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Housing Research Note 11

The Cost of Poor Housing in London

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1. Introduction

1.1. This Housing Research Note estimates the annual cost to the NHS of homes in poor condition in London by tenure. The cost of repairing poor condition is also estimated, along with the number of years it would take for the accumulated benefits of intervention to pay back the costs.

2. Executive Summary

2.1. Many of London's homes are in poor condition. This poor housing affects the occupants, the NHS and society more broadly.

2.2. This research uses the Building Research Institute's cost of poor housing methodology and data from the English Housing Survey (EHS) to estimate the scale of poor housing in London, the costs associated with it, and the costs of repairing it.

2.3. The prevalence of poor condition in London housing varies by tenure, with private rented and social rented homes more likely to be in poor condition than owner-occupied homes.

2.4. Across all tenures, poor condition associated with fall hazards comprise 44 per cent of all causes of poor condition. Cold homes make up 19 per cent of the total count of dwellings with hazards.

2.5. Some causes of poor housing conditions, such as excessively cold homes and overcrowding, are significantly more expensive to repair than others.

2.6. The cost of various causes of poor housing conditions to the NHS also varies considerably. One instance of a home that has a hazard caused by hot surfaces costs the NHS £742 per year, whereas an instance of a hazard caused by a risk of falls associated with baths costs the NHS just £36 per year.

2.7. The research estimates that it would cost £1,203.8m to repair London's poor housing across all tenures. It estimates that the per annum cost to the NHS of poor housing in London is £100.1m.

2.8. The research also estimates the time it would take for savings to repay the costs of repair. Savings made by the NHS would pay back the cost of repair in 12.0 years. This makes a strong case for "invest-to-save" interventions, which look to save expenditure in the long run by investing in improvements which deliver annual savings. Tenants also would benefit immediately from living in homes in better condition.

Table 1: Summary of findings

Cost of repairing all category 1 hazards in London	**Per annum savings to the NHS**	**Years until cost to repair paid back**
£1,203.8m	£100.1m	12.0

3. Context

3.1. In 2018, London had 3.47m homes. According to Council Tax data, 21% of homes in London were built before 1900, the highest proportion of any region and compared to 15% across England as a whole.

3.2. The condition of homes has improved over time, but many have problems that continuously affect the health of their occupants or pose a health risk to them. Poor conditions exist in every housing tenure in London but are unequally distributed. In the private rented sector (PRS), 18 per cent of homes fail the Decent Homes Standard, compared to 15 per cent of social rented homes and 13 per cent of owner-occupied homes.

3.3. Some of the issues, such as overcrowding, ventilation and ergonomics were highlighted or exacerbated by the pandemic, which generally required Londoners to spend more time in their homes than previously. At the time of the Census in March 2021, many Inner London Boroughs had over 50 per cent of respondents working from home and the UK average time spent working from home was around four time higher than in 2014/15 (ONS, 2022).

3.4. A coroner's historic ruling in November 2022 that the tragic death of two-year-old Awaab Ishak was caused by mould in the home has placed renewed focus on the impact of poor conditions. In November 2022, the Secretary of State for Levelling Up, Housing and Communities instructed social housing providers to audit their stock for damp and mould. The Secretary of State has also asked for local authorities to share information on how they plan to drive up standards in the private rented sector.

3.5. The Social Housing Regulation Act (2023) was passed in July 2023, and will introduce a range of reform designed to improve the condition of social housing. The Act creates new Consumer Standards for social sousing tenants and more active enforcement of the Decent Homes Standard, with the Regulator's Inspectors receiving more powers to enter properties and issues unlimited fines to social landlords. The government has also announced plans to update the Decent Homes Standard and apply it to the PRS.

