

# Technical Report Route



THE INSTITUTION OF FIRE ENGINEERS

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## 1.1 Introduction

The purpose of the Technical Report Route is to provide a route to membership of the Institution of Fire Engineers for the grades of Graduate (GIFireE) and Member (MIFireE).

This route is available for those persons who do not have academic qualifications required for membership of the IFE, but who are able to demonstrate that in later life, they have achieved a standard of professional competence comparable to their contemporaries who have achieved their grade of membership through the academic route.

The IFE recognises that fire engineers operate in a broad discipline and may come from diverse professional backgrounds. We seek to provide access to the IFE's grades of membership in as flexible a way as possible, consistent with maintaining standards of professional competence.

## 1.2 Who can apply?

Applicants for membership via the Technical Report Route should:

- Have followed a career path that demonstrates increasing levels of responsibility and experience in fire engineering over a period of at least 15 years for Member or 4 years for Graduate grade.
- Have attained a position clearly demonstrating a level of professional competence, which is comparable with contemporary fire engineers in the relevant grade of membership.

## 1.3 What does the application process involve?

The application process has three stages. Each stage must be completed separately, and in sequence. This prevents you from investing time and expense into an application that may be unsuccessful.

Stage one - completion of the relevant application form. The application must contain full details of your employment record and demonstrate the requisite number of years of increasing responsibility and experience in fire engineering. It must also include a comprehensive training record.

Applications for Member must also demonstrate Continuing Professional Development and must include a Professional Review (IPD) Report.

**Stage two** – Together with the application form you will be required to submit a 250 -500 word proposal for an appropriate technical paper. The IFE will review the application at this stage to ensure the requirements of the Technical Report Route can be met. The Membership Application Assessment Panel (MAAP) will also assess the appropriateness of your proposed technical paper.

**Stage three** – The IFE will notify you to begin preparing your technical paper. On completion, your paper will be assessed by the MAAP.

## 2.1 Application form

An application form is available, together with notes for completion, from the relevant pages of the IFE website. You must provide information on this form to demonstrate the necessary training, experience and increasing responsibility appropriate to the grade applied for.

A detailed employment record is required, describing the role you carried out in each post and the responsibilities you held, such as the number of staff you were responsible for, the level of the manager you reported to etc. Details of training courses attended or on the job training will also be required. The objectives of that training and the learning outcomes must be included. Details of your experience in fire engineering will be required to provide the basis for an evaluation of "increasing responsibility" and to inform the MAAP of the relevance and appropriateness of the proposed technical paper.

The application form should be completed with utmost care, since the IFE cannot 'assume' information that is not provided. An application that does not indicate that the requirements for the grade can be met will be rejected at this stage.

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## 2.2 Proposal for a Technical Paper

As part of the initial application, you will be required to propose a subject for a technical paper. The proposal must be between 250 and 500 words and set out the title and main divisions of the paper, as well as the methodology to be followed in its completion. The proposal should also outline how this subject is relevant to your involvement in fire engineering.

## 2.3 Review of Application

The IFE will review your application at this stage to ensure the essential requirements in respect of training, experience and responsibility can be met. The review will also consider the appropriateness of the proposal for the technical paper. It is important, therefore, that you do not start work on a paper before this stage is completed.

## 2.4 Standard of Technical Paper

The standard and content of the technical paper will need to be at a level appropriate to the grade of membership applied for.

You must recognise that it is being submitted to demonstrate you have acquired a level of knowledge and understanding equal to the academic level of attainment normally required of the grade you are seeking. This means the level should be:

- For Graduate, equal to Level 3 Diploma
- For Member, equal to Level 4 Certificate/HND/Foundation degree.

(NB these standards are based on UK requirements for academic levels. Candidates from outside the UK should seek further clarification in respect of equivalent academic levels in their home country).

The paper must demonstrate that you have theoretical and practical knowledge and understanding of your area of fire engineering and its underlying principles, in an ordered, critical commentary, defining the problems or development aims involved and demonstrating their resolution or achievement.

If you are using previously produced materials it is your responsibility to obtain any necessary clearance from employers or others, particularly where materials are confidential.

Your submission should be written in English, and where appropriate, the text can be illustrated by diagrams, sketches, tables or calculations. All material from a published source must be properly referenced and a comprehensive bibliography of all reference documents must be included.

One copy of your submission must be submitted and be accompanied by a signed declaration identifying exactly, which parts of the paper are your own work. You are strongly recommended to retain one further copy of the paper, as the IFE cannot be responsible for materials lost in transit, however we do now accept emailed submissions.

## 2.5 Completion of paper in time scale

Your full Technical Report paper must be completed within 6 months of receiving notification of approval of your synopsis. When the paper is submitted, the IFE will arrange for the MAAP to assess your work. The MAAP will be seeking to determine if you have reached the same standard of fire engineering knowledge and understanding as your contemporaries have by the academic route.

The MAAP will not be influenced by accounts of exceptional experience or responsibility. If the MAAP conclude that the work is not adequate, they will either agree to you carrying out more work to improve the submission, or reject the application at this stage. Re-submission will only be allowed once in respect of an application.

## 2.6 Recommendation

Following the assessment the MAAP will make a recommendation to the IFE on the award of a grade. The recommendation will be based on your application and the grade you have applied for.

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Neither the MAAP members nor the IFE will enter into any correspondence about the application once a decision is made.

### 3. Tips for writing and structuring your report

Bear in mind that you must define the technical issues or problems involved with your selected topic in engineering terms and show how these have been solved, including the use of mathematical methods, through the application of engineering principles and knowledge of fire engineering fundamentals.

Typically, your report will be based on:

- A description of a project you have been involved with, **or**
- an investigation or research project on some aspect of fire engineering you have undertaken, **or**
- a detailed explanation of the professional and practice processes you employ and how you deliberately use engineering knowledge and principles in your operational activities.

The completed report content will usually include written explanation, diagrams and calculations which together show your understanding of fundamental engineering principles. It often assists the applicant if these relate to their professional experiences: this is a matter of personal choice. You should attempt to keep your Technical Report as concise as possible and try to keep it within a maximum of about 2,000 words.

Remember that **the purpose of the report is to show that your acquired knowledge fully compensates for any lack of formal academic qualifications**. In the Technical Report you are not asked to demonstrate other aspects of your professional competence, for example your management skills and breadth of experience.

### Structure of the Technical Report

The Report might be organised as follows:

- **Title**
- **Introduction** – what the Report is about.
- **Aim** – what was the aim of the project, operation or investigation?
- **Background** - setting the scene. Where does the example lie in relation to the overall context?
- **Technical content and description** - your Report must not simply show that you applied the relevant codes and standards, but must illustrate your understanding and application of fundamental engineering principles. Include mathematical analysis where it is appropriate.
- **Conclusions** – in relation to the application of engineering principles, what were the successes and failures of the project or investigation?
- **Evaluation and reflection** – what lessons have been learned? What evaluation criteria have you used to assess the success or failure of the project / subject being investigated? Include your own critical comments, linking them to fundamental engineering principles. What commercial and other risks were inherent in the project, and how were they tackled?

Supporting documents may include:

**Appendices** – information to support and provide background for the main report.

**Diagrams and drawings** – preferably these should be positioned close to the text they refer to.

**Reference sources** – a clear listing of the information sources you have used when preparing the report such as books, journals, guides, websites and so on.

NB: Where you use software, modelling techniques, standards, codes of practice or other pre-determined methods of solution you must demonstrate your understanding of the basis for such methodology, for example by providing a first principles calculation, or reasoning, for that part of the work being completed.