

# Airbnb in London

Foundations of Spatial Data Science

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## 1. Introduction

### 1.1: Context & Purpose

Recent reporting has raised concerns that short-term rentals in London, particularly through Airbnb, may be contributing to pressures on housing availability, neighbourhood stability, and local services. With the opposition proposing new measures targeting frequent or commercial-scale hosts, you require a clear, data-driven assessment of the scale of the issue and the likely impacts of any potential intervention. This briefing provides an evidence-based overview of current activity across London, supported by spatial analysis and scenario testing, to inform your policy and communications decisions.

### 1.2: Data Basis & Assumptions

Our analysis draws on the Inside Airbnb listings dataset (June 2025) and official London boundary files (boroughs and MSOAs). Records missing key attributes or containing incomplete location information were removed to ensure consistent comparisons across neighbourhoods. All listing coordinates were spatially aligned to borough and MSOA boundaries. Because Airbnb data is self-reported and does not include full occupancy or tenancy details, all estimates should be interpreted as indicative rather than definitive. Additional administrative data—particularly on registration, property use, and enforcement—would strengthen confidence in the results but is not publicly available.

## 2. Is AirBNB in London “Out of Control”?

Assessing whether Airbnb is “out of control” requires looking beyond total listing numbers. Research points to three main indicators: breaches of existing rules, particularly the 90-day annual limit on short-term lets (Rosena and Lees, 2021); commercialisation, where multi-listing hosts operate at a scale closer to professional landlords; and neighbourhood impacts, including pressure on long-term rents, touristification, and strain on local services (Cox and Haar, 2020). Together, these indicators provide a practical framework for evaluating whether Airbnb activity poses a systemic problem for London or creates more localised areas of concern.

### 2.1 Broken Laws

Direct evidence of illegal activity in short-term rentals is limited, but the dataset allows one important indicator: potential breaches of London’s 90-day annual limit. Because Airbnb does not publish occupancy data, we estimate booking volume using a commonly cited practitioner rule that around 70% of guests leave reviews (AirHostsForum, 2015). Combining this with Airbnb’s estimated occupancy measure gives an approximate average stay per guest. Listings whose implied annual use exceeds 90 nights are treated as likely overstaying.

This method is indicative rather than definitive, but aligns with wider concerns about regulatory non-compliance in STR platforms (Bivens, 2019). The results show only a small number of likely overstaying listings, concentrated in high-demand central boroughs noted by Rosena and Lees (2021). This suggests that while some non-compliance exists, overstaying alone does not indicate that Airbnb is broadly “out of control” across London.



The map shows that listings likely to exceed London's 90-day limit are relatively few in number, with **only 68 properties** appearing to surpass the threshold based on our estimated stay calculations. These listings are highly concentrated in central, high-demand boroughs such as Westminster, Kensington & Chelsea, and Tower Hamlets—areas where short-term rentals are most commercially attractive and enforcement is historically more challenging.

Across the dataset, the average stay per guest is 7.5 nights, meaning that most listings fall well below the level that would trigger a regulatory breach. The small number of likely overstayers may reflect pockets of more professionalised hosting or limitations in the review-based estimation method, rather than widespread non-compliance.

Because the estimate relies on assumptions about review behaviour rather than observed occupancy, the visualisation is kept deliberately simple to avoid overstating the precision of the results.

Overall, the spatial pattern suggests that **overstaying exists but is not systemic**, and on its own does not indicate that Airbnb activity is “out of control” across London. Instead, the issue appears to be localised, concentrated in a few tourist-heavy boroughs where targeted enforcement may be more proportionate than city-wide intervention.

