



Passive Fire Protection Forum (PFPPF)

**Guide to Undertaking Technical
Assessments of Fire Performance of
Construction Products Based on Fire
Test Evidence**

2021

Industry Standard Procedure

The Passive Fire Protection Forum (PFPF) seeks to represent the passive fire protection industry within the UK. It provides a focal point and forum for developing best practice in the life safety critical area of passive fire protection. As a single industry contact point for passive fire protection matters it aims to avoid the need for multiple consultation on fire safety issues.

The PFPF aims to promote solutions within the context of effective fire safety design and ensure that the reliability and quality of passive fire protection materials and systems are maintained. It encourages the safe use of passive fire protection through Third-Party Certification (TPC) schemes for the manufacture, installation, inspection and maintenance of products and systems.

The PFPF also aims to raise levels of awareness of passive fire protection including the material and product supply chains, ensuring that the necessary knowledge of passive system protection is part of competency development programmes for all people within the design and construction industry.

The following organisations endorse the principles of this guide:

- Architectural and Specialist Door Manufacturers Association (ASDMA)
- Association of Composite Door Manufacturers (ACDM)
- Association of Ductwork Contractors and Allied Services (ADCAS)
- Association for Specialist Fire Protection (ASFP)
- BRE Global
- British Woodworking Federation (BWF)
- Door & Hardware Federation (DHF)
- Fire Test Study Group (FTSG)
- Glass and Glazing Federation (GGF)
- Guild of Architectural Ironmongers (GAI)
- HEVAC Fire and Smoke Damper Committee
- IFC Certification Limited (IFCC)
- Institute of Clerks of Works and Construction Inspectorate of GB Inc. (IWCWCI)
- International Fire Consultants Limited (IFC)
- Intumescent Fire Seals Association (IFSA)
- Smoke Control Association (SCA)
- The Building Test Centre (BTC)
- UL International (UK) Limited
- Warringtonfire Testing and Certification Limited

This document is referenced in statutory guidance (Approved Document B) produced by the Ministry of Housing, Communities and Local Government (MHCLG).

The National Fire Chiefs Council (NFCC) were consulted with and contributed to this guidance in 2019.

Whilst every effort has been made to ensure the accuracy of advice given, the PFPF cannot accept liability for loss or damage arising from the use of the information supplied in this publication. Compliance with the Guide cannot confer immunity from legal obligations.

Publishing and Copyright Information

The Passive Fire Protection Forum (PFPF) copyright notice displayed in this document indicates when the document was last issued.

© The Passive Fire Protection Forum (PFPF) 2021

Published by The Passive Fire Protection Forum (PFPF), under the umbrella of the Fire Sector Federation

Publication History

First published June 2000
Revised in 2019 and 2021

Contact Details

Passive Fire Protection Forum (PFPF)
Fire Sector Federation
London Road
Moreton in Marsh
Gloucestershire
GL56 0RH

Telephone: +44 (0) 1608 812543

E-mail: executive@firesectorfederation.co.uk

CONTENTS

1. INTRODUCTION	9
2. SCOPE.....	10
3. DEFINITIONS.....	11
3.1 ASSESSMENT	11
3.2 REPORT	11
3.3 FIRE TEST	11
3.4 APPLICANT	11
3.5 ASSESSOR	12
3.6 REVIEWER	12
3.7 RELEVANT TESTING AND ASSESSMENT EXPERIENCE	12
3.8 SUBSCRIBING ORGANISATIONS	12
4. REQUIREMENTS OF SUBSCRIBING ORGANISATIONS	13
4.1 PROFESSIONAL INDEMNITY	13
4.2 QUALITY MANAGEMENT REQUIREMENTS.....	13
4.3 MAINTENANCE OF ASSESSOR AND REVIEWER MATRICES.....	13
4.4 RESPONSIBILITY FOR CHOOSING ASSESSORS AND REVIEWERS	13
5. REQUIREMENTS OF INDIVIDUALS	14
5.1 COMPETENCIES	14
5.2 QUALIFICATIONS	14
5.3 CONTINUING PROFESSIONAL DEVELOPMENT (CPD).....	14
5.4 CONDUCT	14
6. REQUIREMENTS OF ASSESSORS AND REVIEWERS	15
7. LEVELS OF COMPLEXITY OF ASSESSMENT	17
8. PROCEDURE FOR UNDERTAKING ASSESSMENT.....	18
8.1 APPLICATION FOR ASSESSMENT	18
8.2 SELECTION OF ASSESSOR/REVIEWER	18
8.3 IMPARTIALITY	19
8.4 SUPPORTING INFORMATION	19
8.5 ASSESSMENT REPORT	22
8.6 REVIEW OF ASSESSMENT REPORTS.....	23
ANNEX A.....	24
EXAMPLE OF REGISTER OF ASSESSORS AND REVIEWERS	
ANNEX B.....	25
DECLARATION BY THE APPLICANT	
ANNEX C.....	26
RULES OF CONDUCT AND ETHICAL PRINCIPLES FOR USERS OF THIS GUIDE	
ANNEX D.....	28
PROCEDURE OF THE REVIEW OF TEST REPORTS GREATER THAN FIVE YEARS OLD	
ANNEX E	30
ASSESSMENT CHECKLIST	
ANNEX F	31
AMENDMENT TABLE	

RELATIONSHIP WITH STATUTORY PROVISIONS

The following requirements (page 6) are copied from The Building Regulations 2010, Approved Document B: Fire safety Volumes 1 and 2 2019 edition incorporating 2020 amendments (England) and form the guiding principles against which this guide has been revised.

This PFPF guide (albeit a previous version) is referenced in statutory guidance produced by MHCLG as shown below.

Note: The referenced 'Passive Fire Protection Federation's Guide to undertaking assessments in lieu of fire tests' has been renamed to 'PFPF Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence' and this will be updated in future editions of ADB.

This does not however preclude assessments written using this guide being submitted for acceptance, to demonstrate compliance with statutory provisions, by other Authorities Having Jurisdiction (AHJ) within the United Kingdom (Scotland, Wales or Northern Ireland) or other territories.

