Putting our best foot forward

A checklist for walkable density

Committee for Sydney

Acknowledgments

WALKSYDNEY

THE PEAK BODY FOR WALKING IN GREATER SYDNEY

This paper has been completed in partnership with WalkSydney.

WalkSydney is the peak body advocating for walking in the Greater Sydney Region.

WalkSydney has three key asks:

- 30 km/hr urban default speed
- streets that are safe and easy to cross
- pedestrian priority over cars

WalkSydney is a member of the Better Streets coalition, a collection of hundreds of community organisations advocating for better streets in Australia.

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How to use this checklist

This checklist is designed as a simple tool to allow anyone to understand if a future development is likely to be walkable.

What this checklist is:

- Targeted at residential or mixed use development.
- Draws from extensive research into the factors that influence walking, and is designed to provide a clear and easy method for determining if the key factors have been met.
- Helps identify key gaps that are specific to issues around walkability, with the intention of prompting users to think of solutions to these gaps, which may vary depending on context.

This checklist for?

- **Local and state government:** in the design of policies that impact walkability, and in the assessment of multi-dwelling Development Applications or Planning Proposals
- **Designers:** looking for objective measures all in the one place and to score design options.
- **Developers:** to make the case for higher density and the benefits that come with it such as reduced private parking rates.
- **Community:** a tool to help the community understand whether their neighbourhood or a proposal in their area is likely to be walkable or not.

What this checklist isn't:

- a comprehensive infrastructure needs-assessment checklist.
- a comprehensive assessment of how healthy the built environment is. Visit the 'Healthy Built Environment Checklist' for more depth.

How does the scoring work?

- Scoring is equally weighted, with each theme worth six to seven points.
- There are 25 factors, separated into 4 themes.
- To achieve the highest score (or 'highly walkable'), scores should be in the range of 80% - 100%, with no more than two factors missed in any one theme.

What happens if you can't achieve every factor?

- Not every place will be able to achieve every factor, and there are many places that lack one or more factors but are still considered walkable. This tolerance also recognises that not all walkable places are the same. We also recognise that some factors may be out of the control of one party, such as schools within walking distance. These factors have been retained to underline their importance for walkability (even if they cannot always be met), and where appropriate highlighted in a sub-section 'What state and local government can do' in the explanation sections below.

What do some key terms mean?

In the checklist, the following words have the corresponding meanings:

- **Connected** means that there are no significant barriers along the route e.g: missing crossings, pram ramps, footpaths or long deviations to access nodes like public transport.
- **Convenient** means that the route connects people to key points of interest such as high streets, schools, parks, supermarkets and local businesses.
- **Direct** means the shortest and fastest route, in both time (effort) and distance. As a rule of thumb, routes that add more than 20% to a walk's time compared with a flat, straight line are not considered direct. Examples include a deviation 80m off the desire line, slopes over 10%, or a pedestrian overbridge.
- **Frequent public transport** means services every 10 minutes in peak, every 15 minutes off-peak, or better (often referred to as 'turn up and go') at an average of five services an hour. Public transport must be no less than every 15 minutes as a minimum threshold to contribute to any uplift in walkability.
- **High street,** also referred to as a main or shopping street, high streets are the primary commercial street of a suburb often where you can access food and beverage, retail, shops and services like health care, banks or post offices.
- **Local street** is a place that is owned and managed by the local council, with a low traffic volume (generally under 3,000 vehicles per day).
- **Major centre** is a place that has a concentration of homes, jobs, services and education opportunities, typically zoned 'E2 Commercial Centre' or 'SP5 Metro Centre'.
- **Pleasant** is a characteristic that supports the needs of walkers, and includes high quality supporting facilities like benches and bubblers, shade, trees and points of visual interest that provides surprise and delight.
- **Safe** refers to both built interventions and social behaviours. Built interventions include having a level hazard-free surfaces, well lit footpaths, landscaping that does not limit visibility, separation from conflicts (like people riding and driving and with good way finding information). Safety when walking includes trips that are free from harassment and violence based on gender, cultural identity and other defining characteristics.
- **Shared street** means a street where people feel equally comfortable walking and cycling on the road to the road edge. This may be a formal shared zone (10km/h, less than 100 vehicles per hour), or just a street that people regularly walk and cycle along or across the roadway, like a cul-de-sac - these streets are typically slow speed and have no more than 1,000 vehicles per day.

The checklist

Assess your proposal against the following categories. Tick the indicators that are relevant to your proposal.

Land use: All mixed up	
All residents are within a 10 minute walk to:	
	a park with a playground
	a sports space or facility (i.e. courts, public pool, gym, sports field)
	a grocer or supermarket
	a primary school
	a child care centre
	Minimum gross density of 35 dwellings per hectare to support viable local businesses
TOTAL SCORE /6	

Streets: Captivating and comfortable	
	All local streets in the development are slow, calm and 40km/hr and under (ideally 30km/hr)
	Unimpeded footpaths are provided on both sides of the street and are: • at least 2m wide • have a <1:20 gradient • Easy to differentiate where the path begins and ends for people with low-vision, and • have curb cuts (also known as pram ramps), at intersections
	Streets that can be crossed easily: • because the speeds are safe (30km/hr or under), or • because walkers can share with other modes (shared streets), or • pedestrian crossings (zebra or signalised) are provided across every arm of intersections, and no more than 100m apart on high streets, and 200m for all other streets
	Streets feel safe due to the provision of passive surveillance, activated edges and lighting
	Pedestrians are prioritised (e.g. continuous footpaths across driveways, laneways and small streets, as well as raised pedestrian crossings/wombats across larger streets)
	The walking environment includes shade and places to stop and rest
	Routes are direct, convenient and comfortable, connecting people to places of interest, with mid-block crossings provided in areas with larger blocks
TOTAL SCORE /7	

Network: Making active and public transport easy	
	All residents can reach a major centre by frequent public transport (at least one service every 15 minutes) or walking within 30 minutes (door to door)
	90% of residents are in walking distance of a frequent public transport service
	Public transport will be in place from day one of occupation
	There is a shared path or cycleway on all streets over 40km/h and 2000 vehicles per day (preferably with rear lane access for cars)
	Separated cycleway for areas with forecast high levels of pedestrian and cycling use (greater than 300 pedestrians or 150 cyclists per hour)
	Highest residential density and commercial intensity is located within 400m to public transport
TOTAL SCORE /6	

Building: Walkable homes for everyone	
	Low or no car households have been accommodated by including car share or unbundled parking
	Secure bicycle parking is provided within the development
	Affordable Housing is included in the development
	Facilitates working-from-home via fast broadband, and providing a dedicated study room, nook or space for a desk in a bedroom
	Communal spaces are provided, including dedicated play spaces
	There is a range of housing options for diverse household types, including no more than 30% detached housing and no more than 80% of studios and 1-2 bedroom apartments
TOTAL SCORE /6	

COMBINED TOTAL SCORE __ /25

0-5	5-10	10-15	15-20	20-25
Very poor	Poor	OK	Good	Amazing

*Also should not score less than 3 in any given category

Introduction

George Street, Sydney

Close your eyes and picture your ideal holiday. Maybe you're wandering through the streets and laneways of Barcelona or Rome. Maybe it's a staycation, where you can mosey down to the local café. Or you're an adventurer, hiking through the national park. What all these things have in common is an element of walking. It's so common, so 'pedestrian' that we often don't see it.

