

# BTS Mould Risk Indicator

*The Mould Risk Indicator is an online calculator that assesses the risk of mould in rooms and buildings.*

The indicator identifies high mould risk remotely, and before it can be seen growing. Using monitored internal temperature and humidity data, the Mould Risk Indicator puts cutting edge analysis into the user's hands using algorithms developed and validated in collaboration with experts from Loughborough University.

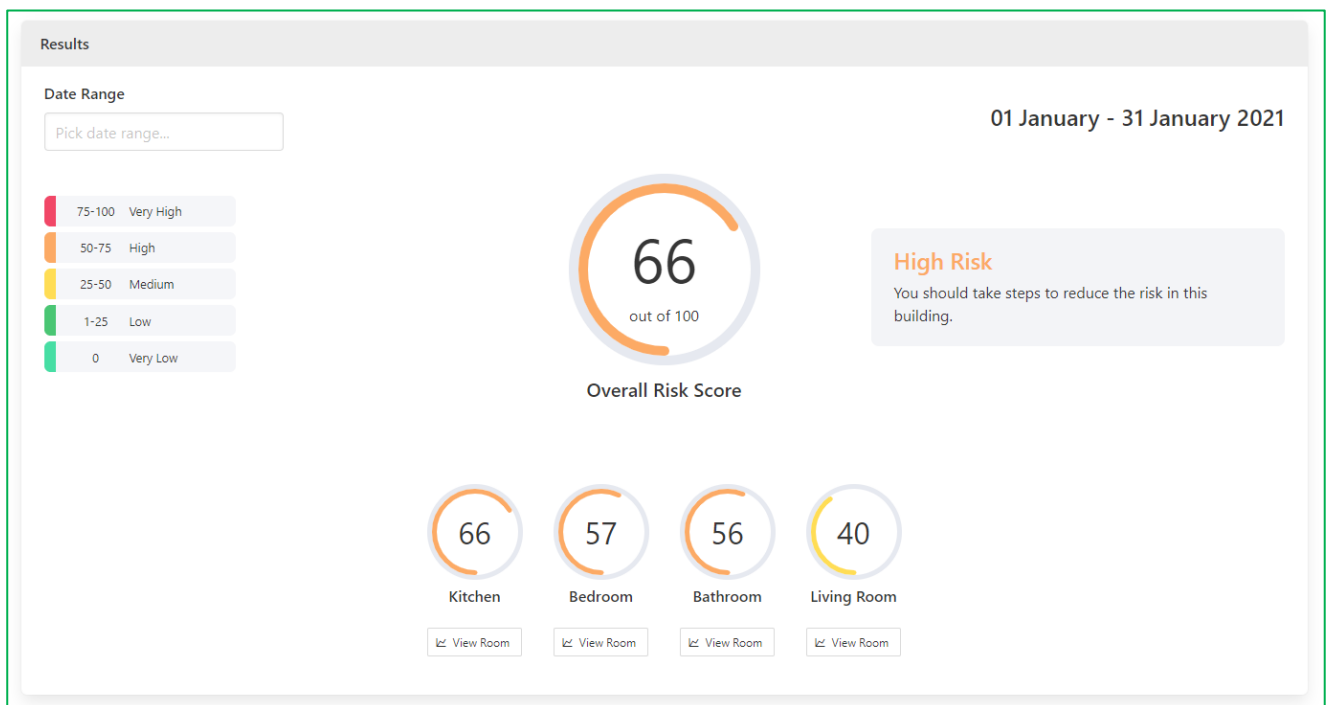


## Why is the Mould Risk Indicator needed?

Exposure to mould is a serious threat to health, costing the NHS in excess of £865m per year, but can be difficult to identify by eye.

What you don't measure you can't manage. By identifying buildings particularly at risk of mould growth, the indicator helps building owners and users to more actively assess and mitigate serious respiratory health risks.

In our field trial in more than 100 homes across the UK we found that there was a **significant mould risk in a quarter of all rooms**, while mould was visible in less than 10%.



## Key features

- ❖ Specialised algorithm developed and validated in collaboration with experts from Loughborough University and SOAP Retrofit
- ❖ Results presented as an easy to interpret overall score for a building and detailed room-by-room analysis
- ❖ Easy-to-use browser interface for data upload, calculations, viewing and sharing results
- ❖ The browser interface allows users to compare quickly across their building stock

**Damp & Mould Risk – Results**

January 2021

Showing 1 to 10 of 44  Enable filters 10 per page

Reference ↑	Location	Rooms	Overall Risk Score	
10 Fake Street	PO5 7OO		52	<input type="button" value="View Building"/>
11 Unreal Road	SC25 1EE		86	<input type="button" value="View Building"/>
11 Where Avenue	AL9 2OG		0	<input type="button" value="View Building"/>
14 Random Place	PQ5 7BE		21	<input type="button" value="View Building"/>
14 Test Street	NUS 0MU		29	<input type="button" value="View Building"/>
15 Pretend Parade	GO0 0NE		16	<input type="button" value="View Building"/>
16 Madeup Avenue	BT5 1OO		66	<input type="button" value="View Building"/>
18 Invented Street	BU1 7DT		6	<input type="button" value="View Building"/>
2 Buckingham Palaces	SW1A 1AA		0	<input type="button" value="View Building"/>
20 St James Park	TH3 0NE		12	<input type="button" value="View Building"/>

