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The Regulatory Reform (Fire Safety) Order 2005

Fire Risk Assessment Report

Client The Company

Client Premises Common areas and common systems in the building
Specimen organisation

Assessment Undertaken by Mr Fire Master
Graduate Member of the Institution of Fire Engineers

Date of Assessment 29 & 31 May 2007

Prepared for Mr Client

Date of Report 31 May 2007

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Section 1	Introduction and Overview
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The Fire Risk Assessment was undertaken by our Consultant who previously served in a Fire Service Fire Safety Branch and on Fire Fighting Duties. The experience and expertise of our Consultant gives him the status of "Competent Person" as described in various articles of The Regulatory Reform (Fire Safety) Order 2005.

With effect from 1st October 2006 The Regulatory Reform (Fire Safety) Order 2005 became the Fire Law with repeal of the previous main and subsidiary legislation.

The Assessment was undertaken in accordance with general risk assessment principles in order to identify hazards that could contribute to injury of persons working in or resorting to the building. Additional information was provided by Mr Maintenance, Building Manager.

There are five aspects that our consultant has used his professional judgement to consider:

Identification of Hazards

Assessment of those at Risk

Evaluation of the Risk

Methods of Control

Further Controls that are Necessary

Due regard has been given to the standards of fire safety required for the premises and training that is necessary to maintain and wherever possible to improve those standards, and the records to be kept.

The conclusions of the Risk Assessment have been reached by consideration of the Guide - HM Government fire safety risk assessment: offices and shops 2006, and various fire related British Standards. The standards of the Guide and other documents have been applied reasonably to provide and maintain satisfactory Fire Safety Standards and Fire Safety Management.

This is a normal risk building that is well managed. Improvements are needed in standards and Fire Safety Management for it to meet with current fire safety standards.

Findings: There were no significant findings.

All findings are listed in Section 8 – Further Control Measures Required – with recommended time scale for improvement

EXAMPLE

Building Description

This is a normal risk building built in approximately 1967 and comprises a basement and ten floors with additional plant areas situated at roof level.

The normal entry point is via the front main entrance doors facing onto Bedford Park which provides access through the reception lobby to passenger lifts. These lifts extend from the basement to serve all occupied levels to the tenth floor. Adjacent to this a common pedestrian stairway is provided to serve all occupied floors and continues above this to give access to the roof plant area.

All occupied floor levels up to the ninth floor are used as office accommodation and general meeting facilities with part of the tenth used as a staff canteen with an associated kitchen. The remainder of this floor is vacant.

Alternative escape staircases are additionally provided which serve all levels to finally discharge at ground level into the car park.

To assist with the movement of building stock a service lift is installed which serves the basement and pre-determined floor levels above this.

Means of Escape

The designated means of escape is via the escape staircases all of which discharge safely to a final exit direct to open air and ultimate safety.

Escape from each floor area is through the protected lift lobby to access the central protected staircase enclosure which continues to discharge through the lift lobby to open air via the main entrance doors.

The alternative escape staircases at each wing of the building are entered through a protected lobby approach to discharge direct to open air at ground floor into the buildings car park.

For the ground floor main office area, escape is provided direct to open air through either the lift lobby and front entrance doors or via the independent alternative escape door from the floor level direct to open air into the car park.

For the separated corridor part of this floor escape is similarly provided through the lift lobby and front entrance doors or alternatively direct to open air via the loading dock access doors.

The Post Room which is accessed off the corridor is provided with an alternative escape door direct to open air into the building car park.

Escape from the basement is facilitated for by access to the stairway within the lift protected lobby, this stair rises to ground level as the first point of discharge directly to open air.

Escape from the storage area is also by means of this route or by an alternative protected stairway to open air at ground level. Escape from the basement & roof plant areas is as follows:

- Boiler Room & Large Tank Room: Via the protected corridor approach to access the stairway in the protected lift lobby or by the alternative escape route into the protected stairway at the rear of the compartment.
- Mainframe, Meter Room & Store: By means of a single direction of escape through the protected corridor and lift lobby to give access to the protected staircase.
- Escape from the roof plant and lift motor rooms is by means of direct access into the protected stairway to discharge direct to open air.

