




# Damp & Mould Review 2023

NOVEMBER 2023

Rosie Wills, Technical Support &  
Repairs Manager, MDH



Introduction	3
The Avoidable Deaths of Awaab Ishak and Luke Brooks	3
Recent Research on Damp and Mould	9
MDH damp and mould reports, inspections and outcomes	9
Current Damp, Mould and Condensation Procedures	10
In-home Diagnosis Methods and Tools	11
Mould treatments by MDH	13
Mould Treatment Pack Overhaul	14
Effective mould treatments	15
Positive Input Ventilation – success rates (updated)	20
Thermal Improvements – Benefits and Drawbacks (updated)	22
Meaningful data collection and risk assessment	26
Environmental Monitoring	32
Finding our silence	34
Fabric first	35
Complaints and Disrepair Claims	36
Tenant Feedback and Involvement	39
Review of Previous Recommendations from 2022 Review	39
Summary/Key Findings	42
References	43
Appendix 1 – Process Flow Chart	45
Appendix 2 – Technical Inspection Flow Chart	46

## 1. Introduction

- 1.1. This report will summarise the findings of a review of the prevalence, causes and effects of damp and mould affecting Mid Devon Housing's (MDH) council housing stock and is a follow up to the MDH Damp and Mould Review 2022 [Damp & Mould Review 2022 \(middevon.gov.uk\)](https://www.middevon.gov.uk).
- 1.2. The report will explore the outcomes of an informal internal review into Mid Devon Housing's performance in relation to responding to damp and mould, lessons learnt, key successes and key targets moving forward.
- 1.3. Since the 2022 MDH Damp and Mould Review was drafted, there has been significant media interest and involvement from the Secretary of State, Regulator for Social Housing and an update from the Housing Ombudsman Service.
- 1.4. Although the information is widely available, this report will first summarise the key findings of the coroner's inquest into the death of 2 year-old Awaab Ishak, and the impact this has had and may have on the UK's housing sector. It will also summarise the proposed 'Awaab's Law'. It will also explore the findings of an inquest into the death of 27year-old Luke Brooks.
- 1.5. The rest of the report is for knowledge sharing purposes. MDH has benefitted from networking with other professionals, housing providers and tenants and believes that to continue this knowledge sharing is imperative to ensure continual discussion and improvement across the sector.
- 1.6. Much of the information in this report is not groundbreaking, however, it does demonstrate how the existing guidance is working or not working, in practice. The report includes information gained through or inspired by networking with other housing and building professionals through good practice sharing events and LinkedIn discussion groups, in the UK and overseas. The more information shared by organisations with access to experience and data, the quicker we can collectively learn and improve.
- 1.7. The report focusses on learning for short and medium-term solutions to damp and mould issues, normally carried out by the in-house responsive teams or contractors. MDH has a programme of whole house retrofitting which has much more established good practice. There is a section of the report summarizing this.
- 1.8. Tenants are at the heart of what we do at MDH and are the most complex factor in understanding and managing damp and mould prevalence in homes. There is a dedicated section within the report, however, considerations and observations are also included under each section, where applicable.

## 2. The Avoidable Deaths of Awaab Ishak and Luke Brooks

- 2.1. Awaab Ishak died in December 2020 after prolonged exposure to mould in his home. Following this, Joanne Kearsley, the coroner looking into the death produced a Regulation 28 Report (to prevent future deaths) for the Secretary of State in 2022. This report stated that '*Awaab Ishak*

*died as a result of a severe respiratory condition due to prolonged exposure to mould in his home environment. Action to treat and prevent the mould, was not taken.'*

- 2.2. The Senior Coroner said that Awaab's death should be a 'defining moment' for the UK's housing sector.
- 2.3. Further elements of the report noted that:
- 2.4. *Awaab lived with his parents at, Rochdale. This property is owned by Rochdale Borough wide housing association ("RBH"). In 2017 the presence of mould in the flat was notified to RBH. The advice given to (Awaab's father) was to, "paint over it." had recently arrived in the UK from Sudan. The fact this needed to be with specialist paint was not made clear to him.*
- 2.5. *In 2018 Awaab was born. I am satisfied from the evidence that the mould remained a continuing and recurrent issue whilst the family were in the property, albeit no further complaint was made to RBH until July 2020. In 2019 the family made an application to be re-housed.*
- 2.6. *In June 2020 the family instructed solicitors to make a disrepair claim due to the mould. An inspection carried out by RBH on the 14th July 2020 confirmed the presence of mould in the kitchen and bathroom. The policy at the time was not to progress to repair and treatment until the agreement of the solicitors had been obtained. No action had been taken to treat the mould by the time Awaab died. At the time of his death significant mould was present in all the rooms in the flat.*
- 2.7. During the course of the Inquest the court heard evidence from the Housing Ombudsman regarding their October 2021 report 'Spotlight on damp and mould'.

Many of the themes they had noted from the increased number of complaints to them were found in Awaab's case, namely:

- Professionals placing too much emphasis on the cause of the mould being due to "family lifestyle." In fact as indicated, homes need to be habitable for modern living. There is no evidence the family lived an "excessive" lifestyle and the daily activities of living which contributed to the damp and condensation were normal activities such as cooking, washing, bathing and drying clothes.
  - There was a lack of proactive action to consider wider potential sources of damp such as structural. However I did not find that there were any structural issues such as leaks etc.
  - There was a lack of proactive treatment of the mould and a lack of consideration of the ineffective ventilation within this ageing property. In this case there was a fan in the bathroom which did not work effectively, there was no mechanical ventilation in the kitchen at all. There was no window in the bathroom and the window in the kitchen opened onto the communal walkway
- 2.8. *CORONERS CONCERNS During the course of the inquest the evidence revealed matters giving rise to concern. In my opinion there is a risk that future deaths will occur unless action is taken.*

*In the circumstances it is my statutory duty to report to you. The MATTERS OF CONCERN are as follows:*

*The 2006 document, "A Decent Home: Definition and Guidance for Implementation" does not give any consideration to the issue of damp and mould. Nor does it provide any guidance as to the need for a property to be adequately ventilated.*

*The HHSRS data sheet relating to damp and mould, is used to calculate risks of the incident and the spread of harm is not reflective of the current known risks of damp and mould and harm to health.*

*There was no evidence that up to date relevant health information pertaining to the risks of damp and mould was easily accessible to the housing sector.*

*The evidence highlighted a "policy" amongst the housing associations, in cases where a disrepair claim has been brought of waiting for agreement from the claimant (or their legal representative) before rectifying any recognised disrepair.*

2.9. In October 2022, 27 year old Luke Brooks was reported to have died at his home from an acute respiratory illness. His parents blamed mould in the house they shared with Luke, primarily because the autopsy found Aspergillus mould on his lungs. The inquest involved the same senior coroner as in Awaab Ishak's hearing: Joanne Kearsley. The Manchester Evening News reported regular updates on the inquest, with key points including:

- The inquest found that "Whilst the property within which Luke resided was in need of some repairs, neither the disrepairs nor any damp caused or contributed to Luke's death."
- "Those disrepairs did not play a part in Luke's death. I cannot say where he got that aspergillus...it's present outside, it's present in the air, it's present in a number of different features"
- Ms Kearsley recalls Prof Malcolm Richardson's evidence, which said aspergillus is common in the UK and is not the black mould associated by people as related to health issues. The inquest heard that aspergillus is a grass eater and generally grows outside, but it can grow on damp clothes and textiles, dust and roll-up cigarettes. There is evidence of a link between cannabis and aspergillus, which could not be proven, Richardson told the inquest. Asked about damp in the development, he said aspergillus 'does not grow readily in a damp house'.
- Other evidence from GMP and NWAS is recalled from the morning. They noted mould in the bathroom and around the window of Luke's bedroom. Evidence of disrepair at the property is recalled, including reports of mould to environmental health. "This should have prompted an inspection in July but it was acknowledged that didn't happen," says Ms Kearsley.
- She says a number of disrepairs were identified in an inspection in November 2021. It was also noted that 'in fairness, at the time of Luke's death, the bedroom which he shared was unclean'.
- The room was shared by three dogs and the room contained food materials, Ms Kearsley says.

- *The inquest heard evidence from a consultant medical mycologist, Prof Malcolm Richardson, who said he found “very, very little” evidence of aspergillus in the house. Dr Chris Kosmidis, a consultant in infectious diseases, said he had been unable to find any case where aspergillus pneumonia had been linked to a mouldy home. Spores of aspergillus are inhaled daily by people but it does not have the ability to cause disease in healthy people. However, Kosmidis said, it can cause disease if a person’s immune system has been severely weakened.*
- 2.10. *In her conclusion, Kearsley said: “Luke predominantly resided in his bedroom which was in an unsanitary condition [...] Due to these factors it is not possible to determine the source of the aspergillus.” (Manchester Evening News, 2023)*
- 2.11. The Guardian also reported on family and friends' views, including concerns about disrepair issues between 2014 and 2017, relating mainly to roof leaks and heating issues.
- Mrs Brooks advised that she had visited Oldham Council to discuss a move to social housing, although was not on any housing waiting list at the time of her son’s death.
  - She said her son had never worked and spent most of his time playing video games in the upstairs room he shared with his friend, Christopher Haycock.
  - He described how Luke had tried to scrape off the mould with a trowel. The house, he said, “wanted knocking down”.
  - Giving evidence to the inquest, Jayne Ratcliffe, director of adult social care at Oldham council said she had reviewed the family’s case for the council to assess “opportunities missed”. She said the issues related to communication and customer care. Ratcliffe said the way in which the council worked from “a prevention and early intervention perspective” is something that they could learn from the case.
  - A police officer, PC Adam Rogers, who attended Luke’s death, recalled it being so cold in the house that he could see his breath. You “could feel the damp on your lungs”, he said. Rogers also took photographs of black mould that he said covered half the ceiling of the upstairs bathroom, which would have been used by Luke. Another photograph showed how plaster had come away from the wall in Luke’s bedroom.

Two other photographs taken by Rogers also highlight another disturbing aspect of Luke’s life and death: the squalor he was living in.

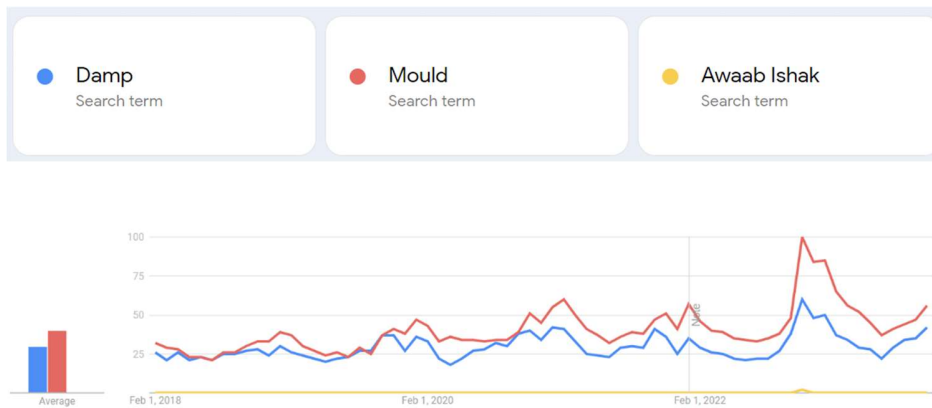
- Two sides of Luke emerged at the inquest. He was funny and caring and looked after his elderly mum and dad, [...] He was also a recluse, spending most of his time in a grotty bedroom he shared with his best friend, Chris, as well as a cat, which came and went, and three dogs who ate, drank and slept in the room.
- He smoked 20 roll-up cigarettes a day and cannabis at weekends. Neither he nor Chris were good at clearing empty food plates or beer cans or crisp packets. There was no carpet on the floor.
- Luke’s mother did not go into Luke and Chris’s room because she respected their privacy. He didn’t let people in his room because he was “embarrassed” by it.  
(The Guardian, 2023) (The Guardian, 2023)

- 2.12. The inquest highlighted the vulnerable nature of the family, and possible missed opportunities to signpost Luke and the family to some much needed social and medical support. It may be the case that conversations were had informally, but there was very little evidence that this was recorded. There was also little to no evidence that advice was provided in relation to prevention and treatment of condensation and mould, nor of the risks associated with unsanitary conditions. There is always a difficult balance, however, in the sense that there are many situations in which an adult with mental capacity can choose to make decisions which may not be in their own best interest.
- 2.13. MDH has worked with tenants in similarly harmful environments, which do not appear to relate to the building's structure. Existing procedures are in line with the new guidance provided by central government, relating to inter-agency working. Our experience is that unless there is a lack of mental capacity, there is very unlikely to be support available to assist with improving the socio-economic factors. Ultimately, issues such as mental health and hoarding fall between services, and even if the support is available, it must be accepted by the person involved.
- 2.14. In Devon, a safeguarding referral for a person deemed to have mental capacity will not be accepted by Adult Services, unless the reporter has express consent of the person they are concerned about, even where there are significant health concerns. In the case of concerns about a child, consent from the parent is normally required. Where there are concerns about poor mental health impacting on self-care, a care assessment can be requested, also with consent. In many cases, a care assessment requires the person travelling to the assessment, which is not always possible for someone with chronic mental health conditions, poor money management or agoraphobia. In cases such as these, non-attendance is marked as 'support refused'. Unfortunately, the nature of many mental health conditions comes with a resistance to engaging with professionals.
- 2.15. A press release was issued by the UK government (Department for Levelling Up, Housing and Communities and the Rt Hon Michael Gove MP) on 9 February 2023. This sets out that *'The government has tabled amendments to the Social Housing (Regulation) Bill to introduce 'Awaab's Law', which will require landlords to fix reported health hazards within specified timeframes.'* If supported, Awaab's Law could:
- Require social landlords to investigate the causes of damp and mould within 14 days of complaints being made and provide tenants with a report on the findings.
  - Give social landlords 7 days to begin work to repair a property if a medical professional believes there is a risk to a tenant's health.
  - Ensure bids for new social housing are treated as a high priority if a medical professional has recommended a tenant moves home after identifying a risk to health at their existing property.
  - Mandate social landlords to provide all tenants with information on their rights, how to make a complaint and what standards they can expect under the HHSRS, provided in simple English, or the language a tenant is most proficient in.
- 2.16. Aside from the impact on the housing sector, it appears to be the case that the increased media coverage involving Awaab, and a Panorama Documentary around the same time prompted a significant new UK wide interest in the risks associated with damp and mould.

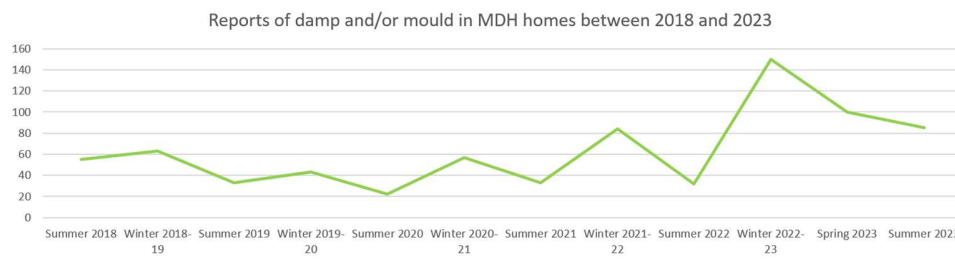
2.17. Using the key words ‘damp and mould’, ‘damp’, ‘mould’ and ‘Awaab Ishak’ between April 2018 and April 2023, Google Trends shows that whilst damp and mould searches have regular peaks and troughs between winter and summer periods, there is a clear peak between November 2022 and January 2023.

