



FIRE SAFETY AND FIRE PROTECTION ENGINEERING (RATIONAL)

The Fire Protection Engineer

The FPE is a critical piece of the Design-Build Team. The role of the FPE is to provide comprehensive input and guidance on all aspects of fire and life safety for the project. This includes, but is not limited to, building code analysis, water supply, smoke control, fire department access, escape, and an analysis of the active and passive fire protection systems.

Tips for using The Fire Engineer

Every time you produce your newsletter, ask yourself:

Q: Why use The Fire Engineer?

A: FPE looks at the total fire protection and life safety perspective of the project to add value and business continuity,

Q: What level of fire engineering do you need?

A: There is different levels of fire engineering, the simple code prescriptive design, the use of more robust international performance codes or the more complex scientific performance based fire engineering.

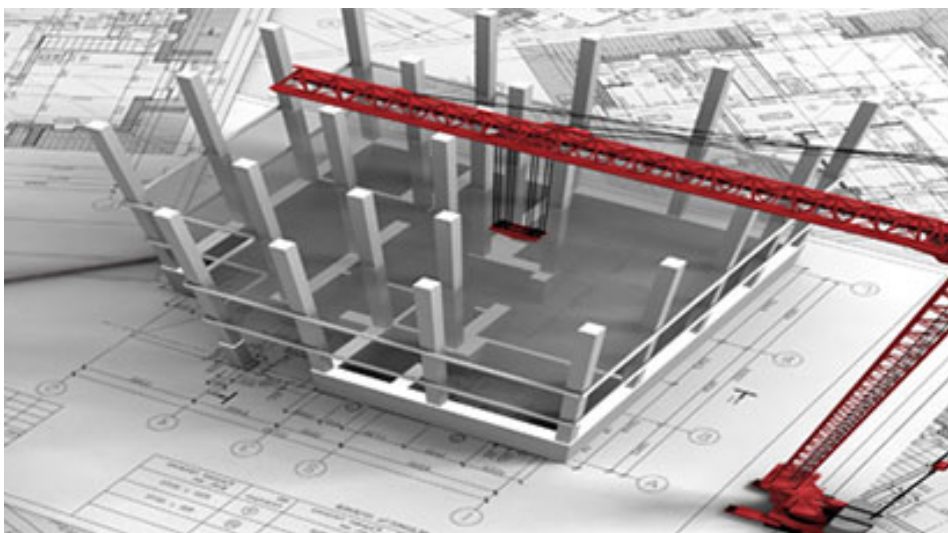
“PERFECTION IS ACHIEVED, NOT WHEN THERE IS NOTHING MORE TO ADD, BUT WHEN THERE IS NOTHING LEFT TO TAKE AWAY.”

Antoine Marie Roger de Saint-Exupery

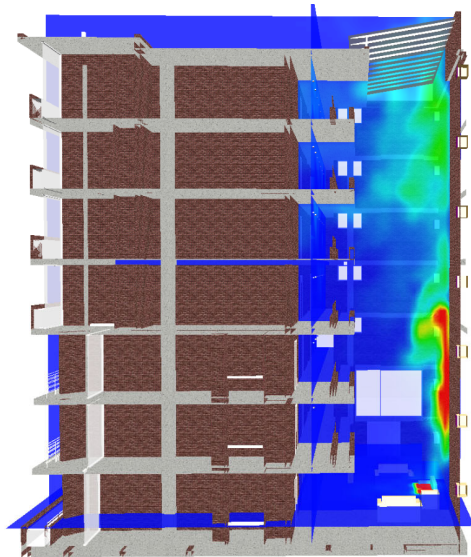
PROVIDING WORLD CLASS SKILLS

Our key services comprise of:

- Advising on architectural layouts
- Specification of fire safety systems
- Negotiation with Statutory Authorities
- Value engineering exercises
- Peer reviews
- Advising on the safe operation of buildings and maximising estate usage
- Maximising derived value from fire safety features installed
- Solving design, build or operational problems.



Building Model



Fire Dynamic Simulation

Developing Value To Our Clients

Our clients range from contractors on-site to signature architects forming competition entries to Property managers seeking regulatory compliance.

We work with our clients at all stages of a projects' lifecycle, from concept to operational, across a diverse range of sectors from government and commercial property estates to mass transit and infrastructure.

We aid our clients in satisfying their legal obligations whilst also offering them design flexibility and savings in terms of budget and construction programme.

Code Prescriptive Consulting

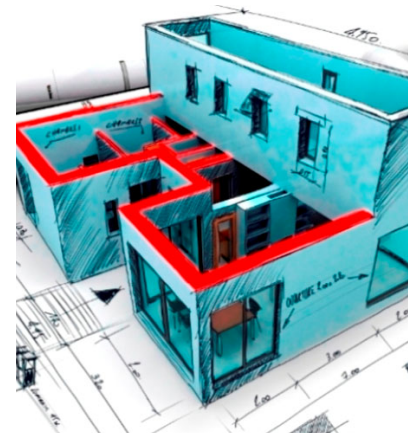
Analyzing applicable fire safety codes and by-laws to provide input for the fire protection master planning process and provide guidance for the design of fire protection systems which will meet these prescriptive requirements. The analysis will also identify where performance-based alternative approaches may be used to meet the intent of the code and satisfy the project objectives.

International Prescriptive Codes

Developing a fire protection master plan to address the short- and long- term life safety objectives of the building or facility. The master plan addresses applicable BS 9999, NFPA 101 & NFPA 5000 building and fire safety codes, requirements of the project and alternative approaches.

Performance-Based Fire Protection Engineering

A more complex and time consuming approach is applying the principles of performance-based design to determine alternative methods for satisfying the fire protection and life safety intent of the applicable laws. This process involves the use of scientific modelling tools and methods for determining fire growth, exit times, system activation times, smoke movement and other variables.



Architect Model

Fire Safety Engineering

Fire engineering is the expert understanding of how fire can affect people and our built environment. It forms a distinct design discipline in its own right.

At The Fire Engineer we use our specialist knowledge to develop innovative and project specific solutions to aid our clients in achieving their aspirations.



Evacuation Simulation

- Timed Egress Analysis – Identification of safe existing designs through analysis of computer models
- Fire Modeling – Evaluation of design fire hazards over a broad spectrum of fuel types and building geometries using fluid dynamics models
- Smoke Control – Development of computer model designs and test methods to predict smoke production and movement within a building
- Fire Alarm/Sprinkler Response – Prediction of time required for systems to operate under variable conditions as determined by computer modeling
- Calculated Fire Resistance – Use of fire growth and heat transfer models to predict fire resistance of building materials and structural components

Negotiating

Communicating on behalf of the building owner/developer with fire officials regarding the project's fire protection approach. The intent is to explain, clarify and interpret the relationship of the fire protection master plan as it applies to local code requirements. By overcoming concerns on the part of the Local Authority, the project can proceed in a timely and cost-effective manner.



The Fire Engineer brings you an alternative solution