

# REGULATORY REFORM (FIRE SAFETY) ORDER 2005

## Fire Risk Assessment of:

Grenfell Tower, Grenfell Road, London W11  
1TQ

for

The Tenants Management Organisation  
(TMO) of the Royal Borough of Kensington  
and Chelsea

**By Carl Stokes on the 29<sup>th</sup> December 2010**

**Review Date:**

**1<sup>st</sup> February 2011**

or before, if any significant changes have taken place, in or adjacent to this building

DATE	REASON FOR REVIEW	BY WHOM	OUTCOME

### Area(s) covered by this fire risk assessment:

The basement boiler room, the ground floor reception and interview rooms, the Walkway level offices of the housing department and common parts, the flat/lobby areas and staircase of the 20 floors of residential accommodation and the roof level open areas, plant, lift motor and water tank rooms.

### Area(s) not covered:

All the private residential apartments, the ground floor electrical substation, Dale Youth Boxing club, Grenfell nursery, the access to the upper ground floor level and the upper ground floor level offices complete.

**The significant findings and action plan of this Fire Risk Assessment are inserted next with this document continuing on page 2.**

**It is the policy of the TMO to take all reasonable steps to protect all relevant persons including residents, employees, visitors, contractors, any members of the public or any other persons who are lawfully on the premises, from potential injury and damage to their health which might arise whilst they are on these premises. When entrusting tasks to an employee their capabilities are taken into account as regard to Health and Safety so far as they relate to fire aspects. The aim of the fire risk assessment is to comply with The Regulatory Reform (Fire Safety) Order 2005.**

**The occupier takes the duties imposed by the Disability Discrimination Act very seriously and seeks to ensure that all reasonable adjustments are made to enable people with disabilities to be treated fairly and not to be placed at any substantial disadvantage as required by The Regulatory Reform (Fire Safety) Order 2005.**

### **Legal Statement**

This risk assessment has been undertaken as a requirement of The Regulatory Reform (Fire Safety) Order 2005, the enforcing authority, ie “the police” for the FSO are the fire and rescue authority for the area in which the premises are situated, (Article 25 of the FSO). It is the local Fire and Rescue Service who therefore have the power to undertake an audit of the fire risk assessment to determine if it is suitable and sufficient or not. Other agencies can ask if you have completed a fire risk assessment but it is not for them to view, enforce or make judgement on.

**You do not have to give a copy of your risk assessment to anybody**, not even the fire authority, if you do give them a copy this could be used against you at a later date. Under Article 9, headed Risk Assessment sub sections 6 and 7 of the FSO it states:

- (6) As soon as practicable after the assessment is made or reviewed, the responsible person must record the information prescribed by paragraph (7) where—
- a) he employs five or more employees;
  - b) a licence under an enactment is in force in relation to the premises; or
  - c) an alterations notice requiring this is in force in relation to the premises.  
(It is very unlikely that an open air even would have an alterations notice)
- (7) The prescribed information is—
- a) the significant findings of the assessment, including the measures which have been or will be taken by the responsible person pursuant to this Order; and
  - b) any group of persons identified by the assessment as being especially at risk.

So legally you have to record any significant findings from the risk assessment if you fall into the categories of 6 a to c above and have this available to be inspected.

### **Responsible Person:**

Chief Executive of the Royal Borough of Kensington and Chelsea

### **Building Owners/ Landlord:**

The Council of The Royal Borough of Kensington and Chelsea

### **Person Consulted during the Assessment:**

Mr Paul Steadman and Mr K Fifield of the of the Tenant Management Organisation of the Royal Borough of Kensington and Chelsea

### **Assessment completed by:**

Mr C Stokes, ACI Arb, FPA Dip FP (Europe), Fire Eng (FPA), NEBOSH, FIA BS 5839 System Designer, Competent Engineer BS 5266, IFE Assessor /Auditor (FSO). 19 years Fire Safety experience with local Fire Authority, in enforcement and auditing roles, 3 years as an independent fire risk assessor. Member of the construction industry CPD certification Service. Professional indemnity insurance cover provided by ██████ Enhanced CRB checked.

### **H M Government Guide used:**

Sleeping Accommodation  
Offices and Shops

### **Any other guides that may be relevant:**

Building Regulations 2000 Approved Document B (Volume 2) inc FPA information  
Managing Agents management policy's, procedures and associated documentation

### **Any other legislation that could make requirements for fire precautions in the building.**

Disability Discrimination Act 2005

### **Building Information**

This fire risk assessment was carried out when a building was in normal use and only a visual inspection has been undertaken of the buildings structure and no invasive structural investigation was undertaken to complete the risk assessment. If there was any concern about hidden structural damage or lack of structural integrity of the buildings structure this will be raised with the landlords and commented upon with-in the following report. As far as I am aware the construction and any refurbishments, of the building have gone through the Building Regulations process. Information has been gathered from the buildings occupants and employees of TMO and from an analysis of documents provided by TMO

### **Description of the building;**

This is a purpose built standalone square shaped 24 storey residential tower block, with a basement boiler room area, with three lower levels are offices etc and twenty levels of residential dwellings above. The ground floor level has an electrical sub station and a secured bin storage area on the roof level is the lift motor room, cold water tanks for the tower and some plant rooms these are accessed via a locked gate off the staircases and this area is restricted to authorised personnel only. Each flat/lift lobby area gives access to the six flats on that level there are a total of 120 apartments in the building. The tower block is located off a public road and directly outside the building is a garden area. The building has a flat roof area which is an open space which is restricted to authorised personnel only. The distance between this building and adjacent properties appears to meet Building Regulation requirements therefore minimising and preventing any fire spread to adjacent premises.

There is one staircase in the tower which runs the height of the building and is fire protected throughout its height with self closing fire rated doors and leads to a final exit at the walkway level. As this buildings is over 18 metres in height it is provided with dry risers with an external inlet inside the main entrance and outlets at each residential floor level and at the roof level. The two lifts in the building are both fire fighter/evacuation lifts, both of the lifts serve each floor level and run the height of the building.

