

SHE

FIRE AND LIFE SAFETY CAPABILITY STATEMENT

“SHE Consultants have made Fire & Life Safety their calling, in order to fulfill the client’s vision while reducing cost and meeting the intent of local requirements.”



FIRE AND LIFE SAFETY SERVICES

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Fire engineering is a science that combines a scientific knowledge of how fires start, spread, are contained and extinguished with a behavioral knowledge of how people react to them. The result is an engineering discipline that exists to protect people, property and the environment from fire.

Fire engineering can start with either the codes or with the design. With a codes-driven approach one should expect to compromise elements of the architectural vision in making the design code compliant.

However, with a design approach, fire engineers give themselves the far more difficult task of protecting the vision by creating strategy through fire engineering. It is a scientific approach that uses the statistics of real fires, calculation tools and studies of human behavior. This preserves the architectural design and provides value reducing over-specification caused by conservative codes and allows fire protection to be deployed where the risk is.

Developing a fire strategy is the process of examining how all of the elements that need to be considered will work together - the structure, the services, the façade and, the occupants. It is also about managing the fire and safety approval process.

Safer buildings

With every project being a prototype, we push the boundaries and, by doing so, are able to recruit from the brightest people in

the industry. This not only equips us to handle the most complex projects but has been central to us being able to continually improve what we offer: better value and safer buildings.

Fire engineering services

The following are services that can be provided by our fire engineering team:

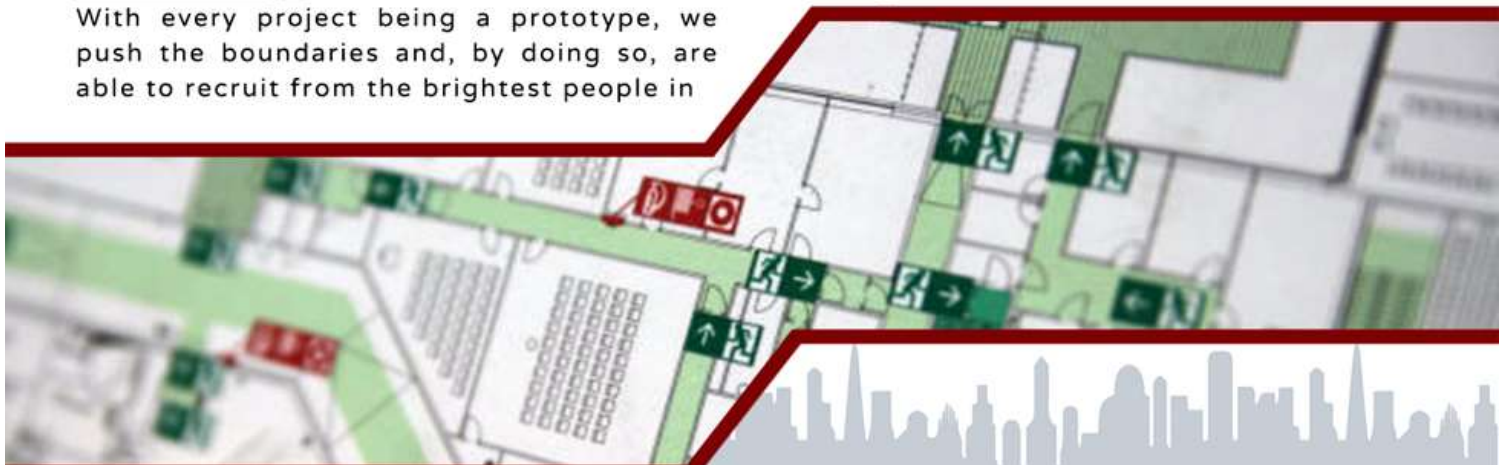
- Strategic fire Engineering Evacuation (evacuation model)
- Internal & external fire spread
- Smoke management
- Fire fighting - internally & site wide
- Construction requirements
- Principles of vertical transportation

Fire systems design

- Concept design and specification development
- System costing and budget models
- Detailed design and Integration Systems Tendering and project management
- Commissioning and functionality
- Assessments and technical support

Fire risk assessment

- What-if analysis, fault and event tree analysis
- Fire and explosion damage
- Calculation and modeling Structural fire engineering Reducing/omitting passive fire
- Protection to steel structure reducing fire rating



STRATEGIC FIRE ENGINEERING

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Fire Engineering involves understanding the phenomena and effects of fire and the reaction and behavior of people to fire, to protect people, property and the environment.

