

Strategy to address damp issues in Powys owned housing stock

Powys County Council
Housing Services



Contents

Executive summary	3
1. Introduction	5
2. Background	6
2.1 Damp	6
2.2 Where is damp found?	6
2.3 What are the types of damp?	6
2.4 The Importance of Heating and Ventilation	8
2.5 Wellbeing Implications	8
2.6 Regulatory Requirements	9
2.7 Legal Implications	9
2.8 Current PCC Policy and Standards	10
3. Damp and Powys' housing stock	11
3.1 Stock Condition Survey Data	11
3.2 Findings from BBA and Pilot Investigations	11
3.3 Findings from Service Manager Review	11
3.4 Powys response to the national problem	12
3.5 Evolving trends	12
4. The Way Ahead	14
4.1 Approach to Reports of Damp	14
4.2 Prioritising Surveys	15
4.3 Operational Delivery	15
4.4 Consulting with residents	17
4.5 Costs	17
4.6 Asset Management	18
4. Appendices	19

Executive summary

Damp is a real, or sometimes perceived problem for residents. Some express fears that breathing in air from damp rooms or mould growth can cause, or aggravate, breathing conditions such as asthma.

Damp is a generic term widely used, but reflects consequence, assumption or perception, rather than being the true description of the event, or the cause itself.

Landlords have a statutory and common law responsibility to their tenants to provide a safe, warm and damp free homes. The Welsh Housing Quality Standard, and Housing Health and Safety Rating System, set out requirements as detailed in part 2.

Powys stock condition survey recorded that 2.5% of its properties suffered with damp. The recent survey of 300 residents conducted by the Welsh Audit Office, found that 23% of residents reported concerns about damp.

In the last 5 years 30% of residents have reported issues with damp or mould. While the numbers of cases are declining, some persistent problems are being experienced. Recent detailed investigations and case reviews have established that greater attention is needed to diagnosis and remedy.

The investigations have found that there are underlying issues with some of Powys' housing stock that do need to be addressed, and resident lifestyle is not always the main cause.

Powys are pro-actively responding to a Welsh Government led initiative regarding design and installation faults with cavity wall and external insulation. This is aimed at ensuring local authorities are not repeating mistakes of the past, and understand their risks arising from this.

It is proposed to build on the findings from the review and associated pilot work carried out over the last year. A structured approach to dealing with damp issues will be put in place in collaboration with our maintenance partner Heart of Wales Property Service. This will ensure robust process and controls from the first contact, through to advanced approaches to dealing with persistent problems.

Step 1 – ensure as much information is collected about reports of damp problem at first point of call, and pre inspection, so the type and cause is identified.

Step 2 – provide information to residents to assist them managing natural condensation that will naturally occur in their homes.

Step 3 – Adopt a consistent step by step checklist approach within HOWPS and PCC, to ensure all matters a landlord may be responsible for are investigated and rectified.

Step 4 – Adopt a whole house approach, considering heating and ventilation upgrades in difficult to resolve cases, or where it is considered residents medical needs or vulnerabilities are a factor.

Step 5 – where no building, ventilation or heating faults are apparent, provide further information to residents to assist them managing condensation.

DRAFT

1. Introduction

The word damp is applied as a common description, and can relate to visible effects, mould growth, smells, or even perception. Damp can be caused by condensation of water vapour generated within a home, or water ingress due to faults with, or decay of, the construction a property. Mould growth is often associated with reports of damp, along with complaints this is causing poor health. Section 2 explores the types of damp.

For the purpose of this strategy the Housing Health and Safety Rating System (HHSRS) Operating Guidance is referred to in terms of risk. Section 1 of the guidance relates to physiological requirements, including damp, extreme cold and extreme heat. The guide sets out that spores of many moulds and fungi can have health effects. These are explored later in this document.

Powys Context

Powys County Council's Housing Service manage approximately 5,400 properties, spread across Powys. In 2012 & 2015 Powys County Council's Housing Service commissioned Savills to carry out stock condition surveys to all its stock. The Councils Welsh Housing Quality Standards programme was determined from these surveys. The surveys identified that around 140 or 2.5% of properties suffered with damp, though the surveys did not detail the type or location of that damp.

