

## Keeping out the chill: fixing London's cold, damp and mouldy homes

February 2019

### Key findings

- People need warm, dry homes to live in.
- Homes in London should all be dry and warm however far too many are not. Many Londoners are struggling to cope with damp and mould in their homes.
- If energy efficiency retrofitting is poorly installed or does not properly include ventilation, it can worsen damp problems.
- Ventilation is critical to prevent damp and is becoming more so as homes are built or retrofitted to be more airtight.
- Energy advice can help residents mitigate condensation in their homes but it must be delivered appropriately, tailored to the living situations and patterns of residents.
- Social housing providers need more support to invest in improving their current stock, but they also need to commit to better quality energy advice, particularly for fuel poor and vulnerable residents.
- Private tenants need a clearer route to good quality advice as currently the support they are provided is patchy, depending on the borough they live in.

*Talk London is an online community where Londoners can have their say on London's big issues. To hear from Londoners about their experiences living in London, we held a conversation on Talk London. The quotes included though this report represent some of what we heard.*

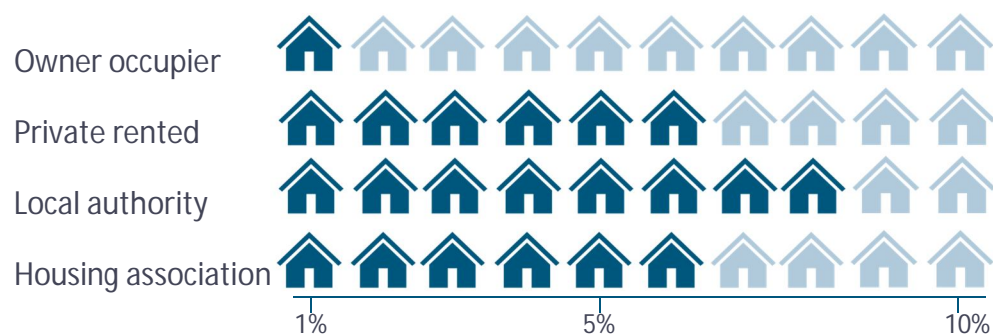
## Keeping out the chill: fixing London's cold, damp and mouldy homes

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### Dampening Lives

#### The impact of damp homes on Londoners

**Many Londoners live in homes which are cold and damp.** Damp problems affect around 6 per cent of homes in London, with serious condensation being the most common form (4 per cent overall). Serious condensation is most common in pre-1990 properties. It is rare in owner-occupied properties (1 per cent), but more common in the social and private rented sectors (6 to 8 per cent). The figure below shows the percentage of houses by tenure with serious condensation in one or more rooms.<sup>1</sup>



**Further improvements are needed in social rented houses.** Although there are now fewer social homes which do not meet the Government's Decent Homes Standard, we have heard from council and housing association tenants who still suffer with damp in their homes.<sup>2</sup>

Overcrowding also increases how susceptible a home is to condensation and about 13 per cent of London's socially rented households are overcrowded.<sup>3</sup>

**Private renters in London also struggle with cold and damp homes.** In 2016, a Shelter survey found that 39 per cent of private renters in London have experienced damp or mould in their homes, while 26 per cent experienced poor insulation or excess cold. The Mayor's Fuel Poverty Action Plan identifies the high proportion of privately rented homes as a challenge London faces to address fuel poverty. 29 per cent of London's homes are privately rented, compared to 18 per cent in the rest of the country.

"Me and my partner suffered a lot from mould in our last rented flat... the wall in the bedroom was green. The living room had green spots. We spent time cleaning it many times, but it would always come back. Problems in our health arose, like allergies and difficulty breathing."

