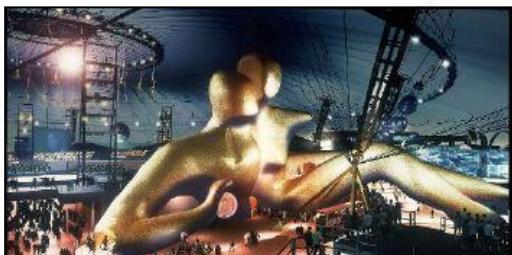


THE PROJECT: THE BODY ZONE, LONDON, UNITED KINGDOM

The Task

Glenn Industries was engaged to design and construct the Body Zone to faithfully replicate an Architect's 200:1 model, depicting the figure of a male embracing a female, creating the centrepiece of London's billion-dollar Millennium Dome.



The Solution

Glenn had just six months to complete the Glass Reinforced Cement (GRC) "skin" for the nine storey high and 71-metre long steel framed structure.

Using the company's proprietary Dots in Space (DIS) system – which combines unique adaptations of cranio-facial, defence and aerospace design technology – Glenn Industries was able to survey and "position in space" the coordinates necessary to accurately reproduce the architectural model in full size.

To ensure there were no delays in the tight construction program, Glenn exported 30 shipping containers from Australia to the London site, containing 32,000 metres of steel rods, 163 tonnes of GRC mix and 150 tonnes of sculpture coat, as well as everything from plant and equipment, to screwdrivers and wheelbarrows.

The multi-faceted engineering of the project was greatly complicated by the intertwined bodies leaning forward at a 15 degree incline, and the interior floor space inside the combined torsos being utilised to house an audio visual display on the human body and how it works.

This internal display was to be accessed by visitors via two escalators, one in the male arm, and the other in the female leg. Wheelchair access was gained via two hydraulic lifts, one at the male shoulder blade and the other in the bent knee of the male leg. These escalators were expected to transport 3,500 people per hour through the Body Zone.

The designed live load of 3500 people per hour was transferred from the main platform through to the structural steel hoops to which the GRC skin is attached via Glenn's proprietary Bob Bar system. As a result, the thickness of the GRC skin varied throughout the Body to accommodate the varying stresses of the live load. During construction, GRC samples were taken daily and subjected to flexural strength tests.

The 4160 square metres of structural GRC skin was covered with 88,000 high-tech coloured Lenticular tiles which, when put together, have a hologram effect to produce ever-changing colours when viewed from various angles.



THE PROJECT: THE BODY ZONE, LONDON, UNITED KINGDOM Cont... 2 of 2

The Result

Glenn Industries successfully completed the Body Zone project ahead of time and under budget, ready for the Millennium Dome's official Royal opening on 31 December 1999.

Glenn Industries received an official commendation from Jennifer Page, Chief Executive of the New Millennium Experience Company, the organisation engaged by the British Government to complete the Millennium Dome project.



"I am only too aware of the great effort and dedication shown by you and your team to create the Body structure. My team, I know, are extremely grateful for your leadership and determination to make the target dates that we needed within the short construction program.

What was created during the six months from May to November was a mammoth achievement and stands as a testament to teamwork and team spirit, which has become a hallmark of this project".

Awards

2000 Australian Institute of Building Professional Excellence in Building Award

2001 AusIndustry Manufacturer of the Year 2001, New Product Innovation Award - 1 of 3 finalists

Similar Projects

Merlion Tower, Sentosa Island, Singapore;

The Big Ram, Goulburn, Australia;

The Big Prawn, Ballina, Australia

The Client:

New Millennium Experience Company,
U.K Government

The Architect:

Branson Coates

The Engineer:

Structural - Buro Happold;
GRC - Rickard & Partners

