enhancing access across the city. The planning of job density and industry clustering is a key focus for metropolitan planning and the considerations for where density – of homes and jobs alike – is concentrated. [The Sandstone Megaregion – Uniting Newcastle, the Central Coast, Sydney and Wollongong', 2018](#)



Source: SGS Economics and Planning

Amenity increases as density increases

Density done well means that we accommodate more people and homes in the space that we have, while at the same time improving liveability. The benefit of higher densities is that they allow us to create communities where more amenities of a more specialised nature are within close access to our homes. Higher densities can also sustain better transport connectivity and high-quality public spaces. They also improve the feasibility of providing essential supporting infrastructure.

And as density increases, so too does the need to increase amenities. Increasing density can have negative impacts on people if the increase is not aligned with the level of amenity in the area – and particularly those already living in the area.

[Making Great Places: Density Done Well, 2016](#)

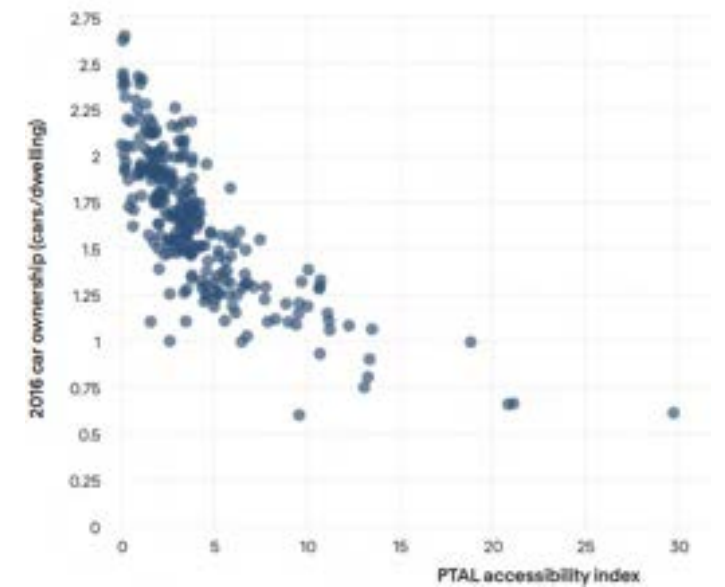


- HIGH DENSITY**
- **Education:** Multiple schools and higher education within the local area
 - **Health:** Specialist medical care locally accessible
 - **Transport:** Integrated public transport with high cycling and walking use
 - **Open space:** Communal, hard and soft, with high quality amenities
 - **Employment:** Business hub with global reach and supporting services

An increase in density around rail stations helps to reduce car ownership

There's a clear link between public transport access and car ownership. Areas in Sydney with higher Public Transport Accessibility Levels (PTAL) tend to have fewer cars per dwelling. Well-planned density in these areas leads to fewer cars in neighborhoods and reduced car trips.

[Rethinking Station Precincts, 2022](#)



Source: Kinesis

Image: Warrick Lane, Blacktown, McGregor Coxall



Great high streets support dense, vibrant communities

High streets are the lifeblood of many communities across Sydney and particularly those suburbs that developed prior to World War II. Ask a Sydneysider their favourite suburb and so often their responses will be tied to a place with a great high street.

A great high street supports a range of local amenities which in turn support – and thrive on – denser communities. They are the places that provide these essential services to enable well located places to increase their density.

The Committee’s 2021 report Mapping Sydney’s High Streets identified a number of success factors for local high streets, including:

- Prioritising pedestrians
- Reduce vehicle speeds, while still allowing cars
- Have narrow carriageways and frequent pedestrian crossings
- Have continuous active frontages for retail and other local services

[Mapping Sydney’s high Streets, 2021](#)

Good density prioritises people over traffic

So many of our positive associations with density are from cities and towns across the world that developed their urban form before the dominance of cars. Think Barcelona, Amsterdam, Hanoi. Our 2016 report Density Done Well highlighted the need for contemporary approaches to density to prioritise people over cars – ‘streets, not roads’. This simple but profound reframing shifts the priority back to the person as the priority for place over the car as a means to getting to, from or through a place.

This principle shapes block lengths, street widths, traffic flow, road space allocation and the emphasis of public domain over carriageway.

[Making Great Places: Density Done Well, 2016](#)



Development done with integrated public transport is critical to achieve good density

Concentrating growth around station precincts requires higher density and more compact living. To gain public acceptance, these areas must offer high-quality design and rich local amenities, making the trade-off worthwhile. Our 2022 Rethinking Station Precincts report recommended ten strategies for success:

1. Integrate station location and land use planning
2. Set clear growth targets around stations
3. Use state-led rezonings for major precincts

4. Support councils in managing station development
5. Establish effective precinct governance
6. Build capacity in Transport for NSW to oversee station developments
7. Retain strategic sites in public ownership
8. Communicate and apply infrastructure contributions effectively
9. Promote sustainable transit and smart parking
10. Increase affordable rental housing in station precincts

[Rethinking Station Precincts, 2022](#)



Source: Hassell

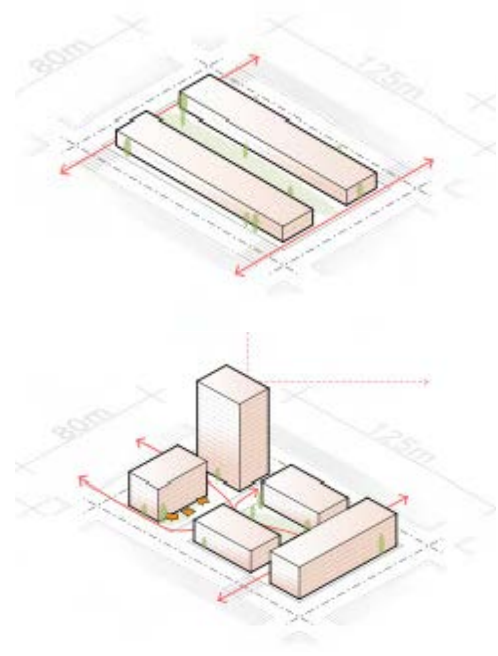


Good density frees up space for other uses

The Committee’s 2016 Density Done Well report made clear that density does not have to mean high density towers in every suburb across Sydney. Increasing density can also mean moving from low density detached housing to medium density terrace housing or walk-up flats.

The report highlighted that density is not just an inner-city typology. Appropriate density right across Sydney’s suburbs enables a more efficient use of land and utilisation of infrastructure, as well as an opportunity to free up land for other uses – such as public open space.

[Making Great Places: Density Done Well, 2016](#)



A diversity of open space is essential, not an option

Higher density means less private open space, like backyards, making public open space essential for good density. Open space ranges from regional parks to sports fields, playgrounds, and even wide, well-designed footpaths. Great places offer diverse spaces. Successfully delivering density requires understanding open space needs and providing the right amount and types. The Committee’s 2019 work with AECOM emphasised the importance of new open spaces in redevelopments like Waterloo, while ensuring access to surrounding areas for recreation. It’s also critical that these space are planned for, and provided from the outset. The costs of getting this wrong can be high, and once developed, close to impossible to provide.



[Density Done Well case studies: Waterloo, 2019](#)

Mixing uses creates great places and amenity and supports a diversity of people and experiences

Another common feature of places that people are drawn to is that they have lots going on – day and night, weekday and weekend. As we said in our 2016 Density Done Well report “These places aren’t just dense with housing or dense with office buildings, there is a mixture of both. There are cafes and restaurants, businesses and workshops, as well as homes.” These are what we call mixed use places, and good density is both defined by and generates demand for, mixed use centres.

Dense residential communities need good access to shops, restaurants and cafes, community facilities such as libraries, local business services, parks and open spaces, to name just a few. Good density plans for mixed-use to ensure that communities have the services they need as well as to create vibrant places with people in them across the day and week.

[Making Great Places: Density Done Well, 2016](#)



Image: Newmarket, Randwick. Arcadia Landscape Architecture



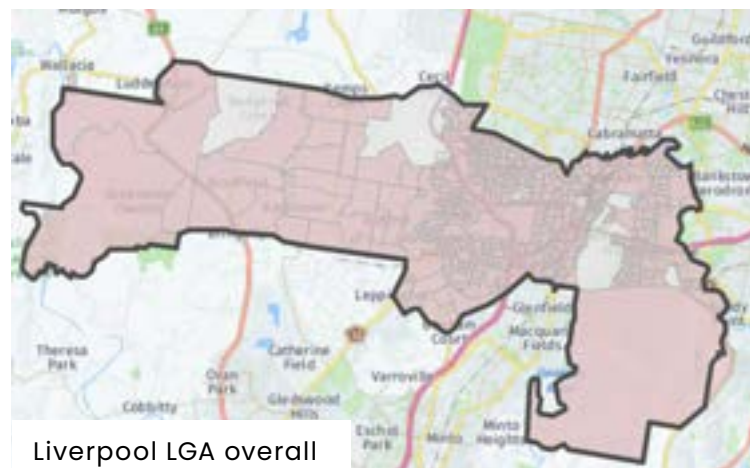
Density data

Measuring apples, to apples

Density can measure many things in many different ways, which makes it hard to build an objective, comparable and consistent definition. This lack of consistency makes it easier to misrepresent density data in conversations about the future of places and communities.

If we are going to have constructive conversations about what density should look like across Sydney's communities, we need to be clear on what we are measuring and at what scale it is being measured. We have to compare apples with apples.

For example, you could say that the population density of Liverpool at 784 persons per km² is low, however if you only focus on Liverpool CBD, instead of Liverpool LGA, the population density jumps to a significantly higher 8,242 persons per km². This is because Liverpool LGA takes into account both urban centres like Liverpool CBD, as well as semi-rural suburbs like Austral (population density of 447 persons per km²) and suburban centres like Miller (3,415 persons per km²). It's also a large LGA at 305km².



Similarly, when Inner Sydney is compared to other cities, often the geography used is the ABS SA4 City and Inner South area is used. However this area picks up the industrial lands at Alexandria, Botany and the airport which distorts the overall density, given they're not residential areas.

