

## ***Appendix D***

### **Behaviour of fire in buildings**

The behaviour of fire in a building will be determined by a combination of its structural design, construction materials, passive and active fire safety elements, the use to which the building is put, nature and quantity of combustible materials and the standard of management applied.

Active and Passive fire safety is covered in Appendix H and Management of fire safety is covered in Appendix I.

Although the structural performance of the building is not strictly within the remit of a fire risk assessor, as this should have been dealt with when it was built, a fire risk assessor must have regard to this aspect.

Accordingly, the fire risk assessor should be able to;

- Generally determine how fires can start and the how the spread of fire and products of combustion can impact on components of the building .
- Identify failures and/or changes to the building that could change the way a fire and products of combustion travel through the building.

To enable the fire risk assessor to carry out the above, the fire risk assessor should have;

- Knowledge of the principles of combustion (triangle of fire).
- Knowledge of fire growth and how it gets progressively bigger.
- Knowledge of movement of smoke and other products of combustion.
- An awareness of how construction materials behave in a fire.
- An awareness of how different structural designs of buildings behave in a fire.
- An awareness of how fire spread can be inhibited by passive and active fire protection methods (see Appendix H).
- An awareness of how to identify that the subsequent use or alteration of the building can invalidate pre existing fire safety precautions and/or strategies.