All of us, throughout our lives, are users of the footpath – whether we're walking, in a wheelchair, mobility device or stroller. Good walking infrastructure benefits people of all abilities. Numerous studies show that walking (or rolling), is good for our health and the environment, and can provoke awe, compassion and gratitude, increase social engagement and better mental health.[1]

Despite the known benefits, we walk less than ever before. It's not a coincidence that chronic disease like heart disease, diabetes and obesity is on the rise.[2] People walk an average of only 10 minutes, or 800m, per trip in many cities, including London, Strasbourg, Lyon and Sydney.

We walk less, not by choice, but because we have been designing our streets, neighbourhoods and cities for cars instead of people since the 1950s. Car travel has undermined the human scale of our blocks and streets. We shifted from sharing our streets to criminalising 'jaywalking,' we widened roads for large volumes of fast traffic and increased the distance between destinations making it highly uncomfortable, if not impossible, to walk.

Creating walkable communities is more important than ever

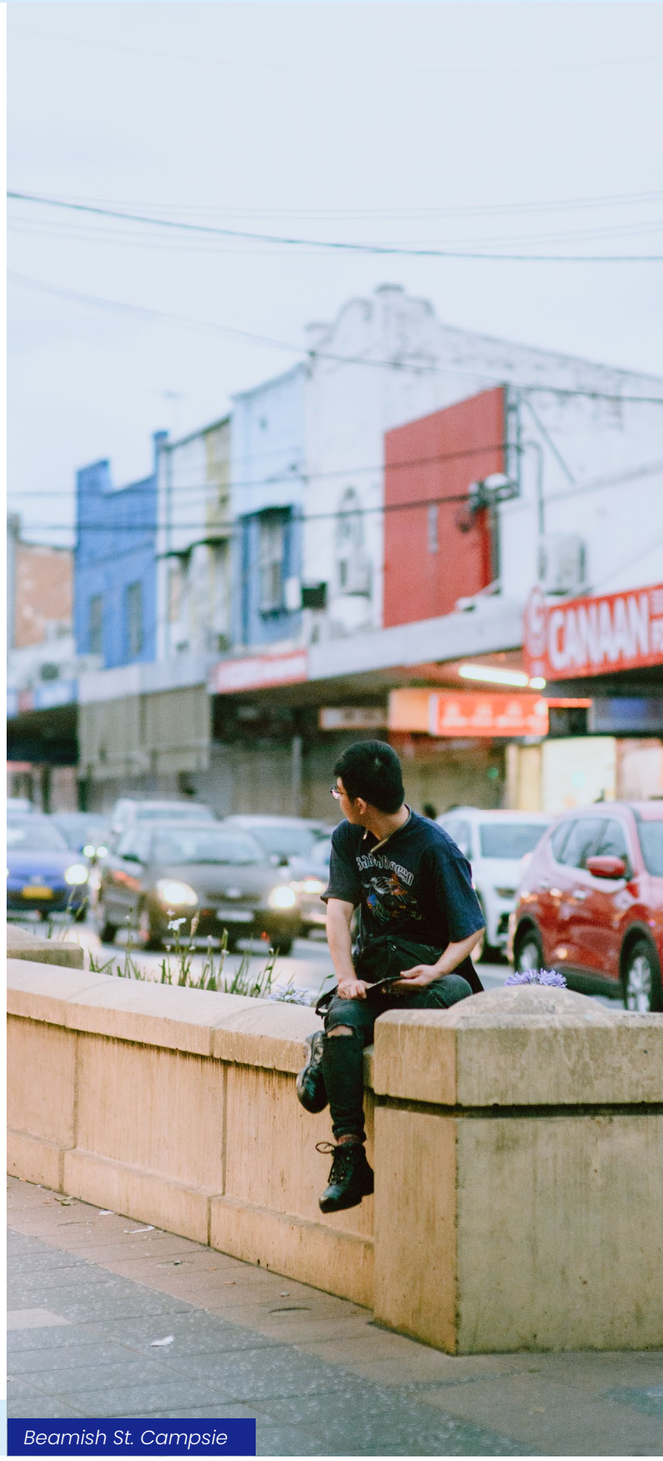
Sydney is about to undergo significant urban change, perhaps the most significant change in generations. The NSW Government has signed up to the ambitious 1.2 million Housing Accord targets, which translates to over 50,000 dwellings built every year till 2029.

The NSW Government has announced a suite of policy changes aiming to increase density around train stations and centres. They anticipate the first wave of announced reforms can unlock capacity for over 200,000 homes. Providing these homes near transit and town centres will mean many trips can be ridden on a train, bus, biked or walked. However, with this increase in density we need to redesign streets and buildings to be for people-first, instead of cars-first.

It should be as easy as possible to walk to public transport, school, the shops or to recreational activities. If we don't do this, people will want to drive, leading to more congestion and traffic - which not only makes people feel less safe walking, but is also often the number one reason existing residents push back against new development in their neighbourhoods.

This checklist for walkable density is intended to help designers, developers and government create, and recreate, great environments for walking both in brand new greenfield, and renewed infill development areas.

In each section we have also called out 'what government can do' to support elements of this checklist, that may not be within the control of designers or developers. Of course, the first thing that all levels of government can do is to use this checklist when developing their own planning proposals and when evaluating those given to them by others to progress through the gateway process.



Beamish St. Campsie

Sydney CBD

High levels of walking is the ultimate litmus test for density done well

Places that are easy to walk around don't happen by accident – they rely on thoughtful planning and design. It's a result of plenty of intersections, designing at a human scale, a good mix of homes, shops and services, a high level of housing density, and layers of interest – parks, public art, places to rest, and, of course, greenery and trees. This is what makes walkability a litmus test for density done well. It can't be achieved without all of the above falling into place.

