

Understanding housing conditions at a local level

Megan Waller

Building a better world together





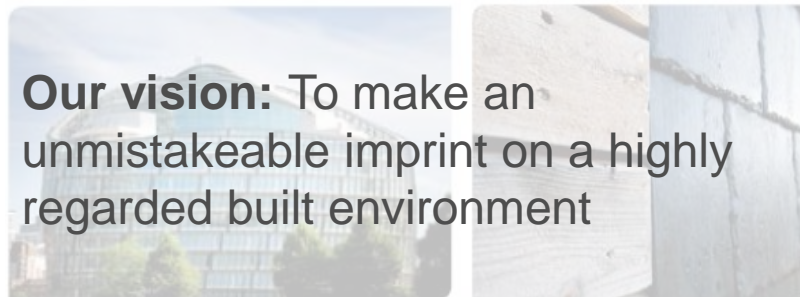
BRE making a
positive difference
in the built environment
since 1921



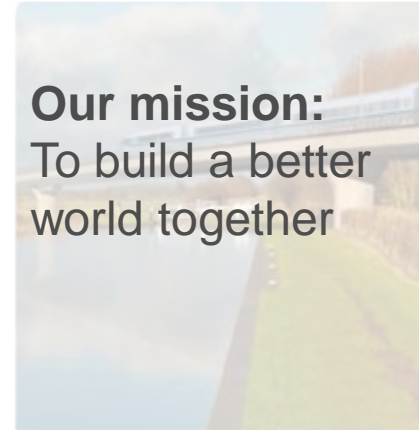
We use
cutting edge
research...



Our vision: To make an
unmistakeable imprint on a highly
regarded built environment



Our mission:
To build a better
world together



...to develop
products, services
standards and
qualifications



...to bring about
positive **change**
to the built
environment.



- An understanding of the national picture in relation to housing and health
- The use of stock modelling to ascertain housing stock conditions and mapping features to offer visual representations
- Putting it into practice – examples from Local Authorities
- Exploring the tools available including the Housing Stock Condition Database (HSCD)



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The National Picture

1

“ A local housing authority must keep the housing conditions in their area under review with a view to identifying any action that may need to be taken by them.

Housing Act 2004

**Main
Drivers**

Private
Rented
Sector
Enforcement
Policies

Discretionary
Licensing
Schemes

Housing
Strategies

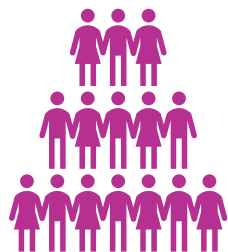
Energy
Efficiency &
Renewal
Schemes



24.2 million
homes



195,290 new
homes

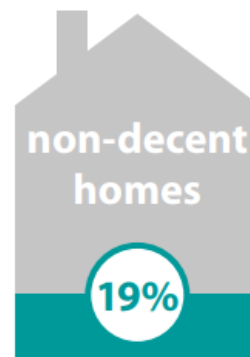


66.4 million
people



8,050
demolitions

4.5 million homes do not meet the
Decent Homes Standard.



Private rented

non-decent homes

25%

Social rented

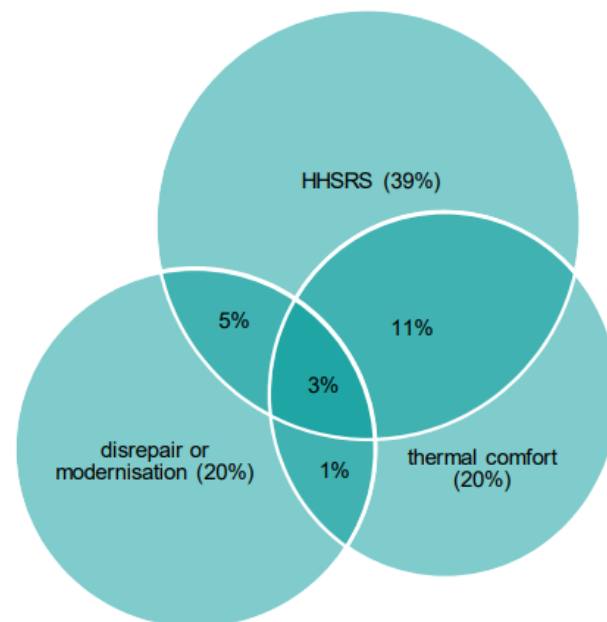
non-decent homes

13%

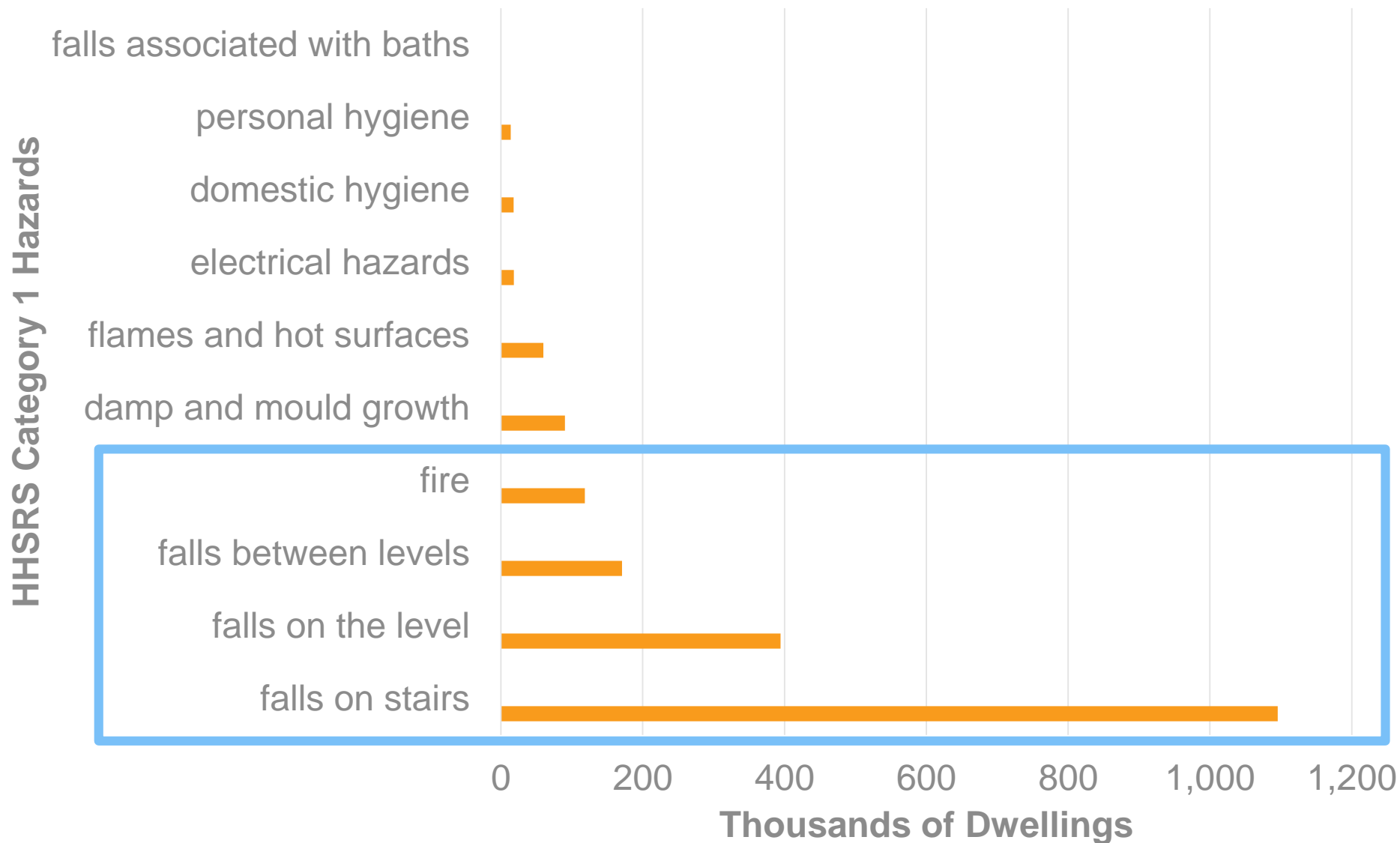
Owner occupied

non-decent homes

19%



HHSRS Category 1 Hazards



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The housing we have isn't going
anywhere – so we need to make
the best of it!