Amendments published in December 2018 - The Building Regulations 2010, Approved Document B: Fire safety Volume 1 and 2 2019 edition (England) *Appendix B: Performance of materials, products and structures* in the Introduction states:

- B1** Much of the guidance in this document is given in terms of performance classifications in relation to British or European Standards. In such cases, it will be necessary to demonstrate that a system or product can meet the relevant performance classification. This will be achieved if the system or product complies with one of the following.
- a. They should be in accordance with a specification or design that has been shown by a specific test to be capable of meeting that performance classification.
 - b. They should have been designed by using relevant design standards in order to meet that performance classification.
 - c. They should have been assessed by applying relevant test evidence, in lieu of carrying out a specific test, as being capable of meeting that performance classification.

NOTE: Some products are subject to Classification Without Further Testing (CWFT). For the purposes of this approved document, such products can be considered to have been shown to be capable of meeting a performance specification as per paragraph B1a.

- B2** Any test evidence used to demonstrate the fire performance classification of a product or system should be carefully checked to ensure that it is applicable to the intended use. Small differences in detail, such as fixing method, joints, dimensions, the introduction of insulation materials and air gaps (ventilated or not), can significantly affect the performance.
- B3** Assessments should not be regarded as a way to avoid a test where one is necessary. Assessments should only be carried out where sufficient relevant test evidence is available. Relevant test evidence is unlikely to be provided by test standards which have different classification criteria.
- B4** Where it is proposed to assess the classification of a product or system in lieu of carrying out a specific test (as in paragraph B1b), this should be done in accordance with the relevant standard for extended application for the test in question and should include details of the test evidence that has been used to support the assessment.

For performance classifications where there is no specific standard for extended application, assessment reports should be produced in accordance with the principles of **BS EN 15725** and should include details of the test evidence that has been used to support the assessment. Further information on best practice is provided in the Passive Fire Protection Federation's *Guide to Undertaking Assessments in Lieu of Fire Tests*.

NOTE: Regulation 7(2) limits components used in or on the external walls of certain buildings to materials achieving class A2-s1, d0 or class A1 (see Section 12). Assessments cannot be used to demonstrate compliance with this requirement.

- B5** Tests and assessments should be carried out by organisations with the necessary expertise. For example, organisations listed as 'notified bodies' in accordance with the European Construction Products Regulation or laboratories accredited by the United Kingdom Accreditation Service (UKAS) for the relevant test standard can be assumed to have the necessary expertise.

NOTE: Standard fire tests do not directly measure fire hazard. They measure or assess the response of a material or system to exposure to one or more aspects of fire conditions. Performance in fire tests is only one of a number of factors that should be taken into account.

Source: Approved Document B Fire Safety volume 2 - 2019 edition inc 2020 amendments.pdf

ASSESSMENTS AND THEIR RELATIONSHIP TO PRODUCT APPROVAL AND THIRD PARTY CERTIFICATION (TPC)

Test evidence provides information on the product or system tested and generally does not offer any extension to scope or design variability.

The role of an assessment is to extend the scope of design/application of a product or system offered to the market, based on sufficient relevant and directly applicable test evidence by technical evaluation of the product or system based on testing experience and product technology core knowledge. Assessments can be standalone documents dealing with specific projects or aspects of product design, or they can form the basis of a transparent scope of approval for the application of the product or system design under Third Party Certification.

Third Party Certification (also termed third party conformity assessment activity) is a conformity assessment activity that is performed by a person or body that is independent of the person or organization that provides the product, and of user interests in that product. As described in ISO/IEC 17065, Conformity Assessment – requirements for bodies certifying products, processes and services aims to provide confidence in the compliance of the product and adds value to the process of certification by having independent assurance that the product has been manufactured correctly according to tested design and is installed properly in accordance with manufacturer's instructions, according to the scheme requirements and against a recognised normative performance standard appropriate to the product.

Third Party Certification schemes for passive fire protection products aim to provide confidence in the compliance of the product (for example) by ensuring a process of Factory Production Control (FPC), traceability, sampling, ongoing audits and testing protocols are in place. For the vast majority of passive fire protection products, an assessment will underpin the scope of certification as the document that provides a defined scope that can be offered to the market, based on the testing undertaken.

It is therefore critical that any assessment on passive fire protection products, whether used within Third Party Certification schemes or outside of that process, is robust and written by competent individuals with the necessary expertise, based upon appropriate and applicable test evidence, as outlined in this PFPF Guide.

Note: Third party product certification provides a higher level of scrutiny than reliance on first party approval from the manufacturer because it brings together the performance record represented by initial type testing with regular independent auditing of associated production processes, all backed by formal independent certification.

FURTHER INFORMATION

This document defines a framework and competency standards for undertaking of assessments based on test evidence for passive fire protection products. It was originally produced in 2000, revised in 2019 and then revised as part of a systematic review process.

Performance in fire tests is only one of a number of factors that should be taken into account. Following the guidance contained within this document will provide confidence that assessments based on test evidence have been carried out with the necessary care and expertise and are appropriate for the intended use.

The PFPF undertakes to carry out regular review of this document and record amendments in Appendix F.

Assessments that are not undertaken in accordance with this guide may still be acceptable for regulatory purposes, however they should be thoroughly scrutinised by impartial and competent individuals to ensure they are appropriate and safe for the intended use.

Compliance with this guide does not guarantee that the assessment will be accepted by any relevant approving authority (e.g. building control approval bodies). There may well be alternative ways of achieving compliance with the requirements.

All assessments of passive fire products shall be based on relevant and directly applicable test evidence by technical evaluation of the product or system based on testing experience and product technology core knowledge and be conducted by individuals with the necessary competence as outlined in this guide, as referenced by the statutory guidance given in Approved Document B Appendix B: *Performance of materials, products and structures*, and equivalents in Scotland, Wales and Northern Ireland.

Note: It is an important key principle that the product design or system to be assessed technically has a base of applicable primary test evidence, backed as and where appropriate with secondary test evidence. The main system components are expected to have their own test evidence as determined by the responsible component manufacturers, validating intended application and performance of the components. The purpose of the assessment is to provide for modifications and variations to the system within the boundaries of the current knowledge and know-how, by applying relevant and applicable test evidence and experience.