The following population density rankings compare Sydney and suburbs of Sydney in a like-for-like, apples to apples way to make true comparisons across different places. In doing so, trends and patterns can be noticed more clearly.

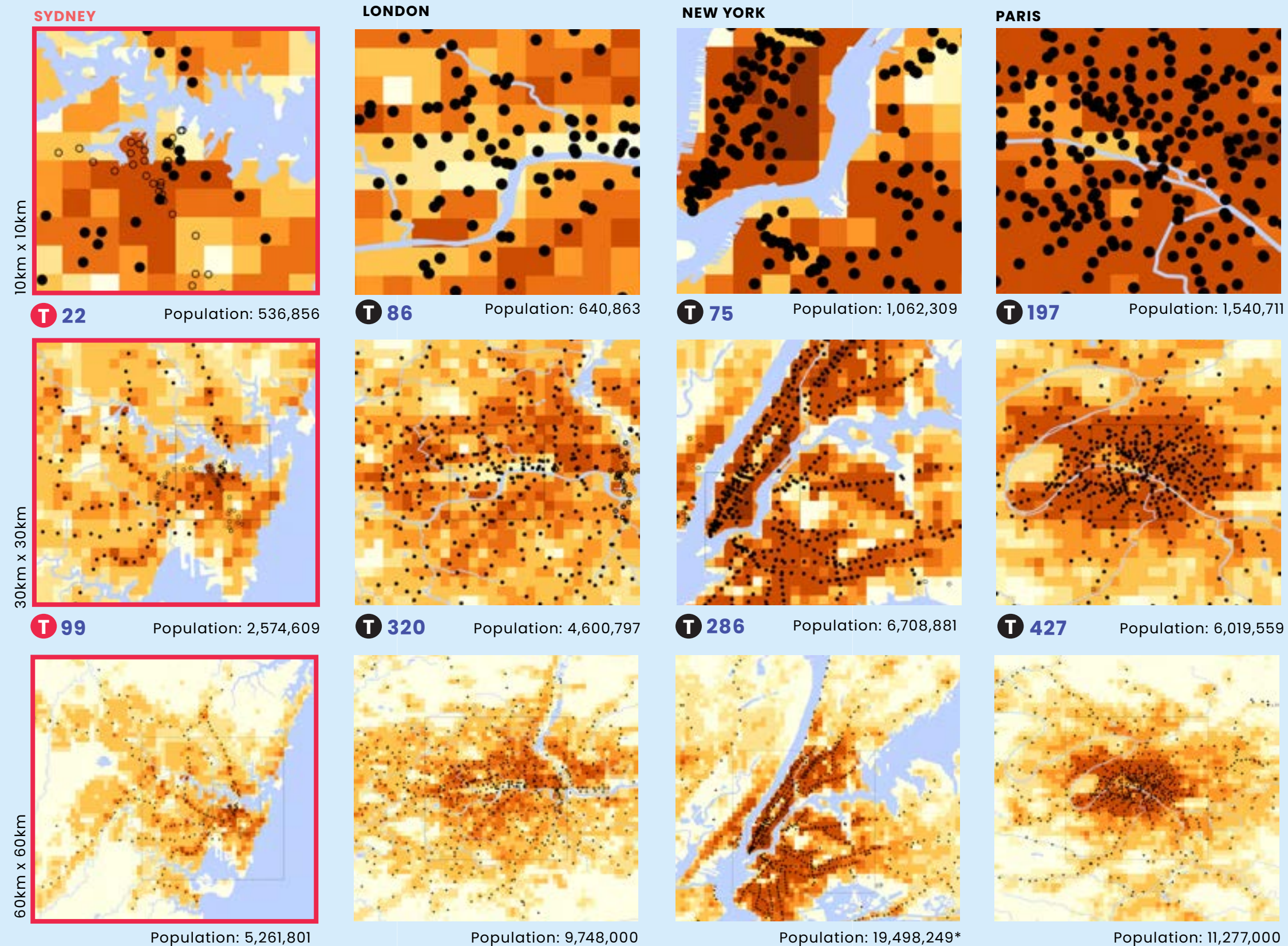
The analysis is focused on population density, which in turn creates demand for increased demand for other forms of density – like job, tree, street intersection density, and more.



Images: Newmarket, Bates Smart, Photographers: Felix Mooneeram and Robert Walsh



How Sydney compares globally



This map series compares one-kilometre grids across constant geographic areas for a range of global cities. Each city is compared at the inner 10x10 kilometres, middle 30x30 kilometres, and outer 60x60 kilometres.

Despite each city's unique topography and natural features like rivers or harbors, using a consistent geographic area is essential to identify patterns of similarities and differences across them.

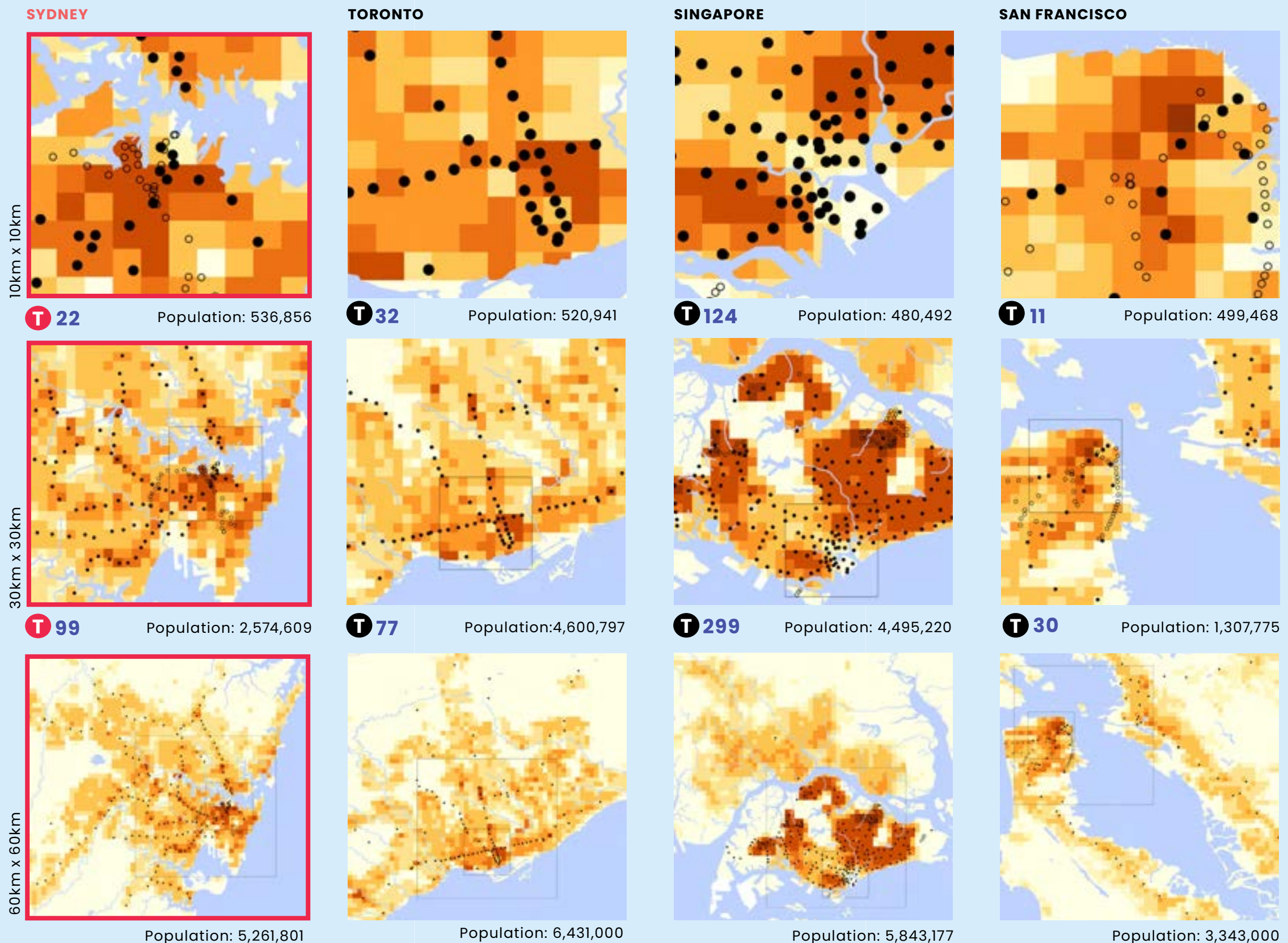


Density differs across different urban centres

This highlights the contrast between city cores and fringes. In cities like Paris and New York, over 1 million people live within a 10x10 km area, reflecting their mixed-use nature. Paris lacks a traditional central business district, featuring a dense mix of residential, cultural, and commercial spaces, with major open spaces on the city's edges. In New York, commercial hubs like Midtown coexist with mixed-use neighbourhoods where residential towers are integrated into commercial areas.

In contrast, cities like Singapore and Tokyo have strong commercial centres with fewer residents. Tokyo's population within 10x10 km is 887,294, but it jumps almost tenfold to over 8 million at 30x30 km. Similarly, Singapore's population within 10x10 km is 480,000, increasing to 4.5 million at 30x30 km. Sydney's CBD follows this pattern, with a less dense core bordered by the Royal Botanic Gardens and the harbour.

Source: Maps created by the City of Sydney



Denser cities also have denser transport networks

Sydney's inner core, with a population of 536,856, is comparable to Toronto, Singapore, San Francisco, Barcelona, and London. However, its transport infrastructure lags behind almost all of these cities. Barcelona, with 15 more train stations, is among the most walkable cities. Singapore triples Sydney's train stations, and London has nearly four times as many. Paris, with 197 metro stations, and Tokyo, with 174, each have nearly nine times more stations than Sydney in a similar area.

In the broader 30x30 km area, all comparative cities bar San Francisco have double Sydney's population and, except for Toronto, a minimum of double the stations.