There were no apparent unusual structural features either externally or internally observed and there are no high voltage luminous tubes for signs etc on the exterior of this building. The access arrangements to this building have been considered and the arrangements appear to conform to part B5 of Approved Document B of the Building Regulations and any changes to road layout etc away from these premises are outside the control of the responsible person.

### **Construction of the Building;**

This is a concrete constructed building, floors and walls, with a flat roof, the staircase has concrete stairs and the protected staircase has self closing 30 minute fire rated doors separating the staircase from the remainder of the building. There appears to be no hidden voids in the building or sandwich panels used and there are no apparent unusual elements of building construction that were considered to add a significant additional contribution to the fire risk.

### **Use and Layout of the Building;**

The building is a residential accommodation building with six private residential apartments per floor level, the apartment entrance doors appear to be fire rated and have letter boxes in the lower half of the door. The basement area houses the boilers and plant for the building with the lift motor room on the roof. The lower three floor levels are used as offices etc.

The entrance lobby has two lifts which service all the floor levels, both are evacuation/fire-fighting lifts so can be used for disabled evacuation if needed. Please see the attached plan showing the layout of the building covered by this assessment at the end of the document.

**The evacuation strategy for this building:**

**For The Residential part of the building:**

For the residents of this building there is a “defend in place or stay put” evacuation strategy, this means the residents remain within their own dwelling during a fire incident unless the fire is in that dwelling or it is otherwise affected, in which case they should immediately evacuate the dwelling and call the Fire and Rescue Service. The Fire Service or Royal Borough of Kensington and Chelsea (RBKC) or Tenant Management Organisation (TMO) employees will arrange for a general evacuation of the building at anytime if this is appropriate or the resident can leave at anytime if they so wish. TMO has provided information to all residents via letters and briefing sheets of ‘what to do in the event of an emergency’ and articles on fire safety advice and emergency procedures are included in the resident’s magazine called “Link”.

Also article’s are provided reminding tenants that they must not store items in communal areas nor cause obstructions to the means of escape, these articles are produced in the 7 major languages which have been selected as being most likely to meet the needs of the residents.

The landlord relies upon the tenants to respond to any emergency in accord with agreed emergency plans and does not facilitate any fire drills or other emergency evacuation exercises.

**For the parts of the building where employees work:**

A simultaneous evacuation strategy is in place for RBKC, TMO or any other employees or contractors working in the building. They are advised that upon hearing the fire alarm or discovering a fire they must leave the building immediately by the nearest available safe exit route and go to the assembly point. The senior person at the assembly point or a fire warden will call the Fire and Rescue Service if there is a fire in the building, giving details of about whereabouts of the fire and if any persons are missing or unable to escape. The person will then await the arrival of the Fire Service to assist them with any additional information that may be requested.

If unable to escape from upper storey’s of the building the employee or contractor should where possible seek refuge in a dwelling and the appropriate emergency action followed as if a resident.

As far as it is known having asked the person named above, apart from the arson incident in July of this year 2010 there have been no other fires in this building within the last 2 years and there is no known problem with false alarms from the commercial fire alarm system in the common parts and office areas or from the domestic detectors in individual dwellings.

**Number of individual private dwellings in this building:**

120
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**Methodology, for the completion of this fire risk assessment**

The adopted risk assessment methodology has been developed in line with guidance from the Health and Safety Executive (5 steps to risk assessment) and PAS79. The assessment involves:

- Gathering relevant information for the building, occupants, processes and past fire history etc.
- Identifying hazards and determining measures to eliminate or control identified fire hazards.
- Determining existing physical fire protection measures and identifying any short comings.
- Discussions with occupiers and employees to determine the effectiveness of fire safety procedures and management policies.
- Subjective assessment of the likelihood of fire occurring.
- Subjective assessment of likely consequences to the occupants of a fire event.
- Assess fire risk and tolerability.
- Document the significant findings from the fire risk assessment.
- Formulating an action plan with the aim being to reduce the fire risk, from the significant findings with both physical and procedural controls,
- Formulating a checking procedures to oversee the “actions to be taken” in the significant findings.
- Formulating a time schedule for reviewing the assessment.

**The following rational is adhered to for the completion of this fire risk assessment**

From Building Regulations 2000, Section 1 of B1, Means of Escape from Flats, of Approved Document B Fire Safety (Volume 2) Incorporating Insurers Requirements for Property Protection.

*2.3 The provisions for means of escape for flats are based on the assumption that:*

- a. the fire is generally in a flat;*
- b. there is no reliance on external rescue (e.g. by a portable ladder);*
- c. measures in Section 8 (B3) provide a high degree of compartmentation and therefore a low probability of fire spread beyond the flat of origin, so that simultaneous evacuation of the building is unlikely to be necessary; and*
- d. although fires may occur in the common parts of the building, the materials and construction used there should prevent the fabric from being involved beyond the immediate vicinity (although in some cases communal facilities exist which require additional measures to be taken).*

## FIRE RISK ASSESSMENT

**FOR: Grenfell Tower Grenfell Road London W11 1TQ**

The following simple risk level estimator is based on a more general health and safety risk level estimator of the type contained in BS 18004 2008:

Potential consequences of fire ⇒ Likelihood of fire ↓	Slight harm	Moderate harm	Extreme harm
<b>Low</b>	Trivial risk	Tolerable risk	Moderate risk
<b>Medium</b>	Tolerable risk	Moderate risk	Substantial risk
<b>High</b>	Moderate risk	Substantial risk	Intolerable risk

Taking into account the fire prevention measures observed at the time of this risk assessment, it is considered that the hazard from fire (likelihood of fire) at these premises is:

**Low**                      
 **Medium**                      
 **High**

In this context, a definition of the above terms is as follows:

- Low:** Unusually low likelihood of fire as a result of negligible potential sources of ignition.
- Medium:** Normal fire hazards (e.g. potential ignition sources) for this type of occupancy, with fire hazards generally subject to appropriate controls (other than minor shortcomings).
- High:** Lack of adequate controls applied to one or more significant fire hazards, such as to result in significant increase in likelihood of fire.