Every building needs a fire strategy. It is the process of examining how all of the elements that need to be considered will work together – the structure, the services, the façade, the occupants and the fire defences.

It is also about managing the fire safety approvals process.

The elements that we would typically consider in drawing up a fire strategy are:

- Evacuation
- Internal and external fire spread
- Smoke management
- Fire detection and alarms
- Automatic extinguishingsystems
- Fire fighting – internally andsite wide
- Fire safety structure

The earlier we get involved in a project the better it enables a more efficient and confident design process required for the efficient operation of the building We define the fire safety goals, which comprise a combination of life safety goals – which are required to satisfy legislation – and client / operational / insurance goals,

Strategic fire engineering on projects.

There are usually five stages to our strategic fire engineering work.

We assess the design and develop an outline strategic fire engineering report, identifying risks (where the design is non-compliant with the prescriptive standards) and opportunities for improved value.

We present the design team with recommendations, work with them to agree the best way forward and provide a matrix for assessing the risks and realizing the value for the different options offered.

We then negotiate this with the building officials and with the Civil Defence.



FIRE SYSTEM DESIGN

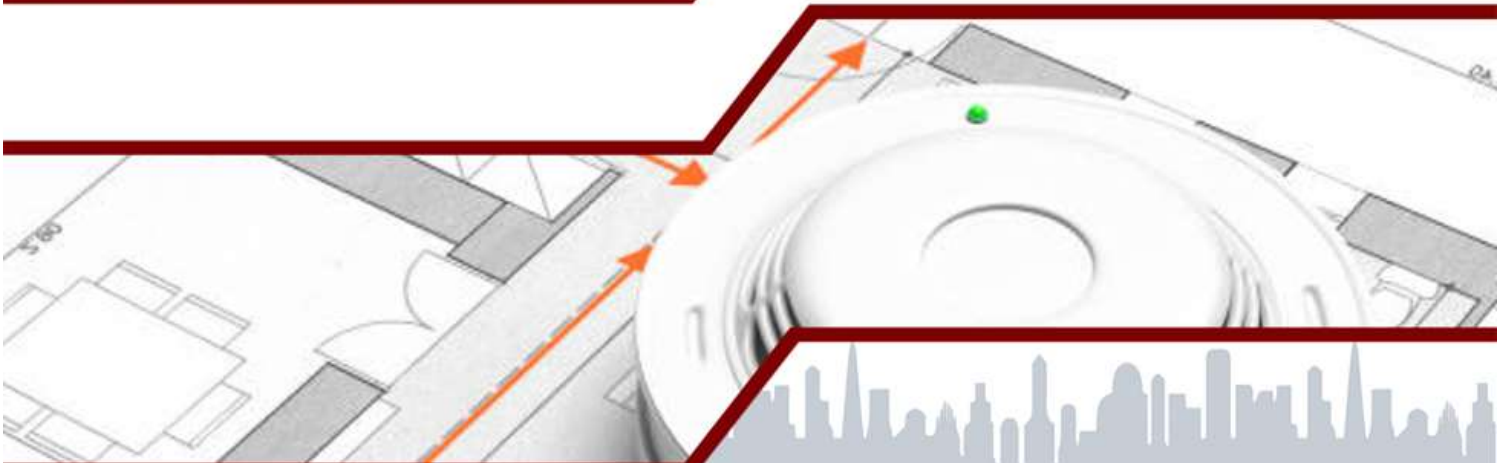
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This service is about the choice of fire detection and automatic fire fighting systems needed to achieve particular results. As Fire and life safety consultants we are unique in offering this service. We offer it because many clients increasingly prefer using us rather than contractors because they feel we are better placed to eliminate over design in our recommendations and being involved on the project in the early stages reduce the risk of late changes and additions to the design. Automatic systems for detection, alarm and suppression are often required to meet Building Regulations requirements.

Modern buildings are becoming increasingly intelligent and the use of systems integration methods during the design phase is both a specialist and integral requirement.