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Intervention at a local level

2

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What would you do if you could identify homes with falls hazards?



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What would you do if you could
identify poor housing?



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What would you do if you could
identify cold homes?



- BRE model
 - Land Registry Commercial Ownership databases
 - Tenancy Deposit Scheme data
 - Council Tax and Land Registry address matching project
-
- Recent success of 2 projects funded by MHCLG Rogue Landlord project earlier this year.
 - Evidenced the tenure of over 90% of the housing stock
 - Provides evidence when implementing strategies based on stock totals and tenure types i.e. a selective licensing scheme

Imagine the ability to understand the benefits of improvement measures?

BEFORE

solid, un-insulated stone walls, partial double glazing, small amount of roof insulation, off-peak storage radiators, electric immersion heater

- Cost of upgrade = £0
- SAP = 22
- Annual fuel cost = £965
- CO2 emissions = 8,972 kg pa
- HHSRS Band = A (Cat 1 hazard)
- Household in fuel poverty

AFTER

condensing gas boiler and radiators for space and water heating, top-up loft insulation, full double glazing

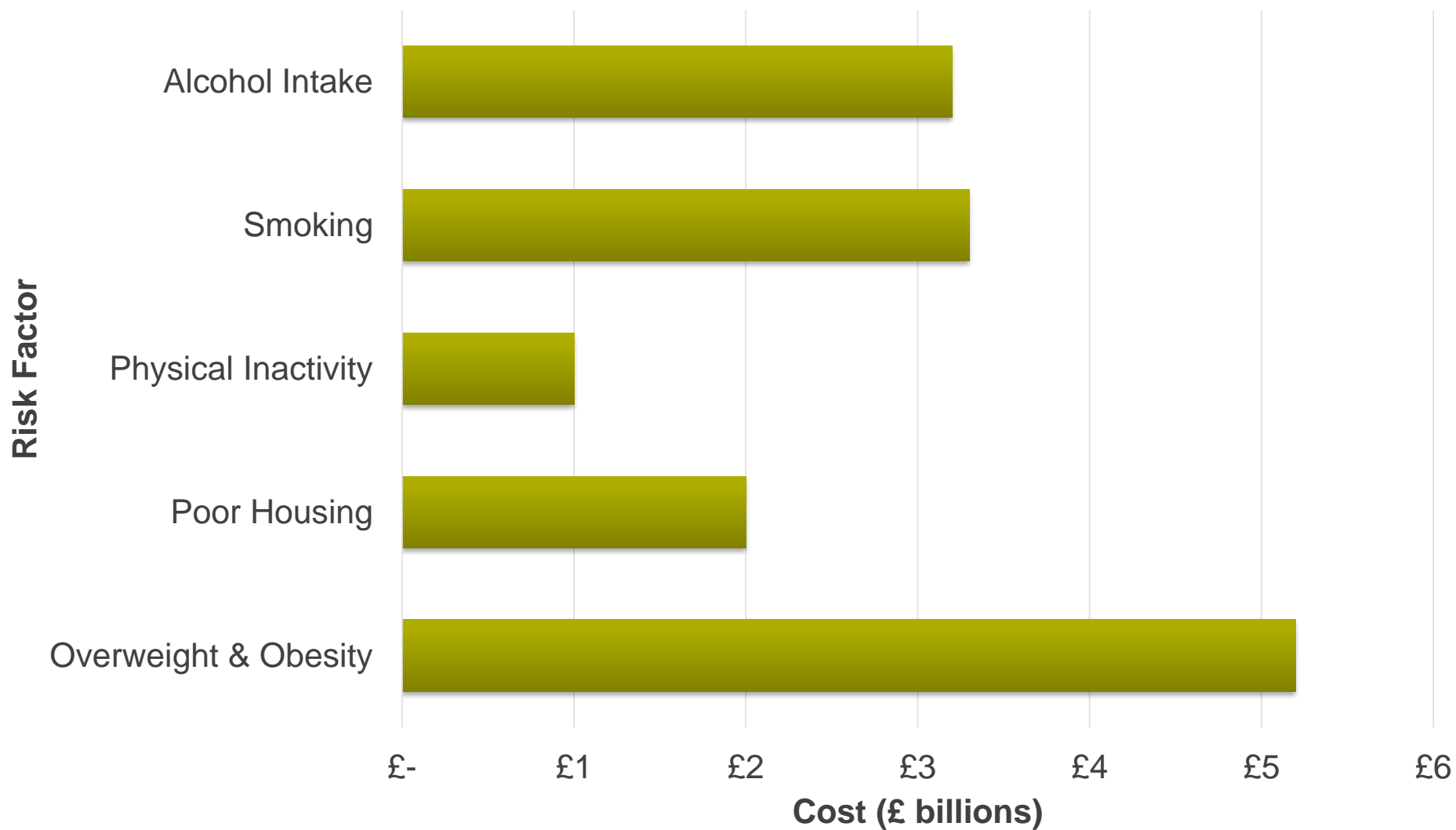
- Cost of upgrade = £3,528
- SAP = 59
- Annual fuel cost = £461
- CO2 emissions = 4,666 kg pa
- HHSRS Band F (Low hazard)
- Household not in fuel poverty

Scenario	Improvement Measure(s)	Average Improvement per property compared to baseline					
		Average improvement (SimpleSAP points)	Average improvement (%)				
			'SimpleSAP'	SimpleCO ₂ (tonnes/year)	Energy demand (kWh/year)	Energy cost (£/year)	Heat demand (kWh/year)
-	Baseline	58	4.92	21,330	1,207	11,119	750
1	LCM	+4	-10%	-11%	-9%	-14%	-14%
2	LCM + DG	+4	-11%	-11%	-10%	-15%	-15%
3	LCM + DG + SW	+8	-21%	-22%	-19%	-30%	-30%
4	LCM + Heating	+9	-21%	-22%	-21%	-15%	-28%
5	LCM + Heating + DG	+9	-21%	-23%	-21%	-16%	-29%
6	LCM + Heating + DG + SW	+12	-30%	-32%	-29%	-31%	-41%
7	LCM + Heating + DG + SW + SHW	+13	-32%	-33%	-30%	-31%	-41%
8	PV	+7	-11%	-5%	-11%	0%	0%

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When you make a home more sustainable – you make it more healthy!