2.18. This is consistent with peaks in disrepair claims received around the same time by MDH, albeit with a 2-3 month delay. MDH also has a similar peak in reports of damp and mould being received to the repairs service.

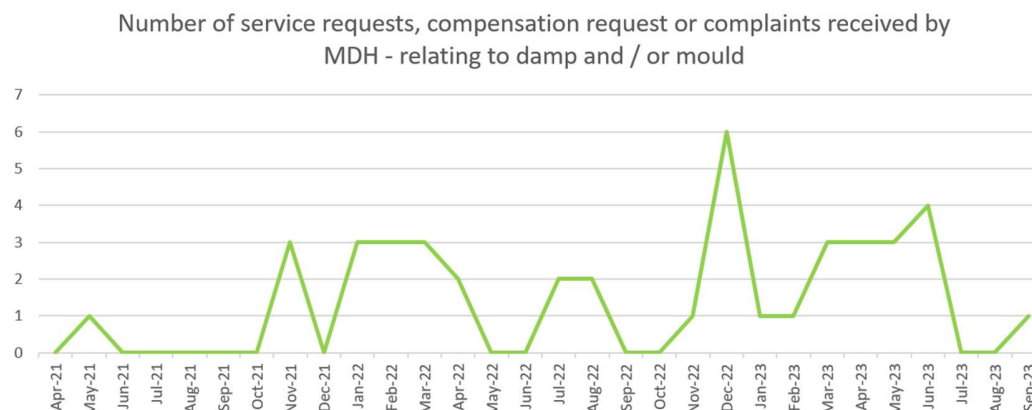
2.19. Key words and interest over time (Google, 2023)



2.20. Reports of damp and/or mould to MDH between 2018-2023



2.21. A breakdown of compensation requests and complaints relating to damp and mould shows that although there has been a slight increase around November 2022, this is not notably different to normal seasonal increases, with January, February and March 2023 seeing less requests than the comparable period in 2022.





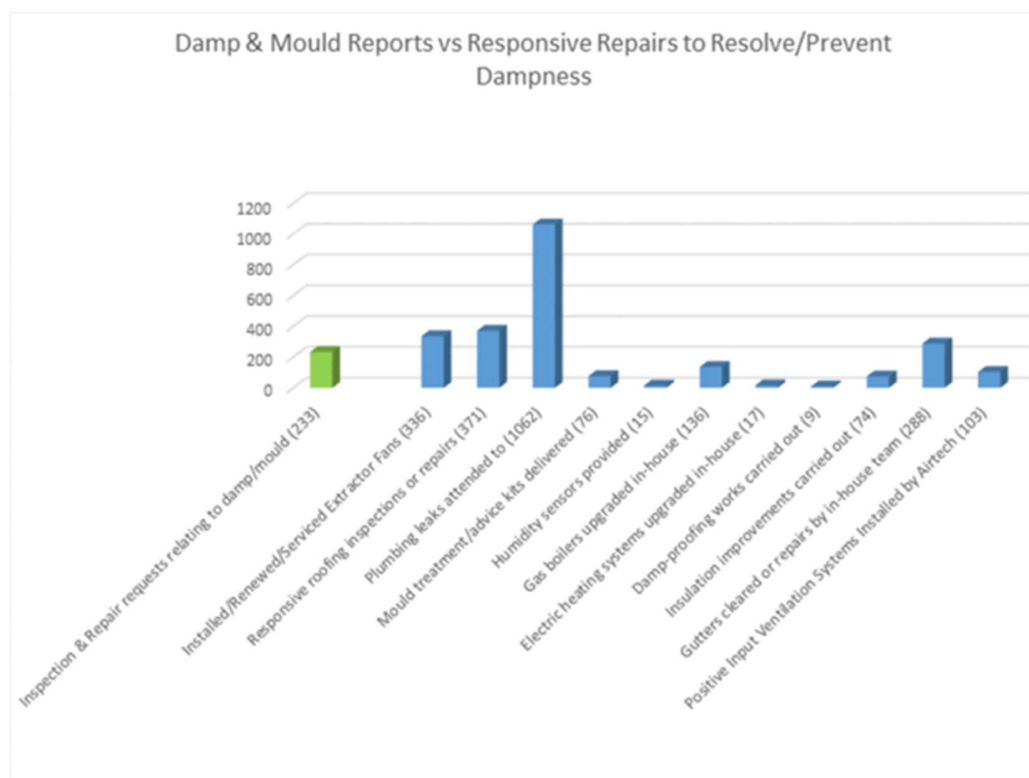
- 2.22. It is worth noting that in relation to Google search trends and also disrepair claims (see figure 2.19 and 16.5), these appear to have returned to normal within a few months, possibly suggesting some level of apathy returning. This highlights the importance of social landlords and legislators maintaining momentum on this issue.
- 2.23. Based on reports of damp and mould being received directly to the MDH repairs service, it appears to be the case that we have been able to keep some momentum, which may be coincidental, or may be as a result of continued social media campaigns, information by post and a project commenced in February 2023 to contact tenants directly to discuss damp and mould. In addition to this, MDH does have robust systems in place to identify and log requests for compensation, formal service requests and complaints, even when they are not expressly reported as this by the tenant. For the purpose of the data explored, 'reports' of damp and mould include proactive reports made by Housing staff, or reports resulting from proactive tenant surveys.
- 2.24. This data also suggests that on the whole, our tenants are more concerned about resolving the damp and mould issues than seeking financial recompense for any damage. This is positive in the sense that the media coverage has highlighted the potential health risks, and it can only be positive that this had led to an increased awareness and ability for MDH to support tenants, and 'find our silence'.

### **3. Recent research on condensation related damp and mould:**

- 3.1. A limited research project carried out by USwitch (USwitch, 2020) suggested that 8.4% of people in the South West of England have mould in their homes. However a 2023 study by Utilita, as published by The Independent Online suggested that 24% of participants had mould, and 21% had damp (The Independent/Utilita, 2023).
- 3.2. The 2023 Utilita study reported that 42% of respondents said that they had decreased the amount of central heating used, and that 24% said that they weren't confident in knowing what caused damp and mould issues.
- 3.3. The Utilita study also found that renters seem to suffer more, with 34% of renters living with mould, compared with 22% of homeowners. In relation to damp, these figures are 27% and 19% respectively.
- 3.4. 'The black mould myth': Whilst it is widely reported that black (or other dark) mould only grows on surfaces affected by condensation, this is not strictly true. Although very unlikely (due to salts, temperature, and other factors), black mould can form on surfaces affected by penetrating or traumatic dampness. It is true that black moulds are almost always associated with condensation related to internal humidity. It is often impacted by cold bridging. This is based on guidance from independent and chartered industry experts. Although there is very little publicly available information to support this, it is well noted in British Standards, Building Research Establishment, RICS publications and Property Care Association guidance.

### **4. MDH Damp and mould reports, inspections and outcomes**

- 4.1. MDH repairs data from between 2018 and 2023 shows that 70% of damp and mould reports are made in the winter months (October – March), and of these, 78% are reported as mould rather than damp.
- 4.2. 572 out of the 24,357 repairs and inspections reported between April 2018 and March 2023 relate to damp and mould, which represents 2.3% of all repairs and inspections. This does not include follow on works relating to damp or mould, nor does it include general leaks or roof leaks.
- 4.3. A separate review was carried out, which looked at all repairs and inspections relating to damp, mould and leaks between 1 April 2022 and 25 March 2023 in MDH stock. The total number of reports was 233. Within the same period, a total of 2487 actions, repairs or improvements were carried out to prevent or resolve these issues. This shows that for every one damp, mould and/or leak report, there are nearly 10 actions to resolve, reduce or prevent it. A further breakdown is included in the table below:



- 4.4. Our data has been further explored, which suggests that for all reports of damp or mould at any time and in any part of the home, including outhouses, the success (resolution) rate is 49%.

## 5. Current damp, mould & condensation procedures

- 5.1. Reporting procedures remain much the same since the last review, however, there has been significant training and tenant contact campaigns to allow all housing officers to identify mould issues and also to encourage tenants to get in touch. Changes include:
  - Crash course in damp and mould for non-technical housing staff.
  - Mandatory damp and mould e-learning for all repairs, housing, and customer service staff.

- Damp and mould online survey.
  - Damp and mould information included with rent statement.
  - Proactive tenant survey project.
  - Mould kit advertisement online and in newsletter.
  - Damp and mould advice during neighbourhood walkabouts.
  - Damp and mould advice video suite.
- 5.2. Tenants calling to report damp or mould for the first time will go through a customer call centre. A scripted system compiled with knowledge from decades of experience in council housing and building pathology will lead to several potential actions or a combination of actions.

The quality of the outcome is, however, very much dependent on the information given by the tenant and the call handler recording it. In principle, the script will help to diagnose and rule out contributing factors such as penetrating damp, leaks, missing insulation, mechanical ventilation issues or rising damp.

- 5.3. A summarised process flow chart showing this is included as Appendix 1 to this document.
- 5.4. Where any 'black' mould is present, a 'mould treatment pack' is offered and delivered to the tenant, often alongside an inspection or repair. Within the mould treatment pack is an advice leaflet. The leaflet advises tenants to call back if after treating mould and following guidance, they still have damp and mould issues. At this point, an inspection is arranged, any appropriate repairs booked and advice for the tenant is given.
- 5.5. Since February 2023, all damp or mould reports where there is no obvious defect, and where there has previously been a mould kit delivered are triaged through to the Technical Support and Repairs Team or Technical Support & Repairs Manager to be reviewed on an individual basis. Where appropriate, tenants are encouraged to send through photos to fast track the diagnosis process and to ensure that repairs are appropriately prioritised.
- 5.6. The general inspection process remains much the same as during the 2022 review.
- 5.7. There is currently little in the way of enforcement of the tenant responsibility side of damp and mould, nor ongoing monitoring or educational support. Based on learning from Luke Brooks' inquest, some improvement in the process of signposting for support would be useful. Up until recently, the focus has been on property condition and breach of tenancy, however, a more empathetic approach may work more effectively, for example by highlighting our concerns about health and wellbeing.

## **6. In-home diagnosis methods and tools**

- 6.1. Our current diagnosis methods consist of:
- Visual indicators and observations

- Resistance / capacitance meter readings – used only as a tool to determine if a wall is dry or if there is a possible issue. In line with guidance, high readings might not indicate damp, as the readings indicate high electrical conductivity, which could relate to moisture content, but could also be impacted by foil backed plasterboard, cabling, or salts.
  - MDH does now use salts analysis and calcium carbide testing where appropriate to confirm diagnoses. Where the cause of damp is complex or disputed, MDH also use specialist and independent surveyors
  - Since early 2023, MDH began carrying out hygro-thermal readings routinely during damp and mould inspections to determine whether condensation is a factor, where the dew points are being met, what the humidity is and what might be contributing to each of these.
  - Since early 2023 MDH has supplied electricians and inspectors with digital anemometers to accurately determine whether extractor fans are functioning well, rather than relying on more rudimentary checks implemented previously.
  - August 2023 saw the introduction of floor hygrometers, largely in response to suspected dampness in the concrete floor slabs of homes constructed before 1970, which may have no formal damp proof membrane.
- 6.2. Due to budget consideration, we work through a process of elimination, rather than carrying out major works before diagnosing simple fixes. This is in line with the RICS, Historic England and PCA Joint Position Statement, which outlines that building surveyors should: *Understand that dealing with damp is often a staged process. Recognise how to deal with the obvious defects first (including, for example, matters such as ventilation, ground levels and lifestyle). Then, allow a period for monitoring and natural evaporation, and reassess before moving on to other treatments. [...] that where the survey terms require recommendations for remedial works, they must be proportionate to the defect and the significance of the building.* (RICS, PCA, Historic England, 2022)
- 6.3. The impact of condensation on diagnosis can be significant, especially in cases of extreme condensation. We have seen cases in buildings with no defects, of condensation presenting as significant roof leaks. Over a long period, this could deteriorate the condition of the fabric of the building and can easily lead to electrical resistance readings well into the ‘wet’ zone.
- 6.4. MDH surveyors and inspectors follow methodology set out within Building Research Establishment guides:
- GR 33 1 – 3 - Assessing moisture in building materials
  - GR 5 – Diagnosing the causes of dampness
  - GR 7 – Treating condensation in houses
  - GR 8 – Treating rain penetration in houses
  - GR 6 – Treating rising damp in houses

- 6.5. In addition to this, MDH surveyors and inspectors also follow methodology and standards set out in the following documents:
- RICS, Historic England and PCA Joint Position Statement - Investigation of moisture and its effects in traditional buildings
  - BS 5250: Code of practice for controlling condensation in buildings
  - Property Care Association code of practice
- 6.6. An interpreted summary of these documents, best practice, has been converted into a diagnosis flow chart, set out in Appendix 2 of this document.

## **7. Mould treatments by MDH**

- 7.1. The MDH tenancy agreement sets out that whilst MDH is responsible for keeping the structure in repair, the tenant is responsible for mould treatment and redecoration. This is supported by legislation and there is more than one example of judges ruling in a landlord's favour in this regard (disrepair claim matters).
- 7.2. There are occasions where MDH will carry out mould treatments, mostly where there has been a defect which has significantly increased the moisture content of the structure or led to increased humidity.
- 7.3. In the past, MDH would also offer mould treatments free of charge where there is no defect, but the tenant is vulnerable or disabled.
- 7.4. Reviewing data from the period between 2018 and 2022, we have reviewed the success of mould treatments carried out by MDH, based on recurrence of mould in the months or years following treatment. The overall success rate was 44%.
- 7.5. Breaking this down further to mould treatments where there was a defect and this was resolved, the mould treatment success rate was 86%.
- 7.6. Where there was no defect and the cause was purely condensation, the success rate of MDH mould treatment was 18%.
- 7.7. Where MDH contacted or re-visited homes with returning mould following MDH treatment, it is consistently the case that issues relating to use of the home remain present, for example extractor fans being isolated, heating not being used, window trickle vents being shut, rooms being exceptionally cluttered or wet room doors having been removed. In other cases, overcrowding, severe mobility or mental health needs continue to impact upon the presence of mould.
- 7.8. MDH have moved away from carrying out free of charge mould treatments where there is no defect on the basis that the evidence suggests that this is less successful than the provision of advice and a mould kit. Speaking to tenants who have had mould return following MDH treatment, we have regularly been told things such as:

*“There must be a structural problem, otherwise you wouldn’t have treated the mould last time, so it’s not to do with condensation”*

*“I shouldn’t have to treat mould [on window cill, glass and PVC window]. I cleaned the window around 12 months ago and this should be often enough, there must be a defect. I don’t open the window in this room [child’s bedroom] because it’s too cold, and if I’m cold, the children must be cold. It’s cold now.” (the temperature was 23°C)*

*“It did start as small amounts, but if I leave it to get worse, the Council will come and do it for me”*

*“I shouldn’t have to treat mould upstairs, because it relates to rising damp”*

In a slightly different case following an unsuccessful legal disrepair claim relating to mould with no defect, a tenant agreed to have a positive input ventilation system fitted. When this was followed up, the tenant agreed that the mould had not returned on walls or furniture, however stated that this was because it was extracting moisture from the walls and that this proved that there was penetrating dampness. The tenant advised that they would look to turn the system off, in order to let the mould return so that the Council could continue to treat it.

