

From Complaints to Confidence: Proactively Managing Moisture with Measured Data

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BTS Webinar Series #2



Build Test Solutions: Who We Are

- Building performance measurement **experts**
- Accurate, **actionable** insight
- Pioneering, **practical** measurement technologies



Today We'll Cover

- Why this matters **now**
- The problem
- How building performance *measurements* can help
- Case studies and practicalities



Dampness & Mould

Two problems, common causes

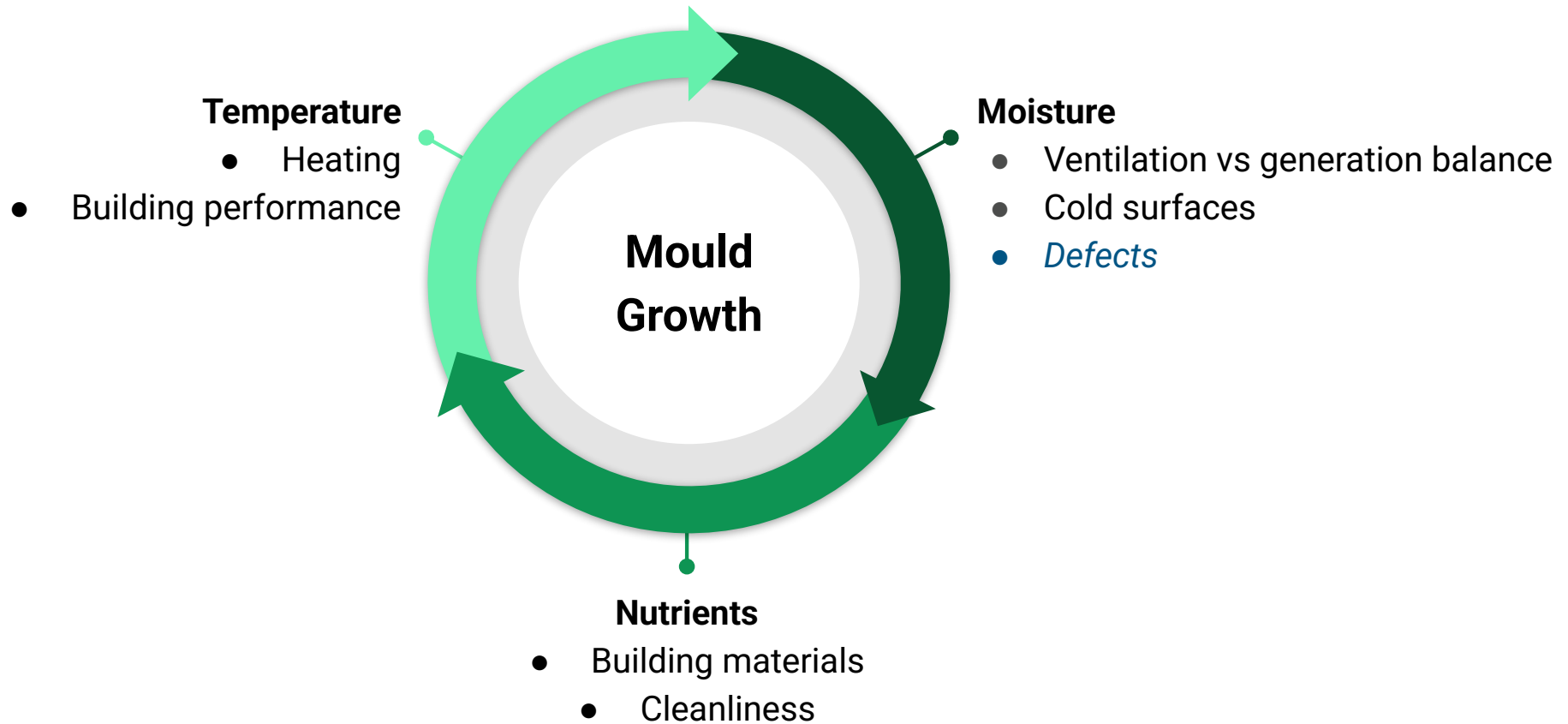
- **Dampness** - damages buildings
- **Mould** - damages people