*Talk London respondent*

**Londoners' health and wellbeing are harmed by damp homes.** The presence of damp in people's homes can increase exposure to allergens, cause or aggravate respiratory conditions and sustain dust mites. Residents are more likely to have respiratory problems if they live in a home with damp. Poor quality housing, with health hazards including damp, costs the NHS £2billion each year.<sup>4</sup>

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**Vulnerable Londoners are especially at risk from the negative health impacts associated with cold and damp.**

The oldest and youngest Londoners and people living with disabilities and respiratory conditions are most vulnerable. Young people living in cold and damp homes are more likely to develop asthmatic symptoms and a quarter of families with disabled children are reported to be living in cold, damp housing.<sup>5</sup> For older residents, cold homes can increase the risk of falls, strokes and circulatory problems.<sup>6</sup>

"... the damp is terrible... I keep me and my kids wrapped in blankets. Heating is too costly and contributes to the mould. My children's bedroom is so damp that mould grows behind the wardrobes."

*Talk London respondent*

"If I turn off the radiators, within one hour all the heat goes away and it's cold again... I cannot afford to leave the radiators permanently turned on. So I stay in the cold. It's very tough at age 70!"

*Talk London respondent*

**Mental health and wellbeing are also affected by cold and damp homes.**

Research has found that living in cold and damp homes is associated with higher levels of anxiety and depression.<sup>7</sup> Damp and mould can also contribute to the feeling of shame some residents have about their homes, which impacts on people's mental health, increasing anxiety and depression.<sup>8</sup> Children's educational attainment and mental health are also significantly at risk from living in cold, damp homes.

### Fuel poverty

**Many people living in cold, damp homes are fuel poor.** Fuel poverty is defined as when a household needs to spend more than the average amount to keep their home warm and when a household would be below the poverty line if the above average amount was spent. Living in fuel poverty increases the likelihood of living in a damp home because if a home is not properly heated, it is more likely to develop condensation.<sup>9</sup>

"I know I could significantly improve the problem by having the heating on during the day but I cannot afford that and only have it on in the evening."

*Talk London respondent*

### Unintended consequences of retrofit

**Some home improvements which are intended to make homes warmer can lead to damp.** Many of the efforts to improve the energy efficiency of homes have concentrated on insulation and making homes more airtight through new windows and frames. Moisture in the air needs to have a way out of buildings, so these energy efficiency measures can lead to condensation if they are installed badly or without enough additional, continuous ventilation.

**Measures to reduce energy use and fuel poverty have also led to damp.** Many homes which were originally heated through communal or district heating systems have been changed to individual boilers in each home.<sup>10</sup> Where this change combines with fuel poor households, it can lead to an increase in damp if residents find it too expensive to heat their homes adequately.



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### Living in damp homes

**Homes should support the lives and living patterns of residents.** Often residents are blamed for condensation and the onus is put on them to solve it through behaviour change.<sup>11</sup> While the way people live in homes can contribute to damp, often residents have no control over these contributing circumstances.

#### Overcrowding and condensation

**Overcrowding contributes to condensation in London.** Across the country, overcrowding in the private and social rented sector is at its highest level ever.<sup>12</sup> Overcrowding affects eight per cent of London's households, which includes a third of children living in social housing and a fifth of children in private rented housing.<sup>13</sup> Overcrowding is one of the most significant risk factors for condensation. With more occupants in a home, the building has more moisture to contend with because there are more people breathing and showering, there is more food being cooked and more clothes being washed.

**Living patterns in over-occupied households can contribute to additional moisture in the air.** For example, if there are young children and retired grandparents, the house is likely to be occupied for most of the day. If there are one or two generations living in the house it is more likely to be empty for most of the day, with children at school and working age adults at work. But people should be able to live in a warm

dry home, whether they spend most of their day there or if they only spend the evenings and nights at home.

**Ventilation is critical to prevent damp. Homes need to be better ventilated, especially those which are overcrowded.** Windows are a natural source of ventilation, but people are often reluctant to open windows due to the cold. Powered systems such as extractor fans can provide ventilation but often are not sufficient. Most ventilation systems are designed to the minimum flat ventilation level that the building regulations set. Therefore, when houses have higher than minimum levels of occupancy, the ventilation is not sufficient to remove enough moisture from the air.