This paints a bleak picture, however, comparing this with feedback relating to ventilation improvements, the difference in how tenants feel about the work and their landlord is stark.

- 7.9. Where the cause does not relate to penetrating dampness, treating mould will normally resolve the visual symptoms for a period of 2 weeks up to 9 months. The mould treatment will temporarily reduce the risk of harm to health; however, mould will often remain on furniture and carpets. Treating the mould will not address the high humidity, which, in excess of 60% on a regular basis is detrimental to respiratory health. Treating the mould also does not resolve the associated elevated levels of volatile organic compounds, carbon dioxide (CO<sub>2</sub>) or dust mite risk.
- 7.10. The cost of mould treatment and redecoration often well exceeds the costs associated with ventilation or thermal improvements, and with limited budgets MDH has taken the approach that it is preferable to allocate any additional funding to ventilation improvements above the minimum standards, when compared carrying out tenant responsibility mould treatments.

## **8. Mould Treatment Pack Overhaul**

- 8.1. Mould packs supplied by MDH are designed to support tenants in their duty to clean their homes and treat mould, in recognition that many tenants may disagree that it is their responsibility or may not have funds available to purchase specialist treatment on top of their normal cleaning budget.
- 8.2. For at least 8 years up until the end of May 2023, an externally sourced ‘Mould Treatment Pack’ has been supplied and delivered free of charge and contained: Two-part fungicidal treatment (Bactdet and Halophen), Fungicidal additive for paint, Gloves, Safety goggles, A paint brush, A Bucket, The MDDC Damp, Mould & Condensation Guidance Leaflet.

- 8.3. Based on 5 year follow up checks and surveys for tenants receiving mould packs in 2018-19, the provision of the kit and guidance alone had around a maximum 46% success rate in resolving mould issues, and a similar success rate for those receiving a mould kit combined with remedial works.
- 8.4. In increased cases, MDH inspectors were finding that the mould kits were being accepted, but not being used by tenants, with common reasons provided being:
- Tenants physically unable to apply the treatment
  - Tenants concerned about the health risk of applying the treatment
  - Tenants not feeling confident that it will work
  - Tenants not agreeing that it is their responsibility
  - Tenants feeling that the treatment method is inconvenient.
- 8.5. Having taken this on board and considering the lessons learnt from Awaab and Luke's deaths, over the 2022/23 winter period, MDH have considered what a more successful 'mould pack' might include. The main change considered is the move toward providing solutions to prevent mould from returning completely, as well as providing the treatment for existing mould. As such, the new 'MDH Mould Pack' includes:
- New MDH Damp and Mould Guide/Workbook
  - Easy to apply household brand mould and mildew spray
  - Gloves and cloths
  - Mini hygrometer / thermometer with 'healthy humidity indicator'
  - Disposable moisture trap (optional extra where furniture is affected)
- 8.6. This new pack was implemented mid-June 2023.
- 8.7. The idea is that combined with the new format guide, the mini hygrometer will help tenants to recognise the causes of mould and identify early warning signs, prompting them to take action when high humidity is detected. Before a mould pack is sent out, MDH teams will have already ensured that there is adequate mechanical ventilation in the home. The device, which also measures temperature, helps the tenant to identify if the heating is ineffective, especially for those tenants with electric heating and no central thermostat.
- 8.8. Success of this new pack will be determined by reviewing mould resolution rates against the previous 46% success rate, as well as by reviewing tenant feedback. This should be reviewed no sooner than June 2024.
- 8.9. The diagnostic scripting system is designed so that this pack should not go to tenants if the cause of dampness is more likely to relate to a leak or other building defect.

## **9. Effective mould treatments**

- 9.1. There is much debate amongst professionals and consumers in relation to the most and least effective treatments for surface mould.

- 9.2. Aside from the obvious caveat that prevention is better than cure, MDH has advised for many years that the most effective treatment is a fungicidal treatment, and advises against the use of bleach, while many landlords do advise a bleach treatment. Other landlords feel that many fungicidal treatments are of limited value and are looking to use a hydrogen-peroxide fogging system, similar to that used in medical environments.
- 9.3. There appears to be only one industry recommended treatment, distributed by one manufacturer. This is generally the only treatment recommended by surveyors and has historically been used by housing providers. It is COPR 1986 approved for commercial and DIY use. Anecdotally, our operatives and tenants have found little success with this treatment, where success has been found with general household brand mould and mildew sprays. In terms of use as a DIY product, the standard mould treatment kit supplied by the manufacturer involves some effort, which many tenants are unwilling or unable to make. In this regard, a mould treatment which is too complicated or difficult to use is practically ineffective, even if the product itself were effective. Feedback from some other housing providers supports this view.
- 9.4. We were able to find a study into effective treatments for permeable finishes. It only tested steam cleaning, gamma irradiation and a detergent/bleach mix, however found that the detergent/bleach mix as the most successful: '*The washing technique completely inactivated or removed spores on all materials except for C. globosum, which was reduced on all items except paper ( $p < 0.05$ ). Washing inactivated all mycotoxins on paper and cloth but not on carpet or untreated wood ( $p < 0.001$ ).*' (S. C. Wilson, 2010) This is useful, but it would be interesting to see the results of other treatments, such as vinegar or fungicides.
- 9.5. In a perfect world, mould treatment would be carried out by a mould remedial specialist, however, given that mould treatment is rarely a landlord responsibility in our homes, and factoring in the low rents and generally low incomes, this is unlikely to be financially feasible. In this regard, it is important that mould treatment is carried out as early, safely and as effectively as possible in order to reduce risk to occupants.
- 9.6. There is also the consideration of the environment and those with sensitivities to harsh chemicals, and whether there are natural alternatives. Tee tree oil, clove oil or vinegar are cited as potentially effective alternatives, as they may disrupt the PH balance required for mould growth. Hydrogen-peroxide is also non-toxic, although is an unstable chemical in terms of storage.
- 9.7. Anecdotally, our tenants have been able to provide some useful insights, with those having the most success in treating mould permanently reporting use of household mould and mildew sprays, with HG, Dettol and Cillit Bang being the most popular. On the other hand, bleach appears to be the most consistently reported treatment leading to mould becoming significantly worse between treatments and returning more quickly each time.
- 9.8. Several online sources do clarify that bleach is only effective as a mould treatment on non-porous surfaces, with a number of sites claiming that vinegar may be effective as a treatment for 80% of moulds, even on porous surfaces.



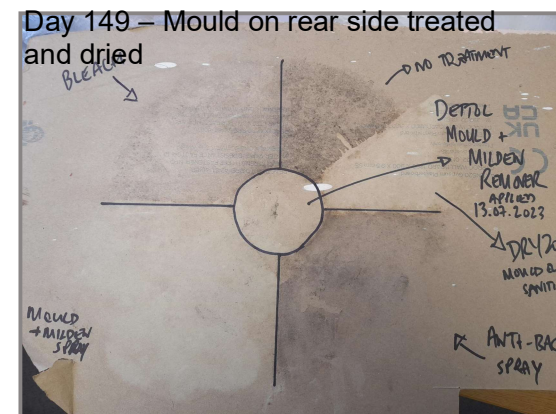
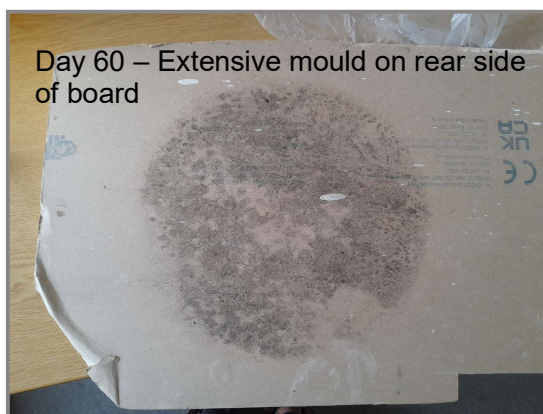
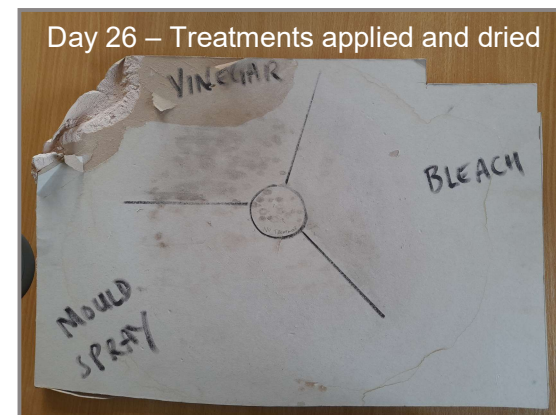
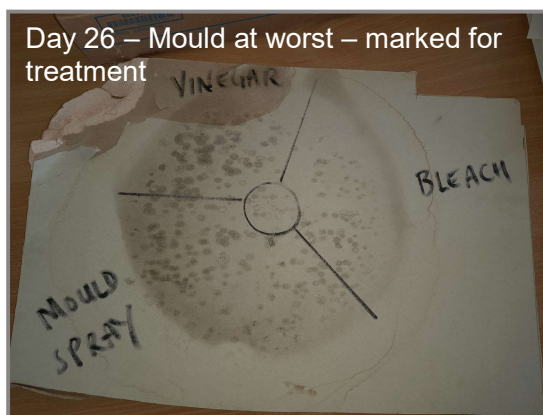
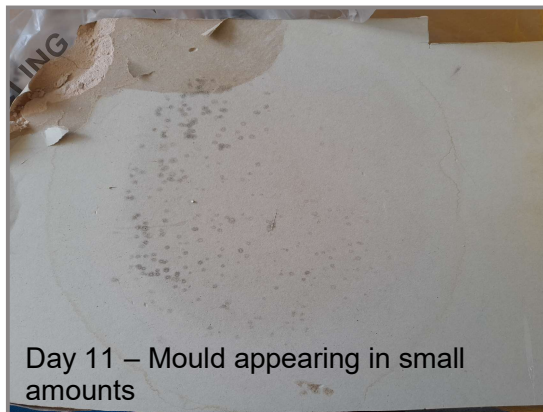
- 9.9. Mycologist Heike Neumeister-Kemp advises that: *“It’s been proven that harsh chemicals such as bleach and ammonia aren’t effective in removing mould. The problem with bleach is that it does nothing to remove the mould instead. It bleaches the colour of the mould, giving the illusion of a mould free surface.” “The fungi contain melanin, and the bleach just takes the colour out, but the fungi are still there, you are just masking it.” “Six weeks later it appears to come back, but it was never gone”* She recommends a vinegar solution to break down the fungi. *“The vinegar attacks the fungi mechanically”, she said “so it actually, via osmosis, penetrates into the structure and explodes it so you actually kill the fungi”.* (Gamble, 2022)
- 9.10. Mould growth will generally form in patterns consistent with thermal bridges, such as those seen in the image on the left. Note the classic crescent shape, as well as the mark on the carpet indicating the presence of furniture close to this wall in a corresponding area. This is what we would expect to see in untreated mould, and in mould previously treated with fungicidal treatment. The photo on the right shows one thermal bridge around the concrete lintel, however the mould is evenly and widely spread over all wall surfaces, including the surface of boxing. There are visible wipe marks. This is indicative of a room which has been ‘treated’ at least once with a bleach solution. Anecdotally, this will bleach the spores, but not kill them, and spreads the spores further around the room during each ‘treatment’. It also seems to feed the mould and worsen the symptoms in general. This is supported by scientific reports.



- 9.11. We carried out a rudimentary experiment in our repairs depot which involved creating an artificial version of the conditions we see in some of our homes, to see what could be learned. A sheet of dry plasterboard was placed in an environment with no direct contact with water, but periods of high humidity. The humidity fluctuated from 50% most of the time, to above 70% RHI for periods of around 2 hours per day. This is consistent with, or less humid than many of the environments we see during regular mould inspections. The temperature of the plasterboard and air remained relatively consistent, at around 21°C. Black spot mould began to form within 12 days.

- 9.12. Despite starting as a dry section of board, measuring 7.5% wood moisture equivalent (WME), by day 12, the first 1-2mm of board had become damp, with readings of 54% WME. By day 18, this had increased to 61%WME. This is despite never having been in direct contact with a water source other than air borne.
- 9.13. We most commonly see mould forming on known cold spots, or thermal bridges in homes, such as uninsulated concrete lintels, walls backing unheated communal hallways or ceilings below patches of disturbed insulation. This experiment demonstrates that with sufficiently high humidity, mould will form even on the most well insulated and well heated surface, highlighting the importance investment in moisture extraction and ventilation.
- 9.14. Sections of the same board were treated with bleach, household mould/mildew spray and a cleaning vinegar. Both the bleach and the household mould and mildew spray removed most of the visible mould staining, whilst the vinegar solution left some clear mould staining.
- 9.15. 31 days after treatment, with similar fluctuations in high humidity, the mould had not returned on any of the treated sections of the board, however, there was also no further mould growth on the untreated section.
- 9.16. Interestingly, while there was no new mould growth on the side of the board directly exposed to the high humidity, the back side of the board had begun to show significant mould growth. There are several explanations for this, including:
- Due to changes in the temperature, humidity and vapour pressure affecting the board caused by long term exposure to moisture, the dew point may have moved to the back of the board.
  - The board and water source were wrapped in plastic sheeting to trap in the humidity for longer period, so the top side of the board was also exposed to high humidity, however, it is worth noting that the mould pattern followed the shape of the bucket completely, even on the back side.
  - The underside of the board was likely warmer than the back side, supporting the view that the dew point would be on the rear of the board. The plaster is permeable.
- 9.17. Sections of the other side of the board were treated with bleach, Dettol mould and mildew spray, a two part Dry-Zone treatment and an anti-bacterial spray.

## 9.18. Photos



9.19. A number of factors influenced the experiment, leading to conditions differing to that which we might find in our homes. We will likely repeat the experiment with greater controls to support better learning, and also include Bactdet/Halophen. What the experiment did suggest it is that:

- Widespread and extreme mould can form in the absence of any structural defect or cold bridge if humidity levels are sufficiently high.
- Surface condensation can lead to wetting of a building material, measurable with an electrical moisture meter (more than 60% WME or 999 REL), which in the home environment could be misdiagnosed as rising, traumatic or penetrating dampness.