Comparative cost burden to the NHS



- Total cost of poor housing (HHSRS Cat 1) = **£1.4bn**
- HHSRS Cat 2 housing = **+ £428m**
- All sub-standard housing = **+ £160m**

The full cost (in terms of NHS first year treatment costs) of sub-standard housing = £2.0bn



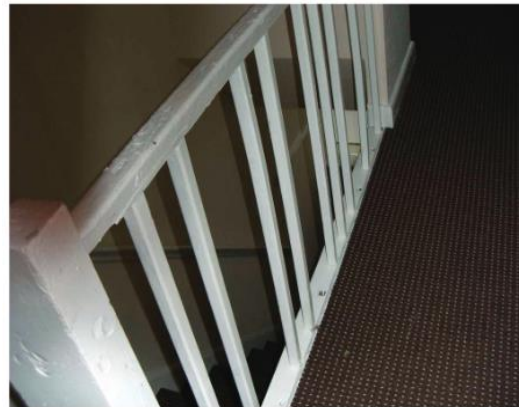
Renovation and refurbishments
to 32 dwellings

117 hazards found

3 most common hazards:

- Excess cold
- Fire
- Entry by intruders

A retrospective health impact
assessment of housing standards
interventions in Derby



Total cost of works: £65,709

Savings to NHS of £23,191
each year

Savings to society of up to
£58,000 each year

Payback period to NHS of
under 3 years

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Case Studies

3

NEED

- Required a cost-effective way to identify housing conditions across the private sector stock
- Information needed to support new policy to tackle private sector housing in poor condition
- Priority to protect the most vulnerable & stimulate the economy

SOLUTION

- Undertake BRE housing stock condition modelling to identify properties at risk of failing decency
- Predict presence of HHSRS hazards, disrepair, fuel poverty, low income households & energy efficiency indicators
- Identify the potential costs for rectifying the poor housing conditions

2,829
improvement measures
implemented



£3 million
saving on health and
social care over 5 years



Individual home
improvement grants of
£35k+
per dwelling

"It is so refreshing to get someone who is prepared to help us achieve better outcomes for people instead of making us jump through hoops and putting so many barriers in place"

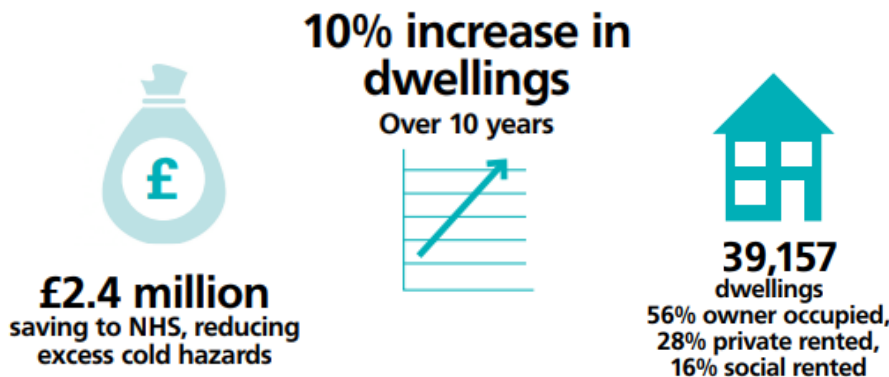
Michelle Horrocks,
Growth & Regeneration Manager, Bolton Council

NEED

- To maintain an excellent housing offer – supporting sustainable growth and to maintain high quality of life within Watford.
- To develop a policy to provide added value and a greater impact by making use of external and other sources of funding.

SOLUTION

- Undertake BRE housing stock condition modelling to identify properties at risk of failing decency and a Health Impact Assessment
- Developed a policy to improve and maintain private sector housing standards to promote health, wellbeing and sustainability – targeting resources at those most in need.



The Council now has more information available on housing conditions in the borough and can specifically target projects based on housing characteristics and household need

What else have our services been used for?



**Housing
Strategies**



**Discretionary
Licensing Schemes**



**Health Impact
Assessments**



**Private Sector
Housing Strategy**



**Joint Strategic Needs
Assessments**



**Energy Efficiency
Schemes**

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Tools

4

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“ The best investment
is in the tools of one's
own trade.

Benjamin Franklin

HHCC

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- Online retrospective health impact assessment tool
- Calculate the cost of hazards in the home and the savings made where mitigated or reduced
- Provides an evidence base to support outcomes of local projects e.g. energy efficiency schemes
- Over £200 million savings to society now calculated
- Free demo available:
<https://www.housinghealthcosts.org/>

XCC

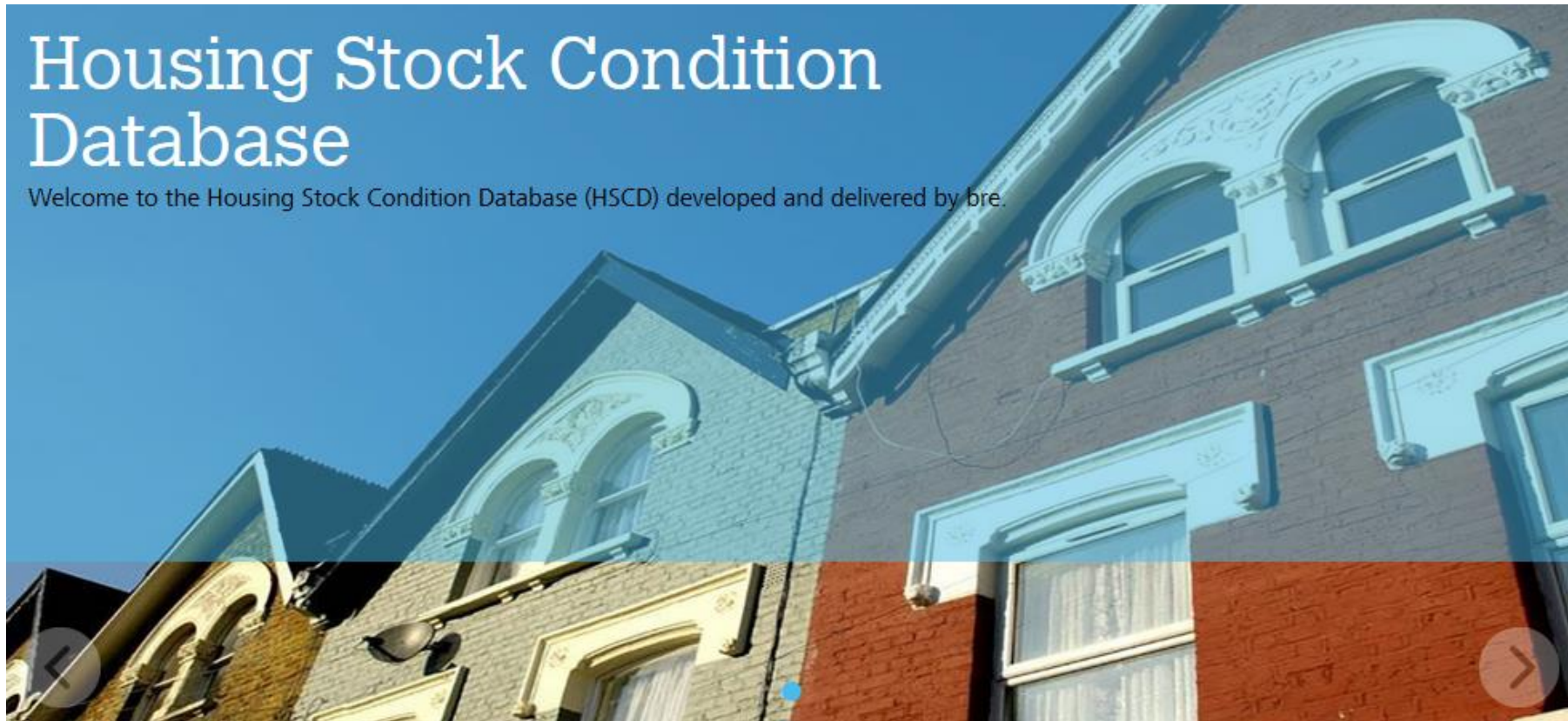
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- Supports the assessment of Excess Cold hazards
- Provides estimated running costs and information on the adequacy of the heating system
- Informs decisions regarding remedial actions for enforcement
- Heat loss calculator supports specification of radiator/storage heater size
- Free demo available:
<https://www.excesscold.com/>

