

Fusion21 Specification Framework: Building Safety and Compliance

Lot 8/9: Passive Fire Protection

Nov 2020

Version 1.0

Contents

1.	Change Log	3
2.	Introduction	3
3.	Objectives	3
4.	Legislation	4
5.	Standards	4
6.	Mandatory Criteria	6
7.	Desirable Criteria	8
8.	Record Keeping.....	8
9.	Fire Door Installation	9
9.1.	Cross Corridor Doors and Risers	9
9.2.	Front Entrance Doorsets (FED)	9
10.	Fire Door Maintenance / Repairs	10
11.	Fire Stopping.....	11
12.	Asbestos.....	12
13.	Asset Information Model.....	13

1. Change Log

Version	Date Published	Summary of Key Changes
1.0	Nov 2020	First Version

2. Introduction

Lot 8 & 9 of Fusion21's Building Safety & Compliance Framework provides a framework of competent Suppliers to deliver passive fire services for Members of the Fusion21 Members Consortium. Work may arise as a result of intrusive surveys, fire risk assessments, or planned fire safety programmes. Contracts can also be expected to cover the provision of:

Fire Doors

Fire Door Installation (Door & Sets)
Fire Door Maintenance

Fire Stopping

Small Penetrations (Mastic, Pipe Collars, Vents etc.)
Large Openings (Blocks, Partitions, Board, Batts etc.)
Fire Safety Signage

This Technical Specification shall be read in conjunction with the 'General Specification' and the 'Employer's Requirements' documents. This Technical Specification shall take precedence over the 'General Specification' but not 'Employer's Requirements'.

3. Objectives

The objectives of the service are to:

- Verify the integrity (or otherwise) of existing fire resisting building components and report back to the commissioning officer or Responsible Person in appropriate detail such that remedial work can be costed.
- Prevent the spread of smoke and fire and protect relevant persons and building fabric by creating/maintaining fire compartments and associated protected means of escape. Fire-rated compartments are to be made to Building Regulations and/or an approved Fire Engineered Design. Appropriate fire resisting materials and installation methods shall be used such that the resulting work is certified to appropriate standards.

4. Legislation

All services/works are provided under the following legislative framework (as amended):

- Health and Safety at Work etc. Act 1974
- Occupiers Liability Act 1957
- Occupiers Liability Act 1984
- Housing Act 2004
- Landlord and Tenant Acts (various)
- The Corporate Manslaughter and Corporate Homicide Act 2007
- The Working Time Regulations (1998)
- The Transfer of Undertakings (Protection of Employment) Regulations 2006
- The Management of Health and Safety at Work Regulations 1999
- The Construction (Design and Management) Regulations 2015
- The Workplace (Health, Safety and Welfare) Regulations 1992
- The Personal Protective Equipment at Work Regulations 1992
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
- The Manual Handling Operation Regulations 1992
- The Health and Safety (Safety Signs and Signals) Regulations 1996
- The Work at Height Regulations 2005
- The Confined Spaces Regulations 1997
- The Building Regulations 2010
- The Provision and Use of Work Equipment Regulations 1998
- The Control of Asbestos Regulations 2012
- The Dangerous Substances and Explosive Atmospheres Regulations 2002
- The Gas Safety (Installation and Use) Regulations 1998
- The Electricity at Work Regulations 1989
- The Electricity Supply Regulations 1988
- The School Premises (England) Regulations 2012
- The Housing Health and Safety Rating System (England) Regulations 2005
- The Regulatory Reform (Fire Safety) Order 2005
- Fire Safety Bill 2020
- The Fire Safety (Scotland) Regulations 2006
- The Domestic Fire Safety (Wales) Measure 2011
- The Domestic Fire Safety (Definition of Residence) (Wales) Order 2013
- The Fire (Scotland) Act 2005
- The Fire Safety (Scotland) Regulations 2006
- The Fire (Scotland) Act 2005 (Relevant Premises) Regulations 2005
- The Fire Safety Regulations (Northern Ireland) 2010
- Fire Precautions (Workplace) Regulations (Northern Ireland) 2001

5. Standards

The Supplier shall comply with all relevant Approved Codes of Practice, British Standards and operate in a diligent manner to good practice. This includes, but is not limited to, the following (as may be updated from time to time):

