



TO: Planning Commission

FROM: Leslie Hamilton, Senior Planner

SUBJECT: Short-Term Rentals – Work Session 2 (LU 18-0034)

DATE: July 11, 2018 **MEETING DATE:** July 23, 2018

ACTION

Review requested background research, and provide input to staff on drafting amendments to the Lake Oswego Code (LOC) concerning Short-Term Rentals (STRs).

DISCUSSION

This is the second in a series of Planning Commission work sessions focusing on STRs. A prior work session was held on June 25, 2018. The following discussion is organized in two parts, each with several subcomponents, for the Commission's consideration:

1. Research Topics Identified by the Planning Commission

- a. General characteristics of STRs in Lake Oswego (updated from April 17, 2018, City Council Study Session)
- b. Legislative history of Lake Oswego's transient lodging tax and regulations
- c. Current STR code enforcement/compliance issues
- d. Impact of STRs on affordable housing
- e. Signage allowed in residential zones
- f. Relationship to Home Occupation regulations

2. Considerations for STR Regulations

- a. Existing Code
- b. Owner On/Off premise
- c. Whole/Partial Dwelling
- d. Number of Rental Nights per accommodation

1. Research Topics Identified by Planning Commission

a. Summary of Research on Existing STRs in Lake Oswego

At the time of the publication of this report, there were 32 STR listings within the city limits, and another 15 listings requiring verification of being within the City limits.

Some initial observations from the research follow. An updated map of advertised STRs is included in Attachment E.

- 32 confirmed listings within the city limits, as of July 9, 2018.
- 23 listings are whole-house and 9 are partial house rentals.
- 13 (41%) of the “hosts” were not the property owner.
- 6 (19%) of the property owners live outside of the city limits with 4 (13%) living outside of Oregon.
- Listings are distributed throughout the city though concentrated in First Addition-Forest Hills neighborhoods.
- The minimum stay per visit ranged from 1 to 29 nights, with a median stay of 5 nights.
- The maximum number of guests ranged from 1 to 10 guests with a median of 5 guests.
- The rent per night ranged from \$45 to \$999, with a median rent of \$119.

b. Legislative History of Lake Oswego’s Transient Lodging Tax and Regulations

At the June 25 work session, the Commission requested a summary of the legislative history of “transient lodging” in Lake Oswego. According to Wikipedia, a Transient Lodging Tax “is charged in most of the United States to travelers when they rent accommodations (a room, rooms, entire home, or other living space) in a hotel, inn, tourist home or house, motel, or other lodging unless the stay is for a period of 30 days or more. The tax is collected at the time that payment is made for the accommodation; it is then remitted by the lodging operator to the city or county.” The Transient Lodging Tax is also known as a Transient Occupancy Tax or Hotel Occupancy Tax in some jurisdictions. [https://en.wikipedia.org/wiki/Transient_occupancy_tax, accessed July 3, 2018]

In Lake Oswego, the Transient Lodging Tax is regulated in Chapter 24, Special Taxes, Article 24.02, Transient Lodging Tax. At least since 1982, the definition of “Hotel, Motel” in the Community Development Code (CDC) has referenced the “transient residential purposes” of the use, and the CDC has limited Hotels/Motels, and thus any rental lodging of less than 30 days, to commercial zones.

Hotel, Motel (c 1982): A building or group of buildings used for transient residential purposes containing rental units which are designed to be used, or which are used, rented or hired out for sleeping purposes.

Hotel, Motel (2018): A building or group of buildings used for transient residential purposes containing rental units which are designed to be used, or which are used, rented or hired out for residential purposes, including associated retail sales within the hotel or motel intended to serve paying guests.

For decades, the City has collected a 6% Transient Lodging Tax on overnight stays in the City. These tax dollars are to be used for the promotion and development of tourism and visitor programs for Lake Oswego. Lodging providers are responsible for collecting the tax, and may keep 5% of the collections to cover administrative costs. A portion of the tax goes directly into the Tourism Fund.

c. Code Enforcement/Compliance Issues

At the June 25 work session, the Commission requested a summary of the compliance issues resulting from the City's enforcement of the STR ban. For the time period January 1, 2013 – present day, the City has received a total of 17 code enforcement complaints relating specifically to STRs. Of these cases 11 were whole house rentals and 6 were partial house rentals. Evidence of specific impacts to neighbors from STRs (e.g., noise, parking, trash, etc.) was not collected or documented, because the enforcement issue was the use itself, which is illegal. However, if the City adopts regulations allowing STRs, it will be important to collect data relating to the standards that are put in place to control the impacts of the use.

In addition, the Police Department pulled all complaints relating to parking, noise, and suspicious persons citywide for the four-month period of March 2018 – June 2018. A total of 506 complaints were made during that time period; of those, there was only one complaint (suspicious person) associated with a property identified as hosting an STR; however, it is not possible to determine whether the complaint was attributed to use of the property as a STR.

d. Impact on Affordable Housing

At the work session on June 25, the Commission requested that staff return with definitions of “affordable housing,” and address the impact of STRs on housing affordability, under the theory that STRs take units off the market that could be rented full-time, thus squeezing supply, which in turn drives up rents. The Community Development Code (CDC) does not define “affordable” or “affordable housing”, nor are there incentives or requirements for the construction of affordable housing units. The following definitions and income levels come from federal and state sources:

AFFORDABLE HOUSING [DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)]: In general, housing for which the occupant(s) is/are paying no more than 30% of his or her income for gross housing costs, including utilities. Please note that some jurisdictions may define affordable housing based on other, locally determined criteria, and that this definition is intended solely as an approximate guideline or

general rule of thumb. [https://www.huduser.gov/portal/glossary/glossary_a.html, accessed July 9, 2018]

AFFORDABLE HOUSING [OREGON HOUSING AND COMMUNITY SERVICE, (OHCS)]: For housing to be considered affordable, a household should pay up to one-third of their income towards rent, leaving money left over for food, utilities, transportation, medicine, and other basic necessities.

[https://www.oregon.gov/LCD/SiteAssets/Pages/housing/Defining_Affordability.pdf, accessed July 9, 2018]

MEDIAN HOUSEHOLD INCOME: The income level earned by a given household where half of the homes in the area earn more and half earn less. In 2016 dollars, the median income, 30% threshold, and monthly expense in the Lake Oswego area are identified below:

<i>Jurisdiction</i>	<i>Median Income (2016)</i>	<i>30%</i>	<i>Monthly Housing Expense at 30%</i>
Lake Oswego	\$89,979	\$26,993	\$2,249
Clackamas County	\$68,915	\$20,674	\$1,722
Portland	\$58,423	\$17,526	\$1,460

(Quick Facts, US Census, accessed July 9, 2018)

[In 2017, the Council established a goal to “explore options for economical housing for all sectors in the community (disabled, retirees, and especially workforce).” The June 2017 Council report defined “economical housing” as that which costs no more than 30% of a household’s income. The terms “economical housing” and “affordable housing” are synonymous for this discussion.]

Staff finds that there appears to be no definitive answer to the question of whether STRs have an adverse impact on housing affordability, at this time, as the actual impacts may vary depending on geographical context (i.e., large city, suburb, or vacation destination, etc.). Staff directs the Commission to Attachment A, a local study by ECONorthwest in 2016 entitled “Housing Affordability Impacts of Airbnb in Portland.” Its key findings include the following:

- Based on Airbnb’s data, entire home listings within the City of Portland make up a small portion of the City’s total supply of housing units.
- Market rents near most Airbnb listings indicate that they would not otherwise rent at affordable price points.
- The ability to generate income through STRs can encourage long-term housing unit creation.
- STR units primarily function as part of the hospitality market, rather than the housing market.

As a counterpoint, staff directs the Commission to Attachment B, “When Tourists Move In,” a study of Sydney, Australia, published in The Journal of the American Planning Association (JAPA) in 2017. Its key findings include the following:

- STR units aggregate in areas of high tourist visitation.
- There is considerable potential that STRs could remove whole homes from the permanent rental supply and therefore considerably increase pressure on rents [in specific geographic subareas].
- STRs probably only assist people to meet their housing costs by sharing homes with tourists when the host remains in the property and rents out rooms or beds.

Attachment C has links to a number of articles on the question of impact to affordable housing and the hotel industry, and whether STRs serve to make housing more affordable to existing occupants, but they are not scientific studies.

e. Signage

At the work session on June 25, the Commission requested a review of the signage allowed in residential zones, as one of the concepts that has been discussed is requiring STRs to post identification signs. Signage in residential zones - specifically for individual dwelling units – is limited to the “incidental” signs described below and in Attachment D. No permit is required for incidental signs.

- One 1-square foot sign, attached to dwelling, with no internal illumination
- One 2- square foot sign, anywhere on an occupied residential lot, with no illumination
- One 8-square foot sign, cut into a masonry surface or constructed of bronze or other non-combustible material
- Window signs, 10% of window surface up to 6 sq. ft.

Staff has not identified an impact that would be mitigated by requiring signage for STRs; in addition, in reviewing the STR regulations of other jurisdictions, staff has not found a signage requirement to be a typical STR regulation. Some jurisdictions, however, do maintain a public registry of STR owners/hosts, so that neighbors can reach them in an emergency.

f. Home Occupation

At the work session on June 25, the Commission requested a summary of the Home Occupation standards as an example of commercial activity that is permitted in residential zones with specific limitations. Home Occupations are defined in the CDC as “a lawful use conducted in a residential zone in or on the premises of a dwelling unit, said use being secondary to the use of the dwelling for dwelling purposes.” Home Occupations are allowed as an accessory use in all residential zones. As of July 1, 2018, the City has 564 home occupations with active business licenses. The use requires a valid business license, but no inspection is required by the City.

Additionally, there is no requirement that a home-based business erect a sign on the property. The specific limitations on home occupations are listed below (LOC 50.03.004.1.b.ii):

Home Occupation

A home occupation may be conducted where allowed by other provisions of this Code if the following conditions are continuously complied with:

- (1) The use does not alter the residential character of the neighborhood nor infringe upon the right of residents in the vicinity to the peaceful enjoyment of the neighborhood.
- (2) A current and valid business license is maintained.
- (3) No employees other than family members who reside at the dwelling.
- (4) No outside storage of goods or materials other than vegetation.
- (5) No more than 25% of the aggregate floor area on the lot is devoted to nonresidential use; an accessory structure may be used provided the provisions of this subsection are met.
- (6) Marijuana facilities are prohibited.

2. Considerations for STR Regulation

STRs by definition have shorter “stays” or tenancy than dwellings that may operate as rental properties (for 30 days or longer). This increased activity from people arriving and departing, even if not moving their belongings into the house, can be disruptive to neighborhood livability, particularly in cities with high levels of tourism and a significant share of housing units used for vacation rental properties. One of the particular concerns with STRs is the transient nature of the use, potentially exacerbated if the property owner is not on-site to oversee the activity or maintenance issues. Land use regulations are one way of addressing these concerns, and the Commission approved a work plan that considers the following aspects of STRs on July 23:

- Owner On/Off site
- Whole/Partial Dwelling Rental
- Restrictions on Rental Nights/Year

These types of controls all relate to how STRs can or should remain “incidental” (or an accessory use) to the primary residential use on the property, consistent with the zone. They can also address the concern that dwelling units, whether for long-term renters or owners, might be taken off the market.

- a. Owner On/Off-site
- b. Whole/Partial Dwelling Rental

Short-term rentals can be divided into two main categories. Entire home rentals, also called vacation homes, are rented out in their entirety while the primary resident is either off-site or staying in another dwelling unit on the property (e.g. rental of a detached accessory dwelling unit while still residing in the primary dwelling). If left unrestricted, these could include detached single-family homes, apartments, condos, accessory dwelling units, or even houseboats. The owner or primary resident may rent out the home while traveling, residing in a secondary location or residence, or as a full-time vacation rental.

Private short-term room rentals, also called home sharing, are the rental of one or more rooms in a dwelling, a guest house, or accessory dwelling unit (ADU), while the primary resident is on-site. This category of STRs have flourished through the various STR platforms as a way for people to offset housing costs, host travelers, and share unused space. On Airbnb, for example, room rentals are differentiated between a private sleeping room with some shared common space (such as shared kitchen), and a shared sleeping room such as a bunk room.

Requiring the owner to be present on the site during the rental period would limit STRs to either partial-dwelling rentals, or properties that have a second unit such as a duplex or an ADU. For a breakdown of whole-house versus partial-house rentals in Lake Oswego see Attachment E.

- c. Restrictions on Rental Nights/Year

Another option for allowing STRs as an incidental use is to limit the number of nights per year that the dwelling could be rented as an STR. This may only be an appropriate limitation on whole-dwelling rentals, as the primary resident would be on site during partial-home rentals. San Francisco, for example, requires the host to be a permanent resident of the STR, and defines “permanent resident” as spending at least 275 nights a year in the hosted unit. Hosts must obtain a license from the City Treasurer and post the certificate on all STR listings. It should be noted that the three approaches discussed above – Owner On-Site, Partial Dwelling Rental, Limited Nights/Year - would prohibit property management firms from buying multiple dwellings to convert to full-time STRs.

