

## Fire Compartmentation



### Current Legislation

It is a requirement, under the Regulatory Reform Order 2005 (RRO) that the 'responsible person' whether that be building owners or occupiers must ensure that the identified fire compartmentation in their buildings is robust, being adequately managed and maintained, ensuring a safe means of escape route is available at all times for evacuation purposes.

A fire risk assessment does not usually include the assessment of fire compartmentation above suspended or capped ceilings. Therefore a detailed compartmentation survey should be completed to meet the legal requirements of the RRO.

### What is Fire Compartmentation?

Fire compartmentation is a strategy required to prevent the spread of fire and smoke, subdividing buildings into manageable areas of risk, whilst providing adequate means of fire escape routes and appropriately maintained facilities for fire prevention.

Fire compartmentation is achieved by dividing sub sections of a building into 'compartments' and 'sub compartments'.

Strategic placement of fire doors, cavity barriers in roof voids, utilisation of fire-resistant flooring and walls, protection and correct fitting and placement of fire dampers and adding fire stopping to services such as cabling and water lines which breach such dividers. The combination of services, assist in preventing, or at the minimum slowing, the spread of fire, smoke and heat throughout a building.

### Process

Watts fire experts have years of experience working with NHS Trusts and have developed a comprehensive fire compartmentation strategy to produce excellent working documentation helping you manage the financial expenditure around fire compartmentation.

The fire compartmentation survey itself involves undertaking a thorough check of the compartmentation strategy of a building, and the status of the elements being utilised for separation. Compartmentation surveys are more in-depth than standard fire risk assessments, taking into account difficult to reach areas such as ceiling cavities, roof voids and penetrating utilities.



### **Identifying Priorities**

Compartments are rated against their fire resistance capabilities, expressed as the number of minutes of resistance they provide against the spread of fire, heat, smoke or expected toxic fumes generated by fire. Different parts of a building may have different requirements for the minimum degree of resistance their compartmentation provides, dependent on usage, human occupancy and materials being stored.

### **Designing Solutions**

Our team of experienced assessors can undertake non invasive and where required, invasive, surveys to check not only that compartmentation exists but that it is suitable for the circumstances. Having completed extensive fire compartmentation surveys in NHS hospitals our detailed surveys cover:



## Cover

- An inspection of the overall condition of existing fire compartments.
- An assessment of the condition and effectiveness of the sealing of wall/soffit interfaces.
- An inspection of existing fire seals applied to service penetrations through fire compartment lines.
- Inspection of any unprotected framework or steelwork which may impact the effectiveness of fire compartments.
- An assessment of the materials used to seal existing service penetrations/linear joints and in particular whether appropriate fire rated materials appear to have been used and whether they appear to have been applied or installed in an appropriate manner.
- The presence of any damage to fire compartment lines that is likely to reduce the effectiveness of the fire compartment.
- The presence of unprotected structural steelwork within fire compartments which may have an impact on the overall effectiveness of the expected fire performance of the building.
- The presence of fire dampers within ducts passing through designated fire compartment lines. Where dampers are present an assessment of the positioning and an inspection of the fixing methods used is made.
- An assessment of the materials and methods used to construct any dry lined walls which form part of the fire compartmentation.
- An assessment of any specific issues relating to the ability to reinstate fire compartmentation (the presence of items of equipment or services which may prevent access to the required area).
- Establish the location and period of resistance required for the compartmentation strategy in your building(s).

- Conduct inspections of compartmentation including fire doors.
- Prepare user friendly schedules of works, drawings and specifications for contractors to price against and implement work.
- Provide on-going support to the contractor and management team.

## Managing Delivery

Reports are provided as a schedule of works in an Excel format and can be linked to your existing asset management system. The schedule details all areas surveyed throughout the fire compartmentation assessment and surveyors recommendations. Reports will be accompanied by photographs of surveyed areas, including detailed images of issues encountered.

Our specialist team, have expert knowledge and qualifications in fire safety risk management, attained from a working background in the fire service, local authority, education, NHS Healthcare, and large complex hospital sites. We deliver programmes designed to your specific organisational needs and recording protocol, in liaison with building control, and fire safety management.

If you would like to talk about how Watts can help you with understanding and improving your NHS Trust, please contact:



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