This is no coincidence. The Committee's Benchmarking Sydney 2024 report found Sydney ranks seventh in mobility among its ten peer cities, just ahead of car-dependent San Francisco but behind Toronto. Even among cities with similar sprawl, like San Francisco and Toronto, Sydney has higher average commute times, revealing a mismatch between job and housing locations. Top-ranked cities like Singapore and Barcelona either have walkable urban cores established well before the car, or are geographically constrained, such as island cities like Singapore.

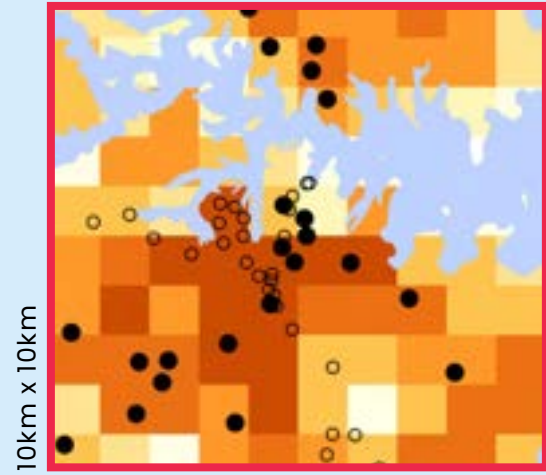
Source: Maps created by the City of Sydney



SYDNEY

BARCELONA

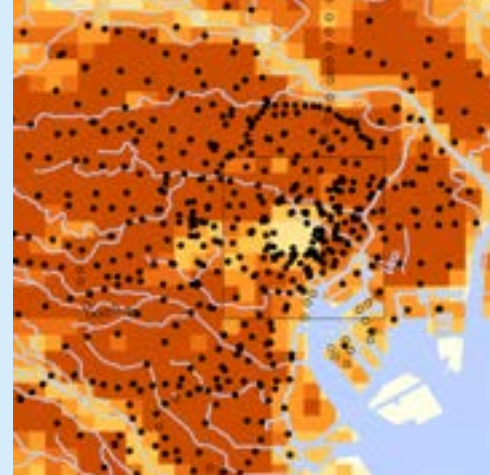
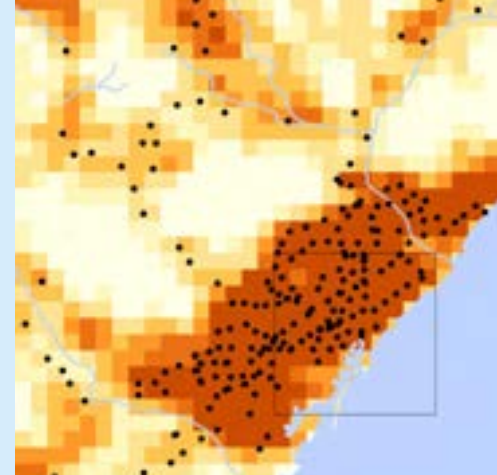
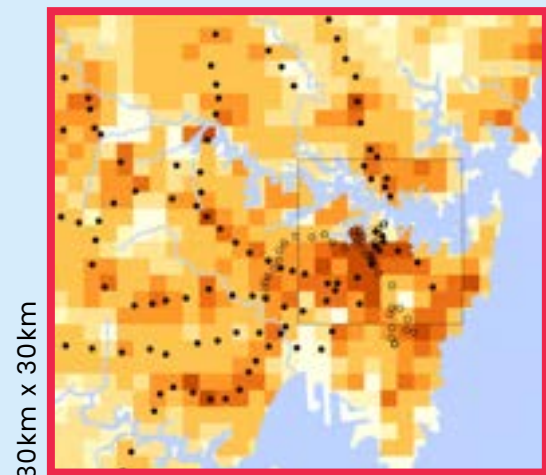
TOKYO



T 22 Population: 536,856

T 37 Population: 563,147

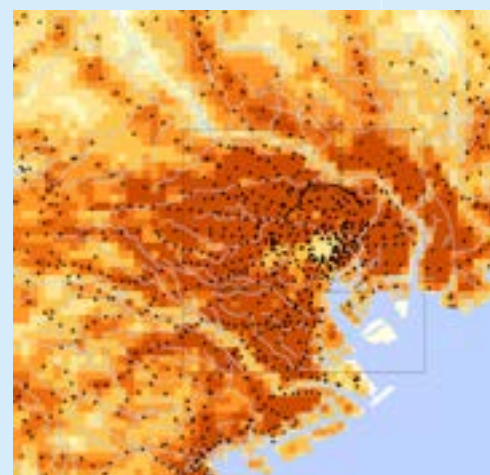
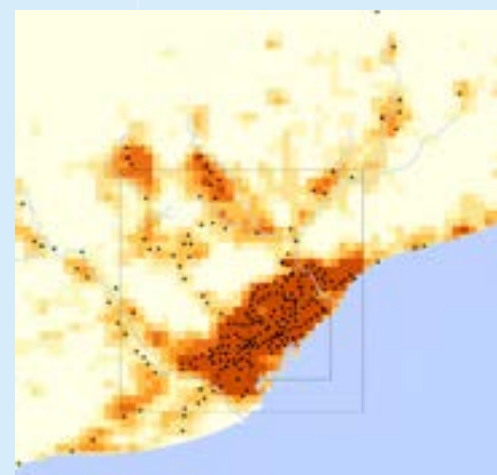
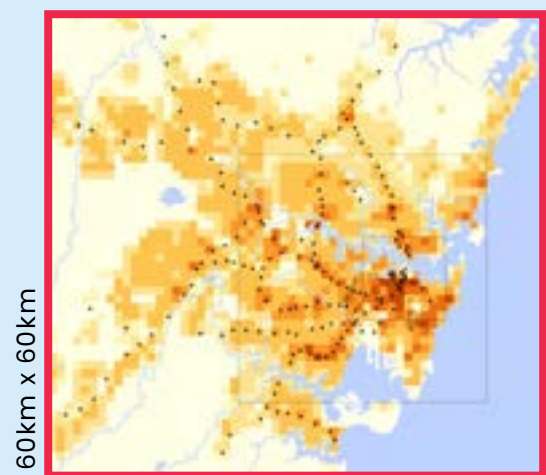
T 174 Population: 887,294



T 99 Population: 2,574,609

T 224 Population: 3,789,557

T 553 Population: 8,776,803



Population: 5,261,801

Population: 5,711,920

Population: 37,340,000

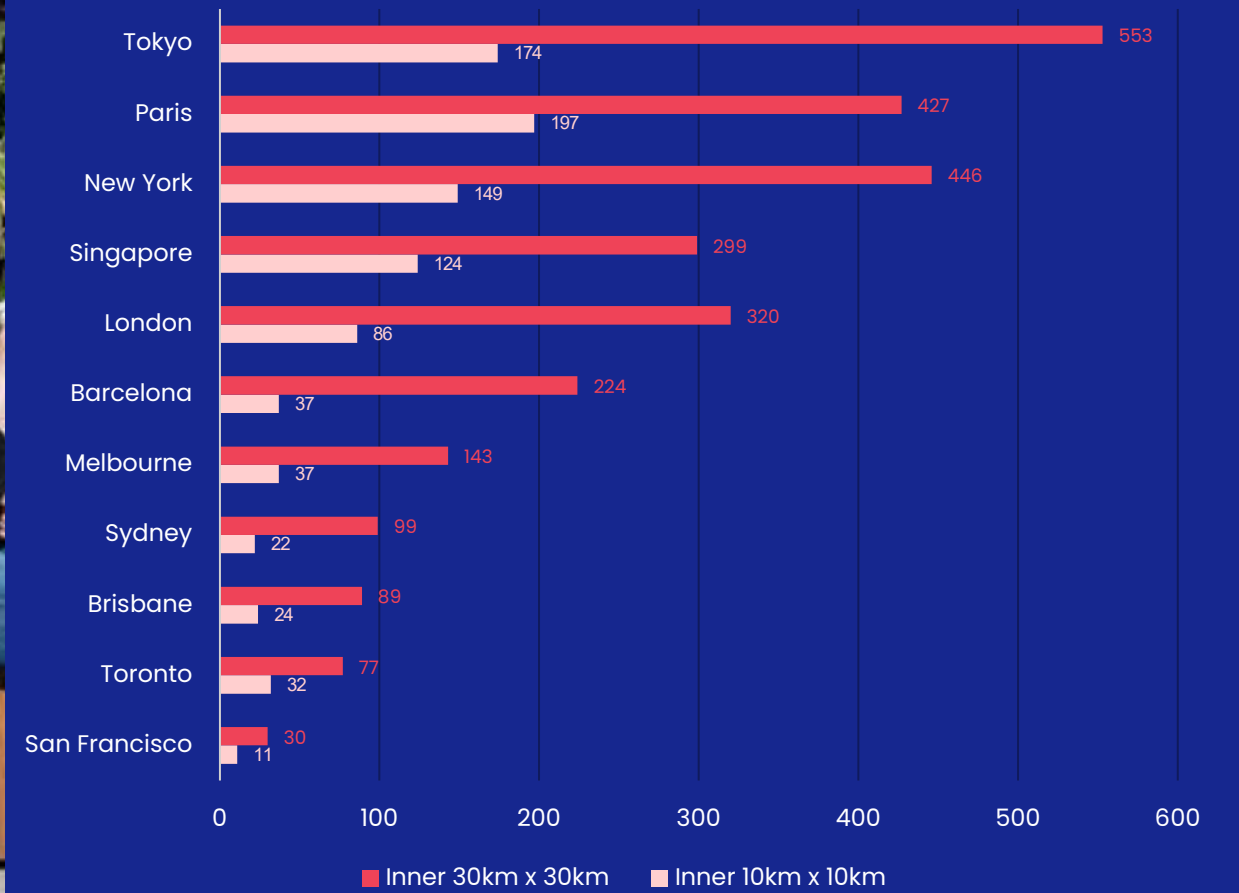


Despite having a lower number of stations, Sydney is not making the most of the stations that it does have.

