



London Borough of Waltham Forest

Private Rented Sector: Housing Condition and Stressors Report

December 2023

Executive Summary

This aim of this report is to provide an evidence base about:

- the relative concentration of private rented sector (PRS) properties in Waltham Forest and their distribution across the borough;
- the condition of dwelling stock in general and specifically in the PRS, including the presence of hazards as assessed under the Housing Health and Safety Rating System (HHSRS);
- other housing related stressors, primarily anti-social behaviour (ASB) and its links to the PRS.

The contents of this report may be used to assist the council in making policy decisions, including the possible introduction of property licensing schemes under Part 2 and Part 3 of the Housing Act 2004.

To produce the analysis, an address-level dataset was assembled using unique property reference numbers (UPRN) to join together data held across a range of council ICT systems, alongside open-source data and other datasets held by the council.

Machine-learning techniques were used to produce insights into the prevalence and distribution of hazards in the private rented sector by assessing the outcomes of inspections in the period May 2020 to September 2023 against a range of predictive factors.

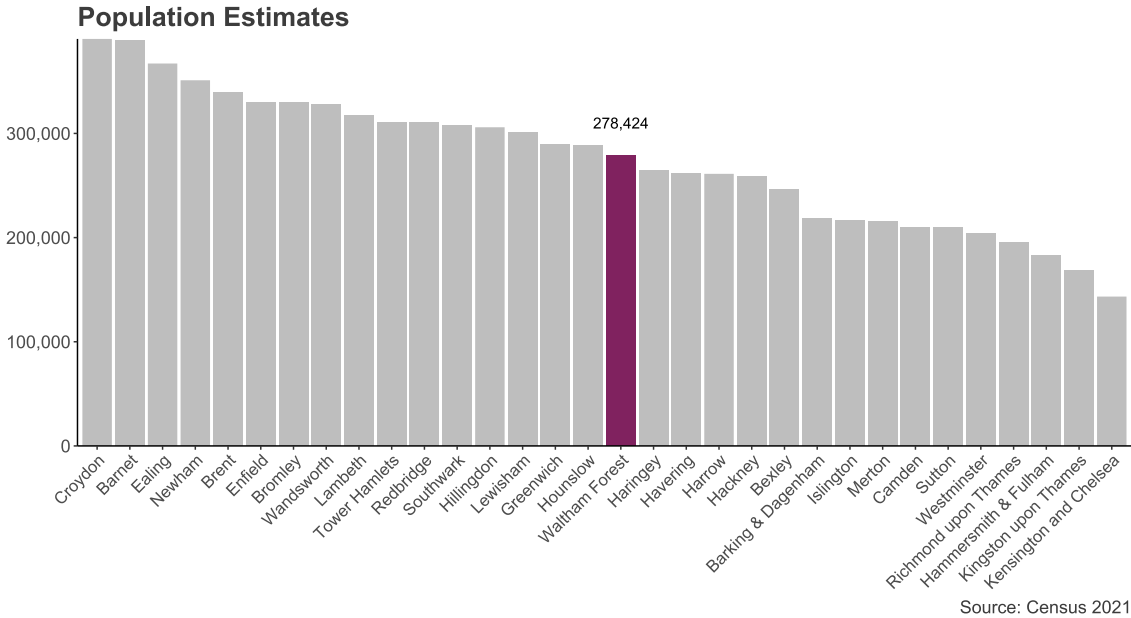
Key Findings

- There are a total of 102,901 residential dwellings in Waltham Forest, 28,593 (27.8%) of which are privately rented.
- 15 out of 22 Waltham Forest wards have a higher percentage PRS than the national average in 2021 (20.3%).
- Waltham Forest (278,424) is the 17th most populous borough out of 32 London boroughs and has the 15th highest population density.
- 17 out of 22 wards have aggregated IMD rankings below the national average.
- Waltham Forest has a higher proportion of households in fuel poverty (21.1%) than the national average (13.4%).
- There are over 7,400 private rented properties in Waltham Forest that are likely to have at least one serious housing hazard (Category 1, HHSRS) or a Category 2 damp and mould or excess cold hazard.
- Waltham Forest recorded 4,521 complaints and service requests from private tenants linked to PRS properties between May 2020 and September 2023.
- 64.2% of PRS properties in Waltham Forest have an EPC rating below C.
- Over a 5-year period, 3,966 ASB incidents have been recorded linked to PRS properties.
- There are 1,600 known HMOs in Waltham Forest and more than a quarter of these have been subject to persistent ASB over the last five years.

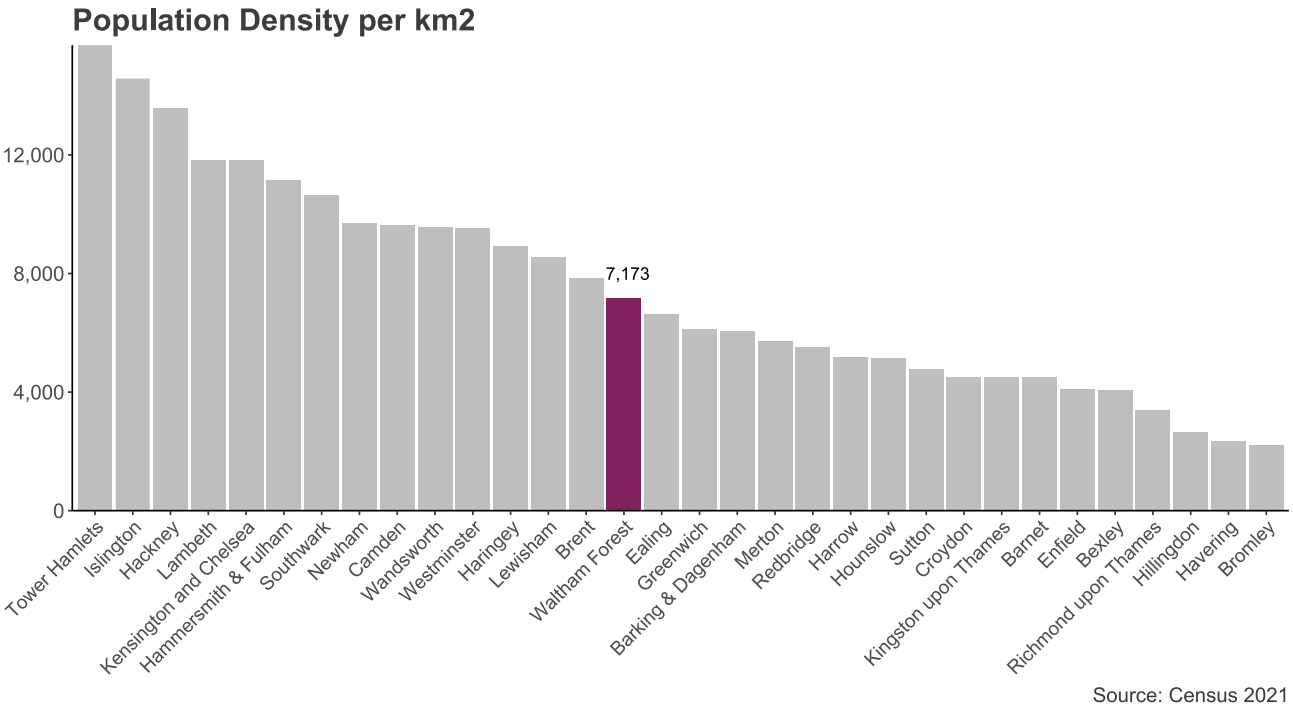
Waltham Forest Overview

Population

Waltham Forest has an estimated population of 278,424 making it the 17th most populous borough in London and the 11th highest out of 20 Outer London boroughs.



Waltham Forest is comparatively densely populated with a population density of 7,173 per km², the 15th highest in London and 2nd highest in Outer London.



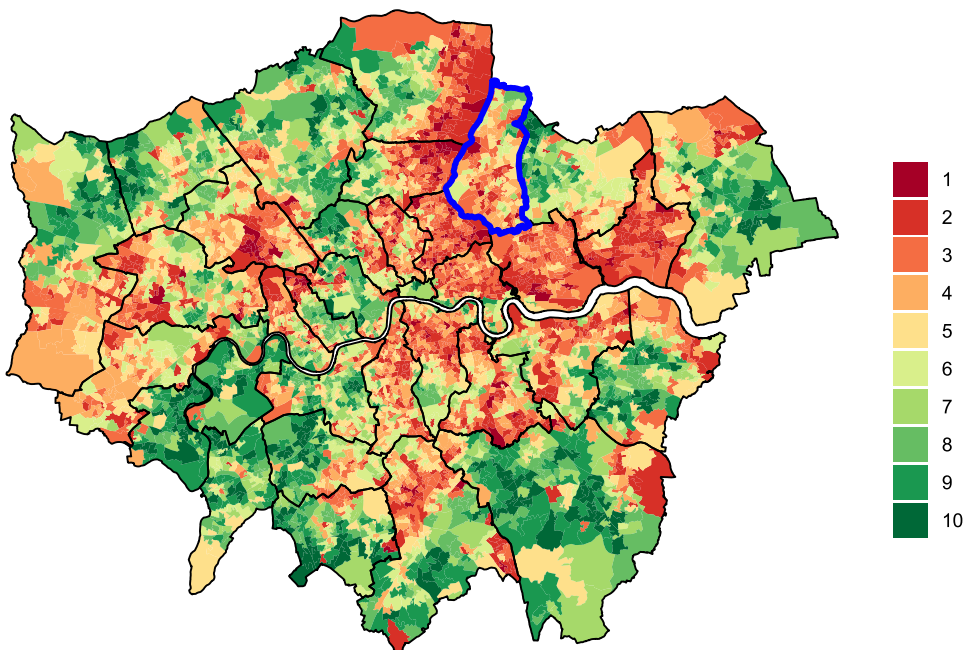
Ethnicity

Waltham Forest is one of the most diverse areas in the country with an estimated 53% of residents from a minority ethnic background. In 2021 Waltham Forest ranked as the 18th most diverse borough in England and Wales (out of 339). The top six countries of origin for residents born overseas are Romania (11,000), Hungary (6,000), Poland (6,000), Bulgaria (5,000), Lithuania (5,000) and Pakistan (5,000). The top five languages spoken locally other than English are Urdu, Polish, Romanian, Turkish and Lithuanian.

