Health and safety briefing

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Reinforced Autoclaved Aerated Concrete (RAAC) FAQ

What is RAAC?

Reinforced Autoclaved Aerated Concrete (RAAC) is a form of concrete with a bubby texture that was commonly used in construction between the 1950s and 1990s. Its aerated texture means it is much lighter than typical reinforced concrete, but not as strong. It was predominantly used in a wide range of buildings as precast panels or planks in roofs (generally flat roofs, although sometimes pitched) and occasionally in floors and walls.

The life span of a RAAC panel is considered to be around 30 years. If properly designed, manufactured, in good condition and with good structural support, RAAC is considered safe. However, recent incidents have demonstrated that panels can fracture and collapse with little or no warning.

Why is this an issue now?

It been known since the 1990s that there were structural deficiencies associated with RAAC. Research by the Building Research Establishment (BRE) found performance problems including cracking, excessive displacements (bending) and with durability.

In December 2018, the government alerted education building owners of a component failure in a property constructed using RAAC. Then, in May 2019, the Standing Committee on Structural Safety (SCOSS, now known as Collaborative Reporting for Safer Structures (CROSS)) raised an alert about the potential risks from this type of concrete. It highlighted the failure of a RAAC roofing panel in an operational school, which suddenly collapsed with no apparent warning.

On 7 September 2022, the Office of Government Property sent a briefing note to all civil service property leaders stating that “RAAC is now life-expired and liable to collapse”.

There have been recent sudden collapses of RAAC panels in school roofs that appeared to be in good condition. This led to the closure of hundreds of schools. Other buildings have been affected too, including hospitals, universities and theatres.

While the focus of the current crisis has been on buildings in the public sector, some private sector employers in Prospect areas have found suspected RAAC in their buildings.

What should building owners do?

The Institution of Structural Engineers (IStructE) advises that owners or managers of buildings built between the 1950s and 1990s, who are unsure of the form of construction, should carry out an inspection of the building to see whether RAAC is present.

The Department for Education has produced guidance on the identification of RAAC. While primarily for bodies in the education sector, it can help all building managers to identify RAAC.

If RAAC is present, its condition must be assessed by a structural engineer. Subject to the engineer's findings, the building owner/manager will need to develop a management plan. This will involve ongoing monitoring, and possibly remedial propping or strengthening works, or removing/replacing the RAAC.

What should branches and reps do?

Branches and their health and safety representatives should raise the issue with employers and press for a comprehensive review and joint inspections of the estate. Where suspected RAAC is identified, reps should encourage the employer to contract a structural engineer who is a member of IStructE to carry out a full assessment.

If RAAC is located in an area where it could lead to injury if it were to fail, a precautionary approach should be invoked and such areas should be closed until the structural engineer's assessment is carried out.

Do not disturb the panels as they may not be structurally sound and their coverings may contain asbestos.