Mould growth fed by:

- Moisture
- Temperature
- Nutrients



Causes of Mould



The Challenge with Managing Mould

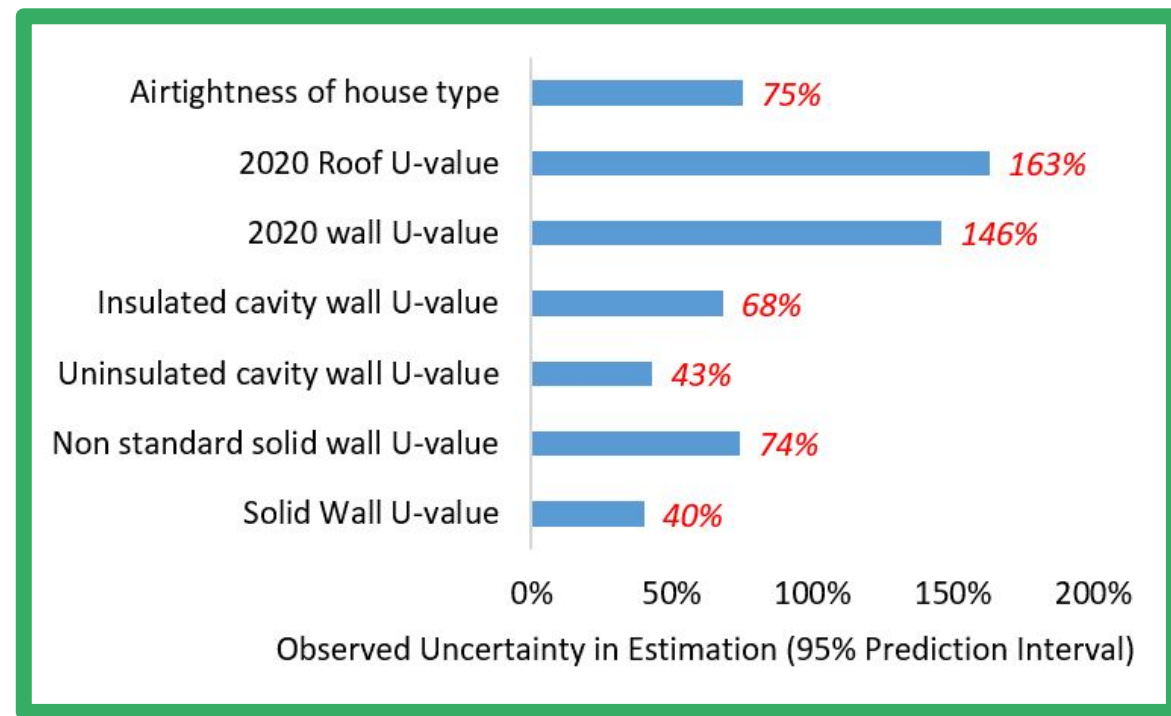
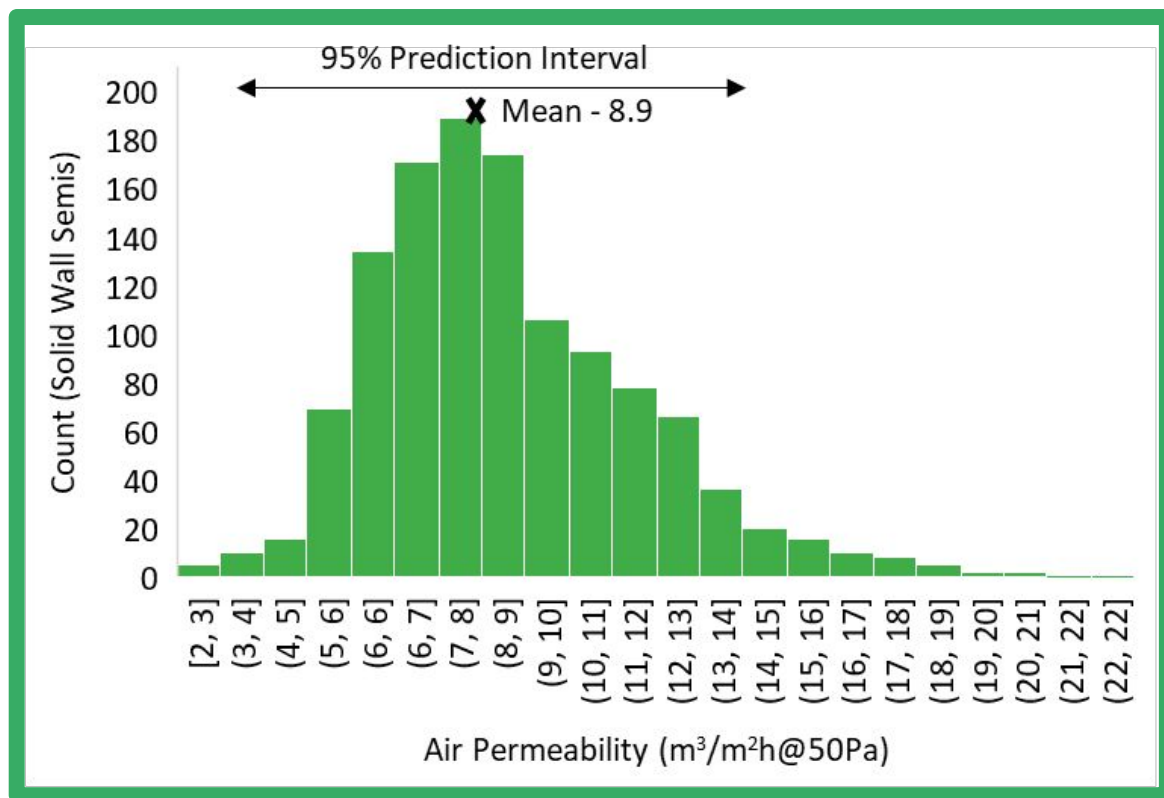
Complex: building, ventilation, people