It's clear that Sydney's density pattern, like many others, is heavily influenced by its rail network. However, compared to other cities, Sydney is not making the most of its stations.

The maps reveal that high density cities typically have more consistent density around stations, while Sydney's station areas show much less uniformity. High density cities like Paris and London, for example, have consistent density around stations with most having 10,000–25,000 people within a walking catchment. In contrast, most of Sydney's stations are surrounded by lower densities, typically 2,500–10,000 people.

Station density across global cities

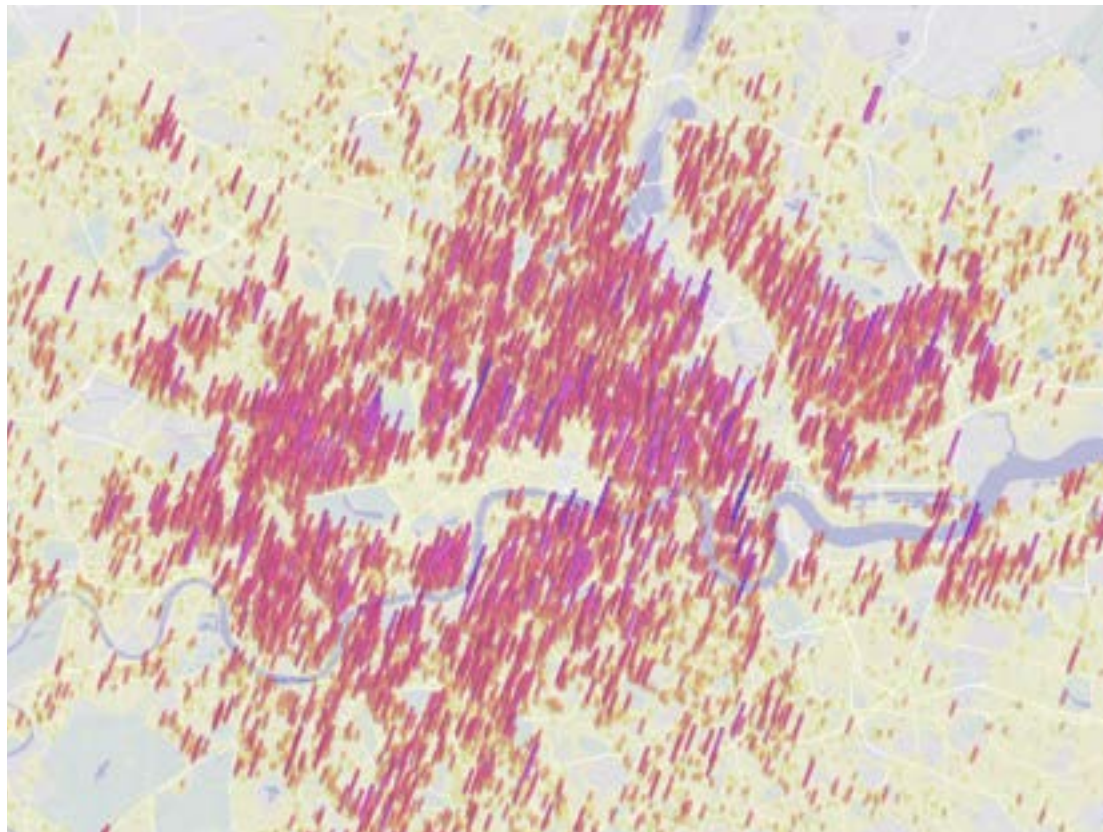




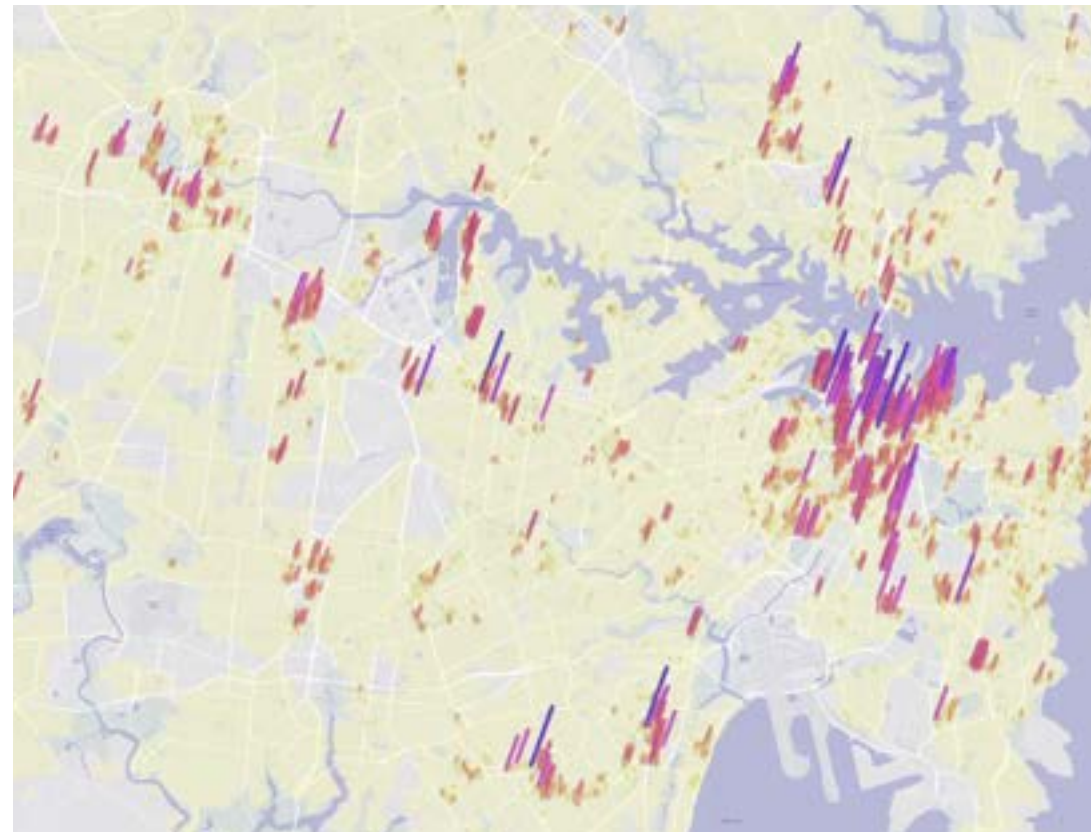
SYDNEY population density



LONDON population density



SYDNEY building heights



LONDON building heights



A tale of two cities: Sydney and London

Illustrated side-by-side, it's clear that while the inner 10 x 10km of Sydney and London share similar levels of density, it changes dramatically at the 30x30km mark. London's population is almost double that of Sydney's in the same amount of space. How are millions more people housed in the same 900km²?

Clearly, the fact that London has 323% more train stations in the same 30x30km area is a big part of the answer. Additionally, while these maps only focus on rail, it's worth comparing the level of cycling infrastructure across the two cities. Currently there is approximately 75km of dedicated bike paths across Greater Sydney. London is close to quadrupling its cycle network from 90km in 2016 to 360km.

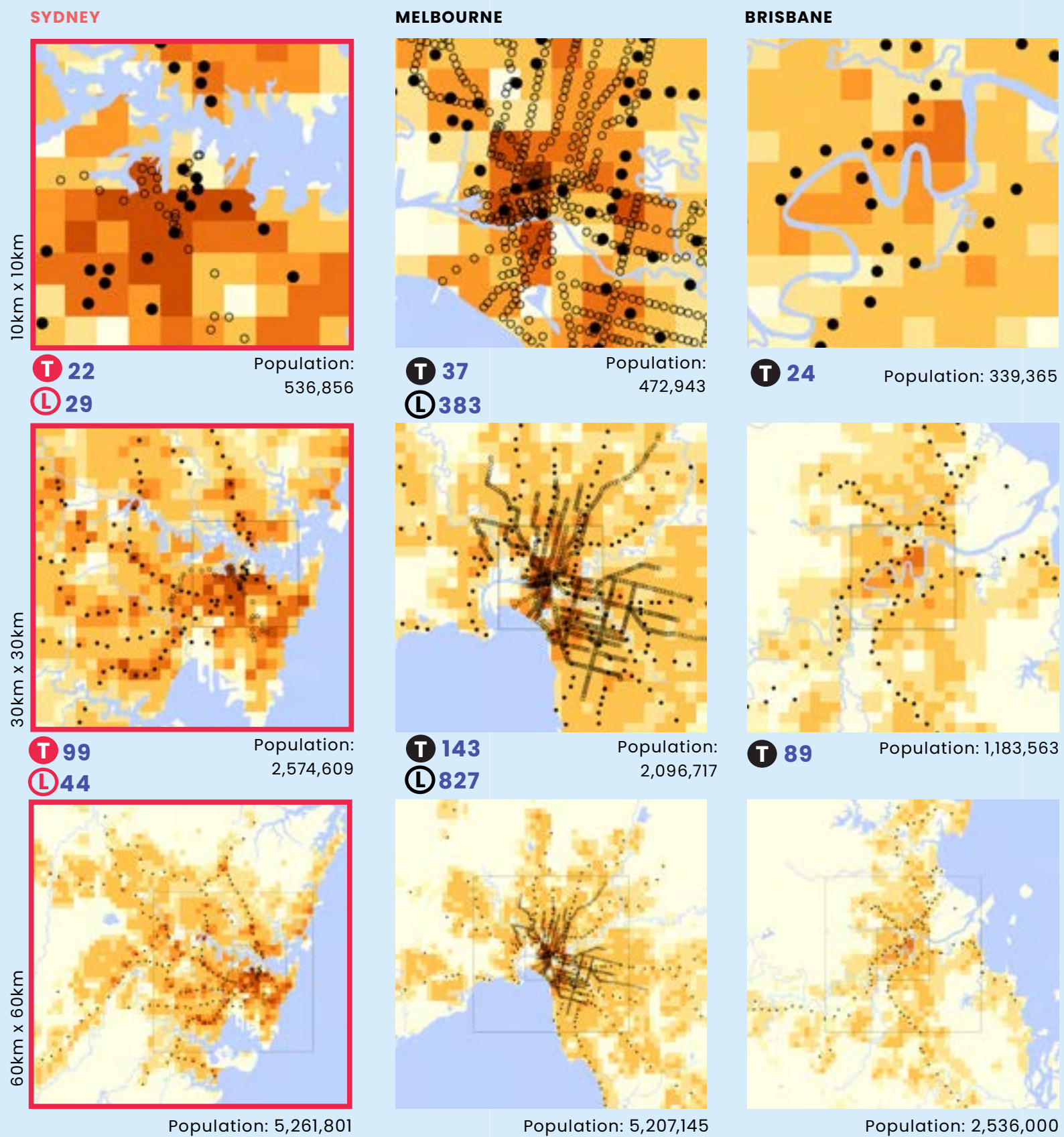
The other remarkable thing about London is that, despite almost doubling the population of Sydney, it's achieved at a relatively low housing density in terms of height.

