

Instructions for ProBoard (NBFSPQ) certificants applying to the Institution of Fire Engineers:

Complete the special Pro Board application, following the instructions printed on the last page of the application booklet.

Include copies of documentation for other education, training, professional development courses taken. This may enhance the application for consideration to a higher grade of IFE membership.

The narrative Initial Professional Development (IPD) paper need not be longer than 1½-2 pages. Describe a particular job/task you do and follow the corresponding objectives listed in the Guide; you probably will not meet all of the objectives. Select the ones most appropriate. Follow the format as shown in the Guide.

Send the application package to the address on the front of the application form.

The US Branch membership committee will review the application package, provide all necessary referee signatures and forward it to the IFE Assessment Panel at IFE HQ for final review and approval. Infrequently the Panel will request additional material; you will be contacted if this happens.

Once the application package is mailed, the whole process may take 6 weeks. You will be notified as soon as word is received from IFE HQ regarding the outcome.

INITIAL PROFESSIONAL DEVELOPMENT REPORT Objectives for Technician and Graduate Grades

You are NOT expected to be fully competent in ALL of these objectives. You must, however, have broad based experience and responsibility in one or more aspects of fire engineering as well as some knowledge of related aspects. More information on this, and guidance on how to use these IPD Objectives in submitting your application is given in the attachment—Your Professional Review Report.

OBJECTIVE		RANGE		EVIDENCE EXAMPLES
A	Use engineering knowledge and understanding to apply technology.	A1	Review and select techniques, procedures and methods to undertake tasks.	<p>Demonstrate an ability to identify limits of personal knowledge, understanding and skills and a striving to maintain currency in Fire Engineering techniques, procedures and methods using appropriate resources.</p> <p>Demonstrate a systematic extension of limits of personal knowledge, understanding and skills to reflect best practice in relevant fields of work.</p> <p>Demonstrate through use of evidence from own experience and best practice the ability to review current Fire Engineering techniques, procedures and methods to select those most appropriate to undertake tasks.</p>
		A2	Use appropriate scientific and fire engineering principles.	<p>Be able to demonstrate an ability to analyse the requirements of tasks, based on Fire Engineering principles and know-how.</p> <p>Demonstrate an ability to plan, monitor and evaluate tasks against expectations of best practice, and based on appropriate Fire Engineering principles and scientific understanding.</p> <p>Be able to demonstrate an ability to apply scientific and Fire Engineering principles to the provision of engineering advice and professional opinion.</p>

B	Contribute to the design, development, manufacture, construction, commissioning, operation and maintenance of products, equipment, processes, systems and services.	B1	Re Identify problems and apply diagnostic methods to achieve satisfactory solution in a fire engineering environment.	Demonstrate an ability to monitor performance and outcomes of Fire Engineering products, procedures, processes and systems to identify deviations from expectations and standards. Determine causes of deviations, using appropriate diagnostic tools and methods. Demonstrate an ability to evaluate the potential consequences of a problem and make judgements about rectification requirements, priorities and reporting. Demonstrate an ability to rectify problems and test solutions against appropriate criteria.
		B2	Identify, organise and use resources effectively to complete tasks, with due regard to cost, quality, safety and environmental impact.	Demonstrate an ability to identify how to undertake a task and to identify the resources required to satisfy specified and agreed criteria. Demonstrate an ability to schedule and marshal the resources required and an ability to apply the resources effectively and correctly to complete the task. Demonstrate an ability to evaluate the outcome against the agreed criteria, including quality, time and cost and against specified safety and environmental criteria.
C	Accept and exercise personal responsibility.	C1	Work reliably and effectively without close supervision, to the appropriate codes of practice.	Demonstrate an ability to contribute to planning by identifying effective methods to undertake relevant tasks. Demonstrate an ability to comply with relevant regulatory and professional codes of practice in the implementation of tasks. Demonstrate an ability to apply best practice to complete designated tasks.
		C2	Accept responsibility for work of self and others.	Demonstrate an ability to identify and agree criteria for the completion of designated tasks. Define responsibility of self and others to achieve criteria for designated tasks. Demonstrate an ability to evaluate the outcome of designated tasks.
		C3	Accept, allocate and supervise technological and other tasks.	Demonstrate an ability to accept responsibility for the completion of designated tasks to time, resources and cost. Demonstrate an ability to accept responsibility for the quality of the outcome of work in which self and team are involved.