3.6. This research includes poor fire safety as a part of poor housing conditions. The methodology used does not, however, include issues pertaining to cladding in its estimates of costs of repair or in its estimates of the presence of fire safety hazards in London's housing. This is because, at the time the EHS data used was collected, the Health and Safety Rating System (HHSRS) Operating Guidance did not specifically cover assessment of cladding and predominantly focused on assessing the risk of hazards within individual dwellings, rather than assessing the common parts of the building, including the exterior of buildings. This is explained in detail in the HHSRS addendum published in November 2018 to amend practice after the Grenfell Tower tragedy (DLUHC, 2018). London has a high proportion of high-rise residential buildings compared to the English average, and the cost of removing hazardous cladding is very large, though this is not fully reflected in the methodology used in this research. The findings are therefore likely to underestimate occurrences of fire safety hazards, fire safety repair costs, and savings from repairing fire safety hazards.

4. Data and methodology

4.1. This research draws on work from the Building Research Establishment (BRE). In *The Full Cost of Poor Housing* (BRE, 2016) and *The Cost of Poor Housing in England* (BRE, 2021), BRE developed a methodology to estimate the cost of poor housing to the NHS for Category 1 HHSRS hazards in England. In *The Cost of Poor Housing in England by Tenure* (BRE, 2023), this analysis was broken down by tenure.

4.2. This research applies BRE's methodology to London's housing by using data from two years of English Housing Survey (EHS) data to estimate the presence of Category 1 hazards in London. Two years of EHS data (2017 and 2019) were used to ensure a larger sample. These were the most recent years available at the time of analysis due to the effect of the pandemic on the collection of EHS data.

4.3. The cost to the NHS is the annual cost of treatment faced by the NHS. The BRE uses the Transport Research Laboratory formula to estimate the full societal cost of hazards per annum.

4.4. The cost per hazard by tenure used in this paper was derived by dividing the 2023 BRE paper's cost totals by its hazard counts. The cost per hazard was then multiplied by the count of hazards in London according to a count of hazards in each tenure from the EHS data.

4.5. As it uses costs that were calculated at the national level, this method does not account for costs generally being higher in London – for example due to higher labour costs – and so the NHS costs are likely to be underestimated. The average cost of repairing hazards by tenure in England was also estimated by BRE, and those estimates were used here without correcting for higher prices in London. This means repair costs are also likely to be underestimated.

4.6. The full working for these findings can be found on the London Datastore here.

Table 2. Dwelling tenure distribution in London and England in 2018. Calculated from 2017 and 2019 English Housing Survey datasets.

Tenure	London	Rest of England	England
Owner-occupied	48.2%	66.0%	63.5%
Private rented	29.0%	18.0%	19.6%
Social rented	22.7%	15.9%	16.9%

Totals do not sum to 100 per cent due to rounding.

5. Findings

5.1. This section explains the findings in detail, including the key concepts of hazards, costs to the NHS, the cost of repair, and the time taken for spending to be paid back.

Hazards in London homes

5.2. This research uses the prevalence of HHSRS Category 1 hazards as a way of quantifying housing in poor condition in London. The HHSRS is a risk-based evaluation tool to help local authorities identify and protect against potential risks and hazards to health and safety from any deficiencies identified in dwellings. It was introduced under the Housing Act 2004 and applies to residential properties in England and Wales.

5.3. The HHSRS assesses 29 categories of hazard. Each hazard has a weighting which will help determine whether the property is rated as having Category 1 (serious) or Category 2 (other) problems. A detailed description of each of the hazards can be found in the Housing Health and Safety Rating System – Guidance for Landlords and Property Related Professionals document published by the then Department for Communities and Local Government in 2006.

5.4. For a Category 1 hazard to be found, the hazard must be likely to cause significant harm. In other words, potential hazards that were assessed not to be likely to cause significant harm to occupiers or guests within the next 12 months have already been filtered out of this research.

5.5. The HHSRS measure of hazards associated with overcrowding is different from the 'bedroom standard' measure of overcrowding used elsewhere in the EHS. The bedroom standard compares the number of bedrooms available with the number of occupiers and their needs as determined by their age and relation to each other. When determining if overcrowding is a Category 1 hazard, however, the health and safety implications of the overcrowding are assessed, based on evidence of the harmful impact of overcrowding to the household's needs. This is explained in the Housing Health and Safety Rating System enforcement guidance. Therefore, a home can contravene the bedroom standard without necessarily containing a Category 1 overcrowding hazard.

