London Borough of Brent

Private Rented Sector: Housing Stock Condition and Stressors Report

October 2022

Executive Summary

Metastreet were commissioned by the London Borough of Brent to review housing stock in the borough and assess housing stressors related to key tenures, particularly the private rented sector.

The detailed housing stock information provided in this report will facilitate the development and delivery of Brent's housing strategy and enable a targeted approach to tackling poor housing.

The main aim of this review was to investigate and provide accurate estimates of:

- Current levels of private rented sector (PRS) properties and tenure change over time.
- Levels of serious hazards that might amount to a Category 1 hazard (HHSRS).
- Other housing related stressors, including antisocial behaviour (ASB), service demand, population and deprivation linked to the PRS.
- Assist the council to make policy decisions, including the possible introduction of property licensing schemes under Part 2 and Part 3 of Housing Act 2004.

Metastreet has developed a stock-modelling approach based on metadata and machine learning to provide insights about the prevalence and distribution of a range of housing factors. This approach has been used by a wide range of housing authorities to understand their housing stock and relationships with key social, environmental and economic stressors.

The models are developed using unique property reference numbers (UPRN) and a large range of council held and open-source data, which provide detailed analysis at the property level.

Data records used to form the foundation of this report include:

Council tax	Electoral register	Other council interventions records	Tenancy deposit data
Housing benefit	Private housing complaints and interventions records	ASB complaints and interventions records	Energy Performance data

Key Findings

- Brent's private rented sector has grown considerably in recent years, from 32% (2011) to 46% (2022)
- There are a total of 127,378 residential dwellings in Brent, 58,105 of which are privately rented
- 22 out of 22 Brent wards have a higher percentage PRS than the national average in 2021 (19%)
- Brent (339,771) the 5th most populous London borough
- 16 of 22 wards have aggregated IMD rankings below the national average
- Brent has a higher proportion in fuel poverty (17.3%) than the national average (13.8%)
- Brent has the 4th highest number of private landlord possession claims in London, with 2,399 in 2019
- In Brent 53% of median earnings is used to pay rent
- There are 10,108 private rented properties in Brent that are likely to have at least 1 serious housing hazard (Category 1, HHSRS)
- Brent recorded 3,229 complaints and service requests from private tenants linked to PRS properties over a 5-year period
- 12.2% of PRS properties in Brent have an E, F, and G rating
- 1.3% of PRS properties have an F and G rating, extrapolated to the entire PRS, 755 PRS properties are likely to fail the MEES statutory requirement
- Over a 5-year period (2017-22) Brent served 6,920 housing and public health notices
- Additionally, 1,282 planning enforcement notices have been served on PRS properties in Brent
- Over a 5-year period, 10, 398 ASB incidents have been recorded linked to PRS properties

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Introduction & Project Objectives

Metastreet were commissioned by the London Borough of Brent to review its housing stock with a focus on the following key areas:

- Residential property tenure changes
- Distribution of the PRS
- Condition of housing stock in the PRS
- Housing related stressors, including Anti-Social Behaviour (ASB), regulatory interventions and deprivation.

The report provides the council with the evidence base for developing housing policy and service interventions. The report also helps satisfy the council's responsibility to review its housing stock as set out under Part 1, Section 3 of the Housing Act 2004.

The second section of the report details the findings of the stock and tenure modelling, including an introduction to the methodology. A combination of Brent's data warehouse, machine learning, and modelling techniques have been used to pinpoint tenure and predict property conditions within its PRS housing stock. An advanced property level data warehouse has been developed to underpin the process.

For the purposes of this review, it was decided that a ward-level summary is the most appropriate basis to assess housing conditions across Brent, built up from property level data.

Three separate predictive tenure models (Ti) have been developed as part of this project which are unique to Brent, they include:

- Private rented sector (PRS)
- Owner occupiers
- Serious PRS housing hazards (Category 1, HHSRS)

The third section provides a short private housing policy overview for the region to determine if characteristics exist in the Borough to support any specific intervention.

The appendices to the report contain a summary of the data and a more detailed report methodology.

1 London Borough of Brent overview

Brent is a borough of Northeast London. It covers an area of 43.2km². It borders the boroughs of Harrow to the north-west, Barnet to the north-east, Camden to the east, the City of Westminster to the south-east, as well as the Royal Borough of Kensington and Chelsea, Hammersmith and Fulham and Ealing to the south. [1]

1.1 Population

The Office of National Statistics (ONS) Census 2021 population estimates for Brent was 339,771. This makes Brent the 5th most populous London borough (Figure 1)[2] .

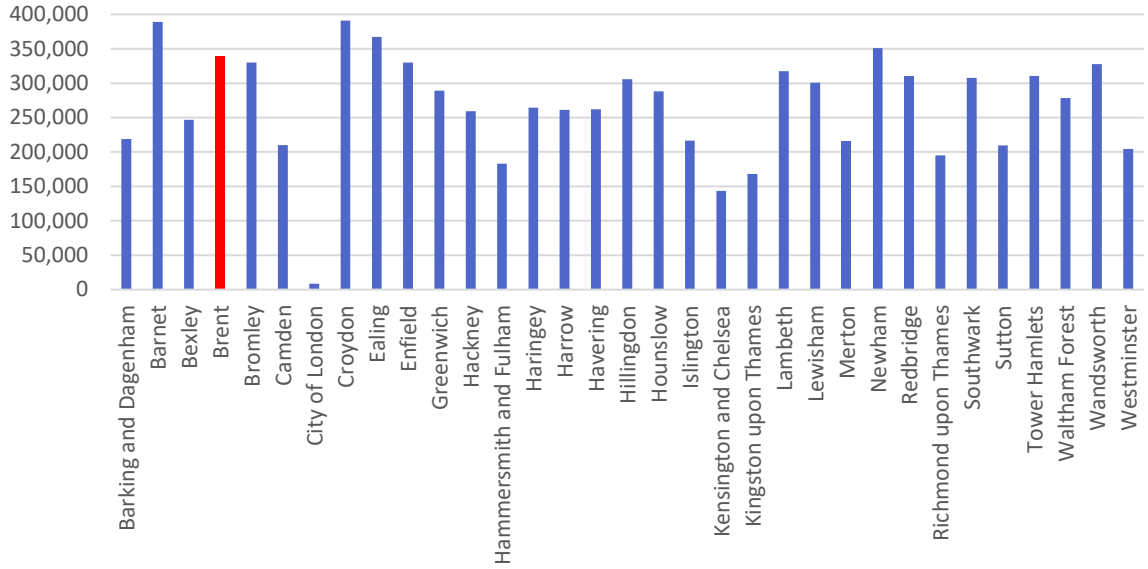


Figure 1. Population estimates by London boroughs (Source: Census 2021).

1.2 Migration

Net long term international migration into Brent in 2018-2019 was 3,193 (Figure 2) [3], making Brent the 9th highest London borough.

[1] Wikipedia, October 2022, https://en.wikipedia.org/wiki/London_Borough_of_Brent
[2] Office for National Statistics – Census 2021, https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimatesenglandandwales/census2021
[3] ONS 2018 https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

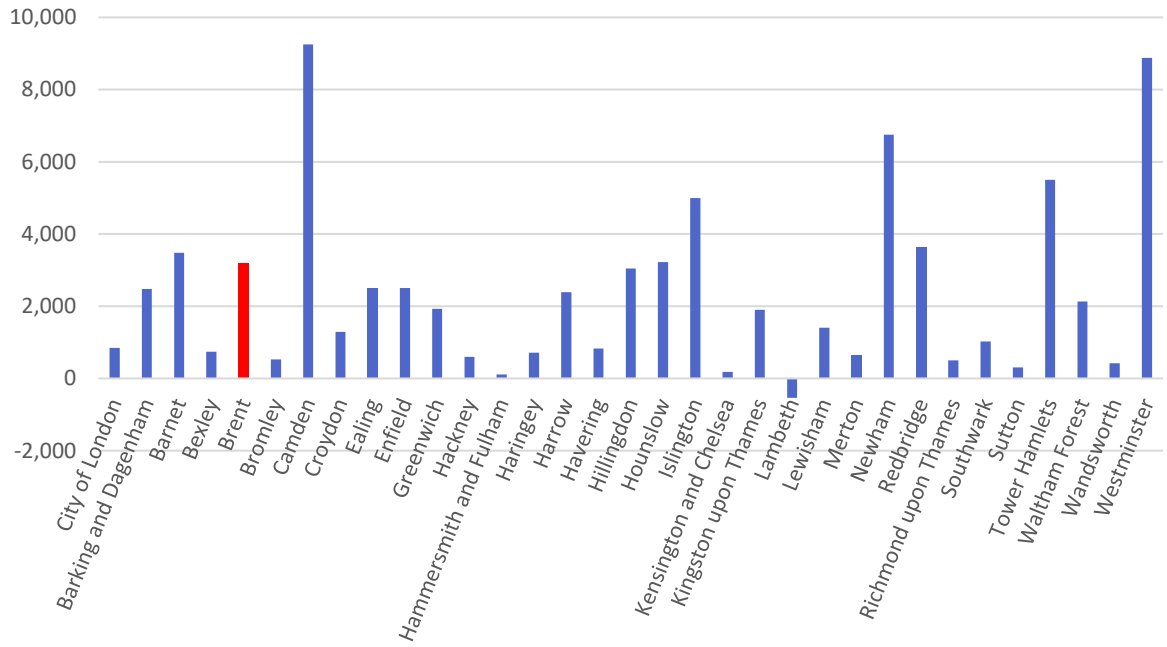


Figure 2. Long-term international migration (net flow) by London boroughs (2018/2019).

1.3 Deprivation

The Indices of Multiple Deprivation 2019 (IMD 2019) provide a set of relative measures of deprivation for LSOAs (Lower-layer super output areas) across England, based on seven domains of deprivation[4].

[4] ONS 2019 https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019,

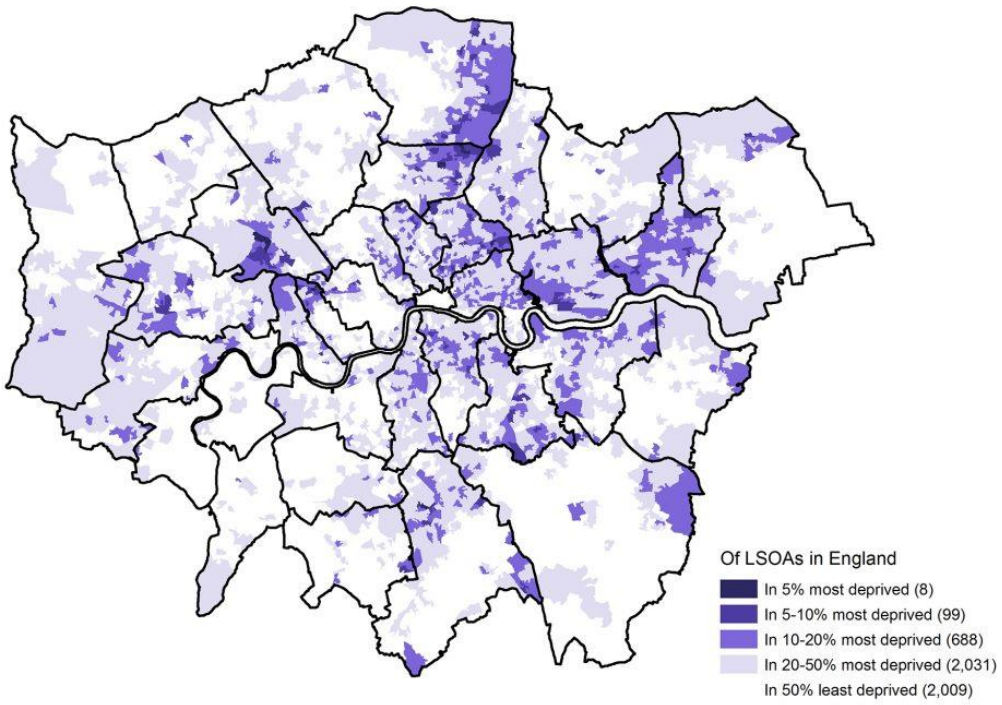


Figure 3. Distribution of deprivation across London (Source & map: London Datastore 2019).

The darker shades are the most deprived areas. Brent ranks (Rank of average rank) as the 49th most deprived borough in England out of 317.

To produce the ward level data, LSOAs have been matched to new wards using an Open Geoportal lookup table[5]. Average IMD 2019 decile aggregated at ward level reveals a clear picture (Figure 4 & Map 1). 1.0 on the graph represents the most deprived 10% areas and 5.0 represents 50% most deprived.

Brent has a mixture of high and low deprivation wards. 16 of 22 wards have aggregated IMD rankings below the national average (Figure 4).