D	Use effective communication and interpersonal skills	D1	Use oral, written and electronic methods for the communication of technical and other information.	Demonstrate an ability to clarify objectives, identify main purpose and select appropriate medium for communication. Be able to select appropriate methods of communication using words and images, audio and visual as appropriate. Be able to communicate competently in written and oral expression.
		D2	Function as an effective team member.	Establish and maintain effective relationships with colleagues, clients and others. Be able to identify and work towards collective goals. Develop effective team working relationships to enhance performance. Be able to give clear and accurate instructions, as appropriate.
E	Make a personal commitment to live by the appropriate code of professional conduct, recognising obligations to society, the profession and the environment	E1	Comply with the Codes and Rules of Conduct	Demonstrate an ability to place responsibility for the welfare, health and safety of the community at all times before the responsibility to the profession, to sectional interests, or to other engineers. Comply with Codes of Conduct of the profession and apply professional skill in the interests of employer and client for whom you act in professional matters. Give evidence, express opinions or make statements in an objective and truthful manner and on the basis of adequate knowledge.
		E2	Manage and apply safe systems of work	Take account of potential professional risks and liabilities and accept responsibility for them. Consider and implement as necessary appropriate occupational health & safety requirements. Investigate community safety requirements, act to resolve any incipient safety issues, take appropriate precautions in relation to hazardous operations and take account of disaster prevention, mitigation and recovery methods.

		E3	Undertake your engineering work in compliance with the Code of Practice on Risk and the Environment	<p>Promote the actions required in engineering practice to improve, sustain and restore the environment.</p> <p>Be aware of the wise use of non-renewable resources through waste minimisation, recycling and the development of alternatives where possible.</p> <p>Strive to achieve the beneficial objectives of Fire Engineering tasks with the lowest possible consumption of raw materials and energy and the adoption of sustainable management practices.</p> <p>Take account of total life-cycle implications with respect to how Fire Engineering products and projects will impact on the environment.</p>
		E4	Carry out the continuing professional development necessary to ensure competence in your areas of future intended practice	<p>Undertake continued professional development (CPD) to maintain and enhance technical competence.</p> <p>Demonstrate an ability to set your own goals to achieve personal and organisational objectives.</p> <p>Maintain a career action plan and records of professional development activities.</p>

Your Professional Review Report

Format and Submission

To assist in the assessment process we seek a basic standard format for presentation, namely:

- c. The report must be typed, or printed, one side only.
- c. The report should be written in the first person singular. Failure to do this may result in you not being given credit for something which is rightfully yours. In cases of doubt, the Review Panel will assume that there was a third party involvement.
- c. The report must be your own work and must be in English. It should be of sufficient length to demonstrate that you meet the relevant criteria.
- c. Any drawings or other supporting papers submitted must be folded to ensure that they do not exceed the dimensions of the report. Original drawings should not be sent as the report will become the property of the Institution when received and may be destroyed after assessment.
- c. The report will be treated as confidential by the Professional Review Panel and any other persons authorised to see it. However, it is the responsibility of the applicant to secure any necessary clearance from employers or others to whom information contained in the report may be considered confidential.

General Guidance on content

Compile your report, making reference to the relevant evidence examples given in the IPD Objectives. Begin with a short **introduction** to give a general picture, in a few sentences, of the type of work and professional development you have had to date.

An example is given, on the following pages, of how you may wish to format your report. However you present it, it must be clear which competence you are claiming.

Section 4 of this Fact Sheet makes suggestions about the use of a single piece of evidence to satisfy a number of objectives. You should appreciate, however, that there is a danger of putting too much reliance on one project. Professional recognition is not narrow and job-specific; it requires a breadth of experience and an ability to transfer capability from one area of work to another. You thus also need to be able to show a reasonable range of work.

No matter how much original material is available, it will only be valuable if it is indexed, cross-referenced and organised against the A1 to E4 criteria. To avoid burdening the submitted document with a mass of supporting evidence, you should think initially in terms of an overview of your experience, showing how the available evidence demonstrates how you meet the relevant criteria.

You must ensure that you have demonstrated an awareness of all of the IPD Objectives. Whilst the full range of activities must be covered, the extent to which each one of the elements has to be demonstrated by each candidate will vary with their job role. All of the elements must be present to some extent; however, the balance between them is a key judgement to be made by the Professional Review Panel.

Suggested Report Format.

The **Introduction** to your Report should give a general picture in a few sentences, of the type of work and training you have done in your career to date. It should also **list**, in tabular form, the different **projects** or **career episodes** you mention in the body of your Report. This will help the reader when you refer back to the name of a project you have already used elsewhere. For example:

Jan - June 99	Porsche Lane Apartments, W1	Luxury apartments - timber frame construction issues relating to fire safety.
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Oct - Dec 99	Green Storage PLC, Anytown	Very large warehouse - compartmentation, personnel safety and firefighting issues etc
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The example on the following pages deals with the first project and covers a variety of Evidence Examples across various IPD Objectives but does not cover everything. The second, and any subsequent projects will thus need to cover the remaining Ranges of the principal objectives.