- Relevant Standards, Guidance and Codes of Practice issued by the Health & Safety Executive (HSE), British Standards Institution (BSI), UK Government, MHCLG
- PAS79-1, PAS79-2 Fire Risk Assessment- Code of practice.
- HM Government Guide 'Fire safety risk assessment guidance by HM Government'
- 'Approved document B: Fire safety'
- Guidance on fire safety provisions for certain types of existing housing by LACoRS, July 2008.
- Fire safety in purpose-built blocks of flats by LGA
- National Fire Chiefs Council's Guidance on Simultaneous Evacuation
- National Fire Chiefs Council's Guidance on Fire Safety in Specialised Housing
- Technical bulletins and guidance from recognised relevant trade/certification bodies (e.g. ASFP, BM Trada, FPA, BWF)
- For health premises: Health Technical Memoranda (HTMs) from the Department of Health
- For education premises: Building Bulletins from the Department for Education
- BS 3632 Standard for residential park homes – Specification
- BS 5516-2 Patent glazing and sloping glazing for buildings – Part 2: Code of practice for sloping glazing
- BS 6891 Installation of low-pressure gas pipework of up to 35 mm (R1 1/4) in domestic premises (2nd family gas) – Specification
- BS 7273 Code of practice for the operation of fire protection measures
- BS 7346 Components for smoke and heat control systems
- BS 7974 Application of fire safety engineering principles to the design of buildings – Code of practice
- BS 8300 Design of buildings and their approaches to meet the needs of disabled people – Code of practice
- BS 9999 Fire safety in the design, management and use of buildings- Code of practice
- BS 9991 Fire safety in the design, management and use of residential buildings - Code of practice
- BS 9997 Fire risk management systems. Requirements with guidance for use
- BS 25999 Business continuity management
- BS 8214 Timber-based fire door assemblies - Code of practice
- BS 7273, Code of practice for the operation of fire protection measures.
- BS EN 1155 Building hardware – Electrically powered hold-open devices for swing doors – Requirements and test methods
- BS EN 1991-1-2 Eurocode 1 – Actions on structures – General actions – Actions on structures exposed to fire
- BS EN 13823 Reaction to fire tests for building products – Building products excluding floorings exposed to the thermal attack by a single burning item
- BS EN ISO 1182 Reaction to fire tests for building products – Non combustibility test
- BS EN ISO 1716 Reaction to fire tests for building products – Determination of the gross calorific value
- BS EN ISO 11925-2:2002, Reaction to fire tests for building products – Ignitability when subjected to direct impingement of flame
- BS EN ISO 14122-4, Safety of machinery – Permanent means of access to machinery – Part 4: Fixed ladders

- DD ENV 1187:2002, Test methods for external fire exposure to roofs
- PAS 121, Specification for active fire curtain barrier assemblies and active fire barrier assemblies with smoke rating
- PD 7974-6 The application of fire safety engineering principles to fire safety design of buildings – Part 6: Human factors – Life safety strategies – Occupant evacuation, behaviour and condition (Sub-system 6)
- BS 5839 Fire detection and alarm systems for buildings – Code of Practice System Design, Installation, Commissioning and Maintenance
- BS 8629 Code of practice for the design, installation, commissioning and maintenance of evacuation alert systems for use by fire and rescue services in buildings containing flats
- BIP 2124 The Design and Installation of Voice Alarm Systems
- BS EN 54 Fire detection and fire alarm systems.
- BS 50518, Monitoring and alarm receiving centre
- BS 5446 Fire detection and fire alarm devices for dwellings.
- BS EN 14604 Smoke alarm devices
- BS EN 50172 Emergency Escape Lighting Systems
- BS EN 1838 Lighting applications. Emergency Lighting
- BIP 2081 A Guide to Emergency Lighting, Third Edition
- BS 5306 Fire protection installations and equipment on premises.
- BS EN 1869 Fire blankets
- BS EN 12101 Smoke and heat control systems. Natural smoke and heat exhaust ventilators
- BS 9251 Sprinkler systems for residential and domestic occupancies. Code of practice
- BS 8458 Fixed fire protection systems. Residential and domestic watermist systems - Code of practice
- HSG168 Fire safety in construction

Should any conflict arise between this specification and any of the above Legislation or Standards the Supplier shall bring this to the attention of the Member immediately.