- Asset owners and professionals can affect:
 - Sufficient ventilation
 - Affordable warmth
 - Proactive monitoring

Without good data, we're fighting in the dark



Unexpected Performance is Typical



Studies by [BRE](#), [Historic Scotland](#), & [BPN](#)

Keeping Residents Safe

Awaab's Law

- Tight timescales
- Must be proactive
- Accentuates cost of repeated failed interventions
- Measurement enables effective and a **well evidenced** plan



Extending Requirements

“In 2026 we will extend regulations to include ... excess cold and excess heat”

- Critical to resident health
- Annual NHS cost of [£1.4bn](#)

Impossible to manage without measurement



The Opportunity

- Find root causes
- Better plan interventions
- Effective remedial works
- Safer residents
- Build trust
- Clear evidence trail
- Better informed investment



The Measurement Toolkit

- A joined up approach
- Monitor mould risk
- Diagnosis:
 - Infiltration
 - Ventilation
 - Heat Loss
 - U-values
 - Thermal bridging
 - *Surveying*

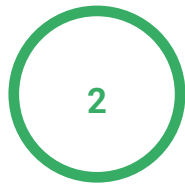


Workflow



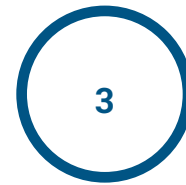
Monitor

Mould Risk Indicator &
SmartHTC for initial
assessment



Diagnostics

Pulse, flow hood & Heat3D
to diagnose issues on
prioritised buildings



Interventions

Apply data; informed
interventions



Prove

Use the toolkit to prove the
interventions worked as
planned



BTS Mould Risk Indicator

Helps landlords spot high risks early

- Daily & overall 0-100 score
- Part F compliance
- Inputs:
 - Temperature & RH monitoring
 - U-value assessment
- Clear triggers for actions



Loughborough
University

Building Energy
Research Group (BERG)