CONCLUSION

Cities use a variety of approaches to address livability, licensing and taxation for STR activity. In developing STR regulations, one of the major considerations is the process for permitting the use. This process could be as simple as allowing them by right subject to use-specific standards (and approval of a business license), similar to how home occupations are allowed now. However, if it was not possible to formulate regulations that could be applied through a ministerial process, the minor development procedure would be used. It should be noted that Airbnb and other companies use online “reviews” and provide other means for customers to report problems with rentals; in this way, some aspects of the STR are self-regulating.

Staff requests that the Commission identify direction on the issues listed above for development of amendments to the CDC for STRs. It should be noted that all of the approaches above will require on-going enforcement efforts to verify ownership, percentage of dwelling rented, and/or the number of nights rented per year. For example, regarding the primary resident requirement, the regulations and/or definitions should be clear as to how residency would be proven. In Hood River, the STR license requires two forms of documentation as proof of primary residence.

ATTACHMENTS

- A. ECONorthwest Report, 10/19/16
- B. JAPA article on Sydney, Australia, 2016
- C. Other Research (links) on Affordability Impact Question, 07/09/18
- D. Residential Signage Matrix (from LOC Article 47), 2015
- E. Updated Map of STRs in Lake Oswego, 07/10/18

Staff reports/memos and public meeting materials can be found by visiting the project webpage. Use the link below to visit the City’s “Project” page.

<http://www.ci.oswego.or.us/projects>

In the “Search” box enter **LU 18-0034** then press “Submit”

ATTACHMENT A
LU 18-0034

Housing Affordability Impacts of Airbnb in Portland

Fall 2016

ECONorthwest
ECONOMICS • FINANCE • PLANNING

▶▶ Disclaimer

For over 40 years, ECONorthwest has helped its clients make sound decisions based on rigorous economic, planning, and financial analysis. For more information about ECONorthwest: www.econw.com.

ECONorthwest staff members Mike Wilkerson, Lorelei Juntunen, Emily Picha, and Tina Morgan prepared this report for Airbnb in September 2016. ECONorthwest is responsible for the content of this report.

The staff at ECONorthwest prepared this report based on their general knowledge of economics and on information derived from government agencies, private statistical services, the reports of others, interviews of individuals, or other sources believed to be reliable. ECONorthwest has not independently verified the accuracy of all such information, and makes no representation regarding its accuracy or completeness.

Any statements nonfactual in nature constitute the authors' current opinions, which may change as more information becomes available. Two of the authors of this report have legal short-term rentals in the City of Portland within their primary residences.

For more information about this report:

Lorelei Juntunen
juntunen@econw.com
KOIN Center
222 SW Columbia Street Suite 1600
Portland, OR 97201
503.222.6060

▶▶ Acronyms and Definitions

Acronyms

HUD: United States Department of Housing and Urban Development

MFI: Median Family Income

ADU: Accessory Dwelling Unit

STR: Short-term Rental

SDC: Systems Development Charge

Definitions

Affordable Housing: Housing that is affordable to households making less than 80% of a region's Median Family Income.

Workforce Housing: Definitions vary, from rents that are affordable to households making 50% to 120% of MFI. In the Portland area, workforce housing is generally affordable to households making 80% to 120% of MFI.

Full-time Listing: Other analyses have used thresholds of 180 nights (49% occupancy) and 270 nights (74% occupancy) to define a threshold for when a unit is considered a full-time short-term rental listing.

Entire Home Listing: Airbnb hosts can select this option for their listing if the guest will have the entire space to themselves. This usually means that guests have a private entrance and bathroom, at a minimum.

Portland MSA: The Metropolitan Statistical Area comprised of Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon, and Clark and Skamania Counties in Washington.

► Summary

The interaction between short-term rentals and the availability of affordable housing units has been a focus of housing policy discussions across the United States. The fundamental question asked in these discussions is: “If short-term rental platforms like Airbnb did not exist, would the owners of those units instead rent those units to long-term renters at affordable rates? If so, how many units are actually lost to short-term rentals?” In Portland, several studies have explored this relationship. To add its data to the discussion, Airbnb asked ECONorthwest to analyze the most current Airbnb entire home listings to provide data and interpretation of the interaction between these listings and housing affordability in the City. Much of the debate in the media (and in Portland) has centered on estimating the number of entire housing units that are currently rented on Airbnb that would otherwise be available as long-term rental units. The loss of these units would reduce the supply of housing in the City. As economists, we recognize that any reduction in the supply of actual housing units must have an impact on housing prices in the market, yet we also recognize that the primary drivers of the housing market and pricing in the Portland region are demand for housing (which is outpacing the growth of the housing supply), zoned capacity for new development, the availability of land, and rising costs of construction. Any lost housing supply must be evaluated in that larger context.

Adding to the complexity of this debate is the fact that no data source, including Airbnb’s own data, allows us to precisely quantify the number of “lost” units. Airbnb data do help us to identify those hosts who rent their units on Airbnb infrequently, and infer that they are therefore not likely to rent their homes as full-time rental units if short-term rental platforms such as Airbnb were not available. This is the central focus of the calculations in this report (and most other similar reports as well).

The results of our analysis on the following pages show that Airbnb’s activities in Portland have minimal, if any, impact on the current affordability crisis. If all of Airbnb’s entire home unit hosts were to suddenly decide to stop renting on Airbnb, it would do very little, if anything, to affect the trends that are driving rising rents. We found that of the nearly 3,000 entire home listings on the Airbnb platform between August 2015 and July 2016, somewhere between **83 and 377 units (or, 0.03% of total housing stock in Portland)** would be considered full-time Airbnb rentals, based on common thresholds of over 270 nights rented and over 180 nights rented, respectively.¹ Airbnb finds that 60% of hosts use the supplemental income they earn from hosting to pay their mortgage or rent. Future analysis could explore the net impacts to the Portland market based on increased income security as a result of income generation from short-term rentals.

Even if all of those units were to be available for long-term rental, many of them would not rent at rates that are affordable to those making 60–80% of the region’s 2016 MFI for a family of two (\$35,220–\$46,950 per year).² Further, we find that but for City policy to waive Systems Development Charges and short-term rental income, many ADUS may not have been constructed. It is likely that units created for initial short-term rental use will convert to long-term use in the future, adding to total housing stock.

Airbnb’s previous analyses have pointed out the many ancillary benefits of their units for hosts and neighborhoods. These include creating extra income for hosts, supporting neighborhood vitality, and stimulating housing unit creation (in the form of ADUs). Policymakers should consider trade-offs between these benefits and a relatively small impact on overall affordability.

►► Summary of Key Findings

Based on Airbnb's data, entire home listings within the City of Portland make up a small portion of the City's total supply of housing units.

We estimate that there are 83 to 377 full-time entire home listings in Portland. Many units are not rented full-time, are in an owner-occupied space, are not a traditional housing unit, or all three, suggesting they would not be available on the market as full-time rental units. Airbnb booked "entire home" listings comprise a small fraction (1.1%) of Portland housing stock. Frequently-booked entire home listings represent at most 0.14% of Portland's housing units, meaning that these units have minimal, if any, impact on housing affordability in Portland. In addition, Airbnb finds that short-term rentals can have a stabilizing effect on households. Airbnb's survey data shows that 60% of hosts depend on supplemental income from Airbnb to make ends meet.

- 2,976 entire home listings exist within the City of Portland. If all entire home listings were counted as housing units, they would comprise 1.1% of all housing units in the City.³
- Nearly half (42%) of entire home listings were rented fewer than 30 nights in one year.
- 377 units (or 12.7% of entire home listings and 0.14% of Portland's housing stock) were rented for more than 180 nights.
- 83 units (2.8% of entire home listings and 0.03% of Portland's housing stock) were rented for more than 270 nights.

Market rents near most Airbnb listings indicate that they would not otherwise rent at affordable price points.

If these units were available to long-term renters, they would likely be rented at price points above traditional affordability thresholds. In addition, Airbnb provides an extra stream of income in these neighborhoods that increases housing security for hosts.

- 70% of listings are located in neighborhoods with average one-bedroom rents of \$1,000 or more, which are unaffordable to households making 80% of MFI or less.⁴

The ability to generate income through short-term rental can incent long-term housing unit creation.

The ability to recoup revenue on Airbnb appears to have incented the construction of ADUs, especially combined with city policies to reduce SDCs. Airbnb's analysis found that 20% of ADUs are rented over 180 nights per year. Many units created for initial short-term rental use will convert to long-term use, adding to total housing stock.

- 257 active Airbnb entire home listings are permitted ADUs.⁵
- 90% of Airbnb entire home units that are permitted ADUs were constructed since 2008, when Airbnb entered the Portland market, and were likely never continuously part of the long-term rental supply.
- 51 of those units (20%) were rented more than 180 nights per year.

Short-term rental units primarily function as part of the hospitality market, rather than the housing market.

Short-term rental units provide a diverse stock of lodging that meets unmet demand throughout the city, bringing new visitors into communities and supporting neighborhood business districts. The flexibility of this stock means that most hosts rent only sporadically during peak periods to provide "overflow" lodging capacity or alternate between short-term and monthly rentals. There are limits to the growth of the hospitality market.

- 59% of Airbnb listings had no hotels within a half-mile.
- 53% of listings active as of Jan 2015 were deactivated by September 2016, showing very high churn.

►► Notes on Data and Previous Studies

Data limitations presented several challenges to quantifying the impacts of short-term rentals on the housing market:

- There is no existing data source available to determine which short-term rental units would be counted as housing units in traditional data sources, or what the owner of the unit would do with the unit without Airbnb or similar short-term rental platforms. Airbnb conducts annual surveys of its hosts that include questions on these topics, but response rates are too low for analysis.
- The data presented in this report are for Airbnb’s listings alone. Many Portland hosts may “cross-list,” or list their homes across several platforms. Without comprehensive data across the most popular short-term rental platforms (including Homeaway), it is impossible to determine how often individual units are rented. However, according to Airbnb survey data, hosts report that over 90% of short-term rental income comes through the Airbnb platform.
- To protect user privacy, Airbnb could not legally provide geographically specific listing-level data to determine the revenue and hosting behavior in specific neighborhoods. Airbnb therefore ran queries of their dataset to allow ECONorthwest to complete some portions of the analysis, as noted in the text.

Related Studies

There are several studies that provide additional context on the economic implications of Airbnb in Portland that were not conducted in full by ECONorthwest.

The Impacts of Homesharing in Portland

Released in 2016, this report examines the impacts of Airbnb and its host community in Portland.⁶ It includes findings related to the economy, tourism, neighborhoods, and residents. ECONorthwest provided economic impact analysis for this report, and found a \$128.5 million total economic impact related to Airbnb that supports 1,900 jobs as a result of Airbnb guest spending.

Airbnb Host Survey

Airbnb conducts annual surveys of its Portland hosts to explore behavior patterns and trends. The surveys have found Airbnb to be a powerful tool to boost incomes and provide supplemental income that allows hosts to afford their existing housing. Key findings from the 2016 survey include:

- 64% of hosts said that being able to rent out their home on Airbnb helped them to stay in their unit.
- 47% of hosts earn low to moderate income (having a household income of \$75,000 or less).
- 55% of hosts rely on Airbnb as supplementary income to make ends meet.
- Hosts spend an average of 32% of their income on housing costs, above the HUD guidelines.

▶▶ Airbnb's entire home listings within the City of Portland make up a small fraction of overall housing units.

As of August 2016, Airbnb has 2,976 "entire home listings" within the City of Portland. Airbnb defines "entire home listings" as a space where the guests will have the whole space to themselves. In other words, these listings are not all "housing units" that could be rented as long-term rental units. They include, for example, suites with a bathroom but no kitchen and remodeled basements with no separate entrances. Third-party analysis, using data scraped from the Airbnb site, tends to overestimate the number of entire home listings in the Portland market, using assumptions and methodologies that don't account for the nuances of host behavior and the types of listings.

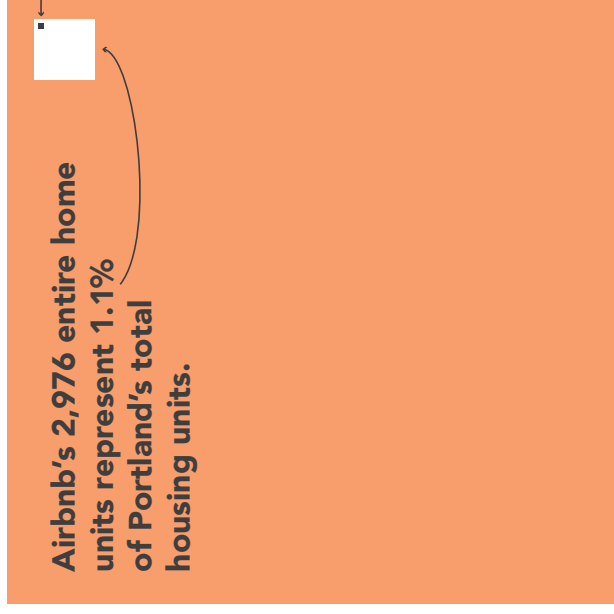
We looked at the units that have been available on Airbnb's platform for at least one year (between August 2015 and July 2016).

