

S₂ Partnership Ltd
Intelligent Risk Management

HEALTH & SAFETY BRIEFING NOTE

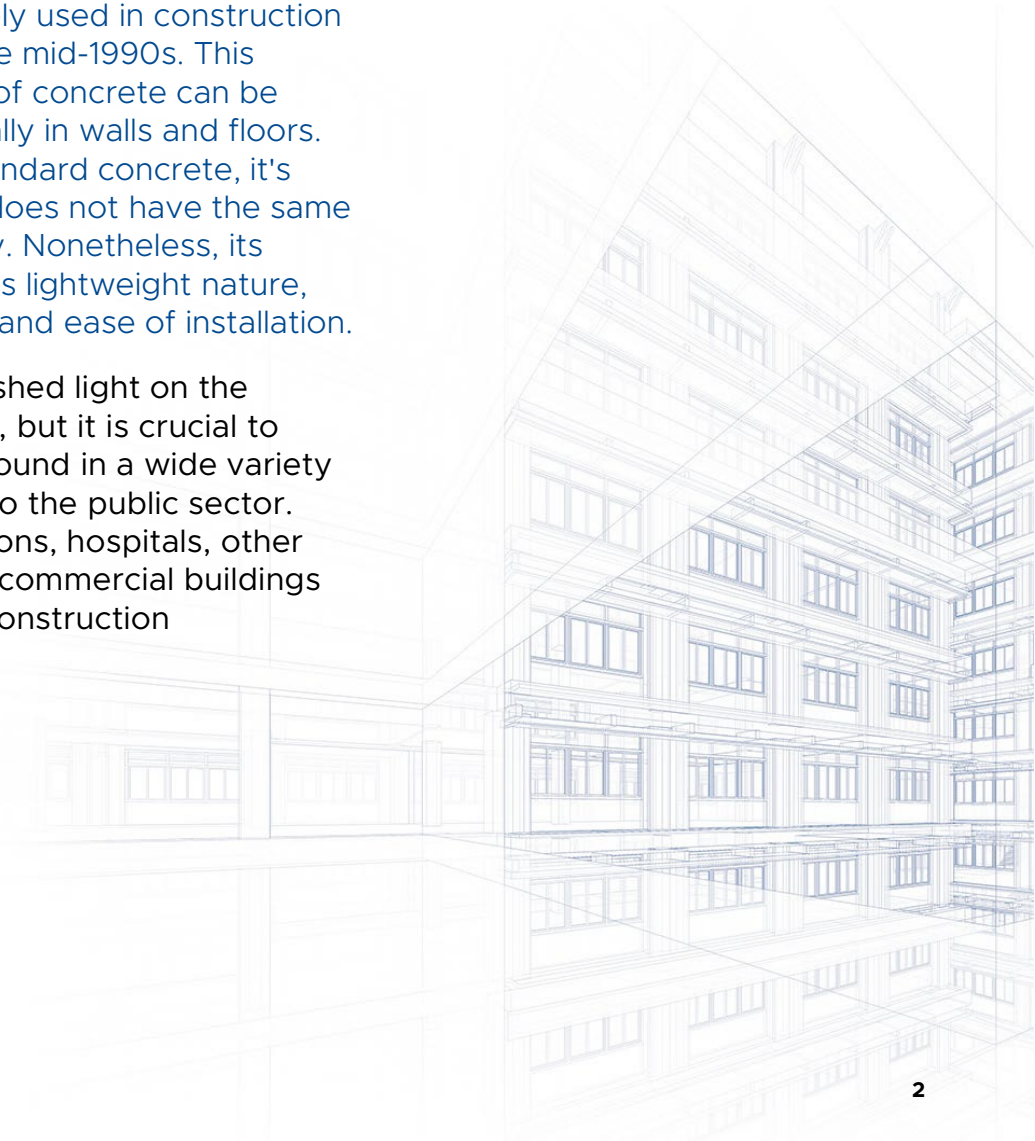
REINFORCED AUTOCLAVED AERATED
CONCRETE (RAAC)

Reinforced Autoclaved Aerated Concrete (RAAC)



RAAC, or Reinforced Autoclave Aerated Concrete, is a material that has been widely used in construction projects from the 1950s to the mid-1990s. This lightweight and bubbly form of concrete can be found in roofs, and occasionally in walls and floors. Although it may resemble standard concrete, it's essential to note that RAAC does not have the same strength qualities or durability. Nonetheless, its popularity surged thanks to its lightweight nature, excellent thermal properties, and ease of installation.