- Bleach appears to be ineffective as a mould treatment
- Vinegar may be effective as a mould treatment but may be more likely to require redecoration to resolve staining, alternative non-toxic options should be explored.
- General anti-bacterial products are ineffective at removing the appearance of mould, or prevent its return.
- Household mould and mildew sprays appear to be an effective method of removing the appearance of mould, as well as preventing or slowing its return.
- Even with the most effective treatment used (household mould and mildew spray), the mould returned after a period of just less than 8 weeks, due to the conditions remaining the same.

9.20. On 7 September 2023, a government guidance report titled 'Understanding and addressing the health risks of damp and mould in the home' was published, which states that:

9.21. *Mould can be removed from hard surfaces with an appropriate cleaning product and should be left to dry completely. Mould and mildew products should be used in preference to bleach, for health and safety reasons. Absorbent materials such as carpets, soft furnishings and ceiling tiles may have to be thrown away if they become mouldy, as it may be difficult or impossible to remove the mould completely. While most tenants could reasonably be expected to remove condensation and very small amounts of mould using an appropriate mould and mildew cleaner, larger areas of mould should only be addressed by qualified professionals. [...] Tenant management of condensation and small amounts of mould should not be a substitute for assessing and addressing the underlying issue, which should always be the priority.*

*Landlords should work with tenants to understand how best to address the issue collaboratively and prevent future recurrence. Landlords should note that some tenants may struggle to live independently and therefore may also struggle to support a cleaning regime after mould has been identified. Building relationships with other professionals supporting tenants may therefore be helpful. (UK Government, 2023)*

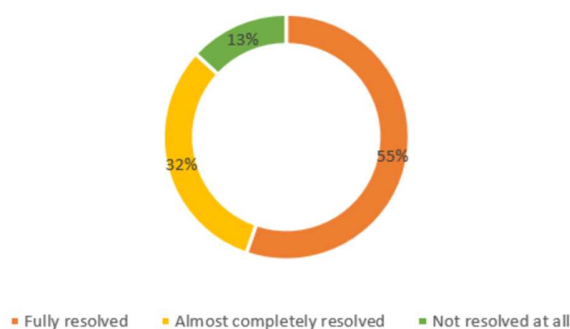
## **10. Positive input ventilation – success rates (updated)**

- 10.1. The PIV system install programme remains one of MDH's biggest successes in relation to supporting tenants with reducing condensation dampness, with 87% of households seeing eradication of mould or significant improvements.
- 10.2. The Building Research Establishment (BRE) published the results of a study of positive input ventilation in 1998, which generally demonstrated that the systems were effective, however had varying results in occupied homes. This was a small study, looking at only 10 homes. Further details were noted in our 2022 review.
- 10.3. Between the start of the MDH project in early 2021 and October 2023, around 268 properties experiencing mould issues had been referred for survey by an external company (Airtech), with a view to assessing for improvement works. The improvement works included new mechanical extractor fans and positive input ventilation systems. Of these, 193 were recommended a PIV,

and at least 148 have been fitted with a PIV unit, with other ventilation improvements also made in other cases, for example new or upgraded mechanical extractor fans.

- 10.4. Having contacted tenants who had PIV units installed the success rate seems to be increasing since the 2022 review. 55% of the 40 respondents said that the mould issues had been completely resolved, with a further 32% saying that it was almost completely resolved. This success rate is a further improvement to those reported in the 2022 review, demonstrating that it may take some time for elevated levels of condensation to become controlled. The remaining 13% stated that they saw no improvement; of this percentage, 40% had not treated the mould prior to the installation, 20% explained that they were impacted by overcrowding, and 40% felt that there were further structural issues to be resolved.
- 10.5. In terms of cost of running these units, with the heater off, they can cost as little as 2p per day to run, or £7.30 per year. Whilst many tenants are understandably concerned about the cost of running any electrical items, MDH does source the most efficient units and extractor fans possible. MDH also endeavors to highlight to tenants the comparatively high costs of mould treatment, redecoration, damage to personal belongings and also to health.

PIV install success rate (condensation and mould control)



- 10.6. Feedback and scoring from tenants include\* :

- 5/10 to 1/10 – ‘We can see a vast difference’
- 10/10 – 1/10 – ‘There was a dreadful situation with mould, damp, ‘mushrooms’. Definitely recommend. After adjustment of the unit (too high) it works perfectly – quiet – hidden away. Thank you for tackling this job. My bungalow was unhealthy for me, as I’m disabled with asthma and other severe medical conditions. NOW, what a difference! Yes there are still spots of mould but that’s expected with an older property’
- 5 / 10 – 0 / 10 – ‘It seems to work!’
- 10 / 10 – 2 / 10 – ‘Lot better for my health. Very good service, thank you.’
- 8 / 10 – 0 or 1 / 10 – ‘Works well – can feel the air circulation – near the unit. Nice easy process, so far, so good’
- 7 / 10 – 0 / 10 – ‘Improvement in partner’s breathing. Better health for my partner. This machine should be fitted where there is asthma’
- 6 / 10 – 1 / 10 – ‘Seems to have stopped condensation forming on windows. Very tidy work’

- 8 / 10 – 2 / 10 – ‘Good at removing mould and condensation. Still some mould in bathroom in ground around tiles. No better/worse since installation’
- 10 / 10 - 0 / 10 – ‘There is no damp or mould’
- 8 / 10 – 0 / 10 – It seems to be working really well. Efficient, friendly and helpful. Airtech were easy to deal with. No mould in our house since fitting’

\*Scores out of 10 are a tenant perception score of extent and spread of mould before and after PIV install where 0 is no mould and 10 is extreme mould.

## 11. Thermal improvements – benefits, drawbacks, and key considerations (updated)

- 11.1. By comparison to other methods of reducing condensation in homes, thermal improvements are generally the most expensive and disruptive works. Thermal improvements tend to comprise of wall insulation, floor insulation or loft insulation.
- 11.2. There are clear benefits to these works in most cases, including a reduction in heating costs, increased thermal comfort and a reduction or elimination of black mould affecting walls.
- 11.3. Based on data taken from properties with internal insulation fitted between 2015 and 2021, recurrence of damp and mould issues post-fitting indicate that this method of insulation has a potential 57% success rate.
- 11.4. In many cases, however, we have seen that without prior improvement to excessive occupant related moisture, moisture has moved from walls and ceilings to other areas, such as soft furnishings, carpets, furniture, and clothes. Whilst it may be frustrating for tenants, this has led to our current approach that these improvements must be preceded by ventilation and use of property changes. In many cases, the thermal improvements may not be needed at all, or without urgency.

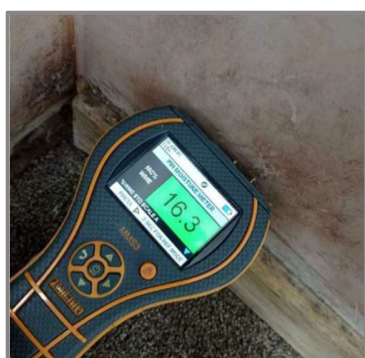


Image 1. Mould growth on the surface of a recently thermal boarded (foil backed) wall, testing as structurally dry. The skirting was also found to be dry, and the cavity sufficiently filled and free of debris. The high internal humidity, which was the primary cause of moisture had not been sufficiently resolved, and so mould persisted. Carpet also has become affected by mildew. A PIV had resolved issues in other rooms, the bedroom door, net curtains and trickle vents kept closed.

- 11.5. In a similar scenario, in Winter 2022 MDH were contacted by a tenant who was experiencing symptoms described as ‘water pouring from the ceiling’ and ‘leaking windows’. Further questioning highlighted that there had been no recent rain, and the windows were very newly installed.
- 11.6. Whilst arrangements were made to check for any issues in the roof and to check the fit of the new windows, the tenants were advised about the possibility of the cause of moisture relating to

condensation. This led to a discussion about the increased cost of heating, cost of living and the possibility of fuel poverty.

- 11.7. The checks confirmed that there was no roof or window leak, and that the loft was evenly insulated. The combination of the draught proofing of the new windows and the cost-of-living crisis appears to have been the cause of this quite severe presentation of dampness.



- 11.8. Whilst it does remain a tenant responsibility to manage condensation, as a responsible landlord, in this instance, MDH were able to assist with the following actions:

- refer the tenants to financial support.
- provide guidance.
- provide a mini hygrometer to monitor the temperature and humidity.
- arrange for further ventilation improvements (PIV).
- follow up in next winter period.
- check the radiator sizing in the bedroom.

- 11.9. That said, any success in this case will be significantly influenced by the tenants, who in this case had a good understanding of the causes of condensation, are engaged as tenants and also have a generally good relationship with MDH as a landlord. This is often not the case, and advice can often be met with resistance.

- 11.10. In a conference [paper](#) published by the Budapest University of Technology and Economics, the various models of thermal bridges are clearly illustrated and described.

- 11.11. *The thermal bridge is a part of the building structure, where comparing to average heat-flow of surrounding elements, there is a distinct, multi-dimensional heat-flow, i.e., the gradient of heat-flow changes. The easiest way to recognize a thermal bridge zone is the detection of the change of surface temperature and the relative change of slope of isothermal lines within the structure. The most easily identifiable type of thermal bridge, the geometrical thermal bridge is developed, where the geometry or shape of the building structure changes. There is a geometrical thermal bridge at a wall corner, at all overhanging structural elements, at the elements connecting in different angles, and the change of sizes of identical structural elements (fig.1.a). Where the material of a building structure changes but the geometry does not, there is material thermal*

bridge. Common example is a pillar in a wall made of different material, but with the thickness of the wall (fig.1.b). In case of structural thermal bridge, both mentioned types are simultaneously occurred. Structural thermal bridges are e.g. penetrations, openings, holes. A slab of a cantilevered balcony, or the penetrations of mechanical pipes are examples for this type (fig.1.c).

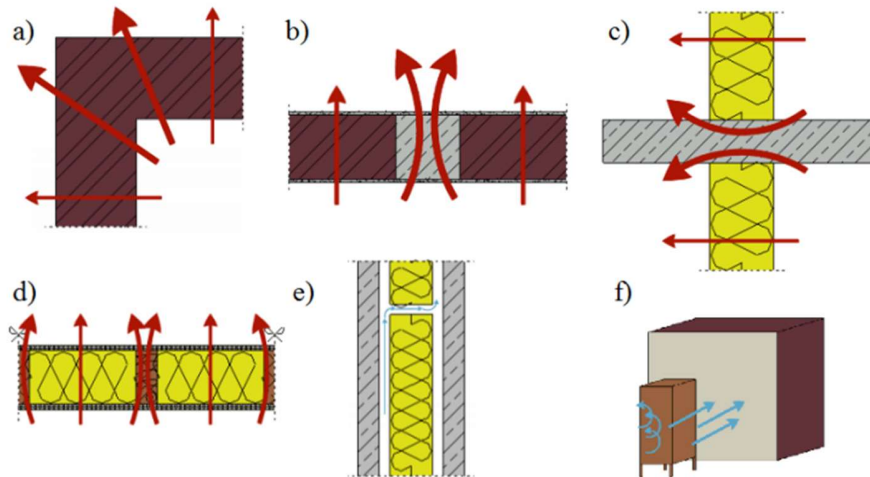


Figure 1. Types of thermal bridges, a) Geometrical, b) Material, c) Structural, d) Periodically repeating, e) Convective, f) Environmental dependent

Due to their frequent occurrence, it is worth dealing with periodical thermal bridges separately, that are repeated regularly according to a well-defined pattern within a structural element. Therefore, in practice, during the calculation of heat losses, it is calculated as it would be one-dimensional heat-flow. The effect of thermal bridges is taken into consideration by increasing the average thermal transfer coefficients of structures. Common example is the frame structure of walls, or the rafters of a pitched roof (fig.1.d). The unplanned air movements within a structure is called convective thermal bridge [6]. The air convection may increase the filtration heat losses, moreover, the thermal conductivity of materials contacting with the airflow having different temperature and humidity can also change. Examples for convective thermal bridges are the gaps within a building structure, inaccuracies of construction joints (fig.1.e). It is possible, that thermal bridges are developed due to not the structure, but different environmental impacts. Due to environmental differences, surface resistances are different, since the air velocity may differ. (It influences the convective heat transfer coefficient.) It is also possible, that a wall section is exposed to different radiations (or at another section, the identical radiation is shaded), consequently the elements with different surface temperatures have different radiation heat transfer coefficients. If a heater device is installed or a furniture is placed in front of a wall section, such thermal bridges can be created easily. These effects are not considered in international standards; however, the Hungarian MSZ-04-140-2:1991 standard, which was withdrawn in 2012 January, recommends 30-50% decrease of the thermal transfer coefficient due to the effect of furniture (fig.1.f)' (Nagy, 2014)

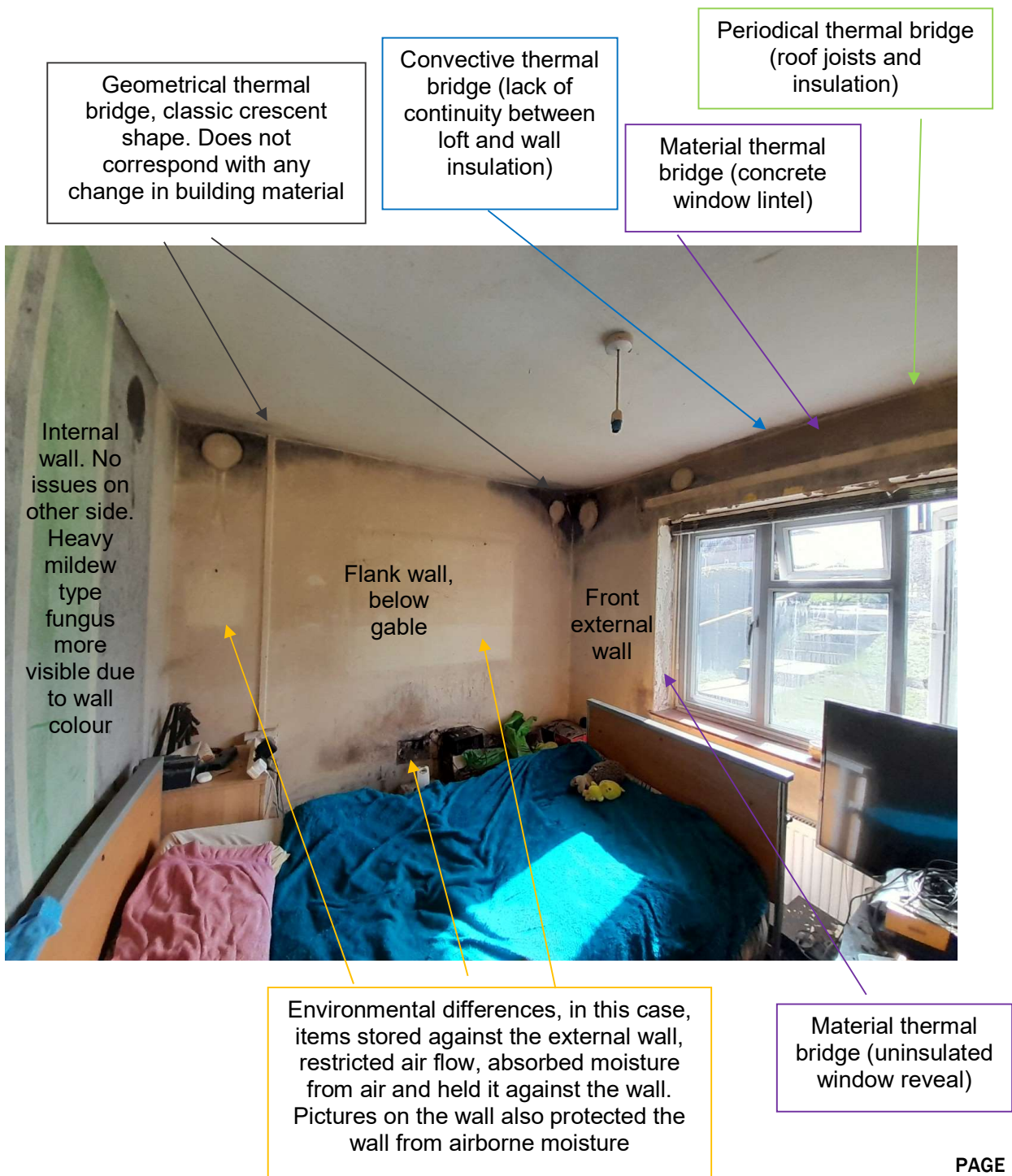
11.12. Whilst this is somewhat technical, we will see this in practice during most mould inspections. In disrepair claims, there is almost always the assertion that that a structural thermal bridge or insulation defect exists, when this might not always be the case. These assertions can delay resolutions and waste resources on unnecessary remedial works. That said, investigation works,



such as cavity wall and roof insulation checks will always be valuable and should always be considered.

