DampSurveys.com

XXXX
London, XXXX

Ground floor apartment with a manual bathroom extractor fan and open plan kitchen with no obvious extractor switch. There is mould around the bathroom and bedroom and signs of condensation. The simple solution is to improve ventilation and heating balance.

HOMEBUYERS DAMP & TIMBER REPORT
for XXXX
4 November 2019

Dear XXXX,

Thank you for instructing us to carry out a damp survey of XXXX. We understand you are the vendor of the property, your buyer's RICS homebuyers surveyor identified a risk of damp, mould or timber decay and you wish to have an expert damp surveyor identify the source of moisture. Please inform us if we have misunderstood your instructions.

SURVEY OBJECTIVES

Our damp and timber surveys are designed to:

- *identify the areas of unwanted dampness within the property,*
- *identify the root cause of unwanted dampness,*
- *identify the effects of dampness,*
- *recommend remedial action,*

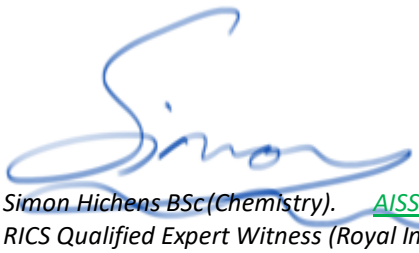
All buildings can be exposed to dampness to some degree. You will mitigate the risk of damp if you follow all our recommendations. This report is intended to be read in full. Observations and opinions must not be taken in isolation. Like any building, you need to be aware of the risks of damp arising in the future and plan a programme of prevention and maintenance accordingly.

INDEPENDENCE AND METHODOLOGY

Our only income is through damp survey fees. Our motivation is integrity and practical, durable solutions. We are independent of contractors and never profit from remedial work. We use an array of analytical equipment to identify damp within walls.

SURVEYOR'S DECLARATION AND CONCLUSION

I confirm that I inspected Victoria Rise on 4 November 2019. I conclude that at the time of the survey that there was condensation and mould caused by excess humidity as a result of thermal imbalance and insufficient use of ventilation.



Simon Hichens BSc(Chemistry). *AISSE (Institute of Specialist Surveyors & Engineers)*
RICS Qualified Expert Witness (Royal Institute of Chartered Surveyors)
ABBE Certificated Surveyor of Timber & Dampness in Buildings (Awarding Body of Build Environment)
PCA Certificated Surveyor of Dampness in Buildings (Property Care Association)
ICAEW and Property Mark Qualifications *Member of the Society for the Protection of Ancient Buildings (SPAB)*
Independent Expert Damp and Timber Surveyor *Report 6 November 2019*

CONTENTS

ABOUT DAMP SURVEYS LTD

Damp Surveys Ltd is an independent damp surveying company. We use an array of tools and techniques accurately differentiate types of damp. Our confidence in the technology allows us to categorically state whether or not there is a risk of rising damp.

Independence is key to understanding how we operate and why we provide a unique service quite different to other companies. Builders with PCA qualifications, offer low cost or free surveys, subsidised by money made from their findings. We do not and never will benefit financially from any recommendations. We are motivated to recommend optimal treatment to protect the property now and into the future. The root cause of dampness is often quick to solve and can be repaired during the survey for no additional cost.

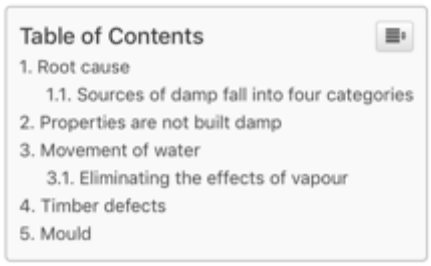
Your peace of mind is our goal, for you to be satisfied that the property will be protected against damp.

ONLINE RESOURCES – links to information integral to this report

Principles of Damp Surveys

GLOSSARY OF TERMS

RICS Facts Sheet 4
(RICS_Dampness_Factsheet_V3.pdf)



Dry Rot from Chemical Damp Proofing

Example Flood Investigation

Understanding Salts

Example Dry Rot

Example Calcium Nitrate

Understanding Rot

Dry Rot from Condensation

Interstitial Condensation


***Stephen Boniface**, **former chairman** of **RICS** states: 'true rising damp' is a myth and chemically injected damp-proof courses (DPC) are 'a complete waste of money'.*

Damp-proofing companies exposed in Which? investigation

THE PROPERTY

The property is a ground floor flat. The front door faces west.

Changes to the property's original design

Properties are not designed and built with damp problems. Understanding changes to a property since first inhabited is the starting point for tracing damp back to its root cause.

Key changes are; double glazing, open plan kitchen, external insulation.

ILLUSTRATIONS

Findings: there were signs of condensation and mould. I tested the inside of all external walls every 1M, the base of the walls by external entrances, around any chimney breasts and a sample of internal walls with a Protimeter damp meter in conductance mode. Damp meters measure electrical conductance. Water is a poor electrical conductor. It is salts in water that conduct electricity. Despite criticism, damp meters are a good test of dryness. Protimeter readings below 20WME are considered dry. There were no high damp meter readings at the time of the survey..