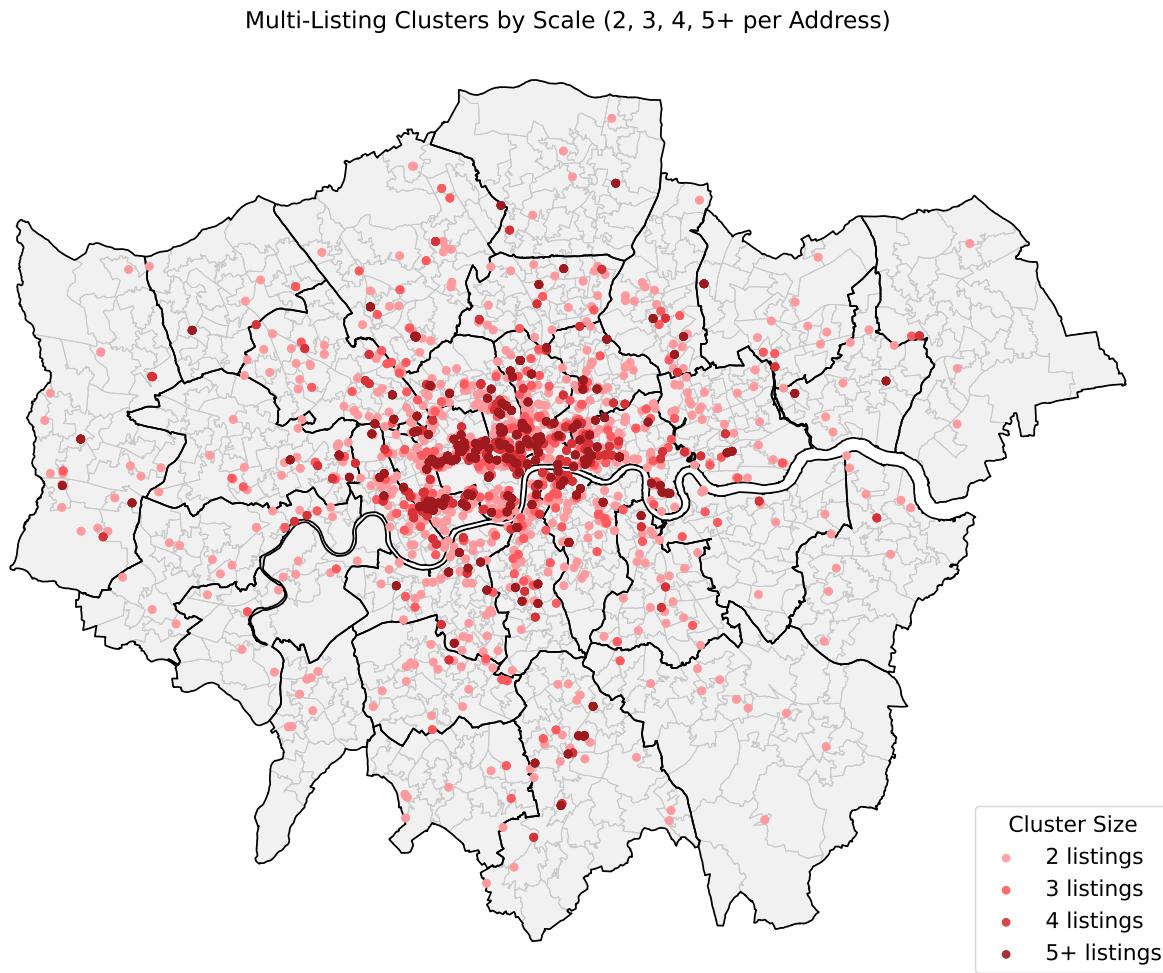
## 2.2 Commercialisation and Multi-Listing Hosts

Multi-listing is often used as an indicator of commercialisation in the short-term rental market. If Airbnb activity in London were genuinely “out of control,” we would expect a large share of hosts to operate multiple properties or to run listings at a scale approaching hotel activity.

The dataset shows that 13,636 hosts operate more than one listing, representing 29.0% of all hosts. Most manage only a small number of properties. Only 1314 hosts operate ten or more listings, and an even smaller group (563) manage twenty or more.

This means that commercial-scale hosting exists, but it is concentrated among a minority of operators, rather than being widespread across the platform. As an indicator of control, this suggests localised commercial pressure, but not city-wide commercialisation.

One further behaviour that may contribute to the perception of Airbnb being “out of control” is when hosts operate several properties at the same location, effectively running small hotels without the obligations associated with them. To identify these cases, we group listings by host ID and rounded 10-metre coordinates to approximate shared addresses.



Across London, there are 1691 locations where a single host operates two or more listings at the same approximate address, 654 locations with three or more, and 213 with at least five. These represent the small “hotel-like” nodes of activity within the platform.

The map shows that these clusters are geographically concentrated, primarily in central boroughs with high tourist demand. They are created by a small minority of hosts, but do form localised hotspots of commercial activity that may contribute to neighbourhood pressure or perceived unfairness relative to regulated accommodation providers.

Taken together, the evidence indicates that commercialisation is present but not systemic across the city. It reinforces the view that Airbnb activity is not out of control London-wide, but rather that specific areas experience targeted pressure points that may merit focused regulatory attention.

## 2.3 Impacts on Neighbourhoods

A third way Airbnb activity may appear “out of control” is through its wider neighbourhood effects. Even when hosts comply with regulations, the cumulative presence of short-term rentals can reshape local housing markets and everyday urban life. Studies in cities facing similar pressures, such as Barcelona, show that these impacts tend to build gradually rather than suddenly but nonetheless contribute to insecurity among long-term residents (Garcia-López et al., 2020).

Neighbourhoods with a high turnover of visitors commonly report noise, nuisance, and pressure on local services, reflecting the churn associated with short stays (Sheppard and Udell, 2016). Shifts in local commerce toward tourist-oriented businesses have also been widely observed (Cocola-Gant, 2016), subtly altering the character of an area even without illegal activity or large-scale commercialisation.

While our dataset does not directly record noise complaints or rent levels, the spatial concentration identified in earlier maps, particularly in Westminster, Kensington and Chelsea, and Tower Hamlets, corresponds closely with the areas where the literature predicts neighbourhood impacts to be most acute. This suggests that concerns about Airbnb’s neighbourhood effects are highly localised rather than citywide.

Taken together, the evidence indicates that neighbourhood impacts are real but uneven. They do not imply that Airbnb is out of control across London as a whole, but they help explain why some communities feel disproportionately affected. This points toward targeted, area-specific policy responses rather than blanket restrictions across the entire city.