Taking into account the nature of the building and the occupants, as well as the fire protection and procedural arrangements observed at the time of this fire risk assessment, it is considered that the consequences for life safety in the event of fire would be:

**Slight harm**                      
 **Moderate harm**                      
 **Extreme harm**

In this context, a definition of the above terms is as follows:

- Slight harm:** Outbreak of fire unlikely to result in serious injury or death of any occupant.
- Moderate harm:** Outbreak of fire could foreseeably result in injury (including serious injury) of one or more occupants, but it is unlikely to involve multiple fatalities.
- Extreme harm:** Significant potential for serious injury or death of one or more occupants.

Accordingly, it is considered that the risk to life from fire at these premises is:

Trivial  Tolerable  Moderate  Substantial  Intolerable

Comments:

The risk to the occupants of this premises is considered to be tolerable.

Risk level	Action and timescale
Trivial	No action is required and no detailed records need be kept.
Tolerable	No major additional controls required. However, there might be a need for improvements that involve minor or limited cost.
Moderate	It is essential that efforts are made to reduce the risk. Risk reduction measures should be implemented within a defined time period. Where moderate risk is associated with consequences that constitute extreme harm, further assessment might be required to establish more precisely the likelihood of harm as a basis for determining the priority for improved control measures.
Substantial	Considerable resources might have to be allocated to reduce the risk. If the building is unoccupied, it should not be occupied until the risk has been reduced. If the building is occupied, urgent action should be taken.
Intolerable	Building (or relevant area) should not be occupied until the risk is reduced.

A suitable risk based control plan should involve effort and urgency that is proportional to risk. The following risk based control plan is based on one advocated by BS 8800 for general health and safety risks:

**(Note that, although the purpose of this section is to place the fire risk in context, the above approach to fire risk assessment is subjective and for guidance only. All hazards and deficiencies identified in this report should be addressed by implementing all recommendations contained in the following action plan. The fire risk assessment should be reviewed regularly.)**

A fire risk assessment has been carried out for this building and the significant findings produced. By implementing the actions of the significant findings the risks or hazards will be lowered and therefore making the building safer for its occupants. If appropriate the significant findings should be passed on to any other occupiers in the building so that co-ordinated actions can be taken and visa versa, this also applies to any significant findings from any reviews etc that are undertaken.

You should consider the potential increased risk and hazard of any significant change before the change is introduced, it is usually more effective to minimise a risk or hazard beforehand than trying to achieve it after the event.

## FIRE HAZARDS AND THEIR ELIMINATION OR CONTROL



## **1. ELECTRICAL SOURCES OF IGNITION**

	<b>YES</b>	<b>NO</b>	<b>N/A</b>
Are reasonable measures taken to prevent fires of electrical origin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are fixed installation periodically inspected and tested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If appropriate, is portable appliance testing carried out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any electrical appliances are present, are trailing leads/adapters suitably limited and sockets not overloaded?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

According to the TMO electrical data information the 5 year electrical test on the fixed wiring in the building was last checked on the 11<sup>th</sup> December 2009 and is next due to be tested in December 2014, there appeared to be no outstanding items indicated on the test sheet. The electrical supply boards and other associated electrical components appear to be industry standard items and are where appropriate housed in standard metal lockable containers. There are no portable electrical appliances in the staircases or flat/lobby landings ie common parts of this buildings and testing is not carried out on any residents private electrical items. There are portable electrical appliances in the TMO housing department offices the test labels on these electrical items had a last test date of the 6<sup>th</sup> July 2010 with a retest date of July 2011, the use of trailing leads or multi plugs is restricted in this building and they are only used where necessary. There is an EDF electrical sub station located in a secure ground floor area with access restricted to authorised EDF employees only.

There are no solar thermal or photovoltaic system on or attached to this building. It is assumed that electrical items of equipment brought into the building by contractors or workmen are suitable and in a good condition, the occupier does not carried out checks on these items of equipment. There is no recent history of major electrical power supply failures for this building, therefore the British Standard testing timetables for stand by/back up batteries in the fire alarm (including radio/wireless systems), emergency lighting and other fixed systems is deemed to be acceptable.

## **2. SMOKING**

	<b>YES</b>	<b>NO</b>	<b>N/A</b>
Are reasonable measures taken to prevent fires as a result of smoking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the smoking ban suitable enforced, in the common parts, with "No Smoking" notices displayed at the entrances?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If located are the external smoking areas appropriately sited with suitable receptacles provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the no smoking policy appeared to be observed at the time of the inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

The residents are allowed to smoke within their own private individual dwellings but not in common parts of the building or communal areas, at the time of this risk assessment there were no indications that the no smoking policy was being abused. The employees who work in the building have an external smoking area, No smoking signage is displayed at the entrances to this building.

**3. ARSON**

**YES      NO      N/A**

Does basic security against arson by outsiders appear reasonable?

Are combustible and waste materials kept away from the outside of the premises?

Are the external refuse containers/rubbish bins suitably secured against an external arson attack?

Is the refuse storage area kept reasonably tidy and the amount of waste material kept to a minimum?

Comments or observations:

There is an electrically operated door entry control system on the main entrance door to restrict entry to the building to authorised personnel only and a CCTV system is also used, key fobs are used by the residents and an intercom system for visitors to the building. During the day there is a receptionist on duty who also acts like a concierge there is a fireman switch override device fitted externally to the entrance door and this was tested at the time of the assessment and worked correctly. This door and the final exit door from the protected staircase on the walkway level are fitted with self closing devices so that the doors close automatically thus maintaining the security of the building.

Combustible and waste materials are kept away from the exterior of the premises as far as possible, with the refuse chute which is located in a protected room on each residential floor level discharging into the secure waste storage area located on the ground floor. The rubbish chute empties directly into a system of medium sized metal rubbish bins. The secure waste storage area is fitted with metal doors, there are open louvered vents above these doors allowing natural ventilation of the area, the bin storage area is completely separated from the remainder of the building apart from the refuse chute. From the information provided bin storage area fires have not been a problem in this building, to minimize the amount of waste the refuse is collected regularly by the local council. There were no combustible items or waste material in the corridors or on the landings of the premises that would aid any potential arsonist at the time of the fire risk assessment.