We found a total of 83–377 entire home listings that were rented full-time, including basement suites and ADUs.

"Full-time" may be defined as:

- 83 listings rented for more than 270 nights from August 2015–July 2016 on Airbnb (2.8% of all listings), 0.03% of Portland's housing; or
- 377 listings rented for more than 180 nights from August 2015–July 2016 on Airbnb (12.7% of all listings), 0.14% of Portland's housing stock.

Many listings are not permanently on the short-term rental market. Of the active listings in January 2015, **only 53% were still active** in September 2016. This high churn rate suggests that Airbnb is a temporary option for many hosts, who later use their space in other ways.



Total Housing Units in the City of Portland

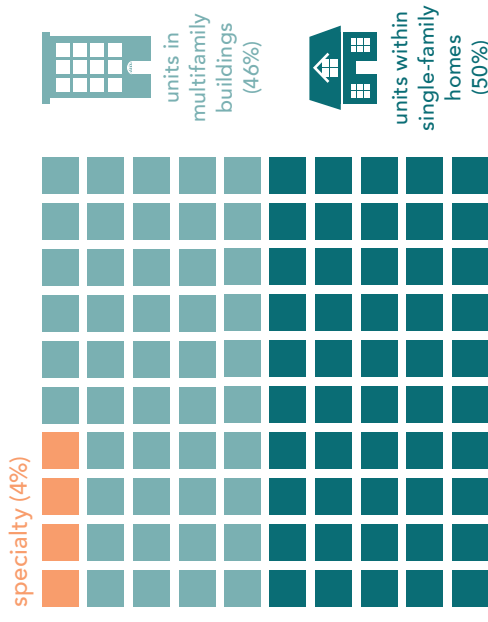
Source: Airbnb data on entire home listings active between August 2015 and July 2016 and rented for at least 180 or at least 270 nights, American Community Survey, 2015 one-year estimate, Table B25001.

▶▶ Airbnb's entire home listings are not necessarily housing units.

Because Airbnb hosts self-categorize their listings, the definition of "entire home" does not always correspond with how traditional data sources categorize housing units. There are instances where units identified as an entire home on Airbnb are not equivalent to a home that could otherwise be available to long-term tenants. This is particularly likely for units rented in single-family homes. These include private suites and converted basements and attics in single-family homes that would not be available on the long-term rental market, with or without Airbnb. Some portion of the 83–377 units fall into this category.

The charts at right show that about half of entire home units on Airbnb are located within single-family homes, which can include basement units or detached ADUs, and that more than half have one bedroom or fewer. While the data do not allow us to measure all unit characteristics, some of them are almost certainly not traditional housing units.

Unit Types



Source: Airbnb data on entire home listings active between August 2015 and July 2016.

Percent of Entire Home Listings by Bedroom Count



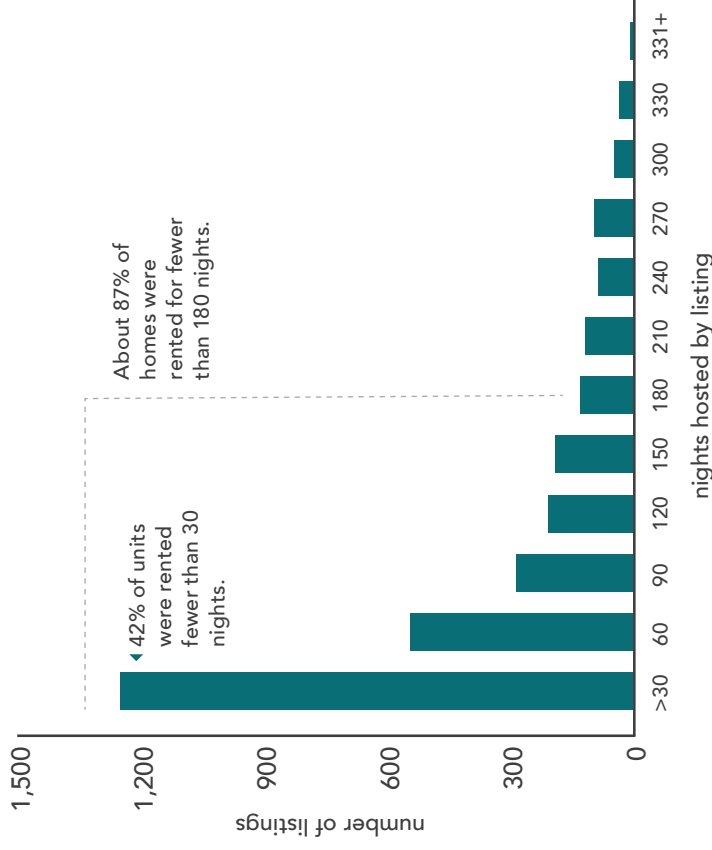
Source: Airbnb data on entire home listings active between August 2015 and July 2016.

▶▶ Most hosts rent out units infrequently.

Portland's Airbnb hosts' rental behavior patterns vary widely. Hosts make trade-offs between flexibility to use their space and income generated on the Airbnb platform. There are a number of reasons why these units may not be rented frequently or included as a unit on the long-term rental market:

- **The unit is the host's primary residence that they rent out when they are on vacation, working away from home, or staying with a significant other.** Many of these hosts deactivate their listing except for a few nights of the year. Half of all listings that were active at some point during the last year initiated at least one deactivation. On average, listings are active about 70% of the time, and deactivated for about 30% of the time. Airbnb's survey data shows that 89% of entire home listings are either a host's primary residence or space within a primary residence.*
- **The host wants the flexibility to be able to use the space for visiting friends and family.**
- **The unit is not permitted for permanent occupancy, such as a basement suite that is permitted as additional living space instead of a separate ADU.** Forty-two percent of units that were on Airbnb from August 2015 to July 2016 were rented fewer than 30 nights. About 87% of homes were listed for fewer than 180 nights.
- **The majority of entire home Airbnb hosts earn less from renting their units as short-term rentals than they would from long-term rentals.** This pattern indicates those entire home listings are likely primary homes being rented while the residents are traveling and/or while hosts are not otherwise using the space.

Nights Hosted: Hosts on Airbnb, August 2015–July 2016



Source: Airbnb data on entire home listings active between August 2015 and July 2016.

*2016 Airbnb Host Survey Data, N=152.

▶▶ Short-term rental units play an important role in the hospitality industry.

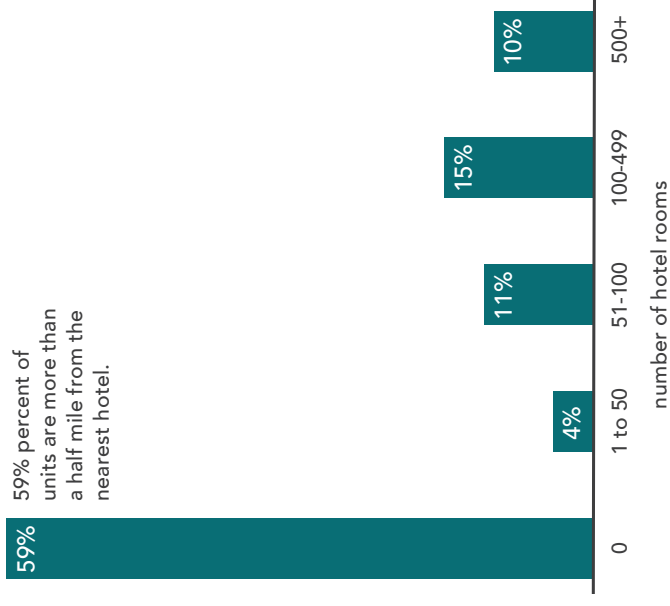
Short-term rentals are a critical component of the local hospitality industry and have existed for longer than Web-based platforms like Airbnb through executive rental services, Craigslist, and other services. Short-term rentals fill a niche for people looking for specialty housing, including business travelers, families, gap housing between long-term rentals, and relatives visiting family members and looking for nearby (neighborhood-based) lodging.

Key market segments include:

- **Peak period visitors:** The shortage of hotel rooms in Portland during peak periods means that short-term rentals help to accommodate visitors and fuel the local economy.
- **Business travelers:** Professionals who need to be close to their place of work.
- **People who need alternative arrangements.** Short-term rentals fill a niche for visitors needing special accommodations, such as hosting a large family, allowing pets, or providing a kitchen space. Airbnb hosts also initiate rentals of at least 30 nights via the site. These month or multimonth rentals are an important part of the housing market (in addition to short-term rentals and lease agreements).

Many visitors to Portland want to stay outside of the Central City, where the market fundamentals are often not strong enough to support the development of a hotel. Short-term rentals offer a geographically dispersed option for visitors. Were these units not available, there would be increased demand for hotel rooms, and fewer travelers staying and shopping in neighborhood centers. There is even some anecdotal evidence that the availability of these units induces travel demand: some guests might not travel to Portland at all without diverse rental opportunities.

Percent of Listings by Number of Hotel Rooms Within a Half Mile



Source: Airbnb data on entire home listings active between August 2015 and July 2016 and Smith Travel Research from August 2016.

Short-term rentals offer a geographically dispersed option for visitors. Were these units not available, there would be increased demand for hotel rooms, and fewer travelers staying and shopping in neighborhood centers.

Hotel developments compete for the same scarce urban land as multifamily housing. As such, overregulating short-term rentals would not address unaccommodated travel demand and could adversely impact future housing stock.

►► The majority of Airbnb listings would not otherwise be affordable housing units.

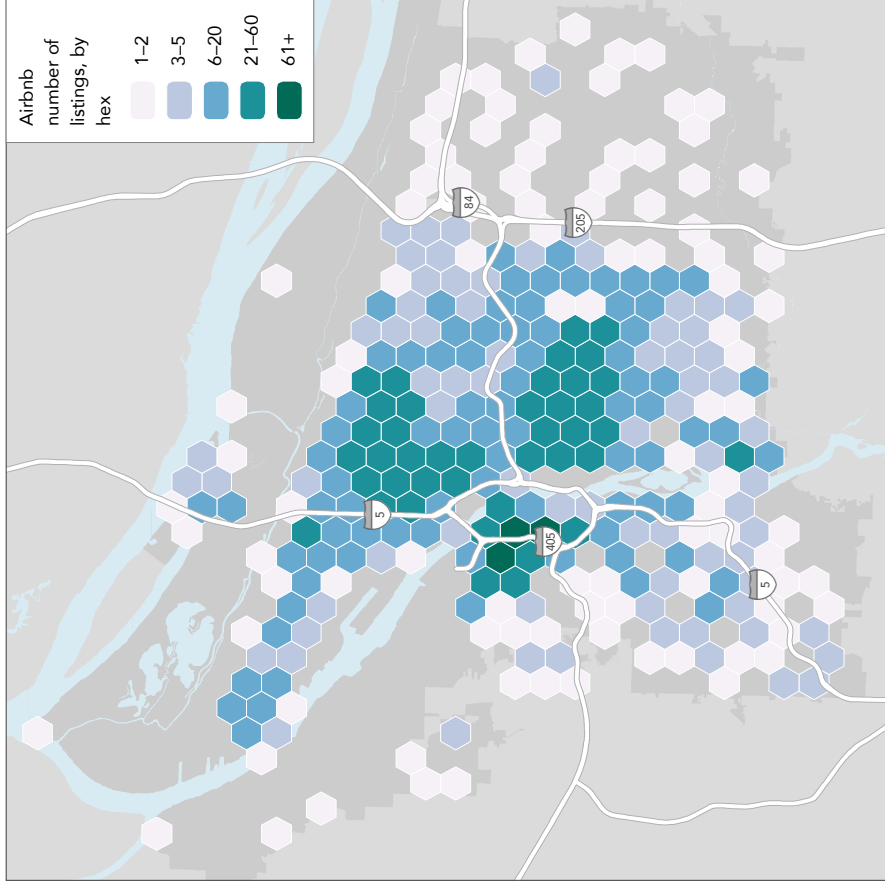
Many Airbnb listings are located where rents are relatively high, including many inner-ring neighborhoods like inner Southeast Portland and inner Northeast Portland. This implies that if some portion of these units were offered as long-term units, they would still be at the higher end of the rent spectrum.

Citywide, 70% of units are located in areas where average rents* are above \$1,000 per unit.⁴ At this rental rate, only families making at least 80% of the MFI would be able to afford a one-bedroom apartment. These units provide workforce housing, rather than affordable housing. In these areas, Airbnb increases density and brings visitors to these high-demand neighborhoods.

Approximately 30% of entire home listings are located in neighborhoods where rents might be affordable to people making less than 80% MFI. It is unclear what portion of these units are actually rentable as long-term units, and are owned by hosts who would instead put them on the long-term market.

Airbnb listings are generally concentrated within five miles of downtown Portland. The map at right shows the density of Airbnb listings within quarter-mile hexagonal geographies.