In 2017, a process was adopted to appoint BBACIT, the consultancy arm of the British Board of Agreement, to inspect and report on properties with persistent damp issues. These surveys were partly invasive in nature, aimed at identifying the true causes of damp. e.g. using scoping cameras to inspect inside wall cavities through small holes drilled in the structure. While this process has assisted in many cases, it has been necessary in some for carry out further invasive investigation to establish true cause, e.g. exposing the structure of walls or floors.

Internal process were also amended in 2017 to ensure that any investigations carried out internally were fully invasive, and establish for certainty the construction details and actual cause of damp. The new process has included a whole house review approach too, which ensures that the heating and ventilation is checked to see if it meets modern, rather than previous standards.

A National problem

In recent years problems have become apparent across Wales with failures of cavity wall insulation and external wall insulation. The failures with cavity wall insulation include installing in properties not suitable to insulate, or using the wrong type of insulation, given the exposure rating of the property. Poor workmanship also occurred with areas missed during installation, and pre-existing building faults were not rectified. Some local authorities are facing substantial costs to remove cavity wall insulation from properties that were not suitable to insulate, or had the wrong material fitted for the exposure rating. This prompted a Welsh Government led initiative in 2017 to ensure local authorities do not repeat past mistakes, and understand their risks with matter.

2. Background

2.1 Damp

We are all exposed to damp in our homes, since activities such as cooking, bathing, showering, washing clothes, and even breathing create water vapour. This water vapour needs assistance to escape, or it will increase humidity within the property and condense on colder surfaces. While designed to prevent water entering the inside of a building, the external envelope comprising the roof, walls, windows and doors can develop faults, or decay over time. A single fault, or combination of issues, can cause water to penetrate the external envelope.

2.2 Where is damp found?

Damp can occur anywhere in a home, though is typically found in on walls and ceilings in kitchen and bathrooms, the perimeter of ceilings/top of walls in bedrooms. Damp can occur around the edges of, and on the surface of windows, and occasionally it can appear as a patch in the middle of a wall. It can also be found on the lower part of walls in the ground floor rooms, or within the floors.

Its appearance can show as a wet patch, mould growth, or with a visible signs such as salts coming out of the wall. In severe cases plaster decay or blowing can occur. Condensation can also occur in roof spaces if they are not properly vented or insulated, causing sweating on the underside of roof felt.

2.3 What are the types damp?

Condensation

This is typically defined by running water across a surface, caused by water vapour which has “condensed” from warm, moist air on contact with a cold surface. Warm air is able to hold more moisture than cold air, and the amount of moisture in the air is usually expressed as Relative Humidity (RH). Air which contains its maximum moisture content is said to be saturated, at which point it has 100% RH.

Indoor relative humidity should be between 40% and 60%, except for short periods of fluctuation. This range is the optimum to limit the occurrence of condensation and mould growth.

It is important to note that in some circumstances natural condensation can occur when there may be no obvious causes, or a combination of less usual events occur. BRE Digest 297 (Reference), states

“Condensation is always the result of air becoming saturated when it meets a cold surface, but the conditions under which it may occur in dwellings vary considerably. Broadly speaking, condensation is dependent on three interacting factors: the environment within the building, the building structure and the natural climatic conditions outside the building.”

Interstitial Condensation

This can occur where the temperature at a point within the structure is cold enough to cause water vapour to condense within it. This can lead to progressive saturation of masonry or cavity wall insulation.

Cold Bridging

This tends to occur in isolated areas, where a structural feature, or partial omission of insulation, lowers the temperature of part of a surface. This means this area will be colder, and can trigger condensing of water vapour just at that point.

Leaks (Traumatic Damp)

This is obviously apparent where a pipe bursts or cracks. However, it can be more difficult to identify if there is a hidden cause gradually soaking the area affected. e.g. leaking underfloor pipes can give an impression of rising damp, as the structure will gradually absorb the water through capillary action.

Water penetration

This occurs where rainwater penetrates through the tiles on the roof, or the walls, windows or doors. This may be due to a fault with one of those components, or as a greater volume of water is affecting an area e.g. leaking gutter saturating the wall. It can also occur when ground levels outside are higher than the buildings dpc causing water to soak through the walls.

Flooding

Fortunately, events of flooding from rivers is a very low risk. Some properties have been affected by overflowing storm water culverts, and this is carefully managed. However, some estates are built into hillsides, and extreme rain events can cause flooding around the house. Where this occurs any weakness in construction can lead to water penetration.

Rising Damp

This is damp visible at low level to ground floor walls, or where a concrete floor is damp. This is typically defined by a tidemark, or change in surface condition of the plaster. It is important to differentiate this from water penetration to raised ground levels.

