

## Concrete floor drying failures

### Concrete Floor Drying Challenges in the UK: Unveiling the Truth and Solutions

In the UK, flooded buildings with concrete floors present a significant challenge, often taking months to dry fully. This common misconception underestimates concrete's inherent moisture content, with evidence suggesting that concrete remains moist even 30 years post-application. This misunderstanding has profound implications across various sectors, and Building Forensics is set to demystify some of these critical issues with detailed insights.

A pivotal concern arose during the extensive building boom in the Middle East, when the demand for cement skyrocketed, leading to a scarcity. This shortage prompted cement producers to innovate in cement production and its application in concrete, affecting the material's longevity. Historically, concrete was believed to have a lifespan of 150 years. However, recent incidents of building collapses, motorway failures, and aerated concrete roof cave-ins have raised alarms about the reduced lifespan of concrete structures, now estimated at merely 40 years.

Engaging with experts in building drying and concrete, there's a general consensus directed towards British & International Standards for concrete drying methodologies and determining its dryness. Flood restoration and flooring specialists employ various techniques to ascertain the moisture content in concrete floors. However, traditional methods and tools, such as Calcium Carbide or Speedy meters, Humidity Surface Boxes, and surface sleeves for measuring internal humidity, have been questioned for their accuracy. Terms like "Vapour Pressure" and "Hydrostatic Pressure" are often misused and deemed irrelevant, despite pushback from certain "experts." These assertions are grounded in scientific data and seek to correct widespread misconceptions.

### How Building Forensics Offers Solutions

With a deep understanding of the complexities surrounding concrete floor drying, Building Forensics aims to address and resolve issues related to resilient floor failure and subsequent damages. By investigating the root causes of misconceptions and failures in concrete flooring, Building Forensics offers insightful analysis and solutions to enhance the durability and understanding of concrete's behaviour over time. This initiative not only aims to correct misconceptions but also to guide industry practices towards more accurate and scientifically backed methods for assessing and managing concrete moisture content, ensuring the longevity and safety of structures. This will have major benefits in flood affected properties if utilised.

