

## 1. Background and Scope

Motor Fuel Group (MFG) is the largest independent forecourt operator in the UK. It has over 900 stations operating under the BP, Shell, Esso, Texaco, JET and Murco fuel brands. The company's retail offer also includes provision of convenience shops, restaurant concessions, valeting and electric vehicle charging facilities on select sites.

This statement is to provide a description of the fire safety arrangements that will be implemented at the design, construction and operation phases of new locations operated by MFG.

## 2. Fire Safety Arrangements

### 2.1. Fire Alarm Systems

Any site development adding a third-party concession (for example a Subway or Greggs restaurant) will require an L2 rated fire alarm system with detection covering food oven areas, electrical cupboard and linked relays on any auto door entrance.

Any other project development (not adding a concession) will require an L4 system with linked relays on any auto door entrance.

Where Electric Vehicle Charging Equipment (EVCE) is installed, the following amendments will be made to the fire alarm system:

- Smoke and heat detectors will be installed in the Low Voltage (LV) control cabinet. And,
- The LV cabinet fire detection will link to all existing internal alarms and a smoke / heat detector light.

### 2.2. Passive Safety Measures

Means of escape should be located within 18m in single direction and 45m in more than one direction (*Ref: Reference to be made to Table 2.1, page 14 and Diagram 2.2, page 15 of Fire Safety: Approved Document B - Vol. 2*)

Final exit doors should have simple fastenings able to be operated quickly in an emergency, e.g., panic bar/push pad door release, designed to BS EN 1125.

If the fire hydrant is more than 100m from an existing fire-hydrant then additional hydrants should be provided within 90m of an entry point to the building/unit and not more than 90m apart.

Cavity barriers to be installed in floor ceiling and cavity voids (including in wall cavities at door and window thresholds).

Smoke detectors to be installed within the ceiling voids where the void is more than 800mm high.

Fire dampers to be provided to all the services which is passing through the fire rated walls.

Automatic entrance doors should be linked to the fire alarm fail safe open on activation of the fire alarm and/or mains failure.

### 2.2.1. Internal Fire Spread (Linings)

#### Functional requirements

To inhibit the spread of fire within the building the internal linings shall adequately resist the spread of flame over their surfaces; and have, if ignited, either a rate of heat release or a rate of fire growth, which is reasonable in the circumstances. In this paragraph “internal linings” mean the materials or products used in any partition, wall, ceiling or other internal structure.

All wall and ceiling linings should be designed to comply with the relevant guidance of *Fire Safety: Approved Document B*.

	National Class	European Class
Small rooms in non-residential accommodation not exceeding 30m <sup>2</sup>	3	D-s3, d2
Other rooms	1	B-s3, d2

### 2.2.2. Internal Fire Spread (Structure)

#### Functional Requirements

The building shall be designed and constructed so that, in the event of fire, its stability will be maintained for a reasonable period. A wall common to two or more buildings shall be designed and constructed so that it adequately resists the spread of fire between those buildings. Where reasonably necessary to inhibit the spread of fire within the building, measures shall be taken, to an extent appropriate to the size and intended use of the building, comprising of either or both of the following:

- a) sub-division of the building with fire resisting construction;
- b) installation of suitable automatic fire suppression systems.

The building shall be designed and constructed so that the unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited.

Typical single-story convenience store is required to have one hour Fire protection, this is to apply via Intumescent paint or 2 layers of 12.5mm fire line boards.

### 2.2.3. External Fire Spread

#### Functional Requirements

The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and position of the building. The roof of the building shall adequately resist the spread of fire over the roof and from one building to another, having regard to the use and position of the building.

#### Requirement to Consider External Fire Spread (Space Separation)

Building Regulation B4 requires that the external walls of a building should adequately resist the spread of fire from one building to another. Guidance is provided in *Fire Safety: Approved Document B Section 13*.

In summary, space separation should be considered between any new building and the actual site boundary, although where a building faces a feature that is unlikely to be built on (such as a roadway, canal, railway line), then the midpoint of the feature can be taken.

### 2.3. Active Safety Measures

All petrol filling stations will have an emergency forecourt isolation switch fitted as standard to isolate the electricity supply to the fuel pumps in the event of an emergency. Where EVCE is installed, the following amendments will be made to the isolation systems:

- The internal and external forecourt isolation switch will be linked to all EV charger units.
- Emergency stop buttons will be present on each EV charger to isolate each individually.

All sites are subject to a programmed periodic electrical inspection regime as follows:

- annual electrical inspection for equipment located within the hazardous areas of the forecourt as defined by the *Dangerous Substances & Explosive Atmospheres Regulations 2002 (DSEAR)*, and
- a five-yearly inspection for electrical equipment located within all other areas.

All sites are also subject to a DSEAR and fire risk assessment at commissioning and on a recurring three-yearly basis or where the site is subject to substantial change, the significant findings of which are reviewed annually.

Works to arrange remedial works where defects are identified by both inspections and risk assessments are arranged as a priority in respect of the above.

## 3. Construction Details

Petroleum Retail Stations must be designed and constructed in accordance with British Standards, APEA and Energy Institute guidance— specifically *EI – “Design, Construction, Modification, Maintenance and Decommissioning of Filling Stations” 4<sup>th</sup> Edition*.

Where EVCE equipment is installed on a petrol filling station, it must be designed and constructed in accordance with the *IET/APEA Supplementary Code of Practice for EV Charging Equipment at Filling Station*.

Fire safety precautions will be implemented in line with the *EI - Petrol Filling Stations Guidance on Managing the Risks of Fire and Explosion (The Red Guide)*

Deviation from these standards must be sought and agreed to prior construction.

## 4. Means of Escape & Evacuation Strategy

Shop buildings are typically single storey convenience stores with internal surface areas ranging from 200-500 square meters. Travel distances are therefore extremely small in most instances. All buildings will have at least one fire exit in addition to the main shop entrance, and potentially more for larger surface areas.

Emergency fire procedures are in place for all sites, and staff receive training on their implementation as part of an initial induction training plan which also involves general fire, health and safety considerations for the operation of a petrol filling station.

## 5. Firefighting Equipment

The following specification will be adhered to for the provision of Fire Extinguishers on all petrol filling stations:

Area	Fire Fighting Equipment Requirements
<b>Forecourt</b>	For up to 4 pump islands there should be at least 2 powder extinguishers (6 Kg) For every additional 2 pump islands we need a further 1 extinguisher DCD – 1 powder extinguisher LPG Compound – 1 powder extinguisher
<b>Shop</b>	1x CO2 extinguisher (2Kg) 1x Foam (6 Kg) Food concessions – Greggs/Subway – 1x fire blanket only
<b>Plant Room</b>	1x Powder

All firefighting equipment will be subject to an annual inspection by an accredited and competent fire appliance company, and any equipment identified as defective will be replaced following the visit.