We offer:

- Concept Design
- Specification Development
- System Costing and Budget Models
- Detailed Design and Integration of Systems
- Tendering and Project Management
- Commissioning, Functionality
- Assessments and Technical Support



FIRE RISK ASSESSMENT

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Risk Assessment ensures fire safety within the building is maintained as designed.

This is a service we offer when an existing building owner / occupier becomes concerned that his / her existing fire strategy may not be as finely tuned as it once was, usually because there has been a change in either the layout of a building or in the equipment, plant or materials used.

We re-examine the strategic fire plan and make recommendations. The recommendations will include a property protection / business continuity plan on how a business can survive a fire. We also offer a mandatory risk assessment. It is a legal requirement for every building owner / tenant is required to undertake a fire safety audit annually.

Essentially the same service as a fire risk assessment this is something we can do, and which can be instrumental in creating more efficient buildings.



STRUCTURAL FIRE ENGINEERING

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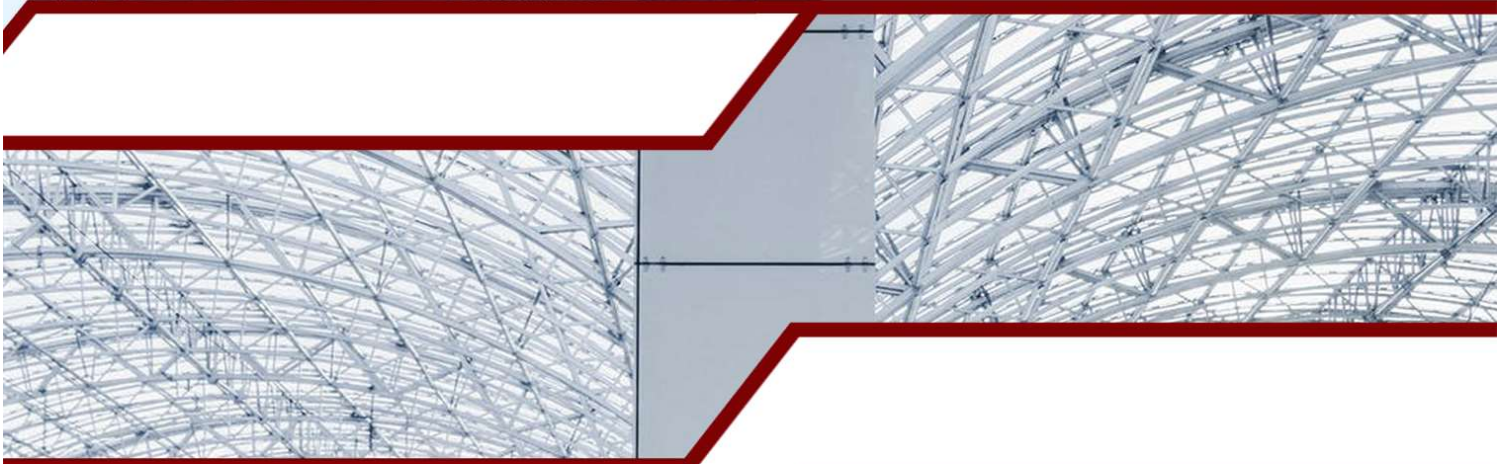
Structural fire engineering is a specialist area of fire engineering. It assesses buildings in terms of their fire resistance, usually expressed in minutes or hours; and analyses the true response and behaviour of structural elements in a fire scenario.

While achieving a required fire scenario performance in concrete is generally straightforward, with steel there are more options and significant value can be realized by

implementing fire modelling to assess the exact fire rating required and structural fire analysis to determine the structural frame's reaction to real fire conditions.

The added value can be identified as follows:

- Commercial; by achieving considerable savings on Fire Protection for the client or
- Visual; in keeping with the architectural aspirations



FIRE & LIFE SAFETY ENGINEERING

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Value on a project exists in the product, in the process, in the life cycle and at a number of the points in between.

Effective fire engineering is about fully understanding the client brief and architects' vision and tailoring the fire solution to meet these needs. Fire engineers give themselves the far more difficult task of protecting the vision by creating a bespoke strategy through fire engineering.

It is a scientific approach that uses the statistics of real fires, calculation tools and studies of human behavior.

This preserves the architectural design and provides value by reducing over-specification caused by conservative codes and allows the fire protection to be deployed where the risk is.