**4. PORTABLE HEATERS & HEATING INSTALLATIONS**

**YES      NO      N/A**

Is the use of portable heaters avoided as far as practicable, in the areas covered?

Are fixed heating boilers/installations subject to regular maintenance, including any gas supply?

	YES	NO	N/A
Are suitable measures taken to keep combustible materials and waste away from boilers or heaters?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are gas safety checks carried out in the building?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

Portable heaters are not used in the common parts of this building, the gas boiler for the buildings heating system along with other plant is located in the basement boiler room, the gas supply and boiler are on a planned preventive maintenance and servicing programme which also includes annual servicing of any other gas appliances in the building. The basement boiler room was clean and tidy at the time of the visit with no combustible waste etc left lying around, there were spare items of equipment in the boiler room but these were against walls etc and did not cause an obstruction or trip hazard.

### **5. PLANT and FIXED EQUIPMENT**

	YES	NO	N/A
Does the plant look in good working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is combustible material kept away from the plant or equipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

The lift motor room and associated items of plant are located at roof level with additional plant in the basement level, at the time of the risk assessment there did not appear to be any leaks of oil or other types of liquid from any plant or machinery. There is a planned maintenance programme of inspections for the plant with-in the building which is carried out by a third party contractor, with the records kept centrally in the "Hub" in Kensal Road. There was no access to the EDF sub station area of the building as this is restricted to employees of this company but it is assumed that this area is kept clean and tidy and any equipment maintained and serviced in accordance with any contractual agreements.

### **6. COOKING and LAUNDRY FACILITIES)**

	YES	NO	N/A
Are reasonable measures taken to prevent fires as a result of cooking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a suitable design and layout of the cooking area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are reasonable measures taken to prevent fires if any laundry facilities are located in the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are any filters changed or cleaned on a regularly basis if fitted in any cooker hoods or tumble dryers in laundries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are any filters changed and ductwork cleaned on a regular basis in any kitchen/laundry extract systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

YES NO N/A

Are there suitable extinguishing appliances available?

Comments or observations:

There are no laundry facilities located in the common parts of this building or communal laundry facilities. There is a cooking area in the walkway level offices staff rest room which contains a kettle and microwave where hot drinks and snacks can be made, these activates are limited to this area. This area is checked at the end of each day to ensure that all appliances are turned off etc and the area is free of any waste or combustible items.  
There is suitable automatic fire detection in this area to give early warning to a fire situation, there is no extraction system in the cooking area as the amount of cooking is minimal and the natural ventilation in the area is sufficient to dispel any cooking fumes.

**7. LIGHTNING**

YES NO N/A

If a lightning protection system is installed on the building does it look in good condition?

Comments or observations:

The building has a lightning protection system installed, from the information provided by the TMO engineer this system is on a planned preventive maintenance contract with an external contractor.

**8. HOUSEKEEPING**

YES NO N/A

Is the standard of housekeeping in the building adequate?

Is there an avoidance of unnecessary amounts of combustible materials or waste?

Is there an avoidance of inappropriate storage of combustible materials or waste in escape routes, staircases or around rubbish chutes (if any in the building)?

Is there an avoidance of inappropriate storage of combustible materials or waste in cupboards or stores etc?

Are any soft furnishing etc in corridors kept to a minimum, do not raise the fire loading or cause an obstruction?

Are routine preventive checks carried to see that the housekeeping/cleaning routines are working?

Comments or observations:

The caretakers or contract cleaners ensure that quantities of waste and combustible material are removed from the communal areas of the building, to the external refuse bins storage area, therefore not allowing a build up of any combustible

materials. The flat/lift lobby areas and the staircases were mostly clear of all items at the time of the risk assessment and it is part of the landlords cleaning contract that the cleaning contractors manager undertakes regular inspections to see that all the areas of the building are kept free of combustible storage and waste. Residents have not introduced any items into the common parts of the building, there is a purpose built domestic waste rubbish chute located in a purpose built room off each flat/lift lobby area.

On the twentieth floor level of the staircase is a locked gate which restricts access to the roof level and there are no carpets or curtains in the staircase or flat/lift lobby areas of the building.

**9. HAZARDS INTRODUCED BY OUTSIDE CONTRACTORS & BUILDING WORK**

	YES	NO	N/A
Are fire safety conditions imposed on outside contractors?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If contractors carry out lone working are there suitable precautions taken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there satisfactory control over works carried out in the building by outside contractors (including "hot work" permits)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there are in house maintenance personnel, are suitable precautions taken, including use of hot work permits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

Only authorised contractors, who have to provide method statements and schedules of work or TMO employees carry out work in the building, TMO has policies and procedures for contractors or in house employees carrying out work in their buildings, including "hot work" or other permit work.

According to the TMO policies contractors or employees are advised on procedures to undertake when lone working takes place. Contractors are advised that when work is carried out that waste and building materials should not be allowed accumulate and obstruct or block exits and escape routes nor should final exit doors be propped or wedge open to aid the workmen. If openings are created in fire resisting partitions or compartments suitable preventive measures must be put in place to maintain the fire separation within the building until these openings are closed again.

No construction refurbishment or maintenance work was being carried out in the building at the time of the visit nor were there any contractors on site.

**10. DANGEROUS SUBSTANCES**

	YES	NO	N/A
If dangerous substances are, or could be, used, has a risk assessment been carried out, as required by the Dangerous Substances and Explosive Atmospheres Regulations 2002?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments or observations:

There are no dangerous substances stored or used in the common parts of this building, this risk assessment has not taken into account any substances that may be within any domestic dwelling, but there are clauses in the residents contract to restrict such substances.

### **11. PEST CONTROL**

**YES NO N/A**

Is there suitable control of any pest infestations?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Comments or observations:

The building does not have any problems at the present time with rats, pigeons, squirrels or other rodents or insects but this issue is kept under review to mitigate any damage that these types of vermin could cause to the fabric or structure of the building and electrical cabling or wiring. If droppings or guano are noticed then action can be taken to inform the pest control company employed by TMO to monitor the pest situation and measures will be taken to eradicate the problem.