Fire Strategy

The construction together with the fire-resisting doors installed provides one-hour fire-resisting compartments between floors, and between floors and the main staircase enclosure. The fire resistance between the floors and the alternative escape staircase is a half-hour standard.

A fire alarm system is installed with automatic fire detection in some office areas and the control panel is sited in the Building Managers Office leading off the ground floor entry. Fire alarm call points are sited in each floor by the exits from the offices and building exits; the sounders are electric.

In the event of fire the alarm will be raised by automatic detection or by the discoverer operating a fire alarm call point. Persons in the building will evacuate by the available escape routes and to their assembly area clear of the building in the Lunar House Car Park.

The fire evacuation controller – the security receptionist – will call the fire and rescue service to attend the incident at the building.

EXAMPLE

Section 4	Identification of Hazards
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All premises are prone to two categories of hazards:

1. Fire hazards
2. General hazards that may adversely affect persons evacuating from fire

Fire Hazards

For a fire to start three constituents are needed:

- A source of ignition;
- Fuel; and
- Oxygen.

If any one of these is missing, a fire cannot start. Taking steps to avoid the three coming together will therefore reduce the chance of a fire occurring.

FIRE CONSTITUENTS IN THE PREMISES		
Ignition Source	Fuel	Oxygen
Electrical/Gas installation	Building components/Timber and cloth in furnishings	Natural ventilation
Electrical appliances	Building components/some papers but minimal	Natural ventilation
Careless disposal of smoking materials	Stored materials	Natural ventilation

General Hazards

These are the deficiencies in the general fire precautions that can affect safety when a fire has started somewhere in the building and come into categories:-

- Means of escape
- Protection to the means of escape
- Fire alarm and detection system
- Fire fighting equipment
- Maintenance of systems and provisions
- Fire safety management, planning and the Fire Emergency Plan
- Fire Safety and procedures training

Our Consultant applies his professional knowledge and experience to check and assess fire and general hazards in the premises.

The areas where persons may be in the premises are as follows:

PERSONS WHO MAY BE AT RISK	AREAS WHERE PERSONS RESORT TO
Building Management team members; occupiers' employers and employees; Landlords' contractors; occupiers' contractors; visitors to the Building Management; visitors to the occupiers; the public.	The general circulation areas: staircase enclosures, corridors, washrooms.
Building Management team members; occupiers' employers and employees; Landlords' contractors; occupiers' contractors; visitors to the Building Management; visitors to the occupiers; the public.	Car parking
Occupiers' employers and employees; tenants' contractors; tenants' visitors; persons evacuating through the by-pass escape route	Occupiers Premises
Building Management team members; Landlords' contractors; occupiers' contractors; other persons approved by the Building Management such as Consultants on survey	Plant Rooms including Riser Ducts
Building Management team members; Landlords' contractors; tenants' employees; visitors	Landlord's Offices
Building Management team members; Landlords' contractors	Landlord's Stores

Our Consultant has assessed the level of risk to persons who were in the premises, and those who may be in the premises at any time.

There were no persons at special risk at the time of the risk assessment and there are no parts of the premises that are likely to present such risk.

Setting out a risk assessment matrix gives some guidance to the severity of the risk and a basic matrix is shown below. The matrix is too simple to cover affects due to deficiencies in the fire safety standards in premises as the insignificant can result in tragedy.

Risk Level = Likelihood x Severity				
Likelihood	Severity	Slightly Harmful	Harmful	Extremely Harmful
Highly Unlikely		Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely		Tolerable Risk	Moderate Risk	SUBSTANTIAL RISK
Likely		Moderate Risk	SUBSTANTIAL RISK	INTOLERABLE RISK

Fires do occur due to three main reasons:

1. They are started deliberately
2. They occur because people are not alert to fire hazards
3. They occur because people are careless of fire hazards

We consider substantial and intolerable risks as **HIGH** risk category for rectification.

Our Consultant will always ensure that HIGH risks are cleared at the time of inspection. If a HIGH risk cannot be cleared immediately the Consultant will contact the Client by telephone with detail of the HIGH risk and immediate action required.