Walkability needs to be built-in

Walking is hard to retrofit—it's structural, woven into the DNA of a place. When there are lots of people, plenty of destinations, and it's easy to get around, people will walk. When people walk, they'll feel happier and less stressed, form community connections, and spend more time—and money, and grow a deeper attachment to a place.[3]

Vivendi Consulting, in collaboration with Transport for NSW, applied their AI and big data tool PAWS, to over 140 centres across Sydney. Their findings reinforce academic research showing that structural factors—such as housing and employment density, permeability, and points of interest—drive walkability, explaining around 54% of observed walking in Greater Sydney. While previous Australian studies (e.g., Billie Giles-Corti and Annie Matan)[4] have identified these effects, this study empirically confirms them at scale.

Structural 54%

Demographic 27%

Adaptable 18%

1.4%
Environmental

Population demographics including age, family composition, education level and income explained just over a quarter of the total observed amount of walking, and environmental factors like topography, levels of rainfall or temperature explained a surprisingly small 1.4%.

One major factor we can adapt to increase walking is the level of public transport, the fourth most important factor after houses, jobs and places to walk to (see Figure 1). However, the remaining adaptable factors like trees and traffic speed do not yet show a major correlation to increased walking - the bulk depends on structural factors - it's important to build places well from the start'.

If these factors aren't in place, densification is the next once-in-a-generation chance to retrofit these - with the ability to reshape street patterns, create new through-block links and change land-use.

Percentage contribution to observed walking in 140 Greater Sydney Centres

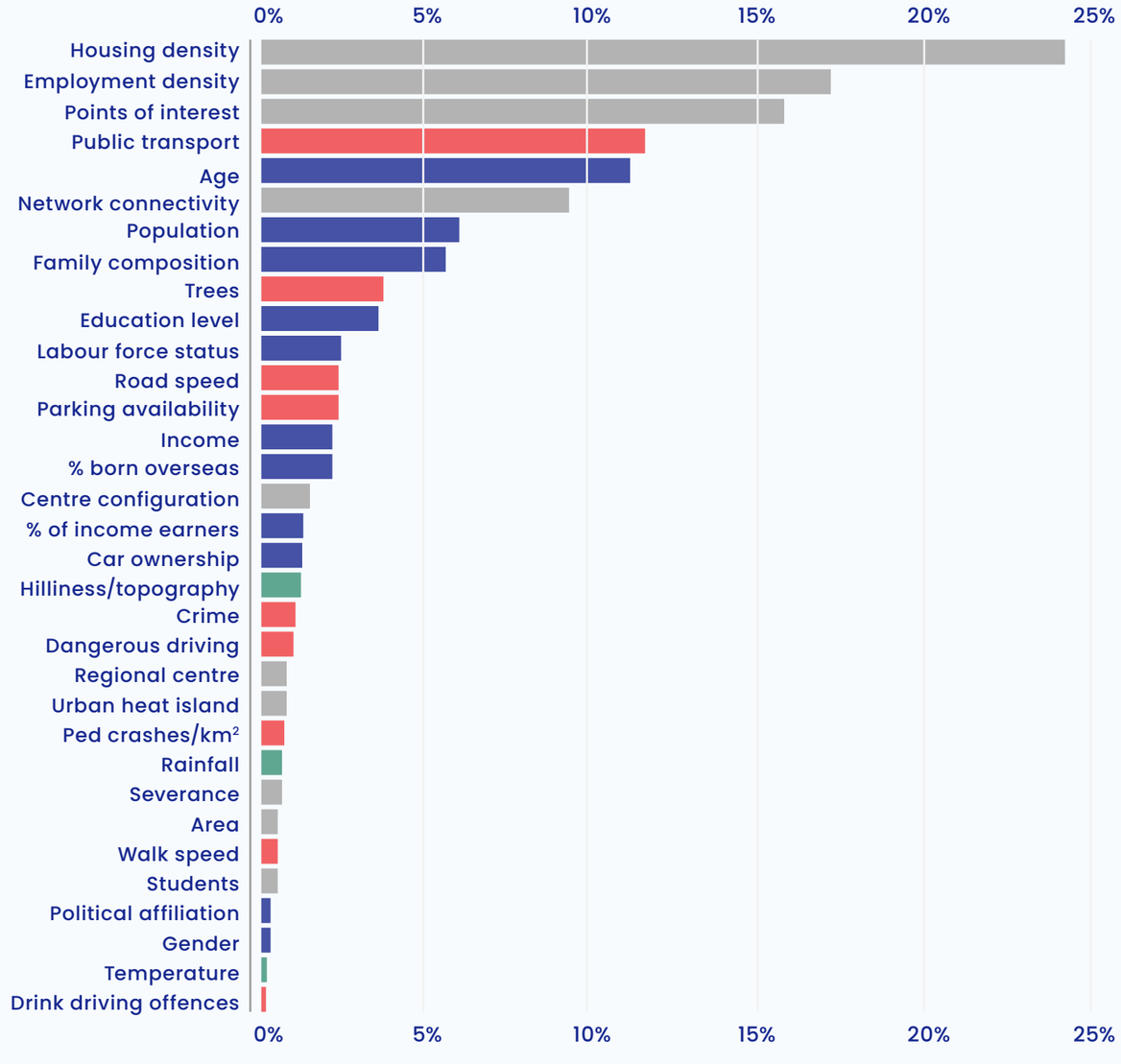


Figure 1: Factors that contribute to walking across 140 Greater Sydney Centres. Source: Vivendi Consulting

Higher levels of walking can't be achieved without higher levels of density

There is a clear tipping point when it comes to levels of walking, and levels of housing density. Across the 140 Greater Sydney centres analysed by Vivendi, centres with more than 30% of freestanding homes were found to have suppressed levels of walking, regardless of whether housing is 30% or 100% detached.

The lower proportion the of detached houses, the higher levels of walking. This finding has a clear lesson for urban planning and design: if we want walkable communities, we need to plan for at least 70% of development as townhouses or apartments – noting that this includes 'gentle' forms of density like low and midrise apartments or duplexes.

Some Sydney suburbs that meet this threshold in the form of 'gentle density' (with the majority of density up to four storeys) that you might not expect include Dee Why, Balmain, Lakemba, Summer Hill and Sutherland.

