Regulating the Skyline: Evidence from London's Protected Vistas*

Andrea Herrera[1,2]

[1]Department of Geography and Environment, London School of Economics.
[2]Millenium Nucleus in Intergenerational Mobility (MOVI).

December 1, 2025

Updated frequently: Most recent version ***here***.

Abstract

Planning authorities frequently impose height limits to protect visual amenities. I study London's Protected Vistas—height restrictions that preserve views of key landmarks—to estimate effects on building height, prices, and welfare. A boundary discontinuity design reveals that tall buildings (over 18 m) are 5–7% shorter within corridors, with no change in the average height of all buildings or in the proportion of tall buildings, while residential prices are approximately 4% higher. Using a building-level visibility index, I show that the price gap is not explained by enhanced private landmark visibility within corridors. Feeding the reduced-form estimates into a quantitative urban model, I simulate the removal of the policy. The model attributes 85% of the local price change to the amenity channel associated with a lower-rise environment and 15% to supply. Removing the regulation shifts development toward commercial use, raises aggregate welfare by around 0.2%, and yields small citywide price decreases.

*I thank my supervisors, Gabriel Ahlfeldt and Christian Hilber, for their guidance and continuous support. I am also grateful to faculty in the G&E Department—especially Sara Bagagli, Felipe Carozzi, Paul Cheshire, Vernon Henderson, Alan Mace, Henry Overman, Giorgio Pietrabissa, and Ana Varela-Varela—for their valuable feedback. I further thank Alan Smithies at the GLA for sharing insights and archival material. I have benefited from comments received at the 2025 UEA Meeting in Montreal, the 2025 Zurich–Oxford Doctoral Symposium on Real Estate Markets, the 2025 UEA Summer School, and the 2025 University of Reading Workshop in Urban Economics.

1 Introduction

Cities often regulate the built environment to preserve visual qualities that are difficult to measure but widely valued: beauty, townscape, and the experience of iconic views. Whether rooted in heritage, design ideals, or civic identity, these aesthetic goals are typically pursued through planning instruments that constrain what can be built. However, such constraints may also restrict the floorspace supply and affect who can access those high-amenity places. This creates a fundamental tension: how should cities weigh the promotion of their beauty against the economic implications of doing so? Although this trade-off lies at the heart of urban planning, its consequences remain only partially understood.

My paper estimates the effects of height regulation on building heights and property prices using London's Protected Vistas policy as a quasi-random variation. I use these estimates in a quantitative urban model to assess the policy's general equilibrium effects and welfare implications. The height limits defined in this policy are set to allow viewers from designated viewpoints throughout the city to see key landmarks, effectively restricting building heights within 13 view corridors. There are three strengths and contributions of this paper worth highlighting.

The first contribution of this paper is a clean identification based on plausibly exogenous variation at corridor borders. Typically, height-defining regulation responds to local characteristics, which creates several threats to causality when studying housing outcomes. These include the endogenous location of the policy (rules placed where demand, productivity, or amenities are high), reverse causality (regulation follows past height and price growth), and confounding boundaries (zoning boundaries coincide with other policies, such as transport infrastructure, conservation areas, or administrative borders). In contrast, the geometry of Protected Vistas is determined by sightlines and topography rather than neighbourhood attributes, which makes treatment at border segments plausibly exogenous to local fundamentals.

The second contribution is to embed an empirically identified height shock into a quantitative urban equilibrium model of London. In the model, corridor height regulations restrict floor space, while the local amenity term captures various amenities (e.g., potential landmark visibility) and potential disamenities associated with a taller built environment (e.g., shadows or dislike for taller structures). For the counterfactual that removes the policy, I estimate the parameters by indirect inference, so the model reproduces the reduced-form price differential while matching the estimated local floor space increases. This allows a transparent decomposition into supply and amenity channels. This exercise contributes to the research that studies regulation (Anagol et al., 2021; Parkhomenko, 2023; Ospital, 2023) by focusing on the trade-off between adding floor space and the potential disamenities derived from a taller built environment (Gyourko and McCulloch, 2024; Duranton and Puga, 2020).

The third contribution of the paper is a measurement contribution, where I create novel three-dimensional variables. Using 1 m LiDAR[1] data of the built environment of London, I construct a corridor-specific permissible-height measure that maps the regulation, subtracting the elevation, into an intensity treatment variable, which allows me to assess the bindingness of the policy. I also construct a building-level landmark-visibility index that records whether and how much each building can see each protected landmark. This measure is used to test whether buildings inside the Protected Vistas have better private visibility of the landmarks compared to buildings outside the view corridors. Many papers assessing the effects of visual amenities typically infer benefits from proximity to the amenities rather than directly measuring what residents can potentially see. For example, Cooper and Namit (2021) studies the effect of Auckland's view-protection policy with a boundary design on land values and infers view benefits from proximity to viewshafts, without observing private line-of-sight. In contrast, my paper adds a direct visibility measure, joint evidence on heights and prices, and a quantitative spatial model for general equilibrium effects and welfare.

To estimate the causal effects of regulation on heights and prices, I employ a boundary discontinuity design,[2] leveraging the clear boundaries of the protected view corridors. To do so, I combine several data sources at the building level: policy information from the London View Management Framework (Greater London Authority, 2012), building characteristics, residential property transactions, LiDAR built environment, and demographic information. The study considers 13 protected corridors: nine centred on St Paul's Cathedral, three on the Palace of Westminster, and one on the Tower of London.[3]

This strategy delivers one of the first clean estimates showing that height regulations bind at the top of the building-height distribution while leaving the bulk of the stock unchanged. Buildings classified as tall by the GLA (over 18 m)[4] are 5–7% shorter inside Protected Vista corridors than in adjacent areas outside, with no change in the share of tall buildings. These results represent an intensive-margin effect consistent with the policy's design, where average permissible heights are around 45 m, while the sample mean is about 12 m. I also see a negative effect on the overall floor space supply in treated areas. Effects are stronger where overlapping constraints are slack (outside Conservation Areas or within Opportunity Areas), when permissible

[1] LiDAR stands for Light Detection and Ranging, which uses a laser to measure the distance between an aircraft, drone or platform and the ground.

[2] A type of Regression Discontinuity Design that uses a geographic boundary to divide the groups into treatment and control (Black, 1999; Keele and Titiunik, 2015).

[3] Among these 13 is the sightline from King Henry VIII's Mound in Richmond Park to St Paul's Cathedral, which extends over 16 km and dates back to 1710.

[4] The 18 m definition coincides with the top decile of the sample height distribution.

heights are below 70 m, and in the city centre. The effects on tall buildings hold across residential use and the age of the building (pre- and post-war).

Identifying price effects of local density is difficult: height and density are endogenous to demand and amenities, and exogenous variation is rare. The boundary discontinuity at Protected Vista borders provides plausibly exogenous variation in height at the border. Using this same empirical design for residential prices, properties inside corridors are 4% larger than the control, with effects of 8% for tall buildings and of 3% for short buildings (at a 10%). For the tall building sample, I assess price differentials by floor groups, with prices of properties around the ground floor being higher inside the PV, while on top floors, the effects are not significant. Across heterogeneous specifications, residential price effects are present outside the city centre and in post-war buildings.

A plausible explanation for the price differential is that properties within the corridors enjoy better views of the protected landmarks. Prior work shows that architectural and historic amenities are capitalised into nearby prices and that properties with direct exposure to historic assets have higher prices, on the order of a few percent at conservation-area boundaries and for listed buildings (Ahlfeldt and Holman, 2018; Koster et al., 2016). In my setting, however, I observe building-level landmark visibility and find no improvement in views to the landmarks in treated areas, so the premium is not a view-hedonic effect. There are two remaining explanations: (i) a very-local amenity response to lower heights (more light, visual openness or other amenities from lower-rise environments), or (ii) a supply-driven price effect under imperfect mobility.

Motivated by these findings, I implement a quantitative spatial model for London following Ahlfeldt et al. (2015). The framework integrates residence–workplace choice with commuting costs, household demand for housing floor space, firm demand for commercial floor space, and land allocation between residential and commercial land use. I use a model for two reasons. First, to decompose the local price effects of Protected Vistas into a supply channel and a demand or amenity channel. Since Protected Vistas can affect supply by reducing floor space and demand by altering neighbourhood amenities, a structural model is required to disentangle these effects. Second, to quantify citywide welfare and reallocation effects from lifting the height restriction, including land-use reallocation and aggregate price changes. To develop the counterfactual, I employ an indirect inference approach to simulate the policy's effects within the model. Similar to (Ahlfeldt et al., 2023), I solve for the changes in the model's primitives (amenities and floor space) that rationalise the effects on prices and heights established in my reduced-form analysis.

In addition to the calibrated price and height effects, the model predicts that lifting the height restrictions would lead to a localised increase in the share of commercial floor space, higher employment and wages, and fewer residents in the areas treated by the policy. This result is consistent with these areas having a higher concentration of productive locations than the rest of the city. When decomposing local price differentials in treated areas by changing either floor space or amenities, keeping all else equal, I find that 85% of the variation is attributable to declines in local amenities compared to the supply channel. The amenity-driven price declines are local, of 3.1–3.7% in treated areas. In contrast, the increase in feasible floor space and reallocation effects result in citywide prices and share of commercial floor space falling only slightly by 0.08% and 0.16%. Overall, aggregate welfare rises by about 0.2%, with most gains arising from easing the supply constraint, increasing the floor space, rather than from changes in local amenities.

Related Literature. This study contributes to ongoing research on the economic impacts of urban regulation, combining reduced-form identification with a quantitative urban model.

The classical insight that inelastic supply amplifies price responses to demand shocks has been demonstrated across many settings. Focusing on height limits, Brueckner et al. (2017) and Brueckner and Singh (2020) develop and estimate an elasticity-based measure of stringency—how far regulated heights sit below free-market heights, documenting substantial cross-city variation and within-city patterns tied to site characteristics. They find that binding regulation reduces land-use efficiency in Chinese and U.S. cities. Recent papers extend these ideas to the micro-geography of supply: Baum-Snow and Han (2024) quantify how neighbourhood-level constraints slow vertical and horizontal redevelopment. On the tall-building margin, Ahlfeldt and McMillen (2018) shows for Chicago that the height–land price elasticity increases when explicit height limits are relaxed. Taking a broader view of constraints—both geographic and regulatory—Saiz (2010) quantifies physical constraints (share of land with steep slopes or water) that drive inelastic housing supply across U.S. metros, while Hilber and Vermeulen (2016) shows that regulatory frictions in England—especially London—raise prices far beyond what natural scarcity alone would predict. Together, these papers also address a first-order concern in studying regulation: whether urban regulation is binding and under what conditions?

An ongoing challenge in this literature is the endogeneity of where planning rules are placed. Urban regulations often correlate with local fundamentals, leading naïve comparisons to confound regulation with pre-existing differences. Following Black (1999), recent work uses boundary discontinuity designs to assess regulatory effects—relative to a naïve OLS, it compares units that are spatially together but differentially regulated, which mitigates bias from unobservables that vary smoothly in space (Turner et al., 2014; Anagol et al., 2021; Blanco and Sportiche, 2024; Kulka et al., 2023; Koster, 2023). Still, these designs can inherit endogeneity if policy boundaries themselves are placed to target particular places. The advantage of using the boundaries of the Protected Vistas in this paper is that they create a clean cut through neighbourhoods, motivated by a criterion that is plausibly orthogonal to local characteristics of the places it affects. In this sense, this setting resembles what Redding and Turner (2015) called the "inconsequential units" approach: locations are accidentally treated by the placement of an infrastructure; in their case, transport infrastructure that unintentionally treats small towns in between two cities that get connected; here, sightline geometry from viewpoints to landmarks.

Structural approaches have also been employed to quantify the impact of regulation on city outcomes. Several relevant studies that have addressed this question include: Turner et al. (2014), who assess regulation's impacts on land values and welfare and distinguish own-lot, external-lot, and supply effects as separate objects of interest; Anagol et al. (2021), who estimate aggregate welfare gains from large-scale upzoning in São Paulo by feeding boundary-discontinuity evidence into a citywide model; Parkhomenko (2023), who endogenise regulation via voting with lobbying in a multi-city equilibrium; and Ospital (2023), who link local regulatory stringency to aggregate misallocation and wildfire-risk exposure. In Ospital (2023), regulation and amenities are intertwined: because restrictive rules tend to bind in amenity-rich areas, regulation raises costs there and pushes residents toward lower-amenity (and, in San Diego, riskier) peripheries, reallocating population along the amenity gradient and increasing exposure to a risk disamenity. My study connects amenities and regulation through a different mechanism, in line with Gyourko and McCulloch (2024), who document a distaste for surrounding housing unit density under certain conditions using a hedonic model of housing choice. In my paper, the amenity (or disamenity) channel is linked to the vertical built environment in a quantitative urban model, utilising causal estimates that show that the policy induces lower building heights and increased property prices.

The paper is structured as follows: Section 2 provides background on London's urban planning system and details the Protected Vistas policy. Section 3 outlines the empirical strategy, including the border discontinuity design, data description, and the reduced-form results on building heights, property prices, and views to landmarks. Section 4 introduces the theoretical framework, the calibrated spatial model, and counterfactual scenarios to assess the broader welfare implications of the policy. Finally, Section 5 discusses the findings and their relevance for urban policy.

2 Background

2.1 Urban Planning System in London

London's urban planning system is discretionary, where development decisions are evaluated on a case-by-case basis rather than strictly determined by predefined zoning laws. This system introduces friction for developers, as local councils must review planning applications, often with significant negotiation and uncertainty. The planning system involves multiple institutional actors. The Greater London Authority (GLA) oversees strategic planning, including the London Plan, which provides guidelines for development across the city (Greater London Authority, 2021). Local Authorities (LAs), comprising London's 32 boroughs and the City of London Corporation, hold primary responsibility for granting or denying planning permissions. The Mayor of London can intervene in significant developments of strategic importance, while advisory bodies such as Historic England influence decisions to protect the city's heritage and architectural character (Historic England, 2022).

Several policy instruments regulate height explicitly and implicitly; in the following two subsections, I will expand on the relevant ones for this study. First, the Protected Vistas, defined in the London View Management Framework (LVMF), the policy studied in this paper, which explicitly limits building heights within protected view corridors to ensure the visibility and appreciation of key landmarks. Second, other norms and policies, such as conservation or opportunity areas, also affect height by promoting or preserving certain heights, often subject to the surrounding height.

2.2 Protected Vistas in London

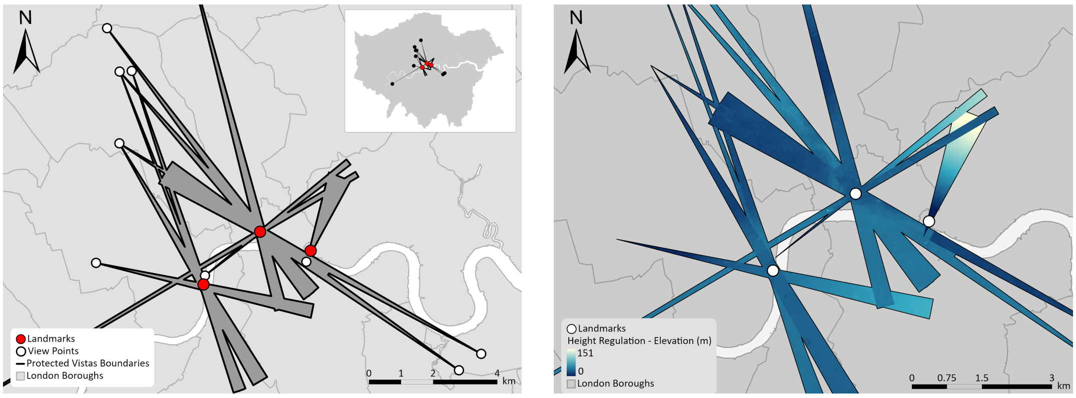
The London View Management Framework (LVMF) is a distinctive height regulation policy that protects views of significant landmarks, including St. Paul's Cathedral, the Palace of Westminster, and the Tower of London, from designated viewpoints throughout the city (Greater London Authority, 2021). The framework establishes 13 corridors,[5] with two protection categories: View Corridors and Wider Setting Consultation Areas (WSCAs), which are further divided into the protection of the foreground and the background of the landmark.[6] Both define height limitations through computational modelling of sightlines and topography. View corridors enforce mandatory compliance and often require substantial design modifications; WSCAs apply less restrictive regulations, allowing for some flexibility on the height as long as they enhance the viewing experience while avoiding a "canyon effect" around protected corridors. Despite these regulations, exceptions occur within London's discretionary planning system, with projects like The Shard receiving approval through negotiations and political considerations (The Guardian, 2016).