Moderate risks are set as MEDIUM risk category with action to be taken to rectify them as soon as possible and within one month maximum, or to be reduced in severity to a LOW risk until the defect can be rectified.

Trivial and tolerable risks have a LOW risk category requiring rectification as soon as possible and within three months maximum.

The time for rectification is judged reasonable for the risk category based upon the guidelines set by the fire authorities on previous legislation, particularly the Fire Precautions Act 1971; however, the rectification should be undertaken sooner whenever possible.

Section 7	The Existing Methods of Control
<p>The following are the main methods of control. Where the font is red there are serious deficiencies or no control in place.</p>	
<p>The building is maintained secure against unauthorised entry with access doors kept fastened shut. Building occupiers are encouraged to be vigilant and to challenge strangers noted in the common areas.</p>	
<p>Perimeter checks are undertaken to ensure there are no broken windows or damage where arsonists could introduce lit materials.</p>	
<p>Liquefied Petroleum Gas is not used or stored in the premises other than used for maintenance purposes and controlled by permit to work.</p>	
<p>Highly flammable liquids are not used or stored in the premises other than used for maintenance purposes and controlled by permit to work.</p>	
<p>Good housekeeping is practiced with waste cleared, bagged, and safely stored for regular disposal.</p>	
<p>There is a smoking policy to eliminate the risk of fire from carelessly discarded smoking materials.</p>	
<p>The electrical installation is inspected five yearly in accordance with the 16th Edition I E E Regulations and portable electrical appliances are tested regularly for insipient faults.</p>	
<p>Cables are managed with none permitted to be loose fixed across walkways and escape routes.</p>	
<p>Multi-outlet adaptors are kept to the minimum with care being taken not to overload electrical circuits.</p>	
<p>Electrical appliances in use, in the electrical cupboards, electrical switch rooms and riser ducts are kept clear from combustible materials and storage</p>	
<p>Employees' initial and ongoing training includes the safe use of electrical work equipment and the care of electrical cables, plugs, connectors, and adaptors.</p>	
<p>Permits to work are issued to contractors when attending to site for Hot Work processes.</p>	
<p>All contractors are vetted for competence and adequate health and safety procedures in order to receive approved contractor status.</p>	
<p>the employer of any employees from an outside undertaking who are working in or on the premises is provided with comprehensible and relevant information on— (a) the risks to those employees; and (b) the preventive and protective measures taken by the responsible person.</p>	
<p>Heating in the building is by means of the fixed building air conditioning system with no portable electrical heaters allowed on site.</p>	
<p>Access in to Plant Rooms and Electrical Riser Ducts is restricted to approved contractors and trained employees only.</p>	
<p>The building construction is in accordance with B1 Building Regulations or BS 5588, and complies with the requirements of The Regulatory Reform (Fire Safety) Order 2005. When alterations are proposed they are designed to comply with B1 Building Regulations and/or HM Guide fire safety risk assessment: offices and shops</p>	
<p>All fire exit doors and intermediate escape doors have simple locks fitted that can be immediately opened without the need to use a key. Where electric locks are fitted, break-glass switches are installed by the door/s to cut the power locally so the locks will release allowing the doors to be opened. Electrical locks are also linked to the fire alarm system to release on operation of the fire alarm, and they fail safe unlocked in the event of a power failure.</p>	

Fire-resisting doors are kept locked shut or are maintained effectively self-closing as appropriate; and all doors are closed when the building is unoccupied to prevent spread of fire should one occur.
Travel distances and exit widths are adequate for the number of persons who may be in the building at any time
Escape and emergency lighting is installed to all escape routes and in plant rooms
A fire alarm system is installed throughout the building consisting of a control panel, manual call points, and either bell or electrical sounders.
Portable fire appliances are installed sufficient for the risk.
Fire safety signs are installed to clearly indicate escape routes and hazards on the escape routes such as low head room in non-public areas.
Fire Action Notices are fixed by each fire alarm call point.
All fire-resisting doors have appropriate signs fixed on them
All signs comply with the Signs and Signals Regulations
Fire safety inspections, tests, checks and services are carried out for all fire safety equipment and provisions in the premises.
Brief fire safety training is given six-monthly prior to the fire evacuation drill.
A fire evacuation drill is organised six-monthly for all persons working in the building. The fire evacuation assembly area is clear of the building and clear of fire-fighter operations. The manager takes control of the evacuation from the building and appoints persons for specific evacuation duties including assisting disabled persons from the premises.
There are adequate arrangements for calling the fire and rescue service to the building – building phone, mobile phone and phones in near by buildings.
Fire safety records are kept in the premises appropriate to the fire safety law applicable to the premises. This includes a fire log book, copy of the risk assessment, and a Fire Emergency Plan