...if we want walkable communities, we need to plan for at least 70% of development as townhouses or apartments

Percentage contribution to observed walking in 140 Greater Sydney Centres

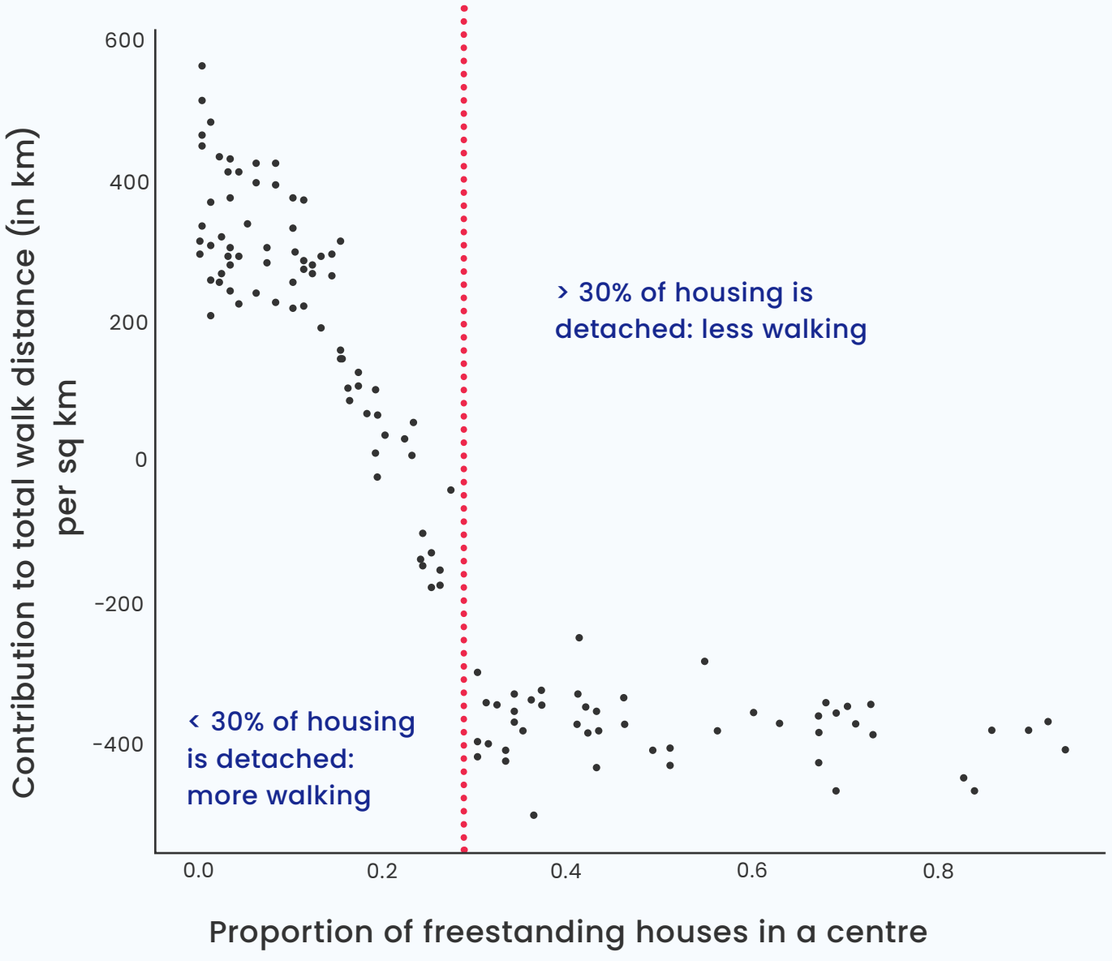


Figure 2: Regression analysis showing correlation between levels of walking and housing typology. Source: Vivendi Consulting

Erskineville Rd. Erskineville

TOD Station	% of Precinct over 35dw/ha	% of density increase needed to reach 35dw/ha	% of people within 10 minutes of a school	% of people within 10 minutes of a supermarket
Bankstown	20%	34%	27%	21%
Bella Vista	1%	400%	27%	2%
Crows Nest	32%	Already achieved	52%	58%
Homebush	15%	37%	38%	20%
Hornsby	17%	50%	25%	39%
Kellyville	1%	319%	3%	1%
Macquarie Park	9%	211%	22%	36%
The Bays	29%	50%	41%	60%

TOD Station	% of Precinct over 35dw/ha	% of density increase needed to reach 35dw/ha	% of people within 10 minutes of a school	% of people within 10 minutes of a supermarket
Ashfield	43%	Already achieved	44%	51%
Berala	19%	37%	33%	99%
Canterbury	25%	Already achieved	30%	96%
Croydon	11%	79%	31%	0%
Dulwich Hill	20%	16%	21%	0%
Gordon	10%	164%	0%	82%
Killara	12%	99%	0%	0%
Kogarah	48%	Already achieved	52%	75%
Lidcombe	31%	Already achieved	55%	0%
Lindfield	24%	40%	86%	78%
Marrickville	26%	1%	7%	88%
Rockdale	35%	Already achieved	44%	92%
Roseville	21%	77%	0%	0%
St Marys	1%	697%	54%	40%
Turrella	4%	154%	78%	0%
Wiley Park	39%	11%	64%	8%

Case study: walkability and the TOD program

A less spoken about benefit of the Transport Oriented Development (TOD) Program is that increased densities also mean increased walkability.

Research shows that you need densities of at least 35 dwellings per hectare to be able to walk to day-to-day needs like shops, schools and services within 1km (10 to 15min walk). The same research also found that the cost of building destinations that people want to walk to is cut in half when delivering neighbourhoods that are at least 30 dwellings/ha compared to 15 dwellings/ha.[5]

Tables 1 and 2 assess how many existing TOD Tier 1 and Tier 2 locations currently meet the minimum benchmark of 35 dwellings per hectare. They also identify how much density needs to increase in areas that don't meet this target to achieve a minimum walkable standard of 35 dwellings per hectare.

It shows that the Ashfield, Lidcombe, Canterbury, Rockdale and Kograh TOD precincts are meeting the minimum levels of density required to be a walkable place. What this analysis doesn't account for is highways or rail lines that can cut these centres in half and reduce walkability (for example, the Princes Highway in Rockdale, or the Pacific Highway in Crows Nest), however, it still gives good insight into why places like St Marys, Bella Vista, Kellyville or Macquarie Park are currently so car dependent. Their density levels simply aren't viable for destinations to be established within walking distances.