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- ❖ Diagnostic capability to assess the causes of observed mould risk
- ❖ Validated through field trial in more than 100 homes in collaboration with Loughborough University
- ❖ Integratable into monitoring platforms through APIs
- ❖ Part of BTS product family, allowing inputs from SmartHTC, Pulse, U-value kit and Heat3D
- ❖ Meets PAS2035 requirements for monitoring and evaluation

## Applications

- ❖ Housing providers – understand and manage mould risk in your stock with planned maintenance rather than costly complaints and reactive maintenance
- ❖ Smart technology providers – add an expert, verified capability to your platform and extra insights for your customers
- ❖ Building surveyors – add an additional capability to your business

## How does it work?

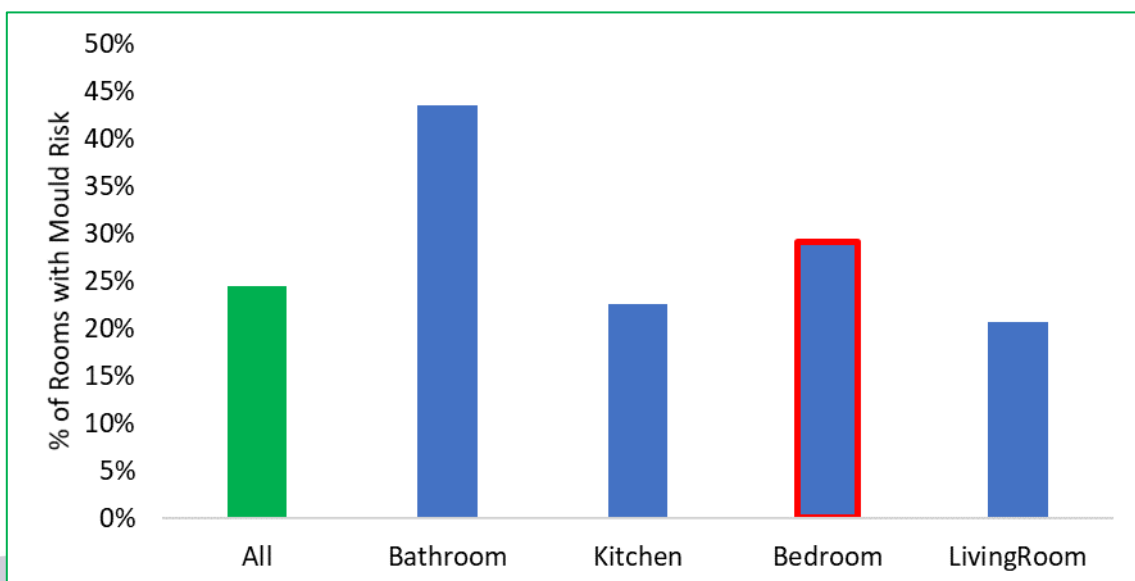
1. Temperature and relative humidity data are collected in a house
2. Enter building information through the browser interface or integrate into your product using our APIs
3. Upload data to the calculator through our browser interface or automate through our APIs
4. Receive comprehensive mould risk analytics at both room and building level with actionable insights
5. Optionally, add measurements of airtightness, U-values or Heat Transfer Coefficients to better tailor the analysis to the building and receive more detailed diagnostic information.

## Field trial

During the winter of 2020-21 internal temperature and relative humidity was monitored in more than 100 homes across the UK as part of an Innovate UK-funded project run by BTS in collaboration with Loughborough University and SOAP Retrofit.

The field trial provided a unique validation of BTS' Mould Risk Indicator, allowing us to ensure that we provide accurate insights.

More than 400 rooms were monitored in the field trial, with **a significant mould risk identified in around ¼** of them. Unsurprisingly, bathrooms were found to be at particularly high risk, but more surprising and worrying was that a significant risk was found in more than ¼ of all bedrooms. Given the time spent in the bedroom and the increased risk of respiratory illness that the presence of mould causes, there's a clear message that the risk needs to be better understood and managed.



## Technical Specifications

Mould Risk Indicator	
Data Inputs	Temperature accurate to $\pm 0.5^{\circ}\text{C}$ Relative humidity accurate to $\pm 3\% \text{RH}$ ( $25^{\circ}\text{C}$ , 20-90%RH)
Building Information	Location Construction details to estimate U-value Optional inputs: measured U-value, Heat Transfer Coefficient and airtightness
Outputs	Overall Risk Score, ranked 0-100 Risk score for each room monitored, ranked 0-100 Vapour pressure excess analysis according to <a href="#">BS5250:2021</a> Analysis of compliance with guidance in UK Building Regulations Approved Document F

## Contact

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