Section 8	Further Control Measures Required
<p>This section sets out specific defects found and the remedial measures (further controls) needed. The measures are those considered by our Consultant to be necessary to meet a reasonable standard of general fire precautions in the premises.</p> <p>The Fire Safety Manager should review the measures and initiate action in the recommended time scale as follows:</p>	
HIGH PRIORITY	Initiate remedial action immediately
MEDIUM PRIORITY	<p>Review within one week. All work that can be undertaken by site staff is to be progressed with aim for completion in one week.</p> <p>For all work that needs outside contractors involvement, obtain quotations for work as soon as can be. Place orders and aim for completion within a month subject to the contractor's availability and the contract extent.</p>
LOW PRIORITY	<p>Review within one week. All work that can be undertaken by site staff is to be progressed with aim for completion in not more than three months.</p> <p>For all work that needs outside contractors involvement, obtain quotations as soon as can be. Place orders and aim for completion within a further two months maximum.</p>
<p>The Fire Safety Manager should enter the person/contractor responsible for the rectification in the BY WHOM column, and the date for required completion in the BY WHEN column, the correct rows.</p> <p>As an item of work is completed and has been checked satisfactory by the Fire Safety Manager, the Fire Safety Manager should sign and date in the last two columns in the correct rows.</p>	

	FURTHER CONTROL MEASURES REQUIRED	PRIORITY	BY WHOM	BY WHEN	COMPLETION SIGNATURE	COMPLETION DATE
1	<p>A notice FIRE DOOR KEEP SHUT that complies with The Health & Safety (Safety Signs & Signals) Regulations 1996 should be fixed on each side of the following fire-resisting doors:</p> <ul style="list-style-type: none"> I. Basement storeroom adjacent to the meter room II. 10th floor: <ul style="list-style-type: none"> • Double doors (one leaf) which gives access to the vacant area • The faded FIRE DOOR KEEP SHUT notice on the double doors giving access to the tenant areas should be replaced 	MEDIUM				
2	<p>A Fire Action Notice complying with the Health & Safety (Safety Signs & Signals) Regulations 1996 should be fixed by the fire alarm call points:</p> <ul style="list-style-type: none"> I. Basement: Lift lobby & boiler room II. Ground floor: Lift lobby adjacent to the lift III. 7th floor: Lift lobby & access corridor to Hotgen IV. 8th floor: Lift lobby V. 9th floor: Lift lobby VI. Within alternative protected staircase lobbies, 1st floor, 2nd floor, 3rd floor, 4th floor, 5th floor, 6th floor, 7th floor, 8th floor, 9th floor & 10th floor 	MEDIUM				
3	<p>A FIRE EXIT KEEP CLEAR sign complying with the Health & Safety (Safety Signs & Signals) Regulations 1996 should be fixed on the external face of the fire exit door:</p> <ul style="list-style-type: none"> I. Alternative final exit from Land Registry to the car park II. Alternative final exit from the Post Room to the car park 	MEDIUM				
4	<p>The structure to include any services passing through it surrounding the Building Managers Office ground floor should be fire-stopped or increased as necessary to provide a minimum standard of 30 minutes fire resistance. At present this office presents a risk to the protected lift lobby approach, a designated escape route from the building. This enclosure should be maintained clear of all risk. However, it is permissible to allow a true reception facility in the area providing that this does not exceed 10sqm in size</p>	MEDIUM				