The London building heights map to the left, shows that most Londoners are housed within a 4-storey typology. This challenges the idea that increasing density in your neighbourhood, must mean a dramatic increase in height.

| KEY | |
|-------------------------|-------------------------------------|
| AVERAGE BUILDING HEIGHT | POPULATION DENSITY |
| up to 2 storeys | up to 12,500 people/km ² |
| 3 to 4 storeys | 17,500 people/km ² |
| 4 to 6 storeys | 25,000 people/km ² |
| 6 to 10 storeys | 35,000 people/km ² |
| 10 to 12 storeys | 50,000 people/km ² |
| 12 to 15 storeys | 70,000 people/km ² |
| 15 to 18 storeys | 100,000 people/km ² |
| over 18 storeys | over 100,000 people/km ² |



How Sydney compares nationally



On a national level, Sydney is the densest city in Australia. Comparing the inner 10x10 of Sydney to Brisbane and Melbourne, Sydney shares a similar population size and pattern to Melbourne, while Brisbane is a little more

evenly spread and less dense. Looking at transport provision, Sydney is on par with Brisbane, while Melbourne's tram network dwarves public transport provision in Sydney with 383 stops in the inner 10x10, and 827 stops in the 30x30km.

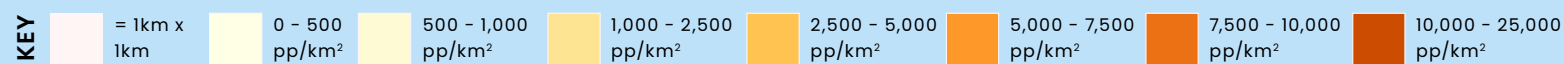
The densest suburbs in Australia come in all forms – low, medium and high rise

When looking at the densest suburbs in Australia (Table 1 below), more than half of the top 20 densest suburbs (SA2 areas) in Australia are in Sydney, with

half falling within the City of Sydney alone. These include high rise precincts, urban renewal areas and older terrace house areas demonstrating there are many ways to achieve high quality dense neighbourhoods, and they come in all different shapes and sizes.

Table 1: Top 20 highest density suburbs in Australia

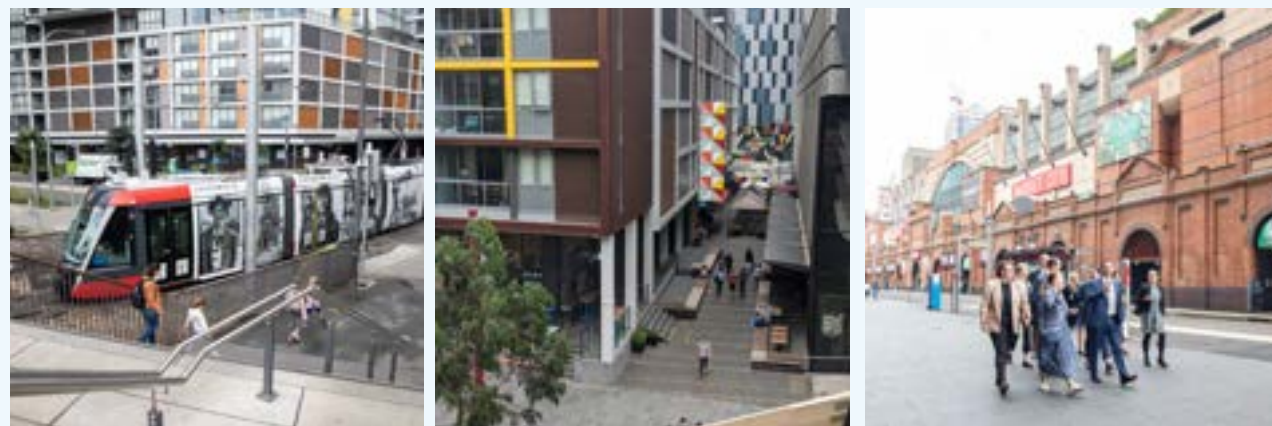
| Suburb (SA2 name) | Population (2022) | Area (km2) | Population density |
|---------------------------------|-------------------|------------|--------------------|
| 1 Melbourne CBD - North | 18,826 | 0.6 | 33,522 |
| 2 Southbank- East | 17,340 | 0.8 | 21,567 |
| 3 Sydney (South) - Haymarket | 21,048 | 1.1 | 19,471 |
| 4 Chippendale | 8,237 | 0.5 | 17,745 |
| 5 Melbourne CBD - West | 8,014 | 0.8 | 9,718 |
| 6 Wollie Creek | 11,408 | 0.7 | 16,789 |
| 7 Zetland | 13,349 | 0.8 | 16,589 |
| 8 Waterloo | 17,010 | 1.1 | 15,001 |
| 9 Ultimo | 7,801 | 0.6 | 13,960 |
| 10 Pyrmont | 12,965 | 0.9 | 13,942 |
| 11 Melbourne CBD - East | 10,655 | 0.8 | 13,286 |
| 12 Potts Point - Woolloomooloo | 18,256 | 1.5 | 12,473 |
| 13 Darlinghurst | 10,617 | 0.9 | 12,390 |
| 14 Surry Hills | 15,952 | 1.3 | 12,118 |
| 15 Rhodes | 11,725 | 1.0 | 11,655 |
| 16 Hurstville-Central | 12,373 | 1.2 | 10,089 |
| 17 South Yarra-North | 11,779 | 1.2 | 10,071 |
| 18 Carlton | 18,00c | 1.8 | 9,899 |
| 19 West Melbourne - Residential | 8,014 | 0.8 | 9,718 |
| 20 Newtown (NSW) | 14,853 | 1.6 | 9,456 |





A collection of Australia's densest suburbs - made up of all forms of density

HAYMARKET - 3rd



CHIPPENDALE - 4th



ZETLAND - 7th



SURRY HILLS - 14th



Images: Jallu, Summer Hill, Bates Smart. Photographer: Felix Mooneeram

How Sydney ranks amongst itself

Since the Committee's original 'Density Done Well' paper was released in 2016, we've grown. Sydney's population density has increased from 390 persons per square kilometre to 423 persons per square kilometre. From looking at where growth has occurred, it's clear that we've gone up in some areas, while others have gone mostly out.

Which council areas have experienced the most change?

Table 2 shows that Burwood, Parramatta, and Lane Cove councils have seen the most change since 2016. Camden's growth isn't due to high-rise developments but to large greenfield releases, nearly doubling its population density from 398 to a relatively low 634 people per square kilometre. Other areas like Blacktown and Hills Shire Council areas have experienced significant growth in both directions - up and out.

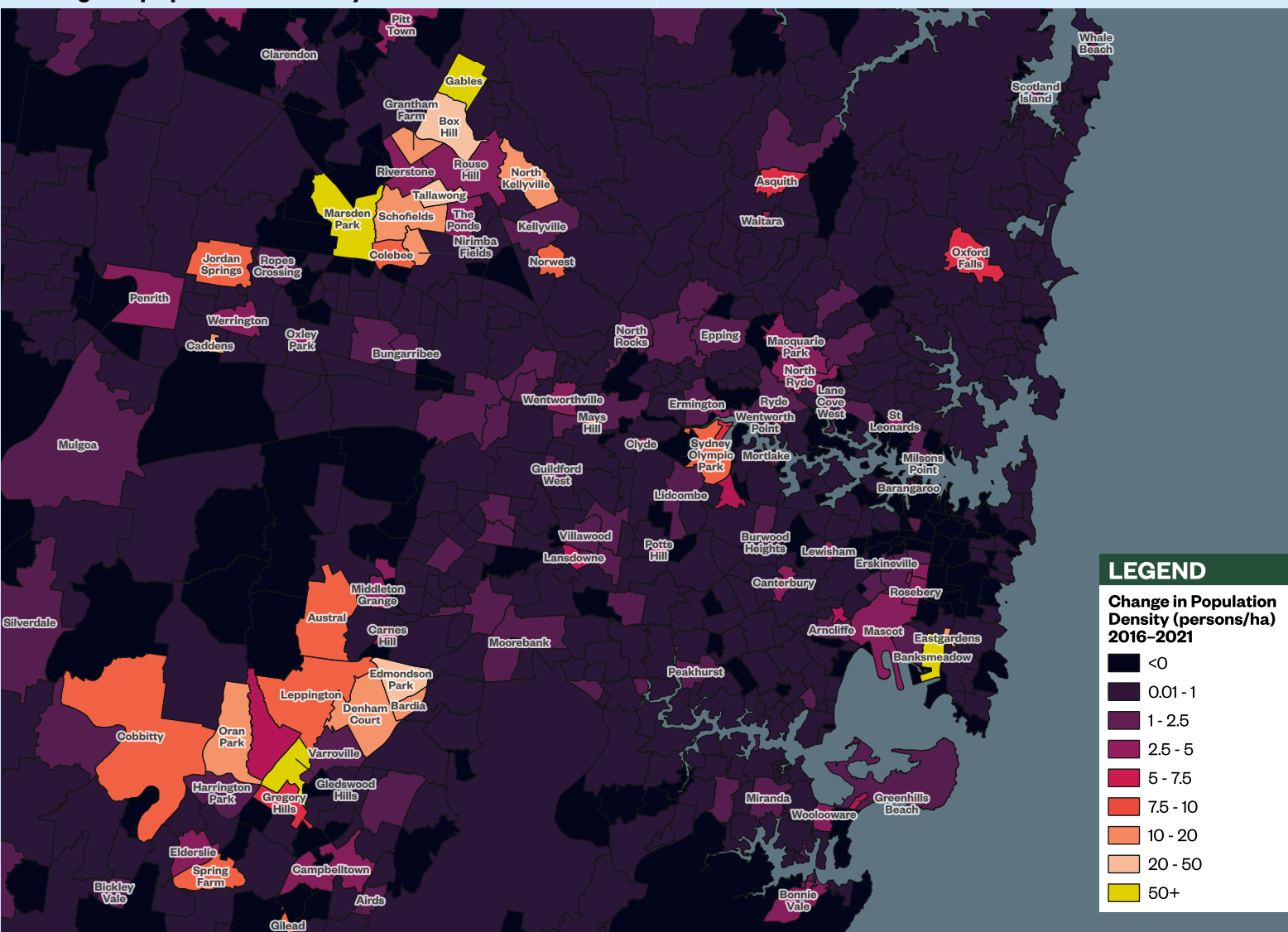
Table 2: Largest changes in LGA population density since 2016

