

FIRE RISK STRATEGY

What IS a Fire Risk Strategy? When do I need one?

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INTRODUCTION

The aftermath of the Grenfell Tower tragedy and the Hackitt report has resulted in fear and confusion in the construction industry.

Legislation is fragmented – complex and has to be interpreted carefully, cross-referencing previous legislation.

Designers and planners have to meticulously pick their way through labyrinthine rules and regulations which often seem to conflict with the need for sustainable building materials. And of course, there is the never-ending fear of making a dreadful mistake with catastrophic and deadly results.

It is therefore hardly surprising that fear and confusion reign supreme. New build developments, schools, flats, HMOs, residential and commercial, and renovations are all affected by this legislation.

Housing associations, local authorities, main contractors, developers and designers, and architects are all facing these challenges.

The above problem is compounded by a lack of early engagement with fire engineers or doing the bare minimum to achieve compliance.





Often, projects are going out to tender with unclear specifications. The winning tender (RIBA Stage 4- technical design) sometimes **fails to appoint a fire engineer to produce a strategy or leaves it to an architect to produce fire drawings.**

This often leads to **over-engineering or under-engineering** or a lack of attention to what the end client actually needs. This can have big financial cost implications and creates a poor start to a sustainable building's life cycle.

Generally, fire engineers are not involved early enough (RIBA Stages 1, 2, and 3) and 90% of the time are not really consulted at all during RIBA stage 5- construction phase.

This means the design changes are not communicated to them and the client ends up remedying costly mistakes.

At RIBA stage 6, the building is handed over to the end-user.

Now the gaps in communication become evident as follows:

- As-built compliance – can it be signed off by all parties- including for insurance purposes?
- Installation evidence- has this been done correctly?
- How do safety features work?

Far too often, the above have been overlooked or not communicated properly to all parties.

This results in the end-user having to sort these problems out after the construction process has been completed.

The building owner now has difficult negotiations with the main contractor about who sorts what out and critically who pays for it.

We are improving in knowledge throughout the industry, but we fail to set clear roles, responsibilities, and outcomes for fire and safety compliance. And we fail to do this early enough in the RIBA stages.

So how we can prevent or at least mitigate some of these mistakes?

First, let's address the obvious question.

IS A FIRE STRATEGY NEEDED FOR MY BUILDING OR DEVELOPMENT?

DOES THE LAW REQUIRE ME TO
HAVE ONE?



Frequently compliance has to be driven by legislation as otherwise people treat it as an 'option'.

Answer?

The short answer is, that it is not currently a legal requirement to have a fire risk strategy **Per Se**- but you need to have the design and build elements that must comply with all parts of the Building Regulations Part B Fire Requirements.

You must provide design and build information to meet Regulation 38 requirements, including specifications, plans, drawings, reviews, and so on.

In addition, when a building is being used, it must have sufficient **fire risk assessments** and systems to **comply with the Fire Safety Order Act 2005**.

The following questions are common for new build developments:

- What alarm system do I need?
- Do I need sprinklers?
- How many fire doors do I need?
- Will the building be compliant?
- Can adopting an early design concept save us money?

A fire risk strategy is the best way to accomplish the above!

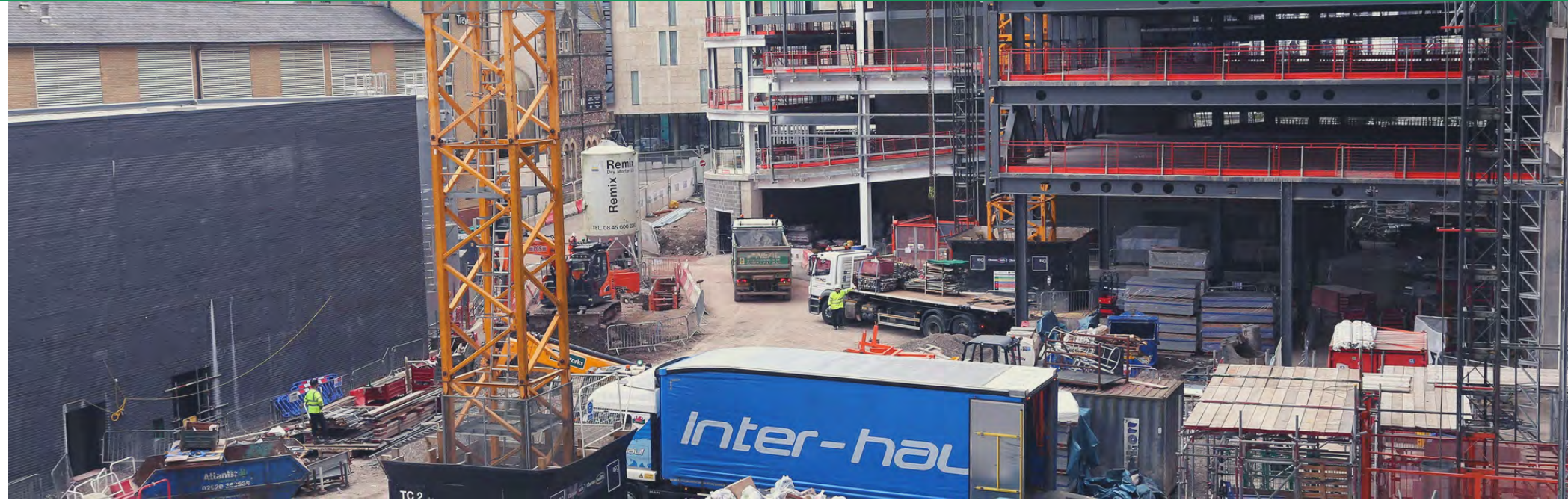
The key point is this – a professional Fire Risk Strategy will ensure compliance with all legislation AND will help you raise your game from doing the bare minimum.



