

Royal Festival Hall, South Bank, London



Client

The South Bank Centre

Value

Royal Festival Hall:
€136.5 m / £91 million
Extension building:
€22.5 m / £15 million
Public Realm Projects:
€12.75m / £8.5 million

Schedule

Royal Festival Hall:
April 2000 – March 2007
Extension Building:
July 2003 – February 2006
Public Realm Projects:
March 2003 – April 2007

Contract Type

Project Management

Architect

Allies & Morrison

Structural Engineer

Price & Myers

Mechanical & Electrical Engineer

Max Fordham & Partners

Quantity Surveyor

Davis Langdon & Everest

Highlights

- Boreholes three times more energy-efficient than alternatives
- Passive infra-red lighting
- 35% of space freed up and restored to public and artists use



The Royal Festival Hall is an iconic Grade I listed building on London's Southbank. Originally completed in 1951, it is the only part of the post Second World War 'Festival of Britain' that survives. The extensive refurbishment project, managed by Bovis Lend Lease, was completed in spring 2007 and has been widely praised.

The project delivered by the Bovis Lend Lease team included the refurbishment of the Royal Festival Hall, the creation of a new extension building and a number of public realm works. Staff and production facilities were moved into the new building, creating an extra thirty five per cent of space in the Hall for public use. Almost every single surface of the 2,788-seat auditorium was replaced, successfully addressing the issue of poor acoustics and the original seating has been completely refurbished. There are now riverside cafes, rooftop terraces and outdoor balconies with panoramic views of the river, providing visitors with an experience befitting this landmark complex.

Construction Challenges

The challenges faced by the project team centred around the logistics of having multiple works taking place simultaneously. In the early stages of the project the site remained live and this necessitated the frequent re-scheduling of works to accommodate live performances whilst working to a tight deadline. With the site located alongside a very busy pedestrian route timely deliveries and safety were constant priorities. A 'yellow card/red card' safety scheme was introduced at the outset and strictly enforced. The location, nature and size of the works meant that safety had to be a number one priority.

The team developed and maintained good working relations with contractors, neighbours and stakeholders with regular meetings being held to ensure the quick resolution of any problems and the sharing of progress.

Sustainability

Whilst there were some limitations to sustainability issues relating to the Grade I listed status of the Hall, they have not prevented the creation of two new 140 metre deep boreholes to provide cooling. As well as providing chilled water, the boreholes will help reduce the problem of rising ground water levels across the London area. The hall will be cooled by air from air-handling units with chilled water supplied from chillers in an existing basement plant room. Using water from the boreholes is three times more energy-efficient than the alternatives of condensers or cooling towers mounted on the roof which would have been more intrusive on the listed building and noisier. From the heat exchangers, the borehole water is discharged into the Thames. The flow rate has to be regulated to keep the discharge temperature close to that of the river water.

New, energy-efficient boilers have been installed and whilst these demanded a higher capital outlay initially, this will be offset with lower fuel costs over time. Likewise, passive infra-red lighting systems were put in place providing further energy saving measures.