## **FIRE PROTECTION MEASURES**

### **12. MEANS OF ESCAPE FROM FIRE**

**YES NO N/A**

It is considered that the building is provided with reasonable means of escape in case of fire?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Is the design of the escape routes adequate?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Is there suitable protection of escape routes?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Are the escape routes unobstructed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Are the escape routes suitable for buildings occupancy?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Do the escape routes lead to suitable final exits?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Are there reasonable travel distances, both in a single and alternative direction, if applicable?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Are travel distances in dead ends suitably limited?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Are travel distances suitable for disabled people?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Is there adequate provision of final exits?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Are exits easily and immediately openable where necessary?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Where necessary do the fire exits open in direction of escape route?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Do the final exit doors have appropriate securing devices?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	YES	NO	N/A
Do the dwelling entrance doors appear to be fire rated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are any other doors protecting the escape route suitably fire rated and in a good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Where appropriate are any fire doors fitted with self closing devices and do these function correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are store and cupboard fire doors kept locked shut?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Where appropriate are the doors/flaps to rubbish chutes or the fire doors to the rubbish chute rooms suitable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the floor covering suitable to prevent slips, trips and falls?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

This building appears to have been constructed in accordance with the Building Regulations with the layout of the building including the travel distances, escape routes and exits appropriate for the present use. The lifts in the building are evacuation lifts so they would be used as the primary means of escape route with the protected staircase the secondary route, this is fire protected for its full height and has an independent final exit at ground floor level. The securing device on the inside of the main entrance/exit door is over ridden by the inner door handle, the walkway level door has a "push bar" fitted to it, both of these exit doors open in the direction of travel.

There was no visual damage observed during the assessment to the fire rated self closing doors of the staircase or the rubbish chute rooms, the fire doors of the rubbish chute rooms are fitted with cold smoke seals but not the door of the staircases. The fire doors of the staircases are not fitted with cold smoke seals because this is the inflow route for air supply needed for the automatic ventilation system installed on the flat/lobby areas.

The apartment entrance doors appear to be 30 minute fire rated doors with a letter box and a flap in the lower quarter to half, there are six apartments on each flat/loft lobby area so a small amount of apartments will be effected if there is an emergency on anyone lobby area.

One resident has erected a lockable metal gate externally to their flat entrance door for added security, it is assumed that this resident is able to unlock these quickly in an emergency to make their escape in case of fire.

At the time of this risk assessment the escape routes were clear of obstructions and the flooring materials on the escape routes within the common parts appeared suitable to prevent slips, trips and falls during evacuation, with no signs of any damage to the floors or any unevenness. The caretakers carry out checks and report any deficiency's to the "Hub" so repairs can be undertaken, some residents have placed door mats outside their flat entrance doors but these I believe do not cause a trip hazard nor an obstruction.

**13. DISABLED PEOPLE**

**YES      NO      N/A**

It is considered that the building is provided with reasonable arrangements for means of escape for disabled people?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Comments or observations:

At the time of the risk assessment there was no evidence of any resident within the premises who suffers from sensory impairment that would prevent them from hearing a shouted warning of fire. TMO have recently introduced a comprehensive programme to gathering information about tenants including any disabilities and their physical ability and mobility to respond to any emergency situations. This information will be imputed on a "TP Tracker system" and held centrally. The additional information will be used to assess if residents may require additional devices to provide them with early warning of smoke/fire in their home and/or development of a Personal Emergency Evacuation Plan (PEEPs). Both the lifts in this building are evacuation/fire fighting lifts and could be used in the evacuation of any disabled residents from the building.

**14. MEASURES TO LIMIT FIRE SPREAD AND DEVELOPMENT**

**YES      NO      N/A**

It is considered that there is:

A reasonable standard of compartmentation provided?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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A reasonable limitation of the fire loading in the means of escape routes/corridors that might promote fire spread?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The wall and ceiling linings are in a good condition?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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If fitted, is any fire rated glazing in good condition?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Where necessary are fire dampers provided to protect the means of escape against fire, smoke and combustion products in the early stages of a fire?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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If fitted, is the ductwork of any mechanical ventilation system cleaned and any filters changed regularly?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Comments or observations:

The building appears to have appropriate fire separation and compartmentation and from a visual inspection of the structure of the building there appeared to be no areas that raised concern about structural damage (fire stopping issues) to the building or obvious signs that in the areas covered that bad workmanship would mean that the fabric or fire integrity was or could be compromised. No invasive structural investigation was undertaken to complete this risk assessment. There were no visible breaches of the compartment or wall and ceilings linings at the time



of this risk assessment apart from those indicated in the significant findings section of this document.

At the time of this assessment the fire loading of the common parts of the building was considered to be good but please see the sections on “housekeeping” and “arson” for more information.

From information provided there are is automatic ventilation provide in the flat/lift lobby areas, please see section 19 below for more information and natural ventilation is used to vent the staircase and ground floor lobby area.

**15. EMERGENCY ESCAPE LIGHTING**

**YES NO N/A**

If any is fitted, is the emergency lighting system currently installed in the building, to a reasonable standard?

Is there adequately normal or borrowed lighting to back up any fitted emergency lighting system installed?

Where necessary, does the emergency lighting cover any external escape routes?

If fitted, are all emergency lighting units, clean and visually in a good condition?

Comments or observations:

There is emergency lighting installed in the staircases, flat/lobby areas, walkway and ground floor entrance lobby area, boiler, lift motor and plant rooms of the building giving I believe adequate coverage for the means of escape routes should the normal supply systems fail. Externally there is street lighting which will provide a suitable level of illumination outside the building during the hours of darkness for the external escape routes and also in the event of a supply systems failure in the building the exterior lighting would still function as it is on a different sub circuit. The system consists of self contained units, not a centralised battery system or a generator back up system, the neon indicator lights are visible on the units. The glare limits of the emergency lighting units are with-in the acceptable ranges of BS 5266 and the colour of the light produced is white , there are no twin pack lighting units in use.