[5] ONS2019 http://geoportal.statistics.gov.uk/datasets/8c05b84af48f4d25a2be35f1d984b883_0/data

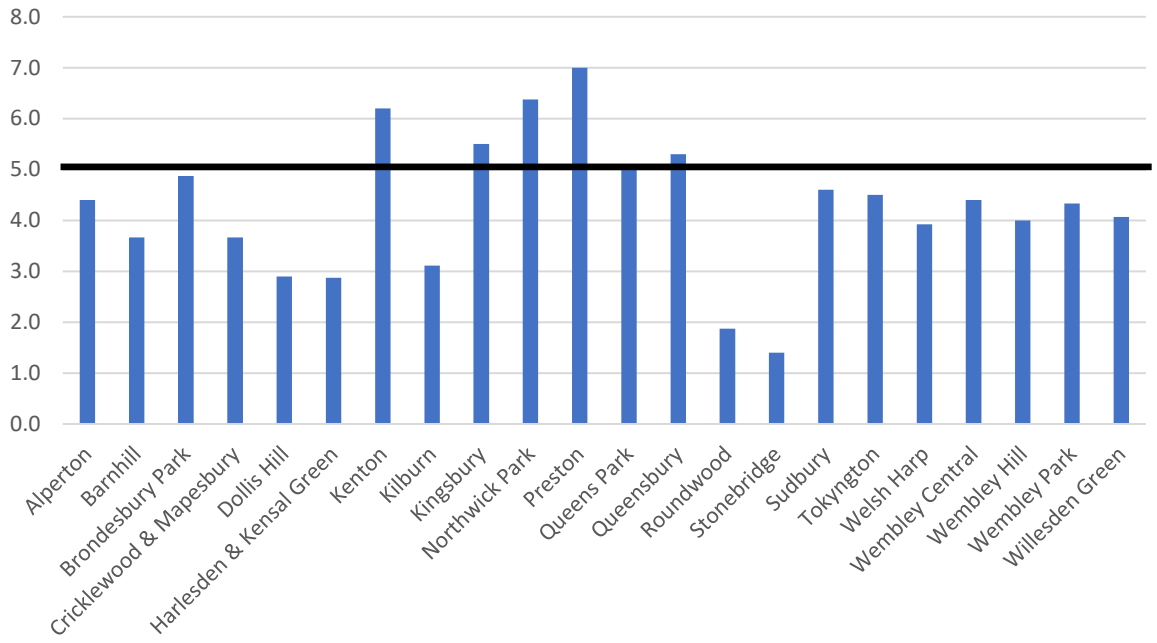
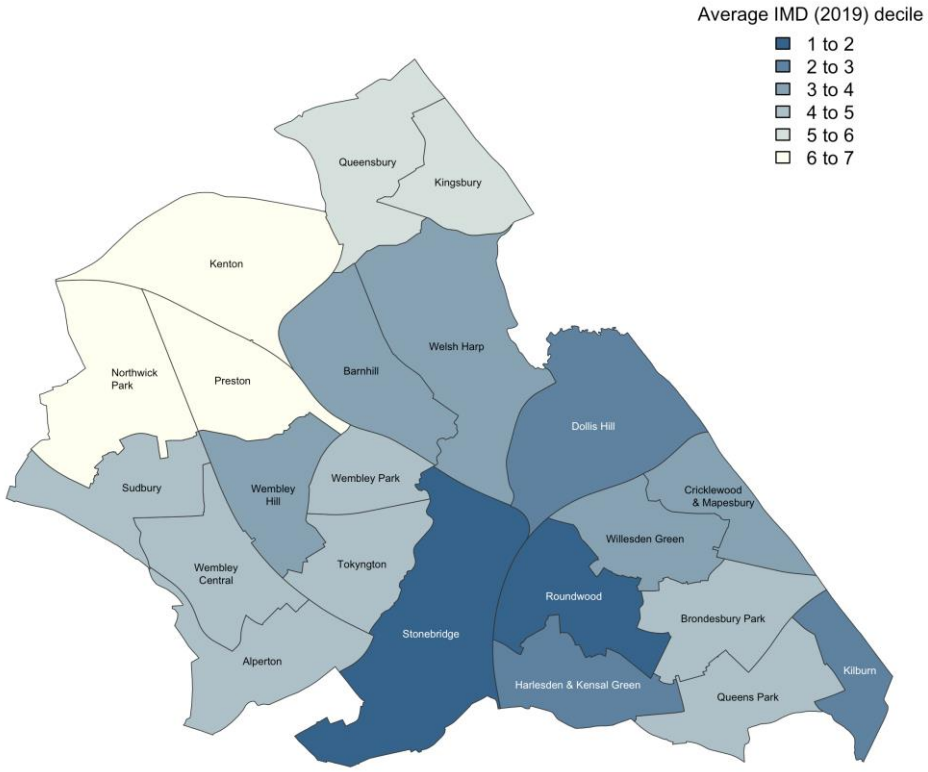


Figure 4. Average IMD (2019) decile by ward (Source: IMD 2019). Horizontal line shows the national average (5)



Map 1. ***Distribution of Average IMD (2019) decile by ward (Source: ONS 2019, Map by Metastreet).***

1.4 Fuel Poverty

Fuel poverty is defined by the Warm Homes and Energy Conservation Act. A household is considered to be fuel poor if they have required fuel costs that are above average (the national median level); and, were they to spend that amount, they would be left with a residual income below the official poverty line.

The fuel poverty score was produced by the Department for Business, Energy & Industrial Strategy using 2019 data and published in 2021. Over the next 12 months these figures are likely to change significantly as a result of acute fuel price increases. Notwithstanding, Brent has a higher proportion in fuel poverty (17.3%) than the national average (13.8%) (Figure 5) [6].

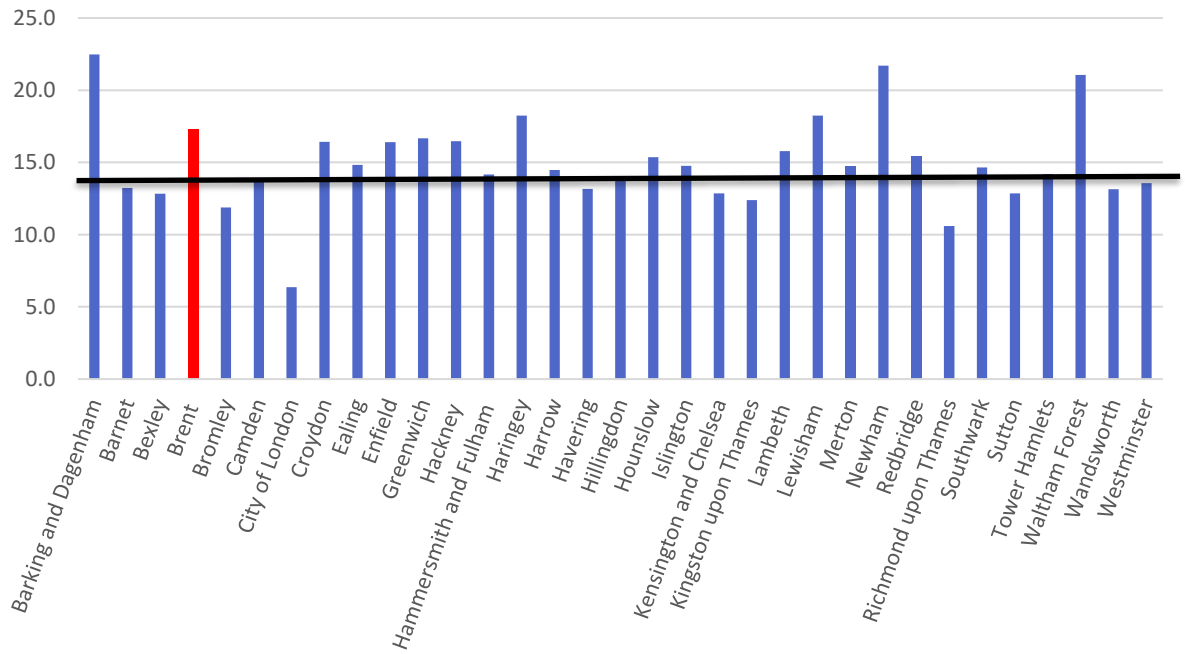


Figure 5. Proportion of households in fuel poverty (%) by London boroughs (BEIS 2021). Horizontal line shows England average (13.8%).

[6] Department for Business, Energy & Industrial Strategy 2021 https://www.gov.uk/government/statistics/sub-regional-fuel-poverty-data-2021

1.5 Rented property possession claim rates

Brent has the 4th highest number of private landlord possession claims in London, with 2,399 in 2019[7] (Figure 6). The average number of claims for London boroughs during this period was 1,224.

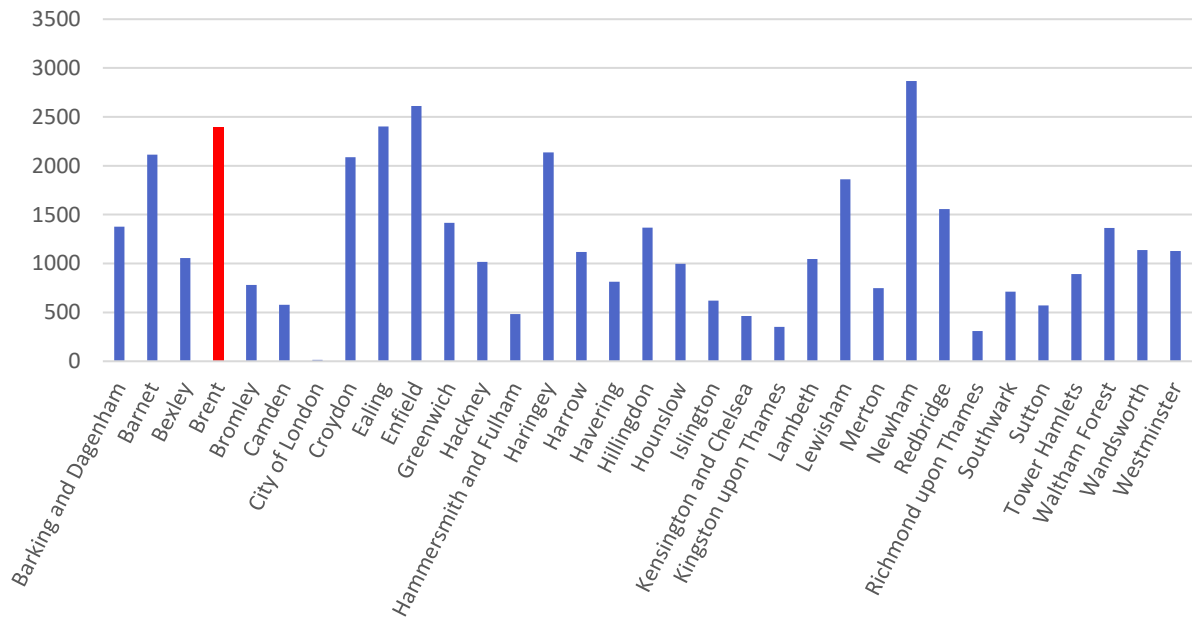


Figure 6. Possession order claims by private landlords by London boroughs (MOJ 2019)

1.6 Homelessness

Local authorities are required by law to either provide accommodation to homeless households (the main homelessness duty), work to stop households becoming homeless (the homelessness prevention duty) or relieve homelessness when it does occur (the homelessness relief duty).

The extent and nature of homelessness duties owed by different boroughs varies significantly. Homelessness returns to government in 2017/18 for Brent has the 12th highest numbers accepted as being homeless (536) (Figure 7)[8].

[7] MOJ Possession claims by local authority (2019) https://www.gov.uk/government/statistics/mortgage-and-landlord-possession-statistics-january-to-march-2020

[8] MHCLG, Homelessness Provision, https://data.london.gov.uk/dataset/homelessness

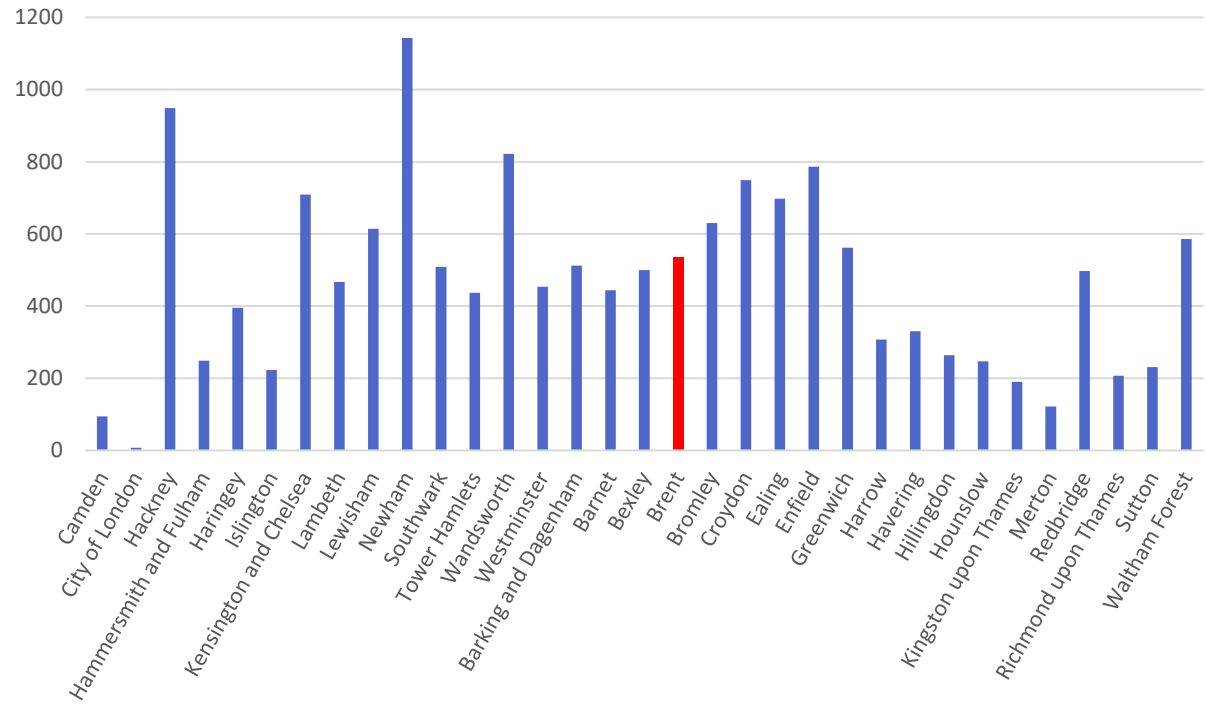


Figure 7. Homelessness acceptances by London boroughs (2017/18)

1.7 Rents and affordability

Private rents vary by borough. As this report is concerned with housing conditions and other housing stressors, we have looked at the average (median) earnings for one-bedroom dwellings as a proportion of median rents. Brent has above average rents for London, with 53% of median earnings used to pay rent (Figure 8)[9]. The London average is 47.9%.

