



The Geelong Arts Centre in Victoria is a shining example of glass reinforced concrete's potential. (Images: John Gollings Photography)



Glass reinforced concrete allows for intricate shapes and daring designs.

Unlocking innovation and sustainability

Glass reinforced concrete has become increasingly popular in the construction industry, with the Geelong Arts Centre serving as a prime example of its successful application.

In the dynamic landscape of modern construction, architects and engineers are constantly seeking innovative materials that offer both versatility and sustainability. One such material that has been gaining traction in recent years is glass reinforced concrete (GRC). Combining the strength of concrete with the flexibility of glass fibres, GRC opens up a world of possibilities in architectural design while delivering significant environmental benefits.

The advantages

GRC offers a multitude of advantages that make it an attractive choice for construction projects of all scales. Its inherent flexibility allows for intricate shapes and daring designs that transcend the limitations of conventional construction methods. Unlike traditional concrete, GRC is lightweight yet remarkably durable, making it ideal for both structural and decorative applications.

A showcase of architectural excellence

A shining example of GRC's potential is the Geelong Arts Centre in Victoria, Australia. Designed to be a beacon of cultural excellence, this iconic structure showcases the versatility and beauty of GRC manufactured by Asurco Roofing and Cladding. As a Master Precaster member of National Precast, Asurco Roofing and Cladding specialises in architectural cladding solutions and is one of the country's leading GRC producers.

The company was tasked with the engineering, fabrication and installation of over 65 GRC panels onto a secondary steel subframe. By leveraging GRC, the architects were able to achieve sinuous forms and intricate details that would have been challenging, if not impossible, with traditional construction materials.

The 10-metre long intricate curved and twisted GRC 'curtain' panels, featuring tassels and cords with integrated lighting, serve as a

testament to the capabilities of this innovative material. According to Ian McDougall, co-founder of ARM Architecture, "the creation of the grand curtain façade was inspired by theatre curtains, particularly the grand drape, as well as stage drapes and borders. Simultaneously, it symbolises the drapery of a tent, encompassing the drape, flap and fly." "The intent is to announce the theatre, the circus, the funfair – capturing the essence of anticipation and excitement that precedes a performance and spectacle."

The result is a visually stunning masterpiece that seamlessly integrates with its surroundings while standing as a symbol of artistic expression and cultural identity.

Sustainable solutions for the future

Beyond its aesthetic appeal, the Geelong Arts Centre exemplifies the sustainability benefits of GRC. Made from a combination of cement, sand, water and alkali-resistant glass fibres, GRC boasts a lower carbon footprint compared to traditional concrete. Additionally, its lightweight nature reduces transportation costs and energy consumption during installation, further minimising its environmental impact.

By choosing GRC for the Geelong Arts Centre, the project team has not only reduced

its environmental footprint but has also set a precedent for future construction projects looking to prioritise sustainability.

GRC represents a paradigm shift in the world of construction, offering unparalleled design possibilities and sustainable solutions for the built environment. The Geelong Arts Centre stands as a glowing example of GRC excellence, demonstrating how this innovative material can elevate architectural design while paving the way towards a more sustainable future. ■



The Geelong Arts Centre stands as a symbol of artistic expression.

Project
The Geelong Arts Centre
Location
Geelong, Victoria
Master Precaster
Asurco Roofing and Cladding
Builder
Lendlease
Architect
ARM Architecture



By the National Precast Concrete Association Australia (National Precast).