

## Fire Engineering Design

### Smoke modelling >

The understanding of fire growth and smoke movement within buildings is a fundamental part of a fire engineered design solution. MSA have invested significantly in this field and are able to provide international best practice solutions for smoke control design. We provide the following services with regard to smoke modelling:

#### Aims >

- >Effective control of smoke including protection of occupants, fire fighters and building contents.
- >Rationalised smoke ventilation requirements & cost effectiveness.

#### Benefits >

- >Tailored smoke ventilation systems for each building including mechanical as well as natural ventilation systems.
- >Extended egress periods.
- >Open unobstructed spaces.
- >Clear design intent with system performance communicated and agreed with approval authorities.

#### Tools >

##### Computational Fluid Dynamics (CFD)

CFD provides detailed analysis of complex geometries. Its use of 3D graphics and real-time simulations clearly communicates the design to both our clients and approval authorities.

##### Zone Model Analysis

MSA utilise our in-house smoke modelling software to provided robust design advice early within the design phase. The assessment provides multiple scenario capability, allowing optimum mechanical or natural designs to be provided.

#### Projects >



>Allegro Development



>UCD Gateway

##### >Dublin Office

19 Windsor Place,  
Lower Pembroke Street,  
Dublin 2

Tel: +353 (1)6765713  
Fax: +353 (1)6785247  
Email: dublin@msa.ie

##### >Belfast Office

Scottish Mutual Building,  
Donegall Square South,  
Belfast BT1 5IG

Tel: +44(0)2890312077  
Fax: +44(0)2890312077  
Email: belfast@msa.ie

##### >Leeds Office

Calls Wharf,  
2 The Calls,  
Leeds LS2 7JU

Tel: +44 (0)113 237 2838  
Fax: +44 (0)113 237 2701  
Email: leeds@msa.ie



ACEI  
Association of Consulting  
Engineers of Ireland