

‘Be a yardstick of quality. Some people aren’t used to an environment where excellence is expected’

STEVE JOBS | APPLE CORP

Think creatively

At FDS Consult, we take a bespoke approach to each and every project. Our expert fire engineers will bring all the technical know-how you're looking for to your project, but they'll also bring a level of creative thinking that you probably wouldn't expect.

We'll work holistically with your building to find solutions that enhance its safety whilst remaining true to its design concept and working practically with its end use.

Contemporary buildings need to maximise safety whilst exploiting modern construction techniques and delivering the architect's aesthetic vision.

Conventional approaches to fire design sometimes require modifications that conflict with the original design or specification. At FDS Consult, we don't believe in compromising our client's schemes: we believe in finding creative ways of working with them.

By targeting individual design issues with a solutions-driven approach we can help you realise your goals for the building. Our team of experts will develop a fire engineering strategy based on their knowledge of fire and smoke behaviours to improve life safety and deliver your objectives. What's more, we'll prove that our innovative approach to your project will work, helping the scheme achieve fast and hassle free fire approval.

Trust the experts

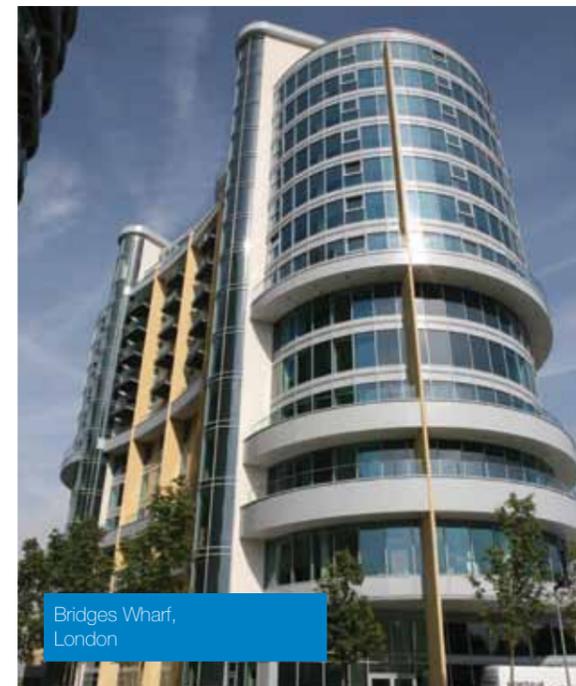
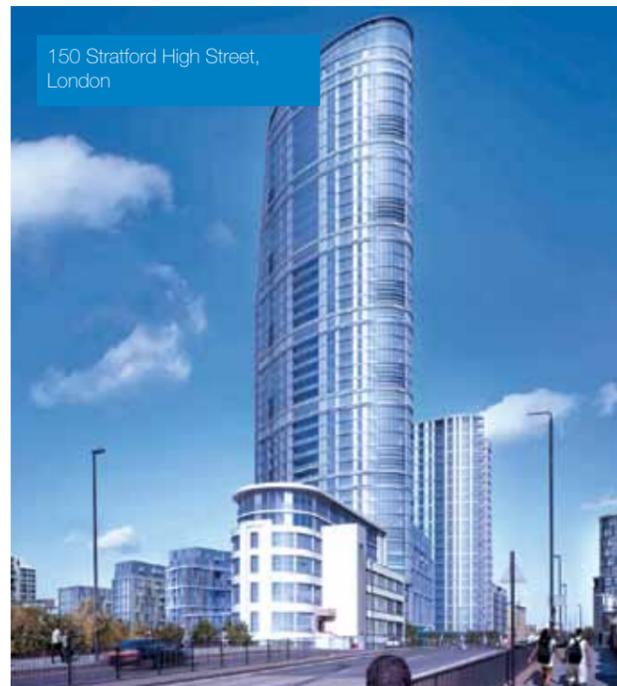
FDS Consult is able to offer you the best fire design solutions by ensuring that we have the best fire design expertise on our team. Our highly qualified, dedicated and experienced fire engineers have a wide range of skills and an impressive array of backgrounds and they all have one thing in common: a can-do approach to working with a building and integrating the fire design with both the architect's vision and the client's brief.