Density of Airbnb Listings in the City of Portland

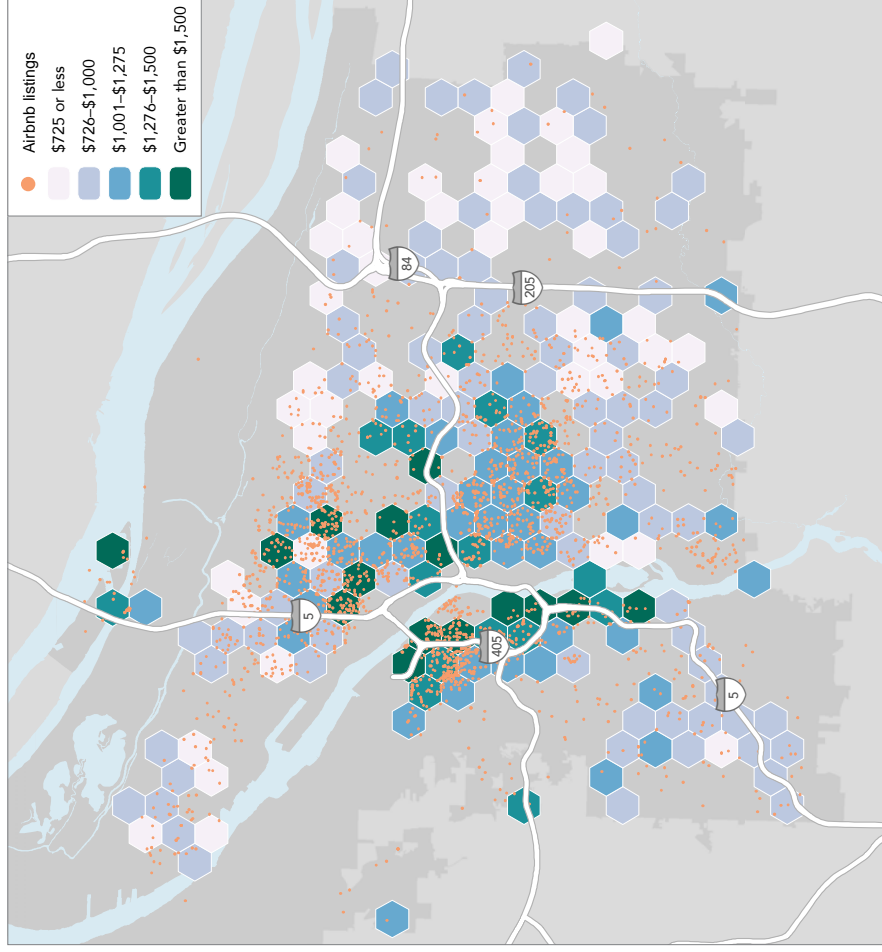


Source: Airbnb data on entire home listings active between August 2015 and July 2016.

*CoStar data for average 1-Bedroom Asking Rents, August 2016.

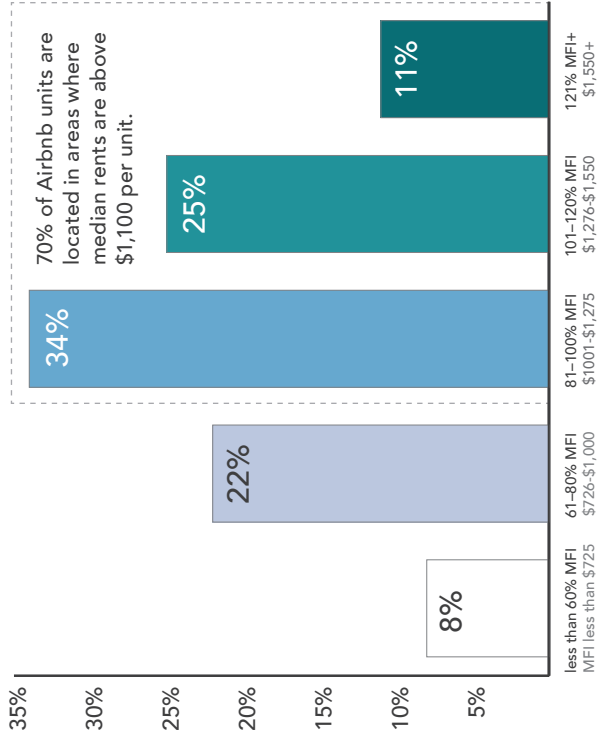
▶▶ The majority of Airbnb listings would not otherwise be affordable housing units.

Average Apartment Rents (all units) and Density of Airbnb Listings, All Units



Source: ECONorthwest using Airbnb listing data and CoStar data from August 2016 for all units within aggregated hexagonal geographies across Portland. CoStar was selected as a data source because it provides data regarding the greatest number of buildings to allow for a city-wide analysis. CoStar does not capture rent from units in single-family homes.

Percent of Airbnb Listings by Average Long-Term Rents (One-Bedroom Units) by Neighborhood



share of listings by neighborhood income

Source: ECONorthwest, using Airbnb listing data and CoStar asking rents for one-bedroom apartments in buildings with ten units or more from August 2016 for all units within aggregated hexagonal geographies across Portland. CoStar was selected as a data source because it provides data regarding the greatest number of buildings to allow for a city-wide analysis. CoStar does not capture rent from units in single-family homes.

How affordable rents are calculated:

$$\begin{aligned}
 & \$73,300: 2016 \text{ MFI for a family of four} \\
 & \times \\
 & 30\%: \text{Share of income a family at 100\% MFI can pay for rent} \\
 & \times \\
 & 75\%: \text{HUD allowance for a one-bedroom apartment, with utilities} \\
 & \hline
 & \$100 \text{ utility allowance} \\
 & \hline
 & 12 \text{ months}
 \end{aligned}$$

Affordable one-bedroom apartment at 100% MFI: \$1,274
 Other affordability thresholds for a one-bedroom apartment:
 ■ At 120% MFI: \$1,549
 ■ At 80% MFI: \$1,000
 ■ At 60% MFI: \$825

Source: <https://www.portlandoregon.gov/phb/article/522288>

▶▶ Short-term rental income can incent long-term housing creation.

Portland has seen a rapid growth in the construction of ADUs since 2010 when the City of Portland waived SDCs in a policy decision to promote infill development. Some hosts on the Airbnb platform may have created units with the intent to recoup their initial investment in building the unit by renting it on short-term rental platforms like Airbnb. Airbnb completed a comparison of entire home listing addresses with building permit locations for new legally-permitted ADUs in Portland. Airbnb found that there are currently 257 active Airbnb entire home listings that are permitted ADUs. Fifty-one of those units (20%) were rented more than 180 nights per year.⁵ Airbnb found that 90% of entire home units that are permitted ADUs were constructed since 2008. Some of these units were likely never continuously part of the long-term rental supply.

While we do not know for certain what motivated those property owners to invest in creating a new ADU, given the timing of the investment and their choice to rent them on Airbnb, it seems reasonable to assume that some combination of reduced SDC fees and potential income from Airbnb incented their development.

A 2014 Oregon Department of Environmental Quality survey found that 80% of ADUs are used as long-term housing.⁷ Given overall trends for Airbnb, it is likely that many units created for the initial use on the site will likely convert to long-term units in the future, and that but for revenue recoupment on Airbnb, many of these units may not have been constructed. This flexibility is one of the most attractive reasons for homeowners to invest in an ADU and to add to the City's eventual long-term housing stock.

ADU Permits by Status, 1995–2016, City of Portland



Source: City of Portland Open GIS. Permits that are issued, under inspection, and finalized are included. Permits that are still under review are not. This explains fewer permits shown for 2015. SDCs have been waived for new ADUs since 2010.

► Drivers of the Regional Housing Market

The primary drivers of the housing market and pricing in the Portland region are demand for housing (which is outpacing the growth of the housing supply), zoned capacity for new development, the availability of land, and rising costs of construction. Given these larger dynamics and the scale of Airbnb's impact on available supply, we see little evidence that Airbnb is a meaningful driver of Portland's affordable housing problem. We summarize the factors that drive the housing market below.

Demand	Supply
<ul style="list-style-type: none"> ■ The Portland MSA population has grown by 7% since 2010, faster than the U.S. growth rate of 4%. Since 2010, 164,000 people have moved to the Portland MSA. Of those, 30% (48,500) moved to the City of Portland.* ■ Many new residents are high-wage earners (mainly in high tech). Of the new jobs created in Portland between 2010 and 2014, 30,000 jobs had a salary of \$100,000 or more.⁸ While many new residents rented some of the newer luxury apartments in the Central City, they also displaced long-term residents who were unable to keep up with rents. ■ Rents have increased quickly as a result of this population increase. The average monthly rent for a one-bedroom apartment in the City of Portland as of September 2016 was \$1,250 (an increase of 58% since 2010).⁹ To afford that, a renter household would need to earn 92% percent of regional MFI. ■ Overall household sizes have increased, as a result of increased housing prices and a lack of supply. Since 2010, the Portland MSA's average household size increased from 2.57 to 2.65. 	<ul style="list-style-type: none"> ■ The Portland region did not build enough units during the recession to account for population growth. The Oregon Office of Economic Analysis reported in 2015 that the Portland MSA underbuilt by 23,000 units from 2006 to 2015.¹⁰ Undersupply is a major driver of price increases. ■ Construction costs and fees have made development more expensive. Construction costs for apartment building types have risen since 2010. This is due to increased labor prices, materials costs, and permit costs. ■ Regulations (Permits and Fees) also impact development costs. Increased development standards, systems development charges, and fees all increase the cost of development and can hinder the development of new housing in some cases.

*U.S. Census 2010 and American Community Survey 2015 1-year estimates for the Portland MSA and the City of Portland.

► Implications for Affordability

The results of our analysis show that Airbnb's activities in Portland do little to worsen our current affordability crisis. If all of Airbnb's entire home unit hosts were to suddenly decide to stop renting on Airbnb, it would do very little, if anything, to affect the trends that are driving rising rents. This analysis, together with other analyses conducted by Airbnb, does point to ways in which Airbnb relates to long-term affordability goals:

Lodging tax revenues can help to fund affordable housing. In November 2015, the City Council approved shifting the short-term rental portion of transient lodging tax resources from the General Fund to the Housing Investment Fund. This transfer will receive an annual cost of living adjustment, and is limited to 0–60% MFI housing purposes. The FY 2016-17 budget reflects the securitization of this revenue stream (approximately \$14 million) for the purpose of acquiring property for use in building affordable housing at 0–60% MFI levels, primarily outside of urban renewal areas.¹¹

Short-term rentals provide income and housing security to many hosts. In some cases, the ability to rent on Airbnb can provide the economic stability for people to stay in their homes. Based on Airbnb survey data, 55% of Airbnb hosts indicated that they relied on Airbnb income to make ends meet while 7% of hosts earned money through Airbnb as their primary income.¹²

Portland's neighborhood business districts benefit from the spending from short-term rental guests. Airbnb's research has found that guests in Portland tend to spend more and stay longer than hotel guests.¹³

Housing market dynamics are more complex than Airbnb. Airbnb has only minimal impact on the housing market, given its complexity and scale. Policies with the biggest impact will include tenant protections, land banking, the proposed housing bond, and inclusionary zoning.

Short-term rental units can help to spur the creation of infill development. Initial Airbnb analysis shows a tangible investment effect due to homeowners' ability to rent ADUs as short-term rentals. This can translate into long-term housing unit creation as homeowners make back their initial investment and transition the unit to other uses.

This analysis was completed at a point in time. If Airbnb's activities were to grow significantly, the supply-side impacts could become more substantial. It is worth watching these trends. However, there are natural limits to the size of the hospitality market that will probably always keep short-term rental units a relatively small portion of the overall housing supply. Policymakers should consider trade-offs between the benefits of short-term rentals and a relatively small impact on overall affordability.