11.13. In a fairly extreme example of a property inspected in 2023, a number of these thermal bridges can be seen. Due to the extreme presentation and spread of mould and mildew, on a number of surfaces, it is possible to identify these common bridges.

11.14.



- 11.15. This example is the same property studied and noted in 15.8 of this report, which further highlights the significance of a lack of ventilation in homes and the benefits of resolving such issues. In this example, it was not the lack of provision of ventilation, but the lack of use. This was heavily impacted by socio-economic issues.
- 11.16. This highlights that the management of condensation related damp and mould is as much an economic and societal issue as it is a building issue, if not more so. Not every landlord will have the resources to fully manage this issue, especially where there is resistance from a tenant or household. MDH's stance is to demonstrate that it has investigated external sources, offered ventilation improvements, and offered support and advice in relation to sources of moisture associated with use of the property.
- 11.17. This is already well established in PAS 2030 and PAS 2035, which highlights the importance of considering the whole home, the occupant, thermal properties, and ventilation needs. It is important to recognise that in responding to mould issues in homes, it will rarely be possible to instantly carry out a whole house retrofit and as such, the risks of knee-jerk spot insulation works should be considered, so as not to carry out works which may increase the mould risk.

## 12. Meaningful Data Collection and Risk Assessment

- 12.1. The MDH 2022 Damp and Mould Review suggested some commonly accepted factors in risk of damp and mould.
- 12.2. Since this review we have also observed that bungalows appear to have been disproportionately affected by damp and mould during the 2022-23 winter period.
- 12.3. The 2022 report did allude to the fact that whilst these assumptions are based on knowledge of construction types, thermal values and resistance to moisture, there were many anomalies. The report showed examples of whole streets that should be at higher risk yet had no history of damp or mould. Equally we can see patterns of properties which should be at very low risk of developing damp and mould that are disproportionately affected.
- 12.4. MDH has not previously routinely recorded or reported on Housing Health and Safety Rating System (HHSRS) risks to any significant extent, relying instead on general asset management and repairs history data to qualify and quantify risk. The new Tenant Satisfaction Measures set by the Housing Regulator means that all social landlords will be required to record and report on some of these risks by end of March 2024.
- 12.5. MDH is committed to ensuring that the opportunity is taken to gather and supply the most accurate and meaningful data into these reports, and has commenced a programme of data analysis, combined with tenant surveys.
- 12.6. As noted by Joanne Kearsley in her report to prevent future deaths '*The HHSRS data sheet relating to damp and mould, is used to calculate risks of the incident and the spread of harm is not reflective of the current known risks of damp and mould and harm to health.*'

- 12.7. Although the HHSRS considers the risks to the most vulnerable group (under 14 years old), it is generally an assessment of the risks posed by the building, and not by the conditions or occupancy. The assessment criteria also allow for significant amounts of assessor interpretation, meaning that assessments carried out by different assessors could vary greatly.
- 12.8. MDH is responsive to significant disrepair, and as a result of this, any hazards are normally resolved before there is a feasible opportunity to record any change in hazard level.
- 12.9. A tenant survey project commenced in February 2023, with a view to surveying at least 10% of tenants by May 2023. This was achieved and has enabled us to focus on the higher risk household or properties first, before continuing to build home and household profiles over the following 6 months. This will continue and will form a register of the prevalence of damp and mould, and allow the service to add flags to the properties or households most at risk of suffering from damp and mould. This data can be used to allocate funding based on the greatest risk and to continue monitoring homes as improvements are made and advice provided. By October 2023, 16% of properties (focusing on key properties) had a tenant survey completed. We also pulled historic data from 26% of properties which had historic reports of damp or mould (765 individual statuses).
- 12.10. The data will also be used to form meaningful risk ratings for HHSRS assessments, by comparing the actual prevalence of damp and mould in homes against varying components and characteristics of the property, considering risk factors such as:
- Bungalows (increased heat loss through floors and ceilings)
  - Ground floor flats (increased heat loss from solid floors)
  - Solid walls (risk of moisture ingress through walls)
  - Narrow cavity walls (poorer thermal properties, increase risk of cavity fill failure)
  - Bradstone block construction (more likely to be a narrow cavity)
  - Cornish units with limited space for mechanical extraction (increased moisture in home, more reliance on physical ventilation)
  - Properties with uninsulated canted ceilings or vertical wall tiling (poorer thermal properties and cold spots)
  - Properties less than EPC C
  - Homes with electric storage heating (less ability to have controllable background heating, less affordable)
  - Pre-1970s properties which may not have a damp proof membrane.
  - Pre-2010 properties which do not meet the most up to date building standards
  - Properties built without cavity walls (solid, rat trap bond or single skin)
- 12.11. Early indications suggest that some of these risk factors are much less significant than others, and in some cases, prevalence of damp and mould are not consistent with expected risk levels at all.
- 12.12. The data has and will continue to help us understand and monitor our performance in resolving damp and mould issues, as well as what has been leading to success.

12.13. An example of some of the data collected and compared is shown below:

Is there damp or mould?	Has there been damp or mould in the past 12 months?	Notes	Genre	Dwell	Year	W/all struct	DHS: Ov	EPC Rtg	RDSAP 2	Boiler: by	Bc	Other heat
no	yes	Airtick fitted PIV in 2022 - no reports since	Traditional	Bungalow	1970	Brick cavity(mf)	Potentially ac	B	Filled cavity	Gas Boiler (C)	2007	N/A
yes	yes	Fan survey carried out. Not possible to fit in kitchen. Airtick fan in bathroom. Possible defect on guttering or fascia - raised. Follow up after this.	Traditional	Bungalow	1970	Brick cavity(mf)	Potentially ac	B	Filled cavity	Combi Gas B	2019	N/A
no	yes	PIV FITTED - 1710 - 0/10 mould. Works well. Resolved - Completed resolved issues	Traditional	Bungalow	1970	Brick cavity(mf)	Potentially ac	B	Filled cavity	Combi Gas B	2019	N/A
no	yes	Resolved - For 1710-0or1710. Works well, can feel air circulation around the unit, so far so good. Noted that there is still a structural issue. FOLLOW UP	Traditional	Bungalow	1970	Brick cavity(mf)	Potentially ac	B	Filled cavity	Combi Gas B	2019	N/A
no	yes	07/10/2022 - damp mould reported in bedroom FOLLOW UP	Traditional	Bungalow	1952	Brick cavity(mf)	Potentially ac	D	Filled cavity	Solid Open (V)	2002	Solid fuel
no	yes	Mould at void 2023 - treated. New floor screed and plastering	Traditional	Bungalow	1965	Brick cavity(mf)	Potentially ac	B	Filled cavity	Gas Boiler (C)	2011	N/A
yes	yes	PIV FITTED - Unresolved - Still smells very damp. Lounge wall still gets wet even though my brother treated it with mould spray and damp treat paint. Follow up	Traditional	Bungalow	1965	Brick cavity(mf)	Potentially ac	B	Filled cavity	Gas Boiler (C)	2012	N/A
yes	no	Checked during MEX.	Traditional	Bungalow	1965	Timber Framed	Potentially ac	D	As built	Gas Boiler (C)	2012	N/A
yes	yes	Condensation related mould, some issues with clutter. Heating upgrade and PIV offered and refused. Specialist survey carried out and disrepair closed as both surveys agreed no defects.	Traditional	Houses	1954	Brick cavity(mf)	Non-decant	D	Filled cavity	N/A	2007	Heat Pump (air)
yes	yes	2021 - damp and mould reported and treated. No reports since. FOLLOW UP	Traditional	Bungalow	1964	Brick cavity(mf)	Potentially ac	C	Filled cavity	Solid Closed	2007	Solid fuel
no	yes	damp, mould reported in 2022. mould pack supplied- no reports since	Traditional	Bungalow	1964	Brick cavity(mf)	Potentially ac	D	Filled cavity	N/A	N/A	Heat Pump (air)
yes	yes	2021 investigate for possible roof leak, dampst showing on bedroom walls. 2023 possibly overhead fan as ceiling damp. FOLLOW UP	Traditional	Bungalow	1950	Reinforced conk	Potentially ac	D	External	N/A	N/A	Heat Pump (air)
yes	no	Only occurred in the last 6 months (14/04/2022 call) widespread mould affecting health. Arranged for contractor fan survey, check of lift insulation and Airtick Survey. Also coat damp and mould spide, mould pack and mini-hygro-meter. Follow up	Traditional	Houses	1955	Reinforced conk	Non-decant	D	Filled cavity	N/A	N/A	Gas Burn Storage
yes	yes	damp reported in 2022. 2 mould packs supplied. No reports since.	Traditional	Houses	1943	Brick cavity(mf)	Potentially ac	D	Filled cavity	N/A	N/A	Gas Burn Storage
no	no	Does have black mould in most rooms. Has lived there 2 years, only had mould since this winter. CVI check carried out, all ok - best type insulation present. Upgrade fans and ducting - changed to VRT rather than soffit vents. Overhaul windows ahead of planned removal and also best loss calc for radi, especially living room FOLLOW UP	Traditional	Bungalow	1963	Brick cavity(mf)	Potentially ac	B	Filled cavity	Combi Gas B	2018	N/A
no	yes	PIV FITTED - Resolved - 10/10-0/10 mould. Would recommend - there is no damp or mould.	Traditional	Bungalow	1962	Brick cavity(mf)	Potentially ac	B	Filled cavity	Gas Boiler (C)	2014	Gas
no	yes	Severe mould during void 2023 - extremely poor condition - carpets removed and specialist cleaning carried out.	Traditional	Bungalow	1962	Brick cavity(mf)	Potentially ac	C	Filled cavity	Combi Gas B	2020	N/A
no	yes	Had roof vents fitted and mould pack price. Small patch came through in corner of bedroom ceiling. None since then.	Traditional	Houses	1967	Brick cavity(mf)	Potentially ac	C	Filled cavity	Gas Boiler (C)	2018	N/A
yes	yes	damp / mould reported - mould pack supplied. 2022 - no reports since	Traditional	Houses	1968	Brick cavity(mf)	Potentially ac	C	Filled cavity	Combi Gas B	2017	N/A
yes	yes	damp / mould reported 2022. broken roof tiles/bricks	Traditional	Houses	1967	Brick cavity(mf)	Potentially ac	C	Filled cavity	Gas Boiler (C)	2004	N/A
yes	yes	mould pack supplied in 2021 & 2022. airtick survey booked 2023.	Traditional	Bungalow	1964	Brick cavity(mf)	Potentially ac	C	Filled cavity	N/A	N/A	N/A
no	yes	PIV FITTED - Resolved - 6/10 to 0/10 mould. Would recommend, seems to have stopped condensation forming on windows, very tidy work. Greater test will be this coming winter FOLLOW UP	Traditional	Bungalow	1964	Brick cavity(mf)	Potentially ac	C	Filled cavity	N/A	N/A	Gas Burn Storage
no	yes	PIV unit fitted in 2021 no reports of damp / mould since.	Traditional	Bungalow	1961	Reinforced conk	Potentially ac	C	Filled cavity	N/A	N/A	Gas Burn Storage
no	yes	2021 - Fill holes in bathroom ceiling & paint damaged caused by roof leak. Mould issues reported in Nov 2022 - recommend to robby	Concise	Bungalow	1961	Reinforced conk	Potentially ac	C	Filled cavity	N/A	N/A	Gas Burn Storage

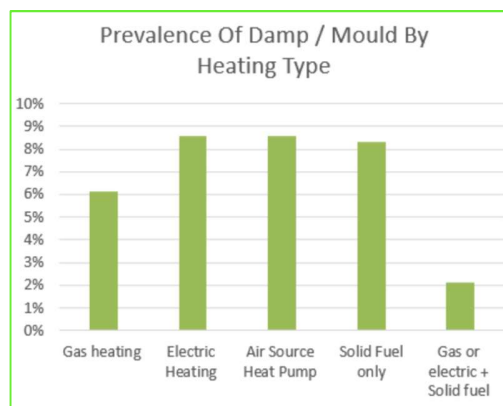
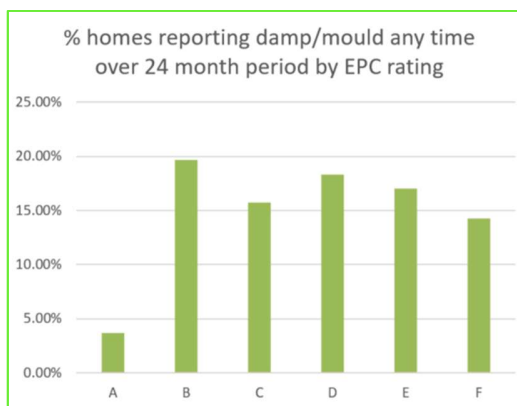
12.14. Early patterns identified so far include:

12.15. **EPC Rating vs Damp/Mould:** In relation to the link between EPC rating and damp/mould reports, A rated properties are low, as expected. However, after this, F rated properties are the next least likely to be affected by damp/mould, followed closely by C rated properties. The EPC system is mainly focused on energy efficiency, heating, and insulation, which is an influence on just one part of the 'mould triangle' of heat-moisture-ventilation. The system has also not caught up with technological changes such as high efficiency electric storage heaters or Air Source Heat Pumps, which still rate poorly. Some of the measures needed to increase EPC ratings can reduce the natural flow of air needed to prevent mould, reduce air quality, and can lead to bridges for moisture to make its way into a building (for example retrofitting cavity wall insulation).