[9] Valuation Office Agency (VOA), Private rental market summary statistics: 2018

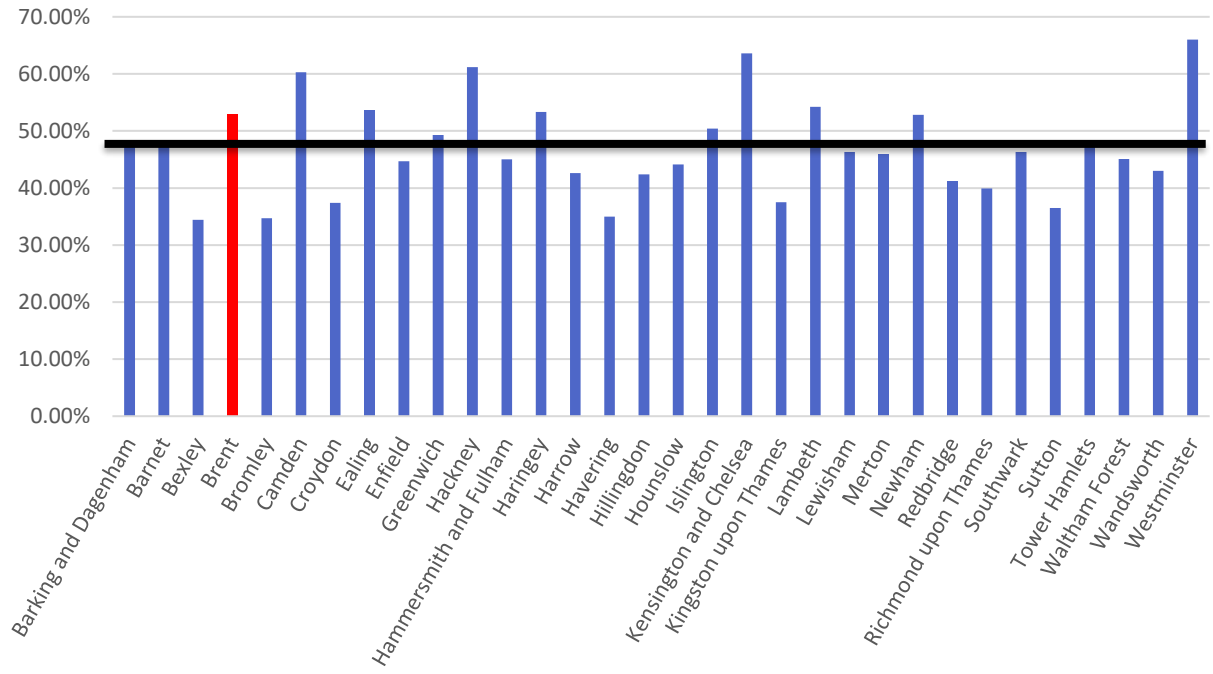


Figure 8. Median rent for a one-bedroom dwelling as a percentage of gross pay by London borough (2019/20) (Source: TFL 2020). ***Horizontal black line shows London average (47.9%)***

1.8 Residential property crime (burglary)

Between April 2021 and March 2022, 1,534 burglaries were reported to the Metropolitan Police across London, averaging (mean) 47.9 per London borough. 65 burglaries were reported in Brent for the same period. [10]

[10] MPS crime data 2022 https://data.london.gov.uk/dataset/mps-crime-data-dashboard--previous-crime-catogories-data

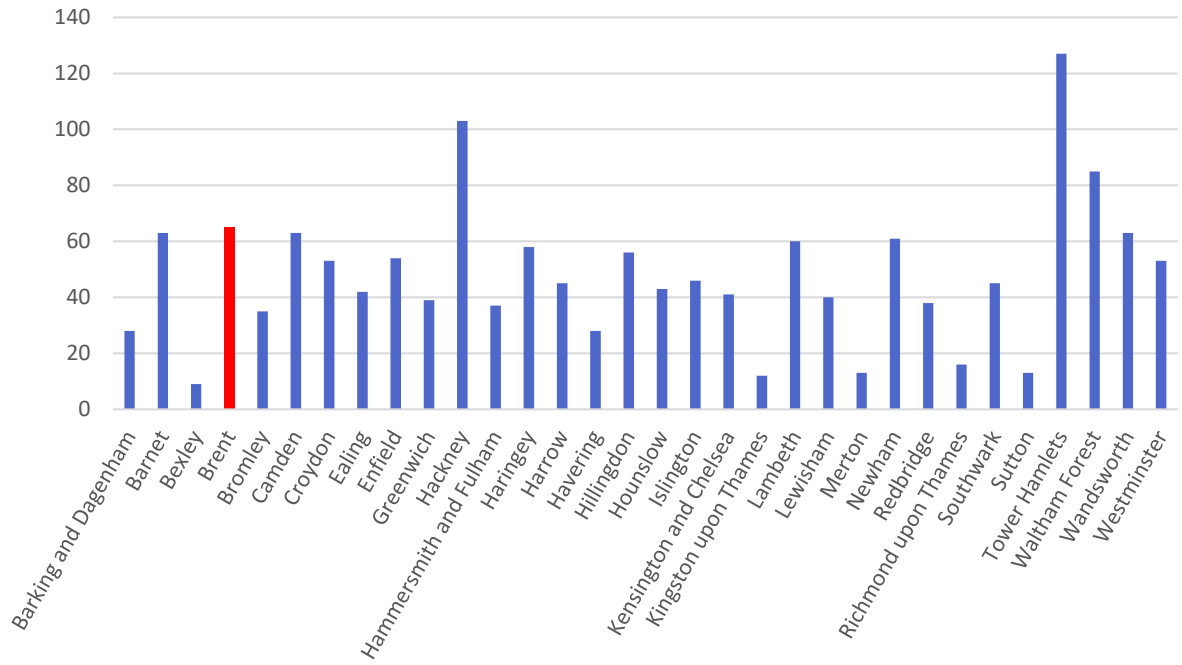


Figure 9. ***Distribution of reported residential burglary in London boroughs - Metropolitan Police (April 2021-March 2022)***

2 Results of housing stock and stressor modelling

2.1 Methodology

Tenure Intelligence (Ti) uses council held and publicly available data to identify tenure and analyse property stressors, including property conditions and ASB.

Data trends at the property level are analysed using machine learning to help predict the tenure of individual properties where they are not already known. Metastreet has worked with the council to create a residential property data warehouse. This has included linking millions of cells of council and externally held data to 127,378 unique property references (UPRN), excluding parent and non-dwellings.

Machine learning is used to make predictions for each tenure and property condition based on a sample of known tenures and outcomes. Results are analysed to produce a summary of housing stock, predictions of Category 1 hazards (HHSRS) and other stressors. To achieve the maximum accuracy, unique models are built for each council and tenure, incorporating individual borough data and using local known outcomes to train predictive models.

Once the data warehouse was created, statistical modelling was used to determine tenure using the methodology outlined below. All specified and requested council held longitudinal data is 5 consecutive years, from April 2017 – March 2022.

Different combinations of risk factors were systematically analysed for their predictive power in terms of key outcomes. Risk factors that duplicated other risk factors but were weaker in their predictive effect were systematically eliminated. Risk factors that were not statistically significant were also excluded through the same processes of elimination.

For each UPRN a risk score was calculated using logistic regression. The selected risk factors have a better or worse than evens chance of being predictive.

A number of predictive models have been developed as part of this project which are unique to Brent. Known stressors linked to individual properties have been modelled to calculate population level incidences and rates.

It is important to note that this approach can never be 100% accurate as all large datasets and statistical models include some level of error. A more detailed description of the methodology and the specific factors selected to build predictive models for this project can be found in Appendix 2.

Metastreet was asked to exclude HMOs that have been licenced under part 2 of the Housing Act 2004 from the PRS stressors results, including housing conditions, ASB, service requests and council interventions. This resulted in the removal of 2,610 known HMO properties from the master PRS dataset. However, all PRS dwellings have been accounted for in the population and distribution section to enable the council to compare other authorities and government statistics.

2.2 Results - Private rented sector

2.2.1 Population and distribution

The private rented sector (PRS) in Brent has grown steadily since 2011 [11].

Based on tenure modelling (2022), Brent's PRS is now calculated to be 46% of all housing stock (Figure 10). This compares to 32% of households in 2011 (ONS). This represents a 43.8% increase over the last 11 years (Figure 11).

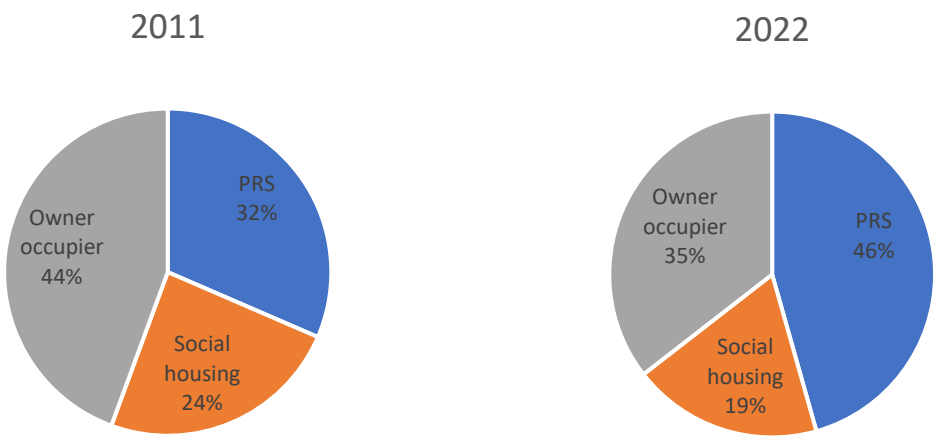


Figure 10. Tenure profile 2011 & 2022 (Source: ONS & Metastreet Ti model).

Tenure percentage change over the last two decades in Brent has been consistent with the London trend, owner occupation decreasing while private renting increasing. Private renting has grown at the expense of owner occupation; however, a sizable proportion of the growth appears to come from new supply.

[11]https://data.london.gov.uk/dataset/census-2001-key-statistics-18-tenure https://data.london.gov.uk/dataset/2011-census-housing

This PRS increase is part of a long term nationwide and regional trend. The PRS in the UK has grown from 9.4% of housing stock in 2000 [12] to 19% of households 2021 [13]. The PRS remains the second largest housing tenure in England. [14] .

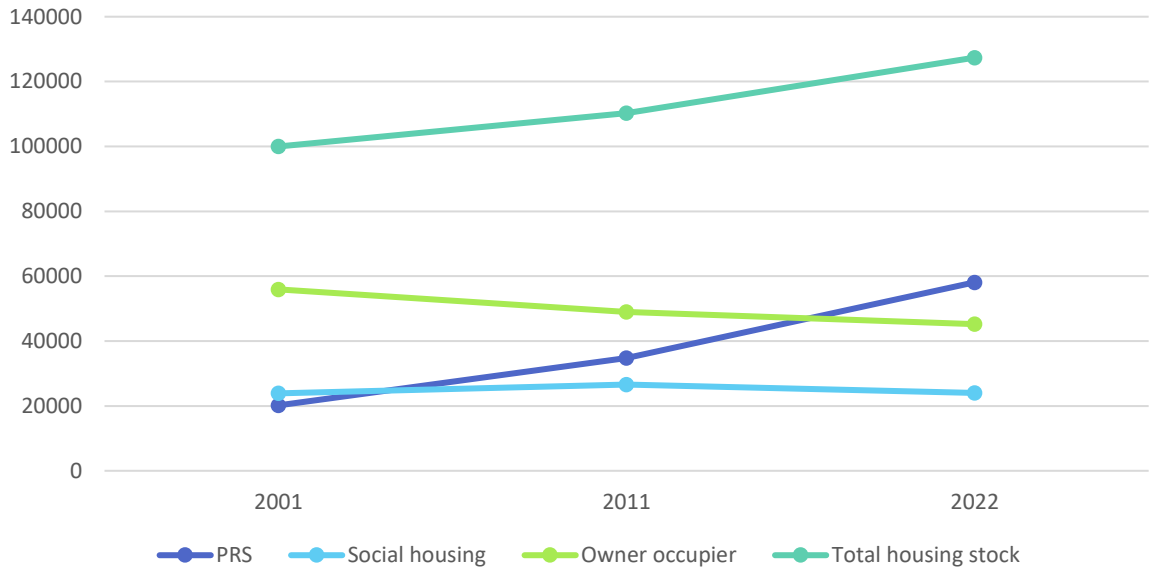


Figure 11. Brent tenure change and total housing stock, 2001, 2011 & 2022 (Source: ONS & Metastreet).

	2001	2011	2022
PRS	20,183	34,735	58,105
Social housing	23,881	26,591	24,053
Owner occupier	55,927	48,960	45,220
Total	**99,991**	**110,286**	**127,378**

Table 1. Number of dwellings by tenure 2001, 2011 & 2022 dwellings by ward (Source: ONS & Ti 2022).

The PRS in Brent is distributed across all 22 wards (Figure 12). The number of PRS dwellings per ward ranges from 8,410 (Wembley Park) to 1,163 (Northwick Park).

[12] The profile of UK private landlords Scanlon K & Woodhead C CML research. LSE London. December 2017 www.cml.org.uk
[13] EHS Headline 2020-2021, https://www.gov.uk/government/statistics/english-housing-survey-2020-to-2021-headline-report
[14] EHS Headline 2020-2021, https://www.gov.uk/government/statistics/english-housing-survey-2020-to-2021-headline-report

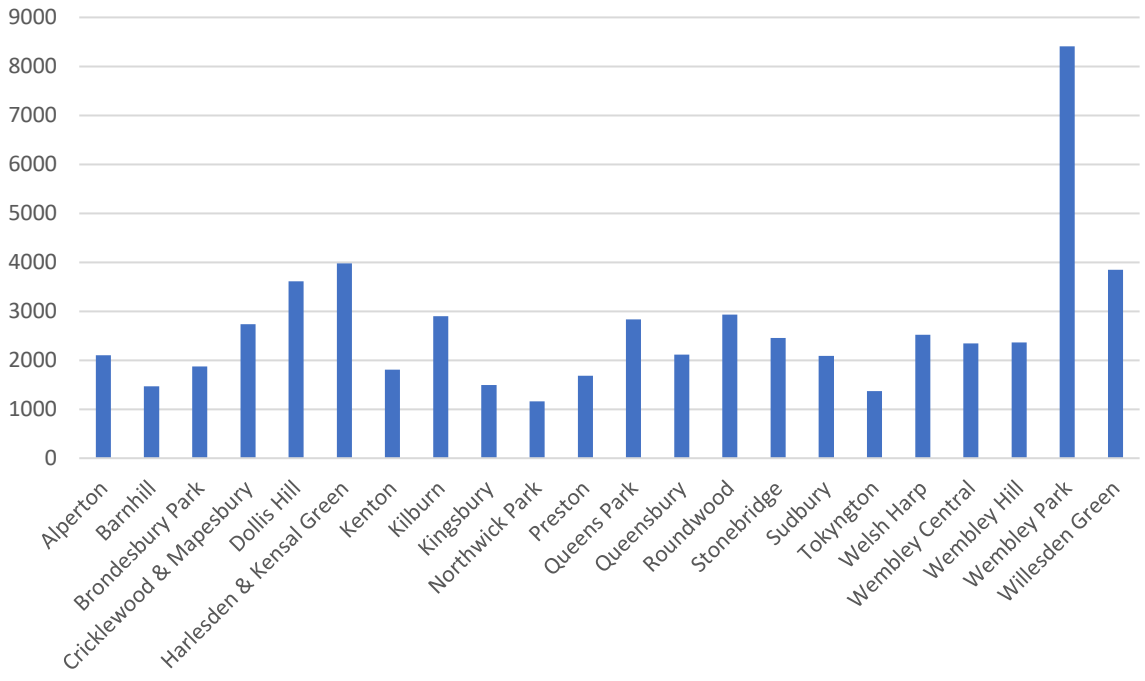


Figure 12. Number of PRS dwellings by ward (Source: Ti 2022).