## 2.4 Overall Assessment

Taken together, the evidence shows that Airbnb activity in London is not out of control at the city-wide level. Rule-breaking and commercial-scale hosting occur, but they are concentrated among a small minority of operators and in a limited number of high-demand neighbourhoods. The main pressures are therefore localised, suggesting that targeted regulatory intervention would be more proportionate and effective than blanket restrictions.

### 3. Professional Landlords and the Scale of Affected Properties

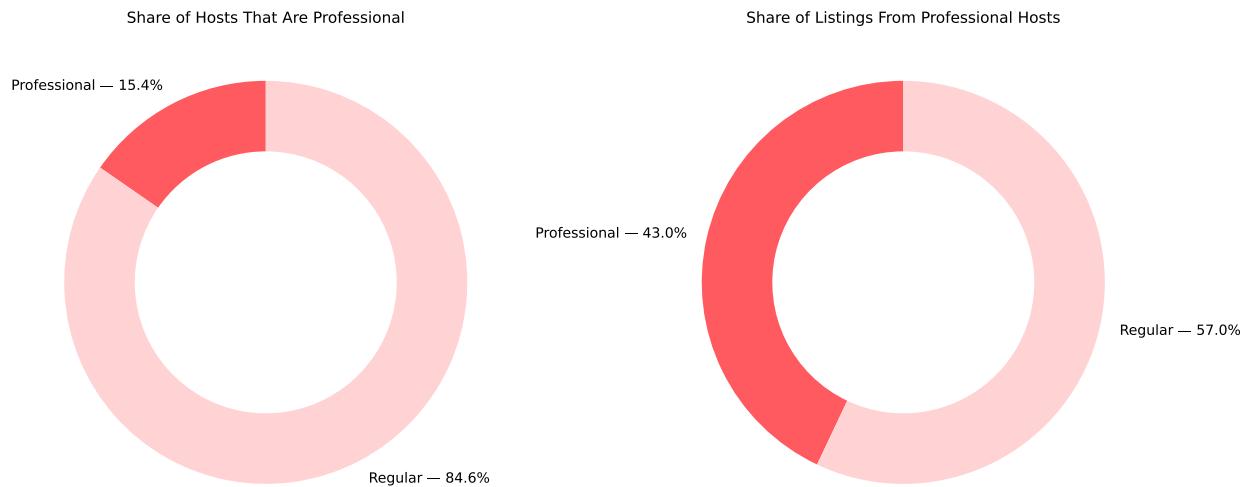
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#### 3.1 Defining “Professional Landlords”

To define “professional landlords,” this analysis follows micro-entrepreneurship literature, which distinguishes commercial operators by both scale and intent (Gydd, 2023). Scale is measured by the number of properties a host manages: those with two or more listings are classified as professional, as operating multiple properties exceeds the supplementary, primary-residence income model often cited in defence of Airbnb’s tax position (Bivens, 2019). Intent is captured through availability, a standard proxy for commercial intensity. While the most commercial operators are often defined as listing properties for 240+ days per year (Barron et al., 2018), such a high threshold excludes hosts who engage in sustained near year-round activity. We therefore adopt a more inclusive threshold of 180 available days, which differentiates ongoing commercial operation from occasional home-sharing while remaining consistent with established usage in the literature.

#### 3.2 How Many Professional Landlords There Are

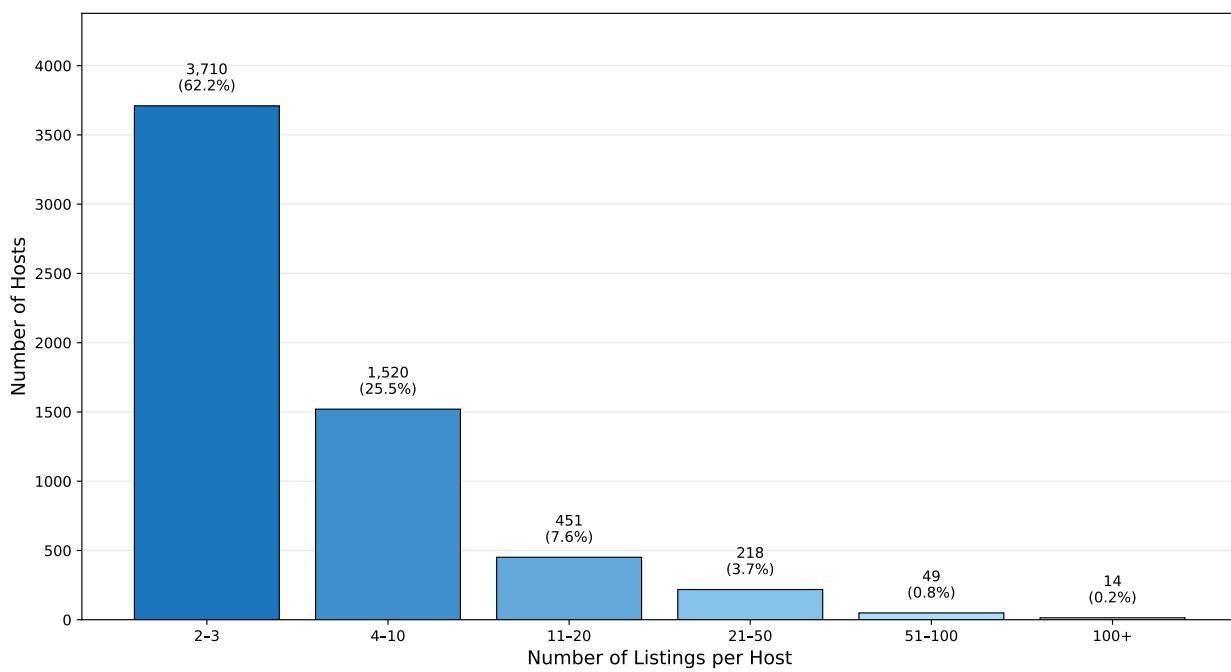
Applying the definition above, London has 7,215 professional landlords, representing 15.4% of all hosts. On its own this suggests that commercial operators are a minority, but this picture changes once we consider how many properties they control. The charts below compare the share of professional hosts to the share of listings associated with them.