Ventilation Assessment

Stop guessing - informed decision making

- Infiltration, passive & mechanical ventilation
- Passive: Pulse
- Mechanical: Flow hoods
- Location, location, location: background ventilation testing



Example Assessment

- ✓ Infiltration, $6.4\text{m}^3/\text{m}^2\text{h}@50\text{Pa}$
 - ✓ Bathroom fan, $>15\text{l/s}$
 - ✗ Kitchen fan, $<30\text{l/s}$
 - ✗ 1 bedroom very airtight, $<1.5\text{m}^3/\text{m}^2\text{h}@4\text{Pa}$
- Clean kitchen fan
 - 1 door undercut



Heat3D

Understand how the building is really working

- Measure U-values in-situ
- Whole surfaces
- 1 hour survey
- Input to calibrate mould risk assessments
- Identify defects



SmartHTC

Rapid, accurate stock assessment

- Measure overall heat loss
- Low or no disruption
- Low cost
- Identify poor or unexpected heat loss



Bringing it all together



Case Study 1

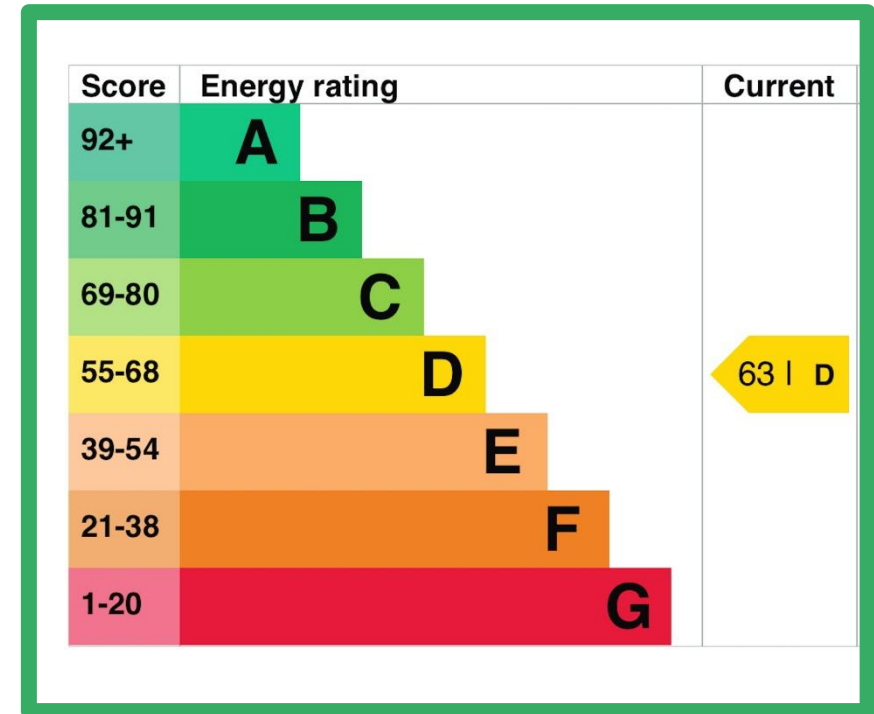


BaU Survey

- Poor airtightness
- Extract fans in place
- No visible mould
- High heat loss from walls

Conclusions:

- Ventilation sufficient
- Solid wall insulation?



Now Measure!

- Quite airtight (73% ↓ RdSAP)
- ✗ Fans shocking (83% ↓ spec)
- ✓ Wall U-value (25% ↓ RdSAP)
- ✓ Resident very happy



Measurement showed
ventilation, not insulation, was
the priority



Case Study 2

- Extract fans in place
- Trickle vents
- Cavity wall insulation
- Visible mould

Conclusions:

- Bit of a mystery!
- Over-occupancy?



Now Measure!