[5] Amongst these 13 there is the sightline from King Henry VIII's Mound in Richmond Park to St Paul's Cathedral, which extends over 16 km and dates back as far as 1710.

[6] In terms of proportions, VC represent around 25% of the surface area, the background WSCA 55%, and the foreground WSCA less than 20% (these are usually divided into two, each one surrounding the VC).

Figure 1: Treatment Maps: 2012 Protected Vistas (LVMF)

(a) Location of PVs in London **(b)** Treatment Intensity (Zoom In)

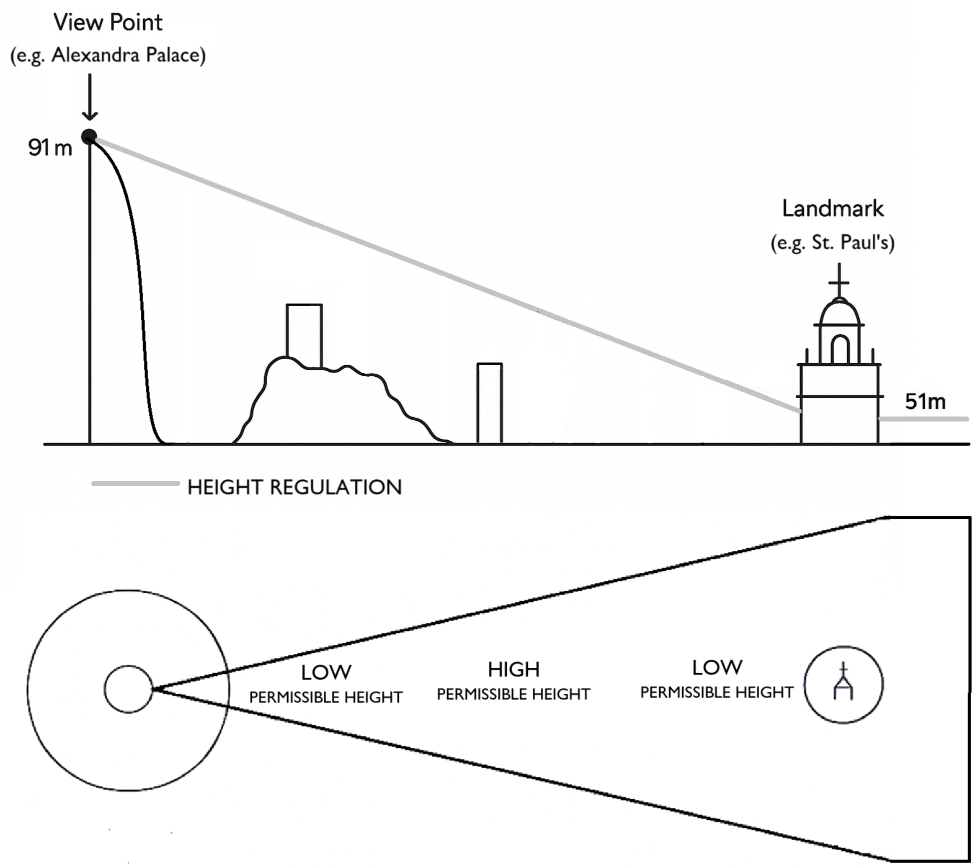


Notes: The figure shows two maps of the Protected Vistas. Panel (a) shows the location of the 2012 PV in London, signalling the landmarks, viewpoints and boundaries of the policy used in this study. Panel (b) shows a close-up of the Protected Vista, which shows in varying colours the different permissible heights allowed to build in meters; darker colours allow little space and lighter colours allow for more.
Source: Own elaboration using height information for 2022 from DEFRA and policy information from the GLA.

Figure (1) shows two maps of the policy. Panel (a) is a zoom to the centre of London where the policy covers the largest surface area. The red circles are the landmarks, the white circles are the viewpoints, and the black lines are the borders of the policy (that is, the perimeter of all of the 13 Protected Vistas). This illustrates the location of the PV within London, which is central and does not cover a great extent of the city. Realising this is especially important for the counterfactual exercises, as this policy could be understood as a locally affecting policy. However, because it affects the city's centre, it can potentially have interesting and significant general equilibrium effects on the city.

Panel (b) shows how height it is allowed to built inside the policy. The colour gradient goes from darker to lighter blue, which indicates the intensity of the treatment, which is the difference between what the regulation allows to build in meters above sea level and the elevation of the ground, also in meters above sea level. It shows that there is substantial variation in the permissible space to build allowed by the regulation in practice, with the highest point allowing buildings up to 150 meters behind the Tower of London. I sketched how the policy behaves in practice in Figure (2 to fix concepts. In simple terms, this intends to illustrate that, given the differentials in elevation in the city, the regulation becomes relevant in places closer to the ground, which tend to coincide with the city's centre, but not exclusively. For instance, the PV focusing on the White Tower (east of the map) presents the highest allowable heights.

Figure 2: Treatment Sketch



Notes: The figure shows a sketch that explains the 3D nature of the policy, with first a horizontal cross-section view of the policy and then a bird-eye top-down view.
Source: Own elaboration based on policy information from the GLA.

2.2.1 History of Protected Vistas

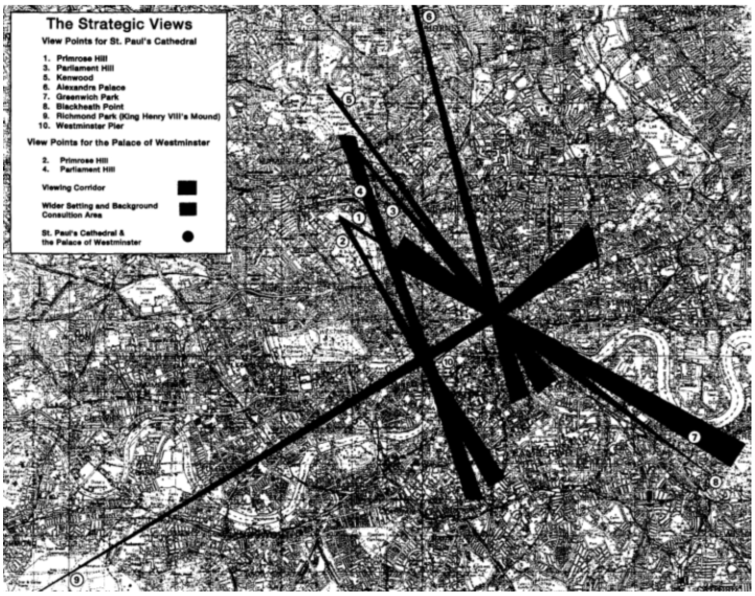
The protection of long-distance views in London, especially of St Paul's Cathedral, has emerged through a layered sequence of custom and policy. After the Great Fire, the 1667 London Building Act introduced stricter controls on rebuilding, including limits on building heights (commonly interpreted as capping structures at four storeys) (Planning for Greater London, 1998). During the same rebuilding era, St Paul's was reconstructed into its present form, and it is believed that the long sightline from King Henry VIII's Mound in Richmond Park toward the Cathedral was intentionally designed then.[7]

[7]This view point was later rediscovered in the 1970s (Friends of Richmond Park, 2013).

In 1937, the City of London Corporation adopted the St Paul's Heights Policy, an informal agreement to preserve the Cathedral's silhouette. Then, the 1976 Greater London Development Plan (GLDP) first recognised *Strategic Views* from elevated public spaces such as Greenwich, Primrose Hill, and Hampstead Heath. These protections were carried into the City of London's 1989 Local Plan, adding specific references to the Monument and the Cathedral's backdrop. A decisive shift came with the 1991 Regional Planning Guidance 3a (RPG3a) (Department of Environment, 1991), delineating ten strategic views with mapped viewing corridors, wider setting consultation areas, and background areas. Figure 3 illustrates the original maps from the 1991 Strategic View; it shows how the overall shape of the policy resembles the 2012 Protected Vista version, considering key elements like the backdrops.

With the creation of the Greater London Authority in 2001, responsibility for the views moved to the Mayor and the policies were embedded in the 2004 London Plan. The London View Management Framework (LVMF) of 2007 (Greater London Authority, 2007) changed the name of the strategic view to *Protected Vistas* and, for most views, it narrowed the viewing "cones" (City Planning Officer, 2010). Later, the 2012 Supplementary Planning Guidance formalised two additional vistas while widening the corridor to an intermediate width between the broad 1991 specification and the narrower 2007 version (City Planning Officer, 2010). A further update in 2018 extended the backdrop areas to the edge of the Greater London area to protect the appreciation of the landmark from the growing presence of high-rise buildings (CNN, 2017).

Figure 3: 1991 Strategic Views (Protected Vistas)



Notes: The figure shows the 1991 version of the Strategic Views (the name Protected Vistas had before) from the Regional Planning Guidance: Supplementary Guidance for London on The Protection ff Strategic Views (RPG3a). **Source:** Department of Environment and GLA.

2.3 Other Height-Affecting Policies

London employs multiple regulatory frameworks governing building heights, balancing urban densification with historic preservation. The London Plan promotes high-density development in designated Central Activity Zones or Opportunity Areas like Canary Wharf and Nine Elms while protecting the city's historic skyline (Greater London Authority, 2021). Development proposals undergo a rigorous planning appeal process that involves public inquiries and extended deliberations.

Beyond the LVMF, additional implicit height constraints exist through over 1,000 conservation areas that restrict modifications to historic neighbourhoods and could limit high-rise development Historic England (2022). Conservation Areas cover over 15% of the whole of London and over 37% of the surface of the 11 central boroughs. These are places where height restrictions are not explicitly stated but rather regulated by saying that changes in the heights of units should not disrupt the character of neighbourhoods, which is challenging to quantify. World Heritage Site buffer zones provide further protection around landmarks such as the Tower of London and Westminster Abbey. At the same time, listed buildings and scheduled monuments receive protected status, affecting nearby development. These restrictions often overlap (even with the PV), creating zones of varying regulatory intensity and allowing the study of heterogeneous effects of height restrictions on urban development outcomes. Furthermore, planning policies aim to prevent "canyon effects" where tall building clusters could visually dominate historic landmarks or disrupt sightlines, so there are potential spillover effects to consider.

The LVMF provides a quasi-experimental setting for evaluating height restrictions, which creates exogenous variation in development constraints. Due to design principles, such as the preference for avoiding sharp changes in the skyline or "canyon views", it is likely that there is potential spillovers from the Protected Vistas into surrounding areas, as urban planners may deliberately shape the surrounding areas of the treatment to prevent high-rise clustering. Also, London's discretionary planning model, as opposed to a zoning-based one like in the USA or other European cities, could raise external validity concerns. Because London is a high-demand city, this setting is equivalent to a high-friction one, which means that the estimates of this study may represent a lower bound of the effect of regulation on heights.

3 Empirical Analysis

This section contains the whole empirical section of the paper, including the data description, permissible height measure, and visibility index. Also, it includes all of the reduced-form results, including testing for mechanisms and robustness analysis. Some of the datasets described in this section are used to calibrate the model in the next section on the quantitative analysis. Also, the counterfactual exercise developed in the next section uses the main estimations found in this empirical section.

3.1 Border Discontinuity Design

This study employs a sharp Border Discontinuity Design (BDD), a form of Regression Discontinuity Design (Black, 1999; Keele and Titiunik, 2015), to estimate the causal effect of the Protected Views policy on heights, prices and views to the key landmarks established in the policy. The policy imposes height restrictions within designated view corridors, creating a sharp spatial discontinuity. The BDD leverages this discontinuity by comparing buildings located just inside and just outside the policy boundaries, under the assumption that units near the boundary are comparable, only differing in the treatment assignment.

The main estimating equation is as follows:

$$Y_{ibt} = \alpha + \beta_1 \, D_{ib}^{AT} + \beta_2 \, D_{ib}^{TS12} + \mathbb{Z}_{ibt}^{\top} \boldsymbol{\phi} + \epsilon_{ibt} \,, \tag{1}$$

Let Y_{ibt} denote the outcome of interest, such as built height, residential property price and the landmark visibility index for building i, near border segment b, and year

t (only for the price regression). Treatment is assigned based on location. There are two treatments in this setting, one considering the 2007 Protected Vista boundary and the other the 2012 boundary. Because the 2007 policy mostly lies inside the perimeter of the 2012 policy, I will consider those places inside the 2007 boundary as "Always Treated", with a dummy D_{ib}^{AT} taking the value of 1 if the building i is inside the 2007 PV. The second treatment is called "Treated Since 2012", which is a dummy D_{ib}^{TS12} that takes the value of 1 if the building i is inside the 2012 PV and outside the 2007 PV. Both of these dummies are mutually exclusive and the sample is defined within a window of h meters from the boundaries. The β coefficients capture the causal effect of the height restriction.

$$\mathbb{Z}_{ibt} = \left(D_{ib}^{91},\ f(\mathbf{X}_{ib}^{AT}),\ f(\mathbf{X}_{ib}^{TS12}),\ \boldsymbol{\gamma}_b^{AT},\ \boldsymbol{\gamma}_b^{TS12},\ \boldsymbol{\delta}_t\right)$$

The term $\mathbb{Z}_{ibt}$ contains relevant controls of the regression. First, because I have two treatments, I need to control for the running variables and the border segment fixed effects of each treatment. The term $f(X_{ib})$ is a flexible function of the running variable, allowing for smooth spatial trends in outcomes. Here, X_{ib} is the running variable measuring the distance from unit i to the nearest boundary b of each of the boundaries. The term γ_b denotes border segment fixed effects, which control for unobserved heterogeneity across different policy boundaries. Including border segment fixed effects is essential, as the policy comprises multiple, non-contiguous view corridors. These fixed effects ensure that identification comes from within-border variation, isolating the local treatment effect at each boundary and avoiding bias from systematic differences across borders. I split the outer boundaries of the policy to create the border segments; I do so by splitting the border in those places where the policy changes boroughs and when it overlaps with a Conservation Area, allowing me to have internally consistent boundaries. I also split the boundaries for other specifications as a robustness exercise.

For the price regressions, I control for year fixed effect (δ_t). I also control for a dummy D_{ib}^{91} that takes the value of 1 if the building i is inside the 2019 PV and outside the 2012 PV, but I do not consider a running variable and fixed effects for the borders in this policy. The preferred specification uses cluster standard errors at a border segment level (Gibbons et al., 2013).

The validity of this design relies on two key assumptions. First, the continuity assumption requires that, in the absence of treatment, potential outcomes evolve smoothly with X_{ib}. This ensures that any observed discontinuity in Y_{ib} at the cutoff can be attributed to the treatment. Second, the no-manipulation assumption rules out precise sorting around the boundary, ensuring that treatment assignment is as good as random in a neighbourhood around the cutoff. I will test for these two assumptions in the results section.

3.2 Data Sources

Policy Information (LVMF)

The analysis integrates multiple data sources to comprehensively evaluate the impact of height restrictions. Information on the London View Management Framework (LVMF) is obtained from the Greater London Authority, providing precise XYZ coordinates of the view corridors and the height restrictions imposed, which allows the creation of the mantle of the regulation as shown in Figure (1).

To build the 2007 and 1991 versions of the policy, I use information from the Regional Planning Guidance: Supplementary Guidance for London on The Protection Of Strategic Views (RPG3a) (Department of Environment, 1991), from the 2007 LVFM (Greater London Authority, 2007), and comparative information developed by the City Planning Office in 2010 (City Planning Officer, 2010), where they compared the evolution of strategic views into protected vistas from 1991 until the proposed version of the 2012 LVMF in 2010 (City Planning Officer, 2010). All these documents detail relevant information, like the cone's width and the visibility height of the landmarks, which allows for projecting these policy versions based on the 2012 shapefiles. I also consider the information available online regarding the 2018 extension of the backdrops of each Protected Vista. A more detailed description of all the policies is provided in the Background Section of this paper.