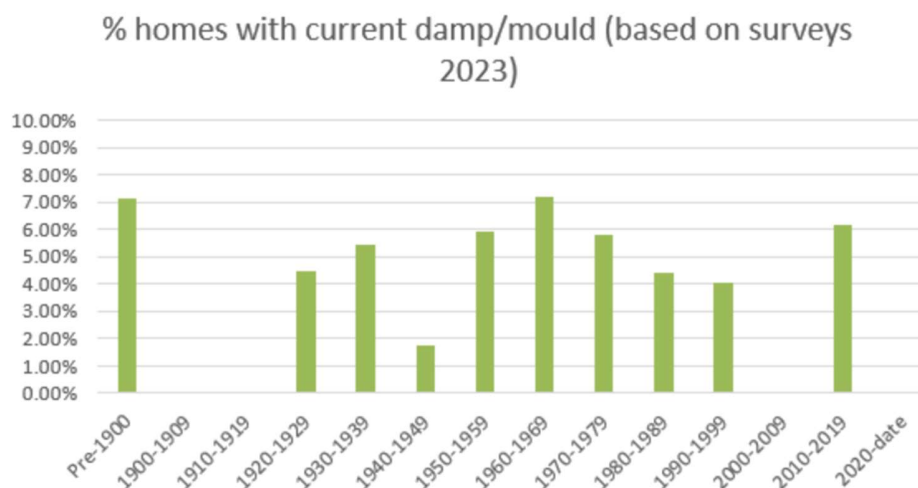
12.16. In relation to the F rated properties, the project has allowed us to identify a common factor of solid fuel heating and open flues across nearly all of these properties, indicating that elevated levels of purge and passive ventilation will counteract several poor insulation details which result in the prevalence of damp and mould. To further test this pattern, the report was filtered to show only the properties with an open flued solid fuel appliance, of which, only 2% of properties were experiencing damp or mould, compared with 5% with a closed flue solid fuel appliance

12.17. A general comparison of heating type compared with the prevalence of damp and mould in MDH homes is shown below.

12.18.



- 12.19. **Construction Era vs Damp/Mould:** The HHSRS rating system recognizes that properties built after 1979 are less at risk of damp and mould, which tied in with key changes in Building Regulations around that time. Our data further suggests particularly low risk construction eras between 1900 and 1919, and again between 1940 and 1949. 1960-1969 is the highest risk construction era, followed by pre-1900 and our newer builds 2010-2019. There is no data for homes 2000-2009 or 2020 to date as no new homes were brought into stock during this period.



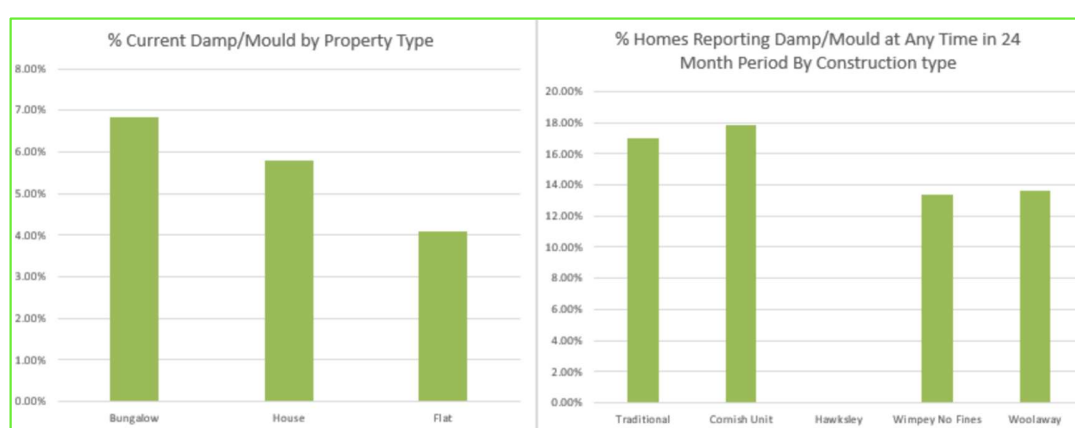
- 12.20. The spike between 1960 and 1969 is not surprising, given the number of thermal bridges built into these properties. There are very few pre-1900 properties within the stock, and these have all been fully modernized, with a clash between solid walls, timber single glazing and the expectations of modern living, heating, and ventilation.
- 12.21. In addition to this, we are finding that a number of properties in this era are affected specifically by mould and elevated dampness at low level just above the skirting. Several surveys have led to our independent surveyor's observation that the removal of asbestos floor tiles and bitumen adhesive could be a contributory factor.
- 12.22. As set out in the BRE Good Repair Guide 28, Part 2: *'Many existing houses undergoing rehabilitation have solid floor without dpms. Those built between 1950 and 1966 usually had floors finished with thermoplastic tiles stuck down with a bitumen adhesive. This type of flooring and adhesive was moderately tolerant to moisture in the base. If you remove these tiles, you should assess the moisture condition of the base. A dpm may be needed before laying moisture sensitive flooring, such as chipboard or other wood-based materials. Flexible PVC, linoleum, cork tiles or carpet, should be laid only on a floor which has a satisfactory dpm. Existing floors with a moisture permeable finish may perform satisfactorily without a dpm in a 'draughty' house. However, reducing ventilation rates in refurbished dwellings, and, particularly, adding a moisture sensitive or impervious floor finish may make rising damp more apparent; this might demonstrate the need for a dpm.'*

**Condensation:** *The most common situations for condensation are: Adjacent to exterior perimeter walls where the heat is lost from the floor to the outside via thermal bridge [...] the remedy is to install thermal insulation [...] usually involves high material and labour costs. It can also be technically difficult with solid floors because of the thickness of insulation required: it is*

*difficult to accommodate floor level changes. In isolation, therefore, it is probably uneconomic'* (Building Research Establishment, 1997)

12.23. **Construction type vs damp/mould.** Data relating to property type very much aligned with the feelings on the ground, with bungalows more likely to suffer with damp/mould issues than any other property type. This is likely to relate to the following factors:

- Homes on one level will struggle more with air movement and dissipation of moist air, due to thermodynamics.
- There is a higher total surface area exposed to an external wall, floor or ceiling.
- There is more likely to be a concrete floor slab, than a suspended timber floor.
- The occupants are more likely to be older or disabled.



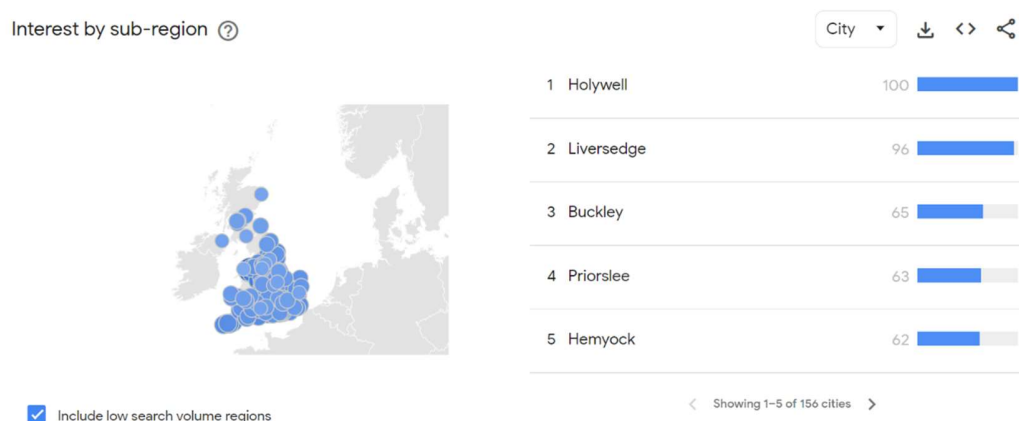
12.24. Non-traditional constructions such as Cornish, Hawksley and Woolaway units are often criticized and assumed to be prone to damp or mould on the basis that they are on the defective house list for mortgaging purposes. Whilst they do have their shortcomings, it seems that damp and mould is not as significant as one might expect. In Cornish units, we tend to find that the biggest risk areas relate to the first floor and are simply remediated during re-roofing works. Our data clearly shows that Wimpey No Fines and Woolaway units are less likely to suffer than our traditionally constructed buildings.

12.25. One key observation is the possible link between the risks of retrofitting cavity wall insulation, and its potential impact on traditional homes, when compared with some of the uniform thermal properties found in the non-traditional homes.

12.26. Whilst collecting our own data is useful, there is also publically available information which may help us, and other housing providers, to pinpoint other key areas. A Google Trends search for key word 'mould' highlights several regions in which this word is commonly searched. The South-West region did not feature highly, however, when filtered for sub-region, a village in our District, Hemyock came up as number 5 in the search. There are around 790 homes in the village, with around 7% being Council homes.

12.27. There are many reasons why the general population of Hemyock and the surrounding areas may be more likely to live in homes affected by damp or mould: It is generally off-gas (95.1%

non-gas properties) and it sits in the Culm River valley (meaning that it is more likely to experience higher levels of humidity). The fuel poverty levels however, are reported to be lower than surrounding areas, at 12.6%. (Non Gas Map, 2023)



- 12.28. In terms of Council owned homes, Hemyock featuring on this list was also not a surprise. There are several flats, for example, with known poor thermal details, which have been difficult to resolve. The flats were designed with built-in asbestos lined bin stores, which protrude into bathrooms. Unfortunately, in most cases, the bin stores do not belong to the bathrooms in which they protrude, so it is not always possible to remove the cold bridge. This has been a longer process of consultation or removing the stores during void periods. In the short term, some internal works, including tile-boarding, heating and ventilation have helped to mitigate the impact.
- 12.29. Google data has also allowed us to tailor our survey project to focus on homes likely to be experiencing damp or mould, and reach out to these people directly. A number of inspections carried out in October 2023 allowed us to identify tenants in these areas who had not reported mould, but were experiencing recurring minor amounts of mould, or in other cases, more significant. We were able to arrange a variety of repairs and improvements to reduce this risk.
- 12.30. A key factor in this was also tenant engagement and buy-in. We were able to turn around the viewpoint of one key tenant who had previously felt let down by the Council's response to damp and mould issues. As a member of the community who was actively involved in supporting neighbours, she was able to encourage her neighbours to report their concerns and also spoke positively about the improvement works she had been recommended. Even neighbours who did not reach out to us or had previously not engaged with us allowed us in for inspections on her recommendation.

### 13. Environmental monitoring

- 13.1. During 2022 and 2023, MDH started using AICO Smartlink remote monitoring systems to monitor fire/heat/CO alarm systems, as well as environmental monitoring. This was rolled out to key homes in 2023 with the intention to identify patterns leading to damp and mould, to identify remedies and to monitor improvements following remedial works or improvements.

- 13.2. Initially the system allowed us to monitor properties and identify that the conditions necessary for mould growth were present, as well as to give an indication of the spread of structural vs. environmental factors.
- 13.3. During the week commencing 2 October 2023, however, we had breakthroughs with two properties which were being closely monitored.
- 13.4. Property A had been assessed several times and no structural defect had been identified. A PIV had been fitted, but some overcrowding (5 people in a 2-bedroom bungalow) was likely to be significantly impacting on humidity levels and mould affecting furniture and soft furnishings. We were in regular touch with the tenants and had suggested some trial and error, to experiment with balancing heating, moisture production and ventilation. A massive reduction in humidity down to a healthy level was noticed. Communication with the tenant confirmed that this corresponded with heating being turned on in the room.

13.5.



- 13.6. In Property B, more significant intervention was required. The humidity and temperature levels were higher than in most properties. CO<sub>2</sub> levels were also being monitored and these were higher than the workplace limit of 5000ppm at over 5500ppm. This was indicative of a severely under-ventilated room. Although the windows were functional, the blinds and curtains were always closed in the front bedroom. The single bedroom was occupied for at least 95% of the day by an occupant with a diagnosis of autism. The main trigger for the damp and mould issues seemed to relate to family bereavement, combined with a childhood phobia of stinging insects. The occupant allowed us to install a fly screen and remove one set of curtains, however, this made little difference.
- 13.7. Support was sought from the GP, Mental Health Support Team, and Adult Social Care Team, however, after 6 weeks, no support was provided, so the property improvement appointment went ahead without the social care support. The works involved: provision of a PIV directly into



the affected bedroom, mould treatment and partial clearance of clutter. This led to an almost instant reduction in humidity and room temperature to safe levels. This plateaued after several days but remained less than the 70% associated with new mould growth. The other change reported by the occupants was that the front bedroom door was left open for the first time in several years. Early indications suggest that it is unlikely that the family will receive any social care support because of our referrals on the basis that they will be unable to travel to appointments, or that the support will be refused.

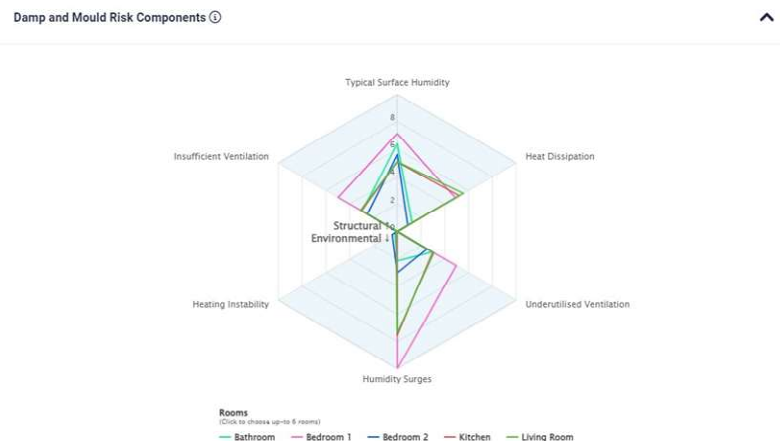
13.8.



13.9. The monitoring equipment and software (AICO SmartLink) also offers damp and mould insights, which have been beneficial, although this can only be accurately interpreted once it has been in place over a 12-month period, to ensure that a range of outdoor weather is experienced.

13.10. As the technology is relatively new to MDH, further understanding of the damp and mould risk components is required. The future intention is to ensure that there are some control properties to assist us to interpret the data from the damp/mould affected properties.