►► Endnotes

1. A commonly used threshold assumption for determining whether a unit as a full-time short-term rental unit. This is explored in more detail in the main body of this report.
2. "2016 HUD Median Family Income and Rent," City of Portland, <https://www.portlandoregon.gov/phb/article/572034>.
3. The City of Portland had 274,917 housing units in 2015, according to the Census American Community Survey 2015 one-year estimates, which was the most recent housing unit estimate available as of August 2016.
4. This is based on the maximum rent and utilities amount affordable to a household making 80% of the MFI for a one-bedroom unit, per HUD's 2016 guidelines for the City of Portland.
5. This includes current active entire home listings. For the Accessory Dwelling Unit data, Airbnb used City of Portland Open GIS data for permits that have created one or more new residential units from January 1995 to May 2016. These data are derived from the Bureau of Development Services permitting database (TRACS). Geocoded to taxlot centroids or street address when taxlot information is not accurate or available. The data can be found at <http://gis.pdx.opendata.arcgis.com/>.
6. "Airbnb Community Gives a Boost to the Portland Economy," Airbnb.com, September 6, 2016, <https://www.airbnbaction.com/airbnb-community-gives-a-boost-to-the-portland-economy/>.
7. Palmeri, Jordan, "Accessory Dwelling Units in Portland, Oregon," (2014) Oregon Department of Environmental Quality, <http://www.deq.state.or.us/lq/sw/docs/SpaceEfficient/adusurveyinterpret.pdf>.
8. Baker, Dean, "Economist sees positive Portland job growth, not so much for nearby areas," Portland Tribune, January 19, 2016, <http://portlandtribune.com/pt/9-news/289434-166077-economist-sees-positive-portland-job-growth-not-so-much-for-nearby-areas>.
9. CoStar data for apartments within the City of Portland, December 2010 to December 2015. Buildings with 10 units or more.
10. Lehner, Josh, "Portland housing update – Are things okay?" *Oregon Economic Analysis Blog*, March 23, 2015, <https://oregoneconomicanalysis.com/2015/03/23/portland-housing-update-are-things-ok/>.
11. "City of Portland Adopted FY 2016-2017 Budget," City of Portland, Page 369, <https://www.portlandoregon.gov/cbo/article/583311>
12. Airbnb host survey data of 142 Portland hosts from 2016.
13. "Airbnb Community Gives a Boost to the Portland Economy," Airbnb.com, September 6, 2016, <https://www.airbnbaction.com/airbnb-community-gives-a-boost-to-the-portland-economy/>.



When Tourists Move In: How Should Urban Planners Respond to Airbnb?

Nicole Gurran & Peter Phibbs

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When Tourists Move In

How Should Urban Planners Respond to Airbnb?

Nicole Gurran and Peter Phibbs

Problem, research strategy, and findings: The online accommodation platform Airbnb has expanded globally, raising substantial planning and regulatory concerns. We ask whether Airbnb rentals generate significant neighborhood impacts like noise, congestion, and competition for parking; reduce the permanent rental housing supply and increase rental prices; or provide income opportunities that help “hosts” afford their own housing. We focus on Sydney, the largest region in Australia with 4.4 million people in 28 individual municipalities, which has experienced both rapidly rising housing costs and exponential growth in Airbnb listings since 2011. Airbnb’s growth has raised concerns serious enough to result in a formal Parliamentary Inquiry by the state of New South Wales. We analyze stakeholder submissions to this inquiry and review local planning regulations, Airbnb listings data, and housing market and census statistics. We find that online homesharing platforms for visitor accommodations blur traditional boundaries between residential and tourist areas so Airbnb listings may fall outside of existing land use regulations or evade detection until neighbors complain. Our findings are constrained by the difficulties of monitoring online operations and the rapid changes in the industry.

Takeaway for practice: Planners and policymakers in cities with increasing numbers of Airbnb rentals need to review how well local planning controls manage the neighborhood nuisances, traffic, and parking problems that may be associated with them while acting to protect the permanent rental housing supply. Local planners need to ensure that zoning and residential development controls distinguish between different forms of short-term Airbnb accommodation listings and their potential impacts on neighborhoods and housing markets.

Keywords: Airbnb, land use planning, housing supply, housing affordability

Housing affordability pressures afflict the world’s major cities, while spare capacity within existing dwellings lies untapped. Proponents of the burgeoning “share economy” claim the movement can address both of these problems by releasing latent space within existing buildings through services such as Airbnb, an online platform allowing residents to raise income by offering their homes as short-term rental accommodations (Shareable and Sustainable Economies Law Center, 2013). Airbnb invites tourists to “live like a local,” implying that guests impose no additional burdens on neighbors and communities while bringing new income to local hosts and businesses (Khadem, 2016; Morris, 2016). Critics, however, argue that Airbnb has enabled tourism accommodations to penetrate residential neighborhoods, which creates conflicts between visitors and residents, displacing permanent accommodations in high-demand cities and exacerbating affordability pressures for low-income groups (Brousseau, Metcalf, & Yu, 2015; New York State Attorney General, 2014). Online holiday rental platforms such as Airbnb raise important questions for urban policymakers and planners about how effective existing planning controls on tourist and residential accommodations are and the extent to which increasing tourism demand puts pressure on the local housing market. Yet there is little academic research on the rise of Airbnb and its implications for urban policy and planning.

In this study, we begin to address this gap, focusing on Sydney, Australia, the largest city and region in the country, covering 4,775 square miles and housing more than 4.5 million people in 2011 in 28 individual municipalities. Housing prices have been increasing rapidly in the region: The median housing price in Sydney recently reached AUD\$900,000 (US\$684,000; Australian Bureau of Statistics [ABS], 2015). Airbnb listings in Sydney have also grown rapidly since spreading to Australia in 2011, more than doubling each year to 15,648 properties in January 2016. Airbnb listings now extend well beyond the traditional tourist destinations of Sydney’s inner and beachside areas. We

About the authors: **Nicole Gurran** (nicole.gurran@sydney.edu.au) and **Peter Phibbs** (peter.phibbs@sydney.edu.au) are professors of urban and regional planning at the University of Sydney, Australia.

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ask whether the rise of tourism in residential areas, facilitated by online platforms such as Airbnb, generates negative neighborhood impacts that require a new land use planning response. We also consider the potential impacts of Airbnb rentals on permanent housing supply and affordability, asking whether Airbnb is creating pressure on Sydney's permanent rental housing supply or, conversely, offsetting housing affordability pressures for "hosts" who rent rooms or beds to tourists.

Our sources include written submissions to a New South Wales (NSW) Inquiry on short-term holiday rentals (Parliament of NSW, 2015); a review of Sydney's land use planning regulations that apply to visitor accommodations; listing data from the independent source InsideAirbnb.com; and statistics on rental vacancy rates, monthly mortgages, and rents. We apply our analysis to greater Sydney overall and a subset of five municipalities in the Sydney metropolitan area to examine potential differences in Airbnb listings and revenue across the metropolitan region. Our empirical findings relate only to the Sydney region, but we believe they are likely to resonate in other cities affected by the global expansion of Airbnb listings.

We first summarize the brief scholarly literature on Airbnb and its potential impacts on local communities, then explain our study approach and data sources in more detail. Next, we discuss the growth of Airbnb in Sydney and question Airbnb's impact on residential neighborhoods, effect on the permanent housing supply, and whether hosts gain sufficient income to offset their own affordability problems.

We find that local land use planning frameworks are not equipped to regulate the new forms of visitor accommodations enabled by the Airbnb platform or the potential conflicts arising from increasing numbers of tourists staying in Sydney's residential areas. Not all forms of online homesharing have created serious impacts since 2011; converting whole houses or apartments into short-term visitor accommodations may most disturb residential communities and reduce permanent rental housing, absorbing 7% of stock in one Sydney municipality. The opportunity to raise additional income in flexible ways does appear to benefit some households able to present an attractive Airbnb listing; these households may gain almost a fifth of their median monthly rental or mortgage costs. But participating in Airbnb is unlikely to improve affordability for those with very low incomes. We conclude that local planners will need to revise zoning and residential development controls to distinguish between different forms of short-term accommodation listings enabled by Airbnb and to manage their differential impacts on neighborhoods and permanent rental housing.

The "Share Economy," Airbnb, and Urban Planning

What Is Airbnb?

Airbnb is part of a growing movement variously dubbed the "sharing," "peer-to-peer," or "digital" economy, which uses advanced technological platforms to enable new operators to compete with traditional "brick and mortar" businesses (Morgan & Kuch, 2015; Orsi, 2013). Airbnb was founded in 2007 by two university graduates who reportedly offered air mattresses on the floor of their San Francisco (CA) apartment to conference delegates wanting to save money (Guttentag, 2015). The concept grew slowly at first, reaching a million booking nights by February 2011, primarily through listings in New York and San Francisco. By January 2012, Airbnb bookings and listings had grown tenfold, spreading rapidly beyond the United States. By August 2016, more than 2 million Airbnb listings were located in 34,000 cities and 191 countries across the world (Airbnb, 2016), with the highest numbers concentrated in Paris, France (78,000), London, United Kingdom (47,000), New York (46,000), Rio de Janeiro, Brazil (26,000), Los Angeles, California (23,000), and Sydney (more than 20,000 by August 2016; McCarthy, 2016). Airbnb's property and room listings now rival the world's largest hotel firms (Guttentag, 2015; Zervas, Proserpio, & Byers, 2014), although its assets remain dispersed and virtual.

Published academic studies on Airbnb come primarily from tourism researchers (Boswijk, 2016; Guttentag, 2015; Zervas et al., 2014), although there have been a handful of legal papers addressing the regulation of the share economy overall (Morgan & Kuch, 2015) and short-term rental accommodations in particular (Gottlieb, 2013; Palombo, 2015). A single study examines Airbnb impacts on Los Angeles' permanent housing supply (Lee, 2016).

Guttentag (2015) describes Airbnb in a review article as an "informal tourism accommodation sector" that has significant disruptive potential. Airbnb enables individuals to compete with hotel operators without major overhead or investment by connecting ordinary people who have homes or rooms to rent with tourists in ways previously not possible (Guttentag, 2015). Airbnb's pervasive marketing extends the potential reach of the sector far beyond that of traditional holiday rental homes and enables several new forms of accommodation. First, individuals can rent out a spare bed in a living area or room within their own house or apartment, remaining present during the visit. Second, people might list their homes for rent while they are away. Third, owners of holiday houses might make their property

available for others when not in use. Finally, investors might use Airbnb to market homes that are solely reserved for short-term tourism accommodations.

What Are Airbnb's Impacts?

The economic impacts of Airbnb are contentious. Airbnb, which has invested considerable resources in commissioned studies and professional lobbyists (Guttentag, 2015), insists that online homesharing expands the tourism market rather than competing directly with hotels for the same customers. Airbnb also argues that homesharing visitors are likely to stay longer, spend more money overall, and bring new income to local neighborhoods (Boswijk, 2016). Independent studies, however, suggest that Airbnb listings will have negative impacts on local hotel revenue, particularly those at the lower end of the market, hurting established local providers and their employees (Boswijk, 2016; Guttentag, 2015). Zervas et al. (2014), in the most comprehensive study to date, compares Airbnb listings in Texas against the quarterly revenue of Texas hotels, finding that a 1% increase in Airbnb listings was associated with a 0.05% decrease in hotel income. Hotels at the lower end of the market, particularly venues without conference space, were the most affected. Airbnb's negative economic impacts on established local firms and their employees, however, may be offset by flexible expansion of tourism capacity during periods of peak demand, such as during conferences or conventions (Guttentag, 2015), or, as the company claims, by spreading tourist expenditure to new areas (Airbnb, 2014, 2016). Empirical evidence of economic benefits in non-tourism areas, however, remains limited (Boswijk, 2016).

There are extensive media reports on conflicts between local residents and Airbnb visitors and how cities are beginning to respond (Kelly, 2016; Khadem, 2016; Morris, 2015; Williams, 2016). New York City, concerned about the impacts of Airbnb on rental housing stock and affordable housing, was one of the first cities to seek to limit the spread of Airbnb (Zervas et al., 2014). It violates New York City laws to rent a whole home or apartment for less than 30 days via Airbnb, or any other means, but detecting illegal stays and prosecuting hosts (often commercial operators who own multiple properties) are extremely difficult (New York State Attorney General, 2014). The city of San Francisco now manages the potential loss of permanent rental accommodations (through their conversion to Airbnb rentals) by requiring Airbnb hosts to register with the city and by limiting sharing to short periods of time, provided that the hosts themselves reside in the dwelling for at least 275 days per year (City and County of San Francisco, 2014). Portland (OR) has added

an additional zone to its planning code, the accessory short term rental (ASTR; City of Portland, 2016). The city stipulates that this land use is an accessory to the normal residential purpose and that the dwelling has to be occupied by the host for at least 270 days per year. Portland, to manage impacts on multiunit apartment buildings, requires an ASTR permit and limits the proportion of dwellings with the permit to 25% of the dwellings in any one structure. The Airbnb system, however, requires hosts to voluntarily complete the permit process themselves, and observers have charged that the hosts rarely comply (Monahan, 2016). In Los Angeles, criminal proceedings have been brought against a landlord accused of evicting permanent tenants to establish an Airbnb rental. The practice, however, is thought to be widespread and difficult to detect and prevent (Poston, 2016). New startup companies have begun to assist in detecting these illegal holiday rentals by examining Airbnb listing data to identify information that they sell to city officials or landlords (Kelly, 2016).

Airbnb insists that hosts are responsible for understanding and complying with any applicable local controls or taxes applying to short-term tourist accommodations (Airbnb, 2016), while generally lobbying against stringent regulations (Airbnb, 2015; Guttentag, 2015). Proponents argue that the Airbnb market imposes a form of self-regulation on the quality of advertised accommodations and the trustworthiness of hosts and guests and suggest that there is no need for government intervention (Guttentag, 2015). Both guests and hosts rate each other on publicly accessible online reviews, which creates strong market-driven incentives to build and maintain a positive reputation, establishing the mutual trust essential to the business model (Boswijk, 2016). In 2016, Airbnb established an online facility for neighbors to complain about visitor behavior (<https://www.airbnb.com.au/neighbors>), promising that grievances will be forwarded to hosts.