6. Mandatory Criteria

The minimum requirements the Supplier shall maintain throughout the duration of the Framework and all underlying Call-off Contracts are:

- Insurance:

Public Liability	£5 million
Employer's Liability	£10 million
Professional Indemnity	£1 million (to be maintained for a period of 6 years following the end of the call-off contract).
Product Liability	£5 million
Contractors All Risks	£250 thousand

- Registered on the Data Protection Public Register (ICO)

- Membership of a relevant/recognised 3rd party UKAS accredited company registration scheme. At least one from the list below (or equivalent):

Fire Door Installation/Maintenance

- FIRAS Passive Fire Protection Certification for Timber Doors, Composite Doors, Fire Door Maintenance
- BM Trada Certified Q-Mark Fire Door Installation and/or Fire Door Maintenance
- LPCB LPS1197, LPS1271
- IFC Certified Installer of Passive Fire Protection
- Blue Sky Certification for Fire Door Installation and/or Fire Door Maintenance

Fire Stopping

- FIRAS Passive Fire Protection Certification for Penetration Sealing, Boards, Cavity Barriers, Partition Systems - Dry Lined, Glazing Systems, Rated Dampers
- BM Trada Certified Q-Mark Fire Stopping Installation Scheme
- LPCB LPS1500, LPS1531
- IFC Certified Installer of Passive Fire Protection
- Blue Sky Certification for Fire Stopping Installation

- Personnel Competencies; the Supplier shall ensure all individuals working under this Framework are competent (using a recognised sector-specific competence framework), and have the necessary training, qualifications, knowledge, skills, experience, and behaviours for the task they are undertaking. The Supplier shall maintain a training matrix and training records that shall be available to the Member immediately upon request. Individuals must hold an accredited qualification by a nationally recognised body for at least one of the qualifications listed (or higher/equivalent) AND have sector specific training.

Fire Door Installation/Maintenance

- BM Trada Q-Mark Fire Door Installation Certification
- BM Trada Q-Mark Fire Door Maintenance Certification
- BWF/NPTC/SBCSG Fire Door Installation Certification

Fire Stopping

- Level 3 Course in Passive Fire Protection (BRE/IFC)
- BM Trade Q-Mark Fire Stopping Installation Certification
- NVQ Level 2 Diploma in Associate Industrial Services Occupations – Passive Fire Protection: With 1:1 supervision from a Level 3 qualified and experienced operative.

Fire Door Installation/Maintenance AND Fire Stopping

In addition to the above, all operative must hold asbestos awareness training / certificate issued within the last 12 months.

In meeting the mandatory criteria above, Suppliers may submit a consortium bid of any make-up so long as there is clarity in the relationships making up the consortium.

7. Desirable Criteria

It would be desirable for supervisors and managers to hold personal membership of a recognised relevant professional body (which has a Code of Conduct for its members) including:

- Fire Industry Association Member
- Association for Specialist Fire Protection Member
- Fire Protection Association Member
- The Institute of Fire Safety Managers
- The Institute of Fire Prevention Officers Member
- Institution of Fire Engineers

8. Record Keeping

All works shall be fully certified (materials, door sets, installation) to approved recognised standards based on primary test evidence. For each installation/works, upon practical completion, the Supplier shall provide:

Fire Door Installation

- Primary Test Evidence and Secondary Test Evidence (based on the Primary) for the Door Set (for each make/model of door type installed) by a UKAS Accredited Body
- Certification of Installation for each door. The certificate shall uniquely link to/identify each individual door
- Supervisor qualification certificates

Fire Door Maintenance

- Schedule of Accepted/Approved Repair Techniques
- Statement of Conformance as a 'Notional/Nominal' Fire Door
- Supervisor qualification certificates

Fire Stopping

- Schedule of locations, installation details, substrates and methods of fixing, materials used and corresponding standards
- Test evidence for materials used and corresponding installation instructions
- Supervisor qualification certificates

Each certificate is to be provided electronically in PDF format and show:

- Date
- Address, Location
- Contractor Company Name
- Signature

Accompanying the certificate(s) the Supplier shall provide before and after photographs.

9. Fire Door Installation

9.1. Cross Corridor Doors and Risers

Installation of internal doorsets suitable for stairwells, lobbies and corridor doorsets including the associated side panels/fanlights. Designed for compartmentation, means of escape and to enable the Fire & Rescue Service to carry out their duties in common areas.

Supply and/or fit to meet the minimum standards set out herein. All doorsets and associated side panels and fanlights must:

- Be tested and certified to EN1634 and BS476 part 22 1987 in full-scale tests at a UKAS accredited facility, with primary test evidence as a complete assembly including side panels/screens and fanlights for both single and double doorsets for required duration and smoke leakage. Any glazing in the door or in any side panel, fanlight, screen etc, should also be tested in the full-scale test.
- Where required fulfil the requirements of Part M of building regulations 2015 with doors meeting BS8300 and applicable DDA requirements.
- Be fit for purpose in terms of resilience against misuse and vandalism. This requirement includes door mounted closers and/or concealed overhead closers. Comprise of anti-vandal glazing to prevent accidental or deliberate breakage. The glazing panel should be fitted with security screws as standard to enable replacement if required.
- Be designed and intended to be able to be repaired and/or repainted and/or maintained.
- Meet acoustic standard having been tested to EN ISO 10140-2.
- Provide various finish options, the paint finish must be non-toxic, non-flammable paint offering a flexible protective film, and/ laminate woodgrain finish and hardwood stained frames with matching beading. Where required by the Member, doors should include kick plates, push plates, and/or automatic drop-down smoke seals.
- All doorsets and components (as present on site) must be inspected prior to removing the existing door and frame in order to verify that all components of the final assembly will, in combination, result in a final installation that conforms with the manufacturer's test evidence/certification documents and installation instructions. This must include, but is not limited to hardware, glazing, intumescent strips, smoke seals, hinges, beading method, door closer, any drop-down seals, and signage where appropriate.
- Be installed by a third-party approved installer, in accordance with the requirements of BS8214 and installed as per manufacturer's instructions. Doors sets shall be installed without modification as tested, including; door, frame, threshold, glazing and, ironmongery and according to written instructions.

9.2. Front Entrance Doorsets (FED)

Installation of flat entrance doors including composite doors.

Supply and/or fit to meet the minimum standards set out herein. All flat entrance doors and associated side panels and fanlights must:

- Be designed, tested and supplied as a complete doorset by a UKAS accredited test facility. Primary test evidence only, some secondary test evidence based on primary is acceptable. Test certification must cover/include; hinges (CE marked), intumescent seals and smoke seals integral to the doorset design, all glazing, locking system/s, all hardware including door viewer, letterplate and security cowl (if required), door knocker (bolt through) and door closer cam action for DDA requirements.
- Where doorset contain an Insulating Glass Unit (IGU), the above test evidence for the doorset must demonstrate a glazed doorset comprising the IGU – the same throughout all tests (for fire, security, thermal insulation etc)
- Be CE marked to EN14351-1.
- Must be of minimal toxicity when smoke is generated as a result of combustion.
- Be independently certified as Secured by Design and PAS24 with glazing certified to EN356. This applies to all glazing including side screens and fanlights.
- Locks must also be tested under PAS24. Multi-point locking systems shall have a thumb turn to the inside of the door for means of escape.
- Be designed and intended to be able to be repaired and/or repainted and/or maintained.
- Prior to ordering/manufacturing, the Supplier must receive written approval on the colours, styles, furniture, type of glazing i.e. clear or obscure, as required by the Member's policy.
- All doorsets and components (as present on site) must be inspected prior to removing the existing door and frame in order to verify that all components of the final assembly will, in combination, result in a final installation that conforms with the manufacturer's test evidence/certification documents and installation instructions. This must include but is not limited to hardware, glazing, intumescent, smoke seals, hinges, beading method, door closer, any drop-down seals, signage, where appropriate.
- Installation should be to test evidence, and doors should be installed (as tested) so with door, frame, threshold, glazing, and/or ironmongery according to written instructions.

10.Fire Door Maintenance / Repairs

Where a fire door, side panel or fanlight has become damaged, the Supplier shall repair or replace as follows:

1. In the first instance, repair using Approved/Accepted Repair Techniques (ARTs) in accordance with the Supplier's Fire Door Maintenance scheme certification to door/frame/surround as required. Where this may be during the middle of the night and the repair cannot be carried out in full, the Supplier shall effect interim repairs to allow the door to securely close and make it safe (to resist smoke/fire) as far as reasonably practicable. Where this happens, the Supplier must return the following day to complete the ARTs.
2. Where the Supplier cannot repair the door using ARTs, the Supplier shall replace the door with an 'interim' fire door blank.

3. If the frame cannot be repaired using ARTs, the Supplier shall replace the doorset, complete with a compliant assembly set (BS 8214) and (if necessary) make good any damage to the surrounding wall/infrastructure to the appropriate fire resisting standard.
4. An interim fire door / door set must be of the required FD30s/FD60s rating and installed to a standard such that it is A) a certified Nominal/Notional Fire Door; and B) suitable and sufficient to remain in place for 2-3 months until such time as a new matching door set is manufactured.

The Supplier must issue certification for interim fire doors and their installation:

- Interim Door Blank: Certificate for the door (as manufactured) plus certification to a nominal/notional fire door standard for the installation.
- Interim Door Sets: Certification as a compliant assembly (for the door set with global assessment) and certification for the installation to the manufacturer's test standards. These doors are only intended as an interim measure and the Supplier is required to clearly state this to the Member on its worksheets.