Built Heights, Permissible Heights and Views (LiDAR)

To examine built environment characteristics, the study leverages high-resolution LiDAR (Light Detection and Ranging) data from DEFRA (2022), which provides detailed 1-meter by 1-meter measurements of building heights and footprints across London. LiDAR is a remote sensing technology that uses laser pulses to measure distances between a sensor and the Earth's surface, producing highly detailed three-dimensional spatial data. A LiDAR system emits thousands of laser pulses per second; by calculating the time it takes for each pulse to bounce back, it determines the distance to the object hit. These measurements are combined with GPS and IMU data to create accurate georeferenced point clouds. LiDAR data are typically captured from aerial platforms such as airplanes or drones and are used to generate two key elevation models: the Digital Surface Model (DSM), which represents the Earth's surface including all objects like big trees, buildings, and infrastructure, and the Digital Terrain Model (DTM), which represents the bare ground surface with all vegetation and structures removed. The elevation values in the LiDAR datasets are in AOD (Above Ordnance Datum), which is the height in meters relative to the mean sea level at Newlyn in Cornwall.

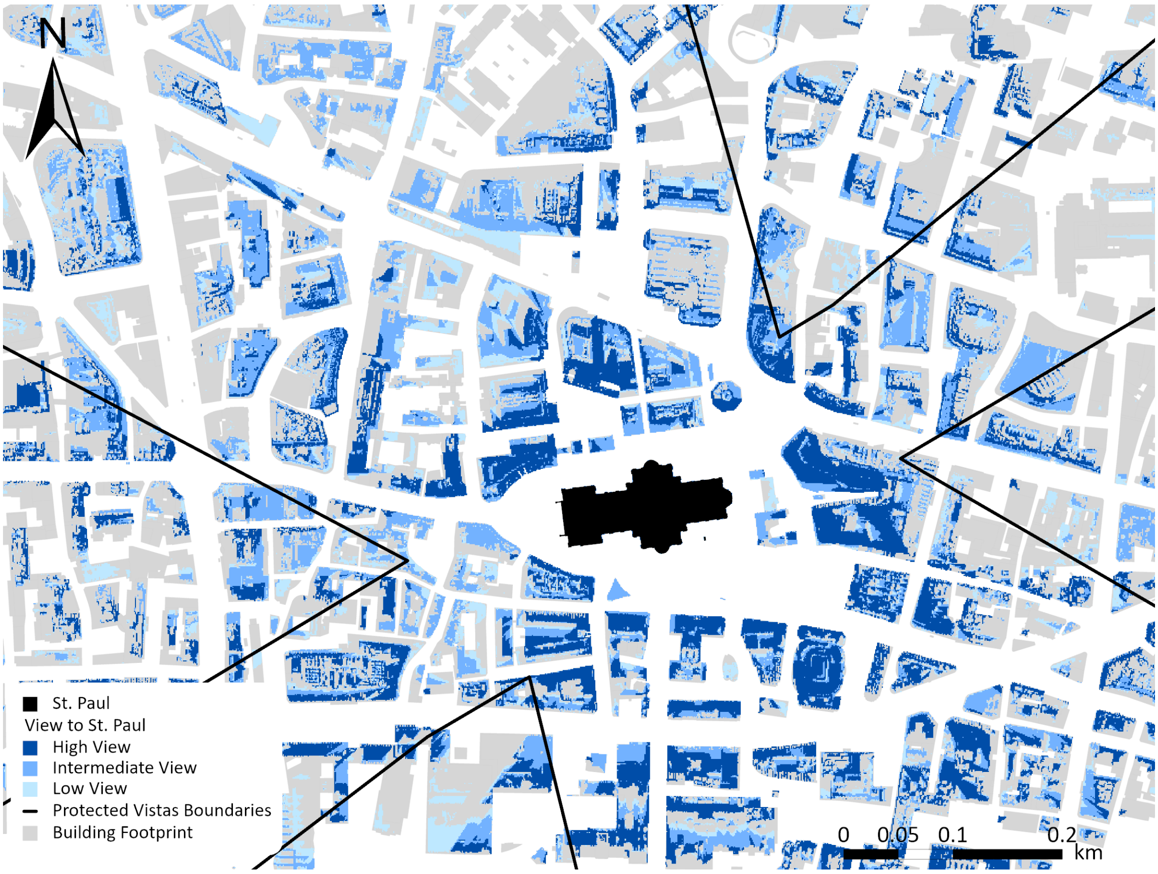
An important feature of this study is that it deals with a three-dimensional treatment, so to manage the treatment straightforwardly, I convert the 3D city into a 2D city. I proceed to subtract the elevation information of the topography (the DTM) from the built environment (the DSM) and from the actual height regulation mantle.[8] By doing this, I can first identify the height of buildings from base to top without considering the altitude they are placed on, for instance, if they are on top of a hill, and second, identify those places where the regulation is closer to the ground and by how much, providing a precise measure of Permitted Heights (showed in Panel b of Figure (1)).

Given these rich data on the built environment, I can construct a visibility measure to assess which buildings can see each of the three landmarks and how much of them. The chosen landmarks are those established by the Protected Vista policy (St. Paul's Cathedral, Westminster Abbey, and the Tower of London). For each landmark, I define as level 1 the height established in the LVMF as the minimum visible element in the landmark that should be visible, so this is the maximum visibility of the landmark; in the case of St. Paul, it is the Drum at 52.1 m AOD. Levels 2 and 3 are proportionally spread towards the top of the landmark; for instance, in the case of St. Paul, the last level sees the whole cross at the top. Figure (4) shows an example of how the visibility measure of St. Paul's Cathedral looks, where not all buildings have visibility of the landmarks, and those that can, only some faces of the buildings can see it.

I have also developed a similar measure, called potential visibility, which uses only the elevation map (the DTM LiDAR measure) to see places where, if there were no built environment, one could see the landmarks. It is one additional step from only using the elevation as a variable, because it restricts the sample to those places that could credibly see the landmarks by accounting for obstructing elements, e.g., hills in the way.

[8]Illustrative example of how these data works: `https://shorturl.at/z4rTn`

Figure 4: Visibility to St. Paul (Zoom In)



Notes: The figure shows the visibility variable to St. Paul's Cathedral (Close-up). In black is the borders of the Protected Vistas and the Cathedral. In varying colours are the parts of the building that have views to the landmark; darker colours see more of the landmarks and lighter colours see less. In the background is a street map.
Source: Own elaboration using height information for 2022 from DEFRA and policy information from the GLA.

Prices and Building Characteristics

Property transaction data comes from the UK Land Registry's Price Paid dataset from 1995 until 2022 and merged by Chi et al. (2021) with the Domestic Energy Performance Certificates (EPC) data published by the Department for Levelling Up, Housing and Communities. This dataset contains transaction prices, geographical coordinates, and various property attributes, allowing for an assessment of market responses to height restrictions based on observed transaction prices.

The information on the characteristics of the building comes from the Digimap Ordnance Survey and Verisk Digimap Collections, such as the building's outline, the age, and land use, among others. Last, this study also considers demographic and socioeconomic information from the 2021 and 2011 UK Census from the Office for National Statistics.

3.3 Descriptive Statistics

Table 1 reports descriptive statistics for buildings grouped by treatment group, distinguishing between those under the Always Treated, those Treated since 2012, and those in the control group (in the Section 2 that describes the evolution of the policy). This table describes the sample used in the main regression, including all buildings 300 meters from the 2012 or 2007 boundary. Each column shows the mean and standard deviation of a series of descriptive characteristics of the buildings and their location for the three treatment groups and the control group. In total, there are 117,990 buildings in this sample; around 80% are part of the pure control group, 18% are inside the 2007 PVs (are also considered in the 2012 PV domain), and 11% are inside of the Treated since 2012.

Average characteristics are similar across groups. Heights are close across areas, ranging from 11.6 meters in the control group to 12.9 meters in the 2007 PV, though the proportion of tall buildings is higher within PV areas than outside (18–19 percent versus 12 percent). Prices per square meter are of comparable magnitude across groups, between £11,000 and £12,000. PV areas also tend to be closer to the landmarks and river, and a slightly higher commercial share. Inside treated areas there is presence of buildings slightly more recent, with a lower proportion of Pre-WWI buildings and a higher average construction year. Last, treated areas appear to have more workplaces than the control group, while the difference is less stark for the workers' residences.

Table 1: Descriptive Statistics

	Always Treated Mean (SD)	Treated since 2012, Out 2007 Mean (SD)	Control Mean (SD)
Height (m)	12.9 (7.6)	12.5 (7.5)	11.5 (7.4)
Price sqm (£k)	11.2 (7.6)	11.6 (14.5)	12.2 (8.8)
Visibility	0.6 (3.1)	1.1 (4.0)	0.6 (3.0)
Visibility to SP	1.0 (6.5)	1.0 (6.5)	0.7 (5.0)
Visibility to W	0.7 (5.9)	2.1 (9.4)	1.2 (6.7)
Visibility to WT	0.0 (0.7)	0.0 (0.0)	0.0 (0.4)
Potential Visibility	25.7 (24.4)	32.1 (26.3)	22.6 (25.0)
Potential Visibility to SP	43.3 (41.2)	45.7 (41.3)	33.4 (39.0)
Potential Visibility to W	32.5 (39.3)	47.8 (42.2)	32.2 (38.9)
Potential Visibility to WT	1.4 (9.2)	2.8 (13.3)	2.2 (12.2)
Floors (#)	2.7 (2.7)	2.6 (2.6)	2.6 (2.4)
Permissible Height (m)	47.3 (18.2)	43.6 (11.4)	45.5 (14.2)
Dist to SP (km)	3.0 (1.7)	3.4 (1.7)	4.9 (2.4)
Dist to W (km)	3.8 (1.6)	3.1 (1.7)	4.9 (2.3)
Dist to WT (km)	3.5 (2.0)	4.0 (1.9)	5.5 (2.8)
Conservation Areas (%)	46.1 (49.8)	43.8 (49.6)	48.6 (50.0)
Other Restricted Areas (%)	12.9 (33.5)	11.5 (31.9)	9.2 (28.9)
Opp. Areas/CAZ (%)	60.7 (48.8)	45.8 (49.8)	26.4 (44.1)
Tall Buildings (%)	18.8 (39.1)	19.0 (39.3)	12.3 (32.8)
Residential (%)	57.8 (49.4)	61.3 (48.7)	70.9 (45.4)
Commercial (%)	32.6 (46.9)	29.6 (45.7)	20.9 (40.6)
Pre-WWII (%)	54.2 (49.8)	54.7 (49.8)	58.6 (49.3)
Post-WWII (%)	40.5 (49.1)	38.9 (48.7)	35.6 (47.9)
Construction Year	1937.5 (42.3)	1934.6 (41.4)	1927.2 (39.3)
New Built (%)	2.7 (16.1)	3.0 (17.0)	1.7 (12.7)
Flat (%)	63.8 (48.0)	60.4 (48.9)	50.0 (50.0)
Freehold (%)	34.8 (47.6)	38.5 (48.7)	48.5 (49.9)
Rooms (#)	3.9 (1.8)	4.1 (2.0)	4.6 (2.3)
Dist to River (km)	1.8 (1.5)	1.7 (1.3)	2.4 (2.2)
Residence Employment	166.3 (60.2)	160.1 (55.7)	159.7 (55.8)
Workplace Employment	898.3 (2747.0)	851.9 (2386.6)	580.0 (2282.6)
Green Space (%)	0.6 (7.7)	1.2 (10.8)	1.1 (10.2)
Observations	20,617	13,363	84,010

Notes: Means with standard deviations in parentheses. The table reports descriptive statistics for the sample of variables inside each of the different treatment categories for the sample inside the 300-meter window of the cutoff from the Protected Vista border. The first set of columns shows information for the buildings inside the 2007 PV (Always Treated group). The second set of columns shows the information for the group inside the 2012 PV policy and outside the 2007 PV policy (Treated since 2012, Out 2007). The last set of columns shows the information of those zones outside all of the PV.

Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and UK's Land Registry and policy information from the GLA.

3.4 Results

Table 2 presents the main results on height and prices of the border discontinuity design defined in Equation (1) at a building level. This table considers a window of 300 meters from the boundary and controls for the distance to the 2007 and 2012 PV border, boundary fixed effects and year fixed effects for the price regressions. The two treatment dummies are mutually exclusive: "Always Treated", and "Treated since 2012", so each coefficient compares buildings just inside the relevant corridor with those not treated by any of the PVs. Standard errors are clustered at the nearest border segment.[9]

The results in Column (1) show a not statistically significant coefficient of the treatment dummies, indicating that being inside a Protected Vista does not, on average, affect height. This result is not completely surprising, given that the average permissible height defined by the regulation is around 45 meters, which is relatively large considering the average height of the buildings inside and around the Protected Vista is around 12 meters (see Table 1). For this reason, I expect the policy to affect the right tail of the distribution of buildings primarily.

In Column (2), I restrict the sample to the tall buildings, and the effects of the regulation are negative and statistically significant, indicating that the policies have a binding effect on tall buildings.[10] The dummy of Always Treated, which is the "purest" treated group, shows that buildings are 7% shorter inside the policy compared to outside, while the effect of those treated since 2012 is 5%.[11] As an additional set of results, in Table A2 I assess the effect of the policy on supply of floor space and find that tall buildings have less floor space, less volume inside the Protected Vistas.

To assess if the building composition is different between treatment and control, Column (3) assesses if the building composition is different between treatment and control, using a Linear Probability Model equivalent to the regression in Column (1), but considering a dummy that identifies a building as tall instead of the log height. Coefficients are not statistically significant, showing no change in the probability of

[9]There are fewer than 20% of buildings that have transaction-level data, so in the appendix, Table A1 recreates Table 2, with results with the subsample of buildings with transaction data, and the conclusions are the same.

[10]This study will define tall buildings as the top 10% highest buildings in the sample, which roughly coincides with the definition of Tall Building provided by the 2021 London Plan, which is "at least six stories of 18 meters" (Greater London Authority, 2021).

[11]This split-sample approach is conceptually close to estimating a quantile regression at the 90th percentile. While it does not formally estimate conditional quantile effects and, in principle, conditions on the outcome, the main concerns are mitigated in this context. First, the treated and control groups contain similar proportions of tall buildings as sohwn in Column (3), reducing the risk of compositional bias. Second, the size of the right-tail subsample (over 10,000 observations) ensures statistical precision. Third, the results are robust to alternative definitions of tall such as starting at the 95th percentile.

being classified as tall. This supports the interpretation that the policy affects the intensive margin (the height of tall buildings) rather than the extensive margin (the share of tall buildings).

Regarding prices, Columns (4) to (6) show results on log prices instead of log heights, where Column (4) has the whole sample and Columns (5) and (6) split the sample by tall and short buildings. There is a significant effect of being inside the PV for the overall stock of buildings, with prices being 4% higher in the areas inside the 2007 PV compared to the control. When splitting the sample, the effect for tall buildings is 8% and for short buildings is 3% (significant at a 10% level). These results are consistent with a potential height premium associated with taller buildings while also providing evidence that the height of the built environment affects the overall prices.

To deepen the previous finding and exploit the dataset's characteristics, I separate the analysis of tall buildings into groups of floors. In Table A3, I assess the effects of prices for tall buildings separated by groups of floors. I define low floors as floors in the basement, ground, and floors 1 to 3; medium floors are floors 4 and 5; and high floors are floors six or higher (the GLA defines a Tall building as six storeys or 18 meters). Column (3) shows the effect of being inside the PV on the prices of low floors of tall buildings. For the Always Treated group, there is a significant effect of 8%, suggesting that on aggregate, flats in the lower floors of tall buildings have higher prices than those in the control group. This result provides further evidence that some negative externality could be associated with being in a higher built environment. Columns (4) and (5) show the effects for medium and high floors, and the results are not statistically significant, ruling out the height premium channel as a key driver of prices in tall buildings.

To complement these findings, I provide non-parametric evidence in Figure 5 of the effects found in Columns (2) and (4) of Table 2. These are a graphical representation of the smoothed residuals of the border fixed effect regression on height for tall buildings and overall prices, plotted against the running variable (distance from the 2012 boundary). Panel a shows the height results, which show a jump at the cutoff, and Panel b shows the effect on prices, which does not show a discontinuity at the border but an important price increase inside the treated area. It could hint at a preference for cleaner sightlines or distaste for taller buildings.