Table 3: Hazards in the Housing Health and Safety Rating System

Physiological requirements	Psychological requirements	Protection against infection	Protection against accidents
Damp and mould growth	Crowding and space	Domestic hygiene, pests and refuse	Falls associated with baths etc
Excess cold	Entry by intruders	Food safety	Falls on the level
Excess heat	Lighting	Personal hygiene, sanitation and drainage	Falls associated with stairs and steps
Lead	Noise	Water supply for domestic purposes	Falls between levels
Biocides			Electrical hazards
Carbon monoxide and fuel combustion products			Fire
Asbestos (and MMF)			Hot surfaces and materials
Radon (radiation)			Collision and entrapment
Uncombusted fuel gas			Explosions
Volatile organic compounds			Position and operability of amenities (ergonomics)
			Structural collapse and failing elements

5.6. The EHS is a continuous national survey commissioned by the Department for Levelling Up, Housing and Communities (DLUHC). It collects information about the housing circumstances of households and the condition and energy efficiency of housing in England. It uses the HHSRS to assess the extent of health hazards in homes. To ensure a large enough sample is used to drill into the London data only, this research combines data from two consecutive EHS reports, 2017 and 2019.

5.7. Three of the HHSRS hazards are not included in this note as they are not assessed in the EHS due to requiring intrusive property surveys: asbestos, biocides and volatile organic compounds. Including these hazards in the methodology would increase the total count of dwellings with hazards.

Table 4: The number of homes with HHSRS hazards in London, using EHS data from 2017 and 2019.

Hazard	Count of dwellings with hazard
Falls on stairs	84,061
Cold homes (SAP 2012)	54,622
Overcrowding	25,417
Falls on the level	23,183
Fire	15,316
Falls between levels	14,496
Domestic hygiene	10,540
Damp and mould	9,740
Hot surfaces	8,394
Ergonomics	7,826
Food safety	7,509
Sanitation	6,286
Collision and entrapment	5,665
Electrical problems	3,706
Carbon monoxide	3,021
Falls associated with baths	1,214
Noise	796
Structural collapse	500
Excess heat	346
Entry by intruders	247
Explosions	0
Lead	0
Lighting	0
Radon	0
Uncombusted fuel gas	0
Water supply	0
Total	**282,882**

5.8. In 2018, there were 3.47m homes in London according to the EHS. The table above shows the number of Category 1 present in all homes in London. One home can have several hazards present, so the total sum of all dwellings with Category 1 hazards (242,000) is less than the sum of the individual hazards.

5.9. Three of the four most common hazards relate to falls. Falls on stairs, between levels, on the level, and associated with baths, collectively comprise 44 per cent of all hazards present in London housing. Several hazards were so rare as not to be detected at all from the properties sampled in the EHS. Lead, radon, excess heat, lighting, water supply, uncombusted gas fuel and explosion hazards therefore are estimated to exist at very low levels in London housing.

The cost of poor housing to the NHS

5.10. The annual cost to the NHS of an occurrence of each hazard is derived from the values used in the BRE report, *The cost of poor housing in England by Tenure* (BRE, 2023). The report's methodology is explained in detail in *The full cost of poor housing* (BRE, 2016). It uses publicly available NHS treatment cost data to assign a value to the first-year treatment costs arising from Category 1 hazards, again noting that Category 1 hazards are ones which have been assessed as likely to cause harm within 12 months.

5.11. The annual cost savings to the NHS if all occurrences of each hazard are mitigated is calculated by multiplying the number of hazards by the annual cost to the NHS of one occurrence of each hazard. It is the sum of the costs that are avoided through treatments not being needed due to homes being free of hazards, and therefore of people not being harmed by poor housing.

5.12. The savings for the hazards of lead, radon, water supply, lighting, un-combusted fuel gas and explosions are £0 each, because the estimated number of each of these hazards in London homes is zero.

5.13. The annual cost to the NHS per cold home is almost twice the average per-hazard cost. Combined with it being the second most common hazard, this means it is responsible for 41 per cent of the savings that would accrue to the NHS if all hazards in London homes were remediated.

5.14. The annual savings to the NHS of repairing all hazards present in London homes would be £100.1m.

Table 5: Annual cost to NHS per count of hazard and annual savings to NHS if all hazards in repaired.

