

C S Stokes and Associates Limited

Mr C Stokes



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Telephone:



18th March 2014

Mrs Claire Williams
Project Manager
The Network Hub
Kensington & Chelsea TMO
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London W10 5BE

Premises: Grenfell Tower, Testerton, Barandon and Hurstway Walks on the Lancaster West Estate

Thank you for asking me to comment on the questions raised by the London Fire Brigade (LFB) officers during they visit to the above buildings on the Lancaster West estate on the 12th March. The LFB fire officers were Ben Lewis, Mathew Ramsey and Dan Hussey and you were accompanied by Mr Bruce Sounes of STUDIO E, the questions asked were contained in your e mails to me from notes that were taken during the visit. I visited the above premises yesterday, Monday the 17th March 2014 to gather the information for this report, the information on service dates etc was obtained from the contractors servicing and maintenance logbooks held on site and from records from the TMO's engineers section at the Hub.

Grenfell Tower

Ventilation system on flat/lift lobby areas

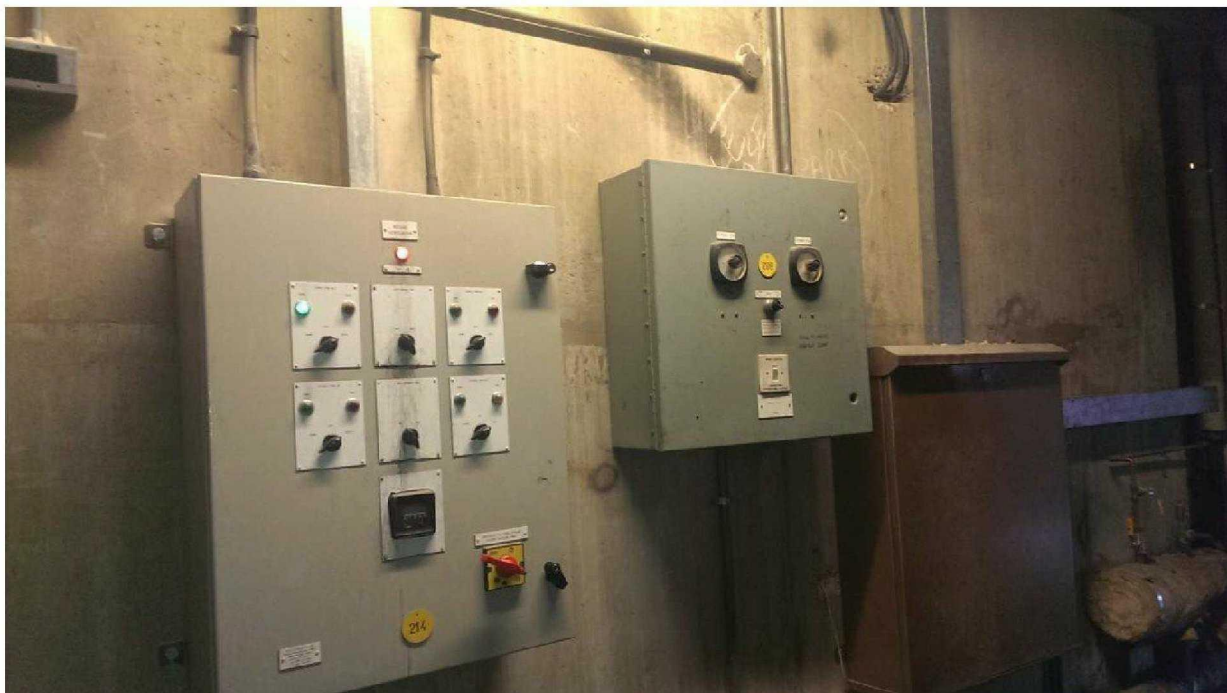
There is a mechanical ventilation extraction system located on the flat/lift lobby areas of Grenfell Tower, there are two vents each side of the flat/lift lobby area with the extraction plant and control panels etc located in the roof level extraction plant room. As well as there being mechanical extraction in the flat/lift lobby areas there is also mechanical extraction in the refuse chute rooms. Please see the first photograph below showing the different control panels for the plant the refuse chute room extraction control panel is on the left with the flat/lift lobby areas emergency smoke control extract panel on the right hand side of it. There is also an extraction system for the mechanical extractors located in the toilets, this control panel for this is located on the opposite wall, plant and duct work etc for these extract systems are also located in this roof level plant room area.

The emergency smoke control extract panel was showing healthy when looked at yesterday with the switch in the auto position. The flat/lift lobby extraction system is activated by the automatic fire detection device on each of the flat/lift lobby area ceilings. The extraction system works by the vents on one side of the flat/lift lobby area expelling the smoke with inflow air coming in through the vents on the other side of the lobby area.

This smoke extraction system is on a planned preventive maintenance programme with RGE, this contractor last serviced this system according to their on site log book on the 15/15/13 *sic*. Please see appendix A below, the previous loose page in the logbook was full and the service before this one was in September 2013 so I am assuming that the 15th month is a mistake and the engineer meant the 12th Month. As can be seen the engineer checked all of the items in the quarterly check list and the only fault recorded was 19th floor relay.

