

# RAAC Panels



## **What is RAAC? What should I do if RAAC is used in the construction of my theatre?**

The Institution of Structural Engineers recently issued updated guidance on Reinforced Autoclaved Aerated Concrete (RAAC). This is a material commonly used to make prefabricated structural planks which may be found in the construction of premises used as places of entertainment.

RAAC is a lightweight form of concrete used in roof, floor, cladding and wall construction in the UK typically from the mid-1950s to the mid-1980s although it may be present in buildings from an earlier period and up to the mid-1990s.

The limited durability of RAAC roofs and other RAAC structures has long been recognised; however recent experience suggests the problem may be more serious than previously appreciated and that many building owners are not aware that it is present in their property.

Building owners and operators should therefore identify if RAAC structures in any form are present in the construction of buildings for which they are responsible. This will require review of existing information and/or an assessment of the building. You may wish to engage a competent structural engineer to undertake this work.

Guidance on Investigation and Assessment is contained in the [Institution of Structural Engineers' \(ISTRUCTE\) publication](#) and the [Department for Education \(DfE\) publishes Estates Guidance on RAAC](#) intended primarily for school buildings but relevant to other premises.

Steps to confirm the safety of RAAC construction:

1. ensure that the condition of all buildings is regularly monitored. Take a risk-based approach that gives due deliberation to the use of the building with consideration given to the possible impact of reduced maintenance.
2. ensure the presence of any RAAC elements is identified.
3. ensure that premises with RAAC elements are regularly inspected by a structural engineer. This includes using a cover meter to check the provision of transverse and longitudinal reinforcement, note deflections, check the panels in the vicinity of the support, the width of the support bearing, cracking, water penetration and signs of reinforcement corrosion and any inconsistencies between panels. The frequency of subsequent inspections should be determined by the structural engineer conducting the initial inspection.

Good roof maintenance practices should be adopted:

1. ensure water outlets are clear and are at such a level that allows free drainage of water from roof areas.

2. if the internal surface of the planks is to be decorated, use paint which allows moisture vapour to pass through it. Protect external surfaces with a coating which provides an effective barrier against the transmission of liquid water.
3. where appropriate, reduce the dead load on roofs for example by removing chippings and replacing them with an appropriate solar reflecting coating.
4. ensure that all waterproof membranes are maintained in good condition.
5. keep records of deflections of RAAC planks and inspect the construction regularly.

Those responsible for the day-to-day management of any building with RAAC elements should:

1. know that RAAC is used in the building and where it is used.
2. check regularly for visual signs of cracks, water penetration, deflection to soffits and ponding to roofs.
3. ensure that all staff know to report any cracks and or other identified potential defect issues.
4. are instructed to immediately close off any part of the building where cracks or other material defects appear pending further checks.

[www.abtt.org.uk](http://www.abtt.org.uk)

### **Other Resources:**

[CROSS Theme Page: Structural Safety of RAAC Planks](#)

[BRE Bookshop: RAAC planks designed before 1980](#)

[BRE Bookshop: RAAC Panels - Review of Behaviour, and Developments in Assessment and Design.](#)