While there are other important contributors to walkability like shade, paths, seating and safety (as listed in the checklist and unpacked further in following sections), density plays a fundamental role in whether a place can be walkable or not.

It is also important to note that many TODs have low walkability to schools, or new schools planned for at all. This is a key challenge that requires urgent state government attention.

Ashfield, one of the most walkable TOD precincts

Bella Vista, one of the least walkable TOD precincts

Walkable density criteria explained

ALL MIXED UP

MAKING ACTIVE AND PUBLIC TRANSPORT THE EASIEST CHOICE

CAPTIVATING AND COMFORTABLE

WALKABLE HOMES FOR EVERYONE

All mixed up

If we want people to be able to walk, diverse places of interest need to be within walking distance.

A major reason that modern car-based cities have become less walkable is because of greater distances between places people want to go. Since the Local Government (Town and Country Planning) Act of 1945, planning laws have embedded separating land uses beyond the distance of human exertion. But we now appreciate that everyday places like schools, grocers and playgrounds work best when within walking distance. NSW Health champion opportunities for physical activity and healthy food access as the two key factors that contribute to a healthy built environment.[6]

When within reach, places of interest like schools, parks and fresh food influence higher rates of walking.

If we start by making access to schools, parks, fresh food and public transport easy on foot, we can eliminate the need for most short trips to be taken by car. Top among the places of interest that can influence walking (after government infrastructure like schools) are playgrounds and fresh food retail (supermarkets and grocers). Equally, we are driven by convenience. If we can make it easy to walk to a variety of places we wish to frequent, like cafés, pharmacies, laundromats and newsagents, we can encourage people to make healthy choices.

Greater density of people, means a greater diversity of retail, entertainment and local services, which enables greater choice.

Places with a higher density of people and mix of land uses create their own demand for even more goods and services that support healthy communities.

For example, the City of Sydney's recent reforms to planning rules in Green Square allow for a wider range of retailers, recognising that a high density of residential land use requires easily accessible, fresh produce.[7] For large retailers in dense areas, housing is replacing car parking as a necessary complementary land use.[8]

Vivendi's analysis of the factors that influence people to walk in NSW found that people who live in higher density neighbourhoods were far more likely to walk. Residential density alone was the largest factor in whether someone was likely to walk or not.[9] This is likely because at a higher density, a larger number of residents can support more retail businesses and services to flourish, in turn providing greater choice of places to walk to within close proximity.[10]

Checklist

- All residents are within a 10-minute walk to:
  - a park with a playground
  - a sports space or facility (i.e. courts, public pool, gym, sports field)
  - a grocer or supermarket
  - a primary school
  - a childcare centre
- Minimum gross density of 35 dwellings/hectare to support viable local businesses.

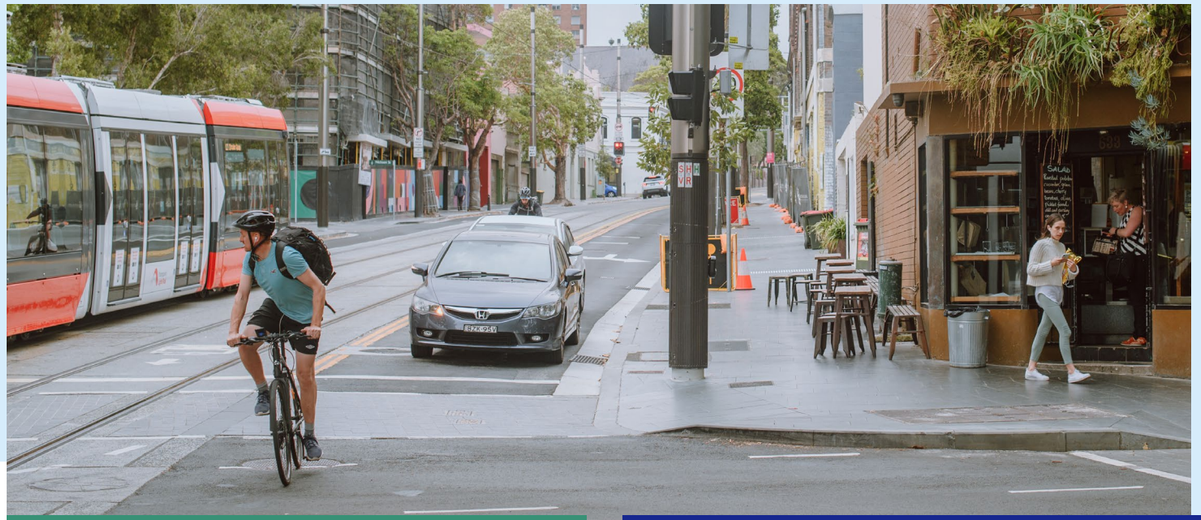
What can local and state government do?

- Ensure that any uplift (R3, R4) is within 10 minutes' of a park with a playground
- Ensure zoning permits supermarkets and fresh food such as using MU zones, and allowing a 'neighbourhood supermarket' or 'supermarket' as a permitted use
- State government to ensure all areas of significant density increases are within 1200m of a primary school. If there is no existing primary school, land should be zoned accordingly, to reserve space for a future school

Residential density alone is the largest factor in whether someone is likely to walk or not

'The Spot', Randwick

Making active or public transport the easiest choice



While unlimited time or energy could make any place walkable, access to public transport and safe cycling connections are essential for truly walkable living and working environments.

Walkable neighbourhoods are complementary to sustainable transport for longer journeys, for access to important regional services like hospitals and universities, or regional employment centres and CBDs.

In the right circumstances, walking for longer trips can be possible.

Some people are willing to walk further for trips, given the right walking environment, if they have the time and want to combine their commute or journey with exercise.

In many OECD countries, walking trips are often well above the standard 400m distance used in many walking centre catchment plans in Australia. Of 10 OECD countries studied, 10-30% of trips are over 1.6km (1 mile) and in eight out of ten countries, 10% of walking trips are between 3-8km.[11]

In Sydney we used to walk miles as well. With 70% of Sydneysiders living within walking distance (400m) to a centre, and most living within 5km of a major or strategic centre, a comfortable distance to cycle (given the right conditions), a 30-minute trip could well be on foot or bike.

Frequency of public transport is important when it comes to the likelihood of choosing to walk and catch the train or bus, over driving.

