



Member IPD Report Guidance

You are **not** expected to be fully competent in **all** of the Member IPD objectives below, but you must have broad based experience and responsibility in one or more aspects of fire engineering as well as some knowledge of related aspects.

Evidence Examples

OBJECTIVE	RANGE	EVIDENCE EXAMPLES
A Use a combination of general and specialist fire engineering knowledge and understanding to apply existing and emerging technology.	A1 Maintain and extend a sound theoretical approach to the application of technology in fire engineering practices.	Identify and accept limits of personal knowledge, understanding and skills and a striving to maintain currency in the Fire Engineering field by accessing and exploiting relevant sources. Be conversant with key information resources such as the Internet, the media, professional journals, attending professional seminars and networking with peers. Deepening of personal knowledge base in the Fire Engineering field through research and experimentation.
	A2 Use a sound evidence-based approach to problem-solving and contribute to continuous improvement.	Analyse the requirements of clients, based on Fire Engineering principles and scientific understanding, for the provision of products, systems and services. Plan, monitor and evaluate the operation of projects, against best practice indicators as well as using appropriate Fire Engineering principles and scientific understanding. Apply scientific and Fire Engineering principles to the provision of engineering advice and professional opinion. Review current methods and operations, to arrive at a valid diagnosis of faults and explanation of problems. Use market intelligence and knowledge of technological developments to improve the effectiveness of Fire Engineering products, services and systems. Use evidence from best practice to improve the effectiveness, reliability, maintainability and economy of Fire Engineering products, systems and services. Evaluate and develop quality management systems.



B	Apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate and maintain fire engineering products, processes, systems and services.	B1 Identify, review and select techniques, procedures and methods to undertake fire engineering tasks.	Use personal experience, an understanding of the employer's commercial position and available Fire Engineering resources to develop a review methodology. Review the potential for enhancement of Fire Engineering products, processes, systems and services and establish an action plan to implement the results of any such review.
		B2 Contribute to design and development of fire engineering solutions.	Contribute to the determination of design and development requirements for Fire Engineering products, processes, systems and services. Contribute to the specification of implementation methods and procedures to achieve design requirements and demonstrate an ability to obtain the resources required for implementation.
		B3 Implement design solutions and contribute to their evaluation.	Secure the resources required for implementation Implement design solutions, taking account of cost, quality, safety, reliability, appearance, fitness for purpose and environmental impact Identify problems during implementation and take corrective action Contribute to the evaluation of design solutions Contribute to recommendations for improvement and actively learn from feedback on results.



C	Provide technical and commercial management	C1 Plan for effective project implementation.	Identify and develop objectives for projects to meet clients' requirements. Plan for the delivery of tasks to complete a project. Identify and obtain the resources required to achieve project objectives Specify and co-ordinate the engineering resources and activities required to achieve project objectives Apply the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc.).
		C2 Manage the planning, budgeting and organisation of tasks, people and resources.	Set and implement work objectives and priorities, including time, resource budget and quality standards. Identify variations from quality standards, programme and budgets, and take corrective action. Monitor, evaluate and adjust tasks as appropriate to ensure that they are performed within financial, commercial and regulatory constraints.
		C3 Manage teams and develop staff to meet changing technical and managerial needs.	Agree objectives and work plans with teams and individuals Identify team and individual needs, and plan for their development Manage and support team and individual development Assess team and individual performance, and provide feedback.
		C4 Manage continuous quality improvement.	Ensure the application of quality management principles by team members and colleagues Manage operations to maintain quality standards Evaluate projects and make recommendations for improvement.



D	Demonstrate effective interpersonal skills	D1 Communicate in English with others at all levels	Develop good personal relationships that are appropriate to the level of communication being used and communicate effectively in a manner that the circumstances of the project dictate. Ensure effective 2-way communication in discussions and be prepared to liaise with colleagues, peers and experts within and beyond the employer's organisation. Respond effectively and efficiently to all received communication, howsoever it is received.
		D2 Present and discuss proposals	Select the most appropriate medium for clearly clarifying Fire Engineering Design objectives and select the most suitable method of communication using, words, images, audio and video as necessary. Communicate fluently in written and oral expression at an experienced professional standard and prepare and present lectures, reports and published papers at professional level. Feed back results to improve the proposals
		D3 Demonstrate personal and social skills	Establish fire engineering teams capable of working towards collective goals and create, maintain and enhance effective working relationships. Be aware of the needs and concerns of others Develop the team, the individuals within the team and yourself to enhance performance. Provide negotiation, conflict resolution and counselling within the team and provide a conduit through which ideas, convictions and attitudes can be exchanged and conveyed. Demonstrate confidence and flexibility in dealing with new and changing interpersonal situations
E	Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment	E1 Comply with relevant Codes of Conduct.	Comply with rules of professional conduct of the IFE Apply professional skill in the interests of the employer and client for whom you act in professional matters. Give evidence, express opinions or make statements in an objective manner and on the basis of adequate knowledge. Work constructively within all relevant legislation and regulatory frameworks, including social and employment legislation



