



**tenos**  
fire engineering consultants

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# Introducing Tenos

Tenos is a leading independent firm of fire engineering consultants. We provide a fully integrated fire engineering solution to protect people from the harmful effects of fire.

Tenos has a proven track record in providing fire engineered solutions for landmark buildings worldwide. We have experience across many sectors including retail and leisure, commercial and industrial, education and healthcare, sports stadia and residential.

Our expertise is recognised nationally and internationally by leading architectural firms, developers, private companies and public sector organisations. They trust in Tenos to design safe buildings, manage risk and deliver innovative, cost-effective fire engineering solutions for the built environment.

Tenos – the fire engineering consultancy you can trust to deliver every aspect of fire safety.



Tenos delivers cost-effective  
fire engineering solutions for  
the built environment

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Clients appoint us for many reasons but what it really comes down to is TRUST

## Why choose Tenos?

Since we established in 1997, Tenos has been a leading international fire engineering consultancy because:

- We employ highly qualified and experienced Chartered Fire Engineers
- We are fully conversant with the requirements of UK, US and other international fire codes
- We tailor our service to an individual client's requirements
- With offices in Manchester, London and Bristol we offer a national and international service
- Our quality management systems conform, and have been accredited to, the requirements of ISO 90001, ISO 14001 and OHSAS 450001
- We offer competitively priced fee quotations and a high quality service
- We Guarantee a personal, responsive and professional service for all of our clients
- Each project is director-led with all the necessary in-house skills to resource a project from conception to completion



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# Fire Engineering Services

At Tenos, our core expertise is delivering innovative fire engineering solutions for large, complex buildings.


We deliver fire engineering solutions that ensure compliance without compromising architectural design and functionality.

Using advanced fire engineering techniques, our highly experienced Chartered Fire Engineers offer a complete review of fire safety in order to provide design teams with an alternative solution to strict code compliance.

Our fire engineering services include:

- Fire Safety Engineering
- Passive Fire Protection Consultancy
- Fire Safety Management
- Fire Expert Witness
- Human Behaviour in Fire & Emergency Evacuation Design

Fire engineered  
solutions for a building's  
entire lifecycle



Tenos offer an innovative,  
practical and robust approach  
to fire safety engineering

## Fire Safety Engineering

Managing fire safety starts with the initial design of a building and continues through to handover. At Tenos, our Chartered Fire Engineers work closely with architects and developers to design safe buildings at every stage of construction.

Tenos provides a range of fire safety engineering services to help you achieve statutory approval during a project's design and construction phases:

- Feasibility studies for master-planning and concept design stages
- Attendance at design team meetings and fire safety workshops
- Fire safety strategies to ensure early approval from authorities
- Advanced fire safety engineering design to demonstrate fire safety compliance (Computational Fluid Dynamics)
- Fire strategy drawings for more detailed designs
- Expert advice and support during the statutory approval, construction and post handover process

# Passive Fire Protection Consultancy


Passive Fire Protection (PFP) is an important component of a fire safety strategy. The inspection of PFP forms part of a fire risk assessment required under the Regulatory Reform (Fire Safety) Order 2005.

PFP is designed to prevent fire spread within a building or separate areas of high fire risk.

To ensure PFP is properly designed, installed and maintained in your building, Tenos offer an independent, impartial and confidential Passive Fire Protection consultancy service.

This comprehensive service, carried out by our highly experienced Chartered Fire Engineers, includes a review of all necessary documentation and, where necessary, an appropriate inspection of the key passive fire protection systems.

You will be issued with a report summarising the key findings and conclusions, together with a prioritised action plan detailing any remedial work required.



Independent, expert consultancy  
to ensure passive fire protection  
compliance

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Tenos fire safety management solutions are driven by the Plan, Do, Check, Act methodology

## Fire Safety Management

Tenos fire safety consultants provide a complete fire safety management solution to help ensure you comply with the Regulatory Reform (Fire Safety) Order 2005 and, in the worst case scenario, act as a fire expert witness in the event of prosecution.

A key aspect of our fire safety management service is to strive for continuous improvement. We achieve this by adopting the proven methodology of Plan, Do, Check, Act.