Walking or riding long distances is not for everyone. Many people also need public transport to make longer trips, and frequency is key to whether the public transport is good enough to wait for. For example, London now measures bus access in terms of both distance to a bus stop as well as distance to high frequency bus stops - where there are five or more buses per hour.[12]

At a minimum, all new homes in suburban and urban areas should be within walking distance to a public transport service.

Ideally all new urban development is within walking distance to a train station, providing dedicated public transport infrastructure like a busway that takes residents to centres and other transport modes from day one. This approach makes transit priority visible, influencing mode choice and allowing ridership and frequencies to build up. If most residents are within the catchment of that corridor, it also becomes easier to make the case for frequency upgrades of the service as the population increases.

Checklist for making active or public transport the easiest choice:

- All residents can reach a major centre by frequent public transport (at least one service every 15mins) or walking within 30 minutes (door to door)
- 90% of residents are in walking distance of a frequent public transport service
- Public transport will be in place from day one of occupation
- There is a shared path or cycleway on all streets over 40km/h and 2000 vehicles per day (preferably with rear lane access for cars)
- Greater than 300 pedestrians or 150 cyclists per hour must be a separated cycleway, not a shared path
- The highest residential density and commercial intensity within 400m to public transport

What can state government do?

- Ensure that frequent public transport is provided to all uplifted areas from day one,
- Provide segregated cycleways, and cycle crossings, on state roads
- Invest in walking and cycling infrastructure around stations to maximise their catchment

What can local government do?

- Plan for increased density around frequent public transport corridors that provide 30 minute* access to major centres
- Plan for a connected network of separated cycleways and slow streets

What can developers do?

- Advocate for public transport services from day 1 of homes being occupied.

*30-minute access should be measured in the same way as Transport for NSW has established for the Greater Sydney Region Plan, ie including a walk stage from home to public transport. For active transport, routes should be measured using only the low-stress cycling network and fully accessible walking routes.

Captivating and comfortable

Walking or wheeling should be everyone's first choice for short trips. For people to choose this option we need to make local streets and high streets more attractive and comfortable places.

Slow, safe streets

We know that traffic speed is central to pedestrian safety and comfort. Many cities around the world now have 30km/h speed limits in an effort to reduce people walking being killed or injured by people driving.

Nearly half of all fatal and serious injuries caused by people driving cars in NSW are at 50km/hr compared to less than 1% at 30km/hr. Slower traffic speeds also create a calmer, friendlier environment for people on the footpath.

Generous footpaths

To make walking easy and more comfortable and inclusive for everyone, all streets should have wide footpaths on both sides of the road and frequent places to cross, (unless traffic volumes are very low <50 cars per day). The path should be easy to navigate, barrier free, include curb cuts to make it easy for prams, wheelchairs or walkers, and clear differentiation in texture or colours to mark where it begins and ends for people with low vision.

Easy to cross

Crossing points should either be a pedestrian crossing, or where there are traffic lights and people should get adequate time to cross the road at frequent intervals. Raised crossings both reinforce pedestrian priority as well as calming traffic.

Comfortable and cool

After basic walking needs are met, all streets can be improved with trees, awnings, places for resting, street furniture and lighting to further enhance the comfort of being on the street.

Street trees in particular, improve the experience of walking by increasing air quality, providing shade and reducing urban-heat island effects. Studies have even shown that spending three to four minutes in a tree-lined street can reduce blood pressure and stress levels.[13] This becomes even more important as Sydney experiences longer and more intense heatwaves.

Captivating and interesting

Active street frontages provide things to see, also making the experience of walking much more engaging and fun. It also feels like a much shorter walk when there are plenty of things to see.

Studies show how people perceive walking the same distance in low-density neighbourhoods as far longer trips than walking the same distance in higher-density neighbourhoods.[14] According to globally influential urbanist Jan Gehl, a good city street should be designed so that the average walker moving at 5km/hr sees something new and interesting about once every five seconds.[15]

Activated and welcoming

Streets should feel safe and welcoming to walk at all times of day or night, for everyone. Lighting is commonly ranked as one of the most important built environment design factors in influencing people's perceptions of safety while walking.[16] However, research by Arup shows that brighter isn't necessarily perceived as safer as it can create high contrast areas and stark no-go zones. Instead, lighting quality is more important than quantity. The way light interacts with surfaces and colours in the built environment is also important. People are more likely to feel safe if they can distinguish a bush from a person, or the colours someone is wearing.[17] In urban settings, ground floor activation in the form of retail or even patios and balconies can lead to more activity and 'eyes on the street', which can also create a greater sense of security.

Clustering attractors like shops, supermarkets and public transport is not only convenient for linking up trips, but each active use makes a more activated and welcoming area for the others.

Spaces to sit, activation, slow streets

Plenty of crossings

Shade via awnings and street trees and planting

Lighting

Sketches by Cox Architecture

Sketches by Cox Architecture

Checklist for safe, easy, comfortable streets:

- All local streets are slow, calm and < 40km/hr (ideally 30km/hr)
- Footpaths are on both sides of the road
- Footpaths are at least 2m wide and less than 1:20 gradient (except where there are <300 vehicles per day)
- Footpaths are clearly marked and have curb cuts at crossings or intersections to increase accessibility
- Streets can be crossed easily, either because speeds are low, walkers can share with other modes (e.g. shared streets) or pedestrian crossings are no more than 100m apart on high streets, and 200m for all other streets
- Footpaths are well lit
- Footpaths have shade and shelter
- Footpaths have places to sit and rest, ideally 50 - 100m apart
- Footpaths are continuous across driveways, laneways and side streets
- Walking routes are direct to local centres and conveniently connect key uses
- There is ground floor activation where suitable, or other forms of passive surveillance from the building to the street.
- Midblock crossings are provided in areas with larger blocks, to align access to points of interest like train stations and schools.

What can state government do?

- Change the NSW Speed Zoning Standard to recommend 30km/h for high pedestrian activity areas and school zones.
- Give councils the ability to lower (not raise) speed limits on Council roads.
- When programming signals, ensure:
  - The wait time for pedestrians is no more than 45 seconds between greens in the cycle with a target of 30 seconds.
  - Cross time for pedestrians remains green for people walking at a relaxed pace (3km/h).

What can local government do?

- Amend working drawings for pavement formation to prioritise continuous footpaths over driveways.
- Audit existing local streets for presence and width of pavements and develop a works program for new footpaths or widening where not enough space is given to walking.
- Have a program to deliver benches, evenly spaced along walking routes.

What can developers do?