#### Myth Busting – Ventilation lets out all the heat<sup>14</sup>

Most (five-sixths) of the heat in homes is stored in the solid objects, such as the walls and the furniture. When warm air is replaced with cold, outdoor air, the furnishings help warm up the new air. Air heating and ventilation uses only a sixth of the typical amount of energy to heat a home.

**While ventilation is important, we heard that often fans are switched off by residents.** Many extractor fans and mechanical ventilation systems are noisy and/or perceived to be costly. However, we also heard of solutions, such as the systems installed in some of Peabody's Thamesmead properties. Rather than being turned on or off by residents, the fans run continuously and quietly. The vent outlets in the

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kitchen and bathroom are constructed to respond to moisture levels, and open wider when the room is humid. This ensures the level of ventilation corresponds to the need of the home. The system is almost silent and has minimal running cost to the residents—just £1 a month.

**Recommendation 1: The Mayor should recommend in the London Plan that new housing, especially for social and affordable rent properties, has ventilation designed to cope with any level of occupancy.**

**Recommendation 2: The Mayor's retrofit programmes, Warmer Homes and RE:NEW, should ensure ventilation installed through the programmes is sufficient to cope with any level of occupancy. Systems installed should be quiet to avoid residents turning them off, use minimal power and be moisture-responsive.**

### Energy Advice

**Landlords, both in the private and social housing sector, often suggest residents should prevent damp through behaviour change.** Suggestions often include putting lids on pots while cooking, opening windows and doors after showering or hanging laundry outside.<sup>15</sup> These suggestions do not take into account the living situations of residents. Many residents do not have outdoor space to hang washing and some residents have security concerns which prevent them from keeping windows open when they are not

"It was a ground floor flat, and we couldn't open the windows because we were not at home most of the times (security wise), and no place to dry clothes but indoors."

*Talk London respondent*

in the home. Yet even when residents are able to follow this kind of advice, condensation often remains. Residents we heard from suggested that even when landlords try to offer practical solutions, the solutions proposed are not sufficient. The most common action landlords took was to supply a dehumidifier which was either ineffective at combating the damp, or expensive to run.

"In my current flat, we have condensation... even though we ventilate the flat when cooking and showering, and always dry clothes outdoors."

*Talk London respondent*

**Good quality energy advice can help residents improve condensation damp in their home.** Beneficial advice includes ensuring residents understand how measures such as ventilation or smart heating work and why they are important. We heard that the best results for retrofit projects are attained when good quality energy advice is provided alongside energy efficiency measures.<sup>16</sup>

**Energy efficiency advice can help alleviate the fuel poverty which contributes to damp.** Energy advice visits can help residents save money, especially if they include checking for competitive energy tariffs and explaining eligibility for grants and benefits. Some studies have shown that good quality energy advice alone can help families make energy savings.<sup>17</sup> Advice which could help residents heat their home sufficiently and help to reduce condensation problems is particularly useful for those who are fuel poor.

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**Social housing providers have a key role in providing energy advice to their residents, many of whom are fuel poor.** Some providers have programmes in place to help their residents to reduce their energy bills.<sup>18</sup> However we heard that not all providers are equipped or committed enough to provide quality advice.<sup>19</sup>

**Recommendation 3: Social housing providers should review their energy advice strategies and work with residents to offer effective advice on how to prevent condensation, taking into consideration tenant living patterns and household situations, prioritising overcrowded households.**

**Recommendation 4: The Mayor should prioritise training and deployment of energy advisors to complement his work on energy efficiency and fuel poverty, under the Energy for Londoners umbrella.<sup>1</sup>**