**16. FIRE SAFETY SIGNS AND NOTICES**

**YES NO N/A**

Is there suitable pictogram fire exit signage in the building?

Are signs clearly legible, fixed in position and unobstructed?

If necessary, are there pictogram fire safety notices in the building with the assembly point indicated?

Comments or observations:

For the residential part of the building the layout of only one protected means of escape staircase means there is no need for escape signage to be provided in the this part of the building but signs have been displayed, this pictogram signage was in good condition at the time of this assessment. There are no fire action notices

displayed in the residents part of the building as the residents have been instructed on the actions to be taken in the event of any emergency in other ways.  
 To aid the emergency services each floor level is permanently numbered in a large font opposite the lifts.  
 In the office levels of the building there are some fire action notices displayed but these are not next to each break glass call point.

**17. MEANS OF GIVING WARNING IN CASE OF FIRE**

**YES NO N/A**

Is a suitable manually operated electrical fire alarm system provided in the common parts of the building?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does it have automatic fire detection, if required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the system suitable for the occupancy and fire risk?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the system extends into the private flats is it suitable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has remote transmission of the system been considered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Comments or observations:**

There is an automatic smoke detector located in each lift/lobby area on every floor level of the residential part of the building and a full fire alarm and warning system installed in the office areas of the building. The basement boiler room area has a manual system and the roof level lift motor room and plant rooms have automatic and manual systems all these devices are linked into the single fire alarm panel located in the ground floor entrance lobby area. There are no sounders of the fire alarm system in the residential parts of the building. As the result of a recent flooding of the ground floor lift lobby area a new fire alarm control panel had to be installed.

There was no access to all the individual dwellings but it is believed that they is a mixture of different types of self contained battery operated and hardwired domestic smoke alarms have been installed within each private flat. TMO in news letters etc has advised residents to fit domestic smoke detectors and there are some central records of devices being fitted in some flats. London Fire Service operate a policy where they will undertake visits to domestic dwellings and fitted domestic detectors, if during these visits concerns are identified about fire safety issues in the dwelling then TMO are informed by the Fire Service.

It is TMO's policy that if flats are refurbished then the installed detection is assessed to see if it needs to be up graded to current standards, but there is no requirement for existing layouts to be upgraded unless building work is being undertaken.

A 'defend in place' evacuation strategy is currently in place for all residential flats in the building and this is considered to be acceptable.

**18. PORTABLE FIRE EXTINGUISHING APPLIANCES**

**YES NO N/A**

Is there reasonable provision of portable fire extinguishers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all the fire extinguishing appliances readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments or observations:

There are no portable fire fighting appliances provided within the common parts of this building. Under normal circumstances it is good practice for extinguishers to be located in a building along escape routes and in close proximity to fire hazard areas. However there are a number of limitations which prohibits the installation of extinguishers on the premises. There is a history of extinguishers being stolen and / or misused. As there are no permanent staff on site and no one will trained in there use. The presence of extinguishers may encourage people to tackle a fire when, they should be evacuating the building. With this in mind the recommendation is to provide effective compartmentation and information provided to tenants about what actions to take in the event of a fire.

It is not know if any portable fire fighting equipment has been purchased by residents for their own private dwellings, in news letters to the residents there have been fire safety articles contains basic instructions in relation to the safe use of portable fire fighting equipment.

Fire extinguishers are provided in the roof level lift motor room, in the basement level boiler room and in the ground floor and walkway level offices these extinguishers were suitably located and the positioned. There are hose reels installed in the basement boiler room, these have not been tested since April 2008 by a company called "Dalkia".

**19. FIXED FIRE SYSTEMS AND EQUIPMENT**

**YES      NO      N/A**

Type of fixed system: Dry/Wet Riser

Evacuation/Fire fighting Lift

Automatic Opening Ventilation System

Comments or observations:

There is a dry riser installed in this building with the inlet inside the ground floor entrance lobby and visible from the fire appliance parking place, which will be on the main road outside the building. The outlets for the dry riser are on each floor level of the residential parts of the building and the roof level, the use of the dry riser will be under the total control of the Fire Service if it is used.

Both the lifts in the building are evacuation/ fire fighting lifts, the lifts have the standard fire fighter over ride controls fitted so that the Fire and Rescue Service can take control of these lifts and use them as they see fit to do so in the event of an emergency. TMO use a third party contractor to maintain and service the lifts and dry risers o are responsible for their operation and effective working.

The evacuation/ fire fighting lift could be used as part of a person's PEEP's if needed.

There is an automatic opening ventilation system located on each lift/lobby landing area, the vents are opened on the activation of the fire alarm detector for that floor level, there is a manual over ride facility located in the main entrance lobby.

## MANAGEMENT OF FIRE SAFETY

### 20. PROCEDURES AND ARRANGEMENTS

**YES      NO      N/A**

Are there routine in- house fire safety inspections and checks carried out, with records kept?

Are appropriate fire procedures in place with a suitable record of the fire safety arrangements ?

Are there suitable arrangements for summoning and meeting the fire and rescue service, including providing relevant information and any likely hazards?

Are there suitable policies and procedures in place for contractors and “lone workers”?

Comments or observations:

The caretakers walk the building on a daily basis and there are defect reporting policies and procedures in place so that any discrepancies or damage can be repaired or items replaced. The Fire and Rescue service can be called at any time by any resident if there is an emergency situation.

The Health and Safety Advisor of the TMO has regular liaison meetings with the local fire and rescue service commander to pass on information and arrange familiarisation visits if needed or requested. As far as I can tell and from information I have been given the policies and procedures are subject to reviewing at set intervals or are altered if new or relevant information becomes available.

### 21. TRAINING AND DRILLS

**YES      NO      N/A**

Are TMO employees given adequate fire safety instruction and training on induction and adequate periodic “refresher training” at suitable intervals, with records kept?

Is the content of the staff training provide suitable with practical instruction on fire fighting equipment?