- Rising damp is primarily caused by the capillary rise of ground water through the structure.
- However, it can over time be due to the salts that are left from the ground water that has evaporated, causing walls or floors to become porous i.e. hygroscopic. Here the walls can absorb humid air from within the property.

In cases of rising damp it is important to remove affected plaster and replace with a product that will combat the effect of hygroscopic damp.

Perception Damp

This typically relates to reports made by residents that it feels or smells damp.

It feels Damp - In cases where there is no visible damp, this can occur where the relative humidity in the property is naturally high, but the building structure is such that surfaces do not get cold enough for condensation to occur.

It smells damp - In cases with no visible damp, musty smells could be due to a lack of ventilation in the property.

In such cases it is important not to pre judge, and investigate if there is potential for hidden damp or fungal growth, or interstitial condensation within the structure.

Moulds and Fungal Growth

This is the effect of the cause of damp. Moulds can grow when the indoor relative humidity persistently exceeds 70%. Most cases of mould are slight to moderate, but more severe cases can lead to the visible release of spore dust. Fungal growth is less common, and more associated with leaks and water penetration event. Typically the types are wet or dry rot in timber, but plaster or cellar fungus can occur.

2.4 The importance of ventilation and heating

There should be continuous low-level of background ventilation, that allows 0.5 air changes per hour. For this reason the building regulations stipulate that windows shall be fitted with trickle ventilation, even for existing properties. In some cases tenants shut these vents complaining of cold drafts, however this will reduce required air changes.

Extract ventilation in kitchens and bathrooms is also important to remove steam from cooking, bathing and showering, and this is required by Part 3 e) of the WHQS standard.

A property should be heated to maintain a temperature between 18 and 21 degrees, and radiators should be utilised in all rooms to avoid a cold spot in the house for water to condense. Clearly there can be a conflict with affordability for some tenants, particularly for those with key meters, which may lead to some rooms being unheated. A supportive and constructive approach to education needs to be taken if it is found that condensation is only occurring in unheated rooms, especially if fuel poverty is a factor. In these cases residents should be sign posted to Citizens Advice to receive free energy advice.

2.5 Wellbeing Implications

Risks from mould and fungi

The Housing Health and Safety Rating System (HHSRS) Operating Guidance sets out the potential for Harm, and identifies that those under 14 are the most vulnerable age group. An extract of the HHSRS Operating Guidance is shown at Appendix 1.

The guide explains that that spores of many moulds and fungi (including timber attacking fungi) can be allergenic, and that risks of health effects are greater to those vulnerable to infection, or with predisposition to sensitisation. It reports health symptoms such as

- rhinitis, conjunctivitis, eczema, cough and wheeze,
- asthma in sensitised persons where there is repeated exposure
- the severity of the asthma can intensifies with increasing humidity, house dust mite and mould levels.

The guide also explains that spores from certain types of mould can be toxic and carcinogenic.

The HHSRS guidance also points to research that shows low levels of background ventilation, without visible mould or dampness, can result in high indoor humidity levels and greatly increased house dust mite populations.

Further and ongoing research will be carried out in liaison with Powys health care professionals to identify the vulnerability groups for residents likely to be affected by damp and mould problems.

Mitigating Risks

Reducing occurrences of reported damp need the right balance of building fault remedy heating, ventilation and this will vary based on the construction and the design. Some properties, or residents' medical needs, may benefit from enhanced ventilation to overcome situations where technical characteristics cannot be improved.

2.6 Regulatory Requirements

The Welsh Housing Quality Standard

The WHQS standard has an overriding requirement that a dwelling must be structurally stable, free from damp and from disrepair. The key building components must be in good condition. The walls must be in good condition as must the roof structure and coverings. External windows, doors and chimneys must also be in good condition.

The standard treats damp as a primary requirement i.e. one that affects safety of residents. It defines the requirements by reference to hazards rated as category 1 under the HHSRS. In An assessment of hazard of risk with damp and mould growth will involve reviewing the extent and severity of the dampness and any mould growth in all rooms within the dwelling. It is the cumulative contribution of those deficiencies to the hazard of damp and mould growth which should be assessed. For this reason a property with a minor damp issue in one room, e.g. cold bridging that may cause seasonal slight mould growth, does not in strict application fail the WHQS standard.