How do we do this? It may sound obvious, but the first thing we do is listen. We need to understand the building both physically and holistically, so we find out everything there is to know about the fabric of the building, its aesthetics, function, surroundings and context in the local built environment and its end users. Armed with this information we're ready to listen some more, because our determination to answer your brief and focus on your priorities is central to our approach. So whether you want us to keep the building true to its aesthetic vision,

or you need us to leverage our value engineering expertise to maximise space and minimise costs, you can be confident that our advice will be tailored to meet your requirements.

What's more, we won't just answer your brief, we'll interrogate it. It's not in our nature to go away and simply do as we're told - if we think our lateral thinking can add value or improve safety, we'll be sure to let you know. For FDS Consult, that's what bringing in the experts is all about: having the confidence to make us part of your team and trusting us to recommend the best solutions for your scheme.

Rest assured that it's an approach that's helped us win the respect and trust of approving authorities across the UK and beyond. We've built our reputation with them by demonstrating a passion for safety and genuine, proven expertise. As a result, our clients can always rely upon straightforward approvals.



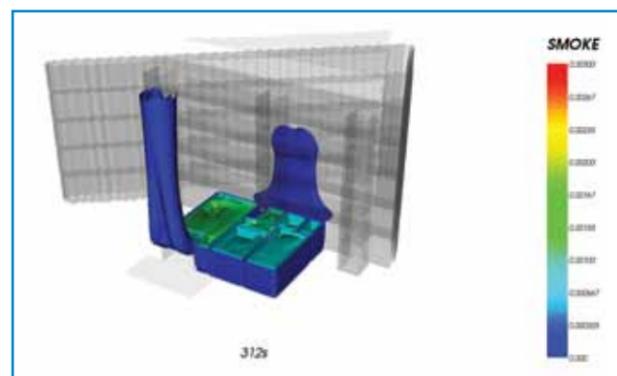
Share our knowledge

With an international track record across an extraordinary portfolio of projects, you'd expect FDS Consult to have the expertise you need to devise practical, cost effective and above all, safe fire strategies for your building. That's our central role as consultants...but it's not all we do.

Certainly, we'll advise you, but we'll also encourage you to engage with the process and learn some of the fundamentals of our innovative approach. That's why our clients come back to us time and again, ensuring that we are involved at the very earliest stages of the project.

Part of the value we provide to our clients is our emphasis on education: by working with us, architects have learnt how fire design can integrate with aesthetic goals rather than working against them and developers have seen just how money is often wasted and how much space is often lost by taking a code-based approach to approvals rather than a solutions-driven approach to safety and practicality.

Our passion for achieving the best results is infectious and we will walk you through our thinking every step of the way. Our investment in advanced computer modelling techniques means that we can demonstrate how our proposed fire strategy will work in practice, enabling you to be confident that a more flexible and less prescriptive approach to fire design will work for you.



Expect more

We expect our clients to challenge us and we're ready to rise to that challenge. We are continually brought in to improve on the fire designs put forward by other consultants and our innovative approach to finding solutions that match the building's needs and the client's brief means that we make those improvements time and time again.

It's not just developers, architects and consultants that call upon our expertise, we also work with fire authorities around the world. They use our knowledge and best practice to input into revisions to building regulations and fire approval guidelines. The proven success of our schemes means that we can demonstrate how fire and smoke behave under

conditions that may be unfamiliar to approving authorities in overseas locations due to varying architectural traditions. As a result, we're not only able to advise, we're able to troubleshoot and we have the influence to work with the authorities on your behalf.

Fire approval is mandatory and there are plenty of fire design consultancies that can help you address this element of your scheme. But expert fire design from a dedicated team committed to adding value, improving safety and remaining true to the original architectural concept can do much, much more. That's why our clients come back to FDS Consult time and time again.



