



FRANKHAM RMS

FIRE RISK ASSESSMENT



Building: Cromwell Tower
Date of Assessment: 18/11/16
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Fire Risk Assessment Report (Common Areas)

Cromwell Tower, Barbican Estate, London EC2Y 8DD

FRA Reference Cromwell Tower



Surveyor name	Carl Dennis
Professional credentials	GIFE
Reviewed By	Tom Gilbert CFPA (europe) Dip
On behalf of	City of London Corporation
Managing Office details	
Date of Survey	18 th November 2016
Target for Review	18 th November 2018

This fire risk assessment should be kept centrally with a copy to be placed in the on-site fire log book. It should be available for audits which may be carried out internally or by the 'enforcing authority'.



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Significant findings

1. **Introduction**
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SIGNIFICANT FINDINGS

Item No.	Action item description (additional control measure)	Priority action level	Action item by whom	Completed date
6.2.3	Final exit doors from flats are consistent. Where sampled they were found to be of solid construction, without positive action self-closing devices, without intumescent strips, smoke seals or substantial rebates/door stops; although they should provide nominal fire resistance, they do not appear to comply with current standards. Consideration should be given to replacing or upgrading all flat doors so that they provide a minimum of 30 minutes fire resistance, they should be fitted with intumescent strips and cold smoke seals, 3 steel hinges and positive action self-closers.	Low		
6.2.5	It was noted that in some instances; residents use escape routes for storage purposes. Implement robust arrangements to ensure escape routes are maintained clear of storage.	Medium		
6.2.8	The survey was undertaken in daylight hours and therefore it was not possible to determine whether adequate compensatory lighting/emergency lighting is provided to external escape routes. A specific survey should be undertaken by a competent person with any identified deficiencies being addressed.	Low		
6.5.2	Fire action notices are inconsistently displayed in communal areas; however the guidance is ambiguous in respect of a 'stay put' evacuation strategy. Consideration should be given to replacing this signage with more definitive instructions; displayed in a consistent manner.	Low		
6.7.4.1	It was noted that in some instances service risers and similar are used for storage purposes. Implement robust arrangements to ensure all such areas, are maintained clear of storage.	Medium		
6.7.4.3	It was noted that fire doors to electrical intake cupboards and similar within the escape routes do not display 'fire door keep locked' signage. 'Not to be used in case of fire' signage is not displayed adjacent to lift enclosures. Lobby doors do not universally display 'fire door keep shut' signs on both sides. Ensure appropriate signage is displayed.	Low		



6.7.4.4	It was noted that in some instances, portable fire extinguishers are provided within communal areas. Typically fire extinguishers are not provided within this type of property as residents are unlikely to have been appropriately trained. Consideration should be given to their removal.	Medium		
6.8.1	It was noted that in some instances fire doors do not close effectively. Ensure a robust program of fire door maintenance is implemented.	Low		

Important

If the additional control measures listed above cannot be implemented within the proposed time scale, the details should be documented. A revised date for completion or alternative solution with new time scales should be identified as part of this process.

It may be necessary to put interim measures into place as part of the process of resolving particular deficiencies.

1.Introduction

This report has been prepared as a written record of the Fire Risk Assessment, carried out Cromwell Tower on 18th November 2016 on behalf of the Landlord, City of London Corporation, under the requirements of the Regulatory Reform (Fire Safety) Order 2005.

The objectives of this Fire Risk Assessment are :-

- a) To identify all current significant fire hazards to which relevant persons on the premises, or in the immediate vicinity of the premises, will be exposed.
- b) To reasonably quantify the level of residual fire risk that is attributed to the premises and its use, with regard to existing (preventive and protective) controlling measures with the emphasis on life safety.
- c) To advise on the nature and extent of any additional (preventive and protective) controlling measures which should be implemented in order to counteract this residual risk, in accordance with the 'Principles of Prevention' as defined in Article 10 of The Regulatory Reform (Fire Safety) Order 2005.

Risk Assessment is not a 'one off' activity, and is part of a dynamic process. It is thus a requirement under Article 9(3) of The Regulatory Reform (Fire Safety) Order 2005 to review and modify the risk assessment when either :-

- a) There is reason to suspect that it is no longer valid, perhaps due to a gradual change in the nature of the tenancy numbers or type, wear & tear on facilities, a large number of small changes, an appreciation of a hazard (e.g. highlighted by fire evacuation drill), or the occurrence of an incident (e.g. actual fire or near miss), which triggers a need to review, OR
- b) There is a significant change in the matters to which it relates, (i.e. following major organisational changes or any refurbishment, alterations or extension).