2.7 Legal and Insurance implications

It is an important part of forward strategy that the cause of the issue is identified and categorized, and care is needed not to make assumptions, particularly that tenant lifestyle is to blame. There has been a recent increase in formal disrepair cases taken out against the

authority, which can involve large sums in rent based compensation. Compensation claims for damage to contents from mould and health effects are also received.

Care is therefore needed with record keeping to make sure it is accurate, and statements are not made that could be perceived as an acceptance of liability. In disrepair cases, an innocent historic reference to damp, could be used as a reference point for when the damp started, in an attempt to increase rent refund compensation. In insurance claim cases, poor record keeping will be treated as a weakness by the insurance company, resulting in difficulty defending claims and admission of liability by default.

2.8 Current PCC Policy and Standards

Powys are committed to dealing with all damp events in tenants homes, however minor. The WHQS Compliance Policy sets out a wider definition of the standard the Council aim to achieve. This is shown at Appendix 3. The Quality of Accommodation Service Standard, otherwise referred to as the letting standard, also sets out that properties should be free from damp or mould. For that reason Powys will endeavor to investigate and remedy all cases of damp and assist residents manage natural condensation. However, there may be situations where condensation issues need to be monitored and managed, or interim solutions adopted pending planned programme works.

The Repairs and Maintenance Service Standard does not distinguish damp events from other response repairs, except for identifying that severe leaks must be dealt with as an emergency. An Appendix to the Standard will be prepared in consultation with the Response Repairs Working Group.

3. Damp and Powys' housing stock

3.1 Stock Survey Data

The stock surveys carried out 2012 and 2015 identified 140 properties with damp, although the type and location of damp was not recorded. The focus of the Councils WHQS programme at that time was component replacements, rather than targeting damp properties.

A review of the Savills raw data shows the estates with the highest occurrences of damp were

- Garth Owen, Newtown
- Fairview, Temple Street, Llandrindod Wells
- Woodlands Avenue, Brecon
- Wyeside, Hay on Wye

Around 100 of these properties, e.g. Wyeside Gardens, will have received WHQS work that would help to mitigate damp, such as new insulated roofs, or/and external wall insulation. A further 17 of these properties have received attention for damp or mould through response repairs orders. In addition Fairview has been completely refurbished.

3.2 Findings from BBA and Pilot Investigations

Some of Powys earlier built properties were not constructed with damp proof courses (dpc) in the walls, and damp proof membranes in the floor (dpm). Inter war and some earlier post war properties have painted bitumen based dpcs or dpms. However, the DPC position can be closer to the ground than current requirements, at 75mm rather than 150mm. Over time ground levels may have been raised by residents, or by the council to create ramps for level access into properties. This can cause the dpc to be bridged allowing water to penetrate across the wall, and makes properties unsuitable for cavity wall insulation.

3.3 Findings from Service Manager Review

Following concerns expressed by the Chair of the Response Repairs Sub Group, the Service Manager – Asset Management conducted a review of several cases initially indicated by Housing Surveyors as condensation, or requiring a paint over or tanking (membrane) treatment. The review established that

- Where the initial diagnosis was the cause was tenant lifestyle, this was too presumptive, as issues with the building were found.
- There were inherent building defects that needed to be rectified, and an approach to seal these in was not appropriate.
- Building ventilation and heating systems required greater consideration

As a result damp awareness training has been undertaken for all PCC and HOWPS surveyors via Housing Quality Network, and direction has been issued to ensure that all building defects and ventilation issues are resolved, and the modernity of the heating system

is considered. Further training is being arranged to assist detailed methods of invasive surveys.

3.4 Powys response to the national problem

Powys do not appear to have the scale of the cavity insulation problem some local authorities face, though some cases of damp have been linked to faults with the cavity insulation. Where this has occurred, it has been removed, and replaced, or the property has had external wall insulation added. Due to a trend of concerns with the workmanship of one installer, a sample survey of their work was undertaken by BBACIT, and the results are shown below

- 3 properties were satisfactory
- 2 properties had some workmanship issues, but these were not causing damp, and these will be monitored
- 1 had no faults with the insulation, but the buildings pointing had decayed, and this needed remedy
- 1 property had faults with the cavity insulation that needed attention
- 1 property was not suitable to have cavity insulation

3.5 Evolving Trends

A study of repairs history since the commencement of the WHQS programme in 2012 shows that there have been orders raised for damp or mould at 1602 properties. This is 30% of the stock. This has some consistency with the results of the Welsh Audit Office telephone survey, where 23% of residents expressed concerns about damp.