The comparison shows a clear asymmetry. While professional landlords account for just 15.4% of hosts, they control 43.0% of all listings in London. This indicates that commercial operators play a disproportionately large role in shaping Airbnb's presence in the city, despite being a relatively small segment of platform participants.

However, these high-level proportions do not reveal how large individual operators actually are. The label "professional landlord" can include both small-scale hosts managing only two properties and large-scale operators with multiple units spread across the city. To understand this variation, we examined the distribution of listings among professional hosts.

### Professional Landlords by Scale



The distribution shows that 62.2% of professional hosts manage only 2–3 listings, indicating that a significant share of professional operators remain relatively small in scale. At the same time, the long right tail of the distribution, including hosts managing 10, 20, or even 50+ listings, highlights the presence of a smaller but important group of high-intensity operators whose activity more closely resembles commercial accommodation provision. This internal variation is crucial for policy design: any definition of “professional landlord” will capture operators with very different business models, resources, and incentives.

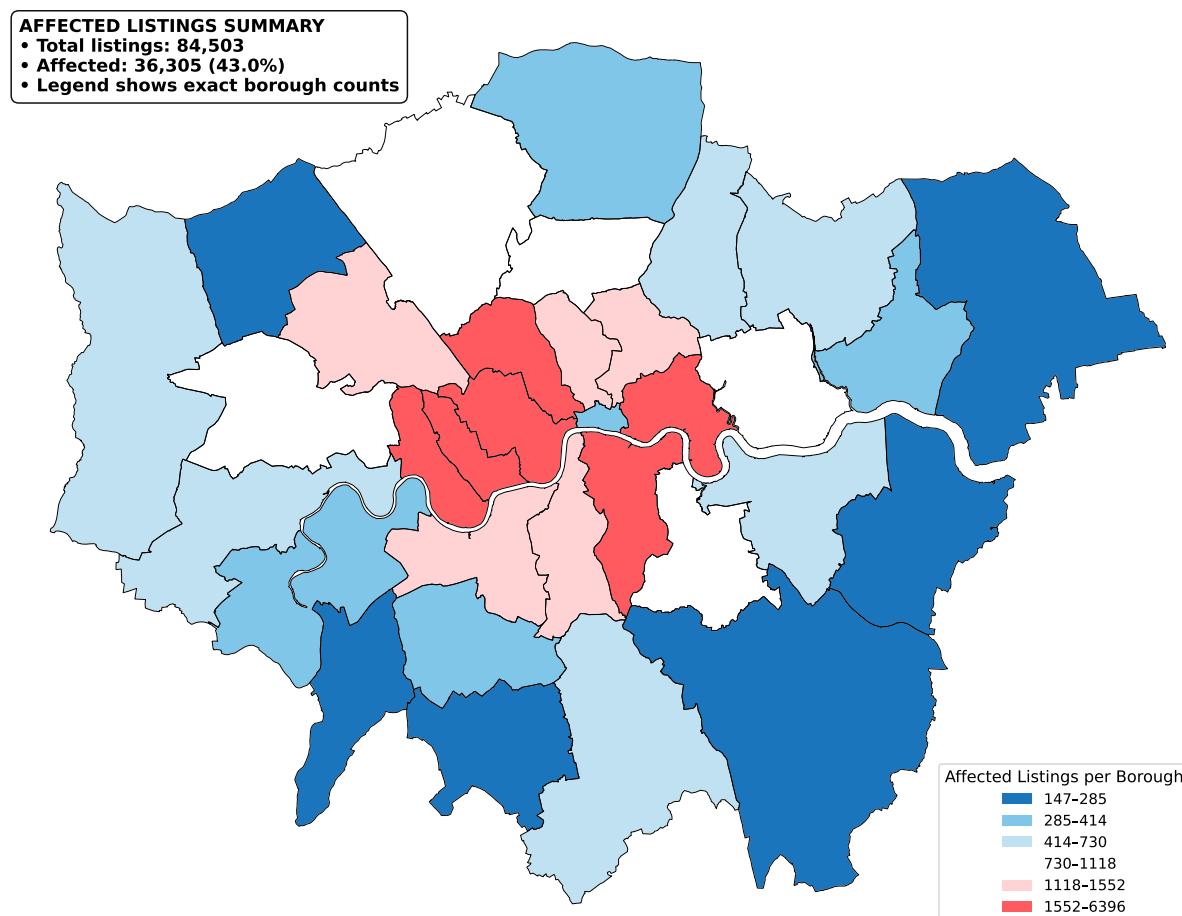
### 3.3 How Many Properties Their Activities Involve