**Residents in the private rented sector do not have a clear avenue for good quality energy advice.** We heard from residents who had reported their struggles with damp and mould to their landlords. While a few people told us their landlord made changes that helped them to control the damp, others suggested the efforts made by their landlords were ineffective or prohibitively expensive. While ineffective support is

"Landlord just threatened to raise the rent when the tenants complained."  
*Talk London respondent*

unhelpful, for others the response is worse. Alarming reports suggest revenge evictions are likely when tenants make formal complaints about their housing. Nearly 10 per cent of renters are too scared of losing their home to complain about the conditions.<sup>20</sup>

Some residents appeal to their local councils for help when they are met by disengaged private landlords. The Mayor's Fuel Poverty Support Fund aims to build on council-provided support by providing grants to London boroughs to expand their existing referral and advice mechanisms in order to:

- Reach a larger number of fuel poor households
- Carry out more home energy visits
- Increase support for people in fuel debt
- Recruit more network partners or make the support they offer to vulnerable households even better.

As we have heard that the quality of support offered by councils can be inconsistent, we would like assurances that the Mayor's Fuel Poverty Support Fund will undertake rigorous assessment of the work the fund supports. We also think the Mayor should seek ways to better support private renters.

**Recommendation 5: The Mayor should write to the Environment Committee detailing how energy advice services are evaluated during the application assessment process for the Fuel Poverty Support Fund.**

<sup>1</sup> The Brexit Alliance does not agree with prioritising the training and deployment of energy advisors, as this would duplicate work which is already supposed to be carried out by social housing providers.

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**Recommendation 6: The Mayor should develop a guide for private renters and landlords, to help them be more informed about what type of advice they should seek and avenues they could explore. This should also include information about tenants' and landlords' legal responsibilities, for example for the landlord to ensure a home meets the Decent Homes Standard.**

### Condition of properties

**More retrofitting with sufficient ventilation is required to tackle damp.** Homes which are insulated, well-ventilated and efficient to heat will remain warm and dry. Despite numerous efforts to increase retrofitting, many homes in London do not meet these conditions.

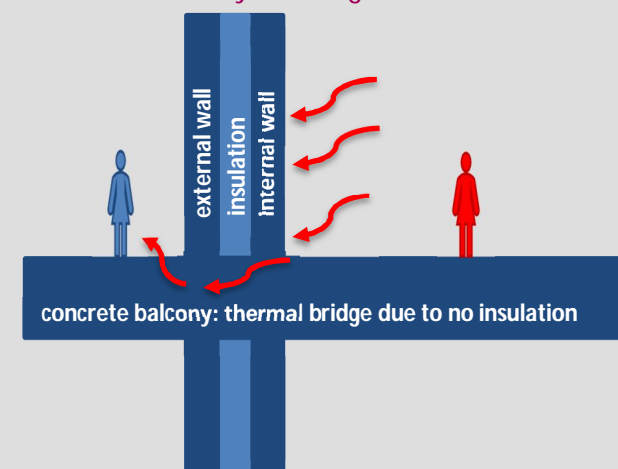
**Inappropriate retrofitting has resulted in cases of increased condensation.** Prior retrofit efforts have focused on energy efficiency and heating methods without considering damp and have therefore not properly included ventilation. Government programmes and industry approaches toward retrofit have led to instances of defective or inappropriate single-measure installations. Household assessments have not fully considered the suitability of measures for a particular property.<sup>21</sup> While the focus on insulating and making buildings more airtight is often beneficial as it keeps warm air inside, it creates a need for better ventilation which has not always been met. The data on condensation caused by inappropriate or faulty retrofit is inconsistent,

so the scale of the problem is not fully understood.<sup>22</sup> The Decent Homes Standard requires that homes have adequate insulation and warmth, but has not incentivised additional ventilation.

Instead, programmes need to be multi-measure and include a full understanding of each dwelling. They need to consider the issue of ventilation, condensation and mould in addition to warmth and energy efficiency.