1. INTRODUCTION

The aim of the guide is to give confidence and provide transparency to end-users and Authorities Having Jurisdiction (AHJ) that assessments based on fire test evidence that exist in the UK market, produced by organisations that subscribe to this guide, are of a satisfactory standard to demonstrate to Building Control Bodies and other Authorities Having Jurisdiction (AHJ) that the product or system is appropriate for the intended use.

Subscribing organisations are required to satisfy the corporate and ethical requirements of this guide, i.e. to employ individuals that subscribe to professional principles and have an appropriate nationally recognised quality system accredited to e.g. ISO 9001 and/or ISO/IEC 17025 and/or ISO/IEC 17065. The selection of qualified individuals for performing assessments and for reviewing the results of such assessments should be made by a named individual within the organisation (or by named deputy during periods of absence). Persons with this responsibility should be named in the organisation quality manual.

The guide also defines the levels of complexity for different kinds of assessments based on test evidence, the levels of expertise for assessors & reviewers and controls the levels of assessor & reviewer who are permitted to undertake/review each kind of assessment. Finally, it includes a code of conduct and guidance on ethical principles for assessors & reviewers.

This guide was originally produced in 2000 by the UK Fire Test Study Group (FTSG), an association of the major fire testing laboratories in the UK and published by the Passive Fire Protection Federation (PFPF). At that time, the title was '*Guide to undertaking assessments in lieu of fire tests*' (AILOT). In 2019 the title was changed to the '*PFPF Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence*'.

The guide includes and extends upon the principles and procedures embodied in Fire Test Study Group (FTSG) Resolution 64a 1993 (and its predecessor Resolution 64). These resolutions, which have been widely circulated to regulatory authorities, consultants and manufacturers for many years are superseded by this guide.

FTSG Resolution 82 states that FTSG members agree to follow the PFPF Guide to undertaking assessments in lieu of fire tests as the document to control the production of assessments in their organisation. FTSG Resolution 82 supersedes FTSG resolution 64a.

This guide has been rewritten in conjunction with subscribing organisations including test laboratories, certification bodies, and trade associations, and is published by the Passive Fire Protection Forum (PFPF), the representative body for the passive fire protection industry in the UK, under the umbrella of the Fire Sector Federation.

2. SCOPE

This guide relates to the provision of technical assessments of fire performance of construction products and building elements based on evidence from fire resistance, reaction to fire and other performance criteria (such as durability, smoke leakage and other environmental conditions) which are **relevant, appropriate and applicable** to the proposed changes, justified and substantiated within the assessment report by reference to that supporting test evidence.

The advice in this guidance covers agreed principles concerning application to relevant standards.

Assessments may be undertaken for a variety of reason as described in Appendix B of Approved Document B and equivalents in Scotland, Wales and Northern Ireland.

Assessments will vary from relatively basic analysis through to detailed and often complex assessments that consider significant multiple changes to a group of products or systems. These are classed as **basic, intermediate** or **complex** assessments. (See Section 7 – levels of complexity).

Assessment reports should be produced in accordance with the principles in EN 15725: 2010 '*Extended application reports on the fire performance of construction products and building elements*'.

Excluded from Scope of this Guide

Fundamental re-design or re-engineering, and fire engineering evaluations require a different approach to that of a basic, intermediate or complex assessment and are excluded within the scope of this guide.

3. DEFINITIONS

3.1 Assessment

A technical evaluation of the likely performance of a component or element of structure (as defined in Approved Document B and equivalents in Scotland, Wales and Northern Ireland) if it were to be subjected to a relevant standard fire test.

An assessment may consider design changes to a tested element of construction for a specific project or it could form a wider scope of approval with a defined period of validity.

Assessments are based on sufficient relevant test evidence and provide a defined scope of approval for a particular design or range of designs and is an opinion of the likely performance of a component or element of structure if it were to be subjected to a standard fire test.

Assessments (for the purpose of this guide) have three levels of complexity– see Section 7.

Basic Assessments

The assessment of relatively minor changes to a tested product or system. Such changes shall not be critical to the fire performance of the product or construction being assessed.

Intermediate Assessments

The assessment of intermediate complexity and significant changes to a tested product or system. Such changes may be critical to the fire performance of the product or construction being assessed.

Complex Assessments

The assessment of multiple changes to a group of tested products or systems. Such assessments often rationalise the results of several tests in a wider assessment report to cover ranges of products in different combinations and permutations. Such changes are always fundamental to the fire performance of the product or construction being assessed.

3.2 Report

The written report of an assessment based on test evidence. This report should be produced in accordance with the principles in EN 15725: 2010 as required by Approved Document B Appendix B and equivalents in Scotland, Wales and Northern Ireland.

3.3 Fire Test

A test performed to evaluate the performance of a material, product, assembly or element of structure to a relevant and recognised standard.

3.4 Applicant

The person or body requesting an assessment.

3.5 Assessor

The person employed by the subscribing organisation making the assessment in response to a request from the applicant.

3.6 Reviewer

The person employed by the subscribing organisation responsible for checking and confirming the validity of an assessment on behalf of the subscribing organisation making the assessment.

3.7 Relevant Testing and Assessment Experience

Current (recent) experience of conducting and/or witnessing and/or analysing fire test data including mode of failure analysis and of undertaking assessments (as assessor or reviewer), on materials, products, assemblies or elements of structure relevant to the product or product group subject to the assessment. An example would be working in such specialist areas with suitable relevant and applicable first-hand practical experience, in order to maintain their up-to-date knowledge across the field.

3.8 Subscribing Organisations

Organisations that agree to be bound by the principles set out in this guide.

4. REQUIREMENTS OF SUBSCRIBING ORGANISATIONS

The corporate requirements of any subscribing organisation undertaking assessments are as follows:

4.1 Professional Indemnity

The organisation shall hold adequate professional indemnity insurance that covers all of its activities relating to the issuing of assessments.

4.2 Quality Management Requirements

The organisation shall maintain a quality management system, e.g. ISO 9001, which includes the issuing of assessments. The quality manual shall contain a commitment to comply with all the requirements of this document.

The quality management system shall require that the organisation maintain a register(s) of individuals' competencies, qualifications, responsibilities, details and their Continuing Professional Development (CPD).