Voluntary and market regulation, however, misses many of the traditional concerns that land use planners have about tourism accommodations, such as the opportunities to spatially cluster tourist facilities and services; the management of traffic, parking, and waste; building and urban design requirements to attenuate noise and privacy impacts; appropriate fire, safety, emergency, and disability access requirements; and likely levels of occupancy and potential overcrowding (Palombo, 2015).

Voluntary codes and market approaches to regulating online homesharing platforms, moreover, will not address concerns that permanent rentals are being converted to tourist accommodations. Indicators that conversions may be occurring include the number of listings held by a single

operator and frequently available to tourists (McCarthy, 2016), potential Airbnb revenue (nightly rates and monthly incomes) compared with permanent weekly rents (Cox, 2016), and the location of Airbnb listings in residential areas. Spatial analyses of listing data also provide evidence of tourist encroachment into residential neighborhoods, as demonstrated in a geographic information systems (GIS)-based study of Airbnb in Barcelona (Gutiérrez, Carlos García-Palomares, Romanillos, & Henar Salas-Almedo, 2016).

Lee (2016) examines Airbnb listings, census and municipal data relating to the city of Los Angeles, and county housing markets to understand Airbnb's impacts on rental supply and affordability. Lee finds that 7,316 units of accommodation had been removed from the city's rental market, with particular pressure in beachside neighborhoods such as Venice, where up to 12.5% of the neighborhood's apartments were listed on the platform. The study uses rental vacancy rates as an indicator of supply pressures to understand the impact of Airbnb conversion on rental housing affordability. This is an established housing market indicator that measures vacant rental stock available for rent as a proportion of the total rental stock. The equilibrium vacancy rate is defined as the vacancy rate at which there is no upward or downward pressure on rents (Belsky, 1992). If the vacancy rate becomes lower than the equilibrium rate, renters will compete with each other to secure rental property, pushing up rents. If the vacancy rates are higher than the equilibrium rate, there will be downward pressure on rents as landlords reduce rents to ensure their properties do not remain vacant. Belsky (1992) demonstrates how this equilibrium rate varies between cities, largely because of the nature of landlords. In the Sydney housing market, for example, this rate is estimated to be about 3% (Real Estate Institute of NSW [REINSW], 2016).

When rental vacancy rates are lower than or close to the equilibrium rate, even small changes in rental stock can materially affect rents (Centre for Affordable Housing, 2015). In Los Angeles, for example, Lees (2016) finds that up to 3% of apartments in districts with vacancy rates lower than the equilibrium rate have been removed from the market, which, given the time taken to construct new housing stock, would constitute a sudden supply shock and lead to upward pressure on rents.

Proponents also claim householders that rent out their homes can earn vital income that helps them afford their own rents or home mortgages, allowing them to remain in high-value locations (Airbnb, 2014; Guttentag, 2015). No academic research has yet examined this claim, but the potential pool of homeowners or renters able to achieve these benefits is likely limited. Those with poor computer

skills or no Internet access, for example, are less able to participate in the "digital economy" in general, whereas successful Airbnb listings will depend on the individual characteristics of homes (appearance, presentation, location, facilities) and the households themselves (Edelman & Luca, 2014).

In summary, there is only nascent scholarly research on the specific neighborhood and housing market impacts of Airbnb rentals, and the ways in which these impacts are managed by local land use planning frameworks. Review articles from tourism researchers (Guttentag, 2015) provide an overview of key issues, but questions remain about the specific impacts in residential and neighborhood settings, and whether modifications to existing land use planning frameworks are needed to manage these impacts. Specific cities have been concerned that Airbnb and other online short-term rental accommodation platforms will increase pressure on the local housing market, but the research literature is thin, meaning that wider applicability to other cities and contexts is unclear. The possibility that Airbnb-style platforms might also help some households meet their own housing costs, as Airbnb claims (Airbnb, 2014), warrants further examination. If short-term visitor hosting is potentially beneficial for income-constrained households seeking to meet rent or mortgage payments, planning and regulatory responses should be designed to support these opportunities while minimizing impacts on neighboring residents.

Investigating the Impacts of Airbnb in Sydney

Australia's largest city, Sydney, in the state of New South Wales (NSW), is the nation's economic center and the Asia Pacific headquarters for many global firms. It is also a focus for domestic and international tourists, receiving 32.5 million visitors in 2013 and 2014 (Ironsides, 2015). There are 28 local government areas in the region, called councils or shires, which are similar to London's boroughs. Sydney's house prices are high by international standards and have risen rapidly since 2013 from a median of around AUD\$600,000 to AUD\$900,000, more than 10 times the median annual income (ABS, 2015). There are inherent housing supply constraints against this strong demand. Employment opportunities tend to be concentrated in the city center and surrounding inner neighborhoods (called "suburbs" in Australia), which have undergone rapid densification in the form of new medium- and high-rise apartment buildings. Demand for accommodations in inner locations, however, continues to outstrip

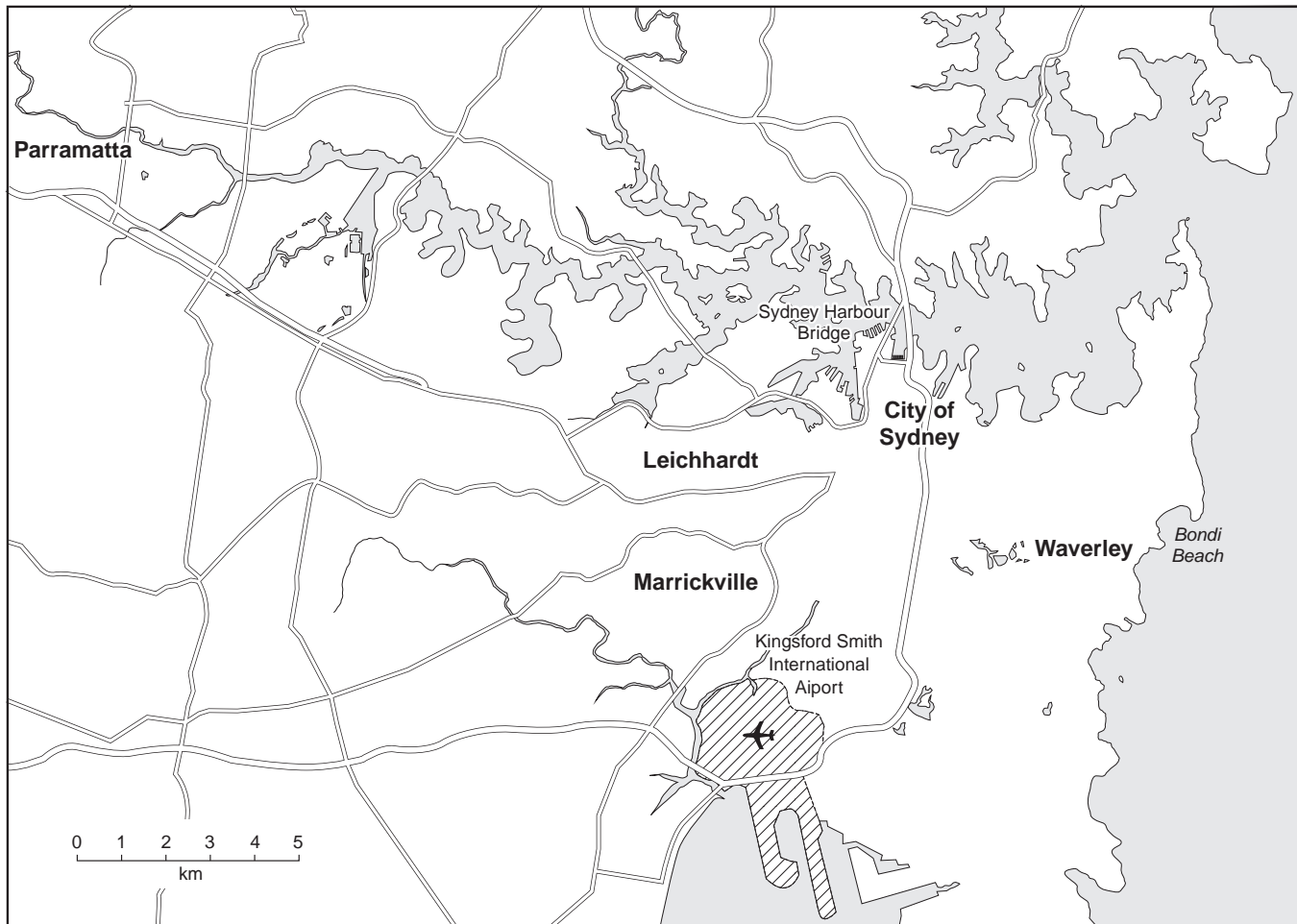


Figure 1. Greater Sydney, Australia.

supply (Shelter NSW, 2014). Many of these inner suburbs are located near Sydney's harbor and beaches, so they are also a focus for international tourists. Figure 1 shows the tourist focal points of Sydney Harbour and Bondi Beach, as well as the city's wider metropolitan context.

There has been a steady loss of existing lower-priced housing stock in Sydney's inner suburbs since the late 1980s, when developers began to convert older buildings into budget tourist accommodations (known as "backpacker" hostels; Peel & Steen, 2007). Attempts to control this process through the planning system have improved safety standards and restricted the location of these hostels to designated areas, although the loss of low-cost rental housing has continued. Thus, the entrance of Airbnb in Sydney occurred within a local context already concerned by the intrusion of tourists in residential areas.

In late 2015, the NSW Parliament launched an inquiry into the adequacy of regulations on the short-term rental sector, partly in response to concerns about the spread of online visitor accommodation platforms such as

Airbnb. The inquiry invited public submissions and held a series of hearings. The inquiry was not finalized by the time of this writing; however, many of the 212 written submissions provide primary insights on the impacts of Airbnb rentals for local communities and the views of local planners on the regulatory framework. We select nine submissions for detailed analysis, including four written by local planners on behalf of their municipalities and one by the representative body for NSW local government; another by a network of individuals owners concerned about short-term renting in their apartment buildings; and three submissions on behalf of online holiday rental providers and advocates, including Airbnb. Three of the local government submissions correspond with our sample of Sydney municipalities, and the fourth (Blue Mountains City Council) is a popular tourist area on greater Sydney's western fringe. We focus on the types of impacts attributed to online holiday rentals, the extent to which these differ from impacts associated with traditional tourism or residential activities, and views about the adequacy of existing state and local planning controls.

Land use planning across the greater Sydney metropolitan area is governed by the State of NSW and implemented by local government municipalities.¹ State legislation establishes the parameters for comprehensive local plans, which include land use zoning and development controls generally drafted by local government. To determine how tourism and residential activities are regulated in this planning framework, we review written evidence provided by local planners and undertake a primary review of state and local controls applying to five local municipalities across the Sydney metropolitan area. These include the city of Sydney itself, which encompasses the central business district as well as tourist attractions like the Harbour Bridge; the municipality of Waverley, which covers the iconic Bondi Beach; Marrickville and Leichardt municipalities, which have traditionally accommodated recent immigrants, students, and urban professionals; and Parramatta, a major commercial center in Sydney's geographical heart. The locations of these municipalities in relation to key tourist attractions and the wider metropolitan context are shown in Figure 1.

We use Inside Airbnb (InsideAirbnb.com) data to establish the quantity and type of listings across the Sydney metropolitan area. InsideAirbnb.com is a noncommercial source of data derived from publicly available information on Airbnb listings. The data are extracted and compiled by independent researcher Murray Cox (2016), providing point-in-time information (January 2016) on the number of Airbnb listings by geographic area (corresponding to suburbs and local government municipalities for Sydney); advertised availability (as a fraction of 365 days); the number of Airbnb listings per host; nightly prices; and reviews per month. This data source has some critical limitations: As with any online advertising, there is the potential for outdated or "bait and switch" listings (advertising of properties that upon investigation are not actually available). Nor is it possible to determine whether properties listed have long been available for short-term holiday renting, or as conventional bed and breakfast accommodations that now use the Airbnb platform for marketing and booking. Nevertheless, the data provide a useful basis for examining and monitoring Airbnb practices and penetration across local and regional housing markets; it is the primary data for two of the studies we cite above (Gutiérrez et al., 2016; Kakar, Franco, Voelz, & Wu, 2016).

We also examine the composition of listings (whole houses or apartments, rooms, and shared rooms) to distinguish between Airbnb accommodations where hosts rent some spare rooms in their property on a casual basis

versus a landlord who lets out an entire property for most of the year.

Rental vacancy rates provide a baseline measure of the potential housing market impact of Airbnb listings. The literature reports on the vacancy rate approach; it is used in the study of Airbnb and housing impacts in Los Angeles (Lee, 2016). We derive vacancy rate data pertaining to Sydney monthly from permanent rental advertisements data as a proportion of the total rental stock in each municipal area (REINSW, 2016). Inside Airbnb data also provides information about the proportion of listings managed by a single operator, which we use as an alternative measure of potential for Airbnb listings to encroach on permanent rental supply.