Dalston Lane, Hackney, London

A wealth of experience

FDS Consult has a portfolio of past and current projects that spans the globe and covers all types and sizes of buildings. What that means for you is complete confidence that we have worked on a similar project to yours in the past and can bring that experience to bear on your building, transferring all that knowledge and best practice to deliver solutions that meet your needs. Here's a summary of some of the sectors in which we work:

Airports

We understand the importance of balancing effective fire design with the security and business continuity issues that are so integral to the nature of an airport. Complex environments, airports are often 24/7 businesses and even a small disruption can have a significant knock-on effect. They also feature buildings within buildings such as food and retail outlets, increasing the fire design challenge still further, and with large numbers of occupants made up of both staff and visitors, effective evacuation strategies are critical.

Our experience of airport fire design means that we can provide innovative solutions that address all these issues and our approach is flexible enough to respond to future development, whilst remaining mindful of the value of space in the airport environment. Using CFD modelling to justify extended evacuation periods is just one of the ways in which we're able to offer safety assurance and our creative approach always focuses on maximising space and increased financial revenue alongside the open architectural vision.



Education

In an education setting fire design not only needs to take account of contemporary trends in school design, such as extensive use of glazing and open atriums, it also

Creekside, Greenwich London

needs to be easily managed by staff. That's why our expertise in value engineering and developing fire management strategies is so valued by our education sector clients.

Our innovative, solutions-driven approach is ideally suited to the challenges of education environments and we use CFD modelling to eliminate costly over-specification and prove that an alternative design will also provide increased levels of safety. Because of the number of children or young people in a school setting, we take an ultra safe approach and our pioneering use of 'safety zones' to which the children can be moved as part of the evacuation process, minimises travel distances to enhance safety levels without incurring expensive systems or construction costs.

Healthcare

It is not always possible to evacuate a health facility immediately and for this reason healthcare schemes are perhaps the most challenging environment for effective fire design. Our approach centres around containing fires, minimising evacuation and, where possible, moving, occupants only limited distances.

We are mindful also, however, of current design trends in healthcare architecture and our creative approach allows us to work with the building to ensure we deliver high levels of safety whilst maintaining the scheme's design aspirations. Our expertise in the sector means that we can devise workable fire strategies that gain approval without adhering rigidly to Health Technical Memorandums (HTM) guidance. What's more, our success in providing fire strategy advice and Building Regulations approval services for NHS LIFT schemes means that we have a proven track record in combining high safety levels, low build costs and ease of management in multi-functional healthcare environments.



Bristol Airport Terminal

Hotels

In a sector where it is difficult to monitor how many people are in the building at any one time and occupants are likely to be unfamiliar with their surroundings, workable evacuation strategies and deliverable management plans are paramount.

With wide ranging, international experience in the sector we understand both contemporary hotel design trends and the complexities of buildings that are often part of a larger mixed use development. What's more, our value engineering expertise means that we are able to devise fire strategies that offer significant cost savings, whilst still delivering enhanced levels of safety.

Industrial

Owing to the large, open plan nature of industrial buildings, fire can spread quickly and insurance companies often stipulate that expensive fire systems such as sprinklers should be used to combat the risk. Our approach is to consider each industrial scheme on a case-by-case basis, carefully assessing the building's size and layout (including any mezzanine levels), its use and its typical contents. This thorough appraisal forms the basis of the fire strategy whilst the use of CFD and other computer modelling tools helps us to provide accurate simulations of fire and smoke spread, measuring the actual times and temperatures involved.

Mixed Use

Mixed use schemes pose complex challenges as each building within the scheme has its own design features, occupancy levels and use, but they may share escape routes and need to be pulled together in a considered evacuation strategy.

Our track record of such schemes means that we have the experience necessary to deliver a unified fire strategy that will maximise safety in each building and across the entire development, whilst minimising disruption in non-fire zones. Our value engineering expertise allows us to provide considerable cost savings on such schemes, by increasing travel distances, minimising stair cores and creating more saleable area, for example, whilst gaining full approval.

Offices

Office schemes often require the fire design team to ensure that the building's distinctive design aspirations remain intact whilst maximising the available floor space and dealing with complex multi-occupancy evacuation requirements.

Thanks to our innovative approach, our office schemes achieve all these goals with fire strategies that incorporate increased travel distances, fewer stair cores, reduced fire ratings, less compartmentation and smaller smoke shaft sizes to reduce build costs, increase saleable space and minimise disruption to non-fire zones whilst maintaining high safety standards. It also makes it possible to incorporate atria or free-flowing spaces within the structure without the need for expensive systems.