It is interesting to note that the numbers of reports of damp and mould are decreasing year on year. The table below shows this, which validates the impact of the WHQS programme, and the revised approach to dealing with damp since 2017. There is also a significant reduction in the number of repeat orders to address damp at a property within a given year. This indicates more robust diagnosis and solutions are starting to be applied.

Year	Reports of damp or mould	Numbers of repeat orders per property per year
2012	363	81
2013	404	81
2014	527	140
2015	345	48
2016	359	40
2017	186	30
2018	133	6

In the last two years a trend is emerging of damp due to building defects at,

- Garth Owen, Newtown
- Yniswen, Penycae
- Iyshrhos, Caerbont
- Spencer Terrace, Gurnos

It is becoming apparent that these older properties either lack, or are beginning to see failure of original methods of damp proofing.

There are also issues with upside down houses in Treowen, Newtown. These properties are built into the hillside, such they are two storey at the front, and single story at the rear. In ground floor rooms, there have been failures with the original wall membrane (tanking system), causing groundwater to penetrate through the walls. Condensation and perception damp is also a wide concern.

These trends indicate that a more proactive approach is needed for these streets and estates. It is proposed that

- 1) These properties are prioritised for stock condition survey in 2019, to assess the prevalence of damp
- 2) Pre-emptive invasive investigations and works are carried out when the properties become void
- 3) The need for a wider planned programme of preventative work is reviewed on completion of the stock surveys

A register will be established so further trends can be recorded, and progress tracked.

4. The Way Ahead

It is proposed to build on findings of the BBA's surveys and pilot work carried out over the last year, and put in place a structured approach to dealing with damp issues, from the first contact and actions by HOWPS, to advanced approaches to dealing with persistent problems. A working group will be established to implement the proposals, to include health care and social services professionals.

4.1 Approach to dealing with reports of damp

Receipt of tenants call reporting damp

As stated earlier, a reference that may appear to accept the situation as damp by a call centre operative, can be used as evidence of an admission of liability by the claimants solicitor. For that reason, it is proposed that any reports of damp to a PCC First Contact Officers or HOWPS 'call centre operative, are handled and recorded in a controlled way. A script will be developed to follow, to attempt to establish as much information about the problem, and categorise it under one of the damp type headings. If not possible to do that, the matter must be recorded as 'tenant reports damp, investigation required'. The investigation then needs to categorise the damp headings. This means that if there is a condensation issue or false perception, due to tenant's activities or opinion, it will always be recorded as such from that point in time.

Assessment of risk

Information will be sought if the caller, or members of the family residing at the property might have a health condition, or be vulnerable in any other way, that may be affected by the damp incident. This will be used to prioritise the initial response, and ensure safe methods of working are adopted. It will also receive consideration during further actions, and to establish if temporary or longer term decanting may be appropriate. Powys will work with health care professionals and social services, via a working group, to ensure impact on residents health is minimized.

Investigation methodology

Training has been carried out by the Housing Quality Network for Powys and HOWPS Surveyors, to ensure there is a consistent approach to investigation and diagnosis. This will include a checklist approach that will record findings, and allow a step by step approach to eradicating damp in the property. Sometimes a step by step approach to remedial work is required, as resolving one issue may negate the need for further measures. A controlled process will be agreed with HOWPS to ensure that records will be available to robustly defend disrepair or personal injury claims. A clear process will be developed by the working group for dealing with severe cases of mould growth.

The proposed process for investigation

- 1) On receiving a call about damp, information will be sought if the caller, or members of the family residing at the property might have a health condition, or other vulnerability, that may be affected by the damp incident

- 2) Where call centre staff can establish a likely cause such as water penetration, or a leak, an HOWPS operative will attend and rectify.
- 3) A process will be developed to establish if this damp incident is a severe case, which could potentially cause risk to health.
- 4) Other reports of damp should receive a pre inspection by a HOWPS surveyor or supervisor, and initial diagnosis using appropriate equipment. A photographic record will be taken of the findings and any readings taken. The impact on health will be explored further and assessed
- 5) Where the pre inspection identifies a clear defect(s) this will be dealt with as a repair by HOWPS and the response time prioritised for those with health or age vulnerabilities. The checklist will be completed and sent to the Council, with confirmation of work carried out.
- 6) All surveys should ensure the attributes and their condition at the time of the visit are recorded, that ventilation measures exist and are being used by the resident
- 7) Information should also be collected about the heating system at the property, its use at time of visit, and pattern of use.
- 8) Where the pre inspection identifies further investigation is needed, the outcome from the pre inspection, checklist and photos will be sent to the councils housing surveyor, who will arrange/carry out a more detailed survey, and review of ventilation and heating at the property. Further consideration of affects to health will be made.
- 9) The Councils Housing Surveyor will recommend the work required too, and obtain approval from, the Client Side Team Leader.
- 10) Where a resident disputes the councils findings consideration will be given to commissioning an independent review.