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THE MAIN LEGISLATION:

- Building Regulations Approved Document B
- Fire Safe British standards such as BS9999 or BS9991
- The Regulatory Reform (Fire Safety) Order 2005



The Regulatory Reform (Fire Safety) Order 2005 applies to the following:

- This legislation applies to nearly all buildings apart from private homes.
- For private dwellings the requirement is to meet the Housing Act.
- HMOs are covered as are blocks of flats and maisonettes.
- Fire Risk Assessments are mandatory and should be carried out by a competent person.

In short the premises should meet the required standards.

If you are responsible for the building, fire risk assessments are **mandatory** under this legislation.

Also, you need to ensure your fire risk assessment is recorded if you have 5 or more employees or if your business has a license under an enactment in force.

The **responsible person** also needs to fulfil the following requirements:

- Perform a detailed assessment identifying the hazards and risks in commercial premises.
- Consider WHO may be at risk.
- Eliminate or reduce the risk of fire as far as is possible.
- Provide general precautions to deal with any risk.
- Take additional measures to ensure fire safety where there are flammable or explosive materials or where they are stored or used.
- Create a plan to deal with any emergency and where necessary record any findings.
- Maintain general fire precautions, and facilities provided for use by firefighters.
- Keep any findings of the risk assessment under review.

So the chances are, your project or building will need a fire strategy.

WHAT IS A FIRE STRATEGY AND WHAT SHOULD IT CONTAIN?

Short answer:

A fire strategy defines the fire safety objectives and performance requirements for a building and the methods for achieving these objectives. The primary aims are to protect people and property.

In order to achieve the objectives, there are usually 7 key elements that every fire risk strategy should contain. These are:

1 Legislation requirements.

This usually means minimum requirements outlined in the building regulations. Compliant design for new build developments usually relies heavily on Approved Document B (and the relevant BS standards BS9991 & BS9999). These are prescriptive codes.

2. Means of escape

This will look at escape routes- the occupancy of the building- the consideration given to occupancy classification – i.e. children, the elderly, and the infirm, etc- evacuation routes, exits, and location of muster points.

3. Fire Spread & Control

included here would be the issue of internal and external fire spread. The location and access to fire fighting equipment. Consideration would be given to the building materials themselves, such as the fire rating of doors walls, and floors. Other considerations would be the plan for fire containment within an apartment, and what materials there are in linings- the insulation materials- and unprotected areas.

4. Construction

This could include external and Internal wall coverings- the construction design and materials- and issues such as fire stopping measures-cavity barriers and compartmentation.

5. Fire service access

This would cover items such as vehicular access and the location of wet/dry risers and hydrants. It would also include any necessary communication to the local fire service.

6. Fire safety management

This would ensure key issues are addressed and that there is clear communication between all staff and building users. All the above should be regularly reviewed, updated and documented.

7. Recommendations

This will be specific to your building, its inhabitants and operation. This may change over the course of time.

Beyond the above, a good fire risk strategy will take into account the impact of the build process, building materials & **life cycle** of the building.





A FIRE STRATEGY HELPS TO AVOID THE FOLLOWING COSTLY MISTAKES

- Building and designing to the bare minimum to satisfy building regulations only.
- Failure to engage with a fire engineer early enough.
- Communication, even before starting a design, will save problems further down the project build stream.
- Not involving a Fire engineer at RIBA stage 5. This is the dreaded RIBA 'Gap'.