Table 2: RDD Results: Effects of PV on Heights and Prices (2022)

	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln H$	$\ln H_{(Tall)}$	$\mathbb{1}\{\text{Tall}\}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$
Always Treated	0.02	-0.07***	0.00	0.04**	0.08**	0.03*
	(0.02)	(0.02)	(0.01)	(0.02)	(0.04)	(0.02)
Treated since 2012	0.00	-0.05***	0.01	0.01	0.01	0.01
	(0.02)	(0.02)	(0.01)	(0.02)	(0.04)	(0.02)
Year FE	No	No	No	Yes	Yes	Yes
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes
Observations	117,990	14,446	117,990	67,807	14,159	53,648
R^2	0.18	0.23	0.27	0.45	0.52	0.43

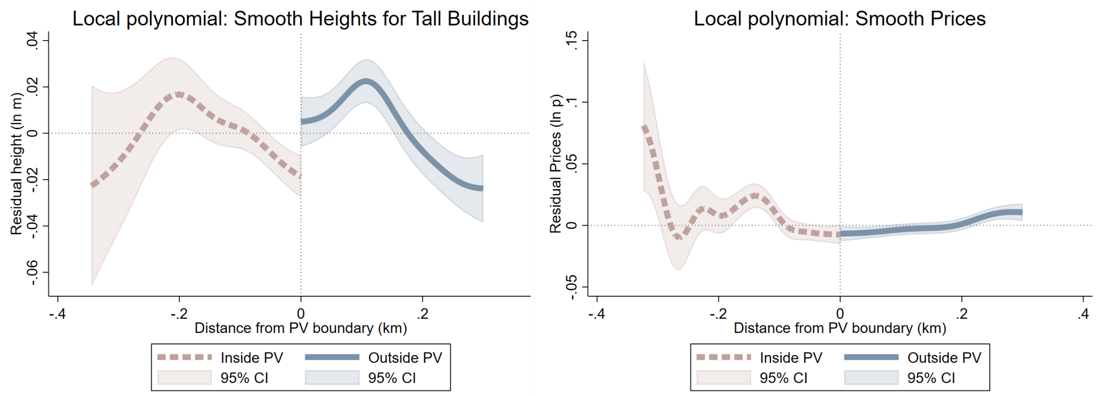
Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variable (distance from a PV boundary) and boundary fixed effects. Standard errors are clustered by nearest boundary. Column 1 shows the results of the main specification, providing the results for log height, which focuses on those buildings within a 300-meter window of the cutoff. Column 2 is identical to column 1, considering only tall buildings. Column 3 shows the results of the same sample as in column 1, but uses a dummy as a dependent variable that takes the value of 1 when a building is considered tall and zero otherwise. Column 4 shows an equivalent regression to column 1, providing results for log prices as the dependent variable and controlling for year fixed effects. Columns 5 and 6 are identical to column 4, considering only tall buildings and then the rest of the sample.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure 5: Non Parametric RDD: Effects on Height for Tall Buildings and Prices

(a) Effects on Height - Tall Buildings **(b)** Effects on Prices



Notes: The figure shows the graphical representation of the smoothed residuals of the border fixed effect regression on height and prices, plotted against the running variable (distance from the boundary). The treated side is on the left, in red, with a dotted fitted line, while the control is on the right, in blue, and on a solid line.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

Identification and Validity Checks

In this subsection, I assess the identifying assumptions underpinning the border discontinuity design. The key requirement is that, absent the Protected Vistas (PV) constraint, potential outcomes and predetermined covariates would evolve smoothly at the administrative boundary; any discontinuity at the cutoff should therefore be attributable to treatment rather than sorting or differential trends in observables. I test for this assumption in two complementary ways. First, I implement a "doughnut" specification that removes observations within 25 meters of the boundary from the baseline 300-meter window, thereby attenuating concerns that extremely local manipulation or measurement error near the cutoff drives the results. Second, I ran balance tests that replace the outcome with predetermined characteristics, verifying that the treatment indicator does not predict discontinuities in covariates that might confound the main estimates. These checks are designed to validate the smoothness condition central to BDD and anchor the interpretation of the main effects as causal.

Table A8 reports the doughnut specification for the main outcomes; the estimated effects are the same for heights, prices and the composition of tall buildings, indicating that the conclusions are not sensitive to excluding the innermost 25 meters of the 300-meter window. Tables A9, A10, A11 and A12 present covariate balance regressions that mirror the main specification but use predetermined variables as outcomes (characteristics of the location, the building and the aggregate composition of flats). Consistent with the identifying assumption, the treatment coefficients are generally small and not statistically significant across most relevant covariates.

Where PV Binds: Treatment Intensity, Regulation and CBD

This subsection investigates where the policy is most likely to bind. Ideally, one would assemble a citywide map of height limits and track sharp changes in allowable height, but this is not feasible in London. Therefore, I implement three proxy exercises. First, I restrict the analysis to parts of the city where local regulation is relatively flexible (i.e., less regulated settings in which markets should be more responsive to relaxations of height policies). Second, I exploit variation in corridor geometry to construct a measure of permissible building height and examine how outcomes vary when the permissible height is lower, corresponding to a tighter constraint. Third, I split the sample between CBD and the rest of the city, as it is likely that the effect of this height restriction on tall buildings will be larger in the centre of the city.

Table A4 shows the heterogeneous results of the main specification shown in Table 2 across different overlapping regulations. Columns (1) to (4) show the results of heights and prices, distinguishing between tall buildings and not, for those spaces in the city outside Conservation Areas or other highly regulated areas (e.g., Thames Policy Area). Columns (5) to (8), I replicate the exercise and restrict the sample further to those buildings also inside Opportunity Areas or Central Activity Zones, which are areas several boroughs are determining as the "locations where tall buildings may be an appropriate form of development,..." (Greater London Authority, 2012). Compared to Table 2, results here are still only significant for the tall building results, but the magnitudes of the effects are larger. For heights, coefficients increase from 0.07 to 0.13 and 0.15 for the Always Treated. Price effect on the other hand disappear in both of these specifications.

Figure A1 shows the main results for tall buildings interacting with an explicit measure of the intensity of the treatment, the Permitted Building Height variable (in meters). As mentioned in the background section, the PV regulation has varying heights throughout the treated areas. The difference between the height defined in the regulation and the height of the ground, both in meters above sea level,[12] allow an accurate measure of the allowable vertical space, which is an intensity variable of the treatment. The results for the Always Treated effect are in the first Column, and in the second Column, the results for the Treated since 2012. The first row uses the sample of Column (2) of Table 2, the second and third row uses the sample from Column (2) and (6) of Table A4. The results for the treated since 2012 seem

[12]The precise unit is called Above Ordnance Datum, which is the height in meters relative to the mean sea level at Newlyn in Cornwall.

fairly intuitive; the treatment effects are negative and significant for lower permissible heights, increasing as the regulation allows for more building space for most treatment dummies. The effect is no longer statistically significant for buildable heights above 60 meters. The patterns for the Always Treated appear flatter, not varying importantly with permissible height, with most coefficients being negative and significant.

Table A5 explores heterogeneity by proximity to the CBD. Columns (1) to (4) examine buildings in the city's centre (at 2km from the landmarks), and Columns (5) to (8) focus on the rest of the city (more than 2km from the centre). For buildings in the centre, effects on heights still focus on tall buildings, with point estimates slightly higher than those in the baseline regression. As opposed to the baseline case, prices for all buildings have a negative effect for one of the treatment dummies, and the rest are not significant. This could point out that, in central areas, being in a taller environment could be a positive element to the neighbourhoods, for instance, being able to designate commercial space on ground floors, or the valuation of clearer views is diminished in comparison. Last, for those buildings outside the city centre, the effect on heights and prices is similar to the main case in magnitude and significance.

Mechanism: Views to Landmarks?

One of the potential mechanisms that could explain the price differences observed is that some of the buildings inside the treated areas, because they are in the path of the line of sight of the landmarks, potentially see these landmarks, benefiting from that view. To assess this, I construct a visibility measure that uses the topography and built environment of the city to assess which buildings can see the landmarks and how much.

To test this mechanism, Table 3 estimates a specification equivalent to Table 2, but with landmark-specific visibility indicators as outcomes. The sample is those buildings that have transaction-level data. The table reports separate regressions by landmark; Columns (1) to (3) correspond to views of St Paul's at three different visibility levels, Columns (4) to (6) correspond to views of Westminster Abby at three different visibility levels, and Columns (7) to (9) correspond to views of The Tower of London at three different visibility levels.[13]

The estimates provide little evidence that PV corridors raise the likelihood that a building sees the landmarks. Across the visibility outcomes, most coefficients on the PV indicators are small and not statistically different from zero. In the few cases where estimates are statistically significant, the signs do not support the view

[13]The landmarks chosen are the ones established by the Protected Vista policy. For each landmark, I define as level 1 the height established in the LVMF as the minimum visible element in the landmark that should be visible; in the case of St. Paul, it is the Drum at 52.1m AOD. Levels 2 and 3 are proportionally spread towards the top of the landmark.

mechanism: in the St Paul's columns, some coefficients on the PV indicators are negative and statistically significant, implying a lower probability of seeing St Paul's just inside the corridor relative to just outside, while the remaining estimates are small and not statistically significant. These conclusions seem to hold when I focus on tall buildings, when I restrict the sample to those units outside Conservation Areas, and when I consider the sample of buildings where the potential visibility of the terrain of the building is positive (where visibility can be credibly assessed).

These results are consistent with the policy goal of preserving public sightlines rather than enhancing private views from buildings within the corridors. In addition, the main results point out that tall buildings are shorter inside the treated areas, reducing the likelihood that they could have better views (Table A1, Column (2)). Overall, landmark visibility does not seem to account for the higher prices inside PV corridors.

Table 3: RDD Results: Effects of PV on Visibility of the Landmarks (2022)

	(1) $\mathbb{1}\{V1\}$	(2) $\mathbb{1}\{V2\}$	(3) $\mathbb{1}\{V3\}$	(4) $\mathbb{1}\{V1\}_{(Tall)}$	(5) $\mathbb{1}\{V2\}_{(Tall)}$	(6) $\mathbb{1}\{V3\}_{(Tall)}$
Always Treated	-0.02	-0.07***	-0.05	-0.12	-0.04	-0.09*
	(0.01)	(0.03)	(0.03)	(0.08)	(0.10)	(0.05)
Treated since 2012	-0.01	-0.01	-0.02	-0.10*	0.02	-0.05
	(0.01)	(0.03)	(0.03)	(0.06)	(0.07)	(0.05)
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,869	22,869	22,869	2,330	2,330	2,330
R^2	0.20	0.21	0.22	0.43	0.43	0.42

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of views to the landmarks on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. These regressions use the sample of buildings that have transaction information. Standard errors are clustered by nearest boundary. The dependent variables are dummies that take the value of 1 if the building has a view of any of the three landmarks for the three levels of visibility (level 1 is the most demanding level, level 2 is the intermediate level, and level 3 is the level that sees the top of the landmark). Columns 1 to 3 show results for the visibility of any landmarks for visibility levels 1, 2 and 3. Columns 4 to 6 show results for the visibility of any landmarks for visibility levels 1, 2 and 3 for tall buildings. **Source:** Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Heterogeneous Results: Land Use and Age of Building

In this section, I evaluate heterogeneity by building age and land use using an adaptation of the specification in Table 2. Using data from the Verisk Digimap Collections, I can identify buildings' binned age and use. For age, the information comes binned by periods like Historic, Interwar, Sixties and Seventies, etc. I group the ages into two: pre- and post-World War II (WWII), as this time coincides with significant innovations in engineering that allow for building higher, as well as the post-construction of London after the war. Regarding use, information is fairly disaggregated by types, including residential, commercial, office, and others. I will group information by the predominant type and focus on predominantly residential, mixed and predominantly commercial and office.

Table A6 explores heterogeneity by land use. Columns (1) to (5) examine residential buildings, Columns (6) to (10) focus on mixed-use buildings, and Columns (11) and (12) on commercial.[14] For residential buildings, the only treatment dummy with a significant effect in heights of tall buildings is the Always Treated, and prices are positive and significant for all buildings and tall buildings. On the other hand, the effects for commercial and mixed-use are not statistically significant.

Table A7 presents heterogeneity analyses by age. Columns (1) to (4) report results for pre-WWII buildings, while Columns (5) to (8) focus on post-WWII structures. Regarding the results of historic buildings, the height differential between the treated and control groups is negative and significant, but there is no price effect or compositional differences. The second set of results shows, again, that the height of tall buildings is shorter in the treated areas, prices are higher, but there is no effect on the prices of tall buildings. There is no compositional difference between the treated and control groups. This pattern aligns with both technological and historical factors. Advances in engineering after the war enabled taller construction, making newer buildings more likely to approach regulatory height limits. In addition, much of London's postwar reconstruction involved replacing bomb-damaged areas with modern, often taller, structures. In contrast, older buildings, often built before modern high-rise techniques, are less likely to approach the height thresholds affected by the policy and thus remain largely unaffected.

4 Quantitative Analysis

This section contains the quantitative analysis of the paper. The motivation behind implementing a quantitative model is two-fold. First, motivated by the main reduced-

[14] I do not observe commercial prices, as the Land Registry's datasets has only residential transactions. I will be analyzing the effects o prices for the mixed-use building, but the sample is smaller.

form results, where I see lower heights of tall buildings and higher residential property prices inside Protected Vistas, I want to decompose the price effect. Protected Vista affects the supply of floor space and the neighbourhood's characteristics (affecting demand), so a structural model is required to disentangle the weight of each channel in the price composition. Second, I am interested in assessing the welfare and general equilibrium implications of removing the policy.

The roadmap of the section is as follows: First, I describe the framework, including the equilibrium conditions. Then, I calibrate the model by inverting equilibrium conditions to recover productivity and amenity fundamentals. Last, I developed a counterfactual exercise to simulate how London would look without Protected Vistas. To do so, I use an indirect inference approach, where I increase floor space by the reduced form estimate, scaling the local amenity parameter so that the model-implied price differential matches the causal estimate from the data.

4.1 Framework

The model used in this paper is a version of the Ahlfeldt et al. (2015) model.[15] This study considers a closed-city model (as opposed to the original paper, which uses an open city model), with a set of discrete locations indexed by i, in this case, over 5,000 LSOAs, which are endowed with K_i units of land. Each location has a supply of floor space L_i, which can be used for residential and commercial use. The term θ_i is the endogenous fraction of floor space allocated to commercial use.

As it is a closed city model, the utility level is endogenous and the total population is fixed.[16] Workers consume residential floor space, a final good, and observe idiosyncratic utility shocks for pairs of residence and employment locations within the city that maximise their utility. Firms maximise profit and use commercial floor space and capital to produce a final good that is costlessly traded. All markets are perfectly competitive.

4.1.1 Workers

Workers are risk neutral and have the following indirect utility function:

$$U_{ij\omega} = \frac{w_j B_i z_{ij\omega}}{d_{ij} Q_i^{1-\beta}} \tag{2}$$

[15]Description of the model is primarily based on the Ahlfeldt et al. (2015) paper and it's Supplementary Appendix. The codes used comes primarily from the following Teaching Toolkit: `https://github.com/Ahlfeldt/ARSW2015-toolkit`.

[16]This feature allows me to assess aggregate welfare changes of residents for different counterfactual settings.

The utility of worker ω living in i and working in j is higher if wages at the workplace w_j are high, local residential amenities B_i are high (i.e. it is nice to live), residential floor space prices Q_i are lower, commuting costs d_{ij} are low (which here are commuting times). Every worker draws a positive shock $z_{ij\omega}$ for the resident-employment pair from a Fréchet distribution.

The idiosyncratic utlity shock includes features at residence, workplace, and along the route, and because it is proper of each individual it allows for heterogeneous tastes over where to live and work. The shocks are drawn from an independent Frechét distribution:

$$F\left(z_{ij\omega}\right) = e^{-T_i E_j z_{ij\omega}^{-\varepsilon}}, \quad T_i, E_j > 0, \varepsilon > 1 \tag{3}$$

With positive scale parameters of $T_i > 0$ (home in i) and $E_j > 0$ (job in j) determining the average taste draw, and a shape $\varepsilon > 1$ parameter that controls the variance of the idiosyncratic-utility distribution.

The indirect utility function also has a Frechét distribution because it is a monotonic function of the idiosyncratic shock.

Commuting Probabilities: Based on the distributions of utility, the probability that a worker chooses to live in location i and work in location j is given by:

$$\pi_{ij} = \frac{\left(\frac{B_i w_j}{d_{ij} Q_i^{1-\beta}}\right)^{\varepsilon}}{\sum_{r=1}^{S} \sum_{s=1}^{S} \left(\frac{B_r w_s}{d_{rs} Q_r^{1-\beta}}\right)^{\varepsilon}} = \frac{\Phi_{ij}}{\Phi} \tag{4}$$

Summing the probabilities across workplaces for a given resident will give the residential choice probabilities π_{Ri}, while summing the probabilities across residences for a given workplace gives the workplace choice probabilities π_{Mj}.