As the next quarterly service is imminently due on this smoke extraction system I would recommend the contractor is asked to service the system and any findings etc made are actioned.

Refuse chute room extraction control panel on the left with the flat/lift lobby areas control panel on the right hand side.



In the ground floor level lobby area of Grenfell Tower there is a control panel for the smoke extraction system, inside the panel are instructions for the system which also covers the lobby pressurisation fan in the Social services area. As the social services area is now empty I do not know if the lobby pressurisation fan is working or not. I am assuming that as RGE have serviced the "smoke extraction system of Grenfell Tower" that all parts of the system were checked.

Fire detection devices located on flat/lift lobby areas and other parts of this building

There are automatic smoke detectors located on the flat/lift lobby areas of this tower as well as other automatic detectors, heat and smoke, in other parts of this building, according to the RGE service maintenance sheet the last quarterly fire alarm service was undertaken on this system on the 7th February 2014. Please see appendix B. The service engineer states the panel is in full working order and that the installed system has been serviced to British Standard 5939, with a zone chart next to the fire alarm control panel

1. E O L monitors are fitted in panel,
2. Panel is monitored via Tunsall call point located in office
3. Age of devices range from 2007 to 2009 to pre 1988.
4. Input and output units are located in riser next to office on the ground floor.

As the RGE fire alarm service engineer states that on his 7th February 2014 quarterly service sheet that the installed fire alarm system in Grenfell Tower is in full working order, so no action is needed on this issue.

The fire alarm system in this building is remotely monitored via a telephone line located in the ground floor level office.

Lifts in this tower

Both of the lifts in this premises are Fire fighter evacuation lifts, this lifts are numbered HO 90 and HOM 91, please see appendix C for the last Express lifts service reports, the last service was undertaken on both lifts on the 26th February 2014. During a recent fire service exercise in this building the local fire crews were given instruction on the use of these fire fighting lifts and there are instructions on how to use them as fire fighting lifts in the ground floor level office and in the lift motor room. Copies on these instructions were also e mailed to the commander of the LFB local fire station.

Fire officer Dan Hussey asks that information on the manual operation of the lifts is provided and that it is not obvious how the steel guards covering the hand wheels of the lifts are removed. On the wall in the roof level lift motor room next to the lifts there is prominently displayed the manufactures instructions on how to manually lower the lifts, with diagram and text. The metal guard covers over the hand wheels are held in place by two wing nuts which are hand tight only and can easily be removed without the need for any tools.

Dry rising main

There is a dry rising main installed in Grenfell Tower, the inlet is located at the ground floor level with there being outlets on each residential flat/lift lobby area and one at the external roof level. This dry riser was last tested by M and P Fire Protection Limited on the 30th December 2013 according to the contractors label fixed inside the inlet and outlet boxes, this was a wet test.

Parking outside of this building

Outside of this building there is a public road with a small gated controlled area along the side of the tower, please see the recommendations below, but this is a public road

and the TMO have not control of the public highway. Presently there is working being undertaken in this public road, please see the photograph.



The contractors undertaking this work are responsible for any obstruction and congestion, if the LFB are highlighting problems the this issue should be raised with the contractors involved and the LFB should be asked to contact the contractors directly.

Premises information packs and other information.

The fire officers asked about the providing of premises information packs, I would strongly recommend that these are not provided.

There were other questions asked about the fire fighting strategy for a fire in the lower ground floor level areas underneath the walks of Testerton, Barandon and Hurstway and how systems would be used etc.

It is for the LFB to undertake what is called Fire Service Act 7.2 D information gathering, the responsible person of a premises can only maintain any systems and fixed equipment installed within their premises. It is up to the fire service to gather information on the premises located on their station grounds and then collate this information and adopt procedures etc to use this installed equipment. The fire risk assessment excludes

operational fire fighting because the assessor cannot know what a fire crew will do at an operational incident.

As a matter of interest operational crews of the local Fire and Rescue service should have been undertaken regular familiarisation visits to premises on their station grounds since 1947 under section 11 d of the Fire Services Act 1947.

Ramp to Testerton, Barandon and Hurstway Walks

During the visit the Fire Officer commented that the ramp up to the above walkways can be removed, but there are also comments from the fire officers about the lack of access to the upper level walkways from the lower ground floor road level, where the fire service will park their fire engines.

I am assuming that the removal of the ramp will be part of the submission to the Building Control Body? If not it should be.

I am concerned that this ramp was required when the premises were constructed but now it is ok to remove the ramp, there is no other way to access these upper floor levels without using steps. The current situation with a ramp complies with the access requirements of Approved Document Part M of the Building Regulations. By removing it now how will disabled persons access this floor level.

Any decision on the removal of the ramp to walkways of Testerton, Barandon and Hurstway should be obtained in writing and held on file in case challenged in the future. I do not think that it is not up to the LFB to state that the ramp can be removed, this is a Building Control issue, under Approved Document M and also under Approved Document B Part 5 of the Building Regulations access for the fire service. The fire service are the enforcing authority for the Fire Safety Order only not for Building Regulations requirements.