Drying out and follow up

It is important to standardise the approach to use of drying out processes, using dehumidifiers where required, and planning follow up work when able to do so. This needs consistent approach across all areas.

Prevention

Maintain effective cross departmental strategies for inspecting and monitoring storm culverts, to avoid storm damage.

4.2 Prioritising Surveys

Where further trends develop of damp occurrences becoming common in a street, or on an estate, surrounding properties will be prioritised for the first batch of post WHQS programme Stock Condition Surveys to be carried out in 2019.

4.3 Remedies and Operational delivery

Water penetration

HOWPS will rectify issues permanently where possible, but in some cases may carry out interim repairs, and refer the matter to Powys for WHQS works. These works will be carried out as part of Powys WHQS programme

Damp proofing

Greater emphasis will be put on installing retrofit damp courses, and replacing concrete floors with no in built membranes. To align with the Radon Strategy, Radon proof membranes will be used in these cases. If expenditure is very high consideration may need to be given to the economy of carrying out the works, and whether this offers value for money, given the age or use the property can be put to.

Ventilation

Currently properties may have a mixture of manual, time run on, continuous running or humidistatic fans. Some bathrooms with openable windows may not have fans. We will move toward to

- 1) upgrading all fans to humidistatic or continuous running units at void.
- 2) Installing fans to bathrooms without them at void or when mould growth occurs.
- 3) Checking for fans during annual stock condition programmes and installing where absent

Some manufactures offer free property assessments, so we will utilise these to ensure the most appropriate type are used.

Some properties have positive air pressure ventilation systems and greater use will be made of these in difficult to resolve cases. These systems are fitted in the roof void, and residents can complain about the cold air that comes though the inlets for these. Therefore, we will install a version with a heat recovery option going forward, and upgrade existing installations where it is considered residents circumstances warrant a change.

Heating

While some systems may be complaint with WHQS in terms of their age, they may not be providing the optimum balance of temperatures, or may have less modern controls. Consideration will therefore be given to upgrading controls, or replacing with more appropriate whole systems, including renewable energy options.

Whole House Approach

The EPC for the property will also be reviewed, or obtained where one does not exist, so all aspects and impacts are collectively reviewed.

Procurement and Supply Chain

There is currently no specific arrangement for carrying out damp proofing works, so a dynamic purchasing system will be developed so there is a pool of specialist contractors available to carry out this work, and offer long term guarantees.

4.4 Consulting with residents

To maintain openness and transparency, the Response Repairs Sub-Group will be consulted on the development of this strategy and associated changes to policy and standards. The group will be used to approve the information and communication information to be developed and made available to residents.

We understand that there are fears about health risks associated with damp so propose to raise awareness by the following means:

- Articles in 'Investing in your Home' newsletter
- Discussions with tenant representatives at Resident Scrutiny Panel and Response Repairs Sub-Group
- Development of information leaflet to supplement CD's currently utilised.
- Availability of leaflets and CD's to hand out at estate days and events
- Briefing notes to inform Councillors and Assembly Members of the initiative, and should wider targeted investigations or work programmes take place

4.5 Costs

Initial Investigation Costs

The cost of initial inspection by HOWPS is included in the annual sum paid to them. In cases where it is believed further investigation is required, they will refer the matter to the Councils Housing Surveyor. At present BBACIT charge £600 for their survey, but the intention is to train and equip PCC staff to carry out these surveys.

Interim Costs

The costs of washing down and treating mould is included in the annual sum paid to HOWPS, as would be removal and treatment of fungi.