| LGA | Population density ABS ERP 2022 (persons per km) | Population density 2016 (persons per km) | Change |
|-------------|--|--|--------|
| Burwood | 5,726 | 5,405 | +321.2 |
| Parramatta | 3,105 | 2,796 | +309.3 |
| Lane Cove | 3,585 | 3,277 | +307.9 |
| Strathfield | 3,309 | 3,036 | +272.9 |
| Bayside | 3,514 | 3,249 | +264.9 |
| Blacktown | 1,720 | 1,457 | +263.2 |
| Ryde | 3,239 | 2,995 | +243.9 |
| Camden | 634 | 398 | +235.8 |
| Cumberland | 3,263 | 3,101 | +161.2 |
| Hills Shire | 515.8 | 422 | +93.9 |

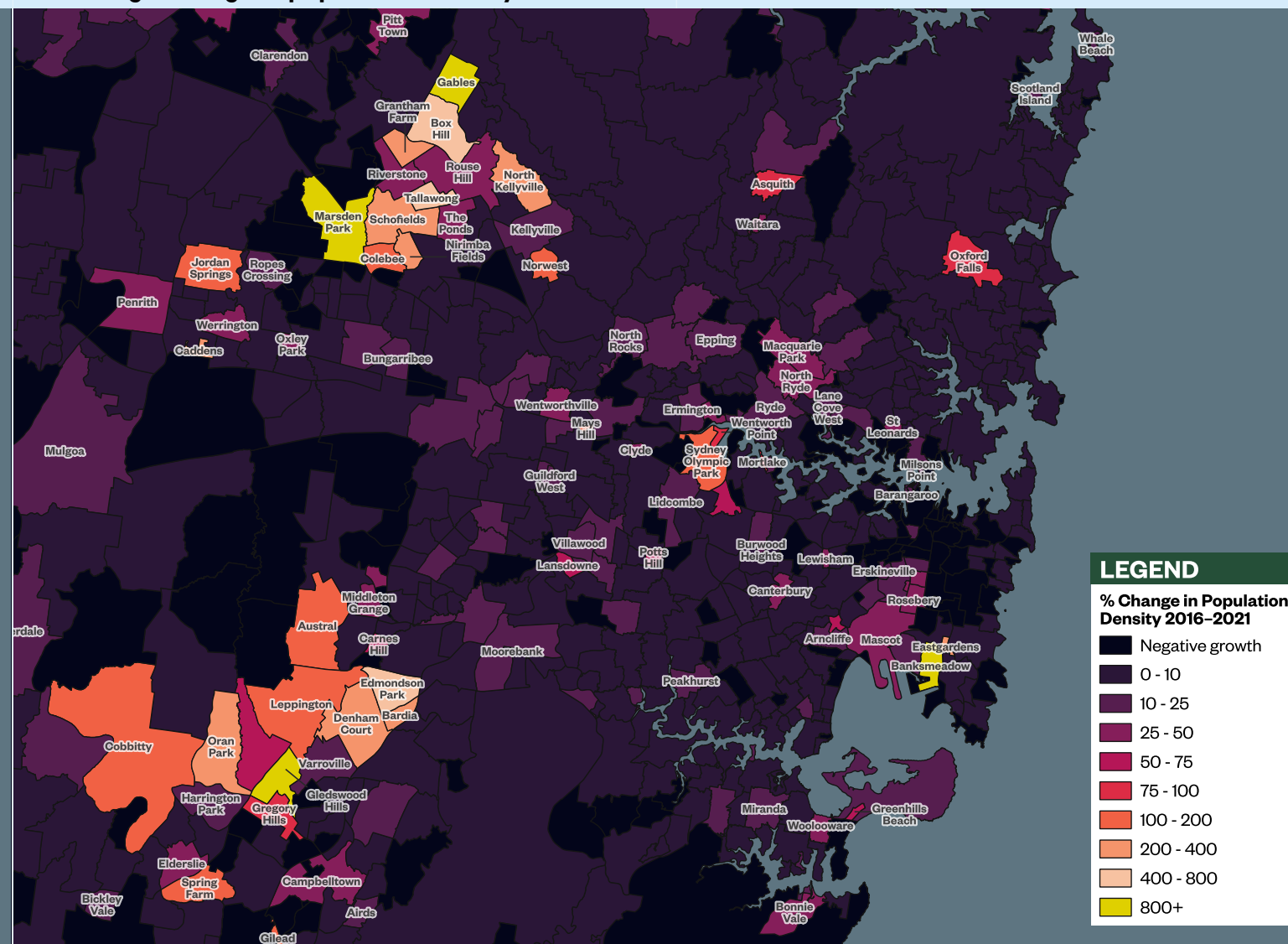
Many of these LGAs have also seen a revitalisation of local high streets as a result of increased population - think of Burwood's Chinatown or Camden's Argyle Street.



Change in population density 2016 - 2021



Percentage change in population density 2016 - 2021



Which suburbs have experienced the most change?

Mapping population density change at the suburb level (shown in map above), it's clear that Sydney's growth since 2016 has occurred in the north and southwest, as well as brownfield sites like Wentworth Point, Wolli Creek and Eastgardens where industrial land has been converted to new housing.

When analysing suburbs by the greatest percentage change in population density (Shown in map on page 33), the contrast in urban development becomes more pronounced. This approach highlights

rapid population growth since 2016 in Sydney's North-west and South-west, though density in these areas remains low. For example, despite Gledswood Hills seeing a staggering 26,000% increase in population density, it still lacks significant urban density.

To provide a clearer picture, Table 3 focuses on suburbs that already had a minimum density of 10 people per hectare.

It shows that suburbs across Sydney's east, west, and south, from Eastgardens and Mascot to Mays Hill, Homebush, Riverstone, and even Greenhills Beach in the Shire, have emerged as hotspots for significant change in population density.

Table 3: Largest changes in population density by suburb

| Suburb | Population Density 2021 (pp/ha) | Population Density 2016 (pp/ha) | Change (%) |
|------------------|---------------------------------|---------------------------------|------------|
| Eastgardens | 76.22 | 16.14 | 372.2 |
| Mays Hill | 64.04 | 25.81 | 148.1 |
| Wentworth Point | 200.54 | 102.42 | 95.7 |
| Mortlake | 80.42 | 43.28 | 85.8 |
| Greenhills Beach | 27.18 | 15.64 | 73.8 |
| Wolli Creek | 160.51 | 96.02 | 67.2 |
| Carnes Hill | 27.04 | 16.58 | 63.0 |
| Homebush | 53.09 | 34.14 | 55.5 |
| Riverstone | 15.41 | 10.42 | 47.9 |
| Mascot | 17.87 | 12.22 | 46.2 |



What does 10,000 people across Sydney look and feel like?

The analysis on the following pages compares how much space 10,000 people take up in 18 precincts across Sydney, as well as their access to public open space, shops and transport. The key takeaways are provided on the following page.

Destinations and Walkability

ANALYSIS AREA

(ABS 2021 Meshblocks with predominantly residential uses)

- ▨ Area Occupied by 10,000 People
- Equivalent Total Area

DESTINATIONS

- Public open space
- Shops
- Station

WALKING DISTANCE

- 200m
- 400m
- > 400m

Character and Place

BUILDING HEIGHT

- > 10 Storeys
- > 4 Storeys
- > 2 Storeys

LAND COVER AND VEGETATION QUALITY

- Tallest trees and vegetation
- Lowest trees and vegetation
- Mostly grass
- No vegetation

PUBLICNESS

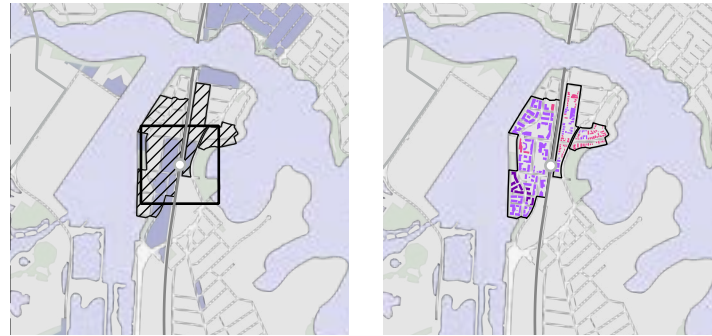
- Public spaces and shops
- Other

0.5 km²

1 km²

1.5 km²

Rhodes 0.45km²



Potts Point 0.45 km²



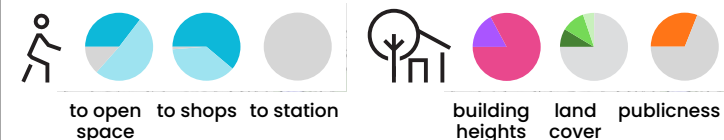
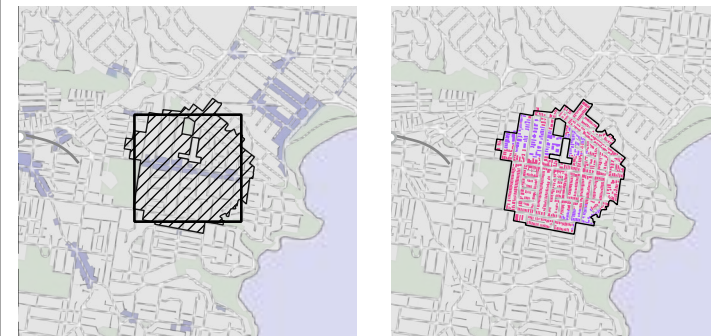
Burwood 0.54 km²