#### How energy efficiency measures could contribute to condensation

**Cavity Wall Insulation:** Cavity Walls were introduced in the 1890s to prevent water getting inside homes. In many homes, the gap between the two walls has now been insulated to reduce heat loss. If there is a gap in the insulation, caused by a ceiling or floor which can transfer heat more easily than the insulated areas, or due to poor quality installation, thermal bridging can occur.<sup>23</sup> Thermal bridges can also be caused by slumps in insulation if it is not installed properly.



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### Peabody Thamesmead; condensation, damp and mould project

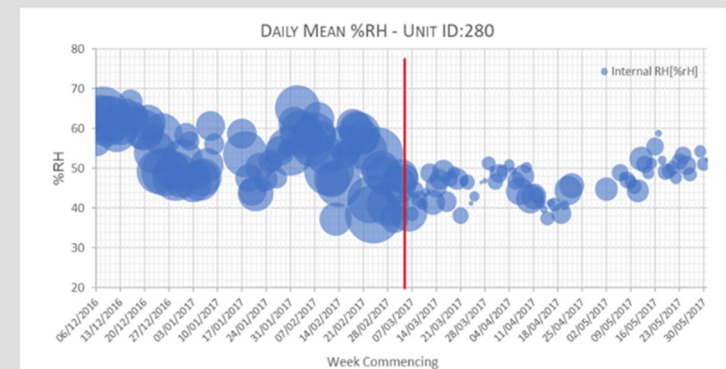
This multi-measure approach has benefitted 272 households in the Thamesmead Estate. Thamesmead was considered a difficult estate to treat as most blocks have reinforced concrete floors, flat roofs and pre-cast reinforced concrete cladding, making it hard to retrofit ventilation systems.

A **risk assessment** grouped dwellings into low, medium and high-risk, based on: vulnerability (age of occupant), occupancy ratio (occupants per bed-space), and energy, excess cold, damp and mould ratings.

**Energy and ventilation advice** was offered to every home. A team visited each home to provide tailored advice to residents. Standard advice, such as the need to ventilate adequately, was provided alongside significant work to help residents save money on heating. As a result of the visits, 202 households saved an average of £211 through behaviour change and tariff switches.

**Specialist smart heating controllers** were installed in over half of participating dwellings. The controller has all the usual characteristics of a regular smart heating controller but also monitors occupancy, internal temperature and relative humidity. As Peabody can access this data, residents were not required to accept the controller to benefit from other measures. The evaluation of the project suggests that the device has been effective in improving energy efficiency and helping residents avoid over- and under-heating their homes.

**Demand controlled ventilation** was installed in all medium and high-risk homes. The demand-controlled centralised mechanical extract ventilation system consists of a single fan continuously extracting moist stale air in 'wet' spaces, such as the kitchen and bathrooms. The ventilation system is controlled by a sensor which reacts mechanically to the humidity in the air. When the air has a low level of humidity, the vent is closed so the fan only extracts the minimum amount of air, but when the sensor detects more relative humidity, for example when residents are cooking, the vent opens wide, so the fan will extract a larger quantity of air. These fans cannot be switched off by residents, however during the committee's visit to hear about the project, residents told us the fans were quiet enough not to disturb them. This figure below shows the humidity in one Thamesmead home before and after the ventilation system was installed. The centre of the blue dot shows the daily average and the size of the dot shows the range. Both the levels of humidity and the range of humidity decreased.





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It is important that case studies such as the Thamesmead CDM project are taken as an example of an effective multi-measure approach, not an exact blueprint. The measures included in this programme were suited specifically to this estate and not all measures were installed in every participating flat — this adaptability to circumstance was a strength of the project. Other projects would need to consider other measures, such as heat recovery or insulation, which were not included in this project as they were deemed inappropriate for reasons to do with the structure of the building and the budget allocated to the project.