	FURTHER CONTROL MEASURES REQUIRED	PRIORITY	BY WHOM	BY WHEN	COMPLETION SIGNATURE	COMPLETION DATE
5	<p>The basement plant area dead end approach protected corridor should be maintained clear of all risk, the following action is necessary:</p> <ul style="list-style-type: none"> • This corridor should be cleared of all storage or obstruction • The out of use mezzanine area above the meter room should be checked and maintained a sterile area at all times. Alternatively this area should be sealed from the protected corridor with materials or a door which provides a minimum standard of 30 minutes fire resistance 	MEDIUM				
6	<p>Any shaft or duct extending between floors or other elements of construction may present a risk of rapid and uncontrolled spread of products of combustion throughout the building in the event of fire. Buildings are most at risk where new services are introduced between the spaces and unprotected areas which are not suitably sealed at the point at which they pass through the structure. The following action is required:</p> <ol style="list-style-type: none"> I. The mezzanine area accessed through the open aperture in the duct cupboard accessed off the basement lift lobby should be checked for the presence of any combustible materials which if found should be removed. II. The point at which services pass through the structure should be sealed with materials designed to provide a minimum standard of 30 minutes fire resistance This applies to each duct cupboard within the lift lobby 1st, 2nd, 4th, 5th, 6th, 7th, 8th, 9th & 10th floors III. Basement mainframe room to meter room. In addition the frame surrounding the door leading to the mainframe room should be sealed to an identical standard IV. 7th floor in the area occupied by Hotgen, inner duct cupboard from the cleaners store 	MEDIUM				
7	<p>The fire alarm system should be extended to include the roof plant and lift machinery lobby. The extended system should be interlinked into the existing system and should comply fully with British Standard BS 5839</p>	MEDIUM				

	FURTHER CONTROL MEASURES REQUIRED	PRIORITY	BY WHOM	BY WHEN	COMPLETION SIGNATURE	COMPLETION DATE
9	It is noted that Evac Chairs have been made available for use to assist with evacuation of disabled persons. It is recommended that these are not brought into use until all control measures identified in a suitable risk assessment have been put in place	MEDIUM				
10	<p>The fire hose reels are quite an expensive item to maintain and this becomes more expensive as each year passes due to the wear and tear and hose deterioration. For systems with pumps there are regular outgoing costs due to leaks and faults. The cost of maintenance per hose reel unit can be up to £140.00 a year over a ten year period.</p> <p>In the event of a fire no persons in the building should attempt to tackle the outbreak with a hose reel as none are adequately trained to be competent to do so and the risk is too high.</p> <p>The fire fighters will not use the hose reels as their health and safety regime does not permit them to use fire fighting equipment that they have not tested.</p> <p>There is no logical reason for the hose reels to remain in the building.</p> <p>As well as removing maintenance costs there could be valuable riser space freed for beneficial use.</p>	LOW				
11	At the time of the visit it appeared that the periodic test of the building electrical installation had not been commenced. This inspection should be undertaken as soon as practicable	MEDIUM				
12	A fire logbook should be kept in the Workplace. It should be used to record the result of all checks, inspections and service of fire equipment and systems, the checking of passive fire protection and the training provided to employees. At present the record of maintenance conducted on building protective equipment is held and maintained by the individual contractors. These records should be transferred and held in the above logbook in order that they are immediately available for inspection on request.	MEDIUM				

	FURTHER CONTROL MEASURES REQUIRED	PRIORITY	BY WHOM	BY WHEN	COMPLETION SIGNATURE	COMPLETION DATE
13	A Fire Safety Manual should be prepared in accordance with British Standard BS5588 Part 12: managing fire safety The Manual, which should be bespoke to the building, will provide an ongoing record of fire safety management and will give appropriate guidance to the Fire Safety Manager and others.	LOW		6 Months		

Section 9		Further Improvements to be Considered & Other Comment
Improvements		
1	See below	
Comments		
1		Consideration should be given to increasing the level of protection afforded to the building by the fire alarm system by the incorporation of automatic smoke/heat detection for risk areas interlinked into the fire alarm system to comply with British Standard BS 5839.

Section 10		Recommended Review
The Fire Safety Manager should monitor the progress of work undertaken in rectifying the deficiencies reported and should ensure that checks are undertaken at target completion dates.		
A final follow up inspection should be undertaken in three months time when all of the reported deficiencies should have been corrected.		
A Fire Risk Assessment and occupiers' compliance surveys should be undertaken annually.		