Newtown 1.04 km²



Bondi West 0.85 km²



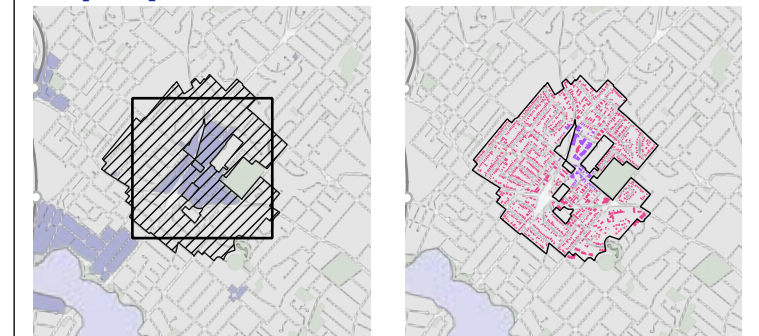
Bondi Junction 1.37 km²



Stanmore 1.42 km²



Top Ryde 1.45 km²



Blacktown 1.56 km²



Source: Maps and analysis by Hassell



2 km²

2.5–3 km²

>3.5 km²

Destinations and Walkability

ANALYSIS AREA

(ABS 2021 Meshblocks with predominantly residential uses)

- Area Occupied by 10,000 People
- Equivalent Total Area

DESTINATIONS

- Public open space
- Shops
- Station

WALKING DISTANCE

- 200m
- 400m
- > 400m

Character and Place

BUILDING HEIGHT

- > 10 Storeys
- > 4 Storeys
- > 2 Storeys

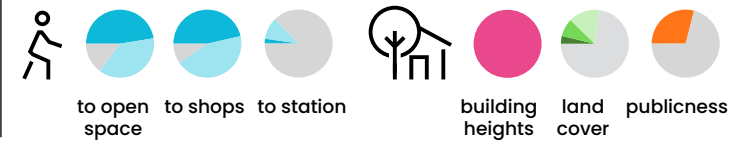
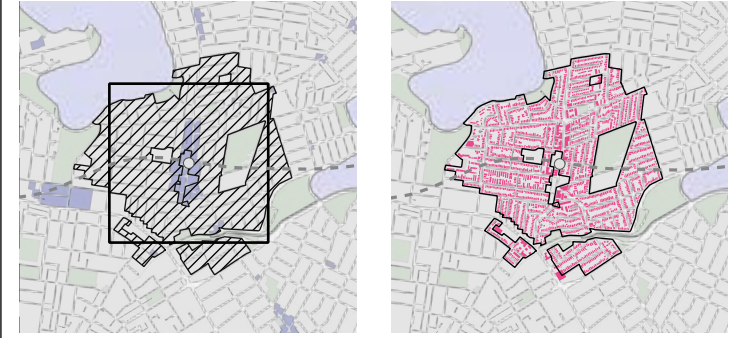
LAND COVER AND VEGETATION QUALITY

- Tallest trees and vegetation
- Lowest trees and vegetation
- Mostly grass
- No vegetation

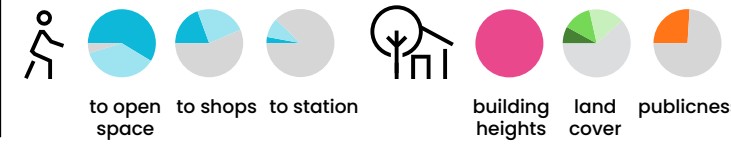
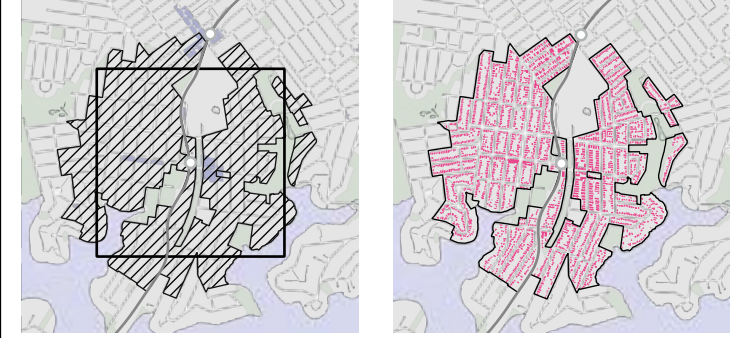
PUBLICNESS

- Public spaces and shops
- Other

Five Dock 1.87 km²



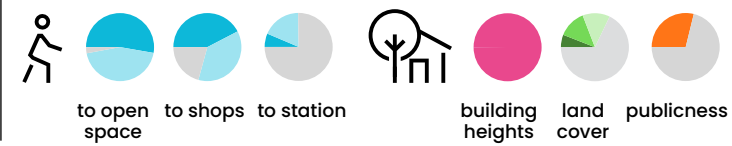
Oatley 2.61 km²



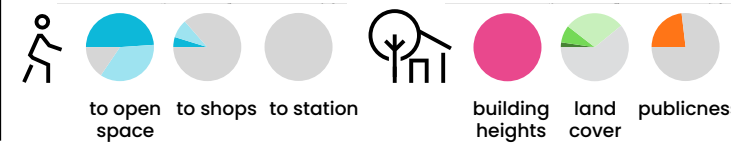
Wahroonga 3.79 km²



Hurlstone Park 1.81 km²



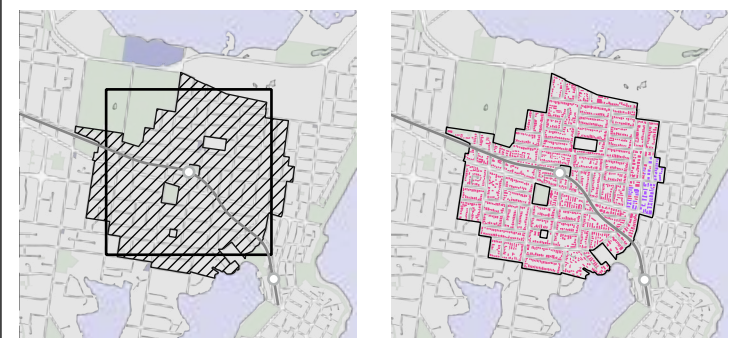
Glenmore Park 2.67 km²



North Rocks 3.68 km²



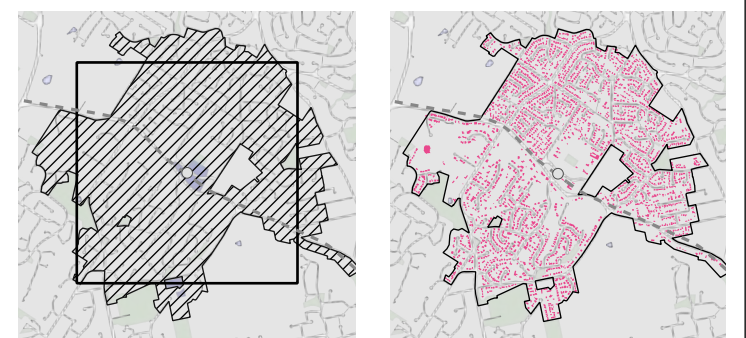
Woolooware 2.02 km²



Lindfield 3.08 km²



Cherrybrook 3.61 km²



Source: Maps and analysis by Hassell



What does 10,000 people across Sydney look and feel like?



Images: Rouse Hill, Landcom

More density, more public life and public spaces

- The ‘publicness’ of the ground plane (the amount of shop fronts, open space, streets and other public spaces) is one of the major differentiators between precincts. Publicness is significantly higher in denser precincts of 10,000 people.
- There is a clear correlation between areas where there are more people – living in smaller amounts of space like Burwood, Bondi Junction and Newtown – and the level of ‘publicness’.
- Being able to easily walk to choose from a range of public spaces and parks is especially important in higher density areas, providing areas to relax, let the dog or toddler go for a run, or have a picnic or celebration with friends.
- The blend of residential, commercial, and public spaces supports diverse, interesting activities and a strong sense of community and place identity.

Same population, similar space, but varying building heights

- Density is not necessarily associated with taller buildings and can also be seen successfully implemented in areas outside mass transit nodes.
- For example, Bondi West – an area surrounding a wide variety of neighbourhood shops along Bondi Road is denser (accommodates 10,000 people in a smaller area) than Bondi Junction which has tall towers and a major train station and transport hub.
- The built form in Potts Point is highly varied, ranging from 2-8 storeys and is denser than Rhodes where there are several apartment towers over 15 storeys, some over 30 storeys.
- The same can be said of Newtown or Stanmore which are both relatively compact, but also mainly two storeys high.

More compact, more walkable

- Where 10,000 people occupy larger areas, there is a smaller proportion of residents within walking distance to shops, mass transit nodes or open space.
- The smaller, denser areas like Potts Point, Rhodes, Bondi Junction, Newtown or Burwood are highly walkable with good access to essential all amenities (shops, stations, and open spaces). Higher levels of walkability promotes greater levels of incidental social interaction, and can benefit local businesses due to higher footfall.
- Conversely, outer suburban areas like Cherrybrook and North Rocks, Lindfield or Glenmore Park have lower levels of walkability, particularly to the shops or public transport. The shops and public spaces that do exist tend to be in limited number or surrounded by car parking with limited access points. This indicates that residents may need to rely more on private vehicles for day-to-day essentials which impacts environmental sustainability and social inclusiveness.

