

Fire safety

12 October 2016

Fire safety is an optional competency for building surveying, and Ewan Craig, a speaker at the RICS annual It's Your APC conference, offers guidance

Fire safety is one of the optional competencies for the building surveying APC. Applying it brings several technical competencies together, for example the following:

- construction technology and environmental services: the performance of building elements in the event of a fire;
- building pathology: how the building has, or is prone to, deterioration and how this may affect fire safety;
- design and specification: the process of construction, incorporating good fire safety practice such as standards on fire engineering;
- legal/regulatory compliance: legislation and regulations on fire safety such as the Regulatory Reform (Fire Safety) Order and Building Regulations.

The levels

The requirements for this competency are provided as follows, by level.

At Level 1

Demonstrate knowledge and understanding of the consequences of fire in a building, how it is modified by the enclosure and how the impact may be controlled. Apply fire safety principles to practical situations so as to minimise the risks of personal injury or death, physical loss and adverse environmental impact from fire.

At Level 2

Demonstrate knowledge and understanding of the combustion process; the physics and chemistry of fire; the physiological and psychological effects of fire; and the ability to assess means of escape systems according to circumstance, including fire safety management systems.

At Level 3

Provide research advice to clients or other bodies on the requirements for fire safety engineering including strategy. Represent clients to statutory bodies in preparing, agreeing and defending a fire safety strategy.

You should be familiar with the fire safety issues in your submission documents, and prepare to address questions on them and related matters.

Questions

Actual questions are based on the candidate's experience, which should be at Level 2 but could exceed this, for example when you have provided advice on fire safety engineering. Two examples are given below.

Please explain how you assessed the fire safety compliance of the proposed design for refurbishment of building A.

This question is aimed at Level 2 candidates. Your response should show the issues that were considered in applying your knowledge and understanding.

This was a large refurbishment project on a 4-storey block of offices. The works included reconfiguring the layout to provide large, open-plan areas, kitchens, meeting rooms and storage. The design strategy had followed the guidance in the Building Regulations Approved Documents. I considered how the project complied with the regulations, in particular [Approved Document Part B volume 2](#).

I assessed the project drawings, showing the existing and proposed layouts, as well as the specification, providing detail on the construction. The horizontal and vertical travel distances were compliant with one exception, a room that created an excessive travel distance. I discussed this with the designer and the room was relocated to ensure it fulfilled the requirements. I assessed other aspects for compliance, such as the new emergency lighting and fire alarm systems, as well as the access and facilities for fire and rescue services.

Can you please describe how you inspected the fire safety measures on the completed refurbishment of building C?

This question is aimed at Level 2 candidates, but it could be extended to Level 3 if, say, you have prepared a Fire Risk Assessment. The answer should demonstrate your application of knowledge.

This was a refurbishment project to improve the fire safety of a student accommodation block. I surveyed the improvements when the works were complete and accessible, referred to the approved plans, specification and the brief when inspecting the block, and worked methodically, from the upper storey downwards, concentrating on the fire precautions.

I found a number of defects in the fire safety measures ? for example, fire dampers that were missing or incorrectly positioned in ducts, and large holes around services penetrating fire-resistant barriers. These defects were corrected, and I then re-inspected the block to confirm the implementation of the fire safety measures.

Care

Given the time constraints of the APC, your answer should be brief but comprehensive. Care should be taken to demonstrate your own skills, abilities and knowledge to the assessors.

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Further information

- Details of the APC pathway guide for building surveyors are on the [rics website](#) and [isurv](#)
- This feature is taken from the RICS *Building surveying journal* (Oct/Nov 2016)