


# Essential Building Design and Construction for Fire Safety Professionals

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The course is designed for fire risk assessors, inspectors/fire safety officers and others with a non-building technical background. This is a one day course designed to raise awareness, knowledge and understanding of the construction of common building structures and known or likely fire safety strategies, with a view to improving the accuracy and relevancy of fire risk assessments in-order to better reflect the risks posed. We will analyse 7 common structural types of buildings used in the UK. I make parallel reference to the evolution of principal fire safety and building regulations, standards and guidance in England and Wales. The course deals with a variety of common building use types, the challenges with increasing scale and complexity of buildings, changing building technology and materials, together with passive fire safety design for compartmentation, escape and protection of structure. The focus is on a representative sample of building structures for multiple uses in properties principally up to 18m in height.

The course material contains extensive use of case studies with photographs, videos and graphics, which will serve as a continuing source of reference. The delivery includes model making, group activities and the day concludes with a site visit to surrounding buildings.

## Learning Outcomes



By the end of the one day course participants will:

- Be more knowledgeable about the basic design and construction principles of common building structural types
- Have a better understanding of passive fire safety measures in existing buildings and in retrofitting
- Be more aware of how passive fire safety measures have evolved
- Have a better appreciation of investigating how buildings are constructed
- Be equipped with tools and techniques to help improve fire risk assessment of a range of building types

### 1.Design and Construction of 7 Common Types of Building Structure

- a. Basic principles of building design and construction
- b. How building structures and construction techniques and materials have evolved
- c. Traditional forms of load bearing masonry construction v modern framed buildings
- d. Wall, floor and roof designs

## **2. Fire Protection Regulations and Guidance**

- a. The mechanism of fire spread and fire safety strategies
- b. Planning, Building and other Regulations and guidance relevant to fire safety
- c. Evolution of standards of compartmentation, fire protection and means of escape

## **3.The Design and Layout of Major Building Use Types**

- a. Methods and techniques for inspecting and identifying the building structure and construction
- b. Medium and high-rise residential and buildings with sleeping accommodation
- c. Workplaces
- d. Leisure/Education/Healthcare buildings

## **4.Refurbishing and Re-purposing of Existing Buildings**

- a. Refurbishing existing buildings
- b. Adapting buildings for new uses
- c. The Regulatory and guidance framework
- d. The challenges for fire safety design and risk assessment

### **Administration**



- Book via Eventbrite
- Course materials will be emailed a week in advance; handouts provided on the day
- Do bring laptops and devices to help view detailed slides, but note that desk top power points are not available
- Lunch, drinks and snacks provided; dietary needs will be sought a week in advance
- CPD certificates handed out on the day

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