Choice probabilities reflect random utility dispersion, where even with common Q_i, w_j, d_{ij}, and $\{B_i, T_i, E_j\}$, z_{ij0} induces heterogeneity in bilateral matches. Ceteris paribus, the probability of residing in i increases in B_i and T_i and decreases in Q_i and commuting disutility d_{ij}. Similarly, the probability of working in j increases in w_j and E_j and decreases in d_{ij}.

Commuting Market Clearing Condition: Using the conditional commuting probabilities, the commuting market clearing condition equates the number of workers employed in location H_{Mj} with the measure of workers choosing to commute to block j for work (derived from workplace probability):

$$H_{Mj} = \sum_{i=1}^{S} \frac{\left(w_j/d_{ij}\right)^{\varepsilon}}{\sum_{s=1}^{S} \left(w_s/d_{is}\right)^{\varepsilon}} H_{Ri} \tag{5}$$

The formulation of workers' commuting decisions implies that the supply of commuters to each employment location j is an increasing function of its relative wage.

Expected Income: The expected income of a worker residing in block i equals the wage in each potential job location, weighted by the probability of commuting there conditional on living in i:

$$\mathbb{E}[w_j|i] = \sum_{j=1}^{S} \frac{\left(\frac{w_j}{d_{ij}}\right)^{\varepsilon}}{\sum_{s=1}^{S}\left(\frac{w_s}{d_{is}}\right)^{\varepsilon}} w_j = \sum_{j=1}^{S} \pi_{ij|i} w_j \tag{6}$$

Expected income is high in blocks with low commuting costs to high-wage employment locations.

Demand for Residential Floor Space: From the worker's problem, I obtain the following demand for residential floor space for worker o, residing in i and working in block j:

$$l_{ijo} = (1-\beta)\frac{w_j}{Q_i} \tag{7}$$

4.1.2 Production

A single final good y_i, which serves as the numeraire, is produced under conditions of perfect competition and constant returns to scale. The production function for this good is given by:

$$y_j = A_j \left(H_{Mj}\right)^{\alpha} \left(L_{Mj}\right)^{1-\alpha}, \quad 0 < \alpha < 1, \tag{8}$$

Where H_{Mj} denotes workplace employment, L_{Mj} represents the total commercial floor space, and A_j is the final good productivity which is taken as given.

Under the assumptions of profit maximisation and zero profits, the commercial bid rent is derived as:

$$q_j = (1-\alpha)\left(\frac{\alpha}{w_j}\right)^{\frac{\alpha}{1-\alpha}} A_j^{1/(1-\alpha)}. \tag{9}$$

Firms in blocks with higher productivity and lower wages can pay higher floor prices and still make zero profit.

4.1.3 Land Market Clearing

Land market equilibrium requires no-arbitrage between the commercial and residential use. The share of floor space used commercially θ_i is given by:

$$\begin{aligned} \theta_i &= 1 && \text{if } q_i > \xi_i Q_i, \\ \theta_i &\in [0,1] && \text{if } q_i = \xi_i Q_i, \\ \theta_i &= 0 && \text{if } q_i < \xi_i Q_i. \end{aligned} \tag{10}$$

Where $\xi_i \geq 1$ is a tax equivalent of land use regulation that restricts commercial land use relative to residential land use.

Residential Floor Space: Housing demand must equal residential supply in location i, which is allocated by $(1-\theta_i)L_i$. Using utility maximisation and taking expectations over the distribution for idiosyncratic utility, this clearing condition can be written as:

$$(1-\theta_i)\,L_i = (1-\beta)\left[\sum_{s=1}^{S} \frac{(w_s/d_{is})^{\varepsilon}}{\sum_{r=1}^{S}(w_r/d_{ir})^{\varepsilon}} w_s\right] \frac{H_{Ri}}{Q_i} = (1-\beta)\frac{\mathbb{E}[w_j|i]H_{Ri}}{Q_i} = \mathbb{E}[l_i]H_{Ri} \tag{11}$$

This equilibrium depends on the population residing in block i and the expected worker income $\mathbb{E}[w_j|i]$, composed of the conditional commuting probability $\pi_{ij|i}$.

Commercial Floor Space: For the equilibrium in the commercial land market, supply, allocated by $\theta_i L_i$, must equate with demand:

$$\theta_i L_i = \left(\frac{(1-\alpha)A_i}{q_i}\right)^{\frac{1}{\alpha}} H_{Mi} \tag{12}$$

Total Floor Space: When both the residential and commercial clearing conditions are satisfied, the total demand for floor space equals the total supply

$$(1-\theta_i)\,L_i + \theta_i L_i = L_i = \varphi_i K_i^{1-\mu} \tag{13}$$

The term $\varphi_i = M_i^{\mu} = \frac{L_i}{K_i^{1-\mu}}$ is the density of development and it determines the relationship between floor space L_i and surface area K_i. In this setting, because London is an extremely planning-constrained city (Hilber and Vermeulen, 2016), I am considering floor space as an exogenous fundamental in the model.

4.1.4 General Equilibrium

Given a fixed city population, a general equilibrium is a collection of prices, quantities, and choice probabilities that simultaneously satisfy the optimal behavior of households and firms, land-use no-arbitrage, and market-clearing conditions. Intuitively, equilibrium means that no agent wants to re-optimise given prevailing prices and amenities, and all markets clear. Workers have chosen residence–workplace pairs, firms have chosen inputs, and the allocation of land across residential and commercial use is consistent with relative returns once regulation is taken into account.

It is useful to distinguish between *fundamentals* and *endogenous* outcomes. Fundamentals are the objects the model takes as given: productivity by job location A_j, residential amenities B_i, bilateral commuting costs d_{ij} (or travel times), density of development φ_i, and regulatory wedges on land use ξ_i. In the closed-city case, total population N is also fixed. The structural parameters of the model are $\{\alpha, \beta, \mu, \varepsilon, \kappa\}$. Endogenous variables are determined within the model so as to satisfy the equilibrium equations: wages w_j; residential and commercial floor-space prices q_i, Q_i, the distribution of residents and employment across locations H_{Ri}, H_{Mj}, commuting probabilities π_i together with the land-use allocation θ_i. They are referred as endogenous because they are not fixed a priori; they move in response to changes in fundamentals so that all equilibrium conditions hold. There equilibrium conditions are the following:

1. Closed-city (population contraint):

$$H = \bar{H}.$$

2. Residential choice probabilities:

$$\pi_{Ri} = \frac{\sum_{s=1}^{S} T_i E_s \left(\frac{1}{d_{is} Q_i^{1-\beta}} \right)^{\varepsilon} (B_i w_s)^{\varepsilon}}{\sum_{r=1}^{S} \sum_{s=1}^{S} T_r E_s \left(\frac{1}{d_{rs} Q_r^{1-\beta}} \right)^{\varepsilon} (B_r w_s)^{\varepsilon}}.$$

3. Workplace choice probabilities:

$$\pi_{Mi} = \frac{\sum_{r=1}^{S} T_r E_i \left(\frac{1}{d_{ri} Q_r^{1-\beta}} \right)^{\varepsilon} (B_r w_i)^{\varepsilon}}{\sum_{r=1}^{S} \sum_{s=1}^{S} T_r E_s \left(\frac{1}{d_{rs} Q_r^{1-\beta}} \right)^{\varepsilon} (B_r w_s)^{\varepsilon}}.$$

4. Commercial land market clearing:

$$\theta_i L_i = \left(\frac{(1-\alpha)A_i}{q_i}\right)^{1/\alpha} H_{Mi}.$$

5. Residential land market clearing:

$$(1-\theta_i)L_i = (1-\beta)\left[\frac{\sum_{s=1}^{S} E_s(w_s/d_{is})^{\varepsilon}}{\sum_{r=1}^{S} E_r(w_r/d_{ir})^{\varepsilon}} w_s\right]\frac{H_{Ri}Q_i}{}$$

6. Profit maximization and zero profit:

$$q_i = (1-\alpha)\left(\frac{\alpha}{w_i}\right)^{\alpha/(1-\alpha)} A_i^{1/(1-\alpha)}$$

7. Land-use no-arbitrage:

$$\theta_i = \begin{cases} 1, & q_i > \xi_i Q_i, \\ \in [0,1], & q_i = \xi_i Q_i, \\ 0, & q_i < \xi_i Q_i. \end{cases}$$

Welfare. In a closed city, the utility level is considered endogenous (as opposed to exogenous in the open city model). After solving the equilibrium, welfare is then computed from the indirect-utility equation.

$$U \;=\; \gamma\left[\sum_{r=1}^{S}\sum_{s=1}^{S} T_r E_s \left(d_{rs}\, Q_r^{1-\beta}\right)^{-\varepsilon}\left(B_r w_s\right)^{\varepsilon}\right]^{1/\varepsilon}$$

Where $\gamma = \Gamma\left(\frac{\varepsilon-1}{\varepsilon}\right)$ and $\Gamma(\cdot)$ is the Gamma function.

4.2 Calibration

Following Ahlfeldt et al. (2015), this paper calibrates a model for London using data at an LSOA level for 2021. I use the 2021 Census from the Office for National Statistics for employment, residents and commuting times. To construct the price index, I use the Ahlfeldt et al. (2023) procedure[17] and transaction prices detailed in

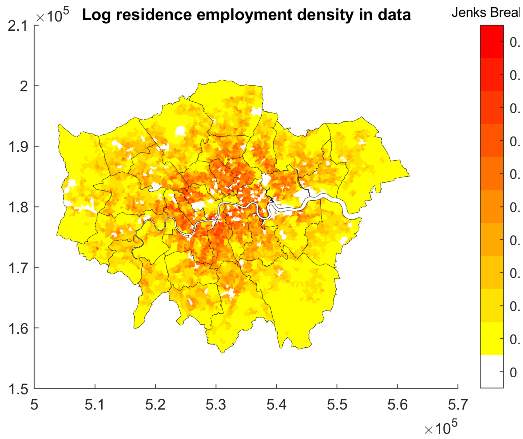
[17] `https://github.com/Ahlfeldt/AHS2023-toolkit`

the Data section (Section 3.2), which contains geographical coordinates, and various property attributes which serve as inputs for the creation of the index.

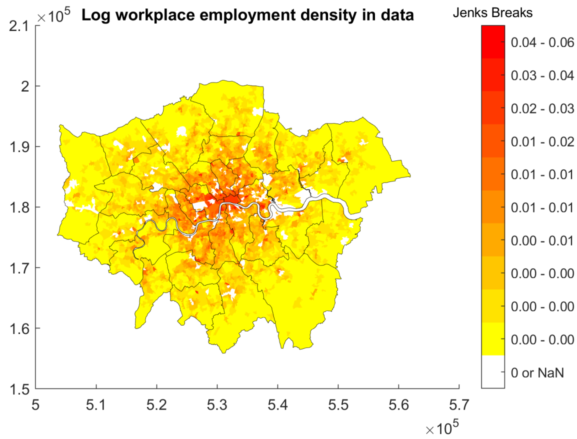
Figure 6 presents descriptive statistics of the main variables fed into the model at the 2021 LSOA level. Panel a shows the distribution of residents, which has a monocentric pattern, with a higher concentration of residents in the centre compared to the periphery, with a notable expectation of the most central part (in the City of London, where there are mainly offices and commercial buildings). Panel b shows a similar distribution of employment in the city, but with a higher gradient and concentration than the residential distribution. Last, panel a shows the 2020 price index, which shows higher values in the city's centre and towards the southwest, and lower values in the east.

Figure 6: Descriptive Statistics: Endogenous Variables (observed in data)

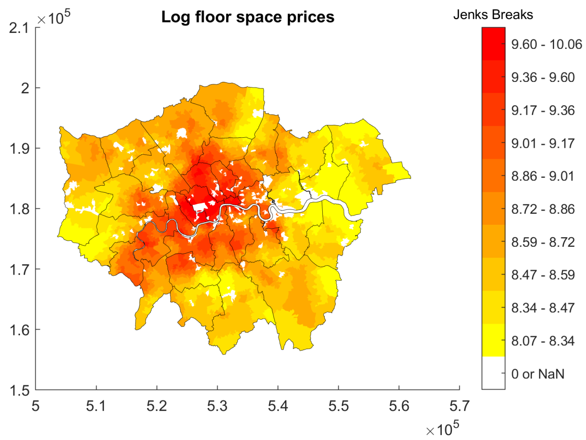
(a) Log Residence Employment



(b) Log Workplace Employment



(c) Log Floor Space Prices

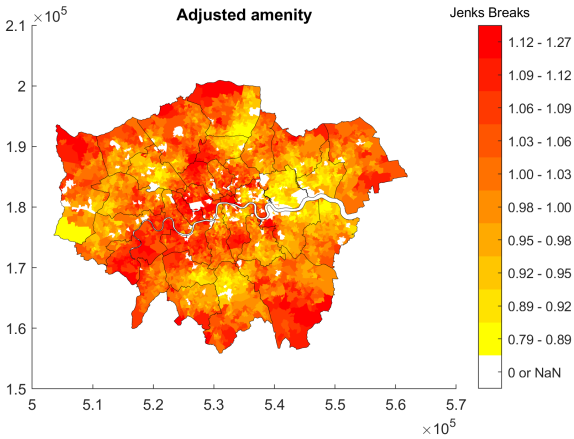


Notes: The figure shows descriptive statistics of variables fed into the model at an LSOA level.
Source: Own elaboration.

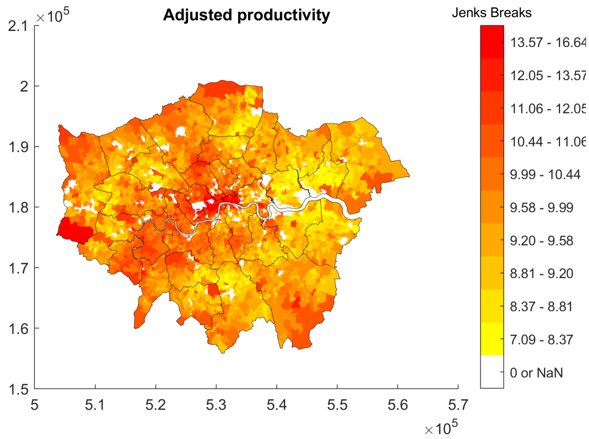
Figures 7 and 8 show the results of the model calibration. For the most part, they seem to match the reality of London. The distribution of fundamental amenities and productivity also makes sense, with high values in the centre for both and with high amenities in parts of the south west (i.e. Richmond borough), even the highlighted LSOA in the centre west, which encompasses Heathrow airport. Figures of the endogenous variables also make sense, with higher densities, the proportion of commercial floorspace and the total amount of floor space in the centre, and high expected income and adjusted wages in the centre.

Figure 7: Calibration outcomes: Exogenous variables

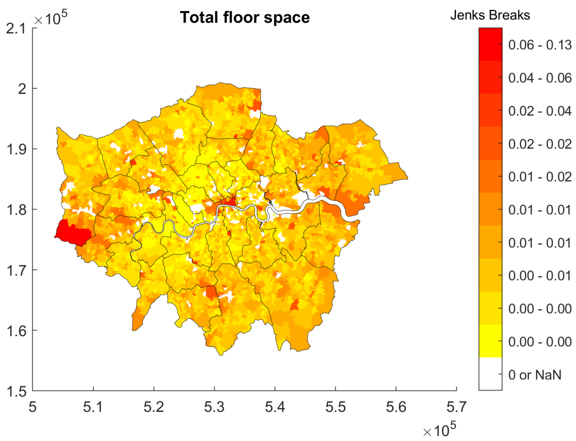
(a) Adjusted Amenities



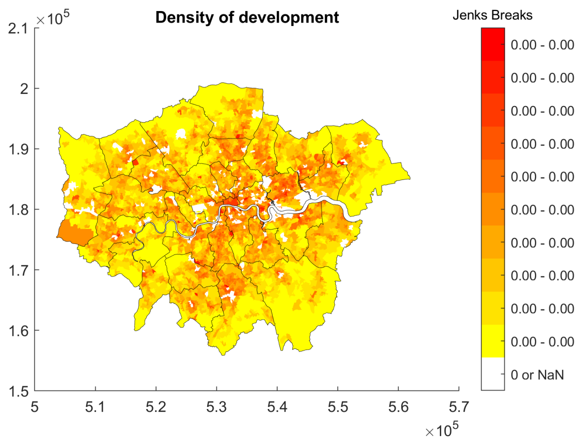
(b) Adjusted Productivity



(c) Total floor space



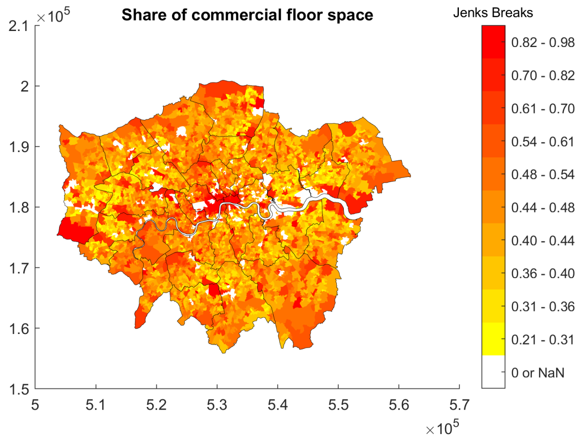
(d) Density of development



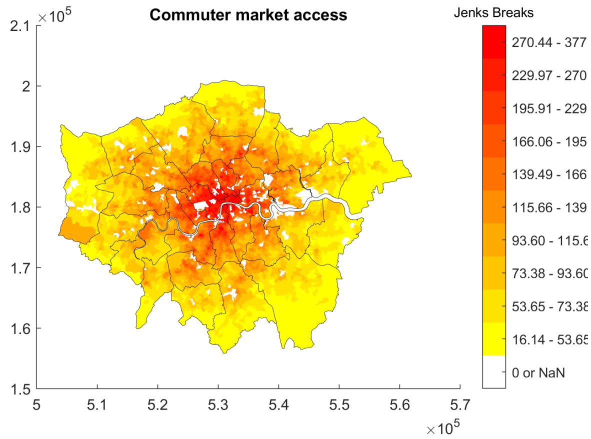
Notes: The figure shows calibrated outcomes (exogenous variables) at an LSOA level.
Source: Own elaboration.