Deprivation

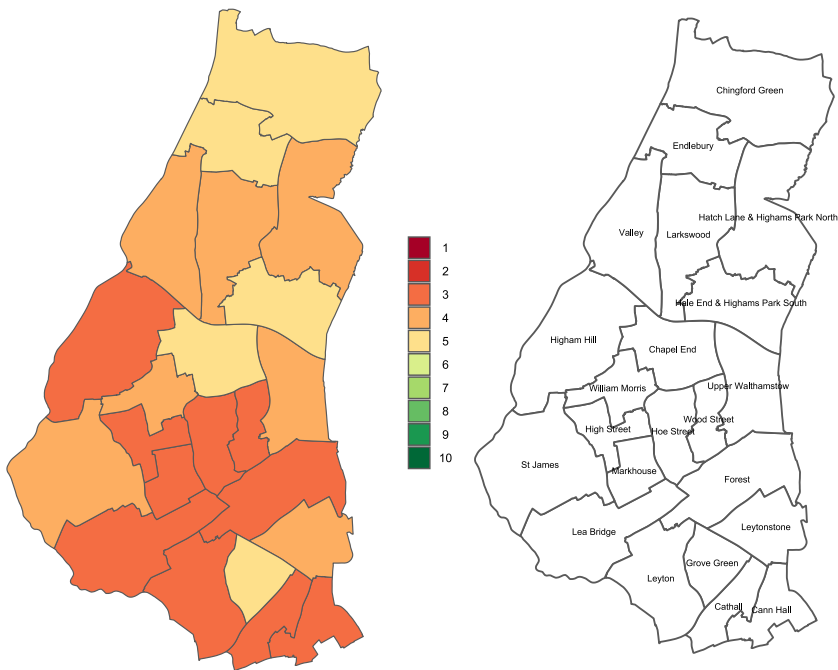
Waltham Forest ranks as the 82nd most deprived borough in England out of 317. The South of the borough is generally more deprived than the north of the borough. 17 out of 22 wards are below the national average.

IMD Decile (2019) by Lower Layer Super Output Areas (2011)

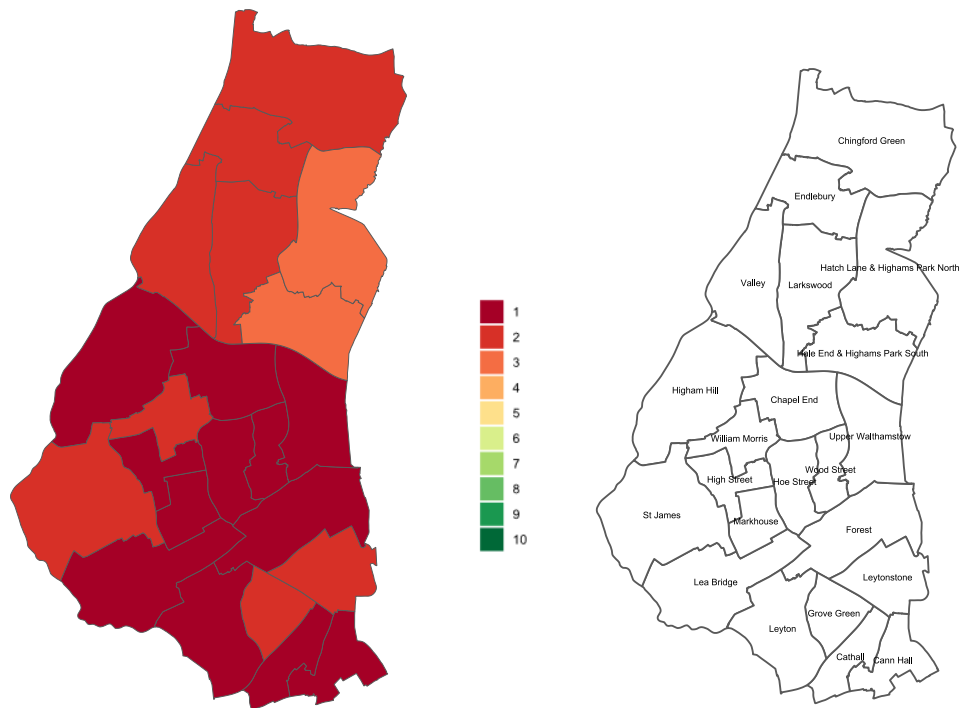


The IMD also evaluates *Barriers to Housing and Services*. This domain measures the physical and financial accessibility of housing and local services, divided into two sub-domains: *geographical barriers*, which are about the physical proximity of local services, and *wider barriers*, which cover issues related to housing access such as affordability and homelessness. In Waltham Forest, every ward falls within the top 30% most deprived nationally according to this measure, with more than half of the wards (12 out of 22) being among the top 10% most deprived nationally.

IMD Decile (2019) (Weighted by Population)



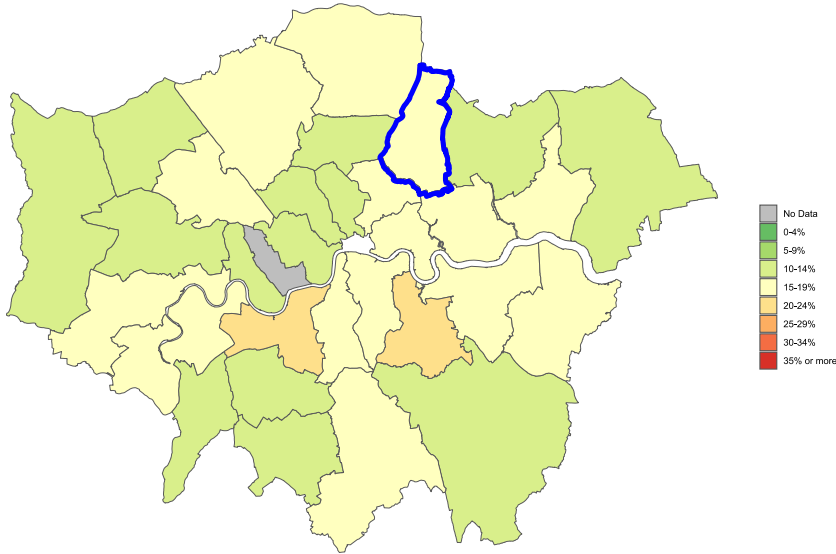
Barriers to Housing and Services Decile (2019) (Weighted by Population)



Poverty Rate

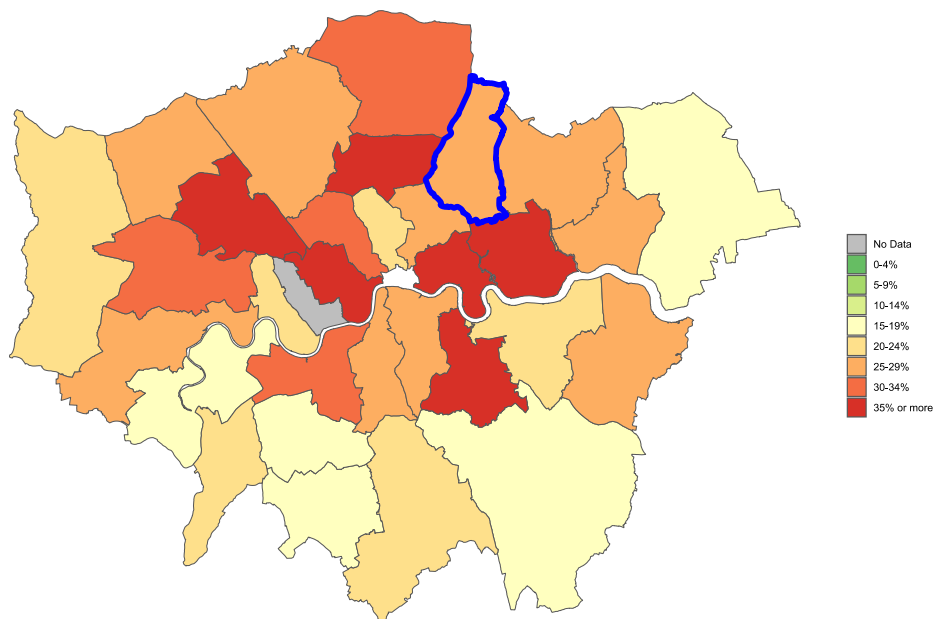
Trust for London data shows that the poverty rate in Waltham Forest before housing costs is 18%. However, when housing costs are included the poverty rate increases to 27%. This is due to the significantly high housing costs experienced across Waltham Forest.

Poverty Rate Before Housing Costs



Source: Trust for London

Poverty Rate After Housing Costs

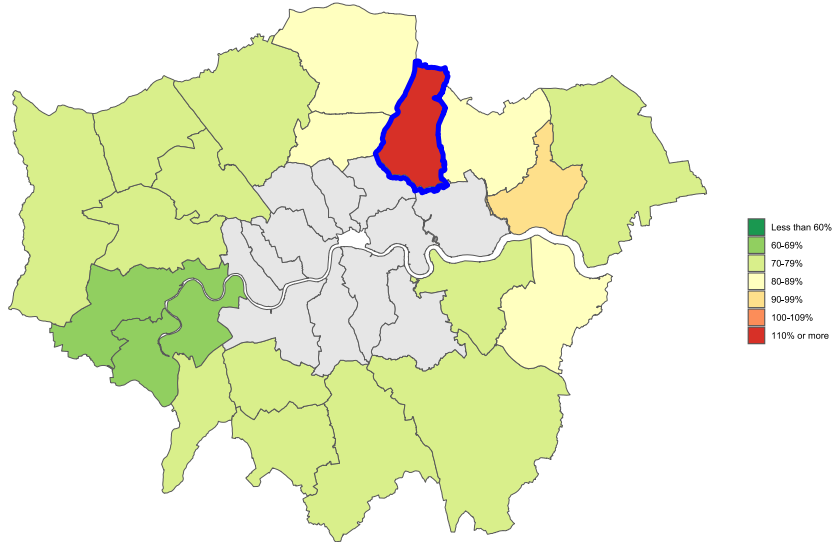


Source: Trust for London

Housing Affordability

Waltham Forest has experienced the highest rate of house price growth of all London boroughs, with house prices increasing by 118% since 2011. This is considerably higher than the London (+65%) and Outer London (+74%) averages over the same period.