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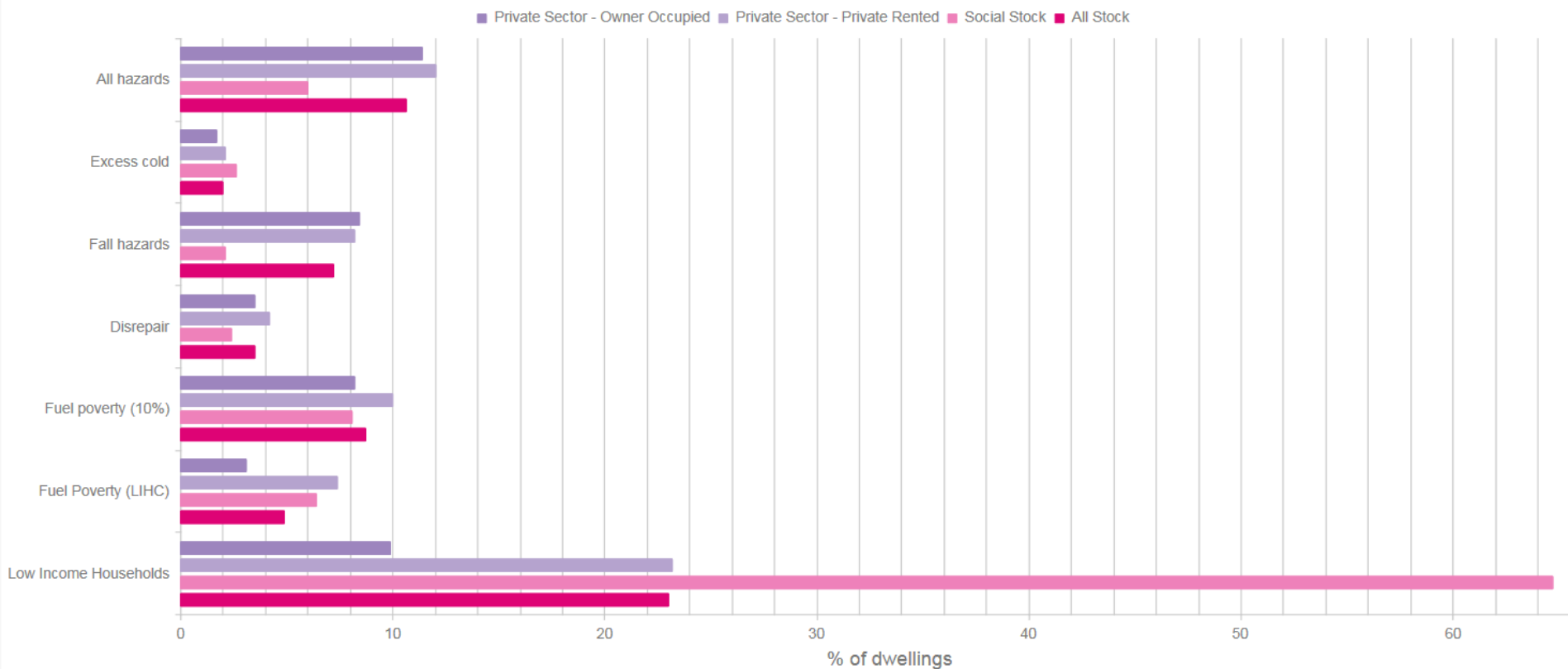
Housing Stock Condition Database

Welcome to the Housing Stock Condition Database (HSCD) developed and delivered by bre.

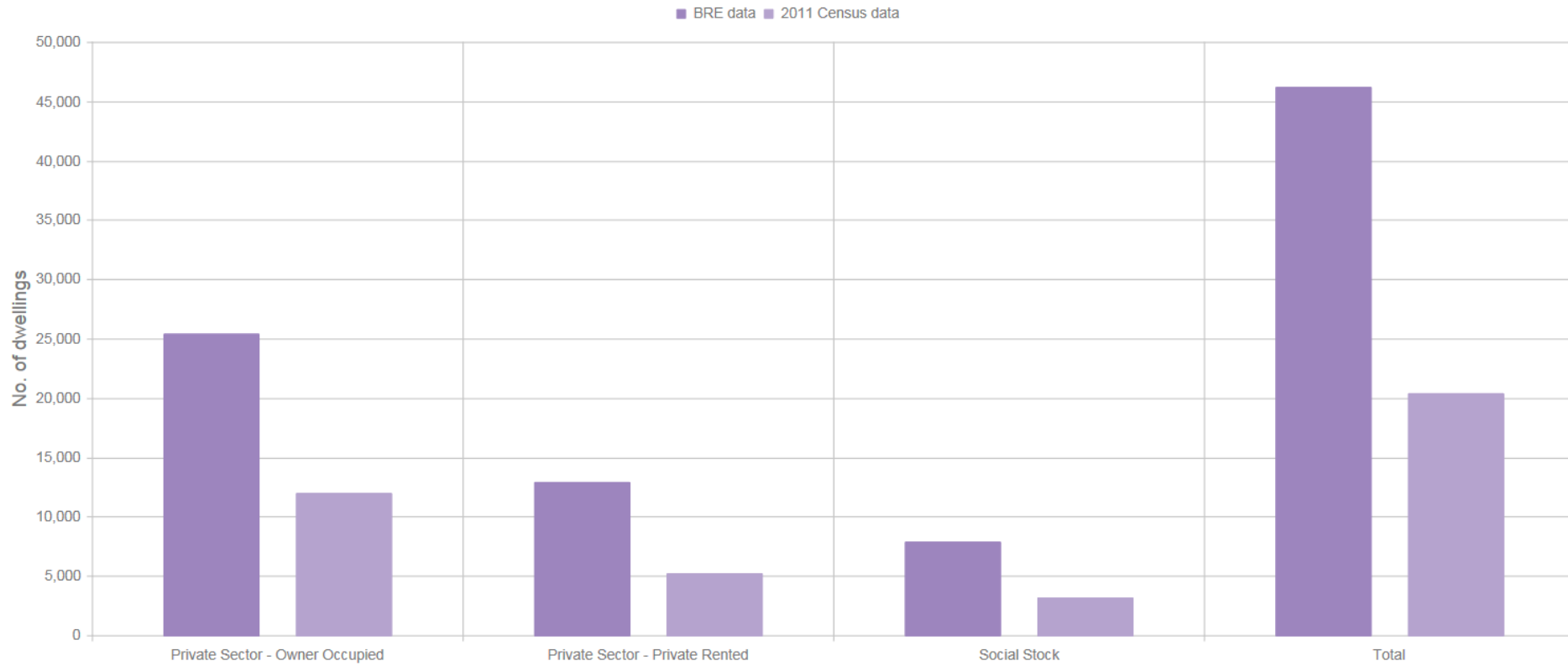


[You are here](#) [Home](#)[Home](#)