Green can thrive in high density, when given room

- Although it is often assumed that higher density leads to lower levels of green cover, this is not always true.
- The maps show lower-density suburbs like Wahroonga and Cherrybrook have more vegetation, mainly due to large grass areas and permeable surfaces. However, grass expanses don’t significantly boost biodiversity or provide much shade.
- Inner-city areas like Newtown and Bondi can match suburban levels of tree canopy, showing that urban density doesn’t exclude greenery—it’s about street space and tree maturity.
- Denser suburbs like Rhodes and Burwood show less total vegetation, but older high-density areas like Potts Point have a higher proportion of tall trees compared to newer suburbs like Glenmore Park.
- While soil permeability is important and should be pursued further in higher density areas, urban renewal precincts can deliver drainage more efficiently through water sensitive urban design embedded within the streetscape. Other opportunities for greenery in high density areas include rooftops and communal areas.
- Wahroonga is one the highest vegetated precincts, however a significant portion of the vegetated areas and recreation facilities are private, sitting on individual property inaccessible to the others living in the community.



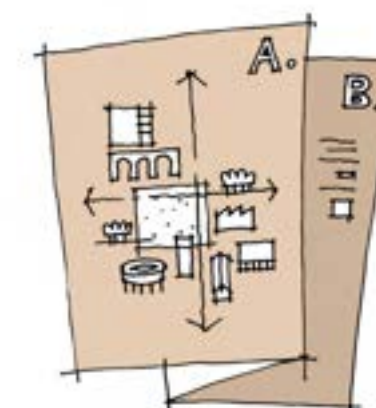
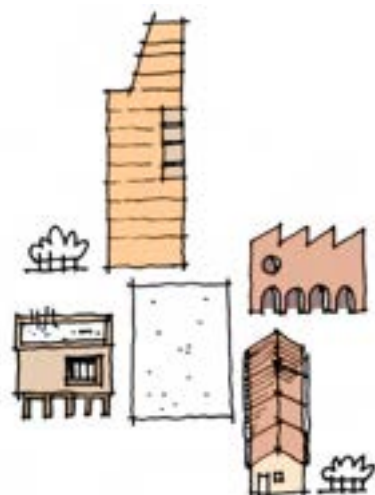
Image: Warrick Lane, Blacktown, McGregor Coxall



Conclusion

The five key takeaways

Comparing Sydney's density globally, nationally and within the city itself points to five main lessons:



- 1. Density comes in all shapes and sizes - more density doesn't necessarily mean more height;** there are ways to gently increase the density of a neighbourhood, from terraces, to low-and-mid-rise apartment buildings.
- 2. More density results in more public life** through a mixture of public and semi-public spaces. It is important to both invest in public spaces, while also planning for active high streets and street frontages. The location and amenity of public space needs to be well considered from the outset - density can work with public space, but not against it. The higher the density, the more important it is to make spaces for people to come together and be social.
- 3. We can be making better use of the stations Sydney already has.** Relative to other cities, the levels of population density around existing heavy rail infrastructure are low. Focusing on transport-oriented development is a positive thing and will bring us into line with other global cities. Noting that there are stations like Newtown or Kings Cross Point, where we have already achieved this.
- 4. Increasing residential density requires a commensurate increase in local amenities.** More homes in well located areas requires planning for, and provision of, supporting amenities to ensure local needs are met without the need for people to get in their cars. This includes local retail and services, restaurants and cafes, and community infrastructure such as libraries and community centres. Like open space, these are not optional extras, but essential elements of great places.
- 5. We need a clear infrastructure and land use spatial plan.** To markedly increase Sydney's density and make a real step change in housing supply, building more rail stations are essential: What's been lacking in Sydney for some time, is a clear plan that demonstrates how areas experiencing significant growth, will be serviced by metro, light rail, rapid buses, walking and cycling. If we fail to get this right, our growth will be stalled, not only because of the resulting gridlock (San Francisco and Toronto are an example of this), but if we keep on building the way that we have, we will also be accelerating inequity in our city.



From defining density, to density done well

This report explores the concept of urban density, emphasising its critical role in shaping Sydney's future as the city grows. By comparing Sydney's population density at international, interstate, and inter-suburb levels, we've highlighted both the opportunities and challenges density presents. We've also presented the data in ways where comparisons are more easily made and decisions can be more informed.

We know that density, when done well, enhances amenity, improves liveability, and creates vibrant, sustainable communities. However, it is also clear that it requires careful planning, substantial investment in public spaces and transport infrastructure, along with a commitment to increasing amenity such as retail, local services and community infrastructure.

Next steps

This introductory report speaks to the need for density done well. The rest of the Density Done Well series will unpack what it means and show how to do it. This involves further research and advocating for policies that support mixed-use development, prioritise public transport, walking, cycling and a reduced reliance on the private car, enhancing open spaces, and ensuring that new housing options are affordable and adaptable.

We call on all stakeholders—governments, the private sector, and community members—to engage in a collaborative dialogue. By exploring successful dense precincts, consulting experts, and co-developing targeted policies, we aim to improve Sydney and ensure that the benefits of well-managed density are shared by all, guiding the city towards a more sustainable and equitable urban future.



Image: Arcadia Landscape Architecture, Newmarket



References

- 1 See: Marin-Guzman, D., 2023, 'Sydney aged care centres to shut due to staff shortages', *Australian Financial Review*, 13 April.
- 2 See: Gilbert, C., Nasreen, Z., and Gurran, N. (2023) Tracking the housing situation, commuting patterns and affordability challenges of essential workers: a report prepared for HOPE Housing, Sydney: The University of Sydney and HOPE Housing.
- 3 See: Committee for Sydney, Chronically Unaffordable Housing.
- 4 See: Baker, J & Wade M, 2021, 'A tale of two Sydneys: We're in the same storm, but different boats', *The Sydney Morning Herald*, 13 August.

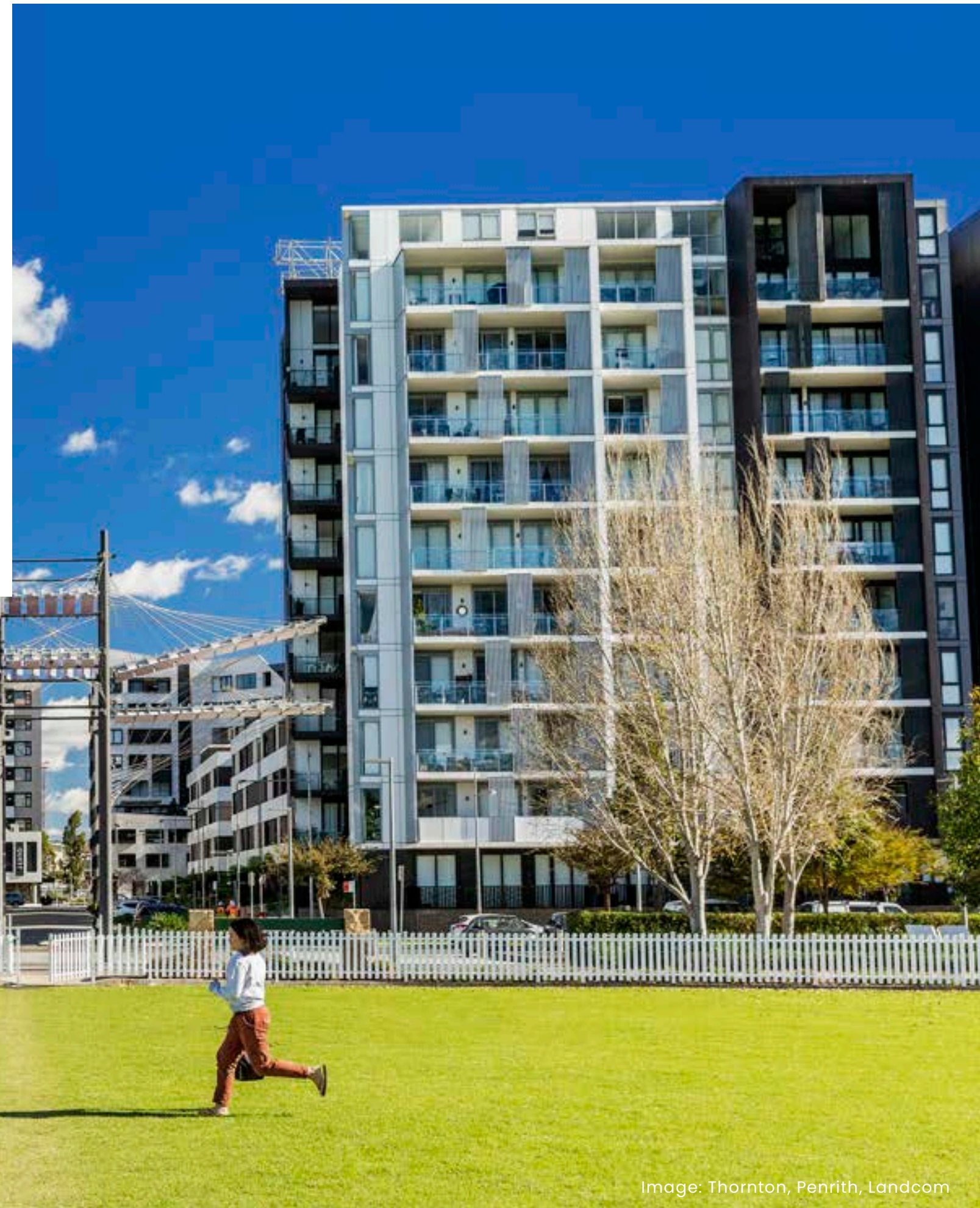



Image: Thornton, Penrith, Landcom



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