Further Investigation and Repair Costs

The costs of investigation and repairs to remedy water ingress and leaks is included in the annual sum paid to HOWPS, provided that substantial parts of, or whole component replacements are not required. Examples would include

- Repairing a roof, including replacing up to 50% of tiles
- Repairing or replacing areas of rendering or pointing provided this is not required for the whole property

The costs of investigation and works to remedy rising damp will not be included in the annual sum. If the situation requires complete replacement or installation of a Damp Proof Course, or replacement of concrete floors, this will be funded from Capital Budget.

Budget

Provision has been made for £500,000 per annum over the next five years to allow comprehensive solutions to be adopted. Costs may vary widely depending on the scope of work required, and typically will be

- up to £10,000 for full damp course treatment to walls (including replastering),
- up to £20,000 where concrete floors require replacement.

4.6 Asset Management

In order to address the weakness in information from the Savills survey, future stock condition surveys will be designed to collect more information about the type, location and potential causes of damp. It is proposed to commence a stock survey of 20% of Powys per year from 2019, and priorities will include streets or estates where there are historic, or increasing trends of damp problems.

DRAFT

Appendix 1 - Extract from Housing Health and Safety Rating Standard 2006, Operating Guidance

Potential for harm

Most vulnerable age group and statistical averages

1.02 The most vulnerable age group is all persons aged 14 years or under.

Basis of estimates

1.03 The averages for Class I outcomes were calculated from the mortality statistics for England and Wales for respiratory disease in children aged 0 to 14 years. The figures for Class II and III were calculated using the same criteria from data from the Hospital Episode Statistics. The estimates for Class IV outcomes were taken from GP consultation rates for coughs and wheeze.

1.04 Recent research has shown that low levels of background ventilation, without visible mould or dampness, can result in high indoor humidity levels and in greatly increased house dust mite populations. In consequence the average likelihoods given may be an underestimate, and should be considered as conservative.

Damp and Mould Growth							
Average likelihood and health outcomes for all persons aged 14 years or under, 1997-1999							
Dwelling type & age		Average likelihood 1 in	Spread of health outcomes				Average HHSRS scores
			Class 1 %	Class II %	Class III %	Class IV %	
Non HMOs	Pre 1920	446	0.0	1.0	10.0	89.0	11 (I)
	1920-45	400	0.0	1.0	10.0	89.0	12 (I)
	1946-79	446	0.0	1.0	10.0	89.0	11 (I)
	Post 1979	725	0.0	1.0	10.0	89.0	7 (J)
HMOs	Pre 1920	430	0.0	1.0	10.0	89.0	11 (I)
	1920-45	219	0.0	1.0	10.0	89.0	22 (H)
	1946-79	967	0.0	1.0	10.0	89.0	5 (J)
	Post 1979	644	0.0	1.0	10.0	89.0	8 (J)
All Dwellings		464	0.0	1.0	10.0	89.0	11 (I)

Physiological health effects

1.05 Both the detritus from house dust mites and mould spores are potent airborne allergens. Exposure to high concentrations of these allergens over a prolonged period will cause sensitisation of atopic individuals (those with a predetermined genetic tendency to sensitisation), and may sensitise non-atopic individuals. Once a person is sensitised relatively low concentrations of the airborne allergen can trigger allergic symptoms such as rhinitis, conjunctivitis, eczema, cough and wheeze. For a sensitised person, repeated exposure can lead to asthma, and it appears that the severity of the asthma intensifies with increasing humidity, house dust mite and mould levels.

1.06 Deaths from all forms of asthma in the UK are around 1,500 a year, of which around 60% has been attributed to dust mite allergy. 20 to 30% of asthma sufferers are sensitised to mould spores. One in eight children suffer with asthma in the UK, compared with one in thirteen adults.

Mould growth

1.08 Although less significant statistically in health terms, spores of many moulds and fungi (including timber attacking fungi) can be allergenic. The spores can also be carcinogenic, toxic and cause infections; the potential health effect varying with species. Fungal infection, whilst not common, is usually associated with those vulnerable to infection (such as those on immuno-suppressant drugs). Some fungi, particularly when in very high concentrations, can also colonise the airways of susceptible individuals, particularly asthmatics. Toxins from some moulds (mycotoxins) can cause nausea and diarrhoea, can suppress the immune system, and have been implicated in cancers. Although uncommon, these are serious if they occur.

Social and mental health effects

1.09 The mental and social health effects of dampness and mould should not be underestimated. Damage to decoration from mould or damp staining and the smells associated with damp and mould can cause depression and anxiety. Feelings of shame and embarrassment can lead to social isolation.