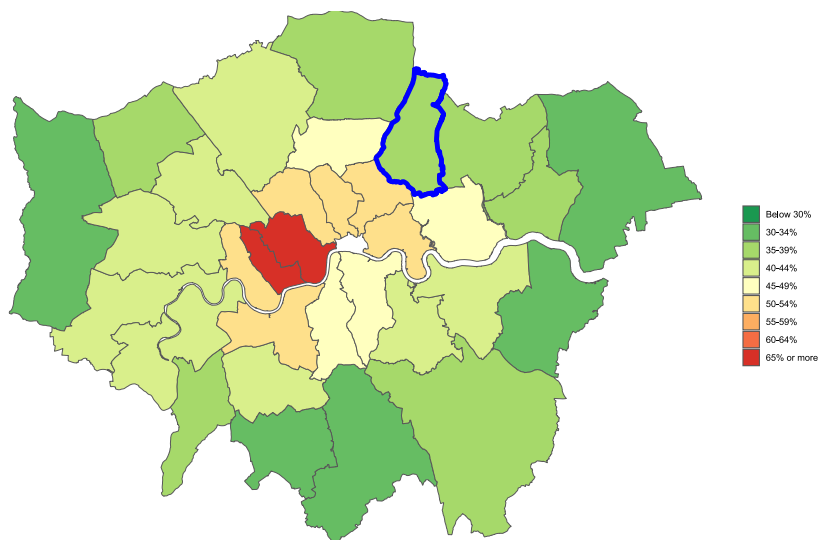
Mean house price change between 2011 and 2021 | Outer London



Source: Waltham Forest Housing Commission Evidence Report 2023

One of the major changes to the PRS across London over the last 20 years has been the increase in rent. This has resulted in problems with residents being able to access decent, affordable housing. Waltham Forest has above average rents for London in terms of affordability, with rent in the borough costing 39.7% of average London earnings against a London average of 37.1%

Rent for a one-bedroom dwelling as a % of gross pay (Oct-21 to Sep-22)

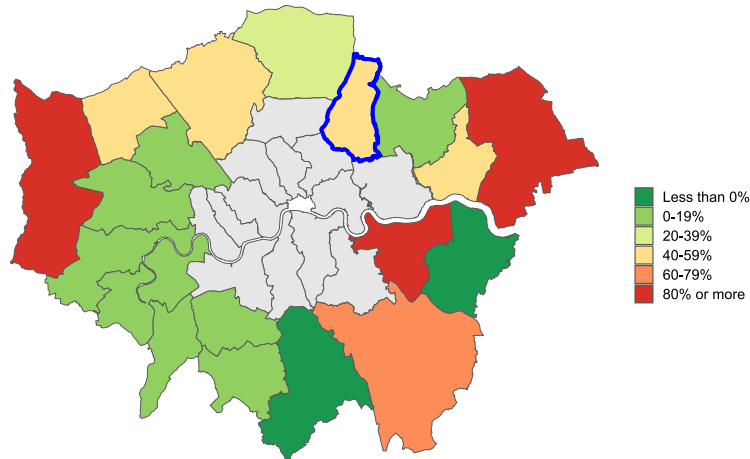


Source: Waltham Forest Housing Commission Evidence Report 2023

Homelessness

The proportion of residents in Waltham Forest who have been assessed as statutorily homeless has increased significantly since 2019. Statutorily homeless means residents who lack a secure place in which they are entitled to live and are therefore owed a duty by the council. There has been a 55% growth in the number of households who were recorded statutorily homeless in 2022 compared with 2019 levels.

Change in number of households assessed as homeless (2019 to 2022) | Outer London

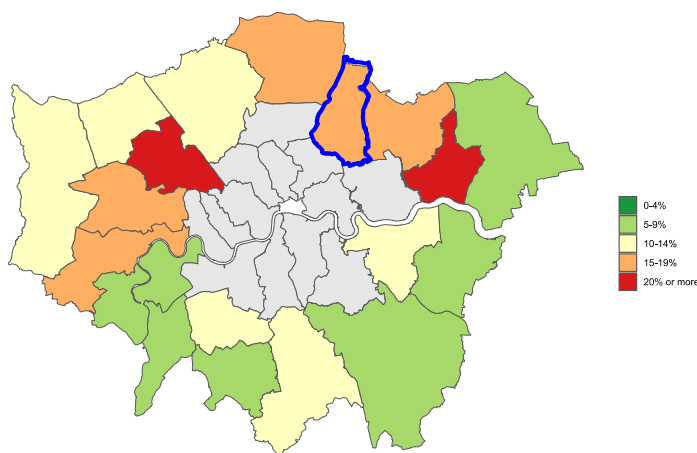


Source: Waltham Forest Housing Commission Evidence Report 2023

Overcrowding

A household is overcrowded if it has fewer bedrooms than it needs to avoid undesirable sharing, based on the age, sex and relationship of household members. 18% of households within Waltham Forest are overcrowded. This is significantly higher than the Outer London average (13.5%).

Percentage of households overcrowded (2021) | Outer London

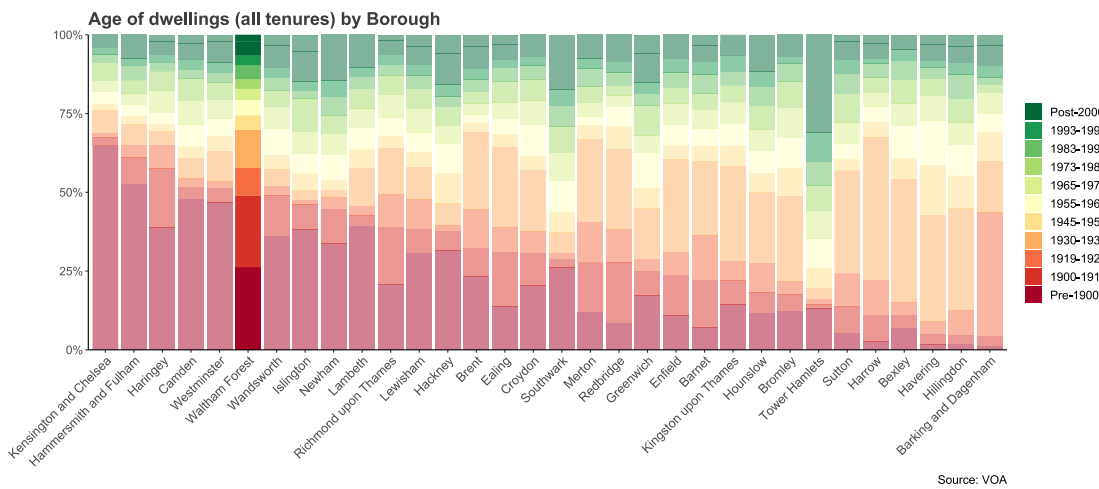


Source: Waltham Forest Housing Commission Evidence Report 2023

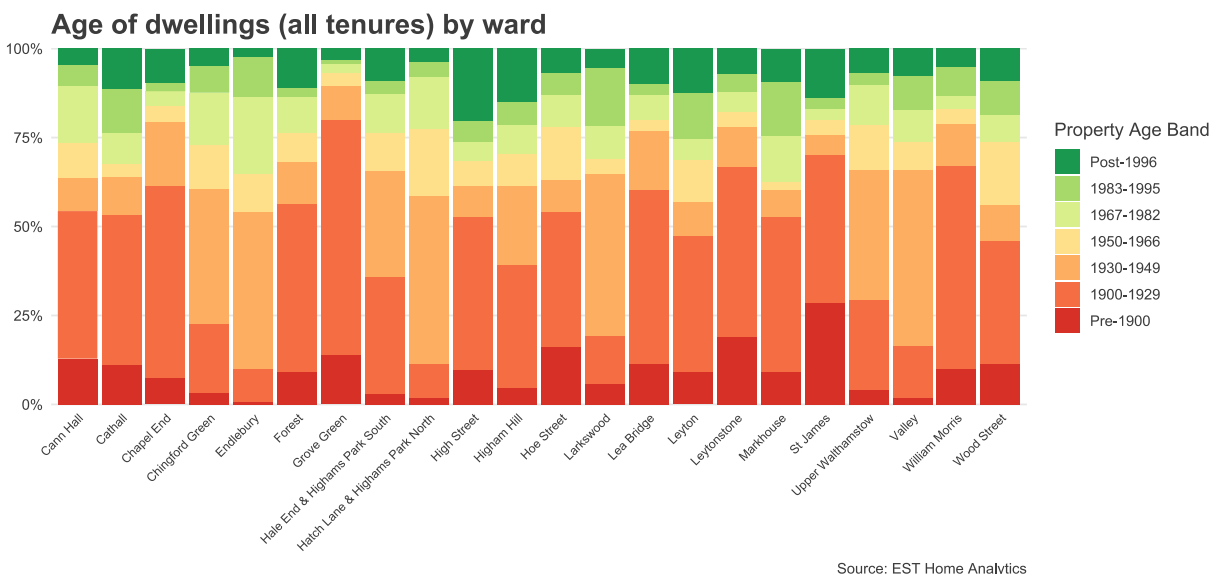
Property Condition

Property Age

The housing stock in Waltham Forest is some of the oldest in London. In 2015, the Valuation Office published data which shows that the proportion of housing stock in Waltham Forest built before 1919 is the 6th highest in London and before 1939 the 3rd highest. Unfortunately, this is the most recent dataset available to make boroughwide comparisons but given that any changes to the composition of dwelling stock are likely to be slow, because only a small proportion of stock is being added or removed in any given year, we would expect a similar pattern in 2023.

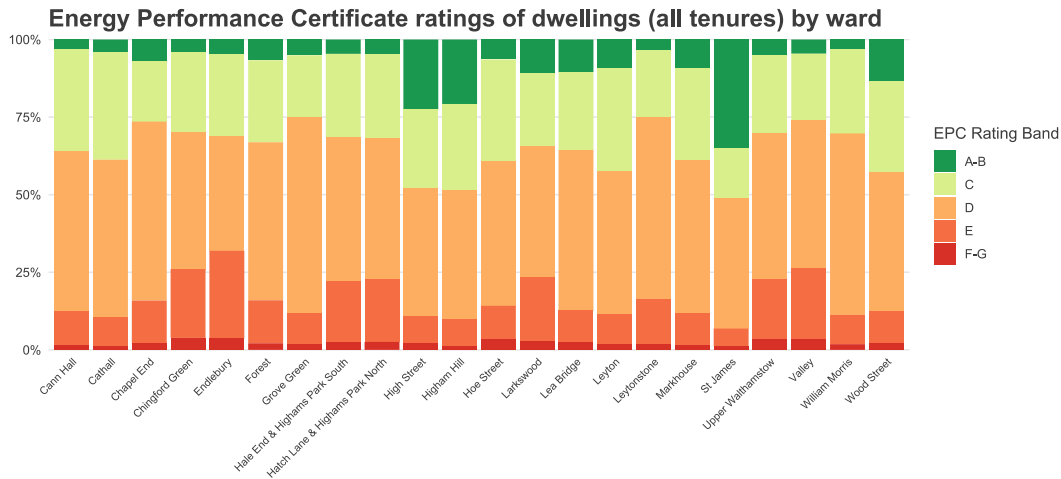


On a ward-level there is more current data is available. This shows that the share of housing built before 1930 is generally lower in the north of the borough (Endlebury and Hatch Lane & Highams Park North for example) than in the South where in some wards (Grove Green) this proportion exceeds 75%.