Taken together, professional landlords are responsible for 36,305 properties, representing 42.96% of all Airbnb listings in London. This provides an upper-bound estimate of the number of properties that would fall under the opposition’s proposal if regulation were targeted at professional operators. The result highlights the concentration of platform activity: a relatively small group of hosts controls a significant share of the city’s short-term rental supply.

However, the distribution of these properties is far from even. To assess where the proposal would have the greatest impact, we mapped all listings associated with professional landlords across

London boroughs.

**Affected Airbnb Listings by Borough**  
36,305 Affected | 84,503 Total Listings

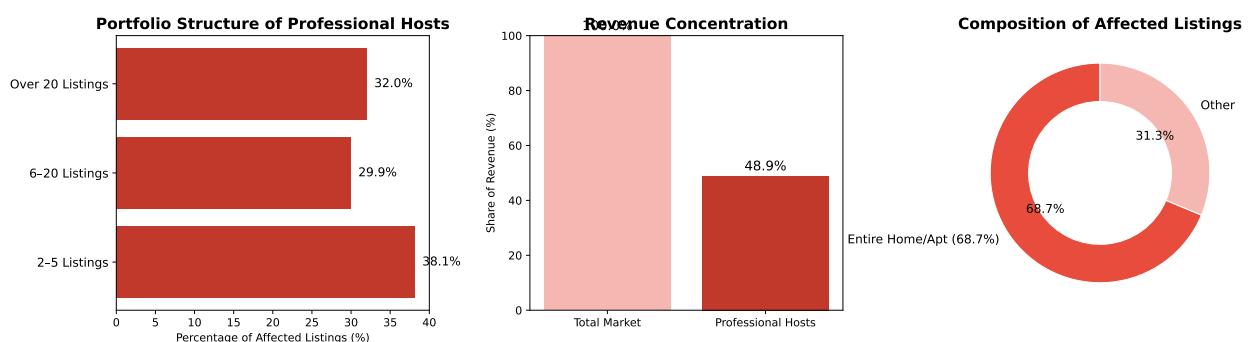
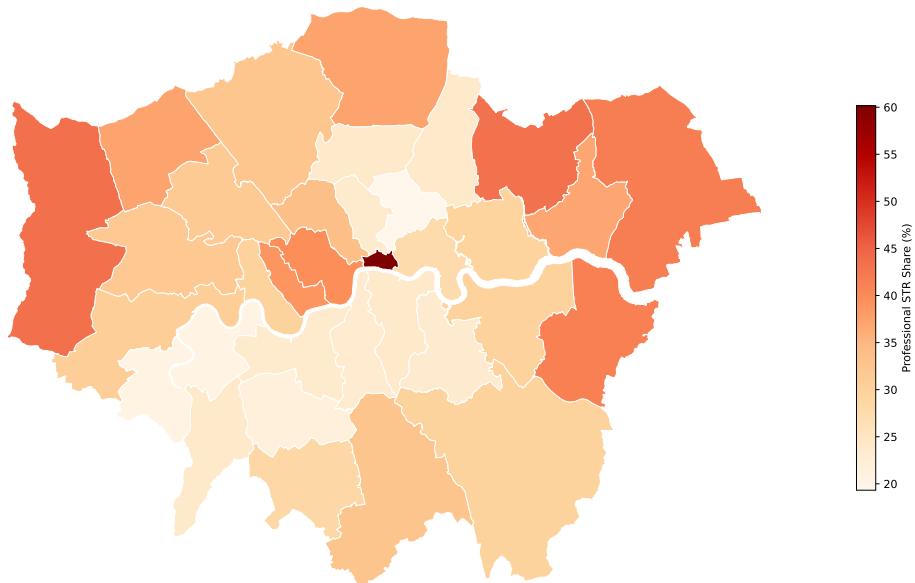


The map shows clear clustering in specific high-demand boroughs, while many outer areas have relatively few affected properties. This uneven geography is important for policy design and political communication. Boroughs with large concentrations of professional listings would experience the most substantial regulatory impact, whereas others would see minimal change. The proposal is therefore not simply a citywide intervention but one with geographically concentrated consequences—an important consideration for both housing policy and political strategy.