The percentage of PRS properties in each ward ranges between 98.4% (Wembley Park) and 30.7% (Stonebridge) (Figure 13). Therefore, 22 out of 22 Brent wards have a higher percentage PRS than the national average in 2021 (19%)[15].

[15] EHS Headline 2020-2021, https://www.gov.uk/government/statistics/english-housing-survey-2020-to-2021-headline-report

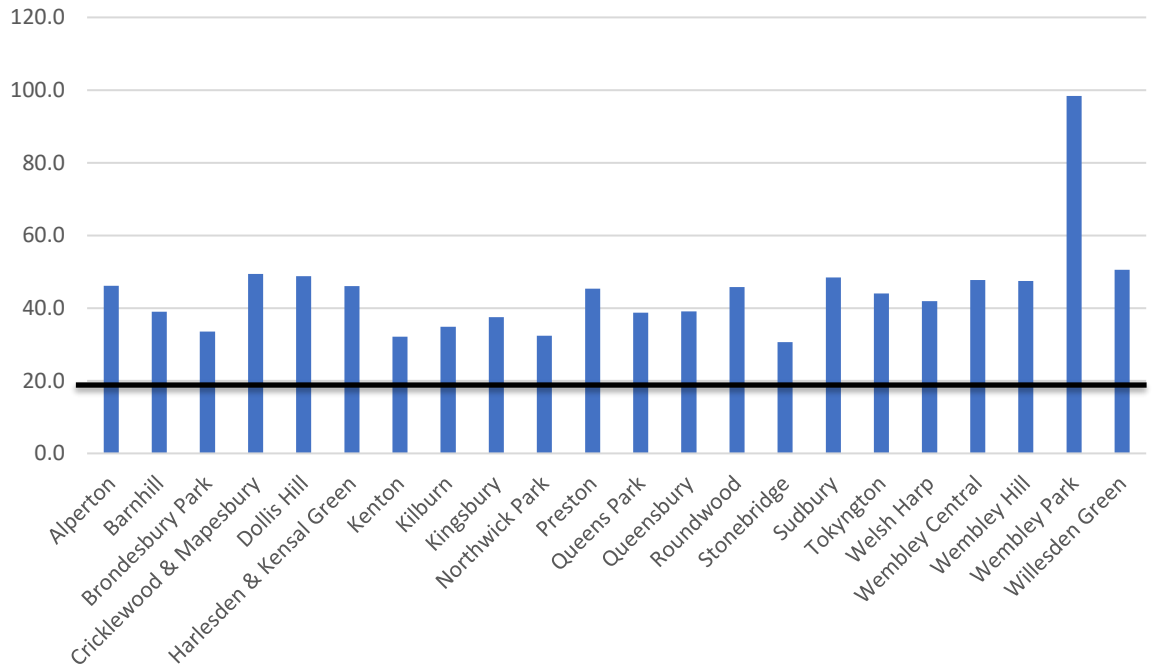


Figure 13. Percentage of PRS dwellings by each ward (Source Ti 2022). ***Horizontal black line shows national average 2021 (19%)***

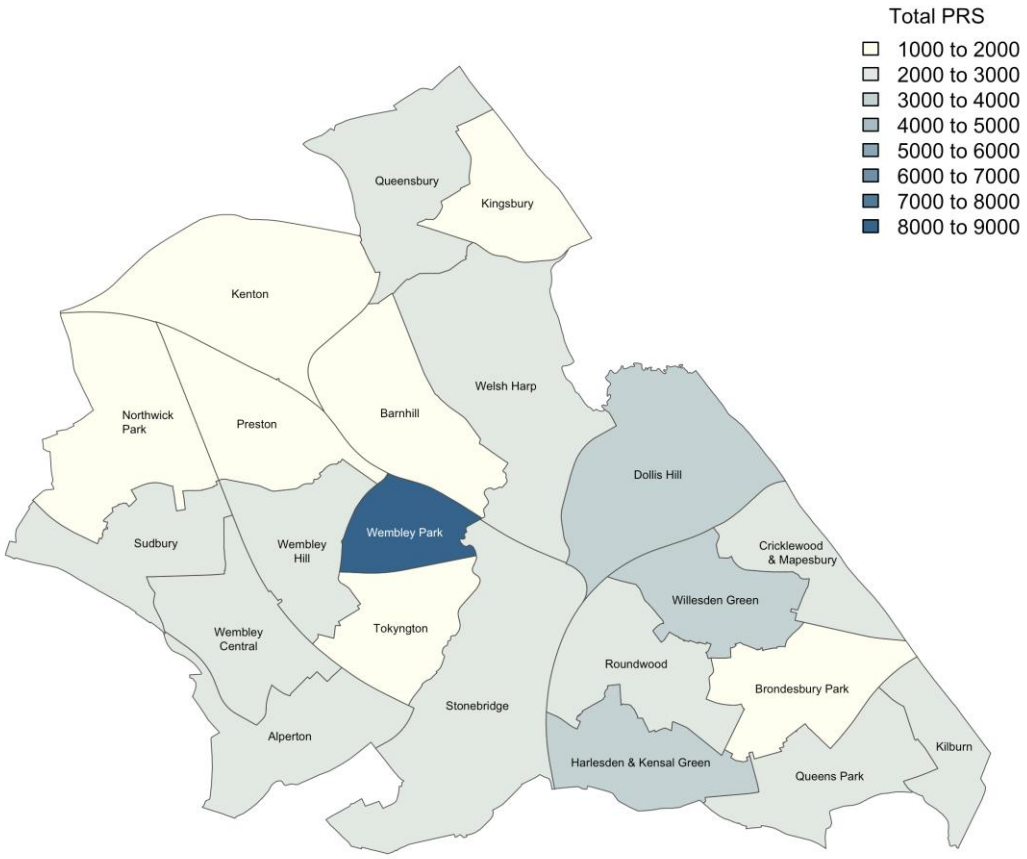
The table below shows the total PRS dwellings in each ward and the percentage PRS compared to the total housing stock.

Ward	No. PRS (predicted)	Total dwellings	% PRS
Alperton	2,099	4,546	46.2
Barnhill	1,469	3,765	39.0
Brondesbury Park	1,876	5,590	33.6
Cricklewood & Mapesbury	2,737	5,542	49.4
Dollis Hill	3,612	7,400	48.8
Harlesden & Kensal Green	3,976	8,642	46.0
Kenton	1,810	5,639	32.1
Kilburn	2,900	8,321	34.9
Kingsbury	1,496	3,993	37.5
Northwick Park	1,163	3,591	32.4
Preston	1,684	3,712	45.4
Queens Park	2,836	7,321	38.7
Queensbury	2,112	5,401	39.1
Roundwood	2,934	6,408	45.8
Stonebridge	2,457	8,012	30.7
Sudbury	2,088	4,314	48.4
Tokyngton	1,368	3,110	44.0
Welsh Harp	2,519	6,009	41.9
Wembley Central	2,346	4,916	47.7

Wembley Hill	2,366	4,990	47.4
Wembley Park	8,410	8,545	98.4
Willesden Green	3,847	7,611	50.5
Grand Total	**58105**	**127378**	**45.6**

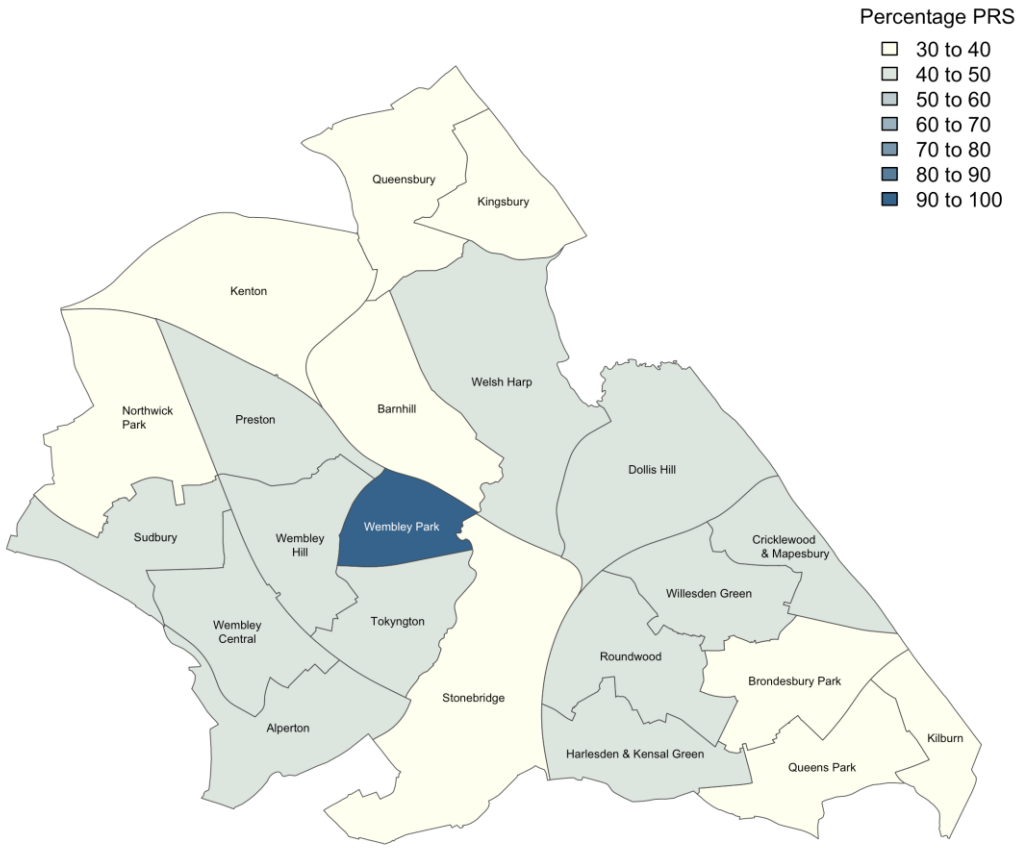
Table 2. Number, total housing stock and percentage of PRS properties by ward (Source Ti 2022).

PRS properties are distributed across the borough (Map 2 & 3).



Map 2. Number of PRS properties in Brent (Source: Ti* 2022, Map by Metastreet*).

Wembley Park (98.4%). has by far the highest concentration of PRS dwellings (Map 3).



Map 3. PRS properties as percentage of dwellings in Brent (Source: Ti 2022, Map by Metastreet).

2.2.2 Housing conditions (excluding known HMOs)

Housing conditions are affected by the level of maintenance and quality of repair, the age of the property, thermal efficiency, and type of construction. Category 1 (HHSRS) hazards have a physiological or psychological impact on the occupant and may result in medical treatment. [16] There is also serious impact on public services, hazardous conditions in the PRS cost the NHS around £340 million a year. [17]

[16] Housing Health and Rating System, Operation Guidance, 2006, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf

[17] House of Commons Committee of Public Accounts: https://committees.parliament.uk/committee/127/public-accounts-committee/news/165326/pac-private-rented-housing-failing-far-too-often-to-provide-safe-and-secure-homes/

In 2021, 12% of private rented dwellings in England had at least one Category 1 hazard; this was a higher proportion than the average for the total housing stock (9%) [18]. It is notable that there is a gradient of risk with age of the property, the risk being greatest in dwellings built before 1900, and lowest in the more energy efficient dwellings built after 1980[19].

A local authority's property age profile can have an impact on housing conditions. Brent has a high number of residential properties (65.7%) built pre-Second World War (Figure 14) [20].

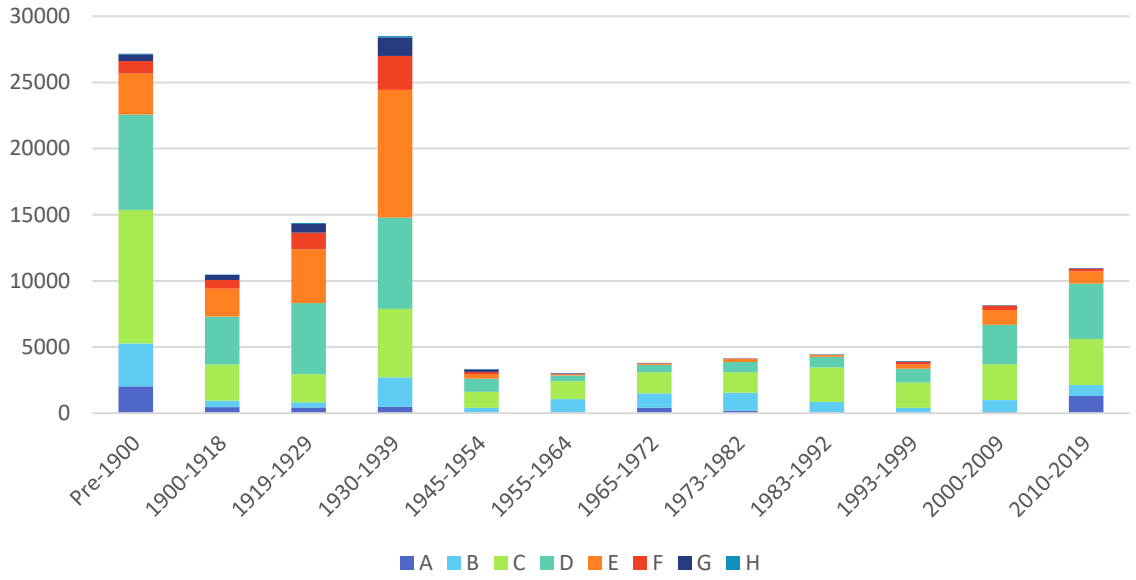


Figure 14. Housing Stock Age Profile and Council Tax band (Source: VOA 2019).

A borough's property type profile offers an indication of housing density, construction type and other population factors. The most common private rented property type in Brent is flats (67%), while bungalow is the least common property type (1%) (Figure 15).