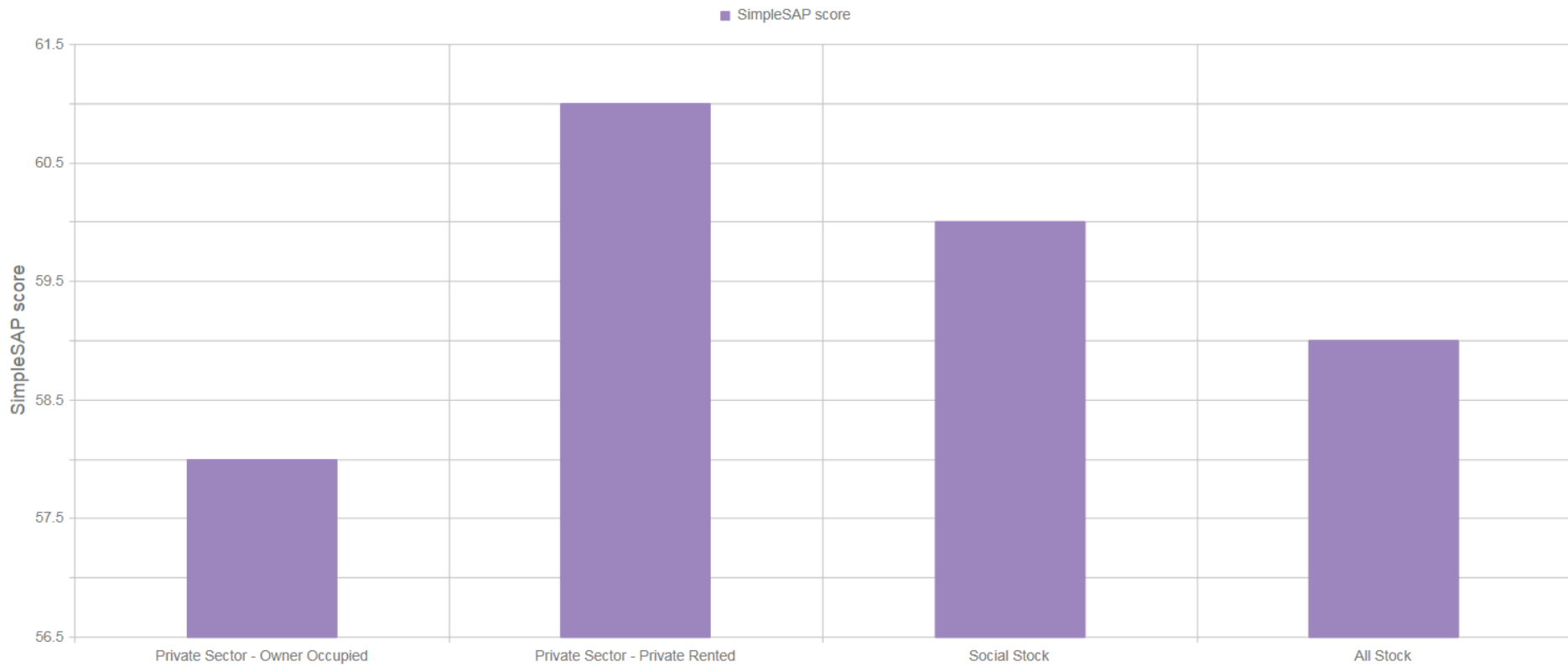
Housing Standards variables for Local Authority



Dwelling Numbers for Local Authority



SimpleSAP Score for Local Authority



You are here [Home](#) > [Filter Dwelling Data](#)

Filter Dwelling Data

Data Source *

☒ Organisation's Data ☐ Latest BRE Data

Local Authority *

Local Authority

Address

Address

Postcode

Ward

Filter By Criteria

Explore your data by selecting one or more tenures and then one or more indicators in this section.

Select stock to view

☐ Owner Occupied ☒ Private Rented ☐ Social

Property Search

Property Type

Property Age

Housing Standards variables

HHSRS Category 1 Hazards ☒ HHSRS ☐ HHSRS Excess Cold ☐ HHSRS Falls

Disrepair ☐

Fuel Poor Households ☐ Fuel Poverty 10% ☐ Fuel Poverty LIHC

Low Income Households ☐

HHSRS Category 2 Hazards ☐ HHSRS

Energy Efficiency Variables

Wall Type ☐ Solid Walls ☐ Uninsulated Cavity Walls ☐ Insulated Cavity Walls

Loft insulation between and mm

SimpleSAP Rating

Filter to keep dwellings with
SimpleSAP less than

Houses of Multiple Occupancy

Houses in Multiple
Occupation ☒

Licensable Houses in Multiple
Occupation ☐

☐ Tick if you want to save this query. Save with the name

Filter Results On Organisation Dwelling Data

Results 1 to 18 of 18

[Download data](#)

UPRN	Improvement scenarios	Address	Postcode	COA Code	LSOA Code	LSOA Name	MSOA Code	MSOA Name	Ward Code	Ward Name	LA Code	LA Name	GOR	Tenure	Title Number	Dwelling type	Dwelling age	Category 1 Hazard Indicator
11111111111231	view	88 Test Street1	PD79	COATest11	LSOATest4	LSOAName4	MSOATest6	MSOAName6	WardTest1	WardName1	TestCase	Fake LA	GOR	Private Rented		Mid Terrace	1900 to 1929	✓
11111111111400	view	43 Test Street10	PD927	COATest124	LSOATest27	LSOAName27	MSOATest7	MSOAName7	WardTest6	WardName6	TestCase	Fake LA	GOR	Private Rented		Semi Detached	1950 to 1966	✓
11111111111515	view	26 Test Street5	PD466	COATest135	LSOATest31	LSOAName31	MSOATest12	MSOAName12	WardTest7	WardName7	TestCase	Fake LA	GOR	Private Rented		Mid Terrace	1950 to 1966	✓
11111111111620	view	80 Test Street10	PD453	COATest144	LSOATest28	LSOAName28	MSOATest12	MSOAName12	WardTest7	WardName7	TestCase	Fake LA	GOR	Private Rented		Semi Detached	1930 to 1949	✓
11111111111649	view	55 Test Street9	PD448	COATest147	LSOATest30	LSOAName30	MSOATest12	MSOAName12	WardTest7	WardName7	TestCase	Fake LA	GOR	Private Rented		End Of Terrace	pre 1900	✓
11111111111783	view	42 Test Street3	PD1685	COATest16	LSOATest4	LSOAName4	MSOATest6	MSOAName6	WardTest1	WardName1	TestCase	Fake LA	GOR	Private Rented		Mid Terrace	1900 to 1929	✓
11111111111933	view	49 Test Street3	PD716	COATest173	LSOATest36	LSOAName36	MSOATest2	MSOAName2	WardTest9	WardName9	TestCase	Fake LA	GOR	Private Rented		Purpose Built	1930 to 1949	✓
11111111112332	view	96 Test Street2	PD154	COATest209	LSOATest47	LSOAName47	MSOATest10	MSOAName10	WardTest11	WardName11	TestCase	Fake LA	GOR	Private Rented		Mid Terrace	1950 to 1966	✓
11111111112503	view	61 Test Street3	PD1228	COATest224	LSOATest49	LSOAName49	MSOATest10	MSOAName10	WardTest11	WardName11	TestCase	Fake LA	GOR	Private Rented		End Of Terrace	pre 1900	✓

<div> <div>bre</div> <div> Log Out Welcome Username </div> </div>																					
Disrepair Indicator	Fuel Poverty 10% Indicator	Fuel Poverty LIHC Indicator	Low Income Indicator	SimpleSAP	SimpleSAP Band	SimpleSAP Band F&G Indicator	SimpleCO2 (tonnes per annum)	Energy demand (kWh per annum)	Heat demand (kWh per annum)	Electricity demand (kWh per annum)	Energy cost (£ per annum)	Heat cost (£ per annum)	Electricity cost (£ per annum)	Loft insulation	Solid Wall	Insulated Cavity Wall	Uninsulated Cavity	HMO	Licensable HMO	LA Data flag	EPC Data flag
			✔	45	E		3.50695	13,402	6,601	2,020	783	396	266	150 mm	✔			✔			
				58	D		3.68946	16,209	6,406	621	744	348	82	100 mm		✔		✔			
				62	D		3.25671	14,274	7,334	572	672	323	76	250 mm or +			✔	✔			
				59	D		3.53127	15,568	8,407	556	716	370	73	250 mm or +			✔	✔			
				42	E		9.55586	42,904	30,896	952	1,706	1,361	126	50 mm	✔			✔			
	✔		✔	46	E		3.39069	15,054	4,166	458	688	227	60	150 mm	✔			✔			
	✔			29	F	✔	4.00627	7,719	2,843	7,719	920	198	896	100 mm			✔	✔			
				57	D		4.4552	19,674	13,814	678	871	572	89	100 mm	✔			✔			
				59	D		2.89167	12,700	8,107	490	610	357	65	250 mm or +	✔			✔			

You are here [Home](#) > [Filter EPC data](#)

EPC data

Select Energy rating to filter on:

Local Authority

Local Authority

Select All ☐

A ☐

B ☐

C ☐

D ☐

E ☐

F ☐

G ☐

Reset 

Search 

You are here [Home](#) > [Filter Improvement Scenarios](#)

Improvement Scenarios data

Enter UPRN number of Property or select Improvement Scenario:

Local Authority

Local Authority

UPRN:

Improvement Scenario:

--select--

--select--

0. Baseline

1. LCM

2. LCM + SW

3. LCM + Heating

4. LCM + Heating + DG

5. LCM + heating + DG + SW

6. LCM + Heating + DG + SW + SHW

7. PV

8. PV + SW

You are here [Home](#) > [Commercial Ownership](#)

Commercial Ownership data

Organisation Summary

Click the summary button for a ranked list of companies that own properties in your organisation.