Retail

Our retail sector expertise means that we can develop efficient fire strategies that not only take account of the value of retail space but also the complexities of evacuation in a retail setting.

Our understanding of today's multiple storey shopping centres allows us to recommend solutions that will maximise retail space and simplify smoke venting design and strategies so that the architectural vision isn't inhibited. We also support our retail clients throughout the lifecycle of the development, leveraging our expertise to provide management evacuation strategies, quarterly compliance checking and Fire Risk Assessments as part of a comprehensive retail sector service package.



Futures Community College

Sports & Leisure

Whether it's a large sports arena or a small local cinema, sports and leisure venues require a fire strategy that is focused on the safe and simple evacuation of people in the event of a fire.

To answer these sector-specific requirements, our sports and leisure fire strategies consider key factors such as escape time, spread of fire, effective smoke management and crowd control. Our strategies also work to simplify designs that would otherwise inhibit the architectural vision. We then prove our design by using computer modelling techniques to establish fire and smoke spread, along with people flow modelling, to gain approval for our bespoke approach.

Tall Buildings

When designing a fire strategy for a tall building, consideration of the effects of rising smoke on the upper levels, the need to protect staircases from fire and smoke in order to evacuate quickly and safely, and increased evacuation times due to high occupancies dependent on limited stair cores, is absolutely critical.

Our approach is to combine an emphasis on safety and addressing the very stringent building regulations applied to tall buildings with a clear focus on maintaining the architect's aesthetic vision for the scheme. We also understand the challenges of tackling a fire in tall buildings where issues such as ensuring adequate water supplies, identifying fire locations and formalising access arrangements, are all factored in. The result is fire strategies that, thanks to a creative approach to smoke venting and reluctance to over-specify, offer both high levels of safety and maximised build value.

Residential

The biggest challenge for developers is building residential apartments that are both innovatively designed to meet consumer demand but also adhere to strict building regulations. Even the most ambitious building designs can be realised with FDS Consult's expertise in fire engineering. Our creative approach allows for innovative apartment layouts whilst achieving approvals and high levels of fire safety.

Further, using this approach it is possible to maximise saleable space and deliver substantial cost savings, while retaining or enhancing the building's functionality and aesthetics.



Technical Expertise At Your Fingertips

Our consultancy services are founded upon proven expertise, established fire design techniques and cutting edge computer modelling programmes. Whether you need us to develop an evacuation strategy, complete the fire design for your building or help you manage its long-term fire risk we have both the knowledge and the tools to help you enhance and maintain levels of safety from design concept through to occupation.

Computational Fluid Dynamics (CFD)

One of a number of computer modelling tools that we use to prove the validity of our fire strategies and designs, CFD software creates a virtual model of a building. Our fire engineering experts fully design the fire strategy and input all the details of the building's physical environment providing the tool with all the layers of information it needs to carry out the complex equations that will calculate fire and smoke behaviours. In this way we can devise a bespoke approach for every individual project and accurately assess how effective our solutions will be in the event of a fire.

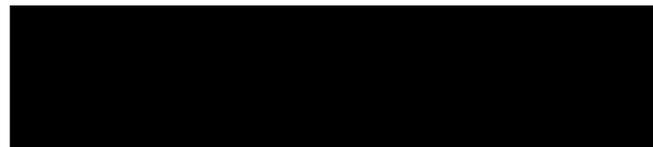
We have the most advanced technology at our fingertips because we're at the vanguard of what we do and you can rely on us to present a clear and substantiated case for a more creative approach to fire design to secure fire approvals for your schemes.



RRO Assessments

Regular, thorough fire risk assessments not only ensure that buildings are being managed in a way that makes them as safe as they can be, they also protect the building's management team from the threat of potential closure and prosecution under the Regulatory Reform Order (RRO).

Assessing the fire risk in a building is about much more than running through a checklist of 'do's' and 'don'ts': it takes specialist expertise to review every aspect of a building and identify anything in its maintenance, compartmentation, management or usage that could increase the risk of fire. FDS Consult has that expertise and our fire risk assessments consider fire behaviour and risk from first principles to provide practical and effective advice - whatever the size or type of building. We will advise you on all the areas of best practice that you're getting right and tell you candidly where you're getting it wrong and how you can fix it. As a result, you can be confident that your fire management strategy will continue to deliver to RRO standards.