[18] EHS Headline 2020-2021, https://www.gov.uk/government/statistics/english-housing-survey-2020-to-2021-headline-report

[19] Housing Health and Rating System, Operation Guidance, 2006, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf

[20] VOA 2019 https://www.gov.uk/government/statistics/council-tax-stock-of-properties-2019

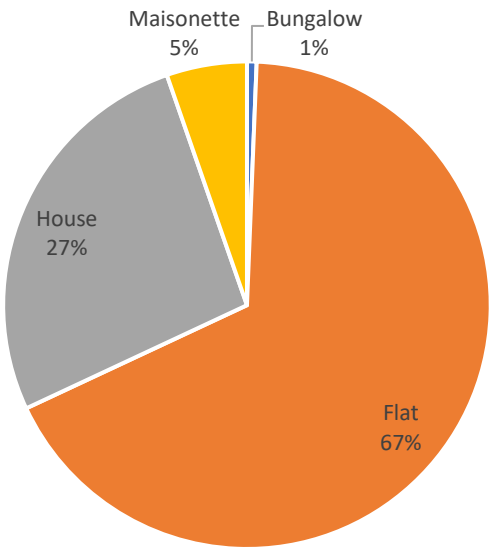


Figure 15. Private rented property type as a percent of total (Source: LBC matched EPC records 2022).

Using a sample of properties that are known to have at least one serious housing hazard (Category 1, HHSRS), it is possible to predict the number of PRS properties with at least one serious hazard across the borough (Figure 16), further details of the methodology can be found in Appendix 2.

There are 10,108 private rented properties in Brent that are likely to have at least 1 serious housing hazard (Category 1, HHSRS). PRS properties with serious hazards are distributed across the borough. Harlesden & Kensal Green (812) and Dollis Hill (796) have the highest number of properties with at least one Category 1 hazard (Figure 16 & Map 4).

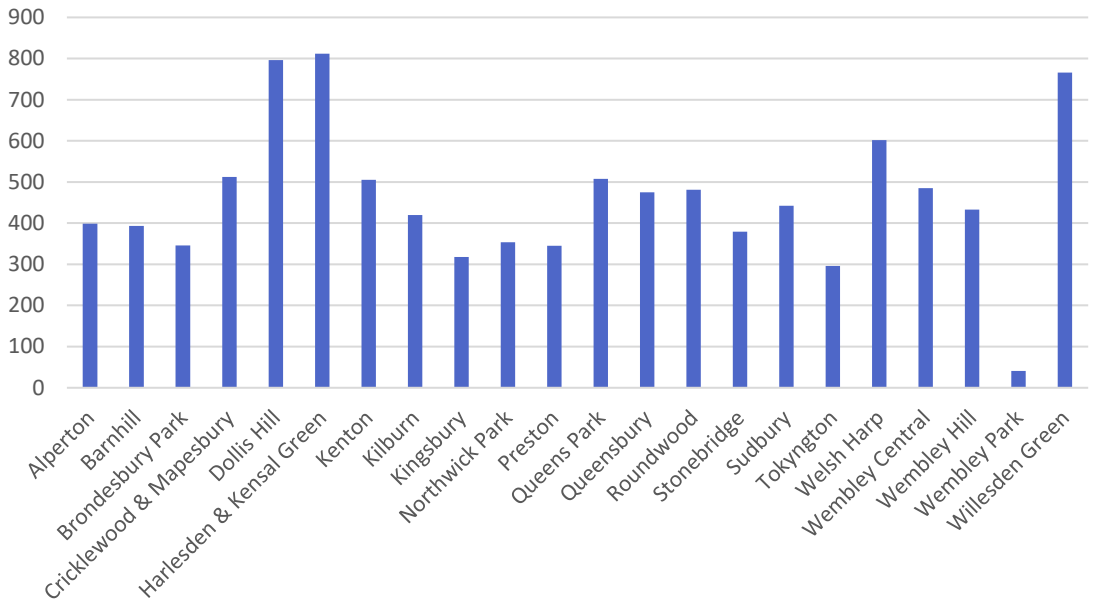
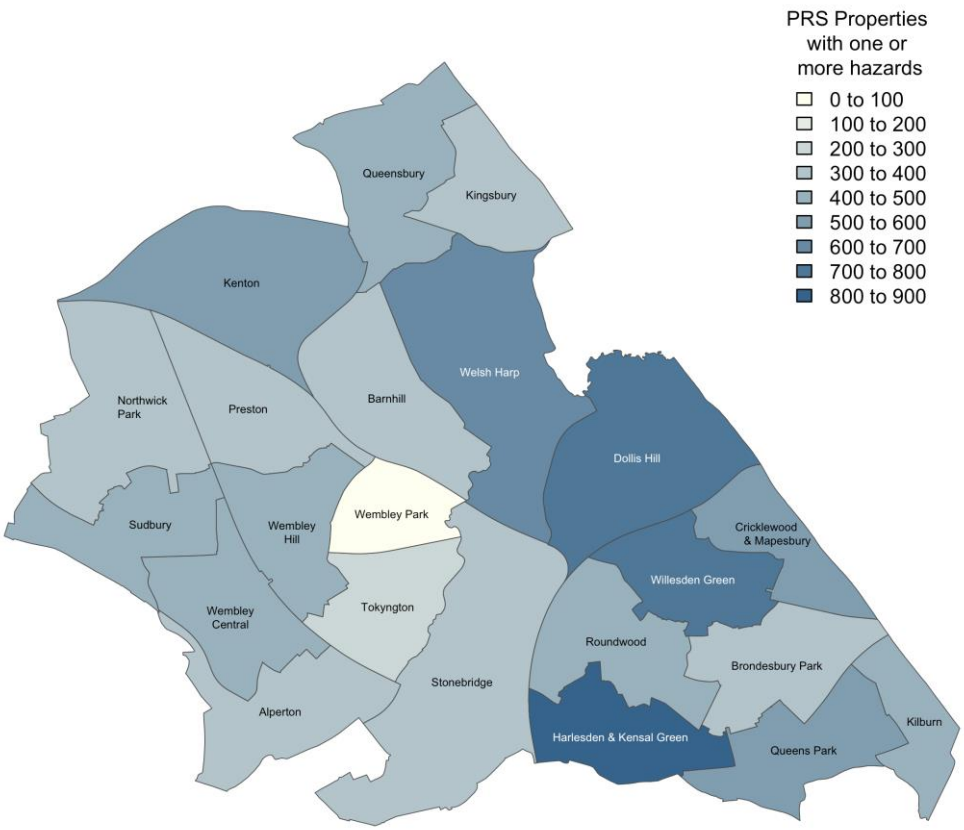


Figure 16. Predicted number of dwellings with Category 1 hazards by ward (Source: Ti 2022).

Category 1 hazards in the PRS are distributed across the whole borough. Wembley Park has the lowest levels of predicted hazards (41) .



Map 4. Distribution of PRS dwellings with Category 1 hazards (HHSRS) (Source: Ti 2022, map by Metastreet).

The rates of Category 1 hazards per 100 PRS properties reveals a wide distribution across Brent (Figure 17).

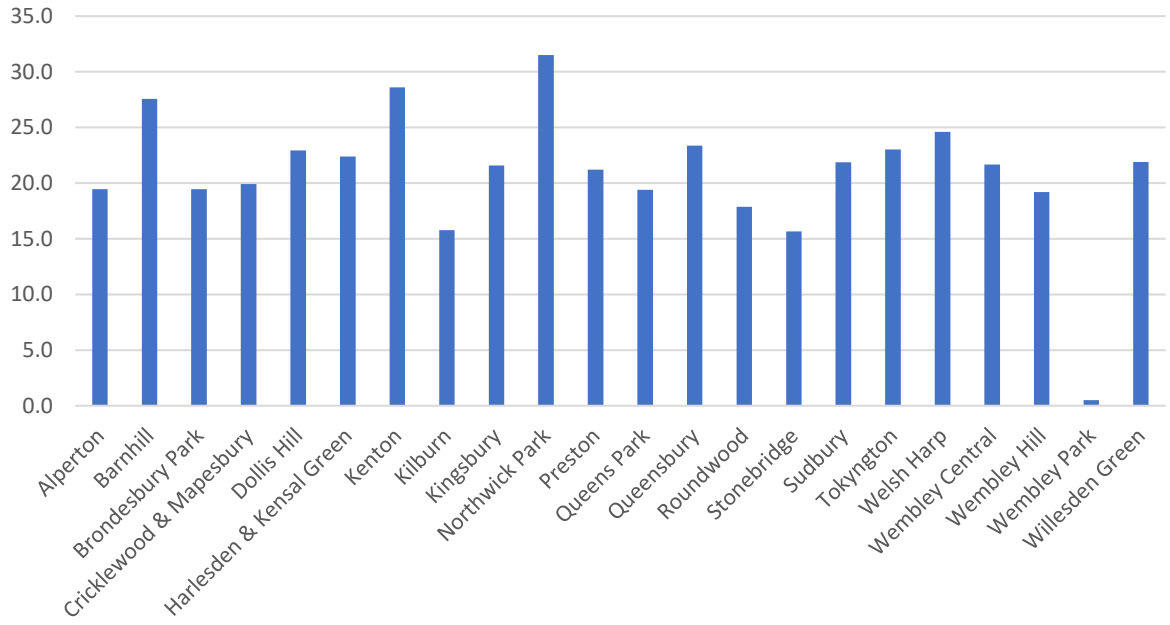


Figure 17. Rates per 100 PRS dwellings with predicted Category 1 hazards by ward (Source: Ti 2022).

Complaints made by PRS tenants to the council about poor property conditions and inadequate property management are a direct indicator of low quality PRS. Brent recorded 3,229 complaints and service requests from private tenants linked to PRS properties over a 5-year period (Figure 18).

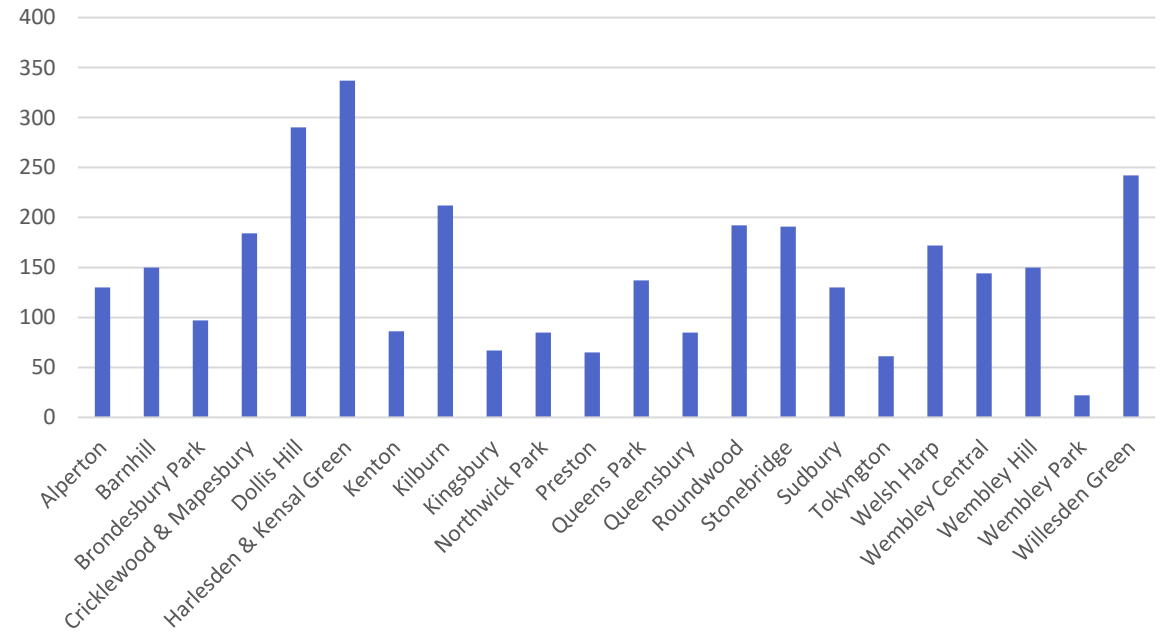
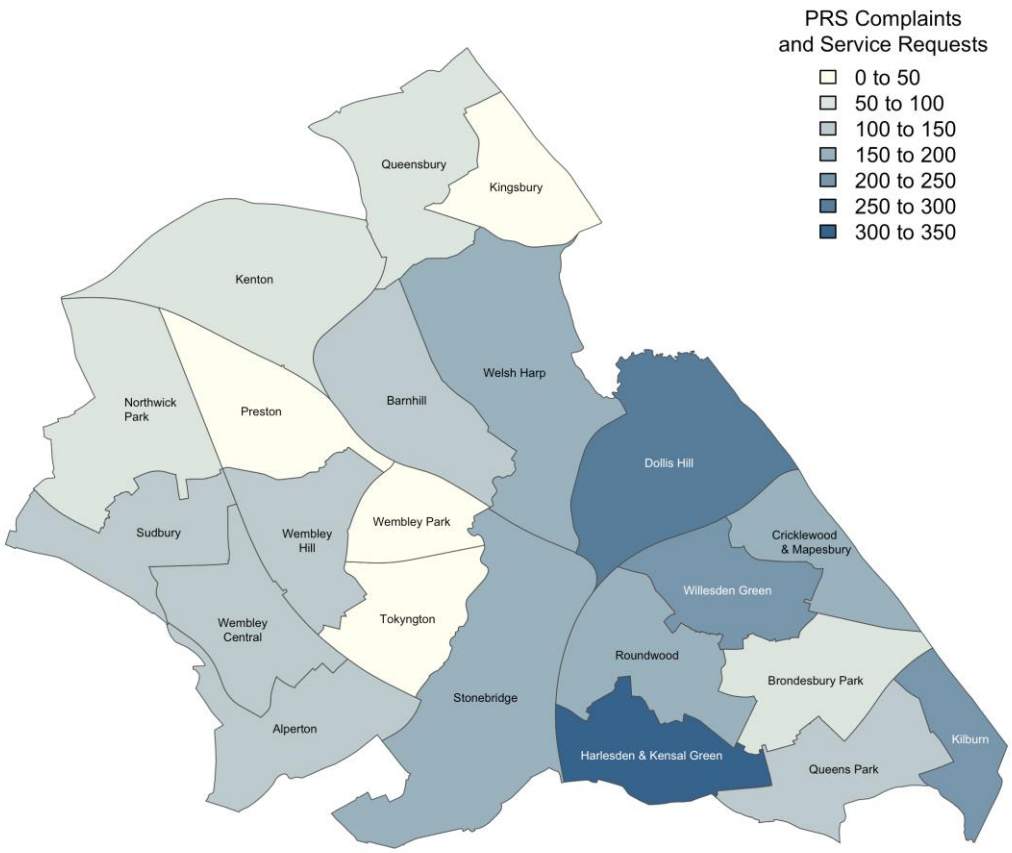


Figure 18. PRS complaints and service requests made by private tenants and others to the Council (Source Ti 2022)

Harlesden & Kensal Green (337) and Dollis Hill (290) received most private tenant service requests and complaints by private tenants and others to the Council (Map 5).