- HTC as expected
- Airtight ($1.9\text{m}^3/\text{m}^2\text{h}@50\text{Pa}$)
- ✗ Fans poor (67% ↓ spec)
- ✗ Wall insulation not working (U-value 286% ↑ than RdSAP)
- 🌡 Large thermal bridge



Case Study 2: Informed Feedback

New conclusions:

- Very airtight building, requires continuous ventilation
- Wall insulation not working, QA issue
- Thermal bridge could be problematic long term



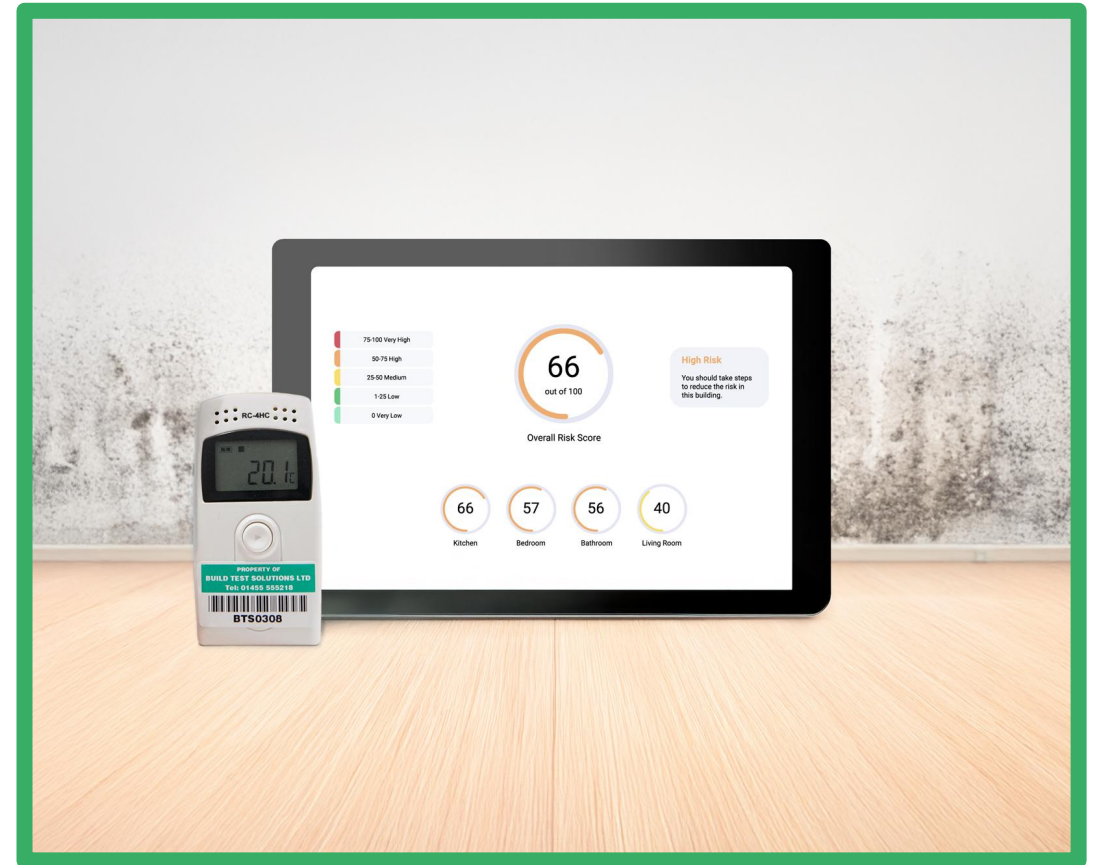
How to Access The Toolkit

- 📋 Assessors: enhance your service with advanced data-driven diagnostics
- 🧰 Installers: validate your work, reduce risk, stand-out
- 🏠 Landlords: deliver internally or commission surveys via our nationwide network



Conclusions

Mould & damp have many causes. But with the right measurements, you can act with confidence, stop treating symptoms and start addressing root causes.



Next Webinar

The real value of airtightness
testing:

More than just compliance

Thursday 18th September
Midday



BTS Conference

- 9th October 2025,
Loughborough University
- Bigger and better than ever!
- Speakers from BTS users,
Government & academics
- Product demos
- The world's #1 BPE-fest



Future Diary Dates

- **Next Webinar:**

- 18th September 2025
- The real value of airtightness testing: More than just compliance



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