- If there are no existing footpaths, provide them as part of your development.
- Consult with council on providing street trees where possible as part of new subdivisions or development.
- Create a ground-floor that is vibrant and contributes to the neighbourhood by focusing on the first six vertical metres of your building.
- Design for activated ground floors or front yard - this could range from commercial uses, through to ground-floor apartments with street-access.

Walkable homes for everyone

Walkability starts at home. We need to provide more diversity of housing that meets diverse needs and can house diverse people.

Greater diversity of housing form leads to more walkable communities.

Research shows that neighbourhoods with proportions of detached housing less than 30% have a step-change in walkability.[18] Attached and multi-storey dwellings offer a higher frequency of facade variation (often including activation in the latter case) compared to detached houses on wide frontages - what Jan Gehl called the 'urban fine grain' of 'attractive ground floor frontages' required to make Sydney a walking city. High rise buildings can also inhibit walking - with large complexes reducing fine urban grain, and long lift trips reducing walking catchments. A fine grain of mixed use ground floor, and through-block access on larger blocks is essential.

Opportunities to work from home, or within your local neighbourhood can increase local walkability.

Commutes and other work-related business account for the longest average trip lengths and average travel times in Sydney.[19] The ability to work locally, at home or in a third space like a cafe, library or co-working space, provides some people with flexibility to make other life choices, such as walking their children to school. By making our homes suitable for working from home, and ensuring communities have adequate third spaces for this purpose, neighbourhoods can be not only more walkable, but better for living generally.

Just like walkability, being able to bike to where you want to go needs to be built in.

For many other trips outside a walking distance, they may still be biked given the right infrastructure – and a place to park. This makes for a more sustainable, and affordable parking option given bikes take up much less space than a car – in fact, you can fit five to six bikes in one car parking space.

Be thrifty when providing car-parking spaces.

As we build more walkable neighbourhoods, more car parking becomes less necessary. In new residential buildings it's important to be thrifty and provide as little parking as needed, especially in areas that have good active and public transport accessibility. This saves on development costs by reducing the need for expensive basements.

Promote car sharing over car ownership

Providing car share spaces is also a good alternative to private parking, as it means people can have access to a car when they need it, rather than needing to invest in a private vehicle which sits idle most of the day or week. Research shows that once people own their own car, people are more likely to drive, even for short trips under 1km that would be easy to walk.[20] Car share members on the other hand, have been shown to dramatically lower the kilometres they drive by up to 50% a year, due to the raised awareness about the actual cost of driving.[21]

Providing 'third places' where people can gather and come together outside of the home or work within development can also increase walkability.

For large-scale developments in particular, 'third places' should be provided for residents to access. Bookable indoor community space provides people with a place to work and have meetings, for community facilities, like libraries. Ideally, these should be co-located with public open space, and visible from the street, so that they form a visible and prominent part of the neighbourhood fabric.

Local workers providing essential services should be able to afford to live locally, and within walking distance to their place of work

Diversity is key to any successful place, not only diversity of housing stock, but the people that live there – space for local teachers, retail workers,, cleaners, health workers, baristas and police. Local key workers should also be able to afford to live locally, close to their place of work. For this, some local housing must be genuinely affordable – that is, it should not exceed 30% of the income of people who earn the bottom 40% of average household incomes – AHURI's 30:40 rule.

Checklist for making homes walkable for everyone

- Car share is provided to provide options for low or no private car-ownership
- Facilitates working-from-home via fast broadband, and providing a dedicated study room, nook, or space for a desk in a bedroom
- Communal spaces are provided, including dedicated play spaces
- Secure bicycle parking is provided in every development
- There is a range of housing options for diverse household types, including no more than 30% detached housing

What can state government do?

- Introduce inclusionary zoning targets that require a minimum amount of affordable housing.
- Review Apartment Design Guide parking standards to remove minimum car parking requirements in new developments close to transport.

What can local government do?

- Reduce minimum car parking requirements, or introduce parking maximum rates in well-connected areas.
- Include requirements or incentives for care share in Development Control Plans.
- Support the development of 'third places' by incentivising mixed-use developments with communal spaces, libraries, or shared workspaces.
- Partner with community housing providers to ensure affordable housing is integrated into well-located areas near jobs and services.

What can developers do?

- Ensure diverse housing options are provided - this can mean a range of types (i.e. stand-alone and attached homes, as well as a diverse apartment mix).
- Provide apartments with study nooks or office spaces
- Provide communal 'third spaces' for residents in large developments including play spaces, communal rooms and communal open spaces.
- Incorporate car share in developments to reduce overall parking spaces.

Case study: Ed Square

Home entrances face a local park, and are car-free

Amazing!

TOTAL SCORE: 24/25

All mixed up: 6/6

Making active and public transport easy: 6/6

Captivating and comfortable: 7/7

Walkable homes for everyone: 5/6

Background

- Ed.Square, developed by Frasers Property Australia, is a sustainable community in south-west Sydney.
- The development has achieved a 6-Star Green Star Communities rating, indicating its high standards in sustainability and urban design.
- It introduces medium-density housing with a variety of dwelling sizes and types, integrating open spaces and amenities for a balanced urban living experience.

Walkability features

- The community is designed to be 100% walkable, with wider footpaths, low-traffic pedestrianised mews, and low-speed streets.
- Landscaped shared zones in residential areas enhance safety and promote walking and cycling.
- Internal car parking arrangements minimise car dominance, reclaiming streets for people, creating communal public spaces.
- All essential amenities, such as shops, cinemas, restaurants and the train station, are within walking distance.
- The development includes over 6 hectares of open space, featuring parks, waterplay areas, barbecue facilities and exercise equipment.

Why It matters

- Ed.Square showcases a successful model of integrating medium-density housing with ample open space, addressing the need for the ‘missing middle’ in urban housing.
- The emphasis on walkability and pedestrian-friendly design promotes healthier lifestyles and safer, more connected communities.
- This project sets a benchmark for future sustainable urban developments, demonstrating how thoughtful design can enhance liveability and community well-being in growing urban areas.

Seating and shade

Shared streets

case study: Haymarket and Darling Square

Background

- According to walkscore, Haymarket is the most walkable place in Greater Sydney. Haymarket was first developed in the 1830s on the edge of Sydney Town, providing a place for agricultural and goods markets servicing the growing urban settlement. Over time, marketplaces like Belmore Markets and Paddy's Markets were established, designed with pedestrian accessibility in mind to ensure as many potential customers as possible could access vendors.
- Although the area experienced decline during the 20th century, its essential urban form and layout was maintained. The redevelopment of Darling Harbour in the 1980s created a new tourism and leisure attraction adjacent to Haymarket, encouraging more people to visit a revitalised Chinatown, and Dixon Street, its main thoroughfare, was pedestrianised to make restaurants and retailers easier to visit.
- More recently, the redevelopment of the Entertainment Centre and into Darling Square has seen Haymarket's unique laneways and pedestrian-centred design expand within the new mixed-use, residential precinct.