Map 5. Distribution of PRS service requests and tenant complaints (Source: Ti 2022, Map by Metastreet).

An EPC rating is an assessment of a property's energy efficiency. It's primarily used by buyers or renters of residential properties to assess the energy costs associated with heating a house or flat. The rating is from A to G. A indicates a highly efficient property, G indicates low efficiency.

The energy efficiency of a dwelling depends on the thermal insulation of the structure, on the fuel type, and the size and design of the means of heating and ventilation. Any disrepair or dampness to the dwelling and any disrepair to the heating system may affect efficiency. The exposure and orientation of the dwelling are also relevant.

As part of this project **41,527** EPC ratings were matched to PRS properties (Figure 19). All figures have been modelled from this group.

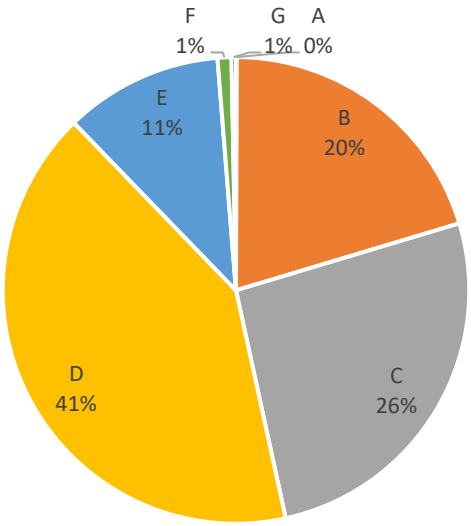


Figure 19. Distribution of Energy Performance Certificate ratings in PRS (Rating A-G) (Source: Ti 2022).

The Minimum Energy Efficiency Standard (MEES) came into force in England and Wales on 1 April 2018. The regulation applies to PRS properties and mandates that all dwellings must have an EPC rating of E and above to be compliant. It has been calculated using the matched addresses that 12.2% of PRS properties in Brent have an E, F, and G rating. 1.3% of PRS properties have an F and G rating (Figure 19). Extrapolated to the entire PRS, 755 PRS properties are likely to fail the MEES statutory requirement.

The statistical evidence shows that there is a continuous relationship between indoor temperature and vulnerability to cold-related death [21]. The colder the dwelling, the greater the risk. The percentage rise in deaths in winter is greater in dwellings with low energy efficiency ratings. Children in cold homes are twice as likely to suffer from a variety of respiratory problems [22]. There is a gradient of risk with age of the property, the risk being greatest in dwellings built before 1850, and

[21] Housing Health and Rating System, Operation Guidance, 2006 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf
[22] Health Equity in England: The Marmot Review 10 Years On, 2020 https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on

lowest in the more energy efficient dwellings built after 1980[23]. Therefore, the F and G properties present a serious risk to the occupants' health, particularly if over the age of 65 (Figure 19 & 20).

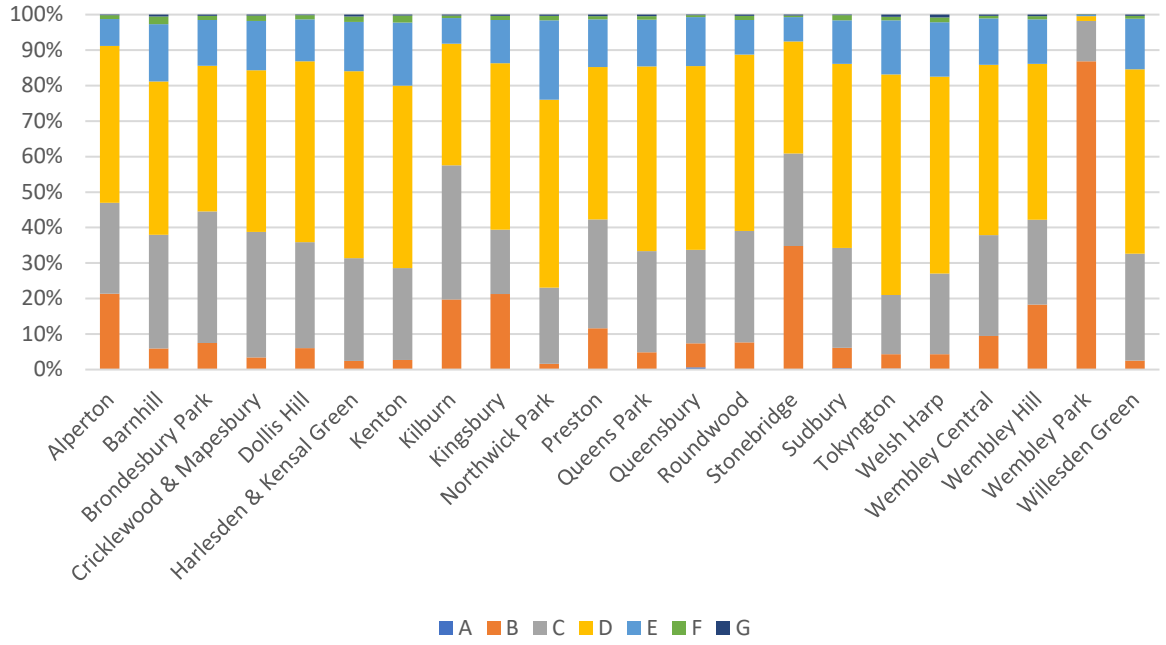


Figure 20. Energy Performance Certificate ratings in PRS by ward (Rating A-G) (Source: Ti 2022).

The difference between the current and potential energy performance score (EPC) helps owners of residential property understand what practicable improvements can be made to improve a properties energy performance. The gap between current and potential EPC scores represents the opportunity to improve energy performance within a reasonable economic envelope (Figure 21 & 22).

[23] Housing Health and Rating System, Operation Guidance, 2006
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf

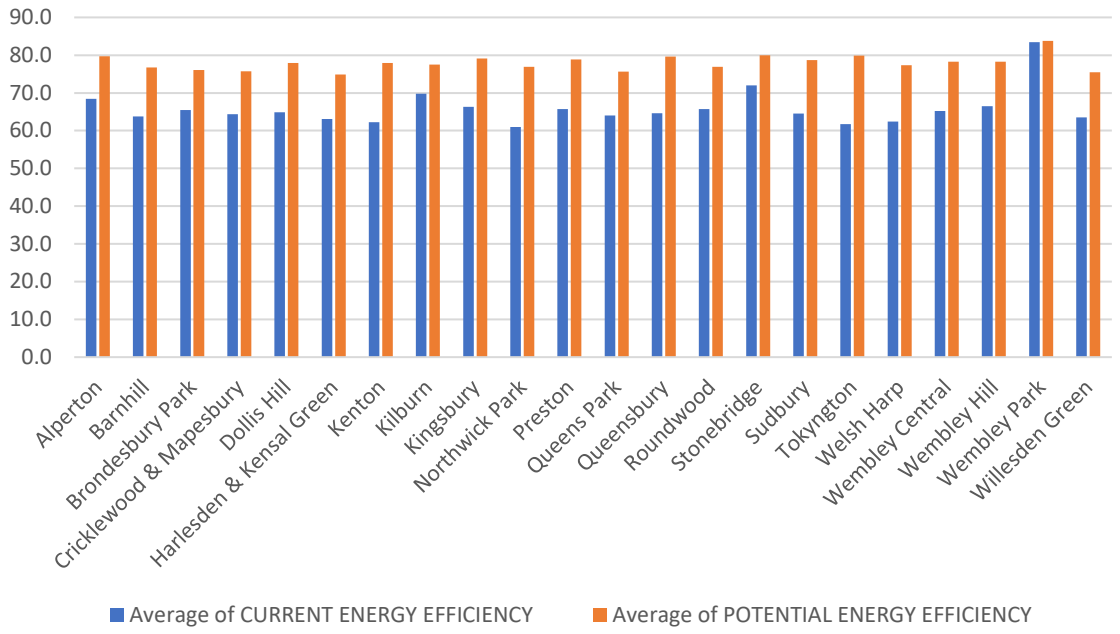


Figure 21. Current and Potential Energy Performance Certificate score (mean average) in PRS by ward (Source: Ti 2022).

Tokyngton's (18.1) PRS stock has the largest difference between current and potential energy efficiency score (Figure 22).

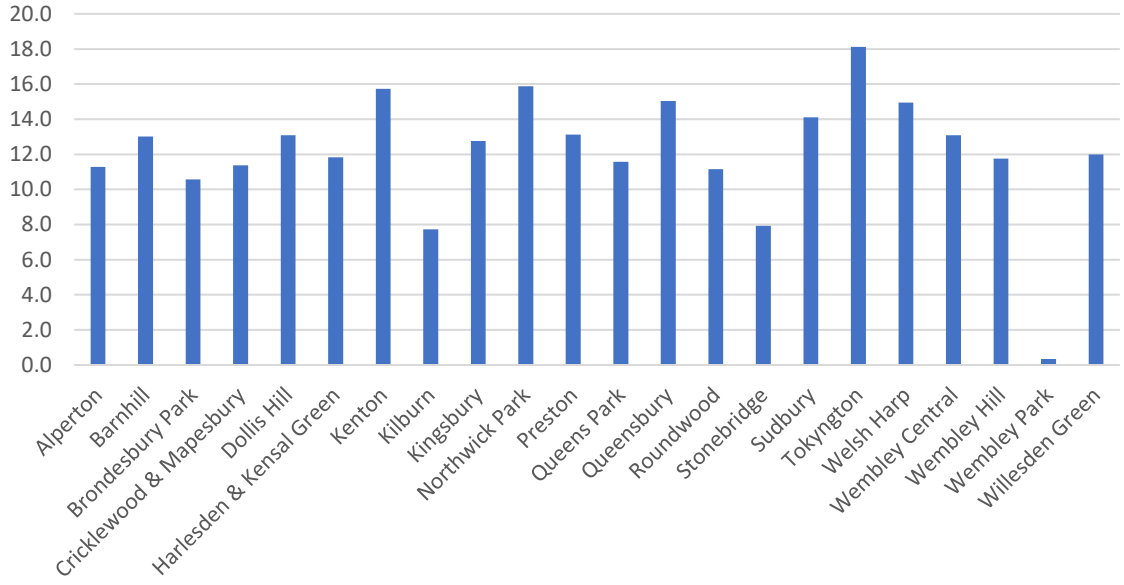


Figure 22. Difference between Current and Potential Energy Performance Certificate score (mean average) in PRS by ward (Source: Ti 2022).

2.2.3 PRS enforcement and regulation interventions (excluding known HMOs)

Brent uses a range of statutory housing and public health notices to address poor housing standards in the PRS. Interventions can be a result of a complaint being made by a tenant about their accommodation or as a result of a proactive inspection. Over a 5-year period (2017-22) Brent served 6,920 housing and public health notices (Figure 23).

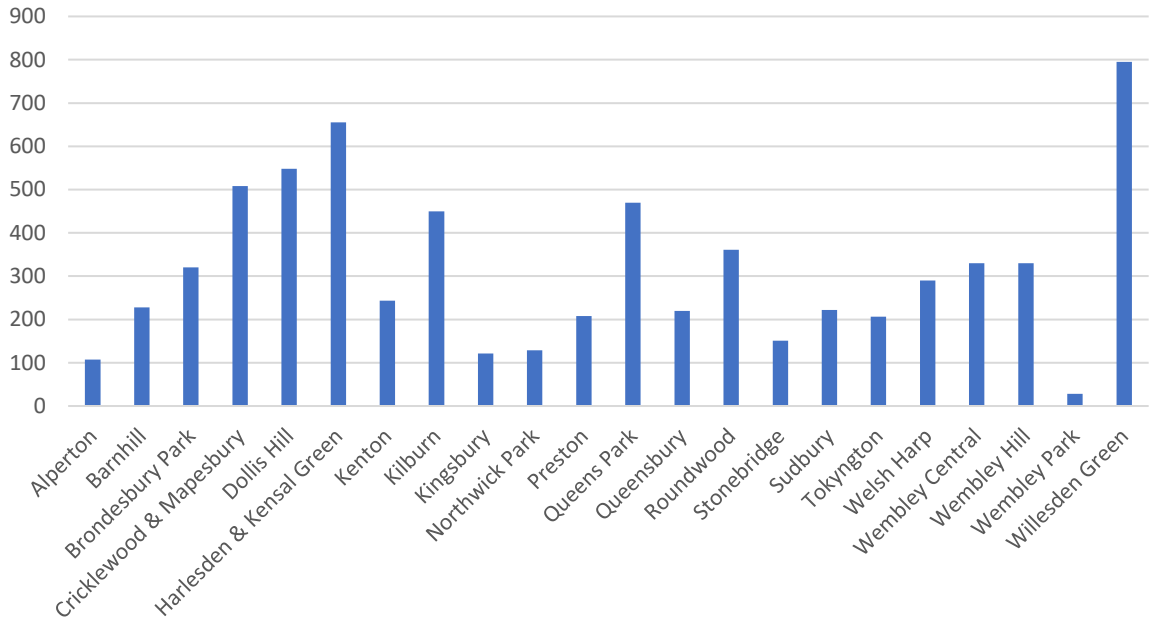
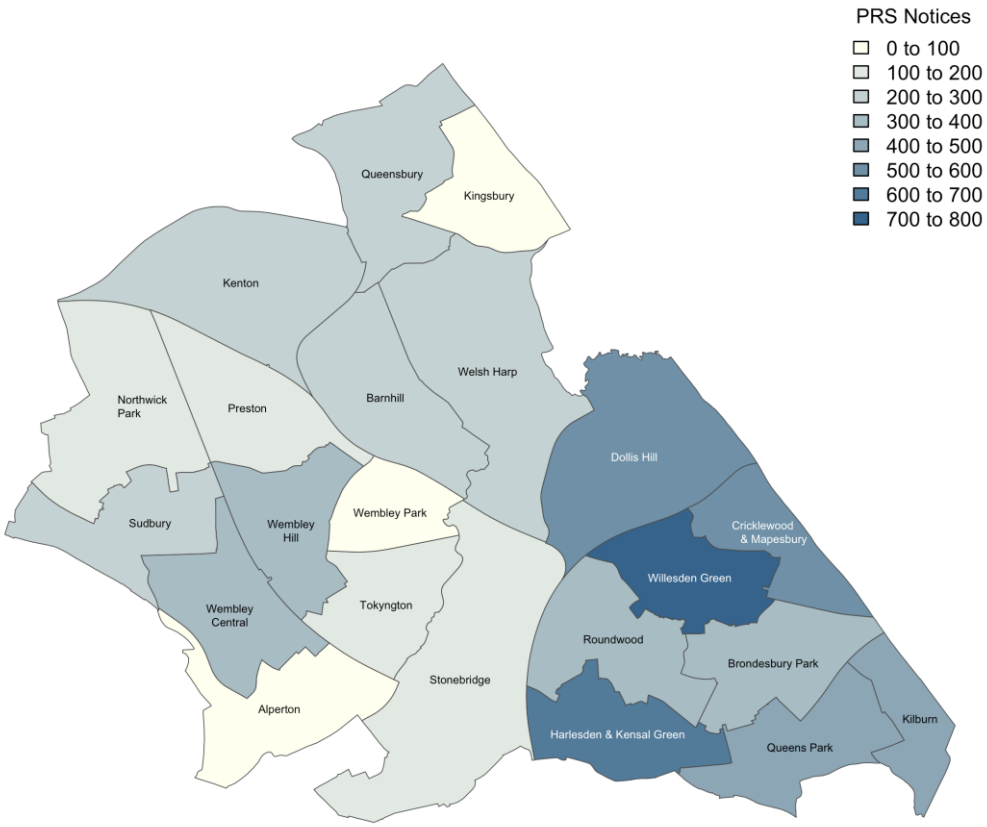


Figure 23. Statutory housing notices served on PRS properties (Source: Ti 2022).

