The University Hospital of Wales had been in use for some 20 years and several aspects of its design did not meet current hospital and fire safety standards.

Project:

The University Hospital of Wales is one of the largest teaching hospitals in Europe. The main ward block houses 800 beds and is a high-rise building. In addition, there is a three-story medical block and a three-story dental block. The three buildings are interconnected by
subways and tunnels.

The hospital had been in use for some 20 years and several aspects of its design did not meet current hospital and fire safety standards. The hospital had also experienced severe disruption due to smoke spread from some relatively small fires. A radical re-evaluation of all aspects of the fire safety provision was required. **This included assessing:**

- Compartmentalisation and separation aspects.
- Automatic fire detection requirements.
- Automatic fire suppression strategies.
- Requirements for storage and removal of waste/rubbish.
- Procedures for evacuation in a fire emergency.

**Contribution:**

**BRE** Global’s Fire and Risk Sciences Division (FRS) was commissioned by WHCSA to assess the total fire safety provision.

FRS liaised with the local fire service, the hospital board, the hospital fire officer and NHS Estates in order to carry out a comprehensive evaluation of the problem. FRS then produced a fire safety report detailing cost-effective recommendations, which were based on fire safety
engineering principles rather than just opting for compliance with prescriptive codes and requirements.

The fire safety assessment report was then used to form the basis of a subsequent £multi-million refurbishment and upgrading scheme.

Benefits:

FRS is the UK's leading centre for research-based consultancy and testing covering all aspects of fire safety and security. The division can draw upon extensive research into experimental emergency evacuations and occupant behaviour during fires, all of which was important to the successful conclusion of this project.

Established in 1947, FRS's clients extend beyond the construction industry, and include those concerned with design, development and manufacture of materials, products, systems, industrial processes, transport and offshore. BRE is retained as an advisor to the NHS Fire Code Committee and the NAPG.