Our fire safety management services include:

- Strategic Fire Safety Management Reviews
- Fire Safety Management Planning
- Gap Analysis
- Fire Risk Assessments
- Fire Safety Management Performance Measurement (Tenos Benchmark)
- Fire Safety Training



# Fire Expert Witness

In the event of a dispute relating to fire safety, it is often necessary to seek advice from an independent and impartial expert witness.

Tenos fire safety experts provide testimony that is legally defensible, accurate and impartial.

For over 20 years, our expert opinion has been called upon by fire authorities and legal professionals for a wide range of fire safety cases across the UK, including a number of high profile cases.

Tenos can provide expert opinion for legal cases on issues such as:

- Fire safety documentation and legal obligation compliance
- Fire safety management or the adequacy of a fire risk assessment
- Reviews of fire safety design
- Reviews of fire performance of materials

A person in a dark suit is pointing with their right index finger at a set of architectural blueprints spread out on a desk. The blueprints show detailed floor plans of a building. In the foreground, there is a white cup of coffee on a saucer and a spiral-bound notebook with handwritten notes. The person's left hand is also visible, resting near the coffee. The background is slightly blurred, showing more of the desk and the person's arm.

Tenos fire safety experts  
provide testimony that is legally  
defensible, accurate and impartial

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## Human Behaviour in Fire and Emergency Evacuation Design

At Tenos, we focus on life safety, a vital part of which is understanding how people respond when confronted with fire.

Through the application of advanced fire engineering techniques such as Computational Fluid Dynamics and Evacuation Modelling, we can demonstrate crowd behaviour in complex buildings in order to develop effective evacuation strategies.

- **Computational Fluid Dynamics**

Computational Fluid Dynamics (CFD) is a branch of fluid mechanics that uses numerical methods and algorithms to solve and analyse problems that involve fluid flows.

Using validated computer modelling tools, we can perform calculations to simulate the movement of smoke, heat and toxic gasses within the boundaries of complex building spaces.

- **Evacuation Modelling**

Evacuation modelling software allows us to assess crowd movement in complex buildings to optimise and refine escape arrangements. It is widely used for stadia, passenger terminals and large shopping centres.

Tenos has a proven track record in developing effective evacuation strategies





## Our Experience

Tenos' expertise extends to all major markets, so we have a deep understanding of the specific issues, challenges and opportunities facing our clients' market sectors. Here are just a few examples:

### Middle East

- Fire engineered strategy for the Burj Al Arab, Dubai
- Fire engineered strategy and design for The KAFD Children's Museum Saudi Arabia
- Fire engineered strategy for Terminal 3 at Abu Dhabi International Airport

### Healthcare

- Fire engineered strategy and design for the new Alder Hey in the Park Children's Hospital, Liverpool
- Fire safety management consultancy to NHS Blood and Transplant nationwide
- Fire engineered strategy and design for Christie Hospital, Manchester



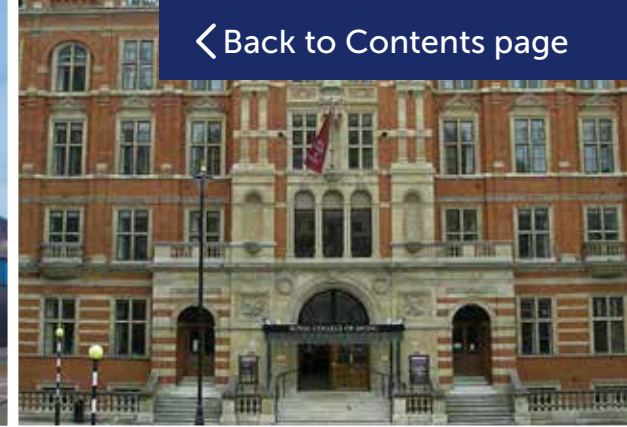
# Our Experience

## Education

- Fire strategy and management for the Royal College of Music, London
- Fire engineered strategy for Appleton Academy, Bradford
- Fire Risk Assessments for Kier PFI Schools

## Residential

- Fire engineered strategy for Coach Park House, Gibraltar
- Fire engineered design for Ochre Yards, Gateshead
- Fire strategy and CFD modelling for Princes Dock, Liverpool







Appoint Tenos as your fire engineering consultants and you can be assured that you will comply with your fire safety obligations during building design, construction and occupation.

For more information or to discuss your project, call us now on:

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