Fire Management Strategies

Following completion of a building, responsibility for managing its fire risk transfers to its management team and they need to have a comprehensive and coherent fire management strategy in place to maintain high levels of safety. However, it's unlikely that they have the level of fire safety expertise in house to do this effectively, which is why our consultants' skills can prove so valuable.

We understand fire strategies for complex buildings therefore our experts can help building management teams to consider every element of the building's ongoing fire safety, such as how evacuations will be carried out, what processes are in place to monitor visitor arrivals and what procedures have been devised to ensure that fire safety equipment is serviced and routine checks are documented. Thanks to our fire management strategy expertise, thousands of buildings across the world are safer every day.

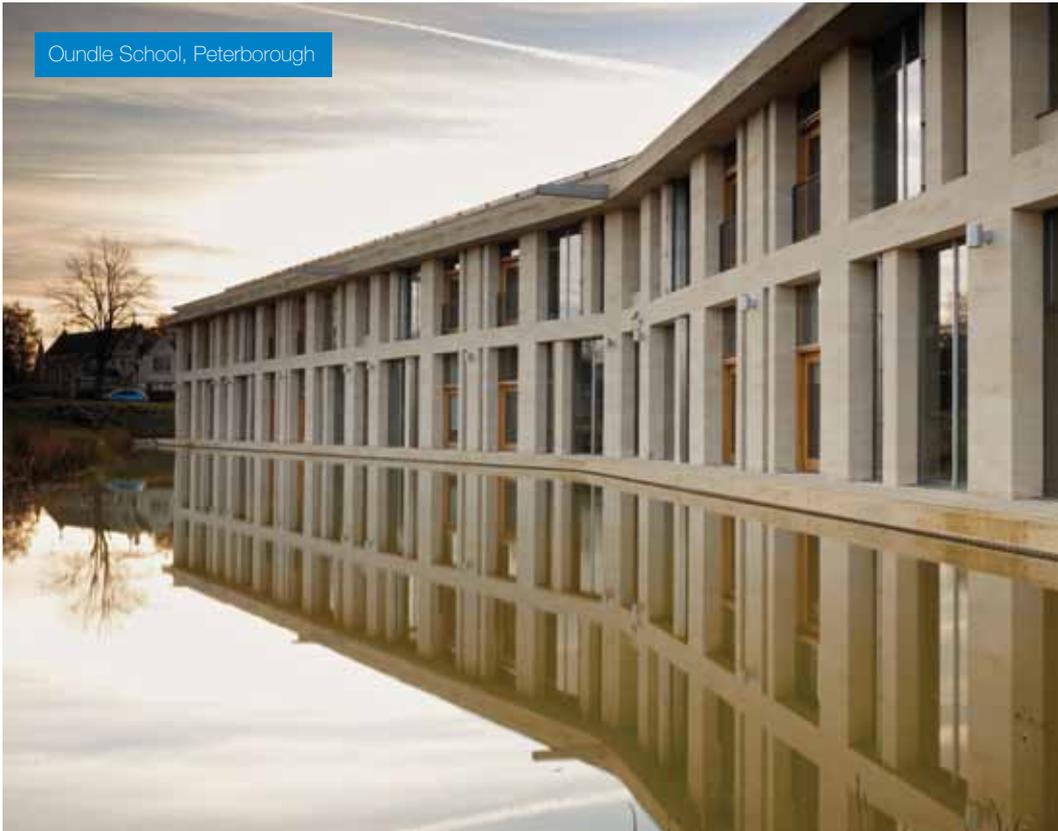
Fire safety design is essential to a building, but it doesn't have to be restrictive on design.

We have proven this time and time again by adopting a creative, solutions-driven approach that goes beyond simply facilitating approvals and instead aims to achieve a better, safer building alongside commercial objectives such as space maximisation and architectural aesthetics

Michel Wizenberg, Managing Director



Oundle School, Peterborough



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