Appendix 2 - Extract from Welsh Housing Quality Standard

PART 1 - In a good state of repair

The Standard

The dwelling must be structurally stable, free from damp and from disrepair. The key building components must be in good condition. The walls must be in good condition as must the roof structure and coverings. External windows, doors and chimneys must also be in good condition.

Minimum Requirement

All dwellings must be in a good state of repair. The assessment of whether or not the dwelling is in a good state of repair will be carried out using the Housing Health and Safety Rating System (HHSRS).

Elements that will need to be assessed are:

1(a) structurally stable and free from disrepair (Primary)

1(b) free from damp (Primary)

Interpretation

1(b) Is the dwelling free from damp (Primary)?

This is referred to in the HHSRS Operating Guidance as HHSRS Hazard 1. This hazard assessment covers threats to health associated with increased prevalence of house dust mites and mould or fungal growths resulting from dampness and/or high humidities. The hazard incorporates threats to mental health and social wellbeing which may be caused by living with the presence of damp, damp staining and/or mould growth.

There are many variables to understanding the causes, likely impact and potential hazards relating to the dwelling being free from damp, which means that the assessment should be one of professional judgement rather than measurement. Consideration should be given to the design, condition and state of repair of the dwelling. The location, extent and duration of any dampness identified are important determinants of the effect it may have on dust mite populations and mould growth, and the consequent potential for harm (HHSRS Operating Guidance ref: pages 48

Appendix 3 - Extract from Powys WHQS Compliance Policy

1(b) free from damp – primary

HHSRS Hazard 1: Damp and mould growth

Powys standard

- A. Dwellings should be warm, dry and well-ventilated. Indoor relative humidity should be between 40% and 60%, except for short periods of fluctuation. This range is the optimum to limit the growth of house dust mite populations and mould growth. It is also the recognized comfort zone.
- B. The structure and finishes of a dwelling should be maintained free from rising, penetrating and traumatic dampness, or persistent condensation.
- C. Rising and penetrating dampness should be prevented by proper and adequate damp-proofing including damp proof courses and membranes and detailing around door and window openings. The external fabric should be kept in repair to prevent rain penetration. Preventative measures including frost protection, will help avoid traumatic problems such as burst pipes and tanks.
- D. All facilities which involve the use of water (for example, baths, wash hand basins, sinks, showers, and wc basins) should be properly installed to prevent or at least minimise the risk of dampness from splashing during normal use. Such facilities should be properly connected to a waste pipe capable of safely carrying waste water to a drainage inlet outside the dwelling.
- E. There should be properly installed rain water goods, including eaves gutters and rainwater fall pipes, capable of safely collecting rainwater discharged from the roof and carrying it safely away from the dwelling either into a drainage inlet or other proper means of disposal.
- F. Roof and underfloor spaces should be properly ventilated to ensure timber remains air dry to minimize the chance of fungal infection.
- G. The dwelling should be able to cope with normal occupant moisture producing activities without persistently high relative humidities. There should be provision for the safe removal of moisture-laden air during peak production. This should include extraction during cooking or bathing, either by mechanical means, or passive stack ventilation and direct venting of clothes drying facilities (whether tumble driers or drying cabinets) to the exterior.
- H. There should be sufficient and appropriate means of ventilation to deal with moisture generated by normal domestic activities without the need to open windows. Opening windows can result in heat loss, noise, and may be a security risk. There may be no need for additional background ventilation where windows are ill-fitting, no draught-stripping, and/or where there are open chimney flues. Where there is draught-stripping, or tight fitting windows, provision for background ventilation may be

necessary via trickle vents in replacement windows, insertion of high-level airbricks, or by a passive stack or a mechanical heat recovery ventilation (MHRV) system.

- I. If moisture levels are controlled, through adequate ventilation, dust mite populations can be significantly reduced by raising indoor temperatures. To achieve this, there should be adequate structural thermal insulation, and appropriate means of space heating.

DRAFT

Appendix 4 Further reading and sources of information

Housing Health and Safety Rating Standard 2006

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf

Welsh Housing Quality Standard

<https://gov.wales/docs/desh/publications/141030-whqs-guide-for-social-landlords-en.pdf>

Powys WHQS Compliance Policy

https://customer.powys.gov.uk/media/2765/WHQS-Compliance-Policy-2017-2018/pdf/WHQS_Compliance_Policy_2017-2018_June_2017_ENG.pdf