Energy Efficiency

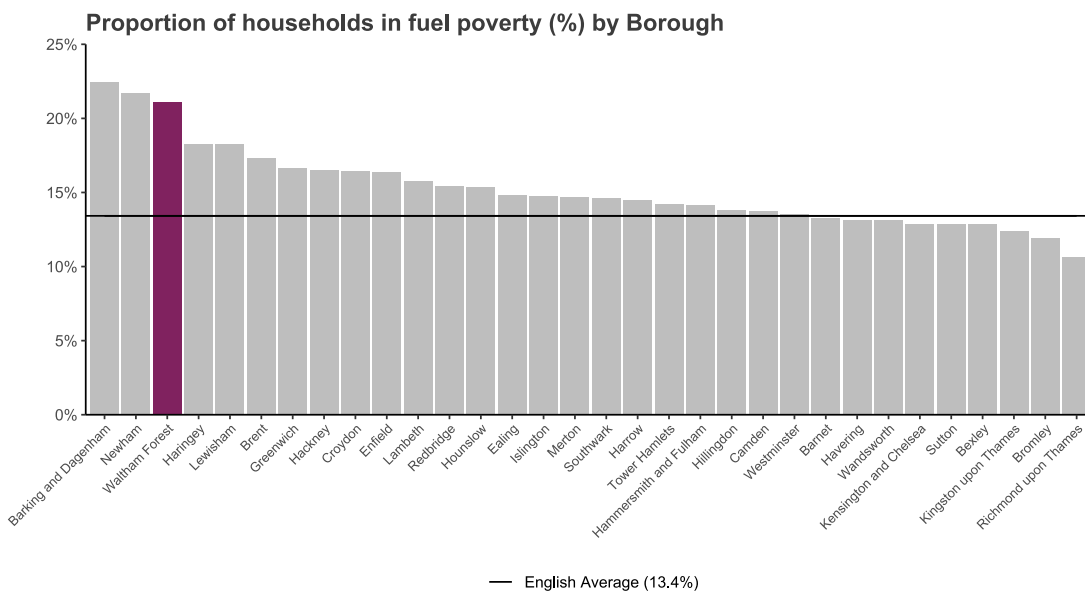
Consistent with the age of the housing stock, there is evidence of poor energy efficiency measures throughout the borough, with most wards having fewer than half of properties with an EPC rating of C or above.



Source: EST Home Analytics

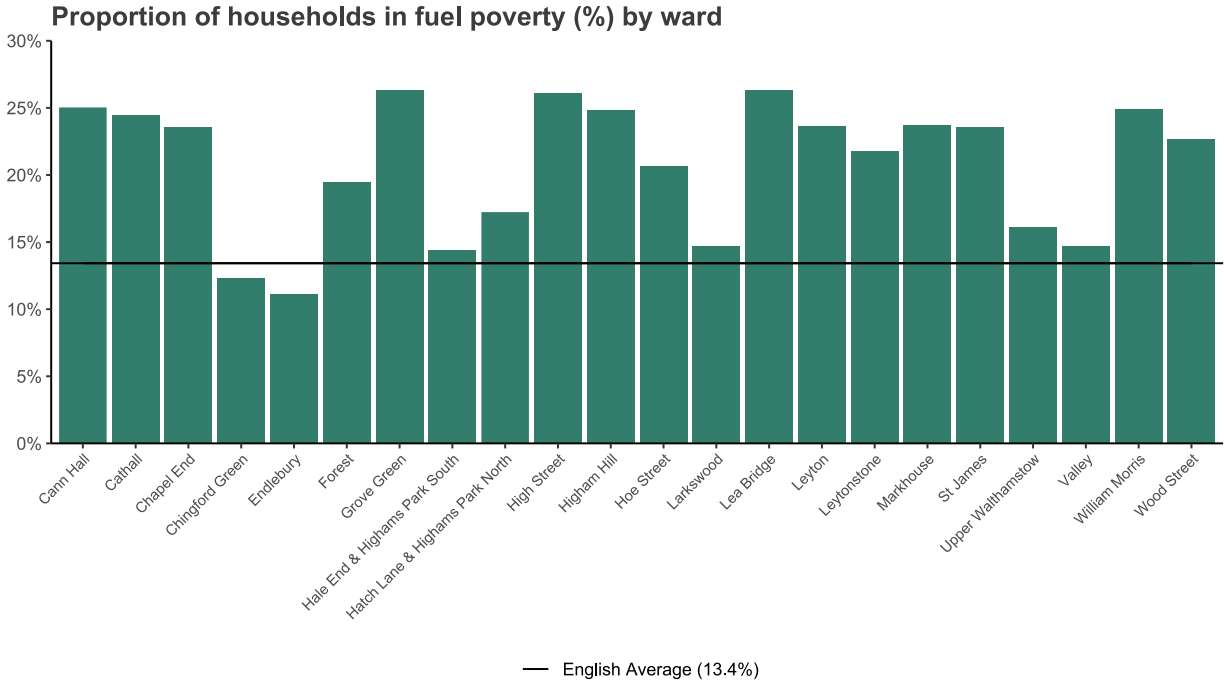
Fuel Poverty

Fuel poverty in England is measured using the Low-Income Low Energy Efficiency (LILEE) indicator. Under this indicator, a household is fuel poor if they are living in a property with a fuel poverty energy efficiency rating of band D or below and when they spend the required amount to heat their home, their disposable income is below the official poverty line.



Source: BEIS 2021

21.1% of households in Waltham Forest are estimated to be in fuel poverty, the third highest proportion in London and more than 50% above the average for England (13.4%). The problem of fuel poverty is evident across the borough with all wards exceeding the English average except for Chingford Green and Endlebury.



Source: BEIS 2021

Anti-Social Behaviour

Anti-Social Behaviour

The Anti-Social Behaviour (ASB) team receive reports of ASB from residents via the service request portal and open records on the ASB case management system.

Sometimes the ASB team open cases based on other sources of intelligence. An *ASB incident* is defined here as a either an ASB record opened on the case management system or an ASB report (recorded only in the service request portal).

The council has compiled a dataset for the five-year period from July 2018 to June 2023. A sub-set of these incidents are associated with a specific residential address. To determine whether a property is privately rented we've relied upon two data sources: the modelled tenure in the EST Home Analytics dataset and the records of current and former property licensing applications.

Number of properties associated with ASB Incidents | July 2018 to June 2023
by Tenure



The results of this analysis show that almost 2,500 properties known or believed to be privately rented were associated with an ASB incident, the highest of all tenures. The PRS also had the highest number of properties associated with two or more incidents which we've defined as *persistent ASB*. This also equates to the highest percentage of

any tenure, using the Census 2021 results for the denominator, albeit the results for Local Authority dwellings are similar.

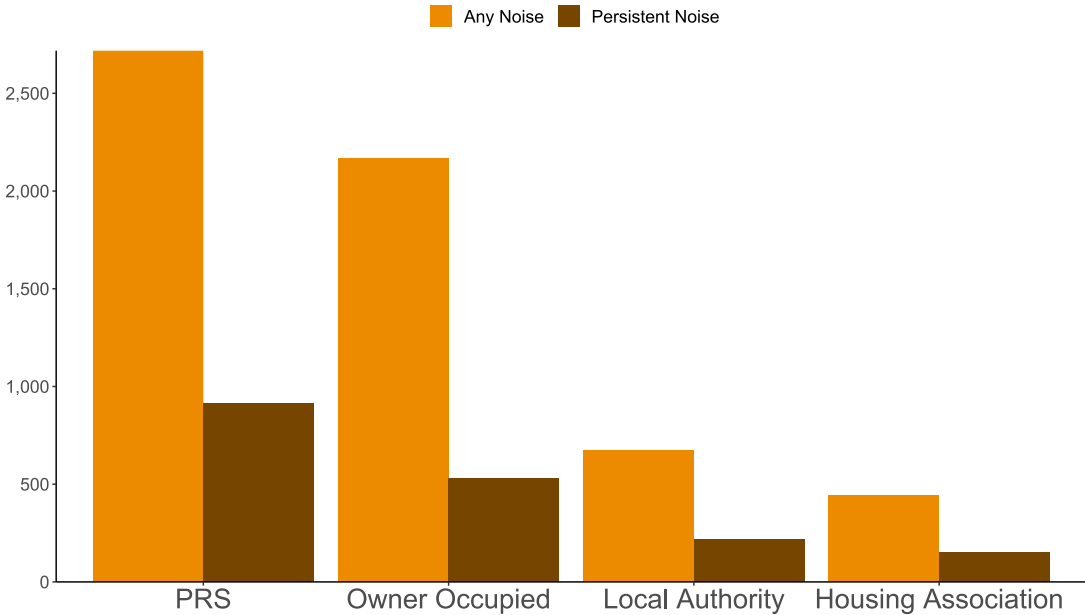
Percentage of properties associated with ASB Incidents | July 2018 to June 2023
by Tenure