Comments or observations:

All TMO employees receive induction training which includes fire training periodic “refresher training” at regular intervals, records of this training are kept by the Human Resources (HR) department at 300 Kensal Road North Kensington. Caretakers, wardens and office managers receive training to be fire marshals/ wardens by a third party fire training company the fire warden are also the nominated persons and by being recorded as a fire warden you are also the nominated person, training records again kept by the HR department. The topics and areas covered by the training packages are available from either TMO’s HR or

the Health and Safety team or direct from the training provider. I have been shown copies of the training documents and they appear to cover all the areas and topics that are mentioned in the H M Government risk assessment guidance booklets. The practical training involves using the types of portable fire fighting appliances currently provided in the TMO buildings.

If anybody receiving this training does not use English as their first language this fact is taken into account so that they comprehend the information given to them. Prior to moving into this building all residents are issued with a handbook which includes some fire safety advice and are given a tour of the building by a Housing Officer, there is no documentary evidencing required by TMO for the issuing of the handbook.

Contractors are reported by TMO to be required to have a construction phase plan which should be agreed before work commences and be acted upon including provision of a suitable number and type of fire extinguishers and someone trained to use them as part of the fire safety arrangements for the project where appropriate. Having asked one of the ladies in the housing offices there seems to have been no fire drills carried out by the office based staff of the housing department for a long time, she indicated years. Fire drills for all the TMO and RBKC staff should be organised by the manager and undertake at least twice a year with records kept.

**22. CO-OPERATION WITH ANY OTHER EMPLOYERS**

**YES NO N/A** \_\_\_\_\_

If this building is shared with other occupiers is fire risk Information co-ordinated between occupiers?

Have you received appropriate information on other occupiers fire risks and general fire precautions?

Comments or observations:

This is a multi occupied building, the basement, ground floor reception area, the walkway level housing offices and all the residential levels are under the control of the TMO. The ground floor areas of the Boxing Club and the Nursery and the whole of the upper ground floor (social services offices) are under the control of other occupiers. The TMO as the landlords are responsible for co-ordinating the fire risk assessment's significant findings of the other occupiers and co-ordinating any emergency response from any relevant information given. A copy of the significant findings from this risk assessment will be forwarded on to these other occupiers so that they can respond to any relevant information.

The small ground floor EDF electrical sub station which is unmanned and only visited infrequently and restricted to employees of this company has not been asked for any significant findings as this area is accessed externally and there is no needed for the company employees to enter the residential parts of the building and TMO employees cannot access this area.

**23. TESTING AND MAINTENANCE**

**YES NO N/A** \_\_\_\_\_

Is the structure of the premises adequately maintained?

Is there weekly testing and six monthly servicing of fire detection and fire alarm system, with records kept?

Is there a monthly visual and annual testing of the emergency escape lighting, with records kept?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>YES</b>	<b>NO</b>	<b>N/A</b>
Is there a monthly visual and annual maintenance of the fire extinguishing appliances, with records kept?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there routine checks of final exit doors and/or security fastenings, with records kept?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there periodic inspection of any external escape staircases and gangways, with records kept?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Six monthly inspection and annual testing of any wet or dry rising mains, with records kept?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six monthly inspection and annual testing of the fire fighting/evacuation lifts, with records kept?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weekly testing and periodic inspection of sprinkler installations, with records kept?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Annual inspection and test of lightning protection system, with records kept?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monthly and annual testing and servicing, under load of any back up/stand by generators, with records kept?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments or observations:

TMO have confirmed that any fire alarm and warning and emergency lighting systems are subject to a maintenance contract and that testing, servicing and maintenance are being carried out on such systems and records are kept by the contractors of all systems.

TMO have indicated that it is intended that monthly on site checks of emergency lighting and portable fire fighting equipment will be carried out by the caretakers and that a written record will be kept on each relevant premises file.

RGE Services are under contract to TMO to provide portable fire fighting equipment testing, servicing and maintenance, but the extinguishers in the building were out of test date, last tested November 2009 and some had "condemned" written on them in large black writing. This seems to indicate that monthly occupier inspections are not being carried out.

Any fixed systems installed in the building are serviced, tested and maintained by professional third party contractors on a planned preventive maintenance programme with records kept centrally by TMO at the "Hub".

## **Definitions:**

**Responsible person:** The person ultimately responsible for fire safety as defined in the Regulatory Reform (Fire Safety) Order 2005. which is:-

**"responsible person"** means—

- a) in relation to a workplace, the employer, if the workplace is to any extent under his control;
- b) in relation to any premises not falling within paragraph (a)—
  - i. the person who has control of the premises (as occupier or otherwise) in connection with the carrying on by him of a trade, business or other undertaking (for profit or not); or
  - ii. the owner, where the person in control of the premises does not have control in connection with the carrying on by that person of a trade, business or other undertaking.

**"relevant persons"** means—

- a) any person (including the responsible person) who is or may be lawfully on the premises; ( members of the public in a shop or licensed premises, contractors or visitors in a factory ) and
- b) any person in the immediate vicinity of the premises who is at risk from a fire on the premises, but does not include a fire-fighter who is carrying out his duties in relation to a function of a fire and rescue authority under section 7, 8 or 9 of the Fire and Rescue Services Act 2004 (fire-fighting, road traffic accidents and other emergencies). This could include people in flats above a ground floor shop or the staff living over a licensed premises.

**Child;** Anyone who is not over compulsory school age, i.e. before or just after their 16th birthday.

You must, before you employ a child, provide a parent with clear and relevant information on the risks to that child identified by the risk assessment, the measures you have put in place to prevent/protect them from fire and inform any other responsible person of any risks to that child arising from their undertaking.

**Combustible materials:** A substance that can be burned.

**Compartment wall and/or floor:** A fire-resisting wall or floor that separates one fire compartment from another.

**Competent person:** A person with enough training and experience or knowledge and other qualities to enable them properly to assist in undertaking the preventive and protective measures.