13.11. 'Damp and mould risk components' for case study:



## 14. Finding our silence

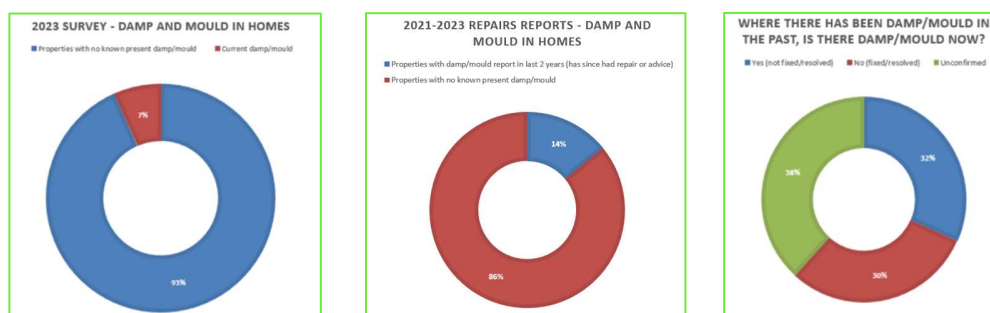
- 14.1. A key recommendation from the Housing Ombudsman Service ‘Spotlight on Damp and Mould’ report was for housing providers to ‘find their silence’, that is, the households experiencing damp or mould, but are not in touch with their landlord.
- 14.2. After the first month of the damp/mould project in May 2023, we had data suggesting that at least 3% of the stock was affected by damp/mould, and that up to 14% had had damp/mould in the past 2 years, which meant that there was an 11% ‘unknown’. Based on data we had at that point, it was estimated that 31% of historic issues were resolved, which meant that of this 11% unknown, 7.9% (233 homes) could represent our 'silence' at that point.
- 14.3. One of the aims of the project was to actively find this ‘silence’ and work toward resolving the issues and building trust between tenant and landlord, as well as identifying any social issues, which are more likely to be resent in these households, on the basis that there is likely to be a disproportionate amount of households in this group experiencing hoarding, poor mental health or debt.
- 14.4. The data collected this year (see section 12) also helped us to better understand where and how significant our ‘silence’ is, that is, tenants who have damp or mould, but have not recently reported it. Our interpretation of our ‘silence’ has been estimated on the following calculation:

14.5.

<p>% of properties affected by any type of damp/mould over a two year period (2021-2023) – 14%</p>	-	<p>% properties with current ‘known’ damp/mould status</p>	-	<p>Current damp/mould resolution success rate %</p>	=	<p><b>‘Silence’</b> (Estimated percentage of households which have damp/mould and have not re-reported, or who have never reported the damp/mould)</p>
--	---	--	---	---	---	--

- 14.6. By August 2023 we had been able to target and survey vulnerable properties and/or households and bring the percentage of known properties experiencing damp/mould up to 6%. We were also able to gather more data to suggest that the damp/mould resolution rate was closer to 49%, bringing our ‘silence’ down to 4.1% of the stock, or 121 homes. By the end of September, the resolution rate was 48%, and the ‘silence’ down to 3.5% or 103 homes. This also brought the estimated number of properties experiencing damp/mould at that point to 7.3%. This includes damp or mould of any extent, cause, location, and responsibility, for example mould in outhouses, which we may not be able to resolve.

14.7.



- 14.8. Our aim is to actively find this ‘silence’ and work toward resolving the issues and building trust between tenant and landlord, as well as identifying any social issues, which are more likely to be present in these households, on the basis that there is likely to be a disproportionate number of households in this group experiencing hoarding, poor mental health, or debt.

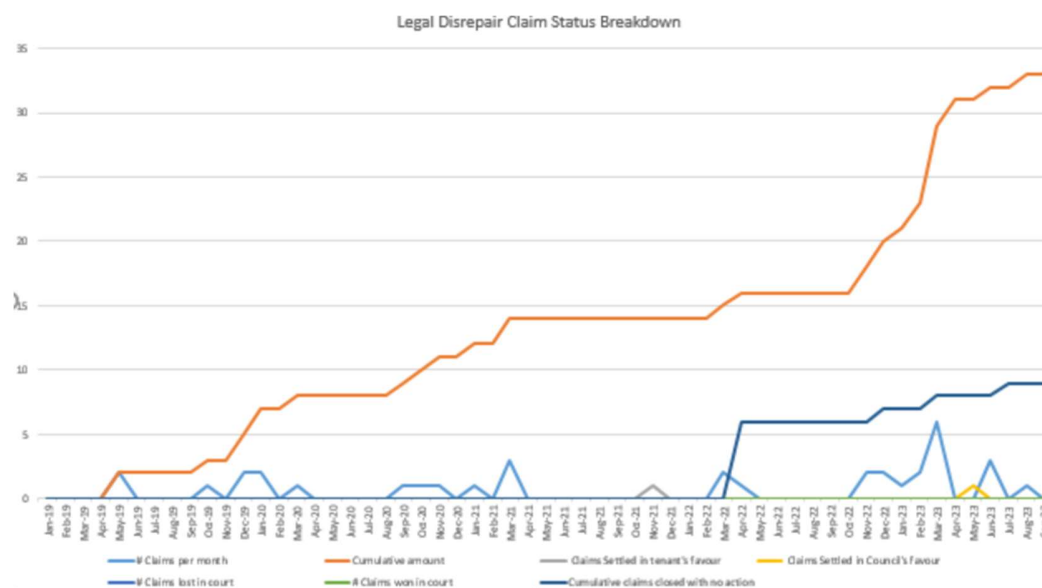
## 15. Fabric First

- 15.1. Most major whole house improvements being carried out by MDH are with funding from the ECO4 Government Scheme (Energy Company Obligation). This focusses on improving the least energy efficient homes, with only properties in band D-G being eligible.
- 15.2. The ECO4 scheme delivers a multi-measure whole-house retrofit approach
- 15.3. Part of the design approach involves tenant engagement and a conversation about what the tenant’s key priorities are.
- 15.4. PAS 2035 is a key element of this process.
- 15.5. For the reasons set out in section 11 of this report, MDH is looking to move away from isolated thermal improvements on a responsive repairs basis and focusing on improving ventilation and levels of decent background heating.
- 15.6. Two key documents include ‘Each Home Counts’ and a BSI white paper titled ‘The Importance of standards for safe energy retrofit’
- 15.7. Key recommendations set out in the Each Home Counts report include:
- Recommendation 5. Develop new approaches for engaging consumers with energy efficiency and renewable energy (e.g. by using trigger points and promoting the wider benefits of the measures which are valued by households), and deliver awareness-raising programmes at national and local levels.
  - Recommendation 6. Make available a set of impartial information and guidance to support more effective industry communications with customers and to aid consumer decision-making on installing measures, by establishing a central Information Hub (to act as a collection point for best practice advice and guidance) and a Data Warehouse (to act as a store for property-level data and information)
  - Recommendation 7. Develop a range of services and tools linked to the Information Hub and Data Warehouse to provide advice (both online and by telephone) and to enable engagement with all consumers, including vulnerable households, in ways most appropriate to them.
  - Recommendation 8. Develop an overarching standards framework document for the end-to-end delivery of retrofit of energy efficiency and renewable energy measures, building on existing standards and make it freely available (under licence) to all those installing under the new Framework

- Recommendation 10. Commission a research project to map existing formal and informal standards to shape and deliver a standards development programme for retrofit.
  - Recommendation 17. All retrofit projects will have an appropriate design stage process which takes a holistic approach and adequately considers the home, its local environment, heritage, occupancy, and the householders' improvement objectives when determining suitable measures.
  - Recommendation 27. Housing Associations will collaborate with industry and government to ensure that the Framework applies to the delivery of improvements in their housing stock, incorporating energy efficiency and renewable energy measures at scale (UK Government, 2016)
- 15.8. The 'Importance of standards for safe energy retrofit' white paper summarises that '*The BSI Retrofit Standards Framework, PAS 2035 and PAS 2038 are children of the Each Home Counts review.*'
- 15.9. It further sets out that '*They are intended to change the culture of the retrofit industry, which had become unprofessional and careless about risks to people's homes and their health. [...]. The biggest challenge is to deliver safe energy retrofit programmes for all buildings, in which risks to performance outcomes and risks to the health and safety of occupants are properly managed. Foremost amongst those risks are fire, and the health risks associated with moisture and mould.*' (Rickaby, 2023)

## 16. Complaints and Disrepair Claims

- 16.1. In 2022-23, MDH repairs service received 106 complaints and a number of service requests, of which 18 related in some way to damp or mould. Of these, none were escalated to the Housing Ombudsman Service.
- 16.2. In the last 5 years, only one complaint relating to damp and mould has been investigated by the Housing Ombudsman Service, with no maladministration found.
- 16.3. Between receipt of the first claim in 2019 and October 2023, MDH received 33 legal disrepair claims, with a significant peak in early 2023 following media interest and a call for information from the Regulator for Social Housing. This peak mirrors increases in internal enquiries and complaints.
- 16.4. This highlights the positive impact of the media coverage and increased awareness of the importance of reporting damp and mould in rented homes, however the progress of these claims highlights how ineffective they appear to be as a resolution for tenants, when compared with the MDDC comments/complaints process and Housing Ombudsman Service alternative, both in terms of timescale and cost.
- 16.5. Total legal disrepair claims received are as below:



16.6. At the point of this report:

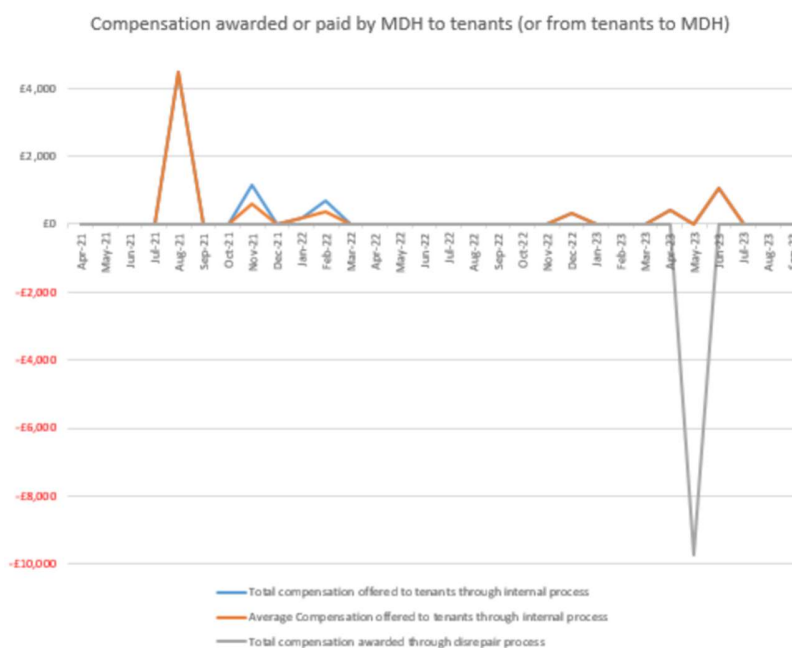
- 10 have been defended and closed with no action.
- 17 are active and being defended.
- 5 are dormant (no communication from disrepair solicitor in 12+ months)
- 1 has been settled out of court, through the Council's complaints process, with the tenant being offered financial compensation.
- 1 has been settled on the day of a planned trial, with the Court ordering the Claimant to pay Mid Devon District Council a NET amount of £9,750.
- 0 have been tried in court.

16.7. In around 60% of cases, claimants have refused access for repairs, most citing that this is on advice of their solicitor. Sadly, this is still occurring even after the death of Awaab Ishak and subsequent highlighting of the risks of damp and mould. In some cases, these disrepair firms are advising their clients to cancel repairs which were planned and booked well before the claim was raised.

16.8. We are also being advised by our tenants of poor practice on the part of no-win no-fee law firms, which include:

- Encouraging tenants not to treat mould, in order that the property looks worse for the expert survey visit.
- Ignoring communication from their client and the Council, leaving the tenant with no support.
- Falsifying information on claims, included defects not present, and backdating claims to before the defects were present.
- Encouraging tenants to state that they had reported issues to their landlord, which in fact had not been raised, to bolster the claim.

- 16.9. In around 83% of claims, the claimant had not previously made a formal complaint with the Council and in all cases, the claimant had not approached the Housing Ombudsman Service. In 11% of claims, the tenant had not previously reported the alleged disrepair.
- 16.10. The graph below sets out compensation awarded through the MDDC comments, complaints, and feedback process, compared with the disrepair process, through which no tenant has been awarded compensation. The only award through the disrepair process was an order made in favour of MDDC.



- 16.11. In terms of financial risk to the housing service, the relatively small numbers of disrepair claims are positive in terms of comparative and proportional figures we see elsewhere. This is possibly reflective of the Housing Service's firm stance not to settle where there is no fault, but also that larger authorities and larger cities are often more vulnerable to claims.
- 16.12. Like many social landlords aware of the unscrupulous tactics of many no-win no-fee disrepair solicitors, MDH have continued to the stance to defend claims and avoid settling out of court unless there is a clear failure of service. This is to protect the HRA revenue from having to fund regular no-fault settlements.
- 16.13. At the point of calculation in October 2023, the total external costs (legal counsel and expert witness) were £24,882. £9,750 had been settled in the Council's favour, £4,450 in compensation was awarded to one tenant through the Council's internal complaints process, with around £6,140 costs also due to the claimant's solicitor. This means that MDH spend an average of £754 defending each claim, and tenants end up on average £160 out of pocket, although this latter figure is very much skewed by the low amounts of claims which reach conclusion.
- 16.14. In May 2023 a Disrepair Claim against Mid Devon District Council was set down for a two-day trial at Plymouth County Court, but at the first day of the trial at the door of the court the tenant, who was represented by a Liverpool based legal firm, offered to settle and pay the Council

money towards its costs in order to avoid a trial of the issues. The settlement agreed between the parties was then put before the Judge, who made an order that the tenant was to pay Mid Devon District Council a net amount of £9,750. This is the only claim received to date which has progressed to Court. More information can be found here: [Council Issues Reminder About Cold Callers and No Win No Fee Firms, Following Legal Win \(middevon.gov.uk\)](#) (Council, 2023)

- 16.15. In contrast to this, the Housing Ombudsman Service reported that in the 2022-23 financial year they handled over 5,000 complaints, and ordered landlords to pay £1.1 million in compensation.

## 17. Tenant feedback and involvement

- 17.1. Attempts to put together a damp and mould focus group earlier in 2023 were unsuccessful, with 6 tenants expressing an interest, but later failing to respond to the first survey request information on how much involvement they would like.
- 17.2. There has been tenant involvement, however, on a more case by case basis, such as the example set out in paragraph 12.31. Additional examples have been tenant input into the new format damp and mould advice leaflet, as well as into template letters for improvement offers.
- 17.3. More will be needed in future to continue this progress, with a view to having damp and mould tenant champions who may already have an active role in their community. We often come across skepticism from our tenants in relation to our findings, however, positive feedback from tenants who have seen success can be invaluable.
- 17.4. We have also been able to get indirect tenant feedback through the environmental monitoring programme. Rolling this out to a selection of homes without damp or mould will further help us to understand the factoring impacting upon risk factors, and to get feedback from tenants who are able to maintain a healthy home, finding out what healthy habits they may have, which we can share with others.
- 17.5. It may be the case that incentives are needed to encourage feedback, for example a free mould treatment or redecoration in exchange for some tenant involvement or survey feedback,

## 18. Review of recommendations from 2022 review:

- 18.1. Several recommendations were set out in our 2022 Damp and Mould review. These have been assessed, with progress noted below.