**Recommendation 7: The Mayor, the Government and other funders or sponsors should ensure future retrofit programmes are multi-measure with sufficient focus on ventilation. Programmes should account for occupancy levels and the need for heat, ventilation and energy advice as well as insulation, to prevent condensation.**

**Housing associations need to be better incentivised to improve their housing stock.** The cost of retrofit work can be a challenge to housing associations. For some housing associations, the issue of funding for retrofit is more pertinent for their properties in London compared to properties outside the capital.<sup>24</sup> Many London properties require extra funding as they are older and more complicated to retrofit. While there

“Peabody could benefit from support in identifying and developing funding opportunities.”

Peabody Housing Association

are some examples of good practice, we heard that housing associations are not sufficiently incentivised to improve their current stock. The policy focus on building new housing could serve as a disincentive to retrofit; funding is more readily available to invest in new stock. VAT, which is not chargeable for new builds, is chargeable on retrofit.<sup>25</sup>

**The Government's new Minimum Energy Efficiency Standards (MEES) require that**, from April 2018, private landlords cannot grant a new tenancy unless the property's Energy Performance Certificate (EPC) is rated an E or higher. Social housing providers are exempt from this requirement as most are already compliant due to works undertaken in order to meet the Decent Homes Standard.<sup>26</sup> One of the Government's Clean Growth Strategy targets is that all social housing attain an EPC rating of C by 2035. However, we have heard that the cost to meet this target through retrofit is higher in London than elsewhere, due to the high incidence of solid wall construction in social housing stock.<sup>27</sup>

**Recommendation 8: There is a need to unlock funding for retrofit:**

- a. As part of the RE:NEW successor programme's 'business case' workstream, the Mayor should present how social housing regulators could encourage London's housing associations to improve their current stock
- b. The Mayor should consider allocating funding on the basis of investing in old stock as well as for new builds
- c. The Government should consider increasing the cap for landlord contributions to energy efficiency measures above the current £3,500 (inclusive of VAT) to £5,000.<sup>28</sup>

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### Health and inequalities

**Vulnerable and marginalised people are more likely to be living in homes which are cold and damp, due to the link with fuel poverty.** This includes young people (especially children of single parents), older people and people living with disabilities. The health impacts of cold and damp homes are particularly dangerous for these groups.

**The Mayor's Warmer Homes programme should specifically target the homes of vulnerable and marginalised people.** The Mayor's Warmer Homes programme offers up to £4,000 worth of home improvements per property. The programme was initially open only to owner-occupiers but it is now being piloted among private rented sector properties if the owner or tenant is eligible. The committee was concerned to hear there is no specific strategy to target the programme at the most vulnerable groups.<sup>29</sup> Currently referrals are determined primarily by what levels of resources boroughs have. While we recognise that some Age UK organisations and foodbanks have been engaged, a more concerted effort needs to be made to reach those who are most at risk of living in cold and damp homes. Many of these households may be in arrears on their bills, and might have contacted Citizens Advice or their energy companies' advice programme for support. Often the most isolated and vulnerable do not access institutional support. Without a strategy for targeting the most vulnerable, this programme may miss those most in need. This is especially pertinent considering the relatively small number of homes this programme has the budget to assist.

**Recommendation 9: Any evaluation of the warmer homes private rented sector pilot should assess how well the pilot has reached children, older or disabled people and those in overcrowded homes. A strategy for reaching the most vulnerable residents living in cold and damp homes should be integral to any roll out of the programme, and include steps for the Mayor to bring together the GLA, community groups, Citizens Advice and energy companies to support fuel poor households.**

**GPs need to be made aware of the Mayor's programmes to help patients living in cold and damp housing.** Often patients approach GPs for help with poor quality housing, due to the impact it has on health. All GPs should therefore be informed about the Fuel Poverty Action Programmes, so they can signpost their patients towards it.