Willesden Green (795) received the highest number of statutory notices for housing and public health related issues (Figure 23 & Map 6).



Map 6: Distribution of statutory notices served on PRS by ward (Source Ti 2022, Map by Metastreet).

Breaches of development control often result in planning enforcement notices. Over a 5-year period **1,282** planning enforcement notices have been served on PRS properties in Brent. All wards except Wembley Park have received notices. Dollis Hill (131) has the highest number of planning notices (Figure 24 & Map 7).

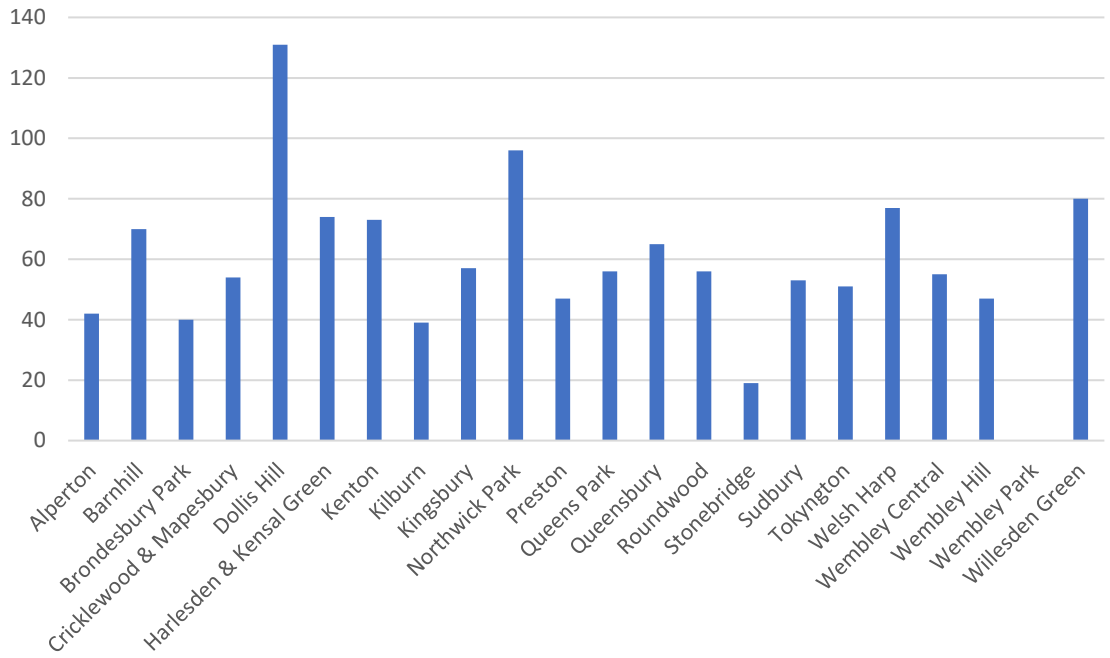
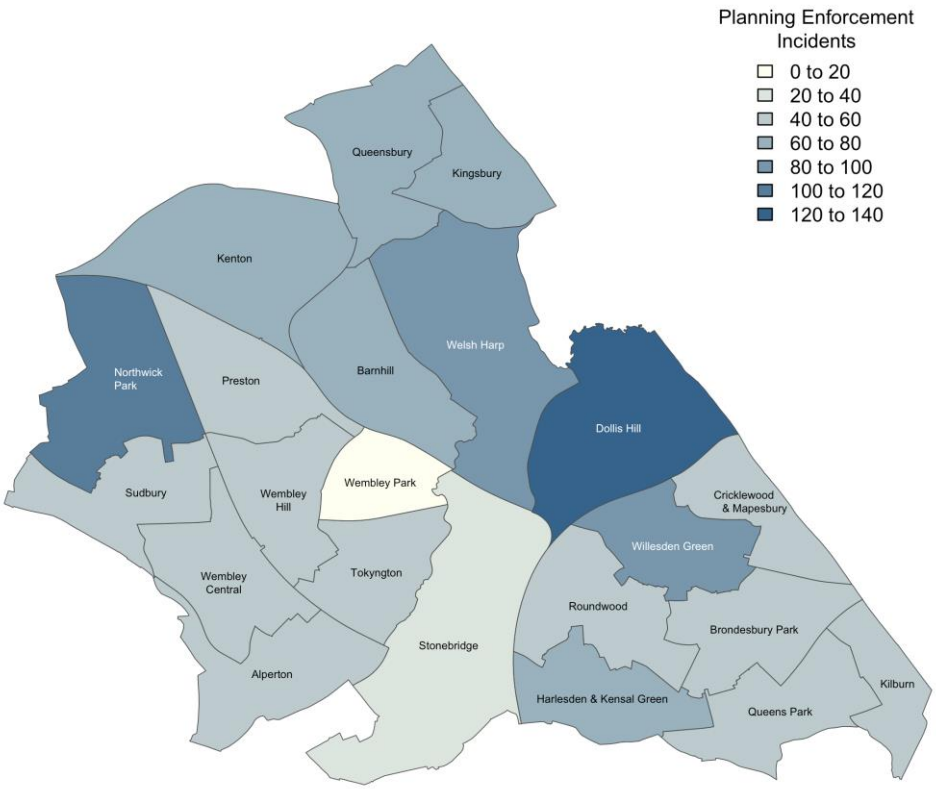


Figure 24. Planning enforcement notices served on PRS properties (Source: Ti 2022).



Map 7: Distribution of planning enforcement notices served on PRS by ward (Source Ti 2022, Map by Metastreet).

2.2.4 Anti-social behaviour (ASB) (excluding known HMOs)

The number of ASB incidents recorded by the council over the last 5 years, (expressed as a rate) are shown below. They relate to ASB associated with residential premises only. For example, ASB incidents investigated on a street corner that cannot be linked to a residential property are excluded from the study (Figure 25).

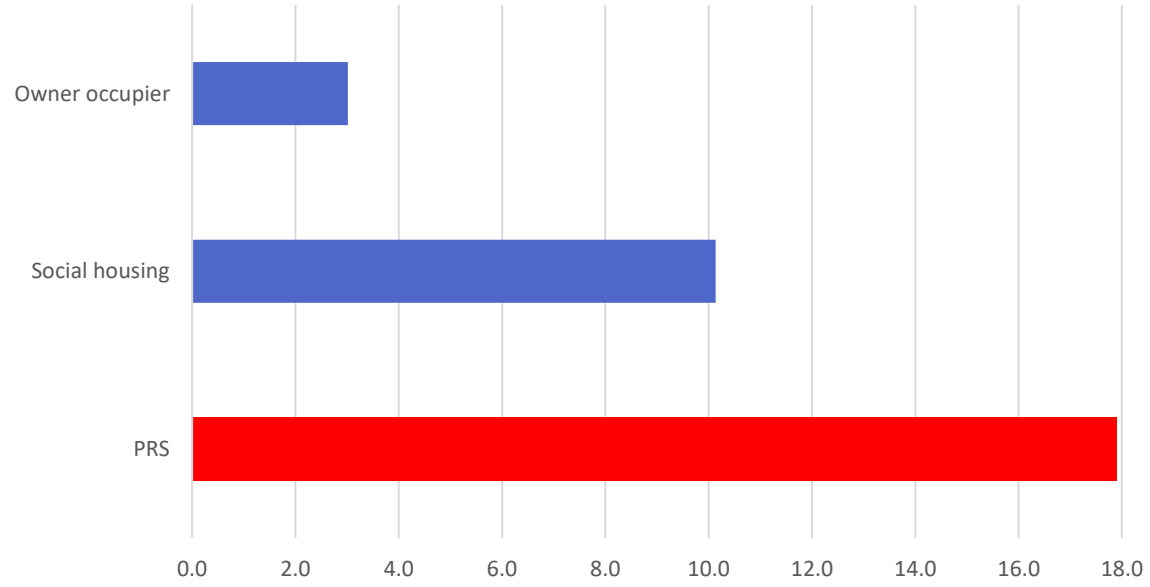


Figure 25. ASB rates per 100 properties by tenure (Source: Ti 2022).

ASB directly linked to PRS properties occurs across the borough. Over a 5-year period, **10, 398** ASB incidents have been recorded by the authority (Figure 27 & Map 8).

Follow up investigations identify drug & alcohol related ASB (42%), noise (25%), Intimidation & harassment (14%), vehicle ASB (6%), other ASB (4%) graffiti & vandalism (3%) prostitution (2%) and rubbish and fly tipping (4%) (Figure 26).

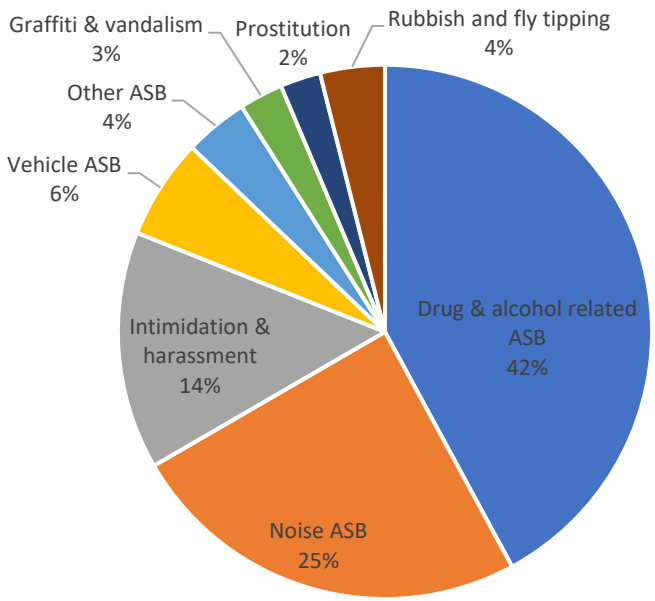


Figure 26. ASB incidents linked to PRS dwellings by type (Source: Ti 2022).

Dollis Hill (878) has the highest levels of PRS ASB incidents and Wembley Park (52) has the lowest (Figure 27 & Map 8).

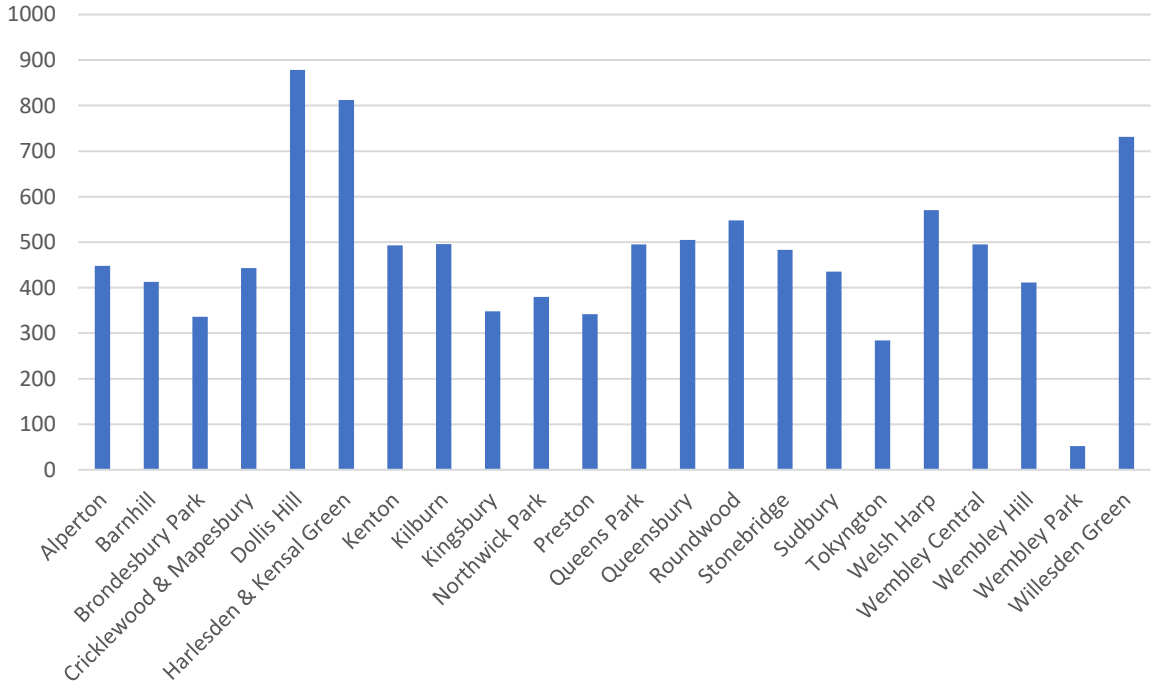
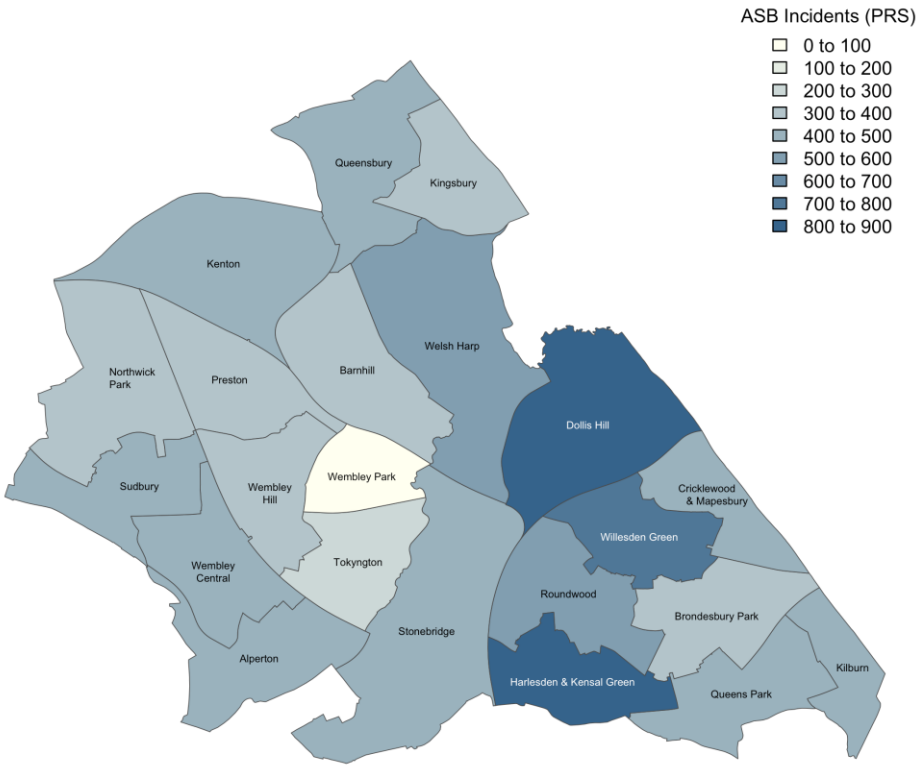