Search options

Enter any of the fields below to search

Company

Proprietor Address

Property Address

Postcode

Title Number

☐ National Data ☒ Organisation's Data

Summary

Map filters

Local Authority

Local Authority

Geographical Level

COA

Transparency



Tenure

Private rented

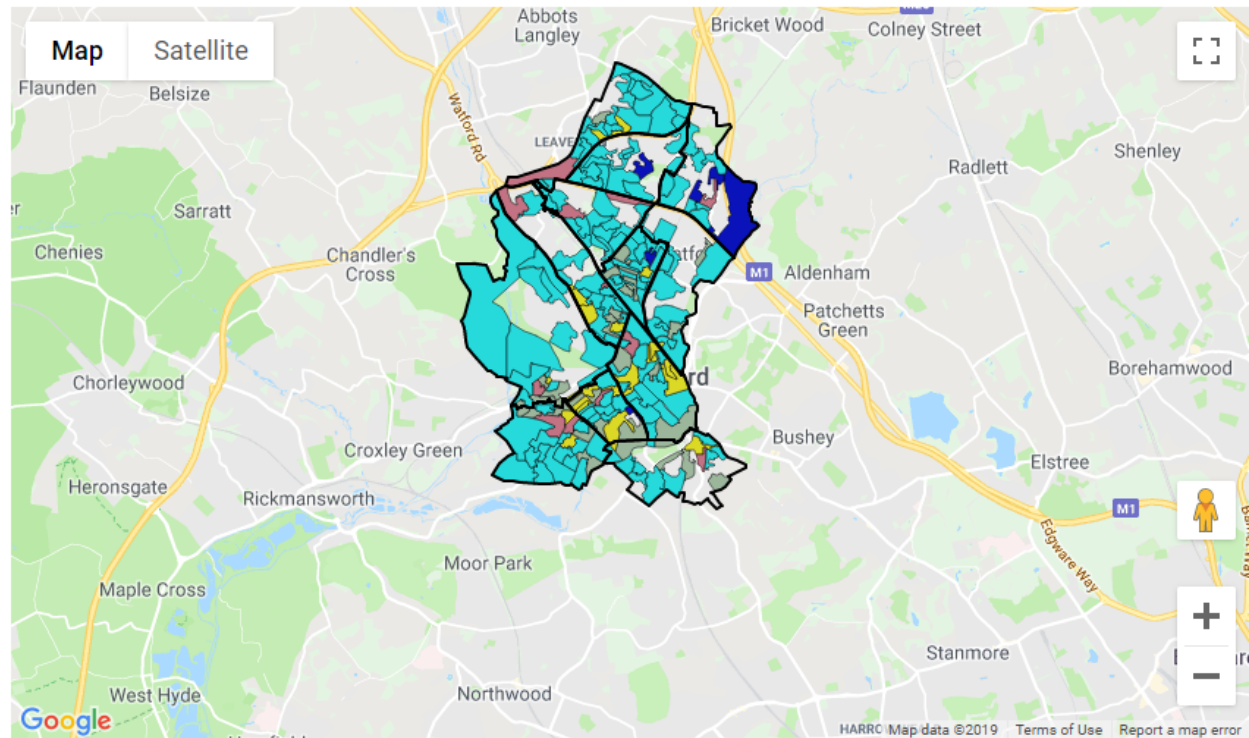
Data layer

HHSRS Cat. 1 Hazards

Apply Filters



Map



DEMONSTRATION PURPOSES ONLY

The only real (as opposed to artificial) data in this demonstration version of HSCD are the administrative area boundary polygons (wards, super output and census output areas) in the HSCD maps. The boundary polygons in the HSCD maps are provided under Open Government Licence by [ONS](#) and the Google Map data provided under licence by [Google](#). The data populating the variables in this demonstration version of HSCD is artificially compiled and does not relate to any real dwelling or household and is for demonstration purposes only.