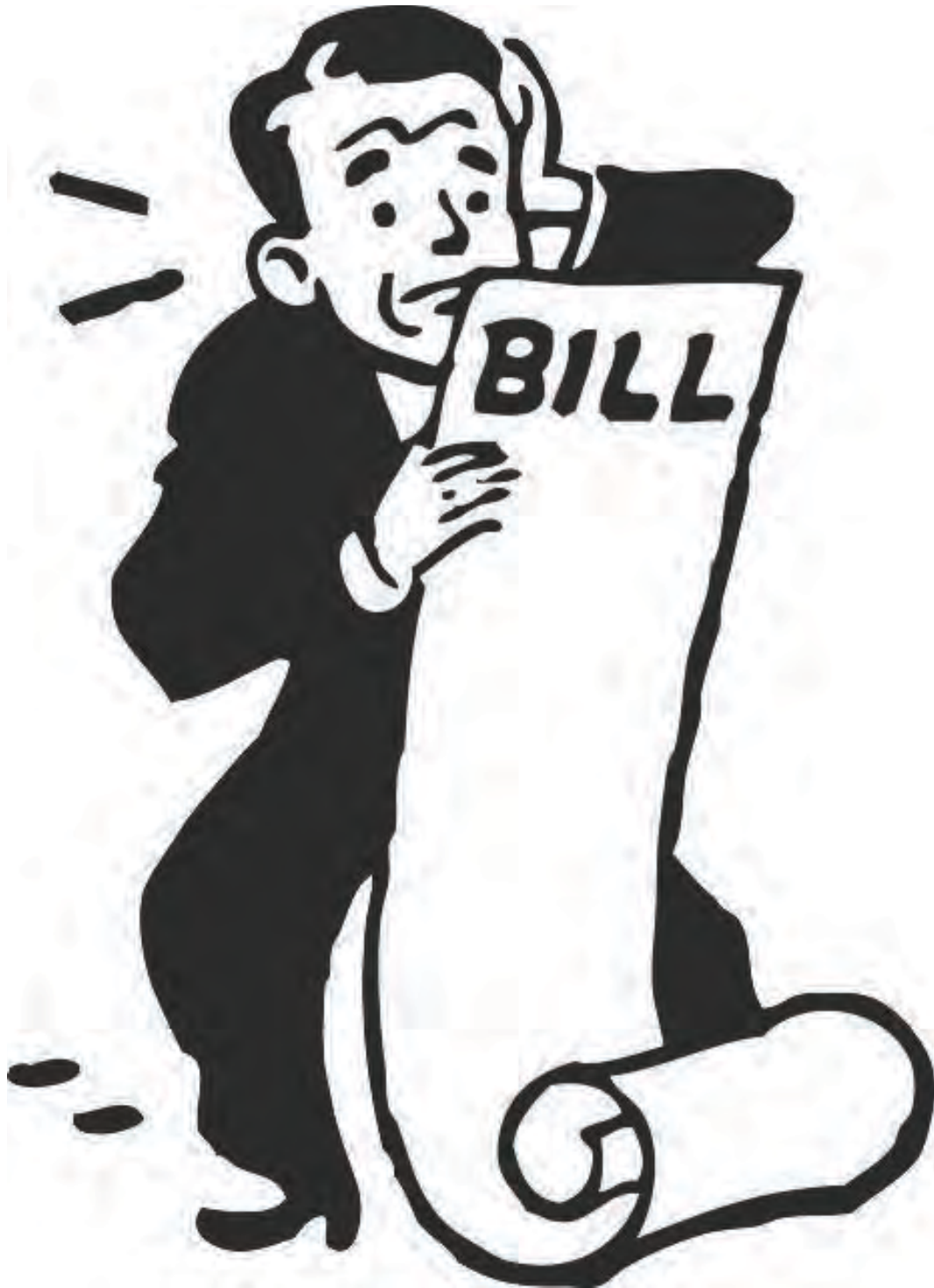
This is where materials are changed – suppliers changed – cost 'savings' made and there is no communication to the fire engineer. When he appears to begin an inspection, suddenly things do not meet the client's expectations or the ongoing management requirements and in some cases, the **Fire Regulations themselves**.

The list here is endless and this causes unnecessary costs and delays that are entirely avoidable.

Here are some of the common ones we see frequently:

- Fire doors fitted where there is no need (cost). Fire doors not fitted where they are required (cost)
- Sprinkler systems – as above.
- Timber treatments and finishes which were unspecified or altered, resulting in an insufficient load-bearing capacity during a fire
- Timber framed developments in close proximity to another building.

THIS RESULTS IN RIBA STAGE 7 - THE DISAPPOINTED CLIENT.



His building is now either over-engineered (he has paid for this) or under-engineered (he will pay in the future) instead of being correctly built using value engineering (where the client gets value for his money)

We began by looking at how Grenfell and how much confusion there exists in relation to construction (particularly new build) and fire safety.

We have looked at the huge cost implications to getting your fire strategy wrong. The costs and resources needed to correct course further downstream.

Finally, the disappointed client – the very thing we want to avoid.

The answer is early engagement with the right people who will interpret your building design to adapt to Fire Regulations and engineer value solutions for your client.

So he is not disappointed and neither are you.

Let's raise the bar, do more than the minimum and provide value engineering leaving a safe compliant building with a lasting legacy for the entire life cycle of the structure.



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If you have questions about fire risk management or strategy, why not give us a call to discuss it?

Every development and building is different so feel free to chat about your specific circumstances.



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