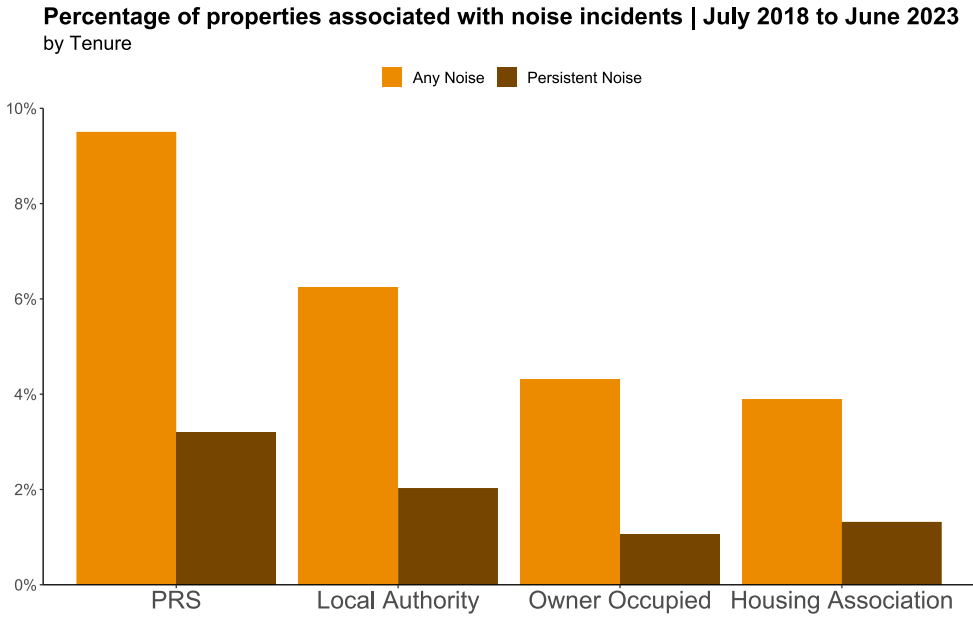
Noise

Noise complaints are recorded in a similar way to ASB incidents. Over the same five-year period, more than 2,500 PRS properties were associated with a noise incident, the highest of any tenure. They were also more likely to be the subject of persistent noise complaints.

Number of properties associated with noise incidents | July 2018 to June 2023
by Tenure

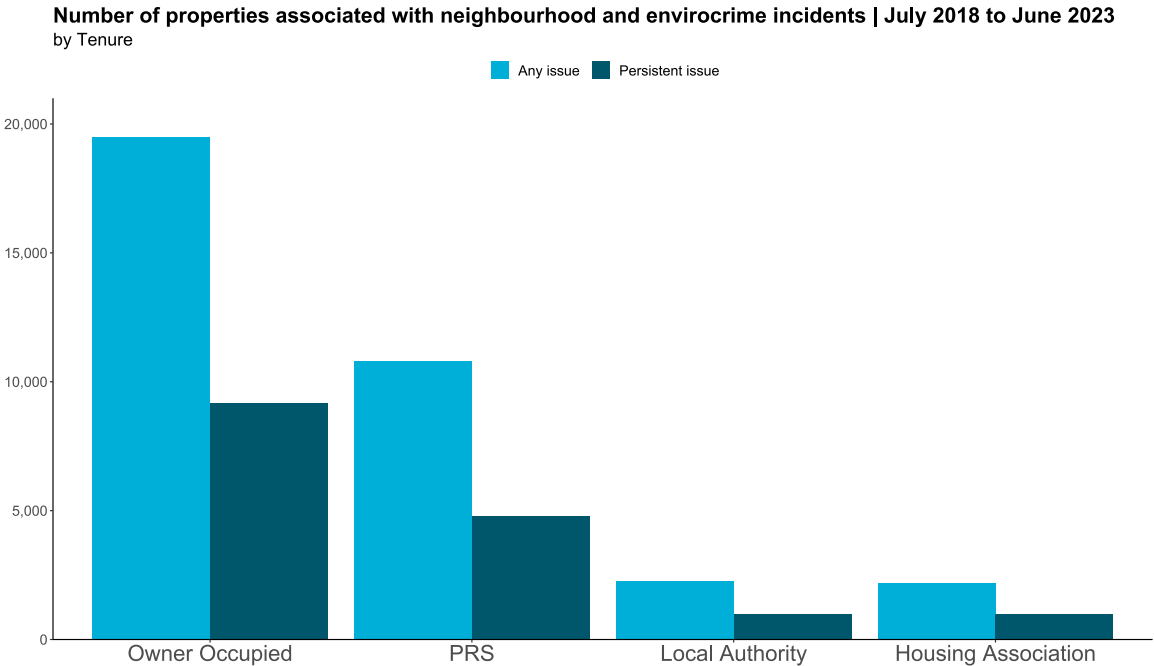


Almost 1 in 10 PRS properties were the subject of a noise complaint over the period and more than 3% were the subject of repeat complaints.



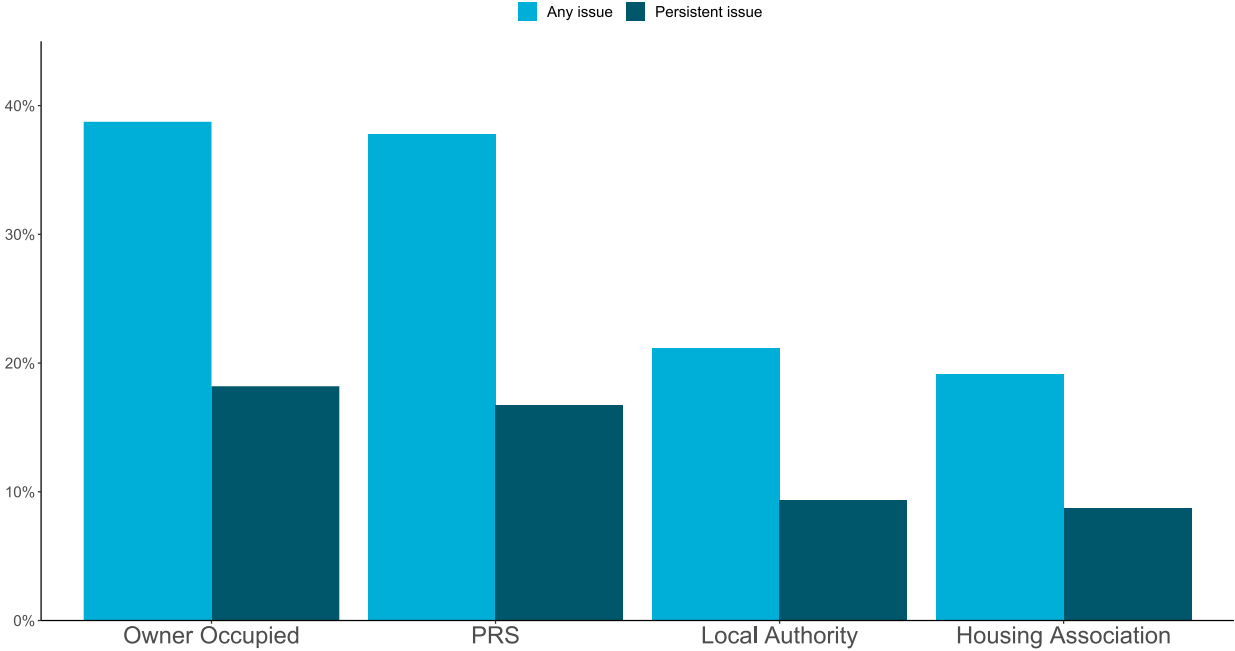
Neighbourhood and Envirocrime

Other types of incident are reported to the council’s Neighbourhood and Envirocrime service, including fly-tipping, dirty front gardens, and dog-fouling. Here the pattern is slightly different, with more owner-occupied dwellings associated with these sorts of incidents.



Nonetheless, a similar proportion of dwellings in the PRS are the subject of Neighbourhood and Envirocrime incidents as owner-occupied dwellings.

Percentage of properties associated with neighbourhood and envirocrime incidents | July 2018 to June 2023 by Tenure

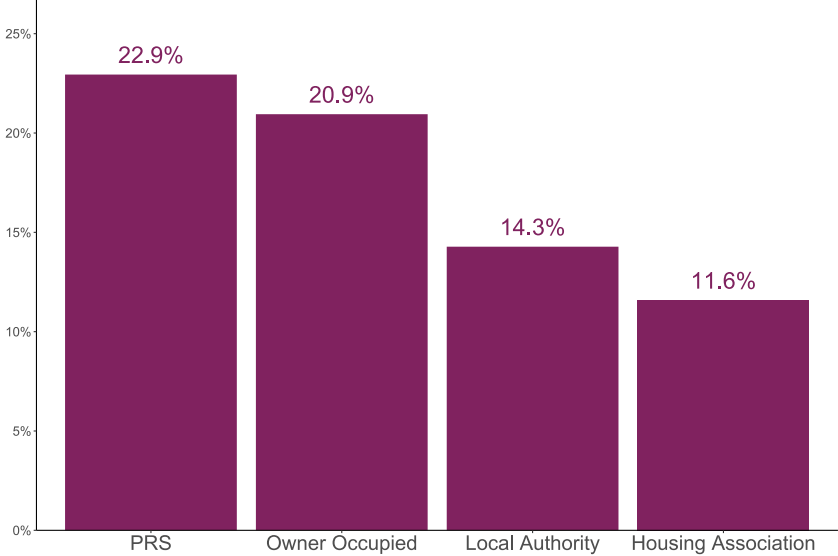


Broad Persistent ASB

A broader measure of *persistent ASB* can be assessed by considering the number of properties that are the subject of two or more incidents of either ASB reported to the ASB team, Noise complaints, or other Neighbourhood and Envirocrime reports.

On this broader metric, more than 6,500 PRS properties (22.9%) were the subject of persistent ASB in the five-year period ending June 2023, the highest proportion of any tenure.