4.3 Maintenance of Assessor and Reviewer Matrices

The competence, professional experience, conflict of interest register and CPD of each assessor and reviewer will be the responsibility of the subscribing organisation who will review and maintain the competency matrix (see Annex A), and the CPD record for each assessor/reviewer. Curricula Viti should be available for public scrutiny as required.

The organisation shall modify the matrices for their assessors/reviewers if:

- Assessors/reviewers join the organisation.
- Assessors/reviewers declare a new conflict of interest.
- Assessors/reviewers leave the organisation.
- Assessors/reviewers are able to assess particular forms of construction.
- Assessors/reviewers are withdrawn from undertaking assessments of a particular level.

4.4 Responsibility for Choosing Assessors and Reviewers

Subscribing organisations undertaking assessments are required to enshrine and implement the system requirements in this guide, including the Rules of Conduct and Ethical Principles (Annex C), by subscriber signed declaration.

Selection of the assessor/reviewer shall be made by a named individual in each subscribing organisation.

Provision shall be made for a deputy during periods of absence.

Provision shall be made to maintain impartiality and manage conflicts of interest.

5. REQUIREMENTS OF INDIVIDUALS

5.1 Competencies

For each assessor and reviewer employed by the subscribing organisation, a record shall be kept of their competency to assess different materials, products, systems, assemblies and forms of construction. This record shall be in the form of the matrix given in Annex A. The record shall be reviewed at least annually by the subscribing organisation.

5.2 Qualifications

For each assessor and reviewer employed by the subscribing organisation, a record shall be kept of any qualifications and related experience they may have that are relevant to their ability to undertake assessments.

5.3 Continuing Professional Development (CPD)

Continuous professional development is an accepted core principle which assessors and reviewers are expected to follow as routine.

For each assessor and reviewer employed by the subscribing organisation their continuing professional development shall be maintained, and a record of their activities should be kept. An example of the ways in which individuals can maintain and increase their professional status could be by the accrual of CPD points (otherwise known as CPD units/credits/hours).

Such points could be earned by, for example:

- Membership of professional bodies.
- Conducting/watching the relevant fire tests.
- Reading appropriate trade/scientific journals.
- Attending seminars/conferences in appropriate fire related areas.
- Presenting papers/workshops in areas of expertise.
- Keeping up to date in development of relevant standards and product technologies.
- Attending and/or reviewing tests and assessments.

Other ways in which CPD can be enhanced are:

- Contribution to National, European or International standardisation committees in areas of expertise on a regular basis.
- By being actively involved with relevant trade associations or professional bodies e.g. attending and participating in relevant technical committee meetings.

5.4 Conduct

Assessors and reviewers of subscribing organisations are required to abide by the Rules of Conduct and Ethical Principles for Users of This Guide (Annex C).

6. REQUIREMENTS OF ASSESSORS AND REVIEWERS

Different levels of competency of individual assessor and reviewer have been identified with different levels of responsibility and remit in regard to the complexity level of assessment that they may undertake. At all levels the reviewer and assessor for a particular product system should be aware of and understand the applicable mode of failure that would apply and what the consequences could be of that mode of failure.

Note: The term 'relevant testing and assessment experience' is defined in Section 3.

Level of Competency	Role	Qualifications and Relevant Experience	Responsibility	Remit (Highest Level of Complexity of Assessment that can be Undertaken)
1	Principal Assessor/ Reviewer	Chartered engineer or equivalent. Five years relevant testing and assessment experience.	Able to supervise levels 2, 3 or 4 Able to review Basic, Intermediate and Complex assessments.	Able to undertake Basic, Intermediate and Complex Assessments.
2	Senior Assessor/ Reviewer	Either > six years relevant testing and assessment experience (non-graduate). Or > three years relevant testing and assessment experience plus qualifications equivalent to an incorporated engineer or above. As level 3 plus greater depth/experience of different products.	Able to supervise levels 2, 3 or 4. Able to review Basic, Intermediate and Complex assessments.	Able to undertake Basic, Intermediate and Complex Assessments.
3	Assessor	Either > four years relevant testing and assessment experience (non - graduate). Or > two years relevant testing and assessment experience plus qualifications equivalent to a technician engineer or above.	Able to supervise level 4. Unable to review assessments. No supervision required to undertake assessments (Basic and Intermediate).	Able to undertake Basic and Intermediate assessments. <i>(Note: It is possible for an Assessor to co-author a Complex Assessment providing the other author has the necessary competencies at Level 2 (Senior Assessor) or Level 1 (Principal Assessor). All co-authored assessments must have a reviewer with the necessary competencies at Level 2 (Senior Assessor/Reviewer) or Level 1 (Principal Assessor/Reviewer))</i>

Level of Competency	Role	Qualifications and Relevant Experience	Responsibility	Remit (Highest Level of Complexity of Assessment that can be Undertaken)
4	Trainee Assessor	Either > two years relevant testing and assessment experience (non - graduate). Or > one year relevant testing and assessment experience plus qualifications equivalent to graduate/associate engineer/NVQ level 5 or above.	Works only under supervision. Cannot review. Cannot supervise.	Able to undertake Basic assessments under supervision. <i>(Note: It is possible for a Trainee Assessor to co-author an Intermediate or Complex Assessment providing the other author has the necessary competencies at Level 2 (Senior Assessor) or Level 1 (Principal Assessor). All co-authored assessments must have a reviewer with the necessary competencies at Level 2 (Senior Assessor/Reviewer) or Level 1 (Principal Assessor/Reviewer))</i>
5	Apprentice Assessor	No experience	No sole responsibility and works only under supervision.	Cannot undertake, review, supervise any assessment. <i>(Note: It is possible for an Apprentice Assessor to co-author a Basic Assessment providing the other author has the necessary competencies at Level 2 (Senior Assessor) or Level 1 (Principal Assessor). All co-authored assessments must have a reviewer with the necessary competencies at Level 2 (Senior Assessor/Reviewer) or Level 1 (Principal Assessor/Reviewer))</i>

7. LEVELS OF COMPLEXITY OF ASSESSMENT

For competency levels of individual undertaking or reviewing, refer to table in Section 6.