This risk assessment is a 'dynamic' working document that should be used as a guide to planning future actions aimed at improving Health & Safety for tenants and others who may be affected by a potential fire at the premise. Notwithstanding the requirements noted in Section 1.3 above, it is a requirement of, City of London Corporation that Fire Risk Assessments are normally reviewed annually, unless otherwise advised by the fire risk assessment report. Some reasonable flexibility is permitted to accommodate logistical and financial constraints.

2. Scope of Assessment and Methodology

2.1 Statutory Requirement

Article 9 of The Regulatory Reform (Fire Safety) Order 2005 requires every responsible person to make a suitable and sufficient assessment of the fire risks to which relevant persons are exposed, with respect to premises within their control. This is for the purpose of identifying the general fire precautions that are needed to comply with the requirements and prohibitions imposed by the Order.

The responsible person, or any other person who has to any extent control of the premises, must ensure that the duties imposed by the relevant articles of The Regulatory Reform (Fire Safety) Order 2005 are complied with in respect of those premises, so far as the requirements relate to matters within their control.

Where the premises are licensed, an alterations notice is in force, or the responsible person has five or more employees, it is a requirement to record the significant findings of the fire risk assessment including the measures which have been or will be taken as a result of the assessment and details of any group of persons identified by the assessment as being especially at risk.

This report therefore incorporates such relevant information, significant findings and recommended actions that are considered necessary to demonstrate compliance with The Regulatory Reform (Fire Safety) Order 2005.

2.2 Identification of Fire Hazards

In order to identify the significant fire hazards within the premise, a checklist is used which considers the particular fire hazards associated with this type of building and the nature of the occupancy.

The hazard identification process will consider each item with due regard to the existing 'control measures', which are either already inherent within the building fabric design or are implemented through the management policy procedures for the premise.

2.3 Assessment of Fire Risk

Each identified hazard is assessed in accordance with the fire risk-rating matrix detailed in Section 4.0 of this report. This matrix has due regard to the person or group of persons who are likely to be affected by each hazard, by considering the hazards in terms of their potential to harm (severity) and their likelihood (probability) of actually occurring.

The matrix allows the assignment of a specific risk rating for each perceived hazard, which subsequently assists in determining the nature and extent of any necessary additional controlling measures, (both physical and procedural deficiencies), as well as the timescale in which these measures should be reasonably implemented.



2.4 Significant Findings Table

The Significant Findings Table details the blend of technical and procedural measures, which are considered necessary to adequately address the residual risk that has been previously identified, semi-quantified and assigned a 'risk-rating'. This risk control plan is essentially an inventory of remedial / advisory actions which should be carried out by the Landlord or his appointed representative, within the recommended timescales. These timescales are suggested purely to aid reasonable implementation of the significant findings, and have been agreed by, City of London Corporation. For the residual risk to be reduced to an acceptable level, it will be necessary to implement all significant findings in the table.

It is a requirement of the, City of London Corporation that P1X timescales may not be exceeded without the recorded authorisation of a senior manager, technical co-ordinator or a Head of Department or a Director.

2.5 Information Source

Information for the completion of this assessment was obtained by a non-invasive physical inspection of the premise and inspection of records and drawings (where available). Information is provided within the report detailing which areas have been accessed and form part of the assessment. For accurate identification of hazard location, digital photographs are enclosed to 'pin-point' the specified hazard.



3.0 Existing Fire Precaution Measures and Occupancy Factors

3.1 Description of premises

Cromwell Tower is detached purpose built premises; providing residential accommodation on 40 floors. The building is of concrete frame/concrete floor construction with brick/block infill.

Flats are accessed via landings at each level, directly from passenger lifts x3. Sub level basements extend below ground to -3 level. These areas provide tenants storage cupboards, plant rooms and staff facilities. Access is also provided to the residents' car park.

3.2 Area assessed

Communal areas. Access was not available to residents store cupboards.

At the time of the assessment where possible service risers and similar adjacent to communal areas were accessed; this was not possible in all instances.

Commercial premises accommodation is situated at ground floor level; these areas were not included in this FRA.

The car park is subject to a separate FRA.

3.3.1 Occupancy details

Accommodation is provided via a mix of 111 flats. Secure access arrangements are by simple lock and key controlled entrances at ground floor level. A 24 hour concierge service operates; performing security/caretaking duties, from the ground floor reception.

All service risers, plant rooms, electrical intake rooms, bin stores and similar are under the control of CoL.

3.3.2 Details of relevant persons especially at risk

General needs properties; information has not been provided regarding vulnerable residents.