Figure 8: Calibration outcomes: Endogenous variables

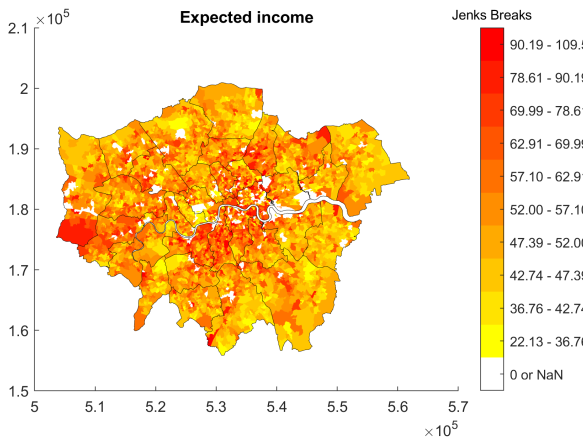
(a) Share of commercial floor space



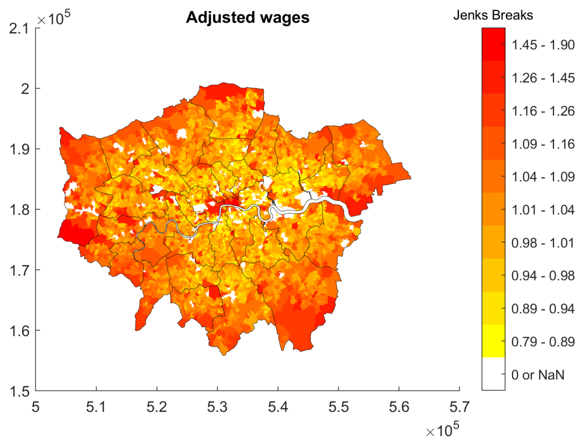
(b) Commuter Market Access



(c) Expected Income



(d) Adjusted Wages



Notes: The figure shows calibrated outcomes (endogenous variables) at an LSOA level.
Source: Own elaboration.

4.3 Policy Counterfactual: Removing the Protected Vistas

In this paper, I develop a counterfactual exercise to see how the city of London would look if there were no Protected Vistas. I treat the reduced-form estimates as policy shocks and quantify the model via indirect inference. To achieve this, I choose an amenity multiplier so that the simulated local price change matches the reduced-form price effect estimated from the data (Ahlfeldt et al., 2023). First, I apply the supply shock by increasing feasible floor space in treated LSOAs by the causal coefficient from Table 2 multiplied by the local share of tall buildings. Then, holding this supply change fixed, I scale residential amenities within the treated area to minimise the distance between simulated and empirical price changes. This aligns the structural quantification with the causal evidence.

Figure 9 maps the results of the counterfactual exercise, and Table 4 shows the aggregate results by treated area, direct spillover area (the same buffer considered in the reduced form) and in the whole city. To decompose local price effects and welfare implications, I also conduct counterfactuals for only changes in amenities and floor space separately; the results are in Panels b and c of Table 4 and in Figures A2 and A2 in the Appendix.

The main set of results is in Figure 9, showing the primary outcome variables after levelling the floor space in Protected Vista with the surrounding areas. Panel a shows changes in floor space, one of the forcing variables in this exercise; I added the Figure to facilitate the assessment of spatial correlations between supply changes and the other outcomes. To increase floor space, I use the proportion of tall buildings in each LSOA and multiply this by the negative value of the elasticity I got in the results for tall buildings in Table 2 of 0.07. The logic is that without this regulation, those tall buildings would have been taller. The distribution of this change in the floor space is mostly concentrated in the central boroughs, with a larger change experienced in those LSOA in the centre of the treated areas. Regarding changes in the amenity value, I create a fixed decrease in the amenity variable in the treated areas of 2.15% that allows me to match the price change obtained in the reduced form results in Table 2 of 0.04. Panel a of Figure A3 shows the distribution of this decrease, which has a similar extent to the change in floor space.

Panel b of Figure 9 shows the price changes due to the combined changes of floor space and amenities, and in Panel a in Table 4, there is the aggregated results for the treated areas and the city as a whole. There is a price change in the treated areas of -3.68%, which varies in intensity inside the treated areas (yellow and orange pattern in the figure). Prices also decrease in the buffer around the treated areas by 2.86%, but in the city as a whole, the price change is very small, a decrease of 0.08%. In the Figure, it is visible that most areas experience almost no changes in prices, or even some small price increases, which add up to a small decrease in the aggregate. When I assess each channels separately in Table 4, the most considerable decrease in prices in the treated areas and the buffer comes from the changes in the amenities relative to the changes in supply. In terms of the entire city, changes in supply decrease prices by a larger amount than the changes in amenities in the treated areas increase prices in London.

Panel e of Figure 9 shows the changes in the share of commercial floor space due to the combined changes of floor space and amenities. There is an increase in the share of commercial vs residential floor space of 8.69%, which seems to be driven mainly by the changes in residential amenity, of 8.53% versus 0.20% from the changes in only floor space. The Figure shows the high intensity of the increases mainly from places inside the PV but not those inside the City of London, probably because those areas already have a very high share at baseline. Overall, the combined counterfactual shows a decrease in the share of commercial floor space in the city of 0.16%, with both channels also showing negative changes. These results could hint that the very productive city centre can now attract and displace commercial activity from other places in the city due to the lack of competition from residents and the increase in floor space supply.

Panels c, d and f of Figure 9 show the changes in residence employment, workplace employment and adjusted wages, respectively. Residents decrease by 12.94% in treated areas, a result that is strongly influenced by the decrease in residential amenities of 13.05%, while changes from floor space are close to zero. On the other hand, employment and wages increased by 4.15% and 0.96%, respectively, in treated areas, a result that agrees with the previous finding about the share of commercial floor space. When focusing on London, wages are close to zero and population does not change as this is a closed city model.

Regarding welfare, the last rows of each panel in Table 4 show the changes in utility in London due to each counterfactual exercise. In all three cases, there is a small increase in the welfare of around 0.20%, but the isolated changes in floor space present the highest utility levels. These measurements do not account for the value of heritage or the benefits for tourists. These elements contribute to residents' and visitors' well-being in ways that are not captured by standard measures of amenities or housing costs. The preservation of sightlines to historic landmarks, for instance, may yield non-market benefits such as identity, continuity, and aesthetic pleasure—values that are embedded in the urban experience but difficult to monetise.

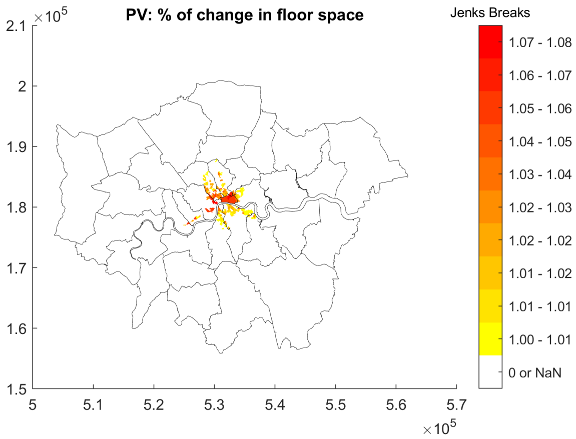
Table 4: Aggregate Counterfactual Outcomes

Panel A: Counterfactual for Changes in Floor Space and Amenities			
Δ in Variables	Treated	Buffer	London
Floor Space Price	-3.68	-2.86	-0.08
Share of Commercial Floor Space	8.69	6.72	-0.16
Residence Employment	-12.94	-10.47	–
Workplace Employment	4.15	3.28	–
Adjusted Wages	0.96	0.77	-0.00
Utility	–	–	0.19
Panel B: Counterfactual for Changes in Floor Space			
Δ in Variables	Treated	Buffer	London
Floor Space Price	-0.67	-0.55	-0.06
Share of Commercial Floor Space	0.20	0.14	-0.14
Residence Employment	0.04	0.03	–
Workplace Employment	1.73	1.42	–
Adjusted Wages	0.15	0.13	0.01
Utility	–	–	0.28
Panel C: Counterfactual for Changes in Amenities			
Δ in Variables	Treated	Buffer	London
Floor Space Price	-3.11	-2.40	-0.01
Share of Commercial Floor Space	8.53	6.63	-0.06
Residence Employment	-13.05	-10.58	–
Workplace Employment	2.65	2.05	–
Adjusted Wages	0.82	0.66	-0.02
Utility	–	–	0.16

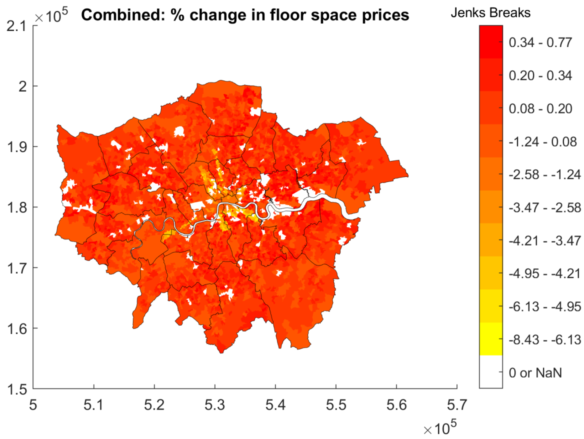
Notes: The table reports the mean of key outcomes (in each row) under different conditions: LSOAs treated (column 1), buffer zone (column 2), and whole city (column 3). Panel A shows the results for the counterfactual exercises that modify the floor space and amenity level inside the treated areas to match the mean price change to the coefficient found in the reduced form. Panel B shows the results for the counterfactual exercises that modify only the floor space inside the treated areas. Panel C shows the one where there is only a modification to the amenities.
Source: Own elaboration.

Figure 9: Counterfactual: Changes in Floor Space and Amenities in the PV

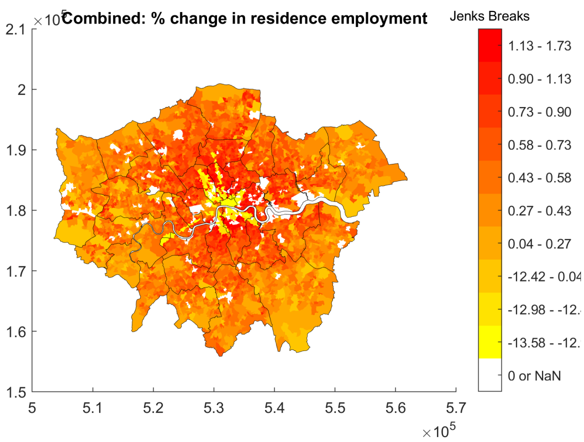
(a) Change in FS (forcing variable)



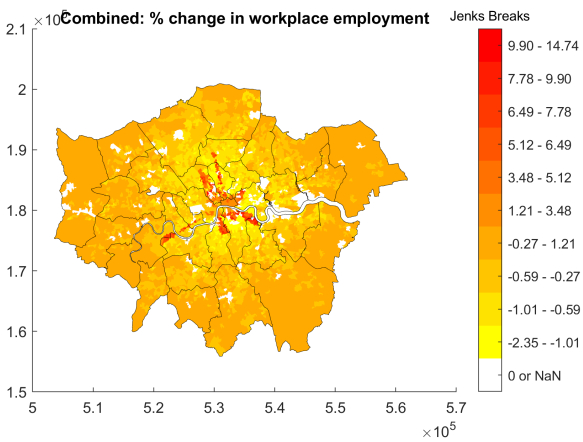
(b) Change in FS Prices



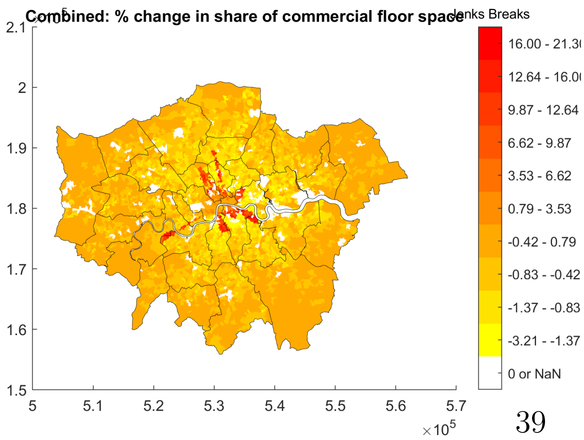
(c) Change in Residence Employment



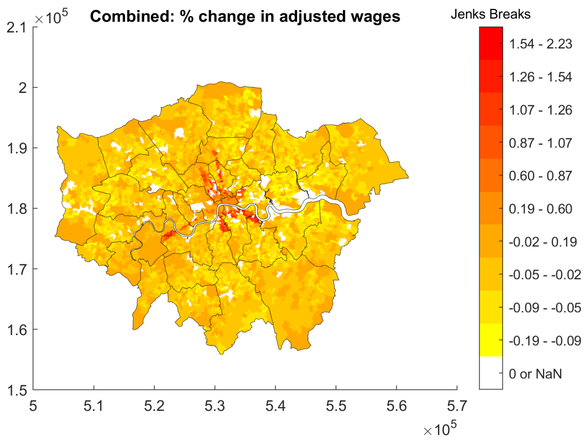
(d) Change in Workplace Employment



(e) Change in Share of Commercial FS



(f) Change in Adjusted Wages



Notes: The figure shows counterfactual outcomes at an LSOA level for the counterfactual exercises that modify the floor space and amenity level inside the treated areas to match the mean price change to the coefficient found in the reduced form. Panel B shows the results for the counterfactual exercises that modify only the floor space inside the treated areas. Panel C shows the one where there is only a modification to the amenities.
Source: Own elaboration.

5 Conclusion

This paper exploits the unique sightline geometry of London's Protected Vistas to provide clean estimates of height regulation. Height caps bind at the top of the distribution—tall buildings are shorter with no change in the proportion of tall buildings—and prices are higher. Fed into a quantitative spatial model that updates feasible floorspace and a local amenity term, these estimates imply a small citywide welfare gain from easing the binding supply constraint.

Planning and distribution. The local price premium persists without improved private landmark views, pointing to very-local built-form amenities (light, openness, streetscape) rather than direct visibility. Such amenities are typically valued more by higher-income households, so preserving them at the cost of reduced vertical capacity has distributional implications: affluent residents nearby may enjoy higher local quality while reduced floorspace tightens markets for others. Because the policy bites on additional height, the foregone units are likely upper-storey, higher-priced dwellings and prime commercial space. Admitting such units could ease pressure via a vacancy-chain effect and add business space. However, it may also entrench high-end clustering; the outcome depends on household mobility and the sensitivity of demand to prices and amenities. Where equity is a concern, planners could pair view protections or height restrictions with inclusionary requirements or publicly provided affordable housing to share benefits more broadly.