Different levels of complexity of assessment have been identified as follows:

Complexity Level of Assessment	Definition	Level of Competency of Individual Able to Undertake Assessment	Level of Competency of Individual Able to Review Assessment	Examples
Complex	Refer to section 3	Level 1 or 2	Level 1 or 2	• Large constructions, e.g. very high/wide glazed screens, composite stud and plasterboard walls that exceed the size of the standard furnace (as defined in BS 476:20). • Interpolation/extrapolation of a range of tests on fire doors or glazing to cover a large range of sizes. • Interpolation/extrapolation of a range of tests on fire doors to cover different configurations (single/double doors, single/double action, over panels, side panels unequal pairs etc.). • Interpolation/extrapolation of a range of tests on glazing to be able to assess modifications to the glazing system (framing components, seal details) to be able to include different types of fire resisting glass. • Interpolation of a range of test data to cover the reaction to fire performance of different thicknesses of a product. • Analysis of a range of tests on fire protection of structural steel work to determine the level of fire protection required for a wide variety of shapes, sizes and types of steel section (e.g. ASFP Yellow Book analysis).
Intermediate	Refer to section 3	Level 1, 2 and 3	Level 1 or 2	• Changes to major components e.g. facing materials, framing studs in a partition system. Substitution of critical items of hardware and/or intumescent seals in fire doors. • Addition of components such as overpanels/side panels in fire doors. • Assessments of simple changes to fire protection of steel work. • Simple change of facing material to a wall or ceiling lining (example only).
Basic	Refer to section 3	Level 1, 2, 3 and 4	Level 1 or 2	Examples of basic assessments are: • Substitution of cover trims of jointing systems in partitions. • Substitution of non-critical items of hardware to fire doors. • Minor changes to the fixing centres of a partition.

8. PROCEDURE FOR UNDERTAKING ASSESSMENT

8.1 Application for Assessment

- All requests for an assessment by the applicant must be confirmed in writing using the application process of the assessing organisation and shall provide accurate evidence and declaration of components and their specification.
- The request for assessment shall give reference to a detailed specification of the proposed construction (e.g. reference to drawing numbers and written specifications) and the applicant is expected to make available (in full detail) to the assessor all information relevant to the assessment of which they are aware. E.g. any test data, including test failures.
- Applicants are also obliged to divulge if they have information on test failures applicable to the assessment being requested.
- The applicant shall provide a written declaration as to whether they have approached any other organisation or individual for an assessment of the same or similar construction; they shall also declare in writing if they are aware that the construction has been tested and disclose any evidence or information, whether favourable or otherwise, which may be relevant to the material, product or system and requested scope of assessment (see 8.4 Assessment Report).

8.2 Selection of Assessor/Reviewer

- The assessment shall be performed by an assessor of the appropriate level and product/construction expertise from the competency matrix of the subscribing organisation (see Section 6 and 7).
- The selection of an assessor shall be made according to the complexity of the assessment being undertaken and the type of material, product or system being assessed.
- The assessment shall be subject to a comprehensive check of the technical data, the reasoning and the derived opinion by a reviewer also of the appropriate level and product, material or system expertise from the competency matrix of the subscribing organisation.
- Both the assessor and the reviewer should, therefore, have intimate experience and knowledge of the current relevant testing procedures and their interpretations demonstrated by the necessary competency mix of skills in interpretation, judgement and relevant product knowledge and experience, of the type of material, product or system to be assessed.
- Selection of the assessor/reviewer shall be made by a named individual in each subscribing organisation. Provision shall be made for a deputy during periods of absence.

8.3 Impartiality

The assessor and reviewer shall observe all of the following requirements with respect to impartiality, transparency and declared conflict of interest when undertaking or reviewing assessments:

- The assessing organisation must observe the principles of impartiality in ISO/IEC 17065: 2012.
- Perceived conflicts of interest of individual assessors must be declared, recorded and subsequently managed with rigor by the supervising individual within the assessing organisation, with appropriate action taken to mitigate risk to conflict of interest or perceived conflict of interest e.g. the assessor or reviewer must not undertake the assessment or review.
- If it is impossible for the assessor or reviewer not to be involved in assessing or reviewing a material, product or system that they have had previous involvement with or,
- Where impartiality could potentially be compromised (e.g. an individual who is the principal expert in a specific product or system, where this knowledge is not held by another individual) or,
- When the assessor has an attachment to a manufacturer or project relevant to the product or construction being considered for assessment then:

This shall either be stated or implicit in the assessment report. The assessing organisation shall inform in writing the applicant (and other stakeholders if known) prior to undertaking the assessment.

** or attachment to a manufacturer or project relevant to the product or construction being considered for assessment*

- Both the assessor and the reviewer shall be responsible for the impartiality of their activities and shall not allow commercial, financial or other pressures to compromise impartiality.
- The assessor who has been selected to undertake the assessment must make known in writing to their supervisor immediately if they become aware that they have a perceived conflict of interest in a specific assessment that they have been asked to undertake or review. The subscribing organisation must update their conflict of interest register.
- Adopt in full, the rules of this guide including Ethical Principle detailed in Annex C – Rules of Conduct and Ethical Principles for Users of This Guide.

8.4 Supporting Information

Any proprietary information referenced in formulating the assessment must be provided (in full) by the applicant with permission granted by the legal owner of the test evidence.

In some scenarios, owners of test evidence do not wish to issue test reports to all parties but are willing to issue them directly to the assessor.

If the applicant does not have a full copy of test report(s), the applicant shall clearly state the test report number(s) that are to be referenced in support of the assessment. The applicant should ensure that the test report(s) are issued directly to the assessor, with the written permission of use for the proposed assessment, directly from the owner of the test evidence.

All the proprietary information must be the property of the applicant or alternatively, the applicant must provide written authority from the owner of the information for it to be used.

Where information is provided which is not the original property of the applicant, or where the test report(s) provided are not from the assessing organisation, the assessor may approach directly the owner of the information with regard to aspects of the assessment proposed by the applicant. The assessor shall notify the applicant in writing.

Where it is known by the applicant or the assessing organisation that an assessment has been provided or declined by another organisation or individual, the assessor shall be given written authority from the applicant to approach directly the body which provided or declined the assessment.

Where the assessment has been previously declined by another body and the new assessing body is aware of this, the new assessing body shall acknowledge this within the report and give a clear technical justification to state why they were prepared to provide the assessment when the other body was not (e.g. additional test evidence was provided and referred to within the assessment report).