11.Fire Stopping

Provide fire stopping services to include, but not limited to, audits and inspections of fire stopping by third parties, undertaking fire stopping to bring a building and/or an area up to an acceptable standard, to provide evidence of the same via detailed reports, and/or certification of installation (as required by law, their own third party accreditation scheme and/or industry standards). The Supplier shall:

- Advise on any shortcomings in fire stopping and the associated risks that this places on the building compartmentation, and the risk to relevant persons. To provide an estimated cost of works including an estimated time frame and anticipated disruption.
- To advise the Responsible Person of possible interim mitigating measures that could be implemented.
- Ensure that all fire compartmentation and firestopping work is undertaken and supervised by suitability qualified individuals and that supervision ratios meet the requirements of their third-party scheme membership as a minimum.
- Undertake pre-installation checks to ensure that the fire-stopping system intended to be installed is fit for purpose. Confirm the environment is right (temperature, humidity, substrate). Check if there are any chemicals present that might affect fire-stopping materials and that the substrates are clean and dust free. Check the product's fire test reports, and other evidence to ensure it adequately supports the end use application.
- All penetrating services should be adequately supported either side of the wall by fire tested supports to prevent collapse of the seal in a fire.
- If the service is already installed (supports have already been fitted), ensure that the fire-stopping is installed with the supports at the correct distance from the faces of the seal.

- Ensure dampers are independently supported so that when activated, they do not affect the stability of the surrounding firestop unless it is designed to support them and has been tested in the fire damper test EN 1366-2. This should be clarified with the damper manufacturer. Demonstrate where penetration seals are to be installed around fire dampers or ducts, that the seal used is approved for use and is compatible with the damper/duct in question.
- Ensure you check the fire resistance time provided by the seal is equal to the wall it is being installed into. Refer to the manufacturer's information and site drawings, to confirm the seal is suitable for the type and size of penetrating service and the size and orientation of the service being sealed.
- Where a floor is intended to be loadbearing, the seal for any floor penetrations must also be loadbearing. If there is any risk of a person standing on it, provide separate mechanical protection e.g. a steel grid fixed above the seal.
- Suppliers shall use all of the correct materials and components and installation methods as recommended by the manufacturer and not mix one manufacturer's product with another's in a single seal e.g. batts and mastics from different manufacturers or pipe collars and batts from different manufacturers. Unless you can prove with test evidence and provide certification under your scheme.
- Ensure mineral wool is not left packed around services without any fire-stopping material covering it.
- Ensure you install pipe wraps within the fire-stop mortar such that they finish flush with the seal soffit.
- Ensure that no glass wool or combustible materials have been used around penetrations and in joints unless they have been successfully tested for the particular application.
- Ensure compartment walls have been taken up to the underside of compartment floors (above suspended ceilings) and that a suitable deflection head is fitted if the wall is non-load bearing, and that fire-stopping reaches the edge of floor slabs, etc.
- Ensure all possible routes for smoke, gases and flame have been sealed.

12. Asbestos

The Supplier may be required to manage, administer or co-ordinate work which involves the handling or disturbance of asbestos containing materials.

Where passive fire safety works/fire stopping is to be carried out to an existing building, the Supplier shall obtain access to the current asbestos information and appropriate project specific sampling / survey for that building prior to commencing any work on-site.

If during the course of any work the Supplier discovers the presence of a material that is not identified in the asbestos survey and therefore may contain asbestos, they are required to immediately cease work, making safe and seek further instructions.

Asbestos removal or remediation in relation to a fire compartmentation project could be undertaken by 3rd parties working on behalf of the Member or the Supplier. Where the Supplier is required to undertake work on or related to asbestos containing materials, the Supplier must use an approved (and if necessary licensed) asbestos removal contractor, with all sampling and analytical work being undertaken by a UKAS accredited independent

asbestos analytical consultant. The Supplier may be required to work with the asbestos specialist(s) to ensure that the works are completed as expeditiously as is possible and the period of time during which compartmentation is breached is minimised. The Supplier will at all times co-operate and coordinate works with the Member's 3rd party suppliers in order to allow for timely progression of the programme.

Whilst the Supplier and/or their approved subcontractor is carrying out work, all documents, paperwork, test certificates as outlined in the HSE approved Code of Practice L143 Managing and working with asbestos and the guidance HSG 247, must be kept onsite throughout the duration of the services.

13. Asset Information Model

To allow the Member to develop its BIM capability, upon request, the supplier shall update:

- Health & Safety File / O&M Records
- BIM/AIM Model

The cost for this is chargeable over and above the SoR items.