Looking outside one can see the cause of dampness. The mould lines up with the base of the wall where the retrofitted insulation starts. The gap is a normal, but it causes a thermal imbalance

Looking through a thermal imaging camera where blue is about 5˚C colder than orange, we see that the base of the wall is slightly warmer on the outside. This warmth translates into heat loss on the inside. Some of the energy saving from the insulation should be used to improve ventilation, such as run the bathroom extractor fan for 30 minutes after taking a shower.

The base of the wall measured 15°C. Taking the internal humidity measurement we can calculate a surface humidity of 81%RH. Mould only grows where relative humidity exceeds 85%RH for 6+ hours. Excessive humidity results from insufficient ventilation. Ventilation is most effective when air is extracted at the source of humidity; bathroom, kitchen, drying clothes and occupied room.

By comparison the thermostat measures 19.3°C. So any thermostat setting should account for this imbalance.

The primary source of vapour comes from the bathroom. Here the extractor fan is manual. The speed was fast. However the extractor fan should be kept on for 30 minutes after showering with the door kept closed.

There is an extractor fan in the kitchen, but is it being use? Another solution is cook with tops on pots and pans and any indoor drying of clothes should be in a vented room with the door closed.

Trickle vents were closed. I opened them during the survey.

There is also an option to open the small windows at the top to improve ventilation.

We tested the inside of all external walls every 1M, the base of the walls by external entrances, chimney breasts and a sample of internal walls with a Protimeter damp meter in conductance mode. Damp meters measure electrical conductance. Water is a poor electrical conductor. It is salts in water that conduct electricity. Despite criticism, damp meters are a good test of dryness. Protimeter readings below 20WME are considered dry. All readings were low, below 20WME at the time of the survey. The above reading was taken by the front door.

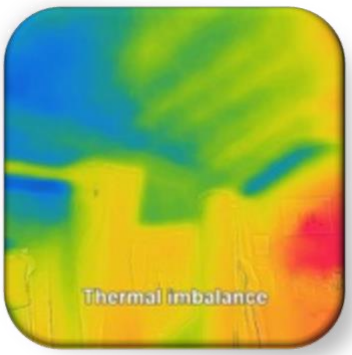
The only marginally high reading was on the plastic section of wall below the window, caused by slight condensation. This panel could be insulated at virtually no cost.

The solution is 1) improved ventilation, 2) closed bathroom door, 3) less clutter by external walls, 4) balanced heating across the flat and though the course of the day, and 4) anti-mould paint on vulnerable surfaces.

DAMPNESS EXPLAINED THROUGH RELEVANT CASE STUDIES

Damp detection often relies on elimination of causes. *There are four sources of dampness in properties; 1) vapour, or excess humidity from insufficient ventilation (which accounts for 85% of damp issues), 2) groundwater (also known as rising damp), 3) penetrating damp or ingress (rainwater) and other 4) leaks. See detailed finding at the back of this report.*

CLICK ON IMAGE TO SEE CASE STUDY



Relevant case studies; excess humidity (condensation caused by insufficient ventilation), excess humidity (mould caused by insufficient ventilation).

CONCLUSION

I conclude that the root cause of dampness is condensation and mould caused by excess humidity as a result of thermal imbalance and insufficient use of ventilation. During the ventilation assessment I conclude: the ventilation is satisfactory, however you will need to keep extractors running, doors closed and windows open to remain mould and condensation free. The trickle vents were closed, sealing the property when you are away. The bathroom and kitchen extractor fans are not being used enough.

In my opinion there are no irreversible effects on the property caused by damp. the recommendations will improve living conditions, but are not urgent nor vital. I understand you go away for long periods, perhaps after just having taken a shower, then closing all windows, effectively sealing up the property, with minimal or no heating.

TREATMENT

Taking a pragmatic approach to eliminating the potential sources of dampness:

URGENT RECOMMENDATIONS

There are no urgent recommendations. The property can be damp and mould free in its current state by following the optional recommendations, or just balancing the heating so that the wall doesn't fall below the mould point and opening windows more Cost of urgent items about £0.

OPTIONAL RECOMMENDATIONS

Optional recommendations: open window slightly when a room is occupied or humid, monitor fluctuation of humidity with a Govee WIFI datalogger, keep mould under control with bleach or an anti-mould spray, paint final coat with an anti-mould paint in vulnerable area

Estimated cost of optional recommendations: £100 .

HEALTH AND SAFETY CONSIDERATIONS

There are no health and safety issues from the dampness noted. It is in the occupier's interests to keep a property properly ventilated and temperatures above the dew and mould point throughout the property, thereby reducing the health risk associated with dust mites, bacteria, protozoans, as well as decorative spoiling caused by mould. https://dampsurveys.com/mould-heath-concerns

W.H.O. (World Health Organisation) guidelines for indoor air quality

"Management of moisture requires proper control of temperature and ventilation to avoid excess humidity, condensation on surfaces and excess moisture in materials. Ventilation should be distributed effectively throughout spaces, and stagnant air zones should be avoided.