Referenced information may be divided into two types, i.e. primary and secondary. Primary information is test data obtained from one or more fire tests and is essential to formulation of the assessment. Secondary information is that which may be used to provide supplementary data to the primary data and should not provide primary judgement for the assessment.

The following sources for primary data (which must be test reports) and secondary data shall be used.

Primary Data

Primary data (which must be test reports) can only apply to the product system that forms the basis for the assessment. This normally comes from formal test reports carried out on the product or product system that is the subject of the proposed modification to the tested arrangement.

Primary data must satisfy the following requirements:

- Primary data must be a full test to the standard against which the assessment is being based; or may be to an alternative test standard, where the alternative is deemed to be equal or more onerous than that under evaluation (e.g. in certain situations, it may be possible for test data to EN 1634-1: 2014+A1: 2018 to be used for an assessment against BS 476: Part 22: 1987).
- Primary data greater than five years old must be subject to the review of test reports procedure given in Annex D

and

- Primary data must come from a laboratory accredited to ISO/IEC 17025 and under International Laboratory Accreditation Cooperation (ILAC) membership for the appropriate test and must be provided as official test reports. The following rule applies if the test report is in a foreign language:
 - , the report has been translated into English and has been legally notarised by the original laboratory or a certified translation office as being a true translation.

Secondary Data

Secondary data should not provide primary judgement for the assessment.

Secondary data must be determined by the assessor as to whether it is relevant and supports the extension of scope within the proposed assessment.

Examples of suitable secondary data are given below:

- Secondary data may be other primary data on constructions that are fundamentally the same as the construction within the proposed assessment to support specific components or design changes.
- Secondary data may be data published in codes and standards.
- Secondary data may be test evidence obtained by indicative/ad-hoc testing to the principles and general conditions of the relevant test standard, however, the laboratory shall be accredited for the appropriate full test standard.
- Secondary data may be data obtained by witnessed testing at a laboratory which is not accredited. The witnesser must inspect/audit the laboratory's facilities/calibration records prior to witnessing the test.

- Secondary data may be greater than 5 years old but must be subject to the review of test reports procedure given in Annex D.
- Secondary data may come from a laboratory accredited to ISO/IEC 17025 and under International Laboratory Accreditation Cooperation (ILAC) membership for the appropriate test and must be provided as official test reports. The following rules apply if the test report is in a foreign language:
 - The report has been translated into English and has been legally notarised by the original laboratory or a certified translation office as being a true translation.

or

 - A non-validated translation into English may be submitted provided it is submitted together with the original full test report in the foreign language.

Assessment shall not solely be based on other assessments, but an assessment could be referred to as the main body of test evidence for a particular material, product or system within an assessment (as could a certification document). It would be expected that sufficient relevant test evidence will always support the assessment for a product or system.

Primary test evidence must always be considered and cited within the assessment report. However, reference may be made to publicly available standard information (e.g. that contained in Codes of Practice).

Test information which is relevant to the assessment should be reviewed against current test procedures to ensure that the results are still valid.

8.5 Assessment Report

This report shall be produced in accordance with the principles in EN 15725: 2010 as required by Approved Document B Amendment 2019 edition Appendix B and equivalents in Scotland, Wales and Northern Ireland.

A statement shall be included in the Assessment Report to confirm that the assessment has been carried out in full compliance with this PFPF Guide.

All variations of how the product is identified, marketed and supplied within the supply chain must be included in the report. This may include: brand name, range name, product name or number and/or product code. The objective of this is to provide a clear link between the description of the product that was assessed or evaluated, and the description and name of the product that is supplied within the market.

The assessment report must contain a list of all the primary and secondary data, in accordance to Annex A of EN 15725: 2010 including test report numbers, dates of reports, and references to the organisation that undertook the test, that have been referred to in arriving at the technical judgment (see Section 8.4).

The assessment report shall contain details of the applicant and the request for making the assessment.

All the information used in formulating the assessment shall be stored on the relevant project file by the assessing body in accordance with the assessing organisations quality management and corporate policies. This would include relevant correspondence from the applicant, drawings and specifications which may have been provided, test reports referenced and any calculation methods which may have been adopted.

The considerations of the assessor should be adequately documented such that the end user, who may not be an expert in such matters, can understand the basis and technical justification of the opinion formulated.

The analysis formulated as a result of the considerations, i.e. the justification offered, must be detailed clearly and unambiguously in the same terms as required by the appropriate Authority Having Jurisdiction (AHJ), stating the test standard against which the assessment has been carried out.

The version of the test standard to which the assessment has been given shall be referenced in the Assessment Report.

The Assessment Report shall bear the following statement:

"This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to the assessing authority the assessment will be unconditionally withdrawn and the applicant will be notified in writing. Similarly, the assessment should be re-evaluated, if the assessed construction is subsequently tested since actual test data is deemed to take precedence."

For assessments that are not produced for a particular project the following should be added:

"The assessment is valid initially for a period of five years after which time it is recommended that it be submitted to the assessing authority for re-evaluation".

The Assessment Report shall include the declaration duly signed by the applicant.

The signature page of the assessment shall bear the following statement:

"This assessment report is not valid unless it incorporates by the declaration duly signed by the applicant".

The form of the declaration is given in Annex B.

The assessor and co-author, where applicable, and the reviewer shall sign the Assessment Report.

8.6 Review of Assessment Reports

If requested by the applicant, the assessor may review the assessment with a view to extending its validity for another period of five years. The purpose of the review is to ensure that current opinion, the basis of the assessment, the reference data, etc., are consistent with current methodology. Any review of an assessment shall be conducted in accordance with this procedure.

It is the responsibility of the applicant to inform the assessor if they should become aware of new test information that has an influence on the judgment of the assessment.

ANNEX A

EXAMPLE OF REGISTER OF ASSESSORS AND REVIEWERS

Each organisation shall keep a register of the competency of the ability of their staff to undertake assessment on different constructions in the following format:

Example of competency matrix showing highest level of assessment that an individual can undertake. This list is not exhaustive and should be adapted to be relevant to the individual and assessing organisation.