Figure 27. Number of ASB incidents linked to PRS by ward (Source Ti 2022).



Map 8. Distribution of ASB linked to PRS properties (Source: Ti 2022, Map by Metastreet).

3 Policy Context

3.1 PRS strategy - London

Rapid PRS growth has been seen across London over the last 15 years. The policy response has generally been for greater regulation of the market through property licensing to mitigate some of the concerns that accompany large and growing PRS populations, including HMOs (Table 3).

Table 3. Overview of the PRS and property licensing across London.

Borough	No. PRS	% PRS	Selective Licensing (Y/N)	Additional Licensing (Y/N)	Notes
L.B. Barking and Dagenham	21,000	28%	Yes	No	Borough wide selective licensing introduced in 2014, renewed in 2019
L.B. Brent	58,105***	45.6%	Yes	Yes	Borough wide additional, ward based selective
L.B. Camden	NA	32.2%	No	Yes	Borough-wide additional licensing
L.B. Croydon	58,585	35.6%	Yes	No	Borough wide selective licensing until 2020
L.B. Ealing	54,776	38.1%	Yes	Yes	Borough wide additional, area based selective
L.B. Enfield	43,500	34%	No	No	Currently operating a borough wide additional licensing and area based selective
L.B. Hammersmith & Fulham	NA	33%	Yes	Yes	Borough wide additional, area based selective
L.B. Haringey	43,775	40.2%	No	Yes	Additional licensing introduced in 2019 borough wide

L.B. Havering	30,215	29%	No	Yes	Borough wide additional, ward based selective
L.B. Islington	25,217	27%	No	No	Borough wide additional and ward based selective
R.B. Kensington & Chelsea	39,047	44.2%	No	No	Currently no discretionary property licensing
L.B. Newham	52,000	47%	Yes	Yes	Borough wide additional and selective licensing introduced in 2013, renewed in 2017 excluding Olympic Park area.
L.B. Merton	29,181	34%	No	No	Currently no discretionary property licensing
L.B. Redbridge	39,848	36.2%	Yes	Yes	Borough wide additional and area based Selective
L.B. Southwark	42,964	29.4%	Yes	Yes	Borough wide additional, area based selective
L.B. Waltham Forest	38,000	39%	Yes	No	Borough wide additional. Borough wide selective licensing introduced in 2015, renewed in 2019 (excluding 2 wards).
Westminster C.C.	55,784	44%	No	No	Borough wide additional

*Additional licensing - relates to small HMOs only (3 & 4 person) **Selective licensing - related to all private single-family dwellings *** Figures updated by this report.

4 Conclusions

Like many other London borough's, Brent's private rented sector has grown considerably in recent years, from 32% (2011) to 46% (2022). This represents a 43.8% increase over the last 11 years (Figure 11)

There are a total of 12,7378 residential dwellings in Brent, 58,105 of which are privately rented. The private rented sector in Brent is distributed across all 22 wards (Figure 10-13 & Map 2). The number of PRS dwellings per ward ranges from 8,410 (Wembley Park) to 1,163 (Northwick Park). 22 out of 22 Brent wards have a higher percentage PRS than the national average in 2021 (19%).

The Office of National Statistics (ONS) Census 2021 population estimates for Brent was 339,771. This makes Brent the 5th most populous London borough (Figure 1). Brent has a mixture of high and low deprivation wards. 16 of 22 wards have aggregated IMD rankings below the national average (Figure 4 & Map 1).

Brent has a higher proportion in fuel poverty (17.3%) than the national average (13.8%) (Figure 5) and the 4th highest number of private landlord possession claims in London, with 2,399 in 2019 (Figure 6).

Brent has above average rents for London, with 53% of median earnings used to pay rent (Figure 8) and the 12th highest numbers accepted as being homeless (Figure 7).

There are 10,108 private rented properties in Brent that are likely to have at least 1 serious housing hazard (Category 1, HHSRS). PRS properties with serious hazards are distributed across the borough. Harlesden & Kensal Green (812) and Dollis Hill (796) have the highest number of properties with at least one Category 1 hazard (Figure 16 & Map 4).

Brent recorded 3,229 complaints and service requests from private tenants linked to PRS properties over a 5-year period (Figure 18 & Map 5). Harlesden & Kensal Green (337) and Dollis Hill (290) generated most private tenant service requests.

It has been calculated using the matched addresses that 12.2% of PRS properties in Brent have an E, F, and G rating. 1.3% of PRS properties have an F and G rating (Figure 19). Extrapolated to the entire PRS, 755 PRS properties are likely to fail the MEES statutory requirement.

Brent uses a range of statutory housing and public health notices to address poor housing standards in the PRS. Over a 5-year period (2017-22) Brent served 6,920 housing and public health notices

(Figure 23). Additionally, over a 5-year period 1,282 planning enforcement notices have been served on PRS properties in Brent. All wards except Wembley Park have received notices. Dollis Hill (131) has the highest number of planning notices (Figure 24 & Map 7).

ASB directly linked to PRS properties occurs across the borough. Over a 5-year period, 10, 398 ASB incidents have been recorded by the authority. Follow up investigations identify drug & alcohol related ASB (42%), noise (25%), Intimidation & harassment (14%), vehicle ASB (6%), other ASB (4%) graffiti & vandalism (3%) prostitution (2%) and rubbish and fly tipping (4%) (Figure 25 & 26 & Map 8).

Appendix 1 – Ward summaries

Table 4. Ward PRS summary overview (Source Ti 2022) (Excluding known HMOs).

Ward	No. PRS (predicted)	% PRS	Category 1 (predicted)	ASB incidents
Alperton	2,051	45.1	399	448
Barnhill	1,426	37.9	393	413
Brondesbury Park	1,779	31.8	346	336
Cricklewood & Mapesbury	2,572	46.4	512	443
Dollis Hill	3,471	46.9	796	878
Harlesden & Kensal Green	3,626	42.0	812	812
Kenton	1,765	31.3	505	493
Kilburn	2,665	32.0	420	496
Kingsbury	1,474	36.9	318	348
Northwick Park	1,124	31.3	354	380
Preston	1,626	43.8	345	342
Queens Park	2,620	35.8	508	495
Queensbury	2,034	37.7	475	505
Roundwood	2,693	42.0	481	548
Stonebridge	2,419	30.2	379	483
Sudbury	2,020	46.8	442	435
Tokyngton	1,285	41.3	296	284
Welsh Harp	2,448	40.7	602	570
Wembley Central	2,237	45.5	485	495
Wembley Hill	2,257	45.2	433	411
Wembley Park	8,405	98.4	41	52
Willesden Green	3,498	46.0	766	731
Total	**55,495**	**43.6**	**10,108**	**10,398**

Appendix 2 - Tenure Intelligence (Ti) – stock modelling methodology

This Appendix explains at a summary level Metastreet's Tenure Intelligence (Ti) methodology (Figure 28).

Ti uses big data and machine learning in combination with expert housing knowledge to accurately predict a defined outcome at the property level.

Council and external data have been assembled as set out in Metastreet's data specification to create a property data warehouse comprising millions of cells of data.

Machine learning is used to make predictions of defined outcomes for each residential property, using known outcome data provided by the council.

Results are analysed by skilled practitioners to produce a summary of housing stock, predictions of levels of property hazards and other property stressors. The results of the analysis can be found in the report findings chapter.

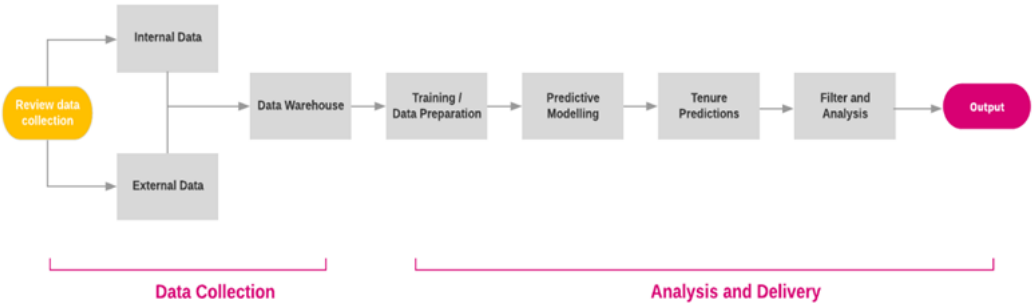


Figure 28. Summary of Metastreet Tenure Intelligence methodology.

Methodology

Metastreet has worked with Brent Council to create a residential property data warehouse based on a detailed specification. This has included linking millions of cells of data to 127,378 unique property references, including council and externally sourced data. All longitudinal data requested from council departments is 5 consecutive years, from April 2017 – March 2022

Once the property data warehouse was created, the Ti model was used to predict tenure and stock condition using the methodology outlined below.

Machine learning was utilised to develop predictive models using training data provided by the council. Predictive models were tested against all residential properties to calculate risk scores for each outcome. Scores were integrated back into the property data warehouse for analysis.

Many combinations of risk factors were systematically analysed for their predictive power using logistic regression. Risk factors that duplicated other risk factors but were weaker in their predictive effect were eliminated. Risk factors with low data volume or higher error are also eliminated. Risk factors that were not statistically significant are excluded through the same processes of elimination. The top 5 risk factors for each model have the strongest predictive combination.

Three predictive models have been developed as part of this project. Each model is unique to Brent, they include:

- Owner occupiers
- Private rented sector (PRS)
- PRS housing hazards

Using a D^2 constant calculation it is possible to measure the theoretical quality of the model fit to the training data sample. This calculation has been completed for each model. The D^2 is a measure of "predictive capacity", with higher values indicating a better model.

Based on the modelling each residential property is allocated a probability score between 0-1. A probability score of 0 indicates a strong likelihood that the property tenure type is *not* present, whilst a score of 1 indicates a strong likelihood the tenure type *is* present.

Predictive scores are used in combination to sort, organise and allocate each property to one of 4 categories described above. Practitioner skill and experience with the data and subject matter is used to achieve the most accurate tenure split.

It is important to note that this approach cannot be 100% accurate as all mathematical models include error for a range of reasons. The D^2 value is one measure of model "effectiveness". The true test of predictions is field trials by the private housing service. However, error is kept to a minimum through detailed post analysis filtering and checking to keep errors to a minimum.

A continuous process of field testing and model development is the most effective way to develop accurate tenure predictions.

The following tables include detail of each selected risk factors for each model. Results of the null hypothesis test are also presented as shown by the Pr(>Chi) results. Values of <0.05 are generally considered to be statistically significant. All the models show values much smaller, indicating much stronger significance.

Owner occupier model

The owner occupier model shows each of the 5 model terms to be statistically significant, with the overall model showing a "predictive capacity" of around 97% (Table 5).

Table 5. Owner occupier predictive factors.

Risk factors selected	**Pr (>Chi)***
Service requests	2.2e-16
EPC TENURE	2.2e-16
Previous_HB_5yrs	2.2e-16
Ctax.acc length days	2.2e-16
Ctax accounts	1.490e-05
Training data, n= 1062	
D^2 test = 0.97**	

* Pr(>Chi) = Probability value/null hypothesis test, ** D^2 test = Measure of model fit

PRS predictive model

The PRS model shows that each of the 5 model terms is statistically significant, with the overall model having a "predictive capacity" of around 97% (Table 6).

Table 6. PRS predictive factors.

Risk factors selected	**Pr(>Chi)**
Ctax.accounts	2.2e-16

Tenure (EPC)	2.2e-16
ACORN data	2.2e-16
HB claims	2.2e-16
ASB	0.0004034
Training data, n= 1062	
D^2 test = 0.97	

Category 1 (HHSRS) hazards model

Numerous properties where the local housing authority has recently taken action to address serious hazards were sampled for training data. Specifically, this included Housing Act 2004 Notices served on properties to address Category 1 hazards. The model results show that each of the model terms is statistically significant, with the overall model having a "predictive capacity" of around 94% (Table 7).

Table 7. Category 1 (HHSRS) hazard predictive factors.

Risk factors selected	**Pr (>Chi)**
CURRENT_ENERGY_RATING	2.2e-16
ASB.incidents	2.185e-07
Service.requests	2.2e-16
Complaint count_5yrs	2.2e-16
Bens.number	1.708e-08
Training data, n= 308	
D^2 test = 0.94	

Version,final

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