Hazard	Annual cost to NHS per count of hazard	Annual savings to NHS if hazard repaired
Cold homes (SAP 2012)	£742	£40,548,204
Falls on stairs	£213	£17,866,771
Hot surfaces	£804	£6,752,046
Falls between levels	£456	£6,611,607
Falls on the level	£283	£6,561,519
Damp and mould	£521	£5,074,246
Overcrowding	£137	£3,488,361
Collision and entrapment	£434	£2,457,499
Domestic hygiene	£207	£2,184,025
Fire	£121	£1,856,022
Ergonomics	£215	£1,682,727
Food safety	£212	£1,591,161
Sanitation	£212	£1,332,911
Electrical problems	£213	£790,145
Carbon monoxide	£190	£575,419
Noise	£498	£396,178
Entry by intruders	£497	£122,533
Structural collapse	£158	£78,718
Falls associated with baths	£36	£43,932
Lead	£217	£0
Radon	£118	£0
Excess heat	£134	£0
Water supply	-	-
Lighting	-	-
Uncombusted fuel gas	-	-
Explosions	-	-
Total		**£100,060,348**

The cost of repairing poor housing

5.15. The per-hazard cost of repair is an estimate of the cost of removing the hazard from a property. The precision of these estimates is subject to caveats. First, the cost of repair was calculated by BRE as a nationwide average using the EHS 'cost to make safe' model at 2019 prices. The cost of parts and labour have inflated significantly since these costs were calculated, and on this basis the costs given can be considered an underestimate.

5.16. Properties can have more than one hazard, and hazards can be linked. For example, removing the hazard of cold by supplying an adequate heating system can in some instance also remove the hazard of mould. Therefore, the true total sum required to remedy all Category 1 hazards should be less than the total number of Category 1 hazards multiplied by the average costs. While the BRE 2023 paper applies a methodology to mitigate against the double counting of costs where repairs mitigate more than one hazard, this paper does not. The difference in total costs of repairs from using this paper's method versus the BRE 2023 method is very small, however, with values differing by less than 1 per cent.

5.17. Finally, the repair costs used are from BRE's nationwide assumptions and have not been amended to account for any differences in London. Because services and goods tend to be more expensive in London, the costs are likely to be underestimated.

5.18. The estimated costs of removing the hazards of cold and overcrowding are significantly higher than other per-hazard repair costs. Repairing all instances of just these two types of hazard in London's housing would cost £867m – or 82 per cent of the total repair cost of all hazards.

5.19. An overcrowded home is one that does not have enough space for normal household life, including space for living and sleeping. It is assessed by comparing the number of bedrooms or bedspaces available with the requirements of the household, based on the number of people in the household and their relationships with each another.

5.20. Overcrowding cannot be 'repaired' in the same way as other hazards, so its mitigation requires either the addition of facilities within the home, or the rehousing of some occupants. Both of these options are expensive, resulting in the average repair cost of £20,453 per dwelling – over three times the cost of the second most expensive repair cost, that for cold homes.

5.21. The repairs required to remove the hazard of cold homes are typically energy upgrades such as installing insulation and appropriate heating systems. There is considerable variation around the average for these energy upgrades, based on factors such as dwelling age and type (EHS, 2022; Energy Report).

5.22. The total cost to repair all hazards present in London homes is £1,203.8m.

Table 6: Average repair cost per dwelling and total cost to repair all hazards.

Hazard	Average repair cost per dwelling	Total cost to repair hazard
Overcrowding	£20,453	£519,842,618
Cold homes (SAP 2012)	£6,337	£346,154,340
Falls on stairs	£1,173	£98,629,448
Fire	£4,168	£63,835,265
Damp and mould	£3,452	£33,621,196
Domestic hygiene	£3,119	£32,871,795
Food safety	£3,131	£23,510,241
Falls on the level	£1,014	£23,506,656
Falls between levels	£1,388	£20,118,077
Hot surfaces	£2,249	£18,878,309
Electrical problems	£1,497	£5,549,700
Ergonomics	£633	£4,953,858
Collision and entrapment	£742	£4,202,026
Sanitation	£561	£3,525,493
Carbon monoxide	£638	£1,927,398
Noise	£1,478	£1,176,488
Falls associated with baths	£627	£761,178
Entry by intruders	£1,261	£310,713
Excess heat	£643	£222,478
Structural collapse	£424	£211,788
Lead	-	£0
Radon	-	£0
Water supply	-	£0
Lighting	-	-
Uncombusted fuel gas	-	-
Explosions	-	-
Total		**£1,203,809,065**