3.3.3 Recommended fire emergency response (tick)

- | | | |
|-------------------------------------|--------------------|-----------------------|
| <input type="checkbox"/> | Full evacuation | Other recommendation: |
| <input type="checkbox"/> | Partial evacuation | |
| <input type="checkbox"/> | Phased evacuation | |
| <input checked="" type="checkbox"/> | 'Stay put' | |
| <input type="checkbox"/> | Other (see right) | |

Explanatory note:

This is a purpose built block of flats with no visible defects in the compartmentation. Therefore a stay put evacuation policy, unless directly affected by fire or requested to evacuate by the fire service, is appropriate for the flats. It should be noted that this assessment is based upon a non-invasive survey.

3.4 Measures to control sources of Ignition, Fuel and Oxygen

Disposal arrangements for residents refuse is via daily CoL collection & removal service.

Electrical convector heaters are provided within communal areas.

It was noted that in some instances service risers and similar are used for storage purposes. Implement robust arrangements to ensure all such areas, are maintained clear of storage.

3.5 Fire-fighting & access measures

Suitable fire service access to site.

Wet rising main outlets are provided at each level.

All levels below Podium are provided with automatic sprinklers.

It was noted that in some instances, portable fire extinguishers are provided within communal areas. Typically fire extinguishers are not provided within this type of property as residents are unlikely to have been appropriately trained. Consideration should be given to their removal.

3.6 Fire detection/alarm measures

As a purpose built block of flats; communal fire alarms are not generally considered to be a requirement.

It could not be confirmed if all dwellings have been provided with smoke detection.

Staffed areas, plant rooms and levels below Podium are provided by what appears to be a BS 5839 pt 1 compliant fire alarm system.

3.7 Means of escape

Final exit doors from flats are consistent. Where sampled they were found to be of solid construction, without FR letter plates, positive action self-closing devices, intumescent strips, smoke seals or substantial rebates/door stops; although they should provide nominal fire resistance, they do not appear to comply with current standards. Consideration should be given to replacing or upgrading all flat doors so that they provide a minimum of 30 minutes fire resistance, they should be fitted with intumescent strips and cold smoke seals, 3 steel hinges and positive action self-closers.

A single stair with lobby protection is provided for escape purposes.

Alternative means of escape is provided from individual flats via communal external escape balconies/stairs at each level.

The survey was undertaken in daylight hours and therefore it was not possible to determine whether adequate compensatory lighting/emergency lighting is provided to external escape routes. A specific survey should be undertaken by a competent



person with any identified deficiencies being addressed.

It was noted that in some instances; residents use escape routes for storage purposes. Implement robust arrangements to ensure escape routes are maintained clear of storage.

It was noted that in some instances fire doors do not close effectively. Ensure a robust program of fire door maintenance is implemented.

Adequate ventilation is achieved via openable vents and windows.

3.8 Maintenance of fire safety facilities

The City of London Corporation have confirmed that there is an appropriate service contract in place for the mains electrical installations.

The City of London Corporation have confirmed that there is an appropriate service contract in place for PAT of relevant installations.

The City of London Corporation have confirmed that there is an appropriate service contract in place for the mains gas installations.

The City of London Corporation have confirmed that there is an appropriate service contract in place for the EL system.

The City of London Corporation have confirmed that there is an appropriate service contract in place for the WRM system.

3.9 Management procedures and information

Fire action notices are inconsistently displayed in communal areas; however the guidance is ambiguous in respect of a 'stay put' evacuation strategy. Consideration should be given to replacing this signage with more definitive instructions; displayed in a consistent manner.

'No Smoking' signage is prominently displayed in communal areas.

It was noted that fire doors to electrical intake cupboards and similar within the escape routes do not display 'fire door keep locked' signage.

'Not to be used in case of fire' signage is not displayed adjacent to lift enclosures. Lobby doors do not universally display 'fire door keep shut' signs on both sides. Ensure appropriate signage is displayed.

3.10 Details of highly flammable and explosive materials

None found.

4.0 Overall Fire Risk Rating for Premises

Method

An overall risk rating for this premises is arrived at by averaging individual risk ratings on the itemised schedule (spreadsheet).

Sheltered accommodation containing vulnerable persons

The same method is used but the Overall Fire Risk Rating is moved up one level. For example, if the individual risk ratings on the itemised schedule average to a **Low Risk** then the Overall Fire Risk Rating for the premises is categorised as **Medium Risk**.