## 4. Pros and Cons of the Opposition's Proposal

### 4.1 City-wide: Who is actually being regulated?

**Short-Term Rental (STR) Market Structure and Spatial Pressure in London  
Professional STR Concentration Across London (Borough Level)**



Linking Airbnb to ONS private rental statistics shows that pressure is highly uneven. Using ONS counts of private rented sector (PRS) tenancies, we calculate the number of professional short-term rentals per 1,000 rented homes. City of London has around 2,855 professional listings per 1,000 PRS tenancies, while Bromley is closer to 100 – roughly a 28-to-1 gap. A small group of inner boroughs carry most of the short-term rental burden, while many outer boroughs remain relatively low-pressure.

This suggests that London does not face a single, city-wide Airbnb crisis. It faces a set of localised hotspots where short-term lets sit on top of a relatively small rented stock.

## 4.2 Borough-Level Pressure and Rental Opportunity

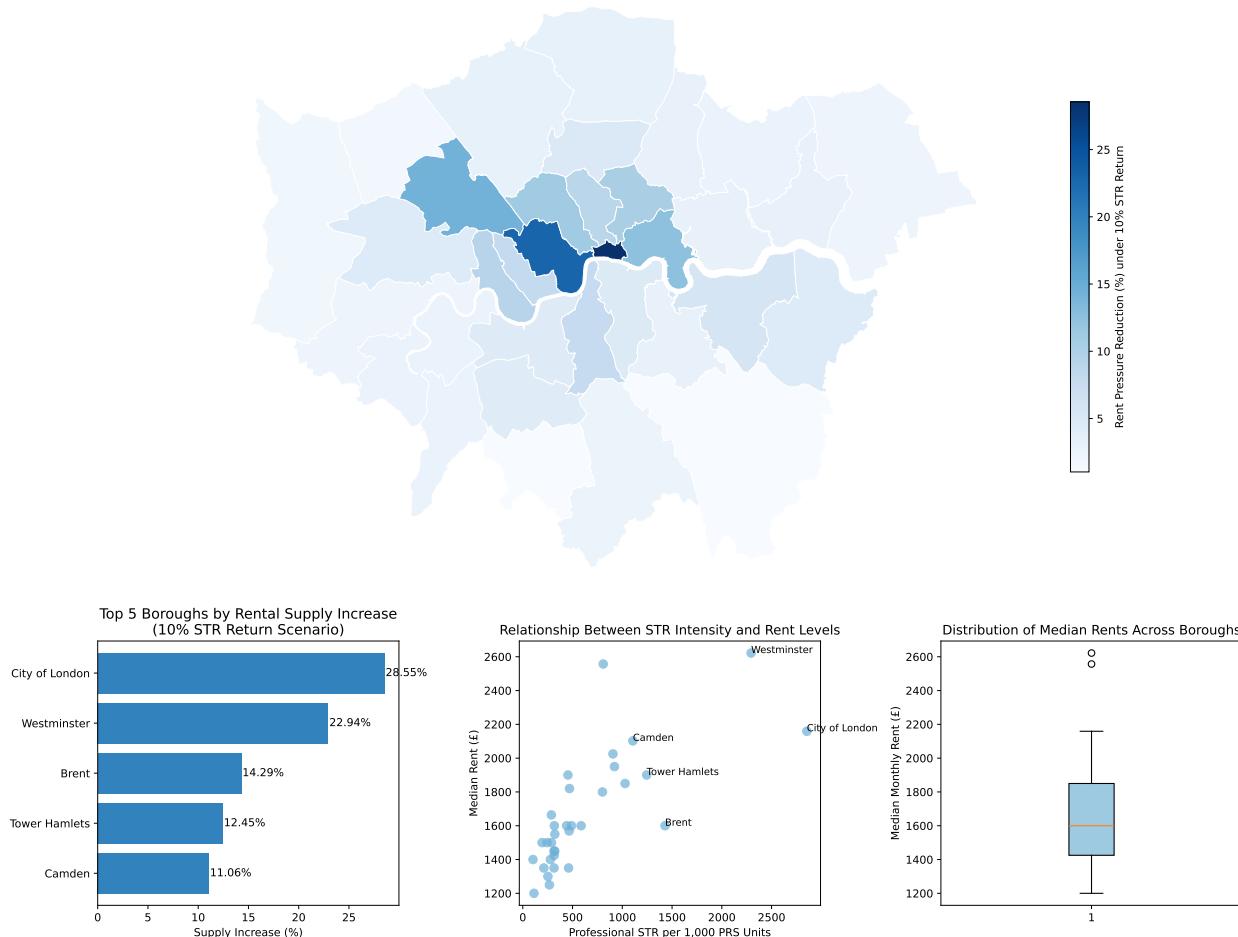
### 4.2.1 Uneven Intensity Across Boroughs

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## 4.2.2 Rental “return” scenario and fairness

**Scenario-Based Assessment of Housing Supply and Rent Pressure  
(Using ONS PRS + Airbnb STR Data)**  
Estimated Reduction in Rent Pressure if 10% of Professional STR Units Return



Using the same ONS data, we test a simple “return-to-PRS” scenario. If 5–10% of professional listings in each borough shifted back into long-term renting, City of London’s PRS stock could grow by around 14–29%, while changes in low-pressure boroughs would be marginal. For residents in the most pressured areas, the proposal therefore offers a realistic way to ease local scarcity and stabilise neighbourhoods.