The time for savings to pay back costs

5.23. The cost of repair can be compared to the annual savings made to the NHS. Dividing the cost of repairing all occurrences of a hazard in London's housing by the annual savings to the NHS tells us how many years it would take for the cost of repair to be 'paid back' by savings.

5.24. Across all hazard types, savings made to the NHS from repairing hazards would pay back the cost of those repairs in 12.0 years.

5.25. The payback period varies according to the costs of each hazard and the associated repairs. For example, there are an estimated 25,417 homes in London with health hazards due to overcrowding, and the average repair cost is the highest among hazards covered in EHS at over £20,000 per home. The estimated cost to the NHS of the health problems caused by overcrowding, however, is relatively low, at £137 in annual costs. It is important to note here that the methodology used was devised before the Covid-19 pandemic, meaning it does not capture what we now know about increased risk of transmission in overcrowded homes.

5.26. The wider societal cost of overcrowding for homes in England estimated by BRE in 2021 is far greater, however, at £2,160 per year. This is indicative of the serious consequences of living in overcrowded housing that extend beyond immediate NHS costs.

5.27. The cost of repair for overcrowding used here is an England-wide average, but the cost of housing, of moving home, and of construction is particularly inflated in the capital, meaning the true cost of mitigation is likely to be considerably higher than the figure used.

5.28. In summary, compared to other hazards, though it is significantly more expensive to mitigate the health impacts of overcrowding, it produces relatively large benefits once the full societal costs are taken into consideration.

Table 7: Years until the cost to repair each hazard is paid back by annual savings to NHS.

Hazard	Years until cost to repair paid back
Overcrowding	149.0
Fire	34.4
Falls associated with baths	17.3
Domestic hygiene	15.1
Food safety	14.8
Cold homes (SAP 2012)	8.5
Electrical problems	7.0
Damp and mould	6.6
Hot surfaces	6.3
Falls on stairs	5.5
Excess heat	4.8
Falls on the level	3.6
Carbon monoxide	3.3
Falls between levels	3.0
Noise	3.0
Ergonomics	2.9
Structural collapse	2.7
Sanitation	2.6
Entry by intruders	2.5
Collision and entrapment	1.7
Explosions	-
Lead	-
Lighting	-
Radon	-
Uncombusted fuel gas	-
Water supply	-
All hazards	**12.0**

6. Tenure breakdown

6.1. This section breaks down the above findings by tenure in London and compares them to the England tenure breakdown published in BRE 2023.

6.2. Table 8 shows the total number of dwellings with a hazard in London. Some dwellings contain multiple hazards. The table shows that London has just under one in ten of all homes with hazards in England.

Table 8: Count of dwellings with hazard in London and England.

Tenure	Count of dwellings with hazard in London	Count of dwellings with hazard in England
Owner-occupied	99,198	1,659,524
Private rented	94,036	655,200
Social rented	49,166	225,895
Total	**242,400**	**2,540,518**

6.3. The percentages in Table 9 use the 2017 and 2019 EHS data, and compare it to the number of homes in each tenure in 2018. There were 3.47m dwellings in London and 24.2m dwellings in England. London's owner-occupied homes are almost half as likely to contain a hazard than the English average. London's private rented homes are also less likely to contain a hazard than the English average. London's social rented homes, however, are more likely to contain hazards than the English average.

Table 9: Percentage of dwellings with hazard in London and England.