Walkability features

- Convenient access to a range of public transport options, jobs and amenities including play spaces, plazas, a library, museum, art galleries and diverse retail and dining opportunities.
- Pedestrian-only streets and laneways across the precinct enhance connectivity. It is a very car-light precinct, with private vehicle access limited to the edges of the precinct. Private residential parking is provided at the second storey, importantly, the ground floor is activated.
- Nearly 40% of Darling Square and Haymarket is open public space.

Why It matters

- Busy, lively and dense urban environments do not happen in places where there is busy, fast, noisy traffic movement.
- Just because older neighbourhoods are the best walking destinations in Australia, doesn't mean we can't replicate and improve upon their strengths in new developments.

Lane-ways with sleeved-car parking

Pedestrianised central boulevard with retail and a community library

Dixon Street pre-pedestrianisation

Amazing!

TOTAL SCORE: 24/25

All mixed up: 6/6

Making active and public transport easy: 6/6

Captivating and comfortable: 7/7

Walkable homes for everyone: 5/6

Dixon Street today

Case study: Victoria Park, Zetland

Generous space for walking

Background

- A Landcom demonstration project for sustainable urban renewal featuring around 3,000 dwellings, including affordable housing delivered by City West Housing.
- The development has a density of about 120 dwellings per hectare and dedicates 15% of the site to public open space (3.7 hectares), with mostly mid-rise buildings (15m - 18m).
- The site was formerly flood-prone but has incorporated Water Sensitive Urban Design (WSUD) in every street, eliminating flooding issues and including a large central park that serves as water detention during heavy rain.
- The edge of the site near a busy road is reserved for commercial uses, forming a 'village centre' with a supermarket and childcare centre, ensuring essential services are within easy reach for residents.

Walkability features

- Excellent public transport access, with six bus routes serving the neighbourhood and its edges. The 304 bus route, running through the centre, offers a frequent service with a maximum 10-minute wait during off-peak times and less than a 4-minute wait during peak times.
- Local walkable destinations include a 'village centre' with a 4,000 sqm supermarket and 12,000 sqm of retail space comprising shops and cafés.
- Despite being near an urban highway, the development prioritises pedestrian access and minimises car dependency, encouraging residents to walk to local amenities and public transport options.

Why It matters

- Walkability and public transport access – Prioritises pedestrians with safe, direct routes to shops, cafés, childcare, and six bus routes, including a high-frequency service (max 10-min wait off-peak), reducing car dependency.
- Mixed-use convenience – A 'village centre' with a supermarket and retail ensures daily needs are within walking distance.
- Urban resilience – WSUD and green spaces enhance flood management while creating walkable, high-quality public areas.

Seating and shade

Activated street-level

Amazing!

TOTAL SCORE: 25/25

All mixed up: 6/6

Making active and public transport easy: 6/6

Captivating and comfortable: 7/7

Walkable homes for everyone: 5/5

Summary of key actions

The table below summarises the call-out-boxes 'what government, or developers can do' to support elements of this checklist.

Key actor	All mixed up	Making active and public transport the easiest choice	Captivating and comfortable	Walkable homes for everyone

State government	• Ensure that any uplift (R3, R4) is within 10 minutes of a park with a playground
	• Ensure zoning permits supermarkets and fresh food such as using MU zones, and allowing a 'neighbourhood supermarket' or 'supermarket' as a permitted use
	• State government to ensure all areas of significant density increases are within 1200m of a primary school. If there is no existing primary school, land should be zoned accordingly, to reserve space for a future school
		• Ensure that frequent public transport is provided to all uplifted areas from day one
		• Provide segregated cycleways, and cycle crossings, on state roads
		• Invest in walking and cycling infrastructure around stations to maximise their catchment
			• Change the Speed Zoning Guidelines to recommend 30km/h for high activity areas and schools
			• Give councils the ability to lower (not raise) speed limits on council roads
			• When programming signals, ensure:
			  • The wait time for pedestrians is no more than 45 seconds between greens in the cycle with a target of 30 seconds
			  • Cross time for pedestrians remains green for people walking at a relaxed pace (3km/h)
				• Introduce inclusionary zoning targets that require a minimum amount of affordable housing
				• Review parking standards to remove minimum car parking requirements in new developments close to transport

Local council	• Ensure that any uplift (R3, R4) is within 10 minutes of a park with a playground • Ensure zoning permits supermarkets and fresh food such as using MU zones, and allowing a 'neighbourhood supermarket' or 'supermarket' as a permitted use	• Plan for increased density around frequent public transport corridors that provide 30 minute* access to major centres • Plan for a connected network of separated cycleways and slow streets	• Amend working drawings for pavement formation to prioritise footpaths over driveways • Audit existing local streets for presence and width of pavements and develop a work program for new footpaths or widening where not enough space is given to walking • Have a program to deliver benches, evenly spaced along walking routes - eg. 50m apart	• Reduce minimum car parking requirements, or introduce parking maximum rates in well-connected areas to support lower car dependency and affordability • Include requirements for care share in DCPs • Support the development of 'third places' by incentivising mixed-use developments with communal spaces, libraries, or shared workspaces • Partner with community housing providers to ensure affordable housing is integrated into well-located areas near jobs and services
Developers	• Provide non-residential ground floors in R4 zones, especially if there is no existing non-residential floorspace within a 5 minute walk of the development	• Advocate for public transport services from day 1 of homes being occupied	• If there are no existing footpaths, provide them as part of your development • Consult with council on providing street trees where possible as part of new subdivisions or development • Create a ground-floor that is vibrant and contributes to the neighbourhood by focusing on the first six vertical metres of your building • Design for activated ground floors or front yard - this could range from commercial uses, through to ground-floor	• Ensure diverse housing options are provided - this can mean a range of types (i.e. stand-alone and attached homes, as well as a diverse apartment mix). 2.5, 3 and 4 bedroom units are more likely to suit families with children • Provide apartments with study nooks or office spaces • Provide communal 'third spaces' for residents in large developments including play spaces, communal rooms and communal open spaces • Incorporate car share in developments to reduce overall parking spaces

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