External validity. While the UK's discretionary regime differs from zoning systems elsewhere, binding height caps in high-demand locations are relevant to them as well. If anything, London likely yields lower-bound effects relative to a free-market counterfactual or to cities with clearer zoning and lower redevelopment frictions: it is a high-demand, high-productivity city with layered constraints that make regulation sticky. The results are thus most informative for superstar cities and other high-pressure markets where tall construction is feasible and aesthetic protections are salient.

Limits and future work. This paper does not measure the public value of preserved vistas; a full valuation would pair these results with revealed- or stated-preference evidence on viewpoint usage (visitors and dwell times) and willingness to pay. Looking ahead, we should track who wins and who loses over time by adding dynamics and heterogeneous households and firms, to see how people move, which neighbourhoods gain or lose, and how effects evolve.

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Appendix

Table A1: RDD Results: Effects of PV on Heights and Prices (2022)

	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln H$	$\ln H_{(Tall)}$	$\mathbb{1}\{\text{Tall}\}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$
Always Treated	-0.03	-0.11***	-0.01	0.04**	0.08**	0.03*
	(0.02)	(0.04)	(0.01)	(0.02)	(0.04)	(0.02)
Treated since 2012	-0.01	-0.06**	0.01	0.01	0.01	0.01
	(0.02)	(0.03)	(0.01)	(0.02)	(0.04)	(0.02)
Year FE	No	No	No	Yes	Yes	Yes
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,869	2,330	22,869	67,807	14,159	53,648
R^2	0.26	0.35	0.24	0.45	0.52	0.43

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. These regressions are equivalent to the main regressions but only with the sample of buildings that have transaction information. Standard errors are clustered by nearest boundary. Column 1 shows the results of the main specification, providing the results for log height, which focuses on those buildings within a 300-meter window of the cutoff. Column 2 is identical to column 1, considering only tall buildings. Column 3 shows the results of the same sample as in column 1, but uses a dummy as a dependent variable that takes the value of 1 when a building is considered tall and zero otherwise. Column 4 shows an equivalent regression to column 1, providing results for log prices as the dependent variable and controlling for year fixed effects. Columns 5 and 6 are identical to column 4, considering only tall buildings and then the rest of the sample.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2: RDD Results: Effects of PV on Supply (2022)

	(1) $\ln H$	(2) $\ln H_{(Tall)}$	(3) $\ln H_{(Short)}$	(4) $\ln FS$	(5) $\ln FS_{(Tall)}$	(6) $\ln FS_{(Short)}$
Always Treated	0.02	-0.07***	0.03	0.03	-0.14	0.03
	(0.02)	(0.02)	(0.02)	(0.04)	(0.10)	(0.04)
Treated since 2012	0.00	-0.05***	-0.00	-0.06	-0.18**	-0.07*
	(0.02)	(0.02)	(0.02)	(0.04)	(0.08)	(0.04)
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes
Observations	117,990	14,446	103,544	118,003	14,446	103,557
R^2	0.18	0.23	0.09	0.11	0.07	0.05

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. Column 1 shows the results of the main specification, providing the results for log height, which focuses on those buildings within a 300-meter window of the cutoff. Column 2 is identical to column 1, considering only tall buildings. Column 3 is identical to column 1, considering only tall buildings. Column 4 shows the results of the main specification, providing the results for log floor space instead of heights. Column 5 shows results of floor space for tall buildings, and column 6 shows results for short buildings.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A3: RDD Results: Effects of PV on Prices by Floors for Tall Buildings

	(1)	(2)	(3)	(4)	(5)
	$\ln P_{(Tall)}$	$\ln P_{(Tall)}$	$\ln P_{(Low)}$	$\ln P_{(Medium)}$	$\ln P_{(High)}$
Always Treated	0.08^{**}	0.07^{*}	0.08^{**}	0.03	-0.05
	(0.04)	(0.04)	(0.04)	(0.05)	(0.10)
Treated since 2012	0.01	-0.01	-0.01	0.00	-0.10
	(0.04)	(0.04)	(0.04)	(0.05)	(0.09)
Year FE	Yes	Yes	Yes	Yes	Yes
Boundary FE	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes
Observations	14,159	12,848	9,299	4,659	2,483
R^2	0.52	0.54	0.53	0.52	0.65

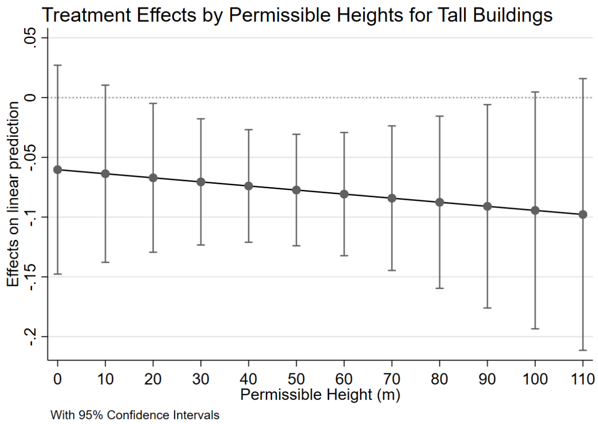
Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. Column 1 shows the results of the main specification, providing the results for log price for tall buildings within a 300-meter window of the cutoff. Column 2 is identical to column 1, considering only tall buildings that have information on their floor. Column 3 shows the results for log price for floors 1 - 3, ground and basement of tall buildings. Column 4 shows the results for log price for floors 4 and 5 of tall buildings. Column 5 shows the results for log price for floors 6 and more of tall buildings.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

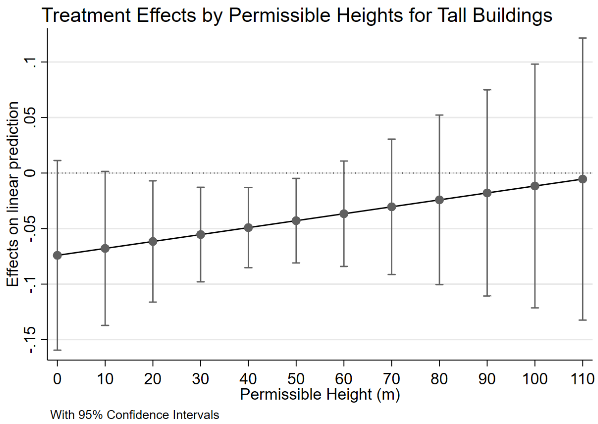
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure A1: Treatment Effects Across Permissible Heights for Tall Buildings (2022)

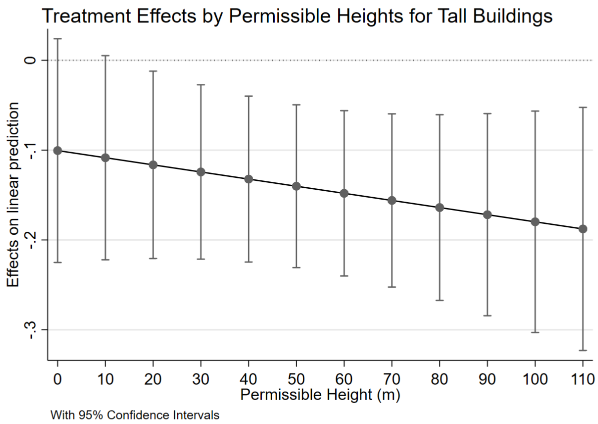
(a) Always Treated



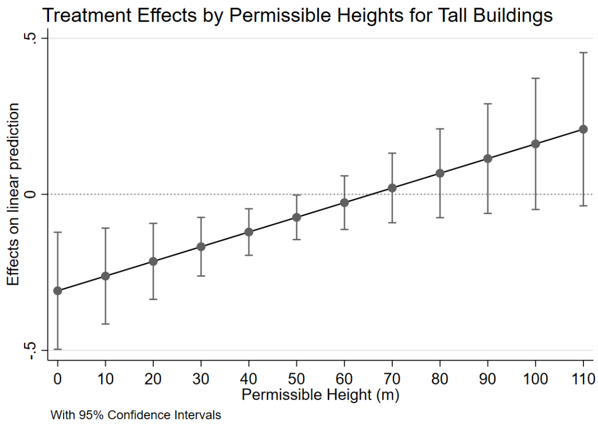
(b) Treated since 2012



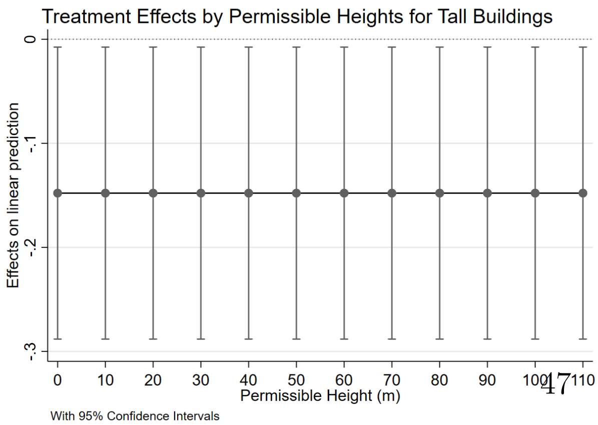
(c) Always Treated - Outside Conservation Areas



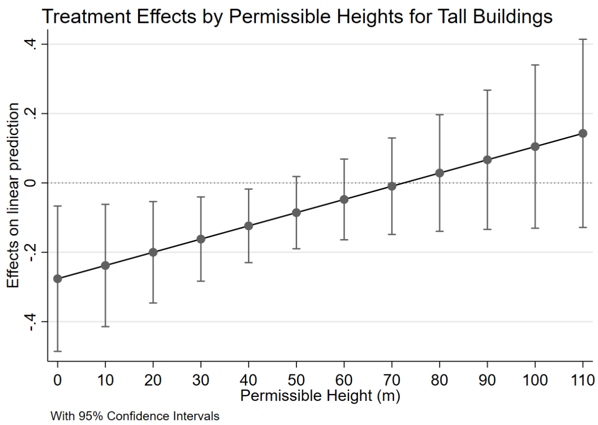
(d) Treated since 2012 - Outside Conservation Areas



(e) Always Treated - Outside Conservation Areas and In Opportunity Areas



(f) Treated since 2012 - Outside Conservation Areas and In Opportunity Areas



Notes: The figure shows OLS estimates of the elasticity of heights on the treatment dummies interacted with the permissible height variable (difference between the height regulation and the ground elevation in meters), the running variable (distance from a PV boundary), boundary and year fixed effects and the interaction with a continuous heterogeneity variable for tall buildings within a 300-meter window of the cutoff (an extension of the results from the main results in Table (2)).

Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and UK's Land Registry and policy information from the GLA.

Table A4: RDD Results: Effects of PV by Other Regulation (2022)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$\ln H$	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\ln H$	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$
Always Treated	0.01	-0.13***	0.02	0.05	0.02	-0.15**	0.04	0.04
	(0.03)	(0.05)	(0.03)	(0.06)	(0.08)	(0.07)	(0.04)	(0.09)
Treated since 2012	0.02	-0.10***	0.02	0.03	0.09	-0.11**	0.01	0.02
	(0.02)	(0.04)	(0.02)	(0.06)	(0.06)	(0.05)	(0.04)	(0.11)
Year FE	No	No	Yes	Yes	No	No	Yes	Yes
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	51,163	4,735	29,381	5,793	14,441	3,101	8,789	2,862
R^2	0.16	0.28	0.39	0.55	0.25	0.27	0.35	0.44

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. The sample considered are those buildings within a 300-meter window of the cutoff. Columns 1 to 4 shows the results for log height, log height for tall buidings, log price and log price for tall buildings for the sample of buildings outside a Conservation area or other highly regulated area. Columns 5 to 8 shows the results for log height, log height for tall buidings, log price and log price for tall buildings for the sample of buildings outside a Conservation area or other highly regulated area or inside an Opportunity Area or a Central Activity Zone.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A5: RDD Results: Effects of PV by CBD (2022)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$
Always Treated	-0.09**	-0.00	0.01	0.00	-0.07**	0.04**	0.10**	0.03
	(0.04)	(0.04)	(0.07)	(0.04)	(0.03)	(0.02)	(0.04)	(0.02)
Treated since 2012	-0.06**	-0.04*	-0.04	-0.05*	-0.05**	0.02	-0.02	0.03
	(0.03)	(0.02)	(0.05)	(0.03)	(0.02)	(0.02)	(0.04)	(0.02)
Year FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,181	12,007	4,583	7,424	6,265	55,800	9,576	46,224
R^2	0.22	0.40	0.43	0.37	0.27	0.47	0.58	0.45

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. The sample considered are tall buildings within a 300-meter window of the cutoff. Columns 1 to 4 shows the results for log height, log height for tall buidings, log price and log price for tall buildings for the sample of buildings in the CBD (at 2km from the landmarks). Columns 5 to 8 shows the results for log height, log height for tall buidings, log price and log price for tall buildings outside the CBD (more than 2km from the landmarks)
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A6: RDD Results: Effects of PV by Land Use (2022)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$	$\mathbb{1}\{\text{Res}\}$	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$	$\mathbb{1}\{\text{Mixed}\}$	$\ln H_{(Tall)}$	$\mathbb{1}\{\text{Com}\}$
Always Treated	-0.12**	0.04**	0.12**	0.02	-0.01	-0.03	0.05	0.05	0.06	0.01	-0.06	0.01
	(0.05)	(0.02)	(0.05)	(0.02)	(0.03)	(0.03)	(0.05)	(0.10)	(0.05)	(0.04)	(0.04)	(0.04)
Treated since 2012	-0.05	0.01	0.02	0.00	0.01	-0.01	0.03	0.03	0.04	-0.03	-0.04	0.02
	(0.04)	(0.02)	(0.05)	(0.02)	(0.02)	(0.02)	(0.03)	(0.07)	(0.05)	(0.04)	(0.03)	(0.04)
Year FE	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No	No
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,911	54,785	8,049	46,736	12,703	2,706	6,822	2,762	4,060	12,703	6,051	12,703
R^2	0.39	0.47	0.60	0.45	0.53	0.40	0.46	0.54	0.44	0.24	0.28	0.38

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. The sample considered are tall buildings within a 300-meter window of the cutoff. Column 1 shows the results for log height for residential buildings, column 2 and 4 shows the results for prices, and column 5 shows the results for the proportion of residential buildings. Column 6 shows the results for log height for mixed-use buildings, column 7 and 9 shows the results for prices, and column 10 shows the results for the proportion of mixed buildings. Column 11 shows the results for log height for commercial use buildings, column 12 shows the results for the proportion of commercial buildings
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and UK's Land Registry and policy information from the GLA.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A7: RDD Results: Effects of PV by Age of Building (2022)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\mathbb{1}\{\text{Pre-WWII}\}$	$\ln H_{(Tall)}$	$\ln P$	$\ln P_{(Tall)}$	$\mathbb{1}\{\text{Post-WWII}\}$
Always Treated	-0.04**	0.03	0.07	-0.03	-0.11**	0.05*	0.09	0.05
	(0.02)	(0.02)	(0.06)	(0.04)	(0.04)	(0.03)	(0.06)	(0.04)
Treated since 2012	-0.01	-0.01	-0.03	-0.02	-0.11***	0.04	0.05	0.03
	(0.01)	(0.02)	(0.05)	(0.03)	(0.03)	(0.02)	(0.06)	(0.03)
Year FE	No	Yes	Yes	No	No	Yes	Yes	No
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,721	41,765	6,666	14,487	6,265	25,588	7,302	14,487
R^2	0.23	0.45	0.46	0.38	0.27	0.43	0.52	0.35

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. The sample considered are tall buildings within a 300-meter window of the cutoff. Column 1 shows the results for log height for buildings built pre-WWII, column 2 and 3 shows the results for prices, and column 4 shows the results for the proportion of buildings from these age categories. Column 5 shows the results for log height for buildings built post-WWII, column 6 and 7 shows the results for prices, and column 8 shows the results for the proportion of buildings from these age categories.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and UK's Land Registry and policy information from the GLA.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A8: Doughnut RDD: PV Effects on Heights and Prices

	(1)	(2)	(3)	(4)	(5)	(6)
	$\ln H$	$\ln H_{(Tall)}$	$\mathbb{1}\{\text{Tall}\}$	$\ln P$	$\ln P_{(Tall)}$	$\ln P_{(Short)}$
Always Treated	0.03	-0.06**	0.01	0.05***	0.09**	0.05**
	(0.02)	(0.03)	(0.01)	(0.02)	(0.04)	(0.02)
Treated since 2012	0.02	-0.04**	0.02	0.00	-0.00	0.01
	(0.02)	(0.02)	(0.01)	(0.02)	(0.04)	(0.02)
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes	Yes
Dist from PV boundary	Yes	Yes	Yes	Yes	Yes	Yes
Control Previous Boundary	Yes	Yes	Yes	Yes	Yes	Yes
Observations	109,082	13,709	109,082	62,805	13,492	49,313
R^2	0.18	0.23	0.27	0.46	0.53	0.44