Testerton, Barandon and Hurstway Walks known as the finger blocks

Dry rising main

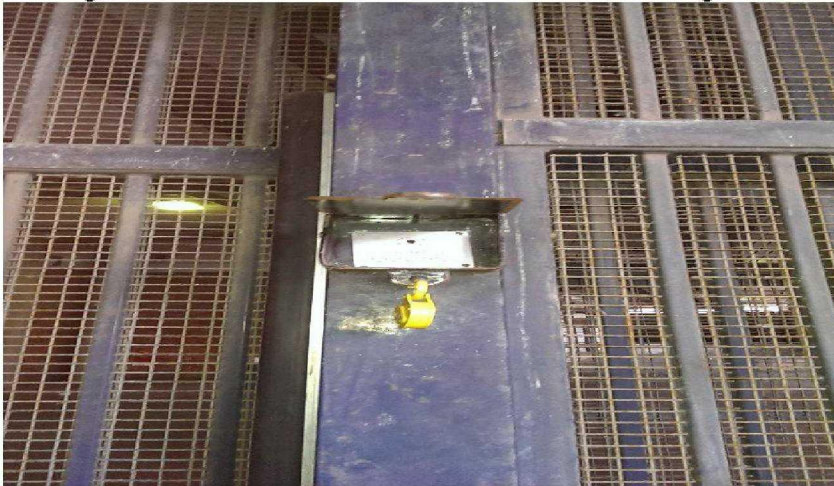
There are dry rising mains installed in these figure blocks, the inlet is located at the lower ground floor level, in the areas underneath the residential areas with the outlets being located directly above the inlets. Each riser is numbered with black paint on the front of the dry riser box, so number 6 dry riser inlet feeds number 6 dry riser outlet which is located directly above it. The dry risers in Testerton and Hurstway Walks were last tested by M and P Fire Protection Limited on the 30th December 2013 according to the contractors label fixed inside these inlet and outlet boxes. Please see the recommendation reference Barandon Walk. Located above the dry riser inlets there is another red painted box this contains an outlet from a ring main, this is different from a town main which is the normal way for water to be provided. As far as I am aware this ring main was installed when the premises was constructed, it could have been considered that a wall mounted water ring main would be easier to maintain than an under ground hydrant one. A ring main is a recognised way of providing water to inaccessible places it also has the advantage that the fire service do not need to use a standpipe key and bar etc when connecting to it. In this case this is a water filled pipe above ground rather than underground which is maintained serviceable by the TMO, the last test was undertaken by M and P Fire Protection Limited on the 29th November 2013 according to the contractors label fixed inside the ring main boxes. The water pressure at the time of this last test was 4.4 bar.

How this system is used by the fire service is a matter for them to decided, also it is up to them to decide if they drive fire appliances into the lower ground floor level roads to apply pressure to the system so that they have a fire fight jet on the upper floor levels. There have been different padlocks fitted to the ring main boxes that the normal FB padlocks, the currently fitted padlocks should be removed and the standard FB padlocks fitted so that the LFB can open the boxes easily.

Access to the areas of the buildings

Fire officer Dan Hussey asked that fire fighter over ride switches, drop keys, are provided on the vehicle and pedestrian gates to the lower ground floor level roads so that they gates can be opened in an emergency by the LFB. Fire fighter over ride switches are already fitted to these gates, please see the photographs below. Fire fighter over ride switches are also fitted to all of the entrance/exit doors to the residential areas where the entrance is off a road or walkway, over ride switches are not fitted to the exit doors to the garden areas.

Fire fighter over ride switch in box fitted to vehicle gate



Fire fighter over ride switch fitted to pedestrian gate



All of the entrance/exit doors to these premises are fitted with self closing devices so that the doors close automatically therefore restricting access to the premises to authorised persons only. The caretakers check these doors on a regular basis and if any self closing are no working correctly there is a reporting procedure so that repairs can be undertaken

Fire detection devices located in the walkways and other parts of these buildings

There are automatic smoke detectors located on the streets of the three walks to automatically open the vents located in the glazed roof areas, there are also devices installed in the electrical intake rooms of these premises. According to the RGE service maintenance sheet the last quarterly fire alarm service was undertaken on this system on the 7th February 2014. Please see appendix D .

The service engineer states the panel is in full working order and that the installed system has been serviced to British Standard 5939, with a zone chart next to the fire alarm control panel located in the ground floor level office of Grenfell Tower. in item 1. All devices and panel are pre 1988 era suggest system is replaced.

As the RGE fire alarm service engineer states that on his 7th February 2014 quarterly service sheet that the installed fire alarm system in these premises is in full working order and the vents would have been tested at the same time as these are interfaces systems, so no action is needed on this issue. The fire alarm system in these premises is not remotely monitored.

Automatic opening vents in these premises.

