**ESSEX COUNTY COUNCIL
PASSIVE FIRE SAFETY POLICY**

**Fire Doors and Fire Stopping**

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4. **Executive Summary:**

The Corporate Health and Safety Board agreed to grant the content of this document ***ECC Policy Status*** in December 2018.

It aims to provide ECC with greater confidence that the installation and workmanship of fire doors and fire stopping complies with Part B (Fire) of the Building Regulations by requiring third party accreditation of installers/manufacturers along with the production of an audit trail with certification.

For all ECC funded and delivered projects (which is predominately school buildings), Infrastructure Delivery (ID) recommends that;

1. **Fire doors shall only be**:
* supplied as (proprietary tested) door sets
* from manufacturers that have relevant third party accreditation for manufacturing quality (for example <http://www.bwfcertifire.org.uk/what-is-bwf-certifire/why-choose-a-member> ).
1. **Fire doors and fire stopping shall only be installed by**:
* a third party accredited company **or**
* a trained individual who has been assessed as competent through third party accreditation\*.

*Inspection and certification by a third party accredited inspector is not favoured because a visual inspection cannot confirm compliance of workmanship and materials used that has been covered up.*

*\* Note: Third party accreditation means members of a UKAS accredited scheme which covers the scope of work undertaken*

1. **All passive fire protection measures installed shall be labelled, photographed, scheduled and recorded on plans upon completion by the third-party installer.** On completionthe contractor and client will have a comprehensive record and audit trail to demonstrate compliance which the end user can then manage and update during the buildings life.
2. **All school managed projects** to be strongly encouraged to adopt this (fire safety) standard.

**2.0 Background:**

Following the tragic Grenfell Tower fire, ECC full council approved the setting up of an Independent Property Review Commission (IPRC).

Andy Fry OBE, was appointed as the chair of this cross-party commission which took evidence from a number of sources including ECC officers and its appointed professional consultants, Essex County Fire and Rescue Service and Chelmsford City Council Building Control.

The IPRC made a number of recommendations in their report relating to fire safety including reviewing current processes/practices to ensure compliance and robust audit trails and the consideration of fire safety measures in excess of Building Regulations.

ID’s recommendation is to provide a robust audit trail of documentation to demonstrate competency in workmanship and materials relating to fire stopping (compartment integrity - Building Regulations Part B) and that the final installation, including all materials used in it, are safe, and certified by third parties.

This recommendation was agreed by the Corporate Health and Safety Board in December 2018 and the contents of this document, including its recommendations, have ***ECC*** ***Policy Status***.

1. **Current practice:**
	1. **Workmanship:**

Currently workmanship competency is left to the contractor to confirm but without any need to evidence how competency has been assessed. It’s not unusual for a contractor to state that a carpenter has been hanging doors for 30 years and is, therefore, competent!

ECC Quality Inspectors will challenge any workmanship where fire doors have been installed incorrectly (e.g. incorrect gaps, missing intumescent seals/smoke seals, etc.) as well as asking for evidence of competency. This [link](https://www.bing.com/videos/search?q=fire+doors+uk&&view=detail&mid=013591A4BE271FC41640013591A4BE271FC41640&&FORM=VRDGAR) shows the importance of getting it right.

By only allowing fire doors to be installed by a third party accredited installer or a trained individual who has been assessed as competent through third party accreditation, this removes any disputes/arguments on site and provides a proper written audit trail and record.

**3.2 Materials and Workmanship:**

i) **Fire Doors**:

Doors, including fire doors, can be purchased from a manufacturer as a ‘doorset’. In essence, this means the doors have been tested and certified complete with all frames, ironmongery and glazing fitted. Some Essex Construction Framework contractors already use this approach as standard. Any manufacturer of a ‘doorset’ must have relevant third-party accreditation for manufacturing quality.

Alternatively a fire rated door and separate door lining can be purchased and then the ironmongery is fitted on site by a carpenter. The issue with this approach is that the fire integrity of the installation can be severely compromised. Evidence seen (link above) shows that fire rating of a door can be drastically reduced through the use of individual components that have been installed incorrectly or are missing. In contrast, door-sets are tested in a controlled environment and certified performance demonstrated.

Where air transfer door grilles are necessary, consideration to the requirements of Part B of the Building Regulations, BB100 or BS9999 should be complied with.

An incorrect specification of an intumescent door grille without integral smoke seal shutters, linked to the fire alarm system, will allow life threatening smoke to pass through into the adjoining compartment / escape routes and around the building in minutes thus rendering fire sealing measures non effective.

**ii) Fire stopping**:

In essence, fire stopping is used to ensure that the integrity of a wall/ceiling/floor is not compromised as the result of holes being made to typically allow services (cables, pipes, etc.) to pass through. Many of the national contractors on the ECF now use specialist firms to fire stop and there is a full audit trail recorded, giving greater confidence that the appropriate materials have been used and the workmanship is certified.

Where contractors perform their own fire stopping, or require their supply chain to do so, determining that the right material has been used is not possible through inspection. This is in contrast to the use of independent third party specialists.

The use of incorrect fire stopping material or poor workmanship can mean for example a two hour fire rated structure can be compromised, leading to failure in minutes. The lack of, or the incorrect use of, materials for fire stopping along with poor workmanship is a significant issue in the industry.

Where ventilation ductwork passes through fire compartments or through or enters escape routes consideration to the requirements of Part B of the Building Regulations, BB100 or BS9999 should be complied with.

**3.3 Best Practice Reference**

The Association for Specialist Fire Protection publication provides useful guidance. <http://pfpf.org/pdf/publications/best_practice_guide.pdf>

**Options**:

To allow contractors to continue to state installations are ‘compliant’ with the Building Regulations, and that workmanship is competent without the need for third party certification and inspection.

OR

To define the level of competency required for ECC projects by specifying independent third party accreditation for both workmanship and manufacturing.

1. **Benefits**:

In the event of a fire, this recommendation, if implemented, would provide greater confidence that fire compartment integrity would perform as designed. The key benefits are:

* life safety - occupants being able to evacuate safely via escape routes (because the fire compartment integrity is limiting fire/smoke spread).
* life safety - reducing the risk to fire service personnel (because fire compartment integrity is limiting fire/smoke spread).
* Building Regulation compliance is achieved through an audit trail of independent testing and certification of workmanship and materials installed along with inspection.
* fire damage being limited to a smaller area (subject to swift notification/response of the fire service) thus helping business continuity and maintaining asset protection.
* reducing the risk of insurance companies challenging claims around appropriateness of materials used or the quality of workmanship.

It is key to note that fire compartment integrity relies heavily on building occupiers understanding their roles and responsibilities and ensuring a robust fire strategy/plan is in place that prevents any fire compartment integrity being compromised. For example, propping open fire doors, making physical changes to the buildings infrastructure (e.g. electric cables, ICT cables passing through fire walls and not being appropriately fire stopped), etc.

**Recommendation**:

For all ECC funded and delivered projects (which is predominately school buildings), ID recommends that;

**Fire doors shall only**:

* be supplied as (proprietary tested) fire door sets
* be from manufacturers that have relevant third party accreditation for manufacturing quality

**Fire doors and fire stopping shall only be installed by**:

* a third party accredited company **or**
* a trained individual who has been assessed as competent through third party accreditation.

**All passive fire protection measures installed shall be labelled, photographed, scheduled and recorded on plans upon completion by the third party installer.** On completionthe contractor and client will have a comprehensive record and audit trail to demonstrate compliance which the end user can then manage and update during the buildings life.

***All school managed projects to be strongly encouraged to adopt this (fire safety) standard.***

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