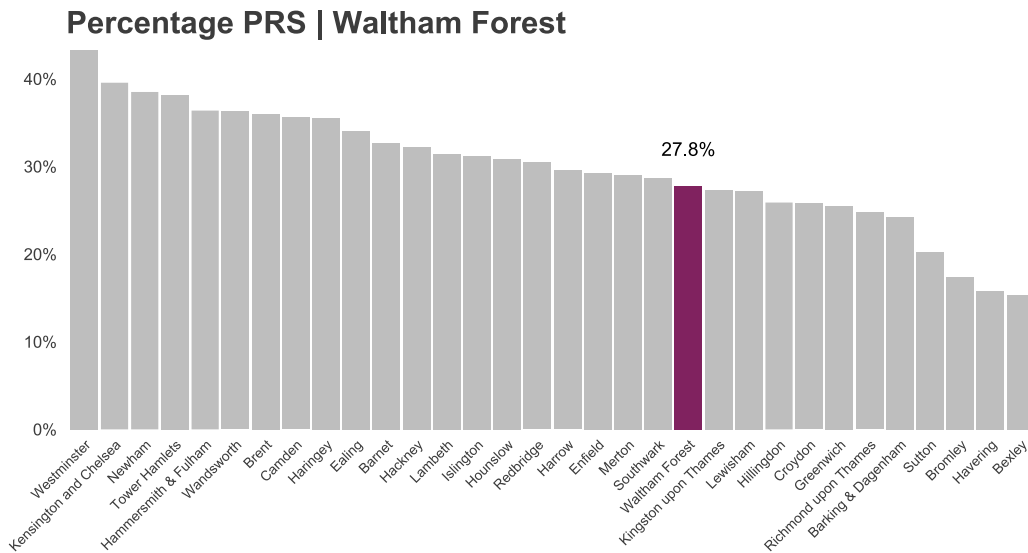
Percentage of properties associated with persistent broad ASB | July 2018 to June 2023 by Tenure



Private Rented Sector

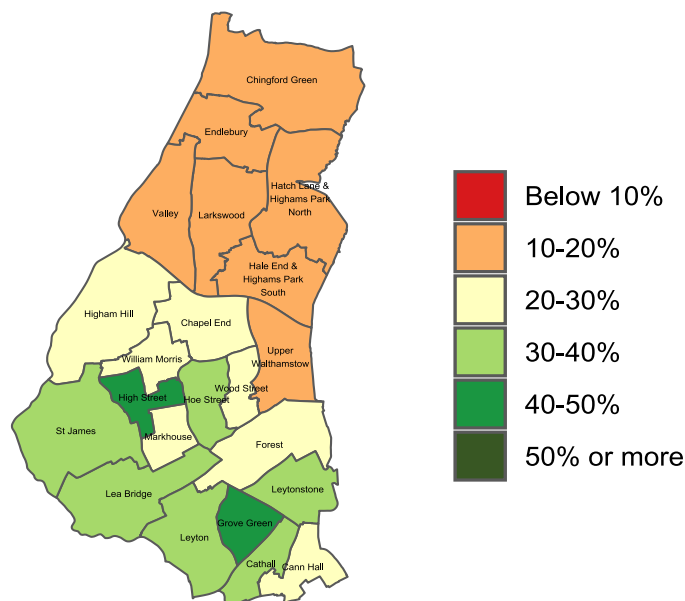
Private Rented Sector

There are 102,901 households in the borough of which 28,593 (27.8%) are estimated to be private rented. The size of the PRS is slightly below the London average (29.9%) but still above average for Outer London (26.4%).

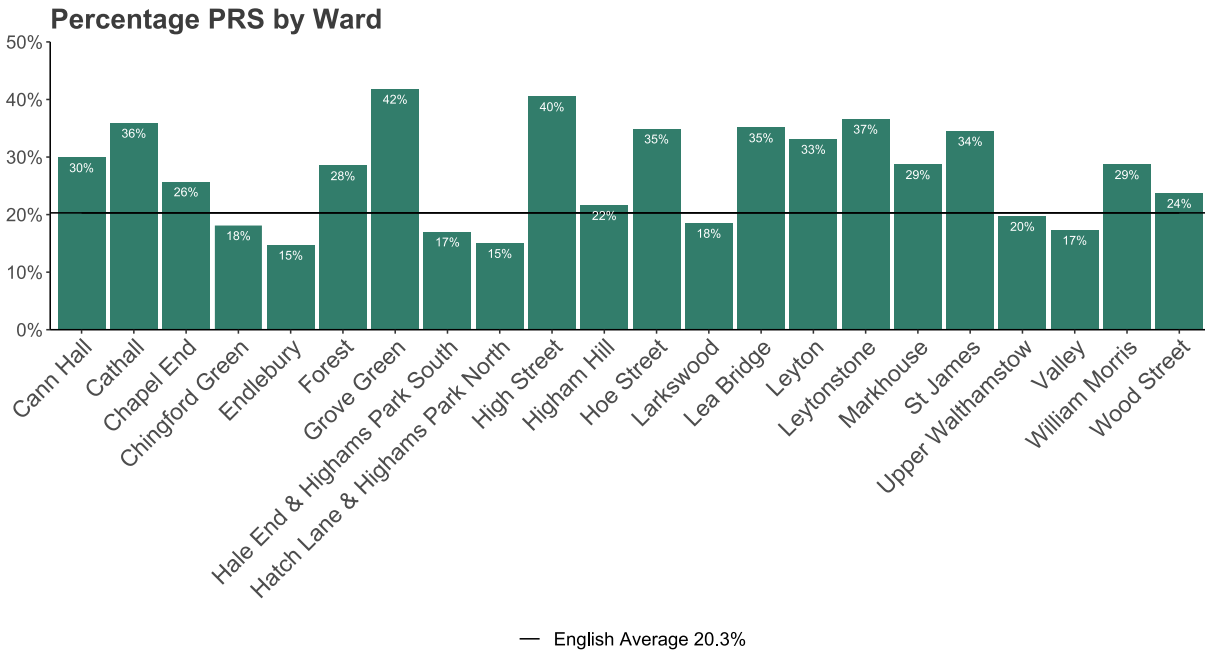


Source: Census 2021

The South of the borough has a larger proportion of households living in the PRS with the highest concentrations in Grove Green (42%), High Street (40%) and Leytonstone (37%) wards.

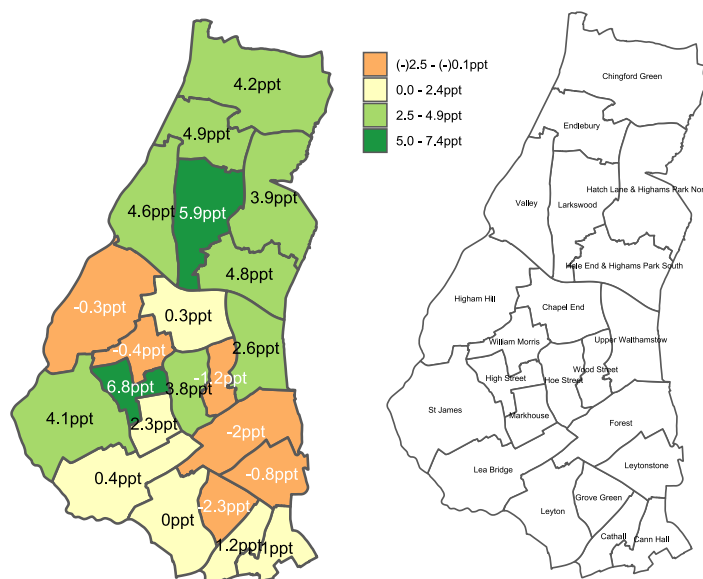


15 out of 22 wards have a higher concentration of households living in the PRS than the English average of 20.3%. The remaining 7 wards each has concentration of at least 15%.



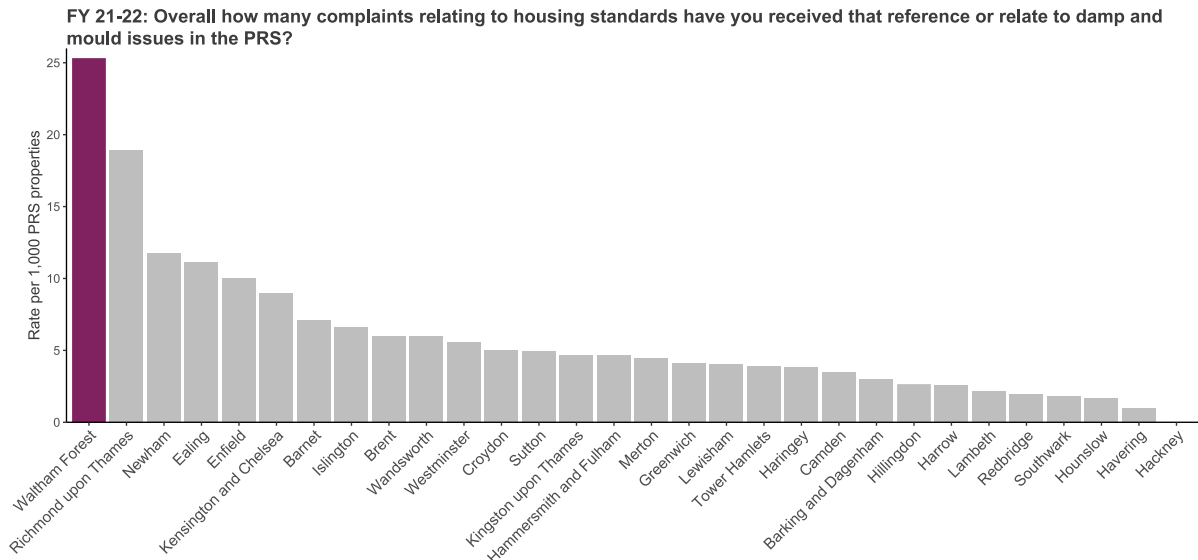
Source: Census 2021

The PRS in Waltham Forest grew by 1.9 ppt from 25.9% in 2011 to 27.8% in 2021, an increase of 7.3%. With the exception of High Street ward, the fastest growth generally occurred in the North of borough, in Larkswood (+5.9ppt), and Endlebury (+4.9ppt) and Hale End & Highams Park South (+4.8ppt).