There are automatic opening vents located in the glazed roof areas of the streets of these walks. This building was originally constructed with the common parts/areas open to the elements, roofs were then added enclosing the walks, this covering in of the walks happened in the mid to late 1990s, when a major refurbishment of the estate was undertaken. This multi million pound refurbishment went through the Building Regulations and Building Control Body process with it is assumed involvement from the London Fire and Emergency Planning Authority because of the work entailed. The original layout and structure of this building has remained unchanged apart from this refurbishment so the result now is that the doors and windows of the flats which were once external are now internal. During the refurbishment process the automatically opening smoke control vents were installed in the new glazed roofs operated by local smoke detectors linked directly to the vents, it is assumed to overcome these structural changes. These vents also can be opened manually to aid with temperate control and environment issues within the building, the control panel being located in the ground floor level office of Grenfell Tower.

According to the contractors information, RGE contractors label fixed on the control panel door of the automatic opening vents in the ground floor level office area of Grenfell Tower the last annual service was on the 14th February 2014 and the systems all worked well.

Garages located at the lower ground floor levels of Testerton and Hurstway Walks.

The fire officers commented on the storage of flammable materials in the OCS cleaners store of Hurstway Road. This is a garage area where cars can be parked and garaged with upwards of 100 litres of petrol in their fuel tanks, this garage area was designed to

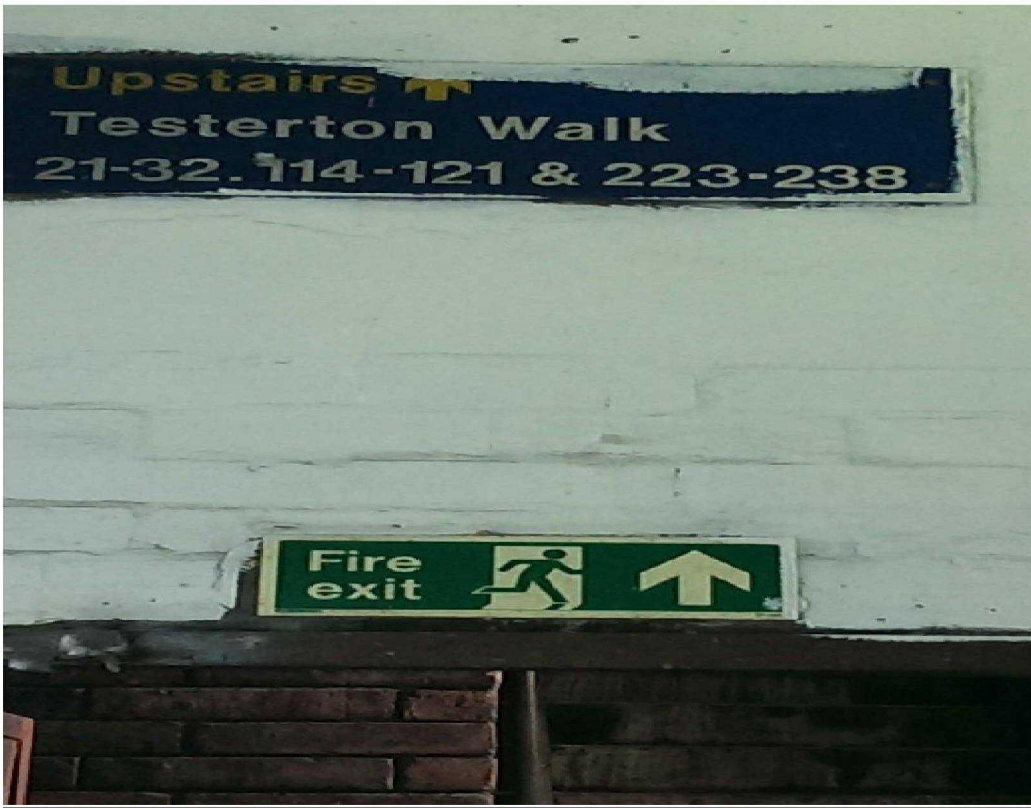
have cars parked in it containing flammable liquid. When I looked in the OCS storage area yesterday there were two 5 litre purpose made green plastic petrol containers stored here. This petrol is used for the leave blowers, I do not believe that any further action is needed on this issue.

Fire officer Dan Hussey commented about the numbering on the garages on the lower ground floor levels of Testerton and Hurstway Walks, these garages have numbers painted on the door frames. There is approximately 3 metres of head room above these garage doors so the numbering will be seen as any smoke will rise to ceiling/roof level and peculate out of the garage areas via the openable vents. If there was a well developed fire in this area then it will be obvious which garage is involved, you will not need to look for numbers even if you did know which number garage was involved. So no action is needed on this issue.

Signage

Fire officer Dan Hussey commented about the signage from the lower ground floor levels indicating the flats located above and accessed from particular staircases, please see the photographs below. I believe that the current signage is sufficient from Testerton and Hurstway roads, there is some paint on the signs but this paint does not obscure the information. There is also emergency escape exit signage displayed, some exit signs are flat to the wall others stick out, the signage which sticks out is more prominent. But only authorised persons have access to these lower ground floor areas, no members of the public so where flat signage is displayed I believe that this is sufficient. There has recently been redecoration work undertaken in Barandon Walk and because of this some new signage should be provided to show flat locations above. If the LFB require additional information this can be asked for under the 7.2 D process and then they can draw up plans showing any operational information that they require.