	<p>E2 Manage and apply safe systems of work</p>	<p>Take account of potential professional risks and liabilities and accept responsibility for them. Consider and implement as necessary appropriate occupational health, safety and welfare requirements Develop and implement appropriate hazard identification and risk management systems Manage, evaluate and improve these systems</p>
	<p>E3 Undertake engineering activities in a way that contributes to sustainable development</p>	<p>Promote the considerations and actions required in engineering practice to improve, sustain and restore the environment. Be aware of the wise use of non-renewable resources through waste minimisation, recycling and the development of alternatives where possible. Strive to achieve the beneficial objectives of Fire Engineering design whilst striving to minimise the consumption of raw materials and energy, and by designing sustainable management procedures. Take account of life-cycle implications with respect to how Fire Engineering designs will impact on the environment. Understand and encourage stakeholder involvement</p>
	<p>E4 Carry out the continuing professional development necessary to maintain and enhance competence in your areas of practice</p>	<p>Undertake reviews of own development needs Undertake continued professional development (CPD) to maintain and enhance competence. Set your own objectives in relation to personal and organisational objectives and maintain a career plan. Maintain records of professional development activities. Assist others with their own CPD</p>



		<p>E5 Exercise responsibilities in an ethical manner</p>	<p>Give an example of where you have applied ethical principles as described in the Engineering Council Statement of Ethical Principles. Full details of this statement are provided in the EngC UK-SPEC document, however, examples of such ethical principles might include:</p> <p>Recognising where an issue falls outside of your area of competence and managing its resolution appropriately. Preventing avoidable danger to health and safety. Treating all persons fairly and with respect. Accepting appropriate responsibility for work carried out under your supervision. Observing the proper duties of confidentiality owed to appropriate parties. Raising a concern about a danger, risk, malpractice or wrongdoing which affects others (“blow the whistle”) or supporting a colleague or any other person to whom you have a duty of care who in good faith raises such a concern. Rejecting bribery and all forms of corrupt behaviour, and making positive efforts to ensure others do likewise. Give an example of where you have applied/upheld ethical principles as defined by your organisation or company, which may be in its company or brand values.</p>
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Planning Your IPD Report

The judgments made about an applicant during the Professional Review Process, are based on evidence submitted. In organising your IPD Report, you are advised to choose a small but significant number of projects or work activities that demonstrate how you have met the criteria.

The activities that you select should be:

- a) your own work, or larger pieces of work in which your personal contribution is clearly identified and substantiated.
- b) able to act as a 'spine' running through several of the A1 to E4 evidence examples.

An example of the use of such a 'spine' is in the B1 to B4 area, which deals with technical practice. Each of the criteria could be met through a totally different project but it would be simpler to organise and present your evidence if a consistent theme is used. This might then extend from the technical applications of the B area into some of the C, D and E activities.

The reviewers will be interested in what **you** have done, **your** role and responsibilities in particular projects and what **you** know about the technical aspects related to them. If you have completed Internal Training Reports as part of a company scheme, or just for your own guidance, you should use these to help you decide which projects or career episodes you can write about.

You will be expected to demonstrate competency with respect to **all objectives** but not necessarily all range statements or evidence examples.

Format and Submission of Your IPD Report

- a) Your report must be typed and printed on A4 paper, single sided only. It should be **no more than 10 pages long**. Please do not bind submissions or use ring binders.
- b) Your 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 third party involvement.
- c) Your 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.
- d) 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 they cannot be returned and, once your application has been fully processed, they will be destroyed in accordance with Data Protection principles.
- e) All material submitted will be treated as confidential by the Review Panel and any other persons authorised to see it for application processing purposes. However, it is the responsibility of the applicant to secure any necessary clearance from employers or others for whom information contained in the report may be considered confidential.



How to Structure Your IPD Report

Begin with a short **introduction**. Your **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.
Oct - Dec 99	Green Storage PLC, Anytown	Very large warehouse - compartmentation, personnel safety and fire fighting issues etc

Please do not put 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 need to show a reasonable range of work.

No matter how much material is available, it will only be valuable if it is indexed, cross-referenced and organised against the A1 to E5 criteria.

You must ensure that you have demonstrated an awareness of all of the IPD objectives. All of the elements must be present to some extent. However, the balance between them is a key judgment to be made by the Review Panel.

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 the example, notice how the candidate separates the project in his layout to help the reader summarise the key features of the project, before describing the details and clearly stating his own role and responsibilities in the project. The candidate **does not** describe every detail of what he / she did day by day, **but does** describe in detail the incidents which relate directly to the evidence examples he / she is claiming. In this case, these are activities in which he / she has identified and solved problems. The candidate repeatedly uses the **first person (I, me, my)** to show the reader what his / her **personal contribution** was in every case.

Please note that for a submission for Member grade the expected length of the report would be between 8-10 sides of A4 typed.

Example layout of an IPD 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</p>	



<p>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 accommodation involving a sleeping risk, I determined that this load bearing 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 that involved fires in a timber frame stair shaft incorporating a timber stair. The research tests, involving fire scenarios based on a simultaneous accelerant, timber crib and double mattress were successful (ie load bearing 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>	<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>A.1</p>
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Career Episode	IPD evidence example
<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>Onsite inspection of the works also formed part of my duties. Generally the work was undertaken by the contractor and the specialist sub-contractor in good order, but during one of my site inspections, I noted a sub-contractor position themselves between a joist and the rails of the basket. Movement of the lift could crush the worker. I immediately told the sub-contractor to cease work and to reposition the cherry picker as it was a risk to his safety.</p> <p>Whilst on site I was shown around the basement plant rooms including the large gas-fired boiler room. The building manager asked me to detail the fire safety and explosion prevention measures that would be required. I recognised that this matter is controlled under the Dangerous Substances and Explosive Atmosphere Regulations (DSEAR) and advised the client that this was outside my area of expertise and that I would refer this matter to a colleague who has the necessary qualification, training and experience.</p>	<p>A.1 B.1 B.2 D.4 D.1</p> <p>E.1</p> <p>E.5</p> <p>E.5</p>
<p>Green Storage PLC, Anytown</p> <p>This project</p>	