We use census data (ABS, 2012) on median monthly mortgages and state government data on median monthly rents to examine whether Airbnb income might help hosts meet their own housing costs, comparing the census data with average monthly incomes from each Airbnb accommodation type. Census data are the most definitive source of information on monthly mortgages by municipality although only median amounts are reported; we note that these may be lower than new mortgages and loans held by first-time homebuyers. We are not able to explore the possibility that Airbnb revenue potential may become capitalized into house prices and rents using the current data set, but we could do so when longitudinal information becomes available.

Do Airbnb Rentals Require a New Land Use Planning Response?

Table 1 summarizes our findings in reviewing selected submissions to the NSW inquiry on short-term holiday accommodations. All of the local government submissions report that noise, nuisance, traffic, parking, and waste management issues may arise when short-term holiday accommodations penetrate residential areas. Larger groups typically prefer holiday homes or apartments, thus increasing the potential for noise impacts from parties and drunken behavior, as well as traffic and parking congestion (Thomas, 2015). In localities strongly oriented toward tourism, short-term holiday rental of residential homes is an established practice and largely welcomed (Rhodes, 2015). In higher-density metropolitan areas that already experience traffic and parking congestion, however, increasing numbers of tourists are often resented. Indeed, the submission by Leichardt City Council states that the onset of Airbnb rentals resulted in the rise of resident complaints about tourist behavior

Table 1. Submissions to New South Wales (NSW) inquiry on the regulation of short-term holiday accommodations.

Organization	Key issues
City of Sydney	<ul style="list-style-type: none"> • Current planning regulation has not kept up with the new business opportunities that online technologies enable • Frequent short-term letting without the presence of the primary resident changes the use of a residential property • Traditional tourism activities occur in buildings designed for that purpose in designated locations; online providers establish operations in residential buildings and neighborhoods • Low-impact lettings could be permitted within certain guidelines but higher-impact uses need regulation to separate them from residential areas
Leichhardt Municipal Council	<ul style="list-style-type: none"> • Growing number of resident complaints about Airbnb accommodations • Complaints may reflect unease with increased numbers of visitors within the neighborhood rather than significant noise or other impacts • Low-impact uses are unlikely to be detected • Planning regulations currently unclear
Waverley Council	<ul style="list-style-type: none"> • Limited supply of traditional holiday accommodations but high demand in Waverley means short-term rentals are penetrating permanent housing stock • Use of a property for short-term rental is incompatible with most residential zones, but detection and enforcement is difficult • Airbnb platform introduces potential for new and unregulated forms of budget “backpacker” accommodations • Pressure for short-term rental and backpacker housing will affect housing affordability
Blue Mountains City Council	<ul style="list-style-type: none"> • Holiday rentals are typically meant for friends and family (rather than a single or couple), and more people mean higher potential impacts (noise, antisocial behavior, parking problems, rubbish) • With an online booking system, scope for neighbors to complain is reduced • Bed and breakfast operators are onsite to moderate guest behavior
Local Government NSW	<ul style="list-style-type: none"> • Issues of short-term rentals longstanding in popular tourist destinations and generally tolerated • In more densely populated areas where parking and traffic congestion is already a problem, local residents are generally more negative about the rise of Airbnb • Planning issues are difficult to characterize because holiday uses may be intermittent and vary in intensity • NSW case law establishes that short-term renting of a house does not change its residential character
Stayz	<ul style="list-style-type: none"> • Airbnb has brought housesharing and short-term rentals into metropolitan areas in Australia in a much bigger way • Banning short-term holiday rentals or requiring complex regulation would drive the practice “underground” or reduce tourism from the area • Short-term holiday rental owners who use the Stayz platform maintain the property for personal use for part of the year, renting it out to cover costs
Owners Corporation Network	<ul style="list-style-type: none"> • Different building standards for fire safety are needed in apartment buildings catering to visitors, who are unfamiliar with emergency exits and protocols • Ever-changing strangers often have little regard for building security and etiquette • Short-term letting of apartments is associated with excessive noise, drunken behavior, garbage disposal issues, and violations of visitor parking restrictions
Sharing Australia	<ul style="list-style-type: none"> • Homesharing provides income for people who want to live in their own home and are often underemployed, self-employed, or retired • Voluntary self-regulation via a holiday rental code of conduct and certification/accreditation systems is preferable to government oversight
Airbnb	<ul style="list-style-type: none"> • Airbnb provides important income for hosts, allows them to stay “in communities” despite increased living costs • Neighborhoods which would not otherwise receive tourists benefit from visitor expenditure • NSW planning law is inconsistent and should clarify that residents can host short-term visitors • Local councils should introduce their own regulations for professionally operated holiday homes

from one in six months to a weekly occurrence (Richardson, 2015). Resident complaints reflect, however, a more general disquiet about the increasing presence of visitors in the neighborhood, rather than tangible noise or nuisances:

Significantly, the complaints are not about noise or outrageous behavior, but merely the perception that a new person or people are occupying the premises each week. It is the feeling of unease that the changing tide of faces brings on. (Richardson, 2015, p. 4)

Resident owners of apartment buildings express more specific complaints about the increasing prevalence of short-term guests, including garbage disposal and parking problems; they note that visitors often ignore security, fire, and safety protocols (Stiles, 2015).

There are mixed views about the need to modify local plans to better regulate short-term accommodations. Each of the local government submissions report that the current planning framework is inadequate because it does not define or regulate the types of activities now enabled by online accommodation listing platforms. Stayz.com suggests that complex regulatory requirements would drive practices “underground” (Stanish, 2015). Airbnb argues that NSW planning law is inconsistent between local government areas, calling for the government to clarify that residents can host short-term visitors, and advocating for local councils to introduce their own regulations for professionally operated holiday homes (Airbnb, 2015).

We examine the specific planning controls applying to our selection of local government areas to further explore these issues. In NSW, each local government is required to adopt zoning and development controls from a suite of state-specified mandatory and optional provisions, although cities have some discretion to enact their own specific regulations in response to local circumstances. These mandatory provisions are contained in the NSW Standard Instrument–Local Environmental Plan (Gurran, 2011). A number of categories of tourist and visitor accommodations are defined by this instrument, including “backpackers’ accommodation,” “bed and breakfast accommodation,” “hotel or motel accommodation,” and “serviced apartments.” Local governments are then able to assign these different types of accommodations to specific land use zones. The Technical Appendix (available at the publisher’s website) summarizes the NSW tourist and visitor accommodation types that most closely resemble offerings available via Airbnb, and

outlines the overarching state and local planning frameworks applicable to each.

All forms of tourist and visitor accommodations are regarded as a “development” and therefore require planning permission. If the activity is to occur within an existing dwelling, hosts must seek a “change of use” permission. “Bed and breakfast accommodation” is typically permitted within dwelling houses (not apartments) in lower-density residential zones, including our sampled municipalities, if operators obtain approval and pay a “development contribution” (akin to an impact fee) toward local facilities and services before starting business. The state’s law governing bed and breakfast accommodations specifies standards for the design of kitchens if operators intend to serve food, and require a designated bathroom for guests. Each local government area may also impose their own onsite parking requirements for bed and breakfast establishments that are often difficult to achieve in inner-city locations (Richardson, 2015). The locations in which the other forms of tourist accommodations (serviced apartments, backpackers, and hotels or motels) are permitted are restricted to zones permitting commercial and mixed uses only.

Several submissions by local planners focus on whether renting homes, rooms, or beds to tourists changes the fundamental use of residential housing to one of these forms of tourism accommodations, thus violating zoning rules (Maher, 2015; Thomas, 2015). Planners express the view that in general the intensity and frequency of holiday rentals are critical considerations. Occasionally renting a home while the occupants are away would not constitute a change of use from residential to tourism accommodation (Richardson, 2015) and should not usually require special permission. Nor would occasional periods of homesharing with paying tourists who occupy rooms or beds during certain times of the year. However, repeated listings (more than 90 days per year was a commonly cited threshold) combined with intrusive visitors—one potential test being noise or other complaints—could mean that the property is no longer being used for residential purposes (Thomas, 2015). Detecting and compiling evidence of the change of use is another matter; local governments report that they do not have the resources to track and enforce breaches unless violations are brought to their attention by residents (Waverley Council, 2016). Advocates for online accommodation providers, in contrast, argue for legal legitimacy through recognition in local plans but relief from intensive regulatory requirements. Airbnb argues that the government should clarify that residents can host short-term visitors, for example.

Do Airbnb Rentals Reduce the Supply of Permanent Rental Accommodations?

Several local government submissions to the NSW inquiry raise the issue of housing availability and affordability (Richardson, 2015; Thomas, 2015). Waverley Council in particular expresses concern about the loss of permanent accommodations for short-term holiday rentals or illegal backpacking hostels. Sharing Australia, an advocate for homesharing, however, emphasizes the potential income-generating opportunities for the underemployed or retired (Willmer, 2015). Airbnb argues in its submission that the platform allows hosts to “make ends meet, keeping residents in communities amid increasing living costs and income inequality” (Airbnb, 2015, p. 6).

We summarize in Table 2 the results of our own analysis of the potential for Airbnb rentals to affect the supply of Sydney’s permanent rental accommodations. Table 2 shows that nearly 1% of Sydney’s total dwellings and 3.26% of the total rental stock were available for short-term stays via Airbnb in late 2015; Figures 2 and 3 show whole-home listings, rooms, and shared rooms spread across the metropolitan region. Nearly a third of greater Sydney’s listings are held by individuals who own multiple properties; frequently listed

Airbnb rentals provide lucrative income, exceeding permanent rental income for greater Sydney by more than AUD\$600 per month. Combined, these indicators suggest that Airbnb rentals are likely to create upward pressure on Sydney’s rents.

Sydney’s equilibrium rental vacancy rate is approximately 3%, while the metropolitan-wide rental vacancy rate at the time of this analysis was 1.9% as a result of strong population growth. We calculate that the number of dwellings removed from the permanent rental market in the region amounts to about half of Sydney’s current rental vacancy rate based on the Inside Airbnb data on frequently available listings. We find that Airbnb listings do concentrate in popular tourist areas such as Waverley and the city of Sydney. In Waverley, the number of whole dwellings frequently available on Airbnb is more than three times the vacancy rate in the locality. This suggests that Airbnb rentals have a sizeable impact on the availability of permanent rental housing in the Waverley local government area with consequent pressure on rents. In the city of Sydney, a total of 1,268 properties, equivalent to 144% of the city’s vacant rental stock, are available for holiday rental via Airbnb, a figure we would also expect to substantially affect rental availability and costs. In Leichardt and Marrickville, the percentages are lower but not inconsiderable at 69% and

Table 2. Sydney Airbnb rentals, housing supply, and affordability indicators.

	Greater Sydney	City of Sydney	Waverley	Leichardt	Marrickville	Parramatta
Housing stock	1,720,333	73,171	24,874	21,320	29,976	63,484
Airbnb listings	15,648	4,221	2,807	412	586	120
Rental housing stock	480,608	43,793	11,620	8,649	12,891	22,286
Frequently available Airbnbs (whole homes)	4,667	1,268	821	120	114	23
Rental vacancy rates	1.90%	2.0%	2.0%	2.0%	2.0%	1.90%
Frequently available Airbnbs as a proportion of rental vacancy rates	51%	145%	353%	69%	44%	5%
Proportion of multiple listings	30.8%	44.3%	29.2%	14.3%	27.5%	81.8%
Median rent	\$2,040	\$2,960	\$2,920	\$2,760	\$2,200	\$1,800
Median mortgage	\$2,167	\$2,539	\$3,000	\$3,000	\$2,485	\$2,063
Airbnb monthly income, frequently available homes	\$2,663	\$2,866	\$2,947	\$2,659	\$1,875	\$1,756
Airbnb rooms/beds	5,938	1,657	994	158	316	84
Airbnb rooms/beds as a proportion of total housing stock	0.9%	2%	4%	1%	1%	0%
Airbnb rooms/beds, monthly income	\$385	\$499	\$294	\$532	\$376	\$281
Airbnb rooms/beds, monthly income as % of median rent	18.9%	16.9%	10.1%	19.3%	17.1%	15.6%
Airbnb rooms/beds, monthly income as % of median mortgage	17.8%	19.7%	9.8%	17.7%	15.1%	13.6%

Note: All in AUD\$.

Sources: ABS, 2012; Department of Family and Community Services, 2016; InsideAirbnb.com; BEINSW, 2016.