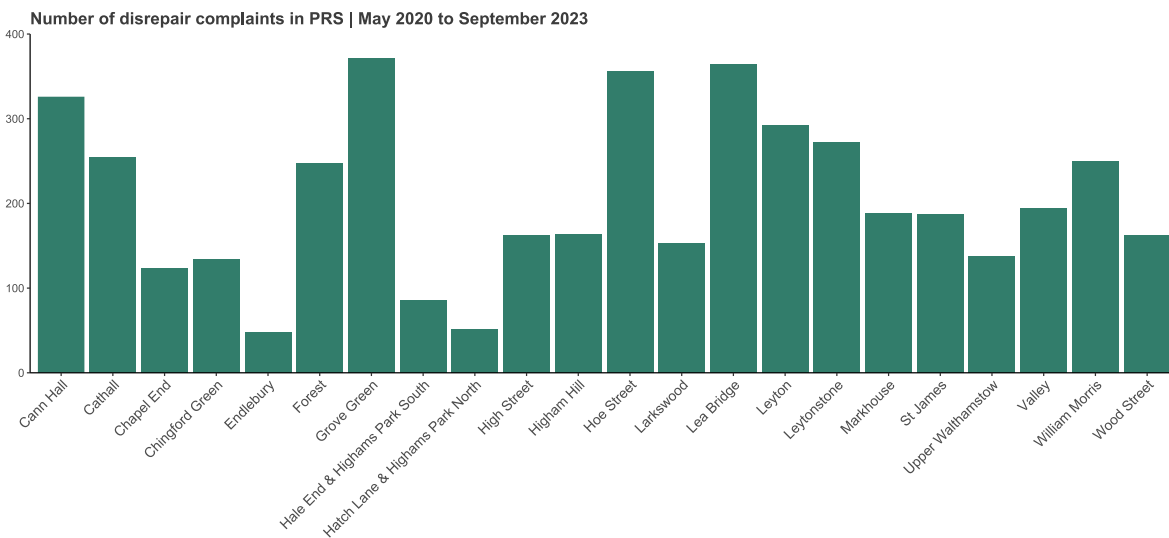
Disrepair Complaints

In November 2022, the Secretary of State for Levelling Up, Housing and Communities wrote to local authorities in England requesting information on damp and mould hazards in the PRS. While there will undoubtedly be different recording practices between different local authorities, the results suggest Waltham Forest has a significant problem with damp and mould, with the highest rate of complaints in London in 2021-22.



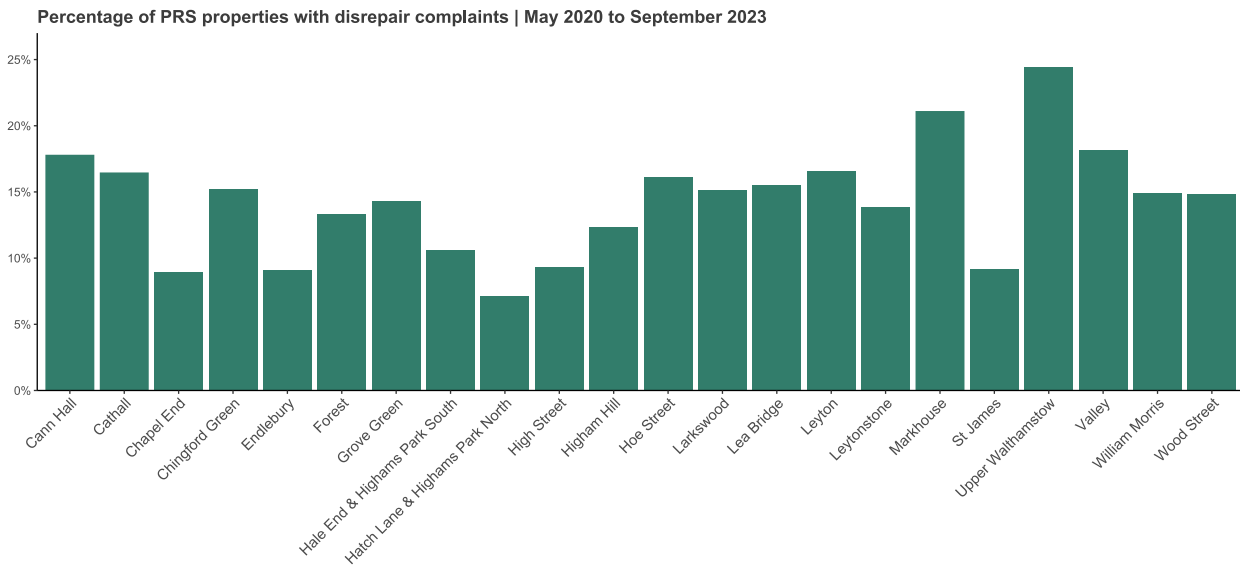
Source: DLUHC

Data from the council's property licensing and complaints database shows that between May 2020 and September 2023 Waltham Forest received 4,521 disrepair complaints relating to over 4,000 different addresses in the PRS. The three wards with the most complaints were Grove Green, Lea Bridge and Hoe Street. Endlebury, Hatch Lane & Highams Park North and Hale End & Highams Park South received the fewest



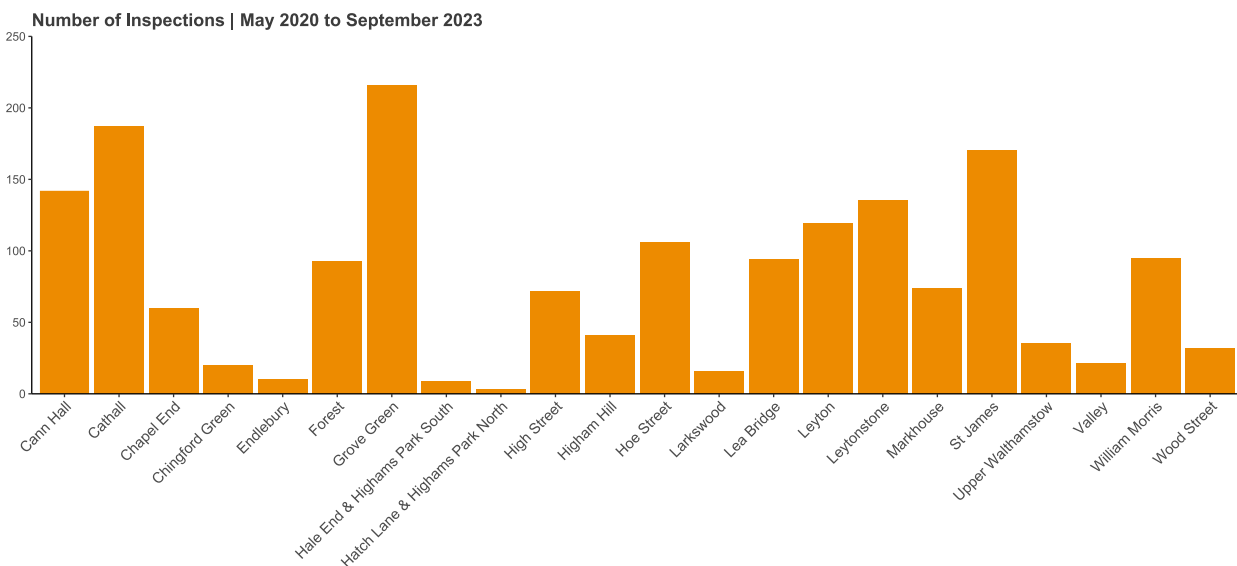
complaints. These wards largely fall outside of the current selective licensing designation (based on historic ward boundaries) which could explain why residents are less likely to make complaints.

Across the borough as a whole, 14.2% of PRS properties have at least one disrepair complaint, ranging on a ward basis from 7% in Hatch Lane & Highams Park North to 24% in Upper Walthamstow.

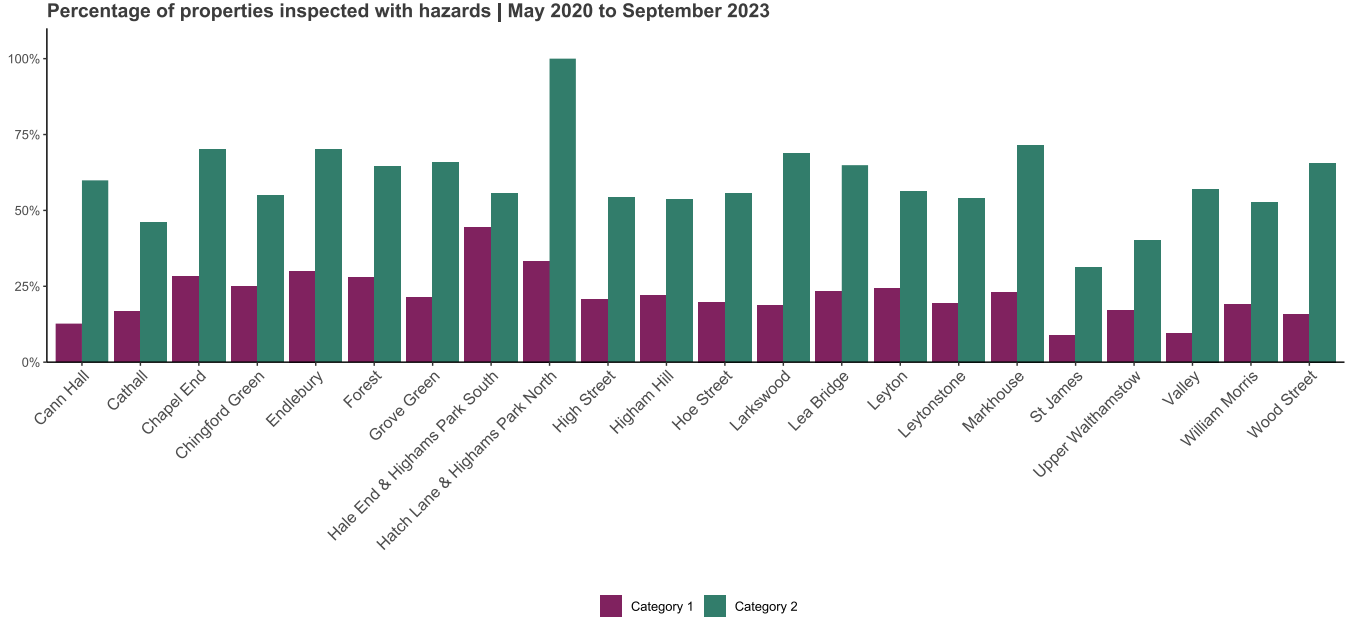


Inspections Data

1,750 properties have been inspected since May 2020. Of these, 976 (56%) were found to have a Category 2 hazard and 339 (19%) were identified as having a Category 1 hazard.



While inspections have been concentrated in wards such as Grove Green with particularly high concentrations of PRS properties, the likelihood of identifying one or more hazards during an inspection is similar across the borough.



Predicting the presence of hazards in Private Rented Sector properties in Waltham Forest

Methodology

The council has assembled a boroughwide address-level dataset which draws on a range of internal and external datasets. These include extracts from the council's ASB case management system, service request portal, and property licensing and complaints software, the Energy Saving Trust's Household Analytics dataset, as well as data from Census 2021. The property licensing and complaints database contains records of all complaints, inspections and licence applications under the current licensing schemes.

A subset of properties within the wider dataset have been inspected by the council's property licensing team either in response to a complaint or as part of the licensing process. In the course of carrying out inspections, officers identify hazards and score them against the HHSRS to determine whether they meet the threshold for being classified as a category 1 or 2 hazard.