For the Mayor, these numbers are both an argument and a warning. They justify strong action in high-pressure boroughs, but they also show that a uniform rule could feel heavy-handed in places like Bromley or Sutton. A more defensible design would link tougher conditions or higher Council Tax to clear evidence of pressure, rather than treating all boroughs as if they looked like City of

London.

## 4.3 Building-Level Experience for Residents and Visitors

### 4.3.1 Resident Experience

At the level of buildings and streets, professional listings behave differently from casual hosts. Among the listings affected by the proposal, 69.16% are entire homes or flats, and 62.26% can be booked for just one or two nights. Professional listings receive, on average, 51.65% more reviews per month than non-professional ones. This points to faster turnover, more visitors coming and going, and a pattern of use that feels closer to a small hotel than a home.

For residents in high-pressure neighbourhoods, the potential benefits are very concrete: fewer late-night arrivals, less luggage in corridors, and a stronger sense that neighbours are people who actually live in the building.

### 4.3.2 Visitor and Tourism Impact

The downside sits with visitors and the tourism economy. Families and small groups often rely on entire-home rentals in central areas, because hotels may be less flexible or more expensive for them. If a significant slice of these listings becomes more costly, moves off-platform, or leaves the market, London may feel less welcoming for these groups unless other types of accommodation expand.

## 4.4 Overall Balance, Winners, Losers, and Caveats

### 4.4.1 Who gains and who loses?

Taken together, the proposal looks less like a blanket attack on Airbnb and more like a tool to manage professional short-term rentals in specific parts of London. For the Mayor, it offers a visible response to concerns about housing and neighbourhood disruption, backed by clear evidence on revenue concentration and borough-level pressure. For residents in the most affected boroughs, the main gains are likely to be a calmer living environment and a gradual improvement in access to long-term rentals.

For the city as a whole, the proposal nudges a small share of homes back towards residential use and reins in the most hotel-like activity in residential blocks. The main costs fall on professional operators, the service jobs linked to them, and visitors who value flexible, apartment-style stays, especially in central locations. There is also a risk of perceived over-regulation in low-pressure boroughs if the rules are not tailored.

#### **4.4.2 Assumptions and Limitations**

Our conclusions rest on simple but important assumptions. We treat potential revenue as nightly price multiplied by 365 days, without observing real occupancy. Reviews per month are only an imperfect proxy for activity. ONS rental data lag behind the Airbnb snapshot by about a year, and the 5–10% “return-to-PRS” scenario is a policy experiment, not a forecast. These limits do not change the core message of concentrated commercial and spatial pressure, but they do mean the proposal is best presented as a way to ease local stress and open up more housing options, not as a guarantee that rents will fall everywhere.

## 5. Reframing the Issue: From Housing Pressure to Housing Opportunity and Social Mobility

The newspaper story raises concerns that Airbnb is “out of control” in London, but a geospatial perspective suggests this is an overgeneralisation. Professional activity is concentrated in a few central, mixed-use boroughs rather than spread across the city, indicating a more specific structural issue within the housing system. International research shows that short-term rental markets are typically composed of many casual hosts and a much smaller group of commercially oriented operators, each interacting with housing supply in different ways (Gurran and Phibbs, 2017). Evidence from other cities also indicates that only certain listing types, particularly entire homes, meaningfully overlap with potential long-term rental stock (Garcia-López et al., 2020).

To interpret the dataset in an information-poor environment, we adopt two defensible assumptions: that entire-home listings are those that could, in principle, be used as long-term rentals, and that multiple high-availability listings serve as a reasonable proxy for commercial activity. These assumptions allow us to move beyond headline claims and identify which parts of the short-term rental market are most relevant to housing opportunity.