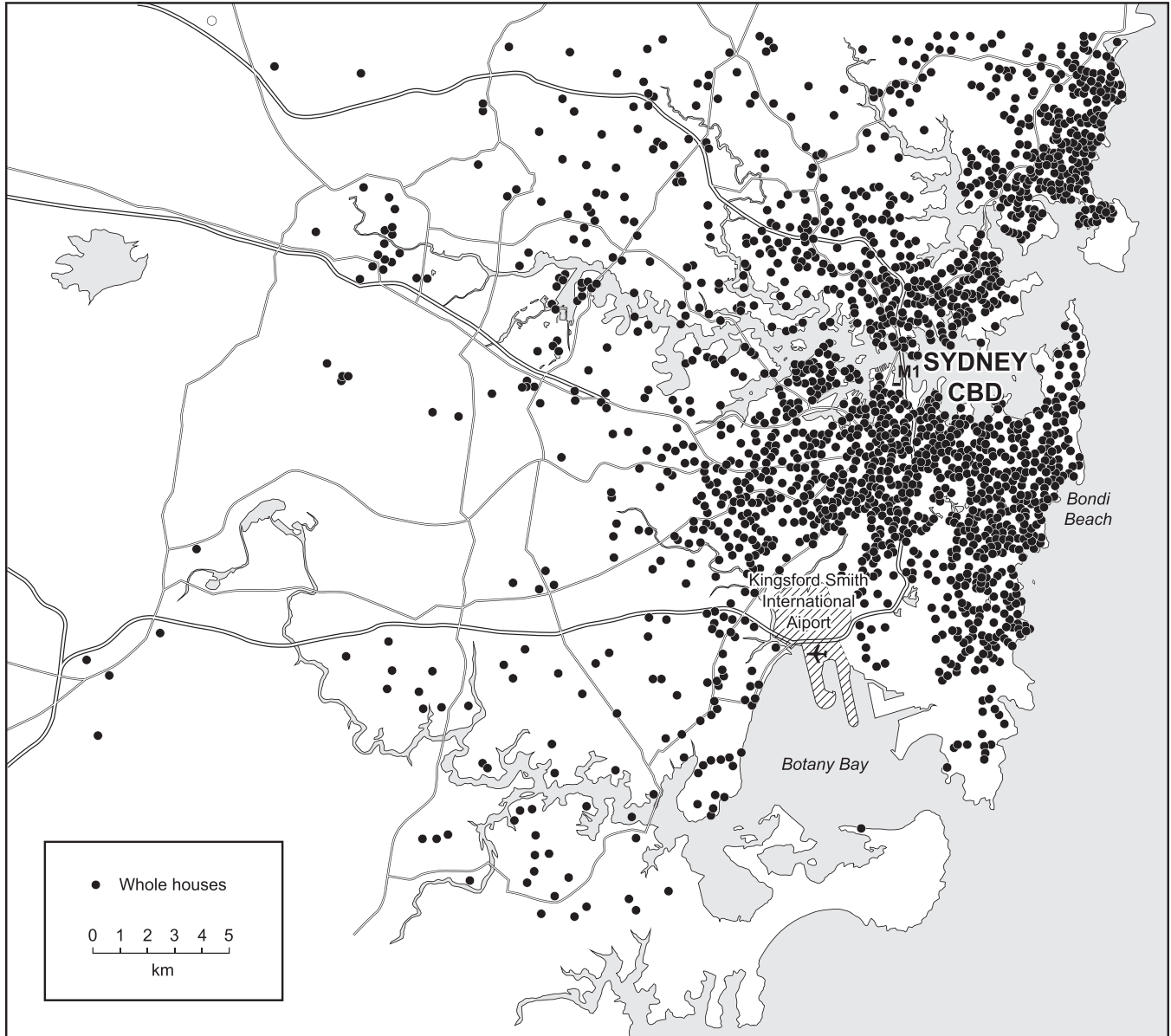


Figure 2. Whole-house Airbnb listings, January 2016.
 Source: Derived from Inside Airbnb, 2016.

44% of the vacant rental stock, respectively. However, the number of Airbnb listings in Parramatta is much smaller, likely reflecting the area’s distance from visitor attractions. Airbnb does not now affect Parramatta’s local housing market, even though Parramatta’s frequently available homes are controlled by landlords with multiple listings.

Does Airbnb Offer Flexible Income to Help “Hosts” Make Their Own Homes More Affordable?

Airbnb probably only assists people to meet their housing costs by sharing homes with tourists when the

host remains in the property and rents out rooms or beds. Sharing listings actually exceed Airbnb listings for whole dwellings in Sydney; Figure 3 shows that shared listings extend beyond the inner urban core. Online homesharing with tourists, however, does not appear widespread across the general population as a percentage of total stock (or households). The municipality of Waverley is the possible exception, where around 4% of households share their homes with fee-paying visitors. In the other sampled municipalities, homesharing via Airbnb is much less prevalent (from 2.3% in Sydney to 0.1% in Parramatta).

These findings suggest that only a small sector of the population benefits from Airbnb income, likely those able

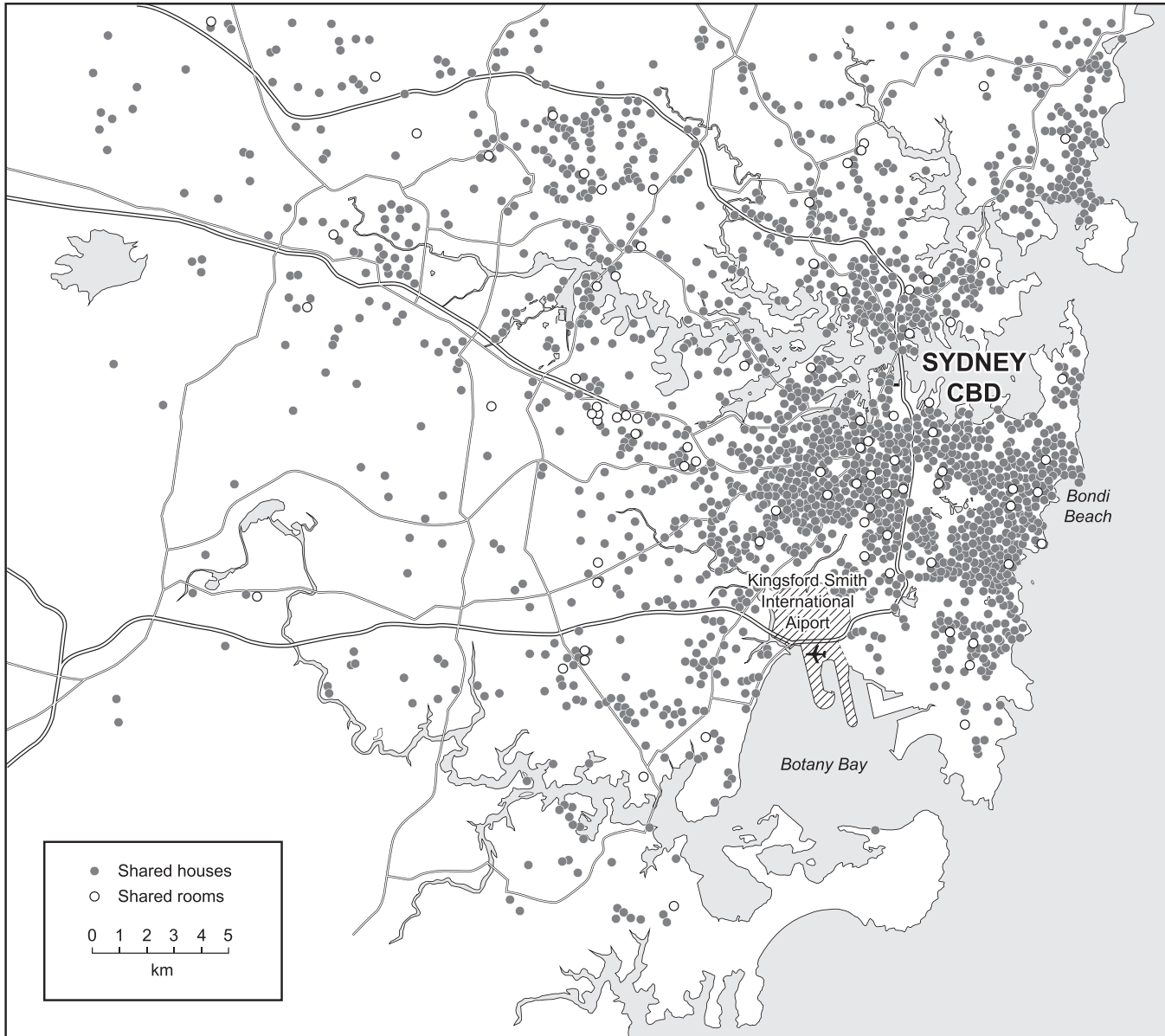


Figure 3. Airbnb rooms and beds, January 2016.
Source: Derived from Inside Airbnb, 2016.

and willing to present their homes in a way that is appealing to the online accommodation marketplace. Those who do list rooms and beds on Airbnb, however, are obtaining rental income equivalent to 10% to 19% of median rents and mortgages. In Waverley, where the practice is most prevalent, renters or homeowners receive around AUD\$294 per month, or 10% of municipal median rent or mortgage expenses. Airbnb rental income makes an even greater contribution to housing expenses in Leichardt and Sydney, rising to nearly 20%. The risk for aspiring home purchasers in these locations over time, however, is that this mortgage “relief” might become capitalized into housing prices, undermining any affordability benefits.

Conclusions: How Should Urban Planners Respond to Airbnb?

In this study, we examine the expansion of online visitor accommodation listings in the Sydney metropolitan region epitomized by the Airbnb platform, focusing on implications for urban policy and planning. We ask whether Airbnb rentals generate neighborhood impacts that require a new land use planning response; create pressure on the permanent rental housing supply; or offer flexible income to help hosts make their own homes more affordable. Our primary data sources include written submissions to a NSW inquiry on short-term renting, local planning controls on tourist and visitor accommodations for a selection of Sydney

municipalities, and InsideAirbnb.com listings and real estate data for late 2015 to early 2016. We note the limitations in these data sources, primarily arising from the difficulties of monitoring online operations and of quantifying housing market impacts, particularly given the rapid evolution of Airbnb and of local and state regulatory responses. Our study, however, only provides an early contribution to understanding some of the complex policy and planning challenges presented by online homesharing platforms for visitor accommodations. Future studies will benefit from longitudinal data to examine the trajectory of Airbnb and the effects of emerging local planning responses.

Our findings show that Airbnb listings aggregate in areas of high tourist visitation but also extend beyond the inner core to Sydney's residential areas already affected by tight rental demand. In areas of high Airbnb visitation, there is growing concern over tourist behavior in residential neighborhoods and apartment buildings, particularly when whole homes or apartments are offered by absent hosts on a permanent or semipermanent basis. There is considerable potential for Airbnb (or other online holiday accommodation platforms) to remove whole homes from the permanent rental supply and therefore considerably increase pressures on rents, a pressure even more marked in certain parts of Sydney. The opportunity to raise additional income in flexible ways may benefit some households able to present an attractive Airbnb listing, but the practice is not widespread, even in the most popular areas of beachside and inner Sydney.

Local planners need to evaluate the potential impact of online housesharing on the potential housing market as well as the neighborhood impacts (noise, congestion, safety) and revise zoning and residential development controls accordingly. All planning efforts should be supported by a strong policy framework for monitoring the impact of Airbnb rentals on the availability and cost of lower-cost permanent rental accommodations, and ongoing research and analysis to fully understand implications for local neighborhoods and housing markets.

Supplemental Material

Supplemental data for this article can be accessed at the publisher's website.

Note

1. When we carried out the study, there were 43 local municipalities in Sydney; however, since this time, local government has undergone a period of reform and amalgamation, reducing the total number of jurisdictions.

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Affordability and AirBnB

Search Terms: Does Airbnb affect housing affordability; Short Term Rentals Impact Hotels

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RESIDENTIAL ZONES - PERMANENT SIGNS (R-0, R-2, WLGR-2.5, R-3, R-5, R-6, R-7.5, R-10, R-15, R-DD and R-W)

Sign Type	Maximum Size	Special Restriction	Placement	Number
Monument or Wall (Fence) Sign	16 square feet	For four or more units or lots; only indirect lighting allowed	Maximum height 6 feet above grade	One per primary frontage; one on secondary frontage > 300 feet
Wall Sign	32 square feet	For four or more units or lots; as an alternative to a Monument or Wall (Fence) Sign; no direct or internal lighting	Placed no higher than 9 feet above grade	One per primary frontage; one on secondary frontage > 300 feet
Incidental	1 square foot	No internal illumination	On building	One
Incidental	2 square feet	No illumination	On any <u>occupied</u> residential lot	One
Incidental	6 square feet	On any parcel with a multiple dwelling; no internal illumination		Free standing sign no taller than 60 inches; wall sign mounted no higher than 8 feet
Incidental	8 square feet	Cut into masonry surface or constructed of bronze or other non-combustible material		
Incidental, Window	10% of window surface, but not to exceed 6 square feet	No internal illumination	Window	

Please refer to LOC 47.06.205 and 47.10.405 for full text.

This publication summarizes only portions of the Lake Oswego Sign Code and is intended to be used solely as an informal discussion document. As such, it should not be relied on as a guarantee that a particular sign request could be approved or denied. Ultimately, all signs must be compatible with the building and site. Please contact the Planning and Building Services Department of the City of Lake Oswego for more information.

Whole Units

Partial Units

City of Lake Oswego
Neighborhood Associations
Short Term Rentals Within
City Limits - July 2018

0 0.25 0.5 0.75 1 Miles

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