DISASTER RECOVERY & HYGIENE EXPERTS

Mould Remediation in Aylesbury, Buckinghamshire

CASE STUDY

TABLE OF CONTENTS

Buckinghamshire, United Kingdom

DISASTER RECOVERY & HYGIENE EXPERTS

Mould Remediation in Aylesbury, Buckinghamshire

CASE STUDY

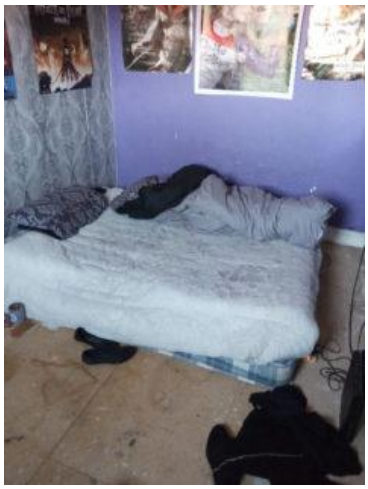
THE BRIEF

We were called to a three bedroom end of terrace property in Aylesbury to assess a bedroom following a recent leak from the adjoining bathroom. The leak happened quite some time prior to our visit and we were advised that no drying was ever carried out following the leak. As a result, extensive mould growth has occurred in the bedroom, affecting the ceiling and walls.

The family home in Buckinghamshire was built in the mid-1900s. The external walls are built from brick, with a cavity between the internal and external walls. All internal walls have been finished with plaster, and the ceilings are made from plasterboard fixed to wooden joists above. The first floor consists of wooden joists and T&R chipboard panels.

THE OBJECTIVE

Upon our arrival, we took atmospheric readings of the internal environment. These readings help us to evaluate several things, including whether there is a risk of secondary damage to hygroscopic materials (eg. wood and plasterboard) due to high levels of moisture in the air. Hygroscopic materials can absorb water vapour from the air, increasing the amount of water they're holding at a given time. As such, this can lead to further issues, including microbial (most commonly mould) growth.to remove the loosened paint. This was achieved, in full, without any damage to the property.



DISASTER RECOVERY & HYGIENE EXPERTS

Mould Remediation in Aylesbury, Buckinghamshire

CASE STUDY

THE RESULT

Sometimes it is best to let the pictures speak for themselves. In just two days the main entrance to this well-known and important building was transformed completely. The graffiti removal in London was a complete success.

The readings we received were as follows:

Area	Relative Humidity	Temperature	Dewpoint	Vapour Pressure	Specific Humidity
Internal	77.9%	14.6°C	10.8°C	1.27kPa	8.00g/kg
Between the subfloor void within the bathroom	68.1%	10.5°C	4.8°C	0.86kPa	5.34g/kg

The floor covering in the bedroom had been removed prior to our arrival, exposing visibly stained chipboard flooring. We also noticed mould growth in multiple places across the walls and ceilings. However, on our initial visit, moisture readings were at acceptable levels.

The internal walls recorded at an average of 180 REL, the ceiling at 150 REL, and the floor at 14% WME. A general review of the property pointed to high internal atmospheric moisture levels as the main driver for the reported issue of mould growth.

In fact, calculations based on BS 5250:2002 code of practice for the control of condensation in buildings showed the moisture levels in the property to suggest a “wet occupancy”, the definition of which is as follows:

Wet Occupancy:

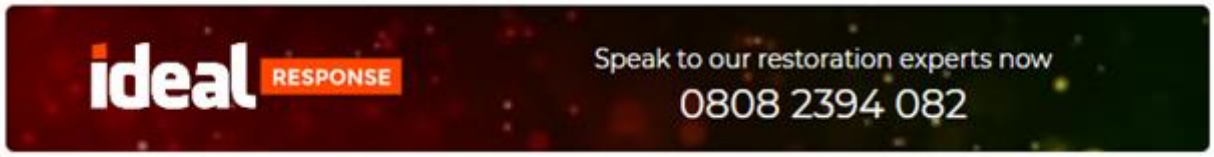
Ventilation is hardly ever used; high moisture generation; probably a family with young children; water vapour pressure excess is greater than 0.6kPa.

DISASTER RECOVERY & HYGIENE EXPERTS

Mould Remediation in Aylesbury, Buckinghamshire

CASE STUDY

THE TECHNICAL PART



The main driver which allows mould to develop and grow in and on materials within a structure is moisture. And more specifically, water activity.

Materials can become damp in a number of ways; directly being wetted, moisture penetrating materials through capillary action, physical contact, and hygroscopic materials absorbing moisture directly from the atmosphere.

There are many hundreds of mould varieties, each requiring different levels of water activity to develop and grow. The lowest known level of water activity at which mould can grow is 0.61. In general, this level translates to 60% relative humidity (normal range is around 40%).

Condensation doesn't have to form on a surface. For there to be sufficient moisture to allow for mould to establish at the point where condensation occurs, the relative humidity would have to be 100%. In most situations where surface condensation occurs or relative humidity of the internal atmosphere exceeds 70% for an extended period, mould will establish and grow.

Mould is an opportunist and once established in a property, will quickly colonise in areas with appropriate conditions. Most properties, through their normal occupational cycle, will have periods of high occupational moisture. However, it is prolonged periods of elevated moisture which allows mould to grow. And once mould is present in a structure, the period of time it takes to colonise new areas is reduced due to increased levels of spores being produced in an enclosed environment.

A general review of the end of terrace property in Aylesbury pointed to high internal atmospheric moisture levels as the main driver for the mould growth in the first floor bedroom. The condensation and control of atmospheric moisture was a priority and could be achieved by ensuring the following points were carried out as they would optimise the internal atmospheric conditions:

DISASTER RECOVERY & HYGIENE EXPERTS

Mould Remediation in Aylesbury, Buckinghamshire

CASE STUDY

The usage of heating to maintain an adequate and even internal air temperature

The usage of extractor fans when cooking, showering, and bathing

Ensuring that areas of moisture production (eg. the bathroom) are kept closed from the general environment until extraction systems have reduced excessive atmospheric moisture

To try not to dry laundry indoors, but if needs be, to ensure good ventilation by opening windows. Preferably, dry a small volume of clothes in the bathroom with the door closed and extractor on.

Ensure the usage of trickle vents and window ventilation

In the interim, to help with the current mould growth, we completed our multi-stage mould remediation process, however, if the above steps are not followed, there is a high chance that the mould will quickly return.

Firstly, the affected areas were sealed off to prevent mould spores from spreading to previously unaffected rooms. A negative pressure system was installed for the duration of our work to help protect from cross-contamination and remove contaminants from the air.

Negative pressure is created in the abatement enclosure, or in some instances larger areas, by using negative pressure fans. These draw contaminated air or airborne particulates through polythene ducting, venting them into the air outside the building.

All affected walls were stripped of wallpaper to expose the mould and facilitate the mould remediation process. All mould-infected surfaces were cleaned and sanitised before the areas were ULV (ultra-low volume) fogged using Decon 7—a gentle decontaminate which is capable of killing 99.99999% of all viruses, bacteria, and mould.

Wanting to see more case studies? Click here to view more of our case studies!

Ideal Response
Disaster Recovery & Hygiene Experts

Phone: 0808 2394 082
Email: info@idealresponse.co.uk
Website: www.idealresponse.co.uk