Map filters

Local Authority

Local Authority

Geographical Level

COA ▼

Transparency



Tenure

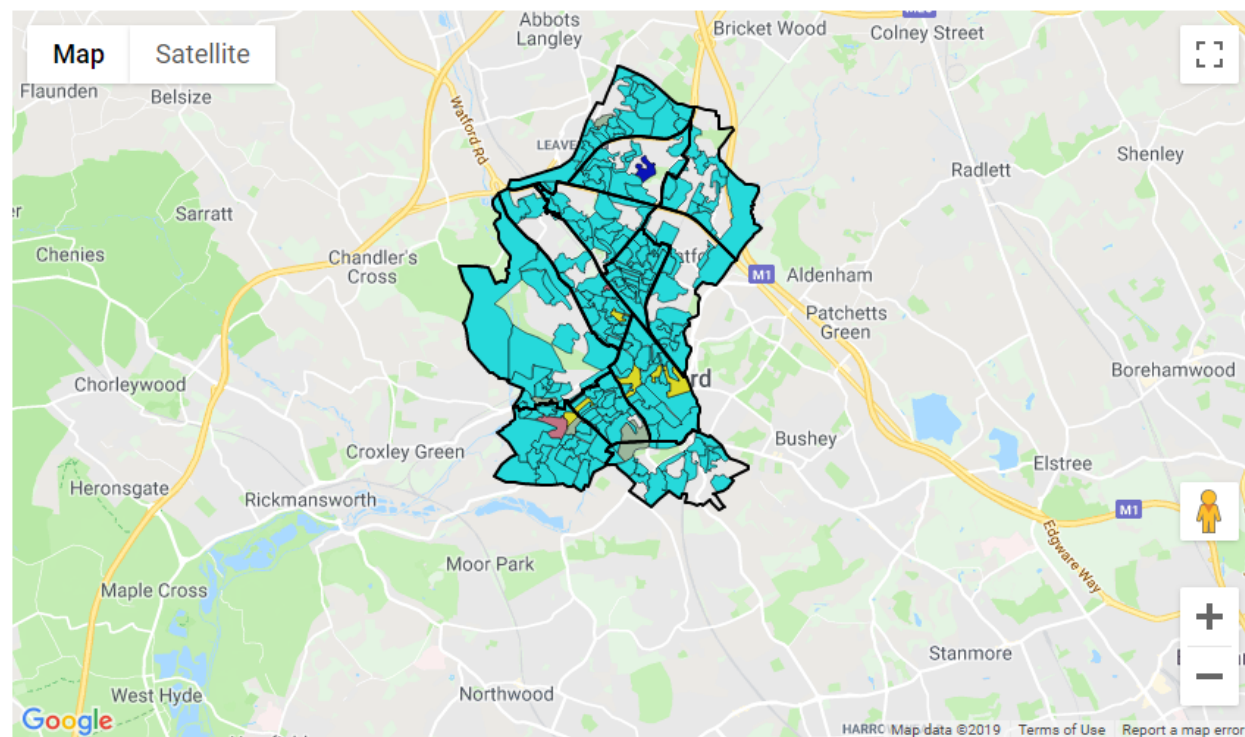
Private rented ▼

Data layer

HHSRS Excess Cold

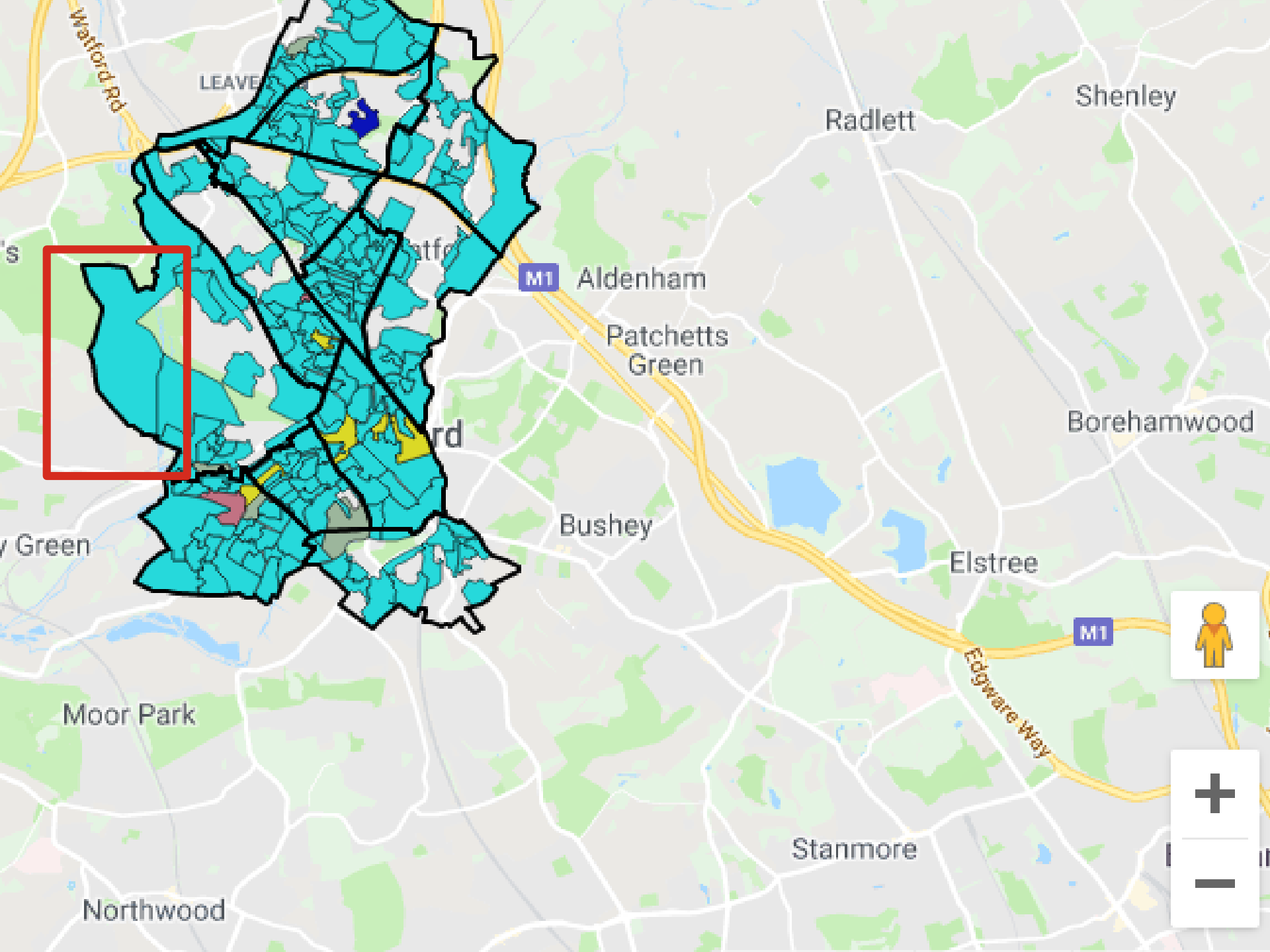
Apply Filters 

Map



▼ DEMONSTRATION PURPOSES ONLY

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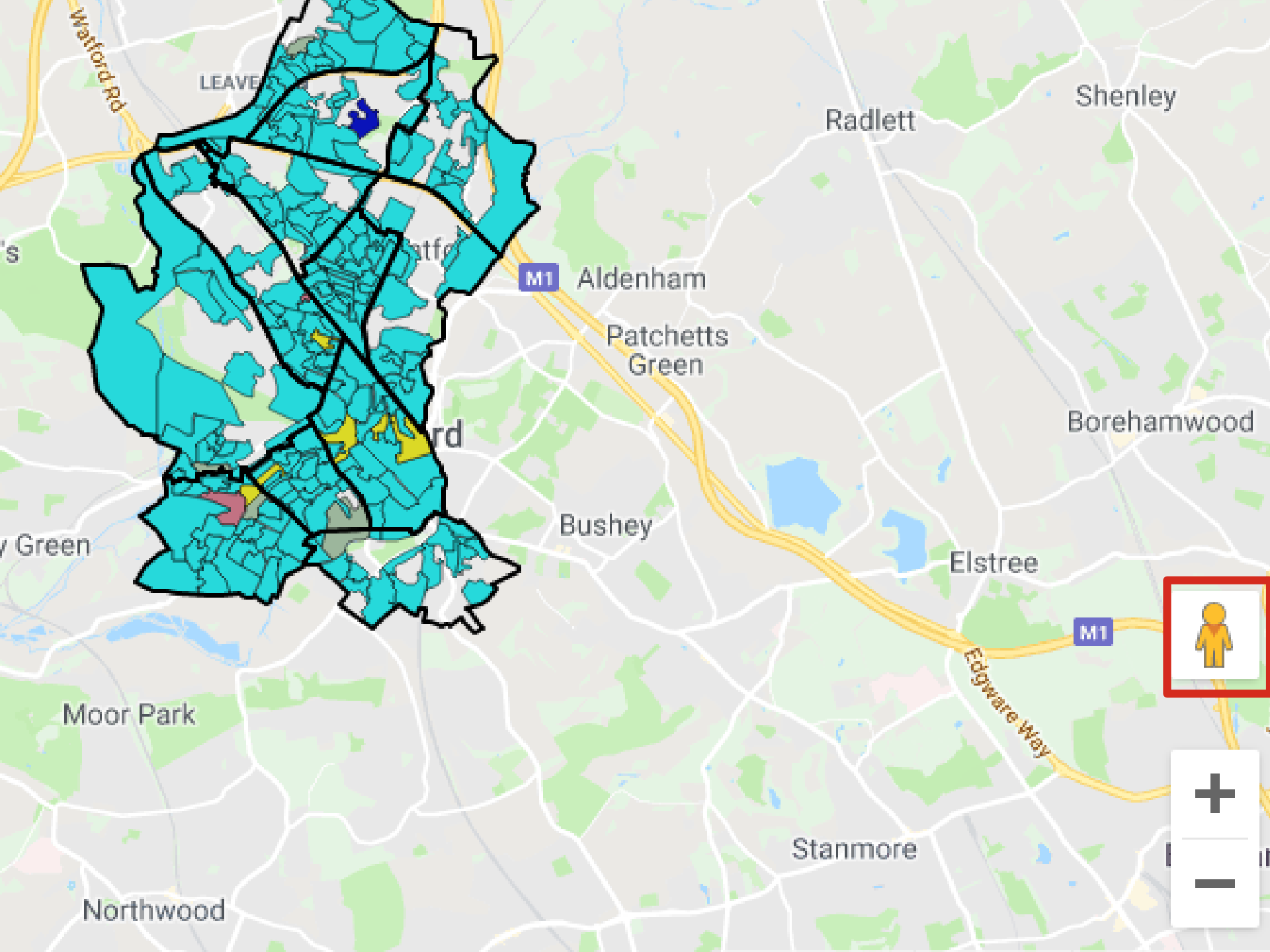