**Dangerous substances:** A substance which because of its physico-chemical or chemical properties and the way it is used or is present at the workplace creates a risk or a substance subject to the Dangerous Substances and Explosive Atmosphere Regulations 2002 (DSEAR). Small quantities of substances are not considered a major hazard for instance DSEAR talks of quantities of 25 litres and more so a few plastic bottles of cleaning materials and other such substances are

not relevant and would be normal. For example the local corner shop or supermarket would not record as dangerous substances all the items they sell in their shop, including bleach, white spirit, paint and glue etc.

**Material change:** An alteration to the premises, process or service which significantly affects the level of risk to people from fire in those premises.

**Means of escape:** Route(s) provided to ensure safe egress from the premises or other locations to a place of total safety.

**Premises:** Any place, such as a building and the immediate land bounded by it, any tent, moveable or temporary structure or any installation or workplace.

**Significant findings:** A feature of the premises or items from which the fire hazards and persons at risk are identified this information comes from completing the fire risk assessment. It can also contain the necessary information, instruction and training needed and how it will be given. From the significant findings can come an:-

**An Action plan:** The actions you have taken or will take to remove or reduce the chance of a fire occurring or the spread of fire and smoke, including time frames and who will supervise or carry out the work needed.

**Travel distance:** The actual distance to be travelled by a person from any point with-in the floor area to the nearest storey exit or final exit, taking into account the layout of walls, partitions and fixings in the building. If the building has been constructed in accordance with The Building Regulations and no unauthorised alterations have then place then the travel distances will be satisfactory.

**Where necessary:** The Order requires that fire precautions (such as fire fighting equipment, fire detection and warning, and emergency routes and exits) should be provided (and maintained) 'where necessary'.

What this means is that the fire precautions you must provide (and maintain) are those which are needed to reasonably protect relevant persons from risks to them in case of fire. This will be determined by the findings of your risk assessment including the preventative measures you have or will have taken.

**Who is at Risk in the building:**

This is a term used in risk assessment documents and the Fire Safety Order 2005, for the purposes of this risk assessment persons who are at risk are deemed to be anybody who is lawfully entitled to be in the building, ie relevant persons, but excluding fire fighters engaged in emergency activities. Please see the definition of "relevant persons" as described above.

**Young person:**

(a) A person aged 16 years, from the date on which he attains that age until and including the 31st August which next follows that date.

(b) A person aged 16 years and over who is undertaking a course of full-time education at a school or college which is not advanced education.

(c) A person aged 16 years and over who is undertaking approved training that is not provided through a contract of employment.



## **REFERENCES:**

### Fire Safety Design and Management

BS 5588-12: 2004. *Fire precautions in the design, construction and use of buildings Managing fire safety.* Now incorporated in:

BS 9999: 2008. *Code of practice for fire safety in the design, management and use of buildings.*

LACoRS. *Housing Fire Safety Guide*

### Fire Detection and Fire Alarm Systems

BS 5839-1: 2008. *Fire detection and fire alarm systems for buildings - Code of practice for system design, installation, commissioning and maintenance.*

BS 5839-6: 2004. *Fire detection and fire alarm systems for buildings – Code of practice for the design, installation and maintenance of fire detection and fire alarm systems in dwellings.*

BS 5839-8: 2008. *Fire detection and fire alarm systems for buildings - Code of practice for the design, installation, commissioning and maintenance of voice alarm systems.*

BS 5839-9: 2003. *Fire detection and fire alarm systems for buildings - Code of practice for the design, installation, commissioning and maintenance of emergency voice communication systems.*

### Fire Extinguishing Appliances

BS 5306-1: 2006. *Code of practice for fire extinguishing installations and equipment on premises - hose reels and foam inlets.*

BS 5306-3: 2003. *Fire extinguishing installations and equipment on premises - Code of practice for the inspection and maintenance of portable fire extinguishers.*

BS 5306-8: 2000. *Fire extinguishing installations and equipment on premises - Selection and installation of portable fire extinguishers - Code of practice.*

BS EN 3. *Portable fire extinguishers.*

BS EN 671-3: 2000. *Fixed fire-fighting systems. Hose systems. Maintenance of hose reels with semi-rigid hose and hose systems with lay-flat hose.*

BS EN 1869: 1997. *Fire blankets.*

### Emergency Escape Lighting

BS 5266-1: 2005. *Emergency lighting - Code of practice for the emergency lighting of premises.*

BS 5266-7: 1999 (BS EN 1838: 1999). *Lighting applications - Emergency lighting.*

BS 5266-8: 2004 (BS EN 50172: 2004). *Emergency escape lighting systems.*

### Fire Safety Signs

BS 5499-1: 2002. *Graphical symbols and signs - Safety signs, including fire safety signs. Specification for geometric shapes, colours and layout.*

BS 5499-4: 2000. *Safety signs, including fire safety signs. Code of practice for escape route signing.*

BS 5499-5: 2002. *Graphical symbols and signs - Safety signs, including fire safety signs. Signs with specific safety meanings.*

BS 5499-10: 2006. *Safety signs, including fire safety signs. Code of practice for the use of safety signs, including fire safety signs.*

### Fixed Fire Extinguishing Systems and Equipment

BS 5306-2: 1990. *Fire extinguishing installations and equipment on premises - Specification for sprinkler systems.*

BS 9990: 2006. *Code of practice for non-automatic fire-fighting systems in buildings.*

BS EN 12845: 2004. *Fixed fire-fighting systems - Automatic sprinkler systems - Design, installation and maintenance.*

### Miscellaneous

BS 7176: 1995. *Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing composites.*

BS 7273-4: 2007. *Code of practice for the operation of fire protection measures - Actuation of release mechanisms for doors.*

BS 7671: 2008. *Requirements for electrical installations. IEE Wiring Regulations. Seventeenth edition.*

PAS 79: 2007. *Fire risk assessment - Guidance and a recommended methodology.*

### Lightning

BS EN 62305-1: 2006. *Protection against lightning. General principles.*

BS EN 62305-2: 2006. *Protection against lightning. Risk management.*

BS EN 62305-3: 2006. *Protection against lightning. Physical damage to structures and life hazard.*

BS EN 62305-4: 2006. *Protection against lightning. Electrical and electronic systems within structures.*