Ventilation of the lower ground floor level areas

The fire officers commented on the cross ventilation of the garage areas of Testerton and Hurstway roads at the lower ground floor levels, at the ends of each of these roads there are large open areas at high level. Please see the photographs, this was how these areas were constructed. I know that some additional boarding has been fixed

above the doors of the garages for security reasons and this could reduce cross ventilation of these areas but the ends of the roads are open. There is also a 3 metre void area above the garage doors which will act as a smoke reservoir in the event of a fire in these areas. This smoke reservoir runs the whole length of these lower ground floor level areas and the fire loading of a garage would not fill this whole smoke reservoir.

I am assuming that the fire offices did not visit Barandon Walk lower ground floor area which is totally enclosed, this area has been converted from garages to office accommodation and there is no natural ventilation in this area. If it is acceptable to have no natural ventilation in Barandon Walk then the limited natural ventilation of Testerton and Hurstway roads is an improvement. Therefore I believe that no action is needed in respect of the question of cross ventilation of the garage areas.

The conversion of Barandon Walk went through the Building Regulations process and so do any refurbishments of units in this area so any comments made by the Building Control bodies on ventilation will be acted upon.

For your information the Regulatory Reform (Fire Safety) Order 2005, (FSO) replaces all previous fire safety legislation and any fire certificate issued under the Fire Precautions Act 1971 ceased to have any effect. The FSO states "if a fire certificate has been issued in respect of your premises or the premises were built to building regulations or have been through the Building Regulations process. As long as you have made no material alterations and all the physical fire precautions have been properly maintained, then it is unlikely you will need to make any significant improvements to your existing physical fire protection arrangements to comply with the Order. However, you must still carry out a fire risk assessment and keep it up to date to ensure that all the fire precautions in your premises remain current and adequate", fire risk assessments have been undertaken.

Barandon Walk, lower ground floor area which is fully enclosed



The garages on the lower ground floor areas of Testerton and Hurstway walks, (sorry about the quality of this photograph)



How any fire fighting would be undertaken in these lower ground floor level areas would be up to the LFB and undertaken after a dynamic risk assessment was taken by the fire officer in operational charge of the incident. It is not the responsibility of the TMO to try and second guess how any fire fighting will be undertaken so I would recommend that no comments are made concerning the Fire Officers requests for information on the challenge of fighting a fire in "undercroft" as raised in the e mails.

My comment and recommendations:

1. The next quarterly service is imminently due on the emergency smoke extraction system installed on the flat/lift lobby areas of Grenfell Tower, the last service by the contractor stated that the system was in working order apart from one reply. I would recommend the contractor is asked to service the system sooner rather than later and any findings etc made by him are actioned upon. If this system is in working order there is no requirement to a CFD analysis to be undertaken.
2. The RGE fire alarm service engineer states that on his 7th February 2014 quarterly service sheet that the installed fire alarm system in Grenfell Tower is in full working order, so no action is needed on this issue.
3. There was a push bike chained to the dry riser outlet box on the 20th floor level, outside flat 203, this bike show be removed immediately.
4. I would recommend that the local parking enforcement wardens are contacted asked to police the parking on the double yellow lines outside this building, enforcement of parking on a public road is outside the control of the TMO, but if

challenged in the future by the LFB it can be shown that the TMO did act to prevent illegal parking.

5. The side gated area along the side of Grenfell Tower should be maintain clear at all times with the gate being locked shut to stop illegal parking in this area.
6. The fire officers asked about the providing of premises information packs, I would strongly recommend that these are not provided.
7. The fire officers commented about fire strategies and the use of the fixed fire systems and equipment installed in the premises, I would strongly recommend the LFB are invited to visit the premises and are given information on the systems installed etc. It is up to the LFB to decided on how to use the provided systems not for the TMO to give them instructions, it is also up to the LFB is they would drive their vehicles into the lower ground floor areas whilst undertaking fire fighting operations.
8. I am assuming that the removal of the ramp will be part of the submission to the Building Control Body? If not it should be. I am concerned that this ramp was required when the premises were constructed but now it is ok to remove the ramp, there is no other way to access these upper floor levels without using steps. The current situation with a ramp complies with the access requirements of Approved Document Part M of the Building Regulations. By removing it now how will disabled persons access this floor level.
9. There have been different padlocks fitted to the ring main boxes that the normal FB padlocks, the currently fitted padlocks should be removed and the standard FB padlocks fitted to each ring main box so that the LFB can open the boxes easily.
10. According to the contractors labels in the dry riser boxes and ring main boxes in Barandon Walk the last service/maintenance test was undertaken on the 8th September 2012. I would recommend that the records for these dry risers and the ring main are checked and if the last service/maintenance has been missed then these systems are serviced immediately.
11. The fire fighter over ride switch in box fitted to vehicle gate which gives access to the lower ground floor level roads is damaged and does not open the gate, this over ride switch should be repaired or replaced so that it opens the vehicle gate when used.
12. The fire alarm system installed in the finger blocks is not remotely monitored I would recommend that this fire alarm system is remotely monitored the in the same way as the fire alarm system installed in Grenfell Tower.
13. OCS the cleaning company have a rest room area and a large storage area in former garages on Hurstway Walk Road, I would recommend that OCS are asked for their Fire Risk Assessments for these two areas.
14. Redecoration work has been undertaken in Barandon Walk and some of the original signage indicating the flats located above and accessed from particular