The overall fire risk rating for the premises is considered to be:

Overall Fire Risk Rating	Tick	Additional actions
Very High Risk	<input type="checkbox"/>	<ul style="list-style-type: none"> Notify the Head of Department and relevant managers Review within 6 months
High Risk	<input type="checkbox"/>	<ul style="list-style-type: none"> Notify the Head of Department and relevant managers Review within 1 year
Medium Risk	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Notify the relevant managers Review within 2 years
Low Risk	<input type="checkbox"/>	<ul style="list-style-type: none"> Review within 3 years <u>if no high risk item</u>
Very Low Risk	<input type="checkbox"/>	<ul style="list-style-type: none"> Review within 3 years <u>if no high risk items</u>

Exceptional circumstances

Where the assessor or receiving manager feels the method of calculation has arrived at a grossly disproportionate Overall Fire Risk Rating, the matter should be referred to the Director for consideration and advice.

4.1 Fire Risk Rating Matrix

The following risk rating matrix is used to enable semi-quantification of the itemised fire safety deficiencies (hazards) that were found during the recent survey of the premise.

Probability Level	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5

Severity Classification

The matrix allows the identified significant fire hazards to be classified in terms of the harmful or unwanted consequences (severity) that the hazard would cause, if it were to occur and also the likelihood (probability) that such harm will occur. These factors are considered with due regard to the existing fire safety features and procedures (controlling measures), which are either incorporated within the building design or procedurally implemented within the premise.

Severity Classification		
Class	Degree	Consequence
1	Minor	No serious injuries; little or no damage to property
2	Moderate	Injury/s not requiring hospitalisation; remedial work required to property
3	Serious	Injury/s requiring hospitalisation; significant damage to property
4	Major	Permanent injury/s or disablement; major damage to property
5	Catastrophic	One or more fatalities; total loss of property

Probability Level		
Level	Degree	Probability of Exposure to Harm
1	Improbable	No known instances of such an event occurring
2	Remote	Unlikely to occur, but still possible
3	Occasional	Likely to occur at some stage in the foreseeable future
4	Probable	Likely to occur frequently or within 1 year
5	Almost certain	Very likely to occur frequently and/or in the near future unless actively prevented

The product of the severity and probability factors will equate to a specific risk rating for each identified hazard. The following band matrix can then be used to assign a comparative degree of risk (Very Low, Low, Medium High or Very High) to each individual fire safety deficiency. This will assist in determining the extent of any necessary additional controlling measures, as well as the timescale in which these measures should be implemented.

5.0 Assessment of Fire Risk

The attached spreadsheet table details the systematic approach that has been taken to assess the individual level of risk that is inherent in each identified hazard / fire safety deficiency, recorded during the inspection of this premise.

Each hazard (item) has been considered with regard to the specific group of people that it threatens; its potential severity and its probability of being realised. Existing control measures are taken into account before determining the nature and extent of any additional control measures deemed necessary to contend with the residual fire risk that remains.

The table below provides timescales for remedial action proportionate to the risk.

Degree of Risk	Risk Rating Score	Priority Level for Action	Timescales for Remedial Action
Very High	20 to 25	P1X	Within 1 month
High	12 to 16	P1	Within 3 months
Medium	8 to 10	P2	Within 12 months
Low	5 to 6	P3	Planned Works Programme
Very Low	1 to 4	P4	Recommended



The Action Items near the front of this report, details the optimum measures that are considered necessary.

The timescales are deemed by the To be inserted to be a reasonable target for officers and managers when planning their implementation.

P1X – Matters of very high risk posing an imminent threat of significant harm must be brought to the attention of the on-site management (where available) and the technical co-ordinator within To be inserted by the fastest means.

In any event, P1X items must be brought to the attention of the Director and Head of Department. HoD to initiate immediate response for remedial action full controls to be in place within time specified above unless deemed necessary to remedy with immediate effect.

P1X and P1 Items may not exceed their target deadline without the recorded consent of a senior manager or Head of Department or Director.

P2 and P3 items exceeding the target deadline must be reported.

P4 items are recommendations but not a legal requirement. However, they should be remedied as budget and management constrains allow.

In order to reduce the residual risk to an acceptable level, it will be necessary to implement all but P4 Action Items on the schedule.

The CoL use the 4x4 matrix for the Fire risk assessment for the combination of the likelihood of fire (identified in Step 2) and the consequences of fire (identified in Step 6). The CoL accepts there is no unique way in which fire risk should be expressed, but it is innate to the process of carrying out the fire risk assessment that there is an assessment of fire risk, which is then appropriate to the document. (For continuity throughout the City of London Corporation, this is used as our standard matrix for all our risk assessments and is not specific for fire safety in the Corporation.