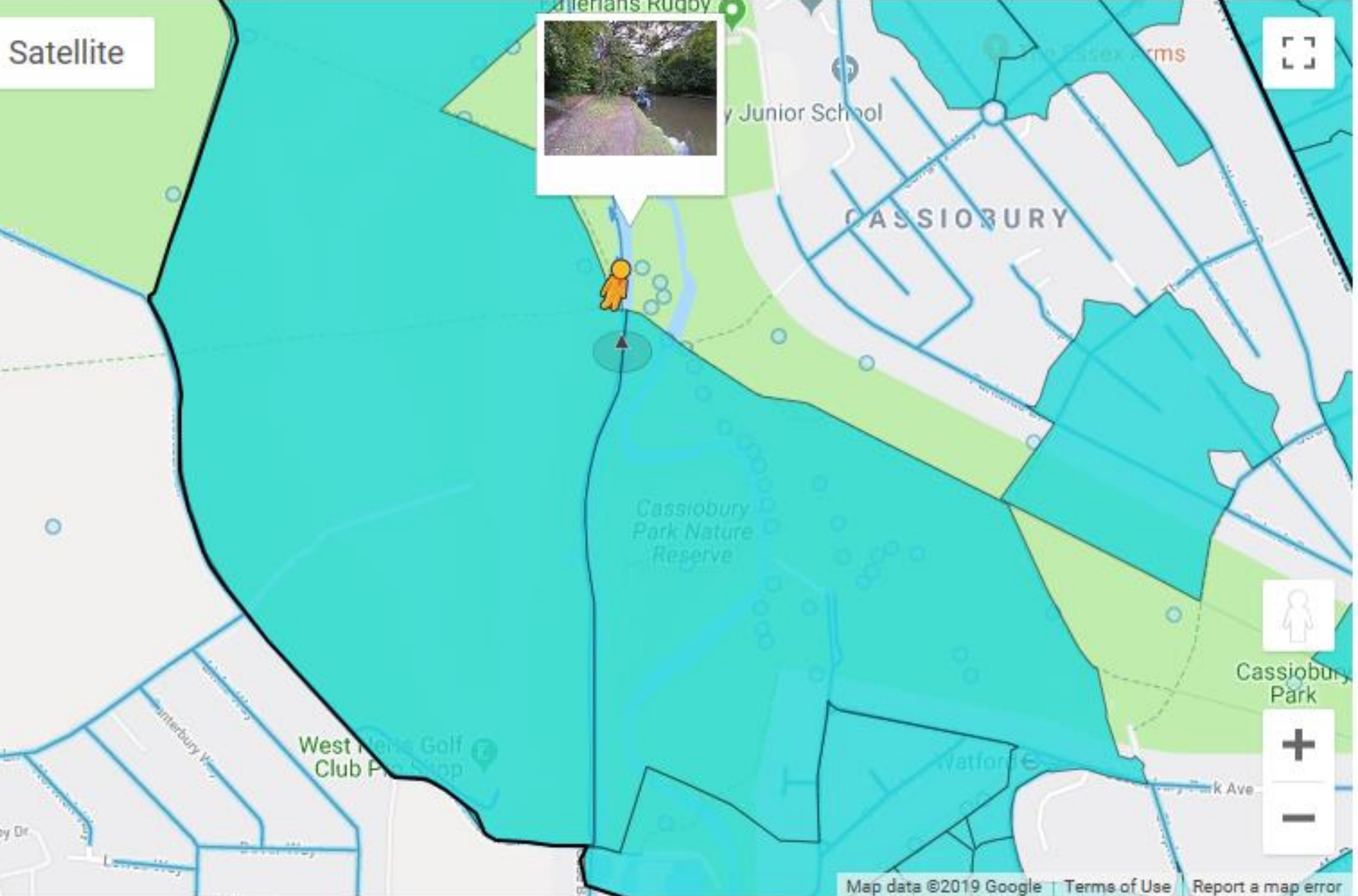


COA code : [COATest156](#)

Ward name : [WardName8](#)

Value: [value](#)





DEMONSTRATION PURPOSES ONLY

When: Tuesday 22nd October 2019

Time: 10am

Length: 30 minutes

HSCD

delivered by bre

Demonstration of the Commercial Ownership feature which has valuable tools for Local Authority officers including:

- Ability to inform tenure
- Identify corporately owned properties
- Identify potential rogue landlord activity
- Review of recent projects using this data
- Future development of this feature

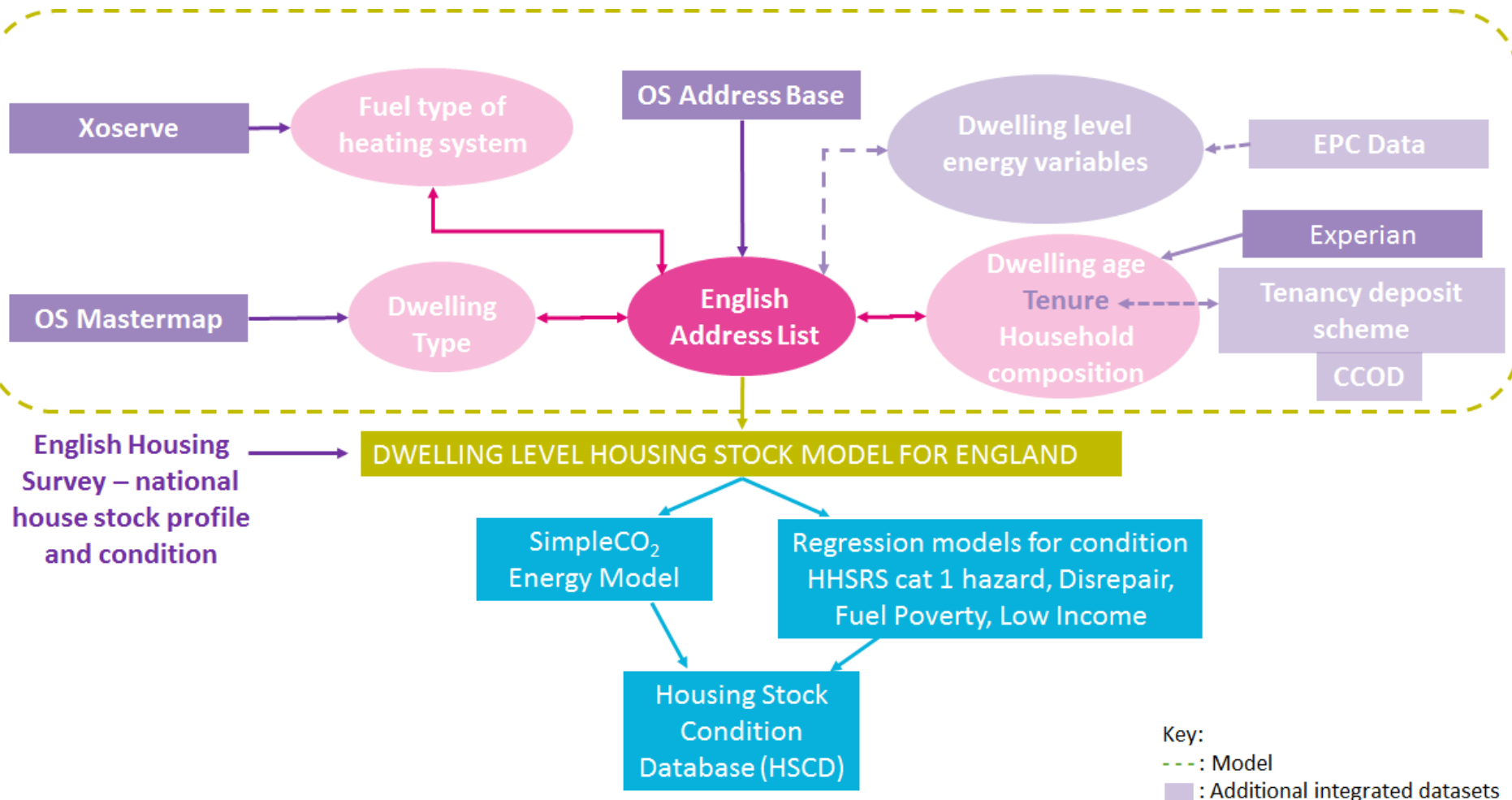
Register here:

<https://register.gotowebinar.com/register/5881801570411309068>

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Methodology

5



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Thank you

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