Assessor / Reviewer Name	(Name of Individual)	Highest Level of Assessment that the Named Individual can Undertake in Relation to Their Individual Competency
NON- LOADBEARING VERTICAL ELEMENTS	MASONRY WALLS	COMPLEX
	SHEET/STUD PARTITIONS	COMPLEX
	MONOBLOC PARTITIONS	COMPLEX
	GLAZING	COMPLEX
	CAVITY BARRIERS	COMPLEX
NON- LOADBEARING HORIZONTAL ELEMENTS	SUSPENDED CEILINGS	COMPLEX
	HORIZONTAL PARTITIONS	COMPLEX
	FIRE PROTECTION TO BEAMS/COLLUMNS/MEMBRANE PROTECTION	COMPLEX
LOAD-BEARING VERTICAL ELEMENTS	MASONRY WALLS	COMPLEX
	STEEL FRAMED WALLS	COMPLEX
LOAD-BEARING HORIZONTAL ELEMENTS	FLOOR	BASIC
	ROOFS	NONE
	BEAMS / COLUMNS	NONE
	STEEL	NONE
	TIMBER	NONE
	CONCRETE	NONE
	COMPOSITE	NONE
	BEAMS/COLLUMNS/MEMBRANE PROTECTION	COMPLEX
SERVICE INSTALLATIONS	DUCTS	NONE
	DAMPERS	NONE
	PENETRATION	BASIC
	LINEAR GAP SEALS	BASIC
DOORS – SMOKE AND FIRE RESISTING	TIMBER	COMPLEX
	STEEL	COMPLEX
	SLIDING / FOLDING	BASIC
	ROLLING SHUTTER	BASIC
	COMPOSITE	NONE
OTHER	SAFES / CABINETS	NONE
	MARINE / OFFSHORE	COMPLEX
	OTHER TRANSPORT	BASIC
	ELECTRICAL	INTERMEDIATE

ANNEX B
DECLARATION BY THE APPLICANT

Reference No _____

We the undersigned confirm that we have read and complied with the obligations placed on us by the

Passive Fire Protection Forum (PFPF)

**Guide to undertaking technical assessments and
engineering evaluations based on fire test evidence**

2021

Industry Standard Procedure

We confirm that any changes which are the subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.

We agree to withdraw this assessment from circulation should the component or element of structure, or any of its component parts be the subject of a failed fire resistance test to the standard against which this assessment is being made.

We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.

We are not aware of any information that could affect the conclusions of this assessment. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

(In accordance with the principles of FTSG Resolution 82)

Signature: _____

Name: _____

Position: _____

Company: _____

Date: _____

ANNEX C

RULES OF CONDUCT AND ETHICAL PRINCIPLES FOR USERS OF THIS GUIDE

The Engineering Council and the Royal Academy of Engineering have jointly created a Statement of Ethical Principles for all engineering professionals. These principles are adopted by members of the PFPF and subscribing organisations of this PFPF Guide.

Engineering professionals work to enhance the wellbeing of society. In doing so they are required to maintain and promote high ethical standards and challenge unethical behaviour. There are four fundamental principles for ethical behaviour and decision-making. These are set out below, together with examples of how each should be applied.

Engineering professionals should read this Statement in conjunction with their relevant Code of Conduct or Licence to Practise. The Statement by itself is not prescriptive: it is neither a Regulation nor a Standard.

Honesty and Integrity

Engineering professionals have a duty to uphold the highest standards of professional conduct including openness, fairness, honesty and integrity. They should:

- Act in a reliable and trustworthy manner
- Be alert to the ways in which their work and behaviour might affect others and respect the privacy, rights and reputations of other parties and individuals
- Respect confidentiality
- Declare conflicts of interest
- Avoid deception and take steps to prevent or report corrupt practices or professional misconduct
- Reject bribery and improper influence

Respect for Life, Law, the Environment and Public Good

Engineering professionals have a duty to obey all applicable laws and regulations and give due weight to facts, published standards and guidance and the wider public interest. They should:

- Hold paramount the health and safety of others and draw attention to hazards
- Ensure their work is lawful and justified
- Recognise the importance of physical and cyber security and data protection
- Respect and protect personal information and intellectual property
- Protect, and where possible improve, the quality of built and natural environments
- Maximise the public good and minimise both actual and potential adverse effects for their own and succeeding generations
- Take due account of the limited availability of natural resources
- Uphold the reputation and standing of the profession

Accuracy and Rigour

Engineering professionals have a duty to acquire and use wisely the understanding, knowledge and skills needed to perform their role. They should:

- Always act with care
- Perform services only in areas in which they are currently competent or under competent supervision
- Keep their knowledge and skills up to date
- Assist the development of engineering knowledge and skills in others
- Present and review theory, evidence and interpretation honestly, accurately, objectively and without bias, while respecting reasoned alternative views
- Identify, evaluate, quantify, mitigate and manage risks
- Not knowingly mislead or allow others to be misled

Leadership and Communication

- Engineering professionals have a duty to abide by and promote high standards of leadership and communication. They should:
- Be aware of the issues that engineering and technology raise for society, and listen to the aspirations and concerns of others
- Promote equality, diversity and inclusion
- Promote public awareness and understanding of the impact and benefits of engineering achievements
- Be objective and truthful in any statement made in their professional capacity
- Challenge statements or policies that cause them professional concern

ANNEX D

PROCEDURE OF THE REVIEW OF TEST REPORTS GREATER THAN FIVE YEARS OLD

1. Introduction

This procedure is automatically invoked when test evidence that is greater than five years old is submitted as test data in the consideration of an assessment. There is no need for an applicant to apply, it is a mandatory task that the assessor undertaking the assessment must carry out in order to be able to use the data supplied for assessment purposes.

2. Procedure

2.1 Selection of Reviewing Personnel

The assessor and reviewer for the review of the test data should be the same assessor and reviewer undertaking the assessment. If this is not possible, then the assessor and reviewer shall satisfy the following requirements:

- Both the assessor and the reviewer should have an intimate knowledge of the current relevant testing procedures and their interpretations, together with a thorough understanding of the type of construction which is the subject of the report.
- Selection of the assessor/reviewer shall be made by a named individual in each organisation. Provision shall be made for a deputy during periods of absence.

2.2 Impartiality

Both the assessor and the reviewer shall act with complete impartiality in their judgement and observe the rules governing impartiality detailed in Section 8.3 of this guide.