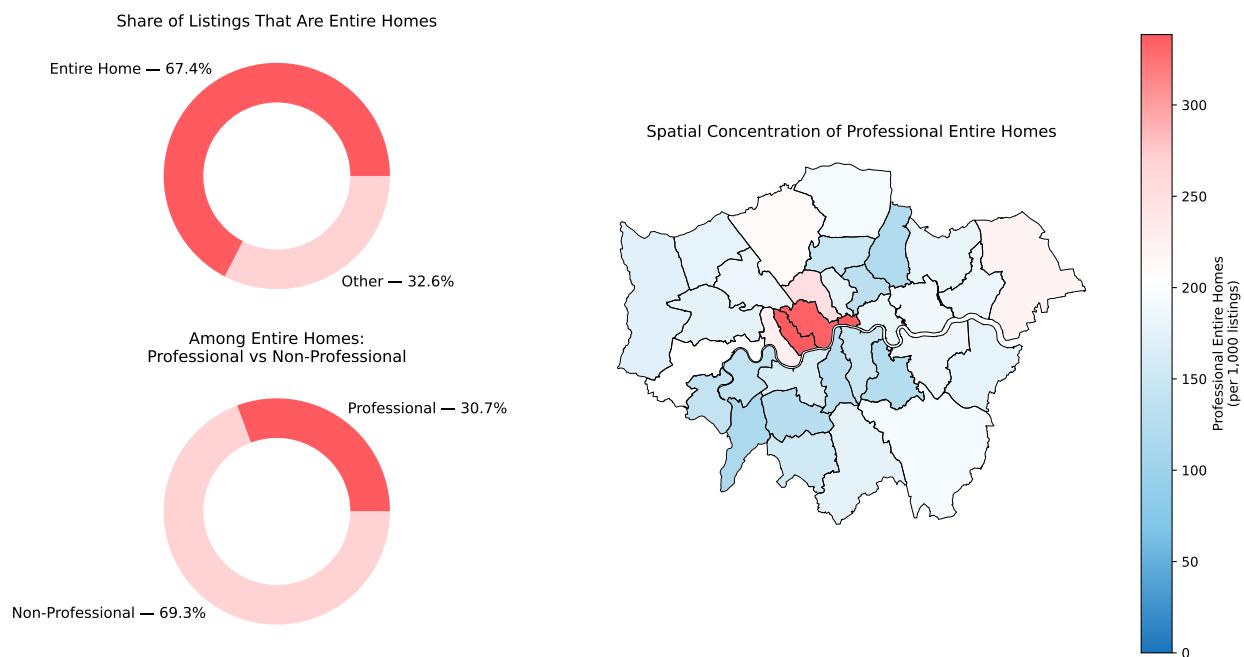
Seen in this way, the issue reflects the economic logic of central London. Tourism and commercial demand make short-term rentals more profitable in certain boroughs, which explains why professional hosts cluster there and why impacts are uneven across the city. This framing also clarifies the link to social mobility. Stable access to long-term housing, particularly for lower-income households, is consistently associated with improved life chances (Chetty et al., 2016). Even modest increases in long-term rental availability therefore have implications that extend well beyond housing opportunity alone.

### 5.1 Housing Opportunity in a Limited-Data Environment

A more constructive reading of the data begins with recognising that only part of the short-term rental market intersects with long-term housing. Entire homes are the listings most relevant here, since these properties could, in principle, be used as long-term rentals. In our dataset, just over one-third of listings fall into this category, which identifies the segment of the platform closest to

the formal housing market.

Within this group, only a minority are operated by hosts who meet our proxy for commercial activity. Most entire-home listings belong to non-professional hosts with only one property. Because commercial activity is heavily concentrated in central mixed-use boroughs shaped by tourism and commercial demand, predominantly residential outer areas show very limited professional presence and therefore far less direct housing pressure. The figure below illustrates both the size of the entire-home category and the small share attributable to professional hosts.



The spatial pattern shows that professional entire-home listings are concentrated in a small number of central boroughs. This concentration reflects the underlying economics of these neighbourhoods and supports a more targeted policy response. Rather than applying a city-wide tax to all professional landlords, the Mayor could reframe the issue as one of creating new housing opportunities. Targeted Council Tax increases in high-demand central areas would focus regulation where commercial activity is genuinely concentrated, while avoiding disproportionate impacts in outer boroughs where non-professional hosts are more likely to shift toward long-term renting if profitability falls. The revenue could also be directed toward supporting non-professional hosts to transition into the long-term rental market, for example through simplified processes or incentives for first-time long-term landlords.

This approach focuses on the part of the market with the greatest potential to expand long-term rental supply, while still addressing concerns about commercial operators. It frames the issue as an opportunity to increase housing availability, rather than as a need for punitive measures.

## 5.2. Long-term Social Mobility

While the immediate effects of targeted regulation relate to housing opportunity, the longer-term implications concern social mobility. Housing stability shapes whether households can remain in neighbourhoods that offer strong schools, transport access, employment networks, and social infrastructure, all of which influence life chances. Research consistently finds that children who grow up in stable, opportunity-rich areas achieve higher earnings, better educational outcomes, and improved long-term trajectories (Lupton and Fitzgerald, 2015; Chetty et al., 2016).

The spatial patterns highlighted earlier matter directly for this. The central boroughs where professional short-term rental activity is concentrated, such as Westminster, Kensington and Chelsea, and Tower Hamlets, are among the city's major commercial and cultural hubs. They combine high opportunity with high housing costs. Even modest increases in long-term rental availability in these neighbourhoods can expand access to environments that support upward mobility. In this sense, the housing opportunity created through carefully targeted Airbnb regulation becomes a direct lever for widening access to the city's most mobility-enhancing areas.

A positive reframing strengthens this link further. Revenue from differential Council Tax applied to commercial hosts in central boroughs could be used to support non-professional hosts to enter the long-term rental sector, increasing supply where it has the greatest mobility impact. This positions short-term rental policy not simply as a response to a housing concern, but as a strategy for expanding access to the neighbourhoods that most shape life chances. By doing so, the Mayor can articulate a narrative that connects immediate housing measures to long-term improvements in social mobility.

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