staircases has been obscured or removed. New signage should be provided in Barandon Walk where needed indicating the flats located above and accessed from particular staircases, this signage should not be obstructed in anyway.

15. The dry rising mains in Barandon Walk should be renumbers after the redecoration work.
16. New fire action notices are needed in the lower ground floor level of Barandon Walk after the redecoration work.
17. I would recommend that a meeting is called with the fire officers of the LFB and the above information is shared with them or this letter passed on to them so that their questions can be answered and to stop this maybe escalating into enforcement action under the FSO.

Please feel free to contact me if you require any further assistance on any of the comments that I have made, I have only answered the questions raised I have not covered any additional areas etc. If you would like me to look at any other areas of these premises or fixed fire systems installed within them please let me know and I will visit site and undertake the work.

Yours Sincerely

Carl Stokes

CC

Mrs J Wray
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Kensington & Chelsea TMO
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London W10 5BE

Log Book
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**Maintenance Procedures for the Smoke
Extraction System at Grenfell Tower**

Log Book



RGE

www.rgeservices.co.uk - [REDACTED]

Maintenance Log Book

Site: **Grenfell Tower
Grenfel Road
London
W11 1TH**

Service Type: **SMOKE EXTRACTION SYSTEMS**

Quarterly Inspection Check List

- 1 Check all equipment has no mechanical or electrical damage;
- 2 Check continuity of fuses and correct type (where practicable);
- 3 Check that all terminations are tight;
- 4 Earth bonding is in order and all covers and guards are in position;
- 5 Check (where possible) that the switches are labelled for circuit controls, and they are in normal operating position;
- 6 Check that cables are supported & protected with no sharp bends or damage to insulation;
- 7 Check battery flexible cables and termination on batter posts for corrosion and correct tightness;
- 8 Check electrolyte level and top up as necessary with appropriate water;
- 9 Check that there is no flammable material or rubbish accumulated by equipment or damper voids;
- 10 Check all interior of the damper voids, that they are clear of rubbish;
- 11 All seals on dampers are intact.



Date	Items Completed on Check list											Fans Running on Normal Power		Fans Running on Battery Power		Dampers Operating Under Fire Alarm Activation (Check 5No. Dampers Per Quarter on Rotation)	Signed By Engineer	Remarks/Comments
	1	2	3	4	5	6	7	8	9	10	11	A	B	A	B			
11/5/10	X	X	X	X	X	X	X	X	X	X	X	OK	OK	OK	OK	ALL TESTED AND ADJUSTED		checking of what dampers likely items to be removed 1/2 No. from the fanbox
15/5/13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	OK	OK	OK	OK			



rgeservices ltd

SERVICE/MAINTENANCE CERTIFICATE						Job No.	108975	
Customer:						Date:	7/2/14	
Site Address:								Greenfell tower
Yearly Inspection		Quarterly Inspection		Breakdown		Service		
				✓		✓		
Description of Work:								service to 55 5359
ITEM/DESCRIPTION	YES	NO	ITEM/DESCRIPTION	YES	NO			
Are Drawings Current	✓		Number of Loops/Zones in Use	27 zones				
Battery	Date	June 2012	Alarms Sounded	✓				
Battery Voltage (indicate)	27.5 v		Fire Risk Ass Available	✓				
Zone E.O.L. Monitor Fitted Correctly	①	✓	Dedicated Supply	✓				
Alarm E.O.L. Monitor Fitted Correctly	✓		Zone Chart Displayed	✓				
Power Fault Monitor Mains Removed	✓		Panel Indicators/Buzzers	✓				
Power Fault Monitor Battery Removed	✓		Detector Head Removed	✓				
Cause & Effects	✓		Devices Labelled		✓			
Building Use or Layout Changed		✓	Device Age/Estimate if not marked		✓			
Remote Monitoring Connected	✓	②	No. of False Alarms per 100 Detectors					
SYSTEM DESCRIPTION	IF YES, TYPE			SYSTEM DESCRIPTION	IF YES, TYPE			
Main Panel	Karlco (manual)			Door Magnets	2000 units			
Repeater Panel/Network	J/A			Sounders/Bells/Voice	160 bells			
Break Glass	AK (manual)			Bacons	J/B			
Batteries	12v	12 Ah	Qty 2	Input/Output Units	② 1/2 units (with area)			
Smoke Detector	Aralco (manual) ③			Cable Type	4mm ² M			
Fixed/ROR Heats	Aralco			UPDATED LOG BOOK				
Category of System	P1	P2	M	L1	L2	L3	L4	L5
Battery Calculations	Standby x Time + In Alarm x Batt Def = • Ah required							
Results Recorded	• 32 (mA) 12 (hrs) + • 4 (mA) x 1.25 = 6.6 (Ah)							
Devices Checked and Location:								
Checked and tested 282 of devices								
Notes:								
Panel in full working order on arrival (1) E.O.L. monitors are								
E.O.L. panel (2) Panel is monitored via Lanstat and panel located in office								
③ Area of device range for 2007-2009 in area 10/12								
④ New cables for area 10/12 and 10/13 will be installed in								
next week to allow for panel fire								
Time on Site :				Time off Site :				
Signature (Engineer):				Signature (Client):				
Name in Capitals (Engineer):				Name in Capitals (Client):				