**Recommendation 10: The Mayor should write, as Chair of the London Health Board, to Clinical Commissioning Groups to outline the Warmer Homes programme and private rented sector pilot, or any future roll-out, so the information is distributed to GPs to boost referral of vulnerable patients.**

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Conservative



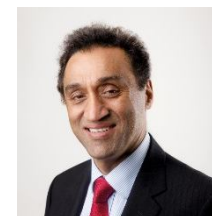
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**Jennette Arnold OBE**  
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**The Environment Committee** examines all aspects of the capital's environment by reviewing the Mayor's strategies on air quality, water, waste, climate change and energy.

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## Endnotes

<sup>1</sup> GLA analysis of English Housing Survey, 2015

<sup>2</sup> Talk London discussion - <https://www.london.gov.uk/talk-london/environment/cold-and-damp-homes?page=1>

<sup>3</sup> GLA, Housing in London Report (2017), p.86

<sup>4</sup> The Kings Fund (2018), Housing and Health: Opportunities for sustainability and transformation partnerships, p. 17.

<sup>5</sup> Public Health England, (2014) Local action on health inequalities: Fuel poverty and cold home related health problems, p. 11

and <https://www.jrf.org.uk/report/housing-and-disabled-children>

<sup>6</sup> National Energy Action, Warm and Healthy Homes Fund, Interim Report, p. 7.

<sup>7</sup> NatCen Social Research, People living in bad housing – numbers and health impacts, p. 8

<sup>8</sup> Shelter, Chance of a Lifetime, p.14

<https://www.theguardian.com/society/2013/oct/29/uk-child-poverty-cold-damp-homes-finances>

<sup>9</sup> London Assembly Environment Committee. [Transcript](#) - 6 December 2018, p.2.

<sup>10</sup> District heating, or heat networks, distribute energy that is generated in a central location by a large boiler.

<sup>11</sup> Sustainable Homes (2018), Breaking the Mould: Should Landlords be doing more?, p.6

<sup>12</sup> English Housing Survey 2017 to 2018: headline report and tables

<https://www.gov.uk/government/statistics/english-housing-survey-2017-to-2018-headline-report>

<sup>13</sup> GLA, Housing in London Report (2017), p.87.

<sup>14</sup> Breaking the Mould, p. 10

<sup>15</sup> Breaking the Mould, p.6 and evidence from the National Landlords Association.

<sup>16</sup> Transcript, pp. 9-10 and Thamesmead site visit, Environment Committee Agenda, 16 January 2019, Appendix 1.

<sup>17</sup> Thamesmead Condensation, Damp and Mould Programme, Executive Summary of Evaluation Report, p. 8

<sup>18</sup> Call for evidence (CfE) submissions from Optivo and L&Q.

<sup>19</sup> Transcript, p.9.

<sup>20</sup> Citizen's Advice - <https://www.citizensadvice.org.uk/about-us/how-citizens-advice-works/media/press-releases/complain-and-youre-out-research-confirms-link-between-tenant-complaints-and-revenge-eviction/>

<sup>21</sup> Dr Peter Bonfield, OBE, FREng (2015), Each Home Counts: An Independent Review of Consumer Advice, Protection, Standards and Enforcement for Energy Efficiency and Renewable Energy, pp. 9-10.

<sup>22</sup> Meeting notes from UKCMB Conference 25th May 2016 World Café session ON Retrofit and Moisture.

<sup>23</sup> <https://www.property-care.org/problems-with-cavity-wall-insulation/>

<sup>24</sup> CfE submissions from Optivo, and transcript, pp. 16 + 30.

<sup>25</sup> <https://www.gov.uk/vat-builders>

<sup>26</sup> Green Alliance (2019), Reinventing retrofit : how to scale up home energy efficiency in the UK, p.6

<sup>27</sup> CfE submission from Optivo

<sup>28</sup> Assembly Motion, 08 February 2018 - <https://www.london.gov.uk/press-releases/assembly/assembly-calls-for-5000-cost-cap>

<sup>29</sup> Transcript, p 18