

ABBA ARENA - LONDON

Arena at Queen Elizabeth Park

Project: ABBA Arena, London

Company: Timber Innovations

Sector: Commercial

Technology: Mass timber

The ABBA Arena is currently located at London's Queen Elizabeth Park. ES Global appointed Stufish Entertainment Architects to carry out the design on this project. A collaboration between Timber Innovations, Crendon Timber Engineering and Wyckham Blackwell, the majority of the structure consists of mass timber and a steel frame. The arena has been designed so it can be dismantled and relocated to another location at a later date. It can welcome up to 3000 people. The dome shaped roof structure is made up of 270 triangular cassettes, spanning between 0.5m and 12.00m. These were manufactured using I Joists, OSB, mineral wool insulation and acoustic separation foam, washers and fixings.

The prefabricated roof cassettes form the acoustic timber dome over the steel frame theatre building. The Dome has a diameter of 70m, and the building reaches an impressive height of 25.5m. The cassettes are designed to keep the sound inside the building. The three layer floating outer skin was developed by an independent acoustician and our in-house design team to prevent any 'sound leakage' from the venue – third party verification of the completed building has confirmed 'the show sound was literally inaudible from the test positions'.

Engineered Joists for the roof cassettes were cut to size by Crendon Timber Engineering, then manufactured into cassettes by Timber Innovations and Wyckham Blackwell in their Solihull Offsite Manufacturing and Assembly Facilities.