2.3 Ownership of Test Evidence

The assessor shall satisfy themselves that where information is provided which is not the original property of the applicant of the assessment, that the applicant has right of access to that information. In this case the assessor shall be given written authority from the applicant to approach directly both the owner of the information and/or the test laboratory that conducted the test.

2.4 Originality of Test Evidence

Many old test reports submitted for consideration in assessment may be copies and/or incomplete. In reviewing the evidence submitted, the assessor must satisfy themselves that the evidence is original, is complete and has not been altered in any way. To ensure this, they shall be given written authority from the applicant to approach directly both the owner of the information and/or the test laboratory that conducted the test.

2.5 Characterisation of Material, Product or System

Many old test reports contain descriptions of the tested product that may vary from that being considered under the assessment. Alternatively, it may be difficult to be fully confident that the material/construction tested originally is the same as that being subject to assessment. There may be a number of reasons for this, but excluding variation in material/product being the subject of the assessment, the following are causes of this:

- The material/product may be described differently in the test report.
- The material/product may be described inadequately in the test report.

The reviewer must be confident that the evidence submitted is relevant to the product/material that is the subject of the assessment.

ANNEX E

ASSESSMENT CHECKLIST

The following checklist has been developed to assist stakeholders in the process of scrutinising an assessment. It is based on Annex A of EN 15725.

This checklist is not exhaustive and is designed in order for stakeholders to make their own decision as to whether they are prepared to accept an assessment as robust. In addition, stakeholders should satisfy themselves that the documentation presented by the supplier relates to the product supplied, is fit for purpose the intended scenario and that the assessment has been carried out by a competent individual / organisation and is consequently safe to use.

Note: Whilst every effort has been made to ensure the accuracy of advice given, the PFPF cannot accept liability for loss or damage arising from the use of the information supplied in this publication.

- The report shall be produced in accordance with the PFPF Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence 2021.
- The report shall be produced in respect to limitations described in The Building Regulations 2010, Approved Document B: Fire safety Volume 1 and 2 2019 edition incorporating 2020 amendments (England) and equivalents in Scotland, Wales and Northern Ireland.
- The report shall clearly identify the product name / code / brand name in order for product, service or system identification within the market.
- The report shall include detail to confirm that it is in date and has valid status.
- The report shall include dimensional limitations, installation limitation, system component limitation.
- The report shall contain sufficient detailed information regarding the specification and any traceability marking of components that are used within the system.
- The organisation and individuals who has undertaken / reviewed shall be stated within the report.
- The report shall contain the assessing organisations details/ logo/ address as well as the report number.
- The report shall be signed and dated by both the assessor and the reviewer.
- The report shall be complete and unabridged (i.e. all pages of the report submitted for scrutiny).
- The product must be assessed to the relevant test standards and indicated within the report.
- Installation detail including compatible methods and compatible materials including edge and boundary conditions should be included within the report.
- Technical specifications of the product / system shall be clearly identified within the report.
- The report shall clearly state (in accordance to Annex A of EN 15725: 2010 and including test report numbers, dates of reports, and references to the organisation that undertook the test), the test method and test report numbers that the judgement has been based upon.
- The report shall clearly state any deviations from the test method.

ANNEX F

AMENDMENT TABLE

The technical review of this guide carried out in 2021 was undertaken by the PFPF drafting subcommittee.

Section	Amendment	Date
Cover, footer and various other places throughout the document	Reference to 2021 version	2021 review
Second page Further Information 2. Scope	Exclusion of assessments carried out on external envelope façade or cladding systems removed in order that this guide reflects the MHCLG Consolidated Guidance <i>Advice for Building Owners of Multi-story, Multi-occupied Residential Buildings (January 2020)</i> which makes specific reference to this guide for the assessment of a system or any product within the system in Section 3.20 on page 12	2021 review
Contact Details	Contact details changed as PFPF is under the umbrella of the Fire Sector Federation	2021 review
Relationship with Statutory Provisions Further Information 2. Scope 3.1 Assessment 3.2 Report 8.5 Assessment Report Annex E	Reference to Approved Document B 2019 edition incorporating 2020 amendments and updated reference to <i>Performance of material, products and structures</i> section and equivalents in Scotland, Wales and Northern Ireland	2021 review
Assessments and Third Relationship to Product Approval and Third-Party Certification (TPC)	Addition of design to application in the role of assessment, clarification of role of independent assurance, and note added to emphasise higher level of scrutiny and independent review in Third Party Certification	2021 review
Further Information	Inclusion of note regarding key principles of assessment, based upon primary test evidence, to provide for modifications and variations based upon current knowledge and know-how by applying relevant and applicable test evidence and experience.	2021 review
1. Introduction	PFPF under the umbrella of the Fire Sector Federation	2021 review
2. Scope 3.1 Assessments 6. Requirements of Assessors and Reviewers 7. Levels of Complexity of Assessment	Lowest level of assessments changed to basic	2021 review
3.1 Assessment	Definition of an assessment from BS 476: Part 10 included	2021 review

Section	Amendment	Date
3.7 Relevant Testing and Assessment Experience	Example included	2021 review
3.8 Subscribing Organisations	Definition refined	2021 review
4.3 Maintenance of Assessor and Reviewer Matrices	Clarification of what should be available for assessors and reviewers	2021 review
4.4 Responsibility for Choosing Assessors & Reviewers 5.4 Conduct 8.3 Impartiality	Reference to Annex C Rules of Conduct and Ethical Principles for Users of This Guide	2021 review
5.2 Qualifications	Definition refined	2021 review
5.3 Continued Professional Development (CPD)	Definition refined	2021 review
6. Requirements of Assessors and Reviewers	Requirement to know modes of failure and consequences included Notes added for Trainee Assessors and Assessors to reflect co-authoring of more reports with supervisors	2021 review
8.4 Supporting Information	Inclusion of certified translation office as an option for translated test reports and clarification of wording regarding foreign test reports	2021 review
8.5 Assessment Report	Clarification of wording in statement to be included in Assessment Report Inclusion of reference to co-authors signing the Assessment Report	2021 review
Annex B	Clarification of wording in Declaration by Application	2021 review
Annex F	Update of Amendment Table	2021 review