A typical house contains 30 - 40 litres of atmospheric water. Each day, each occupant adds about 1.5 litres each day. If it isn't vented out, it will condense into walls and cause mould.

- *0.8 litre in respiration, (about 0.25 litres at night) + water for plants and pets*
- *0.5 litre per shower,*
- *0.5 litre for washing,*
- *0.25 litre cooking,*

LIMITATIONS

Damp Surveys Ltd reports are designed to provide you with an informed independent expert opinion as to the condition of the property together with any recommendations for further investigation or remedial work. We do not warrantee any findings in this report unless we enter into a separate warrantee agreement with you.

The survey was conducted during daylight hours. Damp will be more noticeable at night and when the weather is colder and more humid. Gutters are more likely to fail when full of leaves and during periods of prolonged rain and adverse wind. We make best endeavours but cannot guarantee being able to identify all forms of damp, rot and insect infestation affecting the property. We are happy to return and update our observations and advice at any time.

We carried out a careful and thorough inspection of as much of the property as was accessible. Property is uncluttered in good order. However the long curtains and bedside table are restriction airflow. I was able to access all rooms When it is not possible to make a full inspection, we make a professional judgement about the likelihood of a defect being present. In certain circumstances, this may lead to a recommendation for further action to open up an area for further investigation. We are unable to see the whole roof, all the guttering and some of the drains. We were unable to inspect woodwork or other parts of the structure which are covered, unexposed or inaccessible, and are therefore unable to report that such parts of the property are free from defect. There were no obvious signs of damp resulting from these limitations.

This report is for the sole use of XXXX for whom the survey was undertaken and can only be relied upon for 90 days from the survey date. Unless expressly stated otherwise in this report, nothing in this report confers or is intended to confer any rights on any third party pursuant to the Contracts (Rights of Third Parties) Act 1999.

DETAILED FINDINGS

Below is some of the data used to determine the root cause of dampness.

VENTILATION RISK ASSESSMENT

Conditions during survey

Near main damp concern (relevance explained)

*Relative humidity 68.1**%RH** Temperature 17.7**°C** Mould point 14.2**°C** Dew point 11.7**°C***
*Temperature of damp wall 15**°C** Relative humidity of damp wall 81**%RH***
there was some isolated areas of mould seen, there was a risk of mould on day of survey given external low and poor ventilation.

External conditions (relevance explained)

*Relative humidity 75**%RH** Temperature 12.8**°C** External low on day 9**°C** Sub-floor 68.1**%RH***
Weather: drizzle just before survey

The bathroom extractor. *The extraction rate was **42.8** M^3/min (ideally it should be over **30** M^3/min). The extractor overrun was 0 minutes after the light was switched off. It should last for at least 20 minutes.*
The bathroom extraction rate is good. But it's needs to be kept in on for 30 minutes after taking a shower.

Kitchen Ventilation

The extraction rate was 0 M^3/min (ideally it should be over 100 M^3/min).
I couldn't find switch to turn on kitchen extractor fan. The kitchen is open plan making it vulnerable to excess humidity.
The primary source of vapour is from the bathroom. Be careful not to dry clothes on a drying rack or radiator, unless in a well ventilated room with the door closed.

***I consider if there is thermal imbalance** – I conclude; thermal imbalance is created by the external insulation reducing heat loss to all but a small area at the base of the wall and insufficient internal heating.*

***I conclude:** the ventilation is satisfactory, however you will need to keep extractors running, doors closed and windows open to remain mould and condensation free. The trickle vents were closed, sealing the property when you are away. The bathroom and kitchen extractor fans are not being used enough.*

RISING DAMP RISK ASSESSMENT

The building has an elevation of 27 M above the Thames, in an area with no risk flood risk (see http://checkmyfloodrisk.co.uk/ flood risk is a proxy for a high-water table, a necessity for rising damp). 0

For there to be rising damp the property has to be in contact with ground water (that is standing water, as opposed to rainwater falling onto high ground levels). This is very unlikely in London as most of the rock below the mud has no groundwater. Aquifers and areas prone to flooding were made into parks and other recreational facilities. According to http://mapapps2.bgs.ac.uk/geoindex/home.html?layer=BGSHydroMap the subsoil nearby is; "Rocks with essentially no groundwater".
From Thames Water: "By this time, groundwater levels in the centre of the London Basin had fallen by about 65 M, from about 35 m below ground level in 1845 to almost 100 M in 1967."

I conclude;** Rising damp is a remote possibility**.

PENETRATING DAMP RISK ASSESSMENT

I inspected the exterior for signs of penetrating damp; no exterior concerns. The property has external insulation.

In conclusion:** there were no signs of penetrating damp**.

LEAK RISK ASSESSMENT

I inspected drains; the drains are of no special concern there is no suspicion of a mains water leak.

I look for signs of a water leak. Small water leaks can be very difficult to detect.
***I conclude**; there were no signs of a leak.*

TIMBER RISK ASSESSMENT
I assess the risk of timber rot and woodworm.
The floor is the floor of no special concern, floor felt solid. *There is a solid floor no need for air bricks..*
There is there was no loft.
I conclude; *there were no signs of timber decay****.***