The resulting inspections data has been interrogated and compared against a range of potential predictive factors to determine which factors impact the likelihood of a property containing a hazard. Combinations of risk factors were analysed to determine their predictive power and assembled into three distinct logistic regression models.

Based on the characteristics of a property known or believed to be privately rented, these models can make predictions about the likelihood it containing a hazard. Where that probability exceeds 50%, the standard decision threshold for a binomial logistic regression, the property is predicted to contain that hazard.

The training dataset included 414 observations. The table below provides details of the five risk factors used across the different models and the results of the null hypothesis test. A $Pr(>Chi)$ value below 0.05 is typically considered to be statistically significant. All results are significantly below this threshold.

Risk Factor Selected	Source	Period	Pr(>Chi)		
			Category 1	Category 2	
				Excess Cold	Damp and Mould
Whether a complaint of disrepair has been received	Property Licensing Software	May 2020 to September 2023	1.63E-03	7.49E-11	8.94E-06
The SAP rating of the property	EST Home Analytics	Snapshot June 2023	1.11E-04	5.29E-03	4.21E-03
The number of ASB incidents (including ASB reports and cases, Noise reports and Neighbourhood and Envirocrime reports)	ASB case management system and service request portal	July 2018 to June 2023	3.28E-03	(n/a)	2.76E-03
The estimated age of the property	EST Home Analytics	Snapshot June 2023	8.31E-02	(n/a)	(n/a)
The number of ASB cases and reports	ASB case management system and service request portal	July 2018 to June 2023	(n/a)	1.35E-04	(n/a)

* **Pr(>Chi) = Probability value/null hypothesis test**

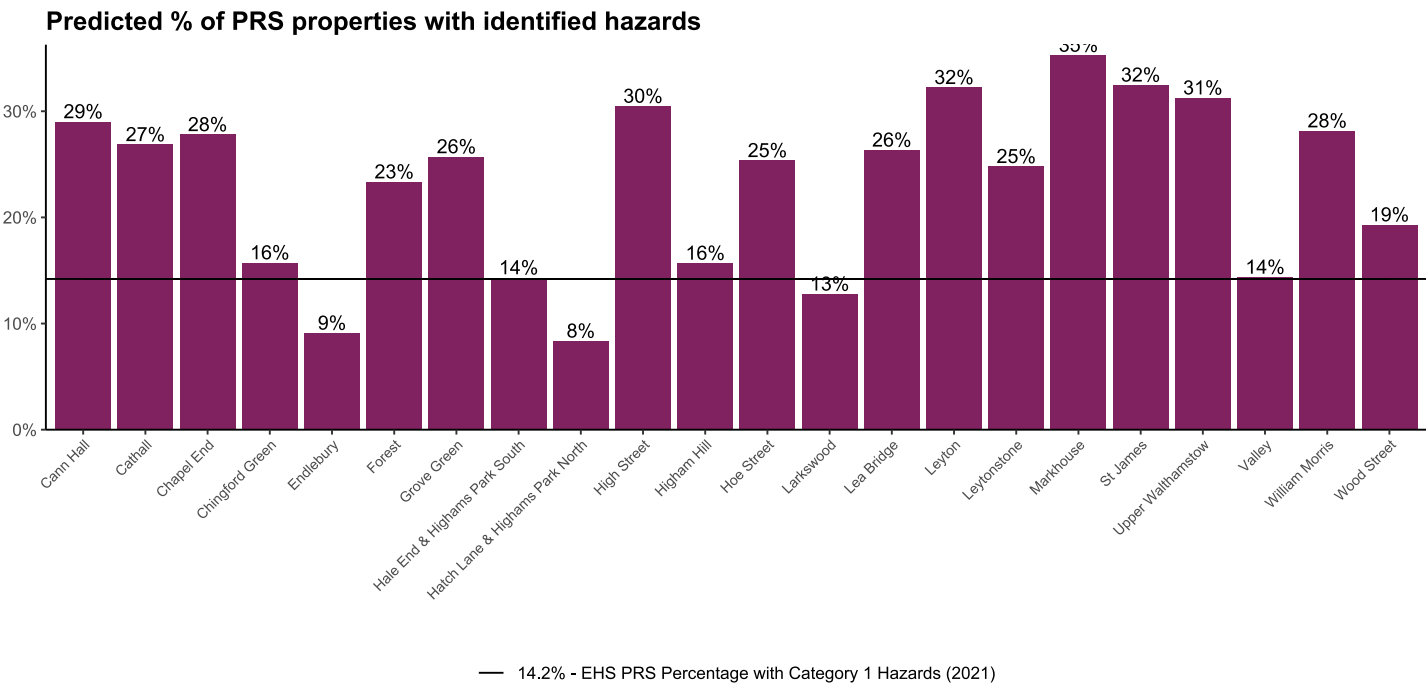
The performance of a logistic regression model can be assessed in numerous ways. Results for commonly used metrics are displayed below for each logistic regression model. Note that the precision or Positive Predictive Value for all models exceeds 90%.

Metrics	Description	Polarity	Category 1	Category 2	
				Excess Cold	Damp and Mould
Positive Predictive Value (PPV)	The ratio of correctly predicted positive observations to the total predicted positive observations	<i>Higher Better</i>	91.0%	99.3%	98.3%
Accuracy	The ratio of correct predictions to the total of all predictions	<i>Higher Better</i>	64.3%	72.9%	75.5%
F1 Test	Harmonic mean of PPV and true positive rate	<i>Higher Better</i>	75.1%	83.2%	84.5%
Mean Misclassification Error	Average rate of misclassification	<i>Lower Better</i>	35.7%	27.1%	24.5%
Area Under ROC Curve	Quantifies the model's ability to distinguish between classes.	<i>Higher Better</i>	69.3%	82.7%	80.9%

To arrive at predictions for the presence of hazards across the whole of the PRS three sources were relied upon. Where properties had been inspected by the property licensing team and a Category 1 hazard or Category 2 damp and mould or excess cold hazard recorded, the results of the inspection were used. For properties that had not inspected but were otherwise believed to be privately rented, the results were modelled using the logistic regression models explained above. Finally, where address-level data indicates that a property has no mains gas and was constructed prior to 1930 or does not have double-glazing nor loft insulation, this was considered sufficient grounds to believe that the property would contain an excess cold hazard under the HHSRS.

We believe this hybrid approach, between modelled predictions, assessments based on property characteristics and records of past hazards, gives a balanced estimate of the number of hazards in the PRS based on the data and intelligence accessible to the council.

The number of PRS properties predicted to contain each hazard are broken down by ward and also shown as a proportion of the PRS. In addition, a figure is provided for *any hazard* which indicates the number of properties containing one or more of any of the identified hazards.



Ward Name	Census 2021 PRS	Modelled Predictions (of which hazards identified during inspection)						Based on Property Characteristics				All Sources	
		Category 1 Hazard	%	Category 2 Damp Hazard	%	Category 2 Excess Cold Hazard	%	Category 1 Excess Cold Hazard	%	Category 2 Excess Cold Hazard	%	Any Hazard	%
Cann Hall	1634	350 (52)	21.40%	191 (47)	11.70%	206 (44)	12.61%	66	4.00%	44	2.70%	474	29.00%
Cathall	1445	262 (71)	18.10%	150 (48)	10.40%	150 (45)	10.38%	73	5.10%	33	2.30%	388	26.90%
Chapel End	1173	279 (36)	23.80%	61 (22)	5.20%	73 (22)	6.22%	19	1.60%	31	2.60%	326	27.80%
Chingford Green	808	70 (11)	8.70%	52 (7)	6.40%	59 (7)	7.30%	18	2.20%	31	3.80%	127	15.70%
Endlebury	473	18 (7)	3.80%	15 (5)	3.20%	15 (4)	3.17%	0	0.00%	17	3.60%	43	9.10%
Forest	1624	252 (56)	15.50%	126 (39)	7.80%	135 (37)	8.31%	72	4.40%	47	2.90%	379	23.30%
Grove Green	2291	455 (107)	19.90%	211 (74)	9.20%	222 (69)	9.69%	42	1.80%	84	3.70%	589	25.70%
Hale End & Highams Park South	671	65 (6)	9.70%	39 (4)	5.80%	39 (3)	5.81%	10	1.50%	21	3.10%	96	14.30%
Hatch Lane & Highams Park North	683	34 (2)	5.00%	19 (1)	2.80%	21 (2)	3.07%	5	0.70%	11	1.60%	57	8.30%
High Street	1605	278 (34)	17.30%	104 (24)	6.50%	111 (20)	6.92%	168	10.50%	58	3.60%	489	30.50%
Higham Hill	1180	137 (20)	11.60%	61 (14)	5.20%	64 (12)	5.42%	24	2.00%	24	2.00%	185	15.70%
Hoe Street	2028	297 (55)	14.60%	211 (51)	10.40%	216 (43)	10.65%	113	5.60%	90	4.40%	514	25.30%
Larkswood	916	71 (7)	7.80%	65 (4)	7.10%	68 (5)	7.42%	7	0.80%	15	1.60%	117	12.80%
Lea Bridge	2115	418 (51)	19.80%	185 (39)	8.75%	195 (37)	9.22%	81	3.80%	60	2.80%	557	26.30%
Leyton	1573	321 (70)	20.40%	180 (51)	11.40%	193 (50)	12.27%	149	9.50%	38	2.40%	507	32.20%
Leytonstone	1763	262 (65)	14.90%	156 (50)	8.80%	154 (44)	8.74%	98	5.60%	81	4.60%	437	24.80%
Markhouse	791	213 (40)	26.90%	103 (29)	13.00%	108 (30)	13.65%	23	2.90%	24	3.00%	279	35.30%
St James	1876	225 (36)	12.00%	94 (30)	5.00%	96 (24)	5.12%	322	17.20%	49	2.60%	609	32.50%
Upper Walthamstow	512	101 (13)	19.70%	83 (8)	16.20%	85 (8)	16.60%	44	8.60%	26	5.10%	160	31.30%
Valley	968	98 (4)	10.10%	69 (3)	7.10%	71 (2)	7.33%	15	1.50%	17	1.80%	139	14.40%
William Morris	1503	345 (40)	23.00%	146 (29)	9.70%	159 (27)	10.58%	21	1.40%	63	4.20%	423	28.10%
Wood Street	969	123 (14)	12.70%	82 (10)	8.50%	88 (12)	9.08%	30	3.10%	27	2.80%	187	19.30%