(WHITE COPY = OFFICE) (PINK COPY = SITE)

19-21 Roebuck Road, Hainault Business Park, Ilford, Essex IG6 3TU Tel: [REDACTED] Info@rgeservices.co.uk



ENGINEER SERVICE REPORT

Form No. 140/11 05/10

245365

EXPRESS
Lifts Alliance
Group

Lifts for London

DATE 26/2/14 ENGINEER D LINNBY
 SITE ADDRESS GRINFEEL TOWN CONTRACT No. P0807174
 TYPE OF MACHINE TRAXION
 No. OF MACHINE H090

PART	S	WBS	SBOH	SDR	PART	S	WBS	SBOH	SDR
1 ENCLOSURE OF HOISTWAY OR LIFTWAY	/	/			18 BALANCE WEIGHT SHOES	/	/		
2 LANDING GATES OR DOORS	/	/			19 CAR LANDING DOOR ACCESSORIES	/	/		
3 CAR GATE(S) OR DOORS	/	/			20 DOOR GEAR	/	/		
4 LANDING GATE OR DOOR LOCKS	/	/			21 PUSHES & INDICATORS	/	/		
5 CAR GATE(S) OR DOOR LOCKS	/	/			22 WORM & SPUR GEARING	/	/		
6 OTHER GATE OR DOOR FASTENINGS	/	/			23 HOISTING MOTOR	/	/		
7 CAR OR PLATFORM FITTINGS	/	/			24 GENERATOR	/	/		
8 CAR GUIDES AND FITTINGS	/	/			25 CONTROLLER CONTACTS	/	/		
9 BUFFERS	/	/			26 WIRING	/	/		
10 OVER - RUNNING DEVICES	/	/			27 BRAKE & BRAKE LININGS	/	/		
11 SUSPENSION RODS	/	/			28 SELECTOR CONTACTS	/	/		
12 GOVERNOR ROPES	/	/			29 PULLEY WHEELS	/	/		
13 SAFETY ROPES	/	/			30 LIFT SHAFT SWITCHES	/	/		
14 SAFETY ROPES OR TAPES	/	/			31 RAM & CYLINDER	/	/		
15 SAFETY GEAR	/	/			32 VALVE GEAR	/	/		
16 OVERSPEED GOVERNOR CAR	/	/			33 RAM PACKINGS	/	/		
17 CAR SHOES OR ROLLERS	/	/			34 WHAT PARTS (IF ANY) INACCESSIBLE	/	/		

S = SATISFACTORY WBS = WORN BUT SERVICEABLE SBOH = SHOULD BE OVERHAULED SDR = SHOULD BE RENEWED

TIME OF ARRIVAL _____ TIME OF DEPARTURE _____ OFFICE USE ONLY

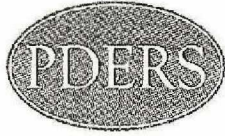
MATERIALS ROUTING VISIT

ENGINEER'S REPORT / REMARKS / JHA

CUSTOMER'S SIGNATURE _____ ENGINEER'S SIGNATURE

Express House, 100 Rill Street, Deptford, London SE8 5NN





ENGINEER SERVICE REPORT

Form No. 14D11 03/10

245366



Lifts for London

DATE: 26-12/14 ENGINEER: D LINNEY
 SITE ADDRESS: GREENFELT TOWER CONTRACT No.: P0807175
 TYPE OF MACHINE: TRACTION
 No. OF MACHINE: H041