Recommendation	Completed?	Notes
Roof leaks – where the same leak is reported twice, additional time should be allowed for and ideally booked for immediately after a rainy day to properly identify the location of the leak.	Partial	Further work needed
Consideration to offering financial incentives for keeping property in good condition and/or low repairs reporters.	Considered but not deemed viable	

Improve educational information for tenants and communication with tenants and other stakeholders. This should be in consultation with tenants	Yes – new leaflet with consultation, video guides and training for staff.	
Introduce a fuel poverty assessment where there are repeated reports of black mould	Yes	FPA criteria since changed
Introducing heating familiarization visit at beginning of tenancies, when new heating is installed and as required in between. Offers should be available to adjust heating settings to most efficient. Provide understandable material for tenants	Partially – completed for gas and ASHP.	Further work needed
Check that heating and insulation levels enable each room to meet a minimum temperature of at least 18°C	Yes – thermo-hygrometers supplied to tenants unable to monitor this.	
Where all defects have been ruled out or remedied, and lifestyle issues are present, monitoring and enforcement action should be taken to set out clear expectations and targets to prevent damage to the fabric of the building. Tenancy action where use of the property is causing damage to property and risk to health.	Yes	Overhaul of mould kit designed to help with this, as well as redesign of damp and mould leaflet.
Re-instate satisfaction surveys, ideally by SMS, if not, perhaps a selection by letter	Partial	Further work needed
Focus on pro-active communication and repairs, including 'damp and mould surveys', chase non-respondents	Partial	Damp and mould surveys published regularly online, with rent statements, and >10% of households surveyed.
Consideration to sourcing of additional diagnostics tools, for example salts analysis kit,	Yes	



wall hygrometer, environmental sensors, floor hygrometer, calcium carbide speedy test kit		
Improved guidance for tenants, including consideration of a mini hygrometer to support tenants to monitor and understand the impact of high levels of relative humidity.	Yes	
Consideration of a damp & mould log similar to those used for ASB and noise levels. This could include, regular temperature and RHI monitoring, recurrence of mould and weather monitoring	Yes	Poor uptake – no responses
Consider use of thermal imaging camera for calculating dew points for individual properties and rooms.	Yes	Also Protimeter MMS3
Social media campaigns. Advice, case studies, links to complaints, warning about disrepair scams	Yes	
Focus group of staff, tenants and councilors on damp and mould	Yes	We had 6 tenants express an interest in the focus group, however, we receive no response to the first invitation to focus group action.

#### 18.2. Additional improvements or changes made:

- Damp and mould check box added to void checklist.
- Project 'ditch the damp, manage the mould'.
- Interactive and e-learning damp and mould training rolled out for all housing and customer service staff.
- [Damp and Mould Policy](#) drafted, ready for cabinet review.
- Damp and Mould Procedure and summary created for housing staff
- Completed a self-assessment against the 26 recommendations from the Housing Ombudsman Service.

## 19. Summary/Key Findings

- 19.1. The findings of this review support the same conclusions as the 2022 review, that rather than looking at whether it is possible for a home to be mould free if managed by the 'ideal tenant', we should be looking at setting a benchmark for assessing whether a property can **reasonably and practicably** be kept mould free by the **average** tenant. This would involve holistically looking at the property's history as well as the tenants'.
- 19.2. The Utilita and USwitch studies suggest as many as 22% of homeowners and 34% of renters have mould in their homes. In relation to damp, these figures are 19% and 27%. Although these figures and descriptions are somewhat subjective, especially in relation to the definition of 'damp', they could provide a useful benchmark. In figure of 22% of homeowners being affected does highlight that the presence of mould is much more complex than something which can be summarised as being a result of poor management by a landlord. Homeowners are essentially in complete control of their own home maintenance, however they are also affected by the same issues such as: lack of understanding of the causes of mould, limited home maintenance budget or fuel poverty.
- 19.3. Combining points 19.1 and 19.2, our long term aim would be to ensure that our data is accurate, and rather than aim for a completely mould free housing stock, which is likely to be unreasonable and unmanageable, but to aim to be more mould free than both the 'renter' estimate, but also the homeowner estimate. Our current data suggests that we are already meeting this, with an estimated maximum number of homes affected by damp or mould over a 5 year period being 19%. Our aim over the next 2 years will be to decrease this to 11%, and also increase our resolution success rate from 49% to over 55%.
- 19.4. The last 12 months' research has helped to form our view of the effectiveness of various short and medium term improvement works, and how this will form our responsive short and medium term improvement programmes. In practical terms, this means that, except loft insulation and replacement of defective cavity wall insulation, MDH will move away from isolated thermal improvement works, for example, thermal boarding. Remedial and improvement works will focus on addressing the most obvious causes, which are often poor ventilation, ineffective heating, or both.
- 19.5. MDH will continue to work in line with legislation, statutory and contractual obligations in relation to mould treatment. This means that it is unlikely that MDH will be carrying out free of charge mould treatments where there is no related disrepair, or major flooding. Where a cold bridge is created by an inherent or latent defect, MDH will generally not offer free of charge mould treatments. MDH will look to offer at-cost mould treatments to any tenant who is physically unable to carry out such work. Based on our experience, testing, tenant feedback and available research our general advice remains to use a professional where possible, and if not, to avoid using bleach. Any fungicidal treatment appears to be beneficial, with household mould sprays seemingly being more effective than industry recommended products, and vinegar being the most recommended non-toxic treatment.
- 19.6. Following up on damp and mould reports after work or advice will be increasingly needed. This will require increased focus on satisfaction surveys, face-to-face visits, and phone contact. A

flagging system may be required to help identify homes having previously been identified as experiencing damp or mould.

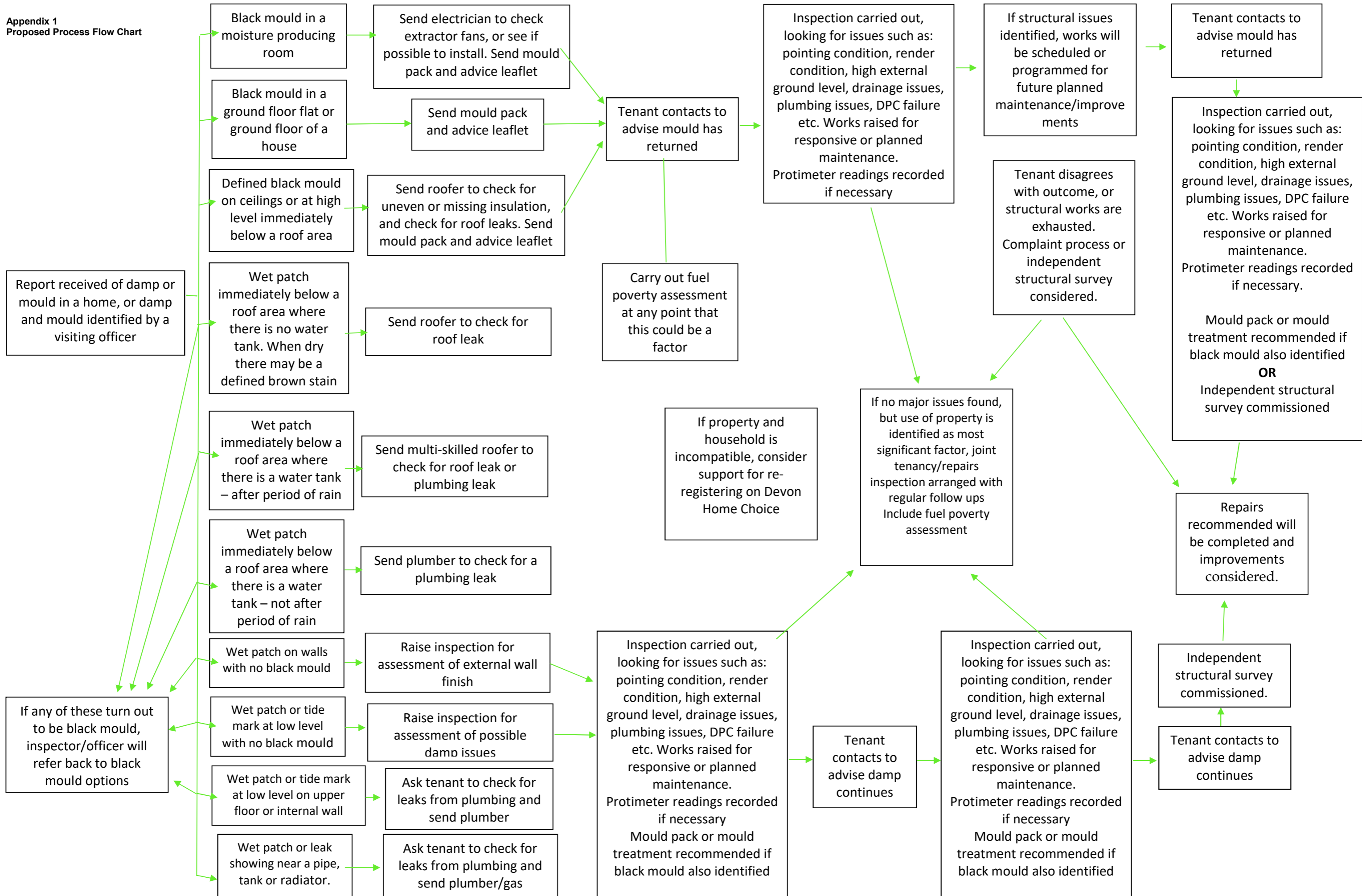
- 19.7. A continued effort to build active tenant involvement into the heart of what we do will be imperative to improve our communication and understanding tenants' needs. It has also shown to be a crucial factor in achieving buy-in and confidence in the types of work we recommend regularly.
- 19.8. A range of socio-economic issues are significant factors in the presence of damp and mould, and can lead to dampness where there is no building defect. We have seen these issues, such as fuel poverty of poor mental health, worsen over the past few years. Our approach will be tailored to accommodate this where possible, however, MDH tenants will need increased support from other health and social care public services. Our processes may need to change to ensure that safeguarding referrals or requests for care/support are treated with the correct level of urgency where the risk to health is significant.

## References

- Bulding Research Establishment. (1997). *GRG 28 part 2 Domestic Floors: assessing the for replacement or repair*. Bulding Research Establishment.
- Council, M. D. (2023, June). *MDDC Press Release*. Retrieved from [middevon.gov.uk](https://www.middevon.gov.uk/council-issues-reminder-about-cold-callers-and-no-win-no-fee-firms-following-legal-win/):  
<https://www.middevon.gov.uk/council-issues-reminder-about-cold-callers-and-no-win-no-fee-firms-following-legal-win/>
- Gamble, L. (2022, August 29). *Why you should never use bleach to remove mould*. Retrieved from [www.bhg.com.au](https://www.bhg.com.au/mould-removal-avoid-bleach): <https://www.bhg.com.au/mould-removal-avoid-bleach>
- Google. (2023, October 11). *Google Trends*. Retrieved from Google Trends:  
<https://trends.google.com/trends/explore?date=2018-01-04%202023-10-11&geo=GB&q=Damp,Mould,Awaab%20Ishak&hl=en>
- Joanne Kearsley, S. C. (2020, November 16). *Awaab-Ishak-Prevention-of-future-deaths-report-2022*. Retrieved from [www.judiciary.uk](https://www.judiciary.uk/wp-content/uploads/2022/11/Awaab-Ishak-Prevention-of-future-deaths-report-2022-0365_Published.pdf): [https://www.judiciary.uk/wp-content/uploads/2022/11/Awaab-Ishak-Prevention-of-future-deaths-report-2022-0365\\_Published.pdf](https://www.judiciary.uk/wp-content/uploads/2022/11/Awaab-Ishak-Prevention-of-future-deaths-report-2022-0365_Published.pdf)
- Manchester Evening News. (2023, August 10). *LIVE: Damp and disrepairs did NOT cause or contribute to tragic Luke Brook's death, coroner rules*. Retrieved from Manchester Evening News:  
<https://www.manchestereveningnews.co.uk/news/greater-manchester-news/live-latest-updates-luke-brooks-27490497>
- Nagy, B. (2014). Comparative analysis of multi-dimensional heat flow modeling. *2nd Conference for PhD students in Civil Engineering* (pp. 2-3). Cluj-Napoca, Romania: Budapest University of Technology and Economics.
- Non Gas Map. (2023, October 13). *Non Gas Map*. Retrieved from [nongasmap](https://www.nongasmap.org.uk/):  
<https://www.nongasmap.org.uk/>
- Rickaby, D. P. (2023). *BSI White Paper: The importance of standards for safe energy retrofit*. Retrieved from [ukcmb.org](https://ukcmb.org/wp-content/uploads/2023/09/The-importance-of-standards-for-safe-energy-retrofit-A-BSI-white-paper.pdf): <https://ukcmb.org/wp-content/uploads/2023/09/The-importance-of-standards-for-safe-energy-retrofit-A-BSI-white-paper.pdf>
- RICS, PCA, Historic England. (2022). *Jint Position Statement*.
- S. C. Wilson, T. L. (2010, August 17). *An Investigation into Techniques for Cleaning Mold-Contaminated Home Contents*. Retrieved from [www.tandfonline.com](https://www.tandfonline.com/doi/full/10.1080/15459620490462823?needAccess=true):  
<https://www.tandfonline.com/doi/full/10.1080/15459620490462823?needAccess=true>
- The Guardian. (2023, August 7). *Mother begged Oldham council to move her and late son from damp house, inquest hears*. Retrieved from The Guardian:  
<https://www.theguardian.com/society/2023/aug/07/mother-begged-oldham-council-to-move-her-and-son-luke-brooks-from-damp-house-inquest-hears>

- The Guardian. (2023, August 10). *The Guardian*. Retrieved from Luke Brooks inquest: a shocking spotlight on living conditions in modern Britain:  
<https://www.theguardian.com/society/2023/aug/10/luke-brooks-inquest-a-shocking-spotlight-on-living-conditions-in-modern-britain>
- The Independent/Utilita. (2023, February 03). *property/uk-homes-damp-fix-solution-b2270560.html*. Retrieved from [www.independent.co.uk](https://www.independent.co.uk): <https://www.independent.co.uk/property/uk-homes-damp-fix-solution-b2270560.html>
- UK Government. (2016, December). *Each Home Counts*. Retrieved from [assets.publishing.service.gov.uk](https://assets.publishing.service.gov.uk):  
[https://assets.publishing.service.gov.uk/media/5a7f1384e5274a2e8ab49f6b/Each\\_Home\\_Counts\\_\\_December\\_2016\\_.pdf](https://assets.publishing.service.gov.uk/media/5a7f1384e5274a2e8ab49f6b/Each_Home_Counts__December_2016_.pdf)
- UK Government. (2023, September 7). *Understanding and addressing the health risks of damp and mould in the home*. Retrieved from [gov.uk](https://www.gov.uk): <https://www.gov.uk/government/publications/damp-and-mould-understanding-and-addressing-the-health-risks-for-rented-housing-providers/understanding-and-addressing-the-health-risks-of-damp-and-mould-in-the-home--2#reducing-the-risk-of-damp-and-mould-develop>
- USwitch. (2020, May 6). *Mouldy Nation Report*. Retrieved from [uswitch.com](https://www.uswitch.com):  
<https://www.uswitch.com/gas-electricity/mouldy-nation-report/>

Appendix 1  
Proposed Process Flow Chart



Appendix 2 - Technical Inspection Flow Chart