Tenure	Percentage of dwellings with hazard in London	Percentage of dwellings with hazard in England
Owner-occupied	5.9	10.8
Private rented	9.3	13.8
Social rented	6.2	5.5
Total	7.0	10.5

6.4. Repairs made in London's private rented sector account for over half of the savings to be made in the sector across England as a whole. This is due to both the relatively large size of the sector in London, and a prevalence in the sector of hazards that cause the need for relatively costly treatments (Table 10).

Table 10: Savings to the NHS per annum if all hazards were repaired in London and England.

Tenure	Savings to NHS per annum if hazard repaired in London	Savings to NHS per annum if hazard repaired in England
Owner-occupied	£46,119,712	£782,553,674
Private rented	£38,109,092	£65,434,145
Social rented	£15,831,544	£290,321,576
Total	**£100,060,348**	**£1,138,309,395**

6.5. Hazards found in the social rented and private rented sectors tend to have higher repair costs per hazard than hazards found in the owner-occupied tenure. Hazards that are expensive to repair, such as overcrowding, are more prevalent in these tenures, resulting in large total costs to repair all hazards relative to the total count of homes with hazard in those tenures.

Table 11:

Tenure	Total cost to repair all hazards in London	Total cost to repair all hazards in England
Owner-occupied	£393,523,953	£5,610,376,229
Private rented	£462,111,581	£2,517,006,756
Social rented	£348,173,531	£824,477,875
Total	**£1,203,809,065**	**£8,951,860,860**

6.6. The time required for NHS savings to pay off repair costs in London is higher than the English average. This is true for all three tenures and is especially pronounced in the social rented sector. This is because the hazards present in social housing stock have relatively high repair costs and delivery relatively low savings to the NHS if repaired.

Table 12: Years until the cost of repair is repaid by savings to the NHS, by tenure, in London and England.

Tenure	Years until cost of repair is paid back in London	Years until cost of repair is paid back in England
Owner-occupied	8.5	7.2
Private rented	12.1	8.7
Social rented	22.0	12.6
Total	**12.0**	**7.9**

7. Discussion

7.1. The above estimation of costs and savings suggests that repairing London's poor housing would have immediate and tangible benefits to Londoners, as well as providing value for money relative to the cost of repair.

7.2. The residents most likely to live in a home of poor condition live in the private rented. The ability to repair housing in poor condition lies principally with the home's owners. Renters in private and social tenures have much less ability to make repairs themselves. Therefore there is a mismatch between those most likely to experience poor conditions and those who are most able to intervene.

7.3. There is a similar mismatch among government departments. The cost savings of repairing poor condition largely accrue to the NHS and other public services. It has not historically been within the remit of the Department of Health and Social Care to fund large housing repair schemes, however.

7.4. The departments which have historically intervened in the condition of housing are the Department for Levelling Up, Housing and Communities (such as with the Decent Homes Programme launched in 2001), and the Departments for Energy Security and Net Zero, and Business, Energy and Industrial Strategy (such as with the Green Homes Grant Scheme in 2020).

7.5. Therefore, there is a mismatch between who can fund repairs, who has the ability to implement repairs, and who benefits from repairs to housing in England. This means incentives are not well aligned to achieve the possible savings and so a holistic whole-of-government response is required to realise the possible efficiencies of repairing poor housing in London (and by extension in other regions).

8. Conclusion

8.1. The estimated cost of poor housing in London is very large: around £100m per year to the NHS alone. The estimated cost of mitigating all poor conditions would be around £1.20bn. The savings made by the NHS would pay back the cost of mitigation in 12.0 years.

Glossary

Dwelling: Any form of accommodation which is used for human habitation, or intended or available for such use, including the outdoor spaces associated with its use, and any common or shared parts and services necessary for the occupation and use of the dwelling, such as drives and paths.

Hazard: Any risk of harm to the health or safety of an actual or potential occupier that arises from a deficiency.

Occurrence: An event or period of time exposing an individual to a hazard.

Payback time: The amount of time in years that it would take for the cost of repair to be paid back by savings made from lower expenditure.

Repair: The actions required to remediate the causes of poor housing by making changes to the property and its elements, including its fixture and fittings, or its use.

Tenure: The conditions under which land or property are held or occupied. London's residential housing sector is typically split into three tenures: social rented, private rented, and owner occupied.

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