In this example, notice how the candidate separates the project in his layout, to help the reader summarises the key features of the project before describing the details clearly states his own role and responsibilities in the project DOES NOT describe every detail of what he did day by day BUT DOES describe in detail the incidents which relate directly to the Evidence Examples he is claiming: (in this case, activities in which he has identified and solved problems) repeatedly uses the first person - I, me, my - to show the reader what his personal contribution was in every case

Sample of a Professional Review Report

Career Episode	IPD evidence example
<p>Porsche Lane Apartments, W1</p> <p>This project related to a six storey block of 24 luxury apartments with a Platform Timber Frame structure and an architectural masonry rain screen cladding. The building was planned with a single stair core serving each floor of the building via a protected lobby and the stair was specified with a softwood main structure and oak balustrading. The local authority rejected the plans on the grounds that the stair design did not comply, on fire safety grounds, with current requirements. At this point the Architect contacted us for professional fire engineering advice.</p> <p>My first task was to establish the nature of the local authority's concern and my first port of call, not surprisingly, was the published guidance that the local authority would be referencing. By virtue of the building size and geometry, statutory guidance published in Part B1 of the Approved Document B in support of the England & Wales Building Regulations recommends that the building be provided with a stair constructed of Materials of Limited Combustibility. This means that the materials used would have to satisfy the appropriate criteria of the British Standard BS476: Part 11 fire test. A stair constructed from timber cannot satisfy this requirement since timber materials, no matter how they are treated, will not satisfy the test criteria.</p> <p>This presented the Design Team with a dilemma. One of the major advantages of timber frame construction is the speed at which the building can be erected and mixing trades in terms of providing a concrete or steel stair would introduce delays into the programme that could potentially effect the viability of the scheme, notwithstanding potential difficulties introduced by differential expansion of the different materials over the height of the medium rise building.</p> <p>At a Design team meeting, I agreed a scope of work with the client (Developer) that involved confirming the concerns of the local authority; then working with the architect to develop, where practicable, a technical specification for a timber stair that would satisfy the client and the local authority.</p> <p>I informally confirmed with the local authority that their concern related to the recommended performance criteria of Limited Combustibility for the stair. I also established with them the principle that, due to the functional nature of the Building Regulations, an appropriately justified alternative approach to published recommendations could be followed.</p> <p>Since the Limited Combustibility guidance of the Approved Document B relates to Reaction To Fire performance, this implies a design fire scenario within the stair itself. The logic of this is inescapable in that fires do occur in stair shafts, generally in association with accumulated temporary storage of materials/goods and that are often ignited maliciously. It is therefore extremely important that the stair itself does not contribute significantly to fire growth nor exhibits loss of load bearing capacity under fire exposure. In terms of</p>	<p>B.3</p> <p>A.2</p> <p>B.3</p> <p>C.1</p> <p>D.2</p> <p>B.1</p>

<p>accommodation involving a sleeping risk. I determined that this loadbearing capacity would be important to enable fire fighters' access to the building, initially to fight the fire and remove persons immediately at risk whilst being available to evacuate other occupants post-fire should this be deemed necessary.</p> <p>A keyword search on the Internet yielded details of a government sponsored research project carried out on a medium rise timber frame building[1]. As part of this research a series of tests were carried out by project engineers and that involved fires in a timber frame stair shaft incorporating a timber stair. The research tests, involving a fire scenario based on a simultaneous accelerant, timber crib and double mattress fire scenario were successful (i.e. loadbearing capacity of the stair was maintained) based on a wholly softwood timber stair treated with an impregnated fire retardant treatment to give a notional Class 1 Reaction To Fire Performance (BS476: Part 7).</p>	A.1
<p>Career Episode</p>	<p>IPD evidence example</p>
<p>Despite having discovered the potential solution, I was faced with the problem of applying the specific results of the research to the situation in hand that involved the use of an alternative timber specification (oak) for the balustrading. A discussion with the stair manufacturers revealed that the timber balustrading has to be of a hardwood specification in order to comply with the structural safety recommendations of Approved Document K. I gathered additional information through contact with the research engineers that indicated that their choice of using Whitewood throughout their test was by virtue of Whitewood representing an onerous timber specification in terms of its low permeability to the treatment process. Hence any more permeable timber would take up a greater quantity of the fire retardant thus maximising the field of application of the research test result. Consultation with industry timber experts confirmed that oak has a slightly better permeability than whitewood and I sourced benchmark test data from the manufacturers of the treatment process that established treated oak as giving at least as good a test result in terms of BS476: Part 7 as treated Whitewood.</p> <p>I put together a report detailing a design fire scenario, the functional fire safety objectives, an analysis drawing on the available research and standard test data and an executive summary. This was submitted to the Local Authority by the Design Team and was accepted by them as an appropriate solution allowing the client to proceed with a slightly modified timber and keeping the project on track.</p>	<p>A.1 B.1 B.2 D.4 D.1</p> <p>E.1</p>
<p>Green Storage PLC, Anytown This project</p>	