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of heights and prices on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary. Column 1 shows the results of the main specification, providing the results for log height, which focuses on those buildings within a doughnut between 25 and 300-meter from the cutoff. Column 2 is identical to column 1, considering only tall buildings. Column 3 shows the results of the same sample as in column 1, but uses a dummy as a dependent variable that takes the value of 1 when a building is considered tall and zero otherwise. Column 4 shows an equivalent regression to column 1, providing results for log prices as the dependent variable and controlling for year fixed effects. Columns 5 and 6 are identical to column 4, considering only tall buildings and then the rest of the sample.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A9: RDD Covariate Balance — Location Characteristics I

	(1)	(2)	(3)	(4)	(5)	(6)
	Dist. SP (km)	Dist. W (km)	Dist. WT (km)	Cons. Areas (%)	Rest. Areas (%)	Opp. Areas/CAZ (%)
Always Treated	-0.20***	-0.16***	-0.20***	0.80	1.25	4.20**
	(0.05)	(0.04)	(0.05)	(2.85)	(1.79)	(2.00)
Treated since 2012	-0.13***	-0.13***	-0.11***	-0.28	2.40*	1.13
	(0.03)	(0.03)	(0.03)	(2.29)	(1.41)	(1.43)
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes	Yes
Observations	118,091	118,091	118,091	118,091	118,091	118,091
R^2	0.92	0.92	0.94	0.47	0.40	0.78

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of different location characteristics on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A10: RDD Covariate Balance — Location Characteristics II

	(1) Dist to River (km)	(2) Residence Employment	(3) Workplace Employment	(4) Green Space (%)
Always Treated	-0.16***	-4.82	29.00	-0.39*
	(0.05)	(3.16)	(37.11)	(0.23)
Treated since 2012	-0.13***	-4.60*	-9.81	-0.25
	(0.03)	(2.63)	(43.54)	(0.32)
Boundary FE	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes
Observations	118,091	118,050	118,050	118,091
R^2	0.92	0.29	0.81	0.19

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of different location characteristics on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11: RDD Covariate Balance — Building Composition

	(1) Tall Buildings (%)	(2) Residential (%)	(3) Commercial (%)	(4) Pre-WWII (%)	(5) Post-WWII (%)
Always Treated	0.08	2.90	-2.22	-1.13	2.08
	(1.09)	(1.98)	(1.90)	(1.88)	(1.91)
Treated since 2012	0.93	2.04	-1.64	-1.97	1.41
	(0.95)	(1.98)	(1.74)	(2.01)	(1.85)
Boundary FE	Yes	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes	Yes
Observations	118,091	118,091	118,091	118,091	118,091
R^2	0.27	0.30	0.30	0.22	0.20

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of different building characteristics on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12: RDD Covariate Balance — Aggregate Flat Characteristics

	(1) New Built (%)	(2) Flat (%)	(3) Freehold (%)	(4) Rooms (#)
Always Treated	0.49	0.56	-1.33	-0.10
	(0.63)	(2.43)	(2.49)	(0.09)
Treated since 2012	0.74	0.71	-0.45	-0.10
	(0.61)	(1.98)	(1.96)	(0.08)
Year FE	Yes	Yes	Yes	Yes
Boundary FE	Yes	Yes	Yes	Yes
Dist from Boundary	Yes	Yes	Yes	Yes
Dummy 1991	Yes	Yes	Yes	Yes
Observations	68,957	68,957	68,957	65,894
R^2	0.06	0.16	0.16	0.17

Standard errors in parentheses

Notes: The table reports OLS estimates of the elasticity of different aggregate flat level characteristics on the treatment dummies, the running variables (distance from a PV boundaries), boundary and year fixed effects. Standard errors are clustered by nearest boundary.
Source: Own calculations using building, height and price information for 2022 from the DEFRA, OS National Geographic Database (NGD), and the UK's Land Registry and policy information from the GLA.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

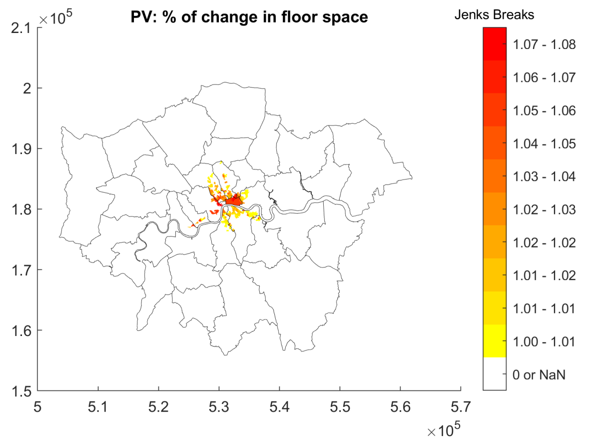
Table A13: List of parameters and quantification strategies

Parameter	**Definition**	**Value**	**Source**
β	Housing expenditure share (in utility)	0.75	Davis and Ortalo-Magné (2011) (USA)
α	Labor share in production (Cobb–Douglas)	0.80	Valentinyi and Herrendorf (2008) (USA)
μ	Share of non-land inputs in floor space production	0.75	Combes et al. (2019); Epple et al. (2010) (France and Pennsylvania)
$\upsilon = \kappa\varepsilon$	Semi-elasticity of commuting flows w/r travel times	0.07	Ahlfeldt et al. (2015) gravity estimation (Berlin)
ε	Preference heterogeneity/Labour supply elasticity/Commuting heterogeneity	6.83	Ahlfeldt et al. (2015) calibrated (Berlin)
κ	Iceberg commuting cost parameter	0.01	Ahlfeldt et al. (2015) backed out (Berlin)
$\gamma = \Gamma\frac{\varepsilon-1}{\varepsilon}$	Scale parameter in expected utility	1.11	Ahlfeldt et al. (2015) backed out (Berlin)

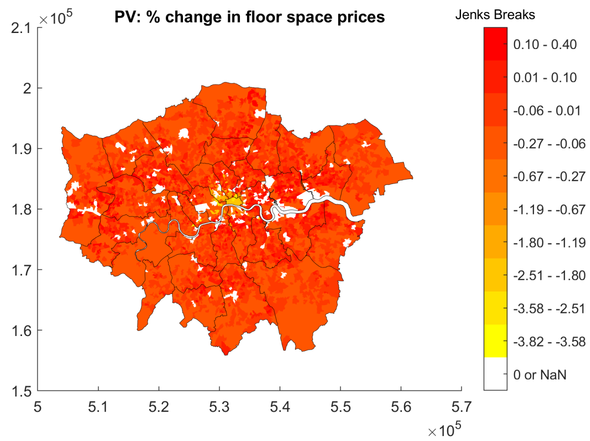
Notes: The table documents the parameters used in the model.
Source: Own elaboration based on Ahlfeldt et al. (2015).

Figure A2: Counterfactual: Changes in Floor Space in the Protected Vista

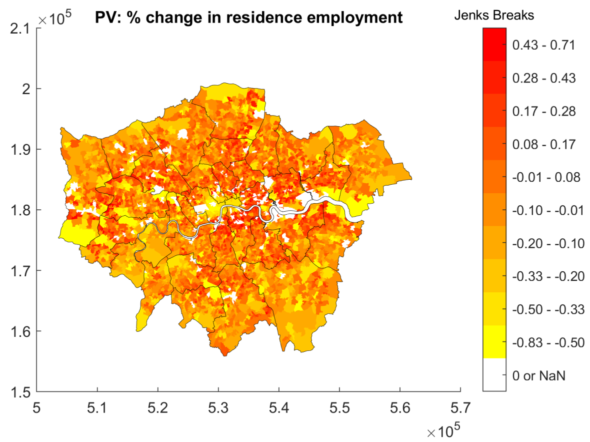
(a) Change in Floor Space (forcing variable)



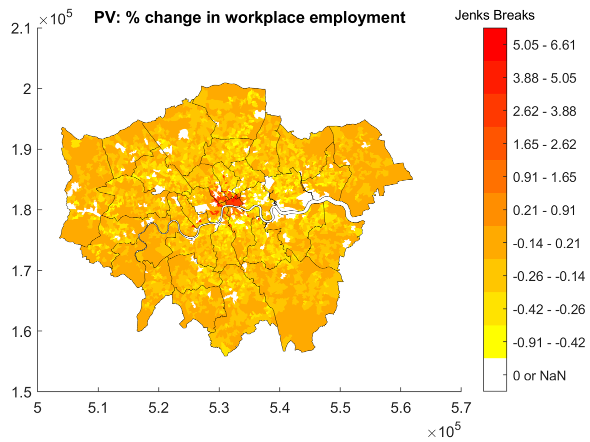
(b) Change in Floor Space Prices



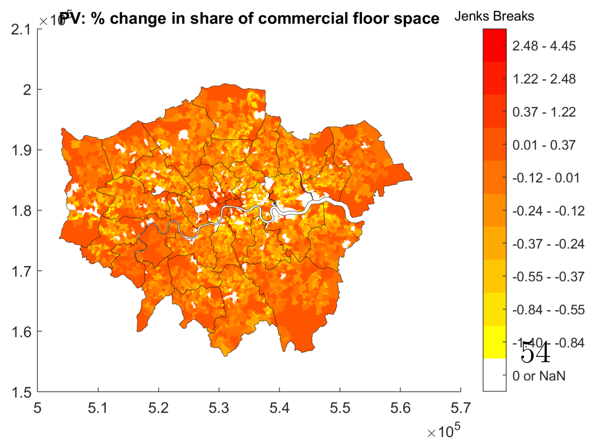
(c) Change in Residence Employment



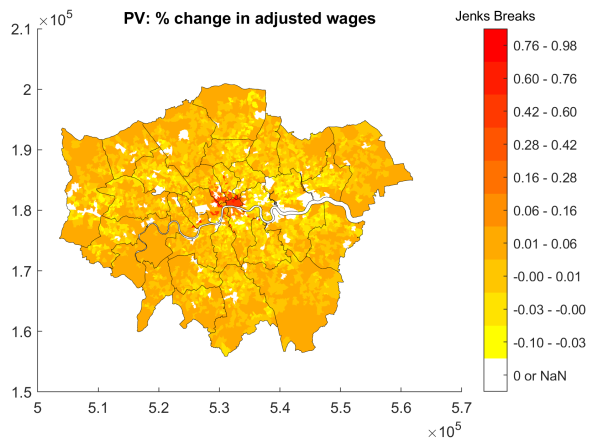
(d) Change in Workplace Employment



(e) Change in the Share of Commercial Floor Space



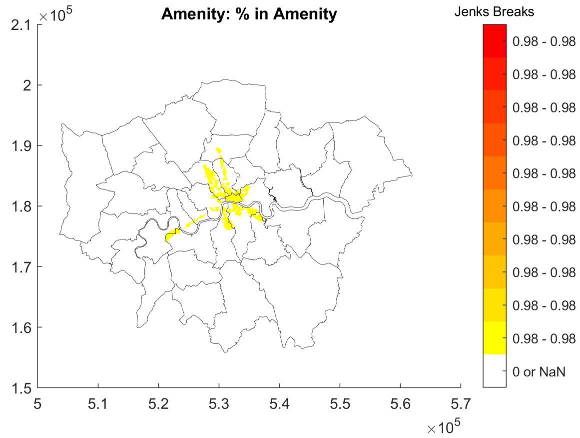
(f) Change in Adjusted Wages



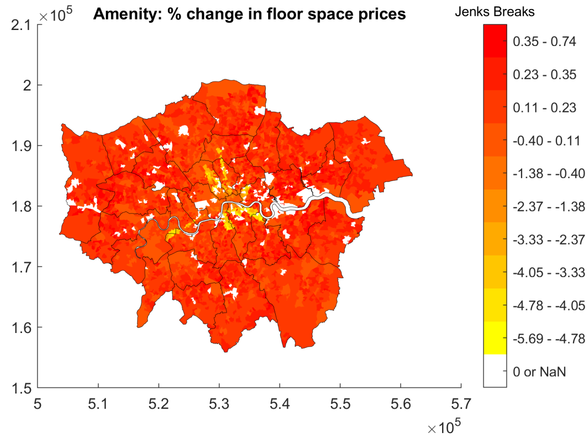
Notes: The figure shows counterfactual outcomes at an LSOA level for the counterfactual exercises that modify the floor space inside the treated areas by the reduced form result.
Source: Own elaboration.

Figure A3: Counterfactual: Changes in Amenities in the Protected Vista

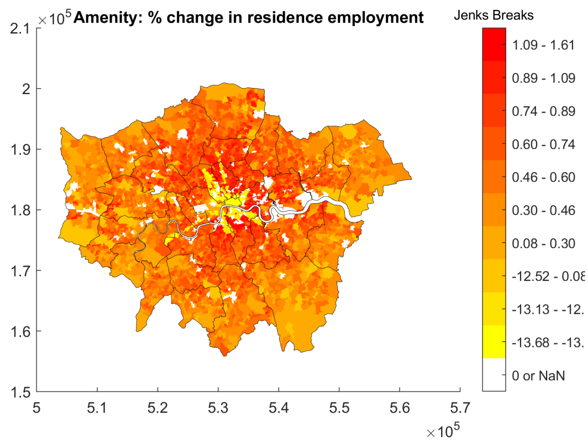
(a) Change in Amenities (forcing variable)



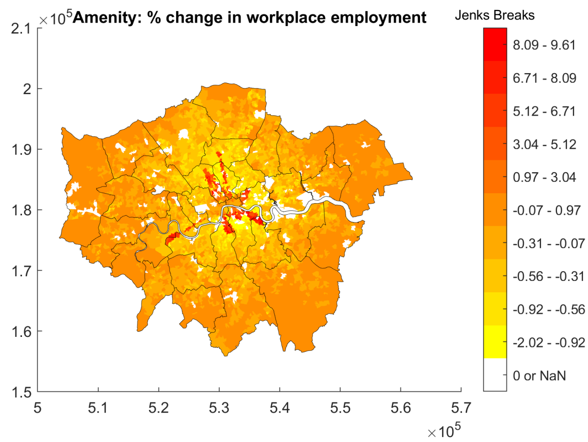
(b) Change in Floor Space Prices



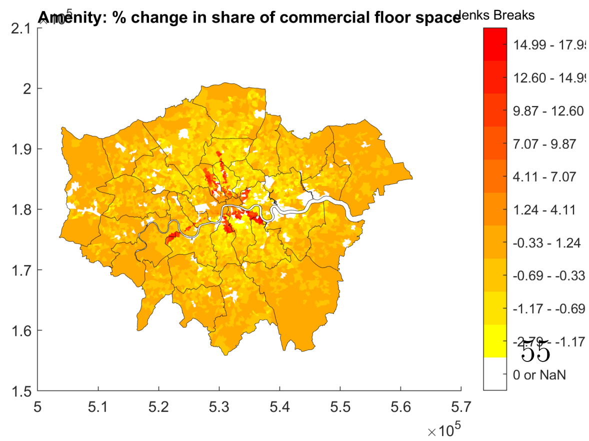
(c) Change in Residence Employment



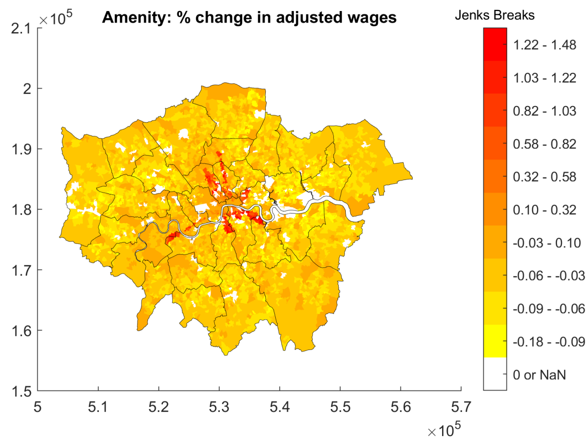
(d) Change in Workplace Employment



(e) Change in the Share of Commercial Floor Space



(f) Change in Adjusted Wages



Notes: The figure shows counterfactual outcomes at an LSOA level for the counterfactual exercises that modify the amenity level inside the treated areas to match the mean price change to the coefficient found in the reduced form.
Source: Own elaboration.