Recent media coverage has shed light on the presence of RAAC in schools, but it is crucial to acknowledge that it can be found in a wide variety of buildings, not just limited to the public sector. Schools, court buildings, prisons, hospitals, other public sector properties and commercial buildings have all used RAAC in their construction endeavours.



Reinforced Autoclaved Aerated Concrete (RAAC)

Why is this now an issue?

The RAAC planks have a lifespan of approximately 30 years. Due to when these were used for construction, they have now surpassed their expected serviceable life. It is recommended that consideration is given to their immediate assessment and replacement, or remedy fix as necessary.

The Institution of Structural Engineers (IStructE) released a comprehensive guide in February 2022 called Reinforced Autoclaved Aerated Concrete Panels – Investigation and Assessment. This resource provides updated guidance on the potential risks associated with RAAC panel construction. It also proposes a systematic approach to the classification of these risk factors and outlines how they can impact the remediation and management of RAAC.

There are continual assessments to evaluate the latest information and research on RAAC to ensure the safety of buildings managed by our clients. The recent discovery of RAAC cases in schools across England has prompted a revised approach to the assessment process for identifying RAAC.

Previously, deflection and transverse cracking were thought to be early warning signs of failure in Reinforced Autoclaved Aerated Concrete (RAAC). However, a

recent investigation following a school roof collapse in 2022 revealed a more alarming risk of sudden failure. In response, the Standing Committee on Structural Safety (SCOSS) issued an alert in May 2023, and the Health & Safety Executive confirmed in August 2023 that RAAC is now considered life-expired and prone to collapse without warning.

“RAAC is now life expired. It is liable to collapse with little or no notice”.

Reinforced Autoclaved Aerated Concrete (RAAC)

What should property owners and managers be doing?

Property owners and managers must review all building conditions and asset information for their property portfolio considering any new information and research around RAAC.

Appropriate actions should include:

- Identify buildings or extensions which date between 1950 - 1990.
- Check any records relating to construction for any mention of RAAC but note that the absence of identification on records does not necessarily mean the material is not present.
- If there is uncertainty about the construction method and materials, particularly if it might be RAAC, a professional advisor might suggest inspecting the structure and taking precautionary measures like temporarily supporting an RAAC element like a roof or floor deck.
- A professional adviser may also consider the presence of other potentially hazardous materials, including the disturbance of Asbestos-containing materials.

There is a need to assess risks, meticulously plan, and develop a safe system of work for all identification and inspection tasks. In cases where there are suspected or identified issues, it is advisable to instruct further specialist reports to assess the condition and 'Assessment of Risk' in accordance with the IStructE's publication on 'Reinforced Autoclaved Aerated Concrete'.

Panels categorised as Red (High or Critical risk) should undergo immediate remedial action, while a proactive approach should be taken with Amber (Medium Risk) panels, implementing planned preventative measures. For panels deemed suitable for retention, it is important to conduct regular monitoring as the sudden failure reported by the Standing Committee on Structural Safety highlights the need for a proactive and cautious approach.



Means of escape

If there's a need for remedial action like support structures or segregation of certain areas, it is vital to also take into account the emergency escape routes. If any areas become obstructed or blocked due to these measures, it is essential to conduct a thorough review of the building's fire risk assessment (FRA) to determine if the safety and escape routes for occupants are compromised.

How can we help?



S₂ Partnership is a leading safety risk management specialist for the commercial property sector. Our knowledgeable, independent consultancy services and RiskWise property risk management software are trusted by many of the leading managing agents, property owners, investors and insurers within the industry.

The S₂ Partnership has a dedicated team of Health and Safety experts who provide highly effective safety management systems, risk assessments, auditing, training, and strategy development. Additionally, RiskWise offers organisations the ability to monitor the progress of the investigation and track remedial actions for prompt and efficient resolution of RAAC issues.

S₂ keeps abreast of the latest changes in regulations and works with clients to develop robust safety solutions, providing just the right support to each individual business to protect lives, buildings and businesses. During property assessments, our consultants will determine the building's age and consider any relevant client procedures. However, please note that our consultants are not structural engineers, so additional investigation is recommended for RAAC concerns. If there is visible damage to concrete panels or any other parts of the property that pose an immediate risk, it should be escalated according to the client briefing note.

We hope you find the information contained in this document helpful. If you need more guidance or a [demo](#) of how RiskWise can assist with RAAC, please feel free to [contact us](#).

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