

## THE PROJECT: BIG MERINO, GOULBURN, AUSTRALIA

### The Task

Glenn Industries was engaged to design, manufacture and construct from GlennGRC™ a giant four storey high Merino Ram in Goulburn, New South Wales as a tourism attraction, and educational venue to showcase the regions wool industry. The Big Merino was to stand 14 metres high with a viewing platform from its eyes, two floor levels of displays on the history of wool and the wool industry, and a souvenir shop at ground level.

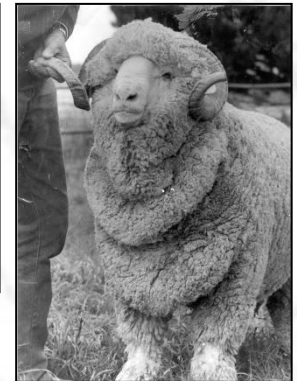
### The Solution

Glenn Industries began the design process by taking scale measurements of a prize winning Merino Ram. This enabled accurate reproduction and the creation of life like realism of the Merino Ram to the scale required.

Glenn Industries innovative design approach and the inherent qualities of GlennGRC™ provided the architects with a design and building medium to form the outer skin of the Ram and meet all building codes and requirements.



Prize Winning Merino Ram



To achieve the three-dimensional shape of the Ram, Glenn's team engineered and erected a structural steel framework in the 'rough' shape of the ram. This structural steel framework provided support for armature, which was progressively bent and formed by Glenn's artisans to define the shape of the Ram.



Structural Steel Framework  
Merino Ram - Goulburn - Australia

This armature was attached to the structural steel framework by "L" shape anchors known as 'Bob Bars'. 'Bob Bars' support the dead load of the GlennGRC skin and transfer wind and absorb the differential in movement between the GlennGRC™ 'skin' and structural steel support. This was of paramount importance due to the great variances in Goulburn's climate and weather conditions.

When the armature had been accurately formed, it was then covered with proprietary manufactured expanded lathe to accept the spray application of the GlennGRC™ to form the fleece of the Ram. Glenn formulated the GlennGRC™ with polymer modifiers to ensure the matrix would not be adversely affected by variable weather conditions during the spraying and sculpturing works.

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After spray application, the GlennGRC™ was manually compacted, which 'dovetailed' the matrix to the lathe and allowed for continuous spraying of the difficult vertical and inverted surfaces.

The final spray application was integrally coloured and artistically formed to faithfully reproduce the texture of the Ram's fleece. This was enhanced by the use of oxide stains to replicate the characteristic colour variations of wool.



### The Result

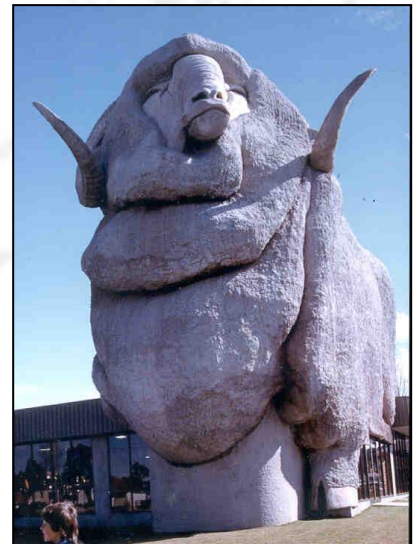


The Merino Ram was judged for authenticity by a Merino Ram Royal Show judge and was awarded A1 status. The Big Ram as it is commonly known, was officially opened to the public in August 1985 and stands today as testament to the longevity and durability of GlennGRC™.

The internal static displays depicting the history of wool in Australia are spectacular and provide a valuable educational tool. School groups and tourists from around the world regularly visit the Big Ram.

The Singaporean Government team responsible for the construction of the Merlion Tower on Sentosa Island visited the Big Merino and other Glenn Industries projects such as Magic Mountain in Glenelg, South Australia (1980), and the Big Prawn in Ballina to see first hand the longevity and exacting life like detail produced by Glenn Industries technology.

As a result Glenn Industries was chosen from a worldwide tender and awarded the contract to faithfully reproduce Singapore's national icon – The Merlion.



### Similar Projects

Big Prawn, Ballina, Australia  
Big Oyster, Taree, Australia  
Merlion Tower, Sentosa Island, Singapore  
Body Zone, Millennium Dome, London, United Kingdom

# innovation