City of London 4 point risk matrix			Likelihood				
			1	2	3	4	
			Rare	Unlikely	Possible	Likely	
			Has happened very rarely or never before	Where harm is unlikely to occur	Possible for harm to occur in the next year	Where it is certain or almost certain that harm will occur in the next year	
Severity	1	Minor	Minor incident including injury to one or more individuals such as cuts, scrapes, minor bruising and skin irritation	1	2	3	4
	2	Serious	Significant Injury or illness causing short term disability to one or more person. For example, and Over 7 Day injury / incapacitation.	2	4	6	8
	4	Major	Major injury or illness/disease causing long term disability to one or more person including broken bones, occupational disease and ill-health	4	8	12	16
	8	Extreme	Fatality or life threatening illness / disease to one or more persons	8	16	24	32
Risk Key							
Low: No additional control measures are usually required. Consideration may be given to more cost effective solutions or improvement that imposes no additional cost burden. However, control measures must be monitored to ensure effectiveness taking corrective action where necessary							
Medium: Further control measures are required to reduce the risk. Where significant resources are required, short term interim measures may have to be taken until long term measures are implemented. Where the severity is 'high' or there is a high likelihood of harm, urgent action should be taken							
High: Work should not be started or continued until the risk has been reduced							

Ref Number: Location: Ref & Site location	Observations	Hazards - existing control measures & recommendations	Assessor use Risk evaluation Risk Priority Low-Medium-High	Assessor use CoL service level Action completed by: Date	CoL Use Actioned by Date time Name	CoL Use PSD No Completed date
Means of Escape	Final exit doors from flats are mixed. Where sampled they were found to be of solid construction, without positive action self-closing devices, without intumescent strips, smoke seals or substantial rebates/door stops; although they should provide nominal fire resistance, they do not appear to comply with current standards.	Consideration should be given to replacing or upgrading all flat doors so that they provide a minimum of 30 minutes fire resistance, they should be fitted with intumescent strips and cold smoke seals, 3 steel hinges and positive action self-closers.	Low			
Means of Escape	It was noted that in some instances; residents use escape routes for storage purposes.	Implement robust arrangements to ensure escape routes are maintained clear of storage	Medium			

Means of Escape	The survey was undertaken in daylight hours and therefore it was not possible to determine whether adequate compensatory lighting/emergency lighting is provided to external escape routes.	A specific survey should be undertaken by a competent person with any identified deficiencies being addressed.	Low			
Means of Escape	It was noted that in some instances service risers and similar are used for storage purposes.	Implement robust arrangements to ensure all such areas, are maintained clear of storage.	Medium			
Means of Escape	It was noted that in some instances fire doors do not close effectively.	Ensure a robust program of fire door maintenance is implemented.	Low			
Signage	Fire action notices are inconsistently displayed in communal areas; however the guidance is ambiguous in respect of a 'stay put' evacuation strategy.	Consideration should be given to replacing this signage with more definitive instructions; displayed in a consistent manner.	Low			

Signage	It was noted that fire doors to electrical intake cupboards and similar within the escape routes do not display 'fire door keep locked' signage. 'Not to be used in case of fire' signage is not displayed adjacent to lift enclosures. Lobby doors do not display 'fire door keep shut' signs on both sides.	Ensure appropriate signage is displayed.	Low			
Firefighting equipment	It was noted that in some instances, portable fire extinguishers are provided within communal areas.	Typically fire extinguishers are not provided within this type of property as residents are unlikely to have been appropriately trained. Consideration should be given to their removal.	Medium			

Declaration

I confirm that I, the person named below, am competent to carry out a fire risk assessment of this premises and that I have been thorough and methodical both in the undertaking of the assessment and the completion of this report.

Completed by: Carl Dennis GIFE

Signed:

Date: 18th November 2016

Photographs:

Item No.	Image
6.2.5	<p data-bbox="772 368 882 400">Photo 1</p>  <p data-bbox="772 799 1084 831">Inappropriate storage.</p>
6.2.5	<p data-bbox="772 853 882 885">Photo 2</p>  <p data-bbox="772 1284 1084 1316">Inappropriate storage.</p>

6.7.4.1

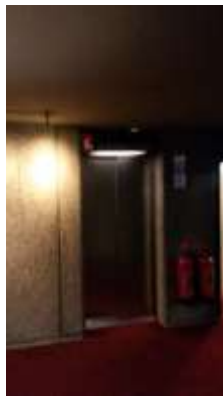
Photo 3



Inappropriate storage.


6.7.4.3

Photo 4



Missing signage.

6.7.4.3	Photo 5  Missing signage.
6.7.4.3	Photo 6  Missing signage.

6.8.1	<p data-bbox="763 288 887 323">Photo 7</p>  <p data-bbox="763 724 1211 759">Ineffective closing mechanism.</p>