



Vue Cinema,
Westfield 2, Stratford City

Main Contractor:
Bridgford Interiors

Cinema operator: VUE



Challenge

Westfield 2 on the high profile London Olympic Park in Stratford City is Europe's largest urban shopping mall with a vibrant leisure and entertainment offering. Farrat was chosen as a key supplier to this project as a result of the excellent quality of products and services supplied on to a similar scheme in White City. The shopping centre was at the heart of what was at the time the largest single construction site in Europe while the cinema was essentially enclosed in a box shaped area on the roof.

In terms of unique challenges on this project there were a number of different wall types depending on the location and placing the isolators would be an intensive process partly through time constraints but also the amount of isolators per screen. On average there were 36 seating structure isolators per auditorium and 16 auditoria. Another challenge was that access for all materials was through one set of double doors on the roof with access via a crane if available or otherwise a hoist. Finally restricted accessibility on to the top of the shopping centre would mean pumping the concrete 30 metres up and as far as 200 metres along into the building navigating through the network of auditoria entrance corridors.



Having already provided us with such a comprehensive solution on a similar project, Farrat was the obvious choice.

Martin Fahey
Director, Bridgford Interiors



Solution



Due to our successful completion of a similar project at White City (and a straight up business agreement) we were automatically selected to get straight on with Stratford City. Keys to success were intensive, detailed planning, project management and having a quality range of products that could be adapted to a number of applications.

The site was part of the London Olympic development so all deliveries had to be via pre-booked dedicated vehicles which had to go through special off-site security clearance before being permitted on to the Westfield complex.

Raked seating structure

Farrat acted as design co-ordinator by taking the loadings from the structural engineer, baseplate dimensions from the two steelwork contractors and the acoustic performance requirements of the acoustic consultant to generate schedules and drawings for each auditorium showing which bearing should be positioned in which location. Each acoustic bearing pad was individually labelled and AWTH acoustic washers were then packed as a kit for each auditorium and deliveries were scheduled to be in line with Bridgford's installation schedule. This all proved to be a valuable service to the client, making sure no mistakes were made and shortening installation time.

Walls

The typical cinema design relies on the acoustic walls being supported by the floating floor to create a box-in-box design. The performance from the White City VUE cinema proved that the alternative method of placing the walls next to the floors and isolating them with Farrat FAVIM and AWTH acoustic washers gave excellent acoustic performance results. There were a number of different wall types depending on the location and in each case we calculated the width of strip required, length of each wall type required and the quantity of AWTH acoustic washers with integrated bushes. All these items were packed for easy identification to speed up installation time on site.

Floors

The final part of the process was to install the Acoustic Floating Floors chosen for the ease, speed and flexibility of installation. We created accurate installation drawings for each auditorium showing exact isolator and formwork locations and quantities. For the entrance ramps to each auditorium we created reinforced screed ramps which were isolated using FAVIM full area acoustic isolation material where the top of the ramp met the Isomat floating floor system.

Access for all materials was very constrained and there was a big emphasis on protection of the newly finished building. This once again prompted the decision to use fibre reinforced concrete rather than mesh reinforcement as it would have taken too much time to get the mesh into the building.

The concrete pour was successfully completed in the scheduled 5 days. The concrete had to be pumped 30m up (being careful not to damage the finished building facade) and up to 230m into the building navigating through the network of auditoria entrance corridors. For such a long pipeline we used a compressor to push the excess concrete out of the pipeline to minimise concrete waste.

A cooperative and professional relationship between the Acoustruct team and the client meant that design changes imposed by the end user as well as coordination with other trades were successfully navigated to ensure the project was completed on time and on budget.



Key Facts

- › 16 screen cinema
- › 630 Isolators for the raked seating structure
- › 2155m of FAVIM supplied under walls
- › 1598m⁴ of Isomat Floating floors
- › 5367 Isomat Isolators
- › 248m² of isolated screed
- › 115m³ of concrete
- › Max Pour distance: 230m from pump located 30m below



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