PART	S	WBS	SBOH	SBR	PART	S	WBS	SBOH	SBR
1 ENCLOSURE OF HOISTWAY OR LIFTWAY	/				18 BALANCE WEIGHT SHOES	/			
2 LANDING GATE OR DOORS	/				19 CAR LANDING DOOR ACCESSORIES	/			
3 CAR GATE(S) OR DOORS	/				20 DOOR GEAR	/			
4 LANDING GATE OR DOOR LOCKS	/				21 PUSHES & INDICATORS	/			
5 CAR GATE(S) OR DOOR LOCKS	/				22 WORM & SPUR GEARING	/			
6 OTHER GATE OR DOOR FASTENINGS	/				23 HOISTING MOTOR	/			
7 CAR OR PLATFORM FITTINGS	/				24 GENERATOR	/			
8 CAR GUIDES AND FITTINGS	/				25 CONTROLLER CONTACTS	/			
9 BUFFERS	/				26 WIRING	/			
10 OVER-RUNNING DEVICES	/				27 BRAKE & BRAKE LININGS	/			
11 SUSPENSION RODS	/				28 SELECTOR CONTACTS	/			
12 GOVERNOR ROPES	/				29 PULLEY WHEELS	/			
13 SAFETY ROPES	/				30 LIFT SHAFT SWITCHES	/			
14 SAFETY ROPES OR TAPES	/				31 RAM & CYLINDER	/			
15 SAFETY GEAR	/				32 VALVE GEAR	/			
16 OVERSPEED GOVERNOR CAR	/				33 RAM PACKINGS	/			
17 CAR SHOES OR ROLLERS	/				34 WHAT PARTS (IF ANY) INACCESSIBLE	/			

S = SATISFACTORY WBS = WORN BUT SERVICEABLE SBOH = SHOULD BE OVERHAULLED SBR = SHOULD BE RENEWED

TIME OF ARRIVAL: _____ TIME OF DEPARTURE: _____ OFFICE USE ONLY





MATERIALS: ROUTINE VISIT

ENGINEER'S REPORT - REMARKS - JIRA

CUSTOMER'S SIGNATURE: _____ ENGINEER'S SIGNATURE: [Signature]

Express House, 100 Pall Mall Street, Deptford, London SE8 3NN



   					
SERVICE/MAINTENANCE CERTIFICATE		Job No. 108877			
Customer: <i>WOC</i>		Date: 7/2/14			
Site Address: <i>Lancaster West</i>					
Yearly Inspection	Quarterly Inspection	Breakdown			
	<input checked="" type="checkbox"/>	Service			
Description of Work: <i>Service to BS 5839</i>					
ITEM/DESCRIPTION	YES	NO	ITEM/DESCRIPTION	YES	NO
Are Drawings Current	<input checked="" type="checkbox"/>		Number of Loops/Zones in Use	<i>3 loops</i>	
Battery Date	<i>29/4/12</i>		Alarms Sounded	<input checked="" type="checkbox"/>	
Battery Voltage (indicate)	<i>23.5 v</i>		Fire Risk Ass Available	<input checked="" type="checkbox"/>	
Zone E.O.L. Monitor Fitted Correctly	<input checked="" type="checkbox"/>		Dedicated Supply	<input checked="" type="checkbox"/>	
Alarm E.O.L. Monitor Fitted Correctly	<input checked="" type="checkbox"/>		Zone Chart Displayed	<input checked="" type="checkbox"/>	
Power Fault Monitor Mains Removed	<input checked="" type="checkbox"/>		Panel Indicators/Buzzers	<input checked="" type="checkbox"/>	
Power Fault Monitor Battery Removed	<input checked="" type="checkbox"/>		Detector Head Removed	<input checked="" type="checkbox"/>	
Cause & Effects	<input checked="" type="checkbox"/>		Devices Labelled	<input checked="" type="checkbox"/>	
Building Use or Layout Changed	<input checked="" type="checkbox"/>		Device Age/Estimate if not marked	<i>12-1488</i>	
Remote Monitoring Connected	<input checked="" type="checkbox"/>		No. of False Alarms per 100 Detectors		
SYSTEM DESCRIPTION	IF YES, TYPE		SYSTEM DESCRIPTION	IF YES, TYPE	
Main Panel	<i>Trained person</i>		Door Magnets	<i>Local Magnets</i>	
Repeater Panel/Network	<i>WOC person</i>		Sounders/Bells/Voice	<i>250 Bells</i>	
Break Glass			Beacons	<i>N/A</i>	
Batteries	<input checked="" type="checkbox"/>	Ah Qty	Input/Output Units	<i>Not tested</i>	
Smoke Detector	<i>12/15 2</i>		Cable Type	<i>1000 m</i>	
Fixed/ROR Heats	<i>N/A</i>		UPDATED LOG BOOK		
Category of System	P1	P2	M	L1	L2
Battery Calculations	Standby x	Time +	In Alarm x	Batt Def =	Ah required
Results Recorded	<i>0.5 (mA)</i>	<i>12 (hrs)</i>	<i>0.8 (mA)</i>	<i>x 1.25</i>	<i>= 0.8 (Ah)</i>
Devices Checked and Location:					
<i>Checked and tested 25% of devices</i>					
Notes:					
<i>Panel is full working order on arrival. All devices in panel are fully tested. The 1988 and 1998 systems are replaced.</i>					
Time on Site : _____			Time off Site : _____		
Signature (Engineer): <i>[Signature]</i>			Next Test Due Date: <i>3 months</i>		
Name in Capitals (Engineer): <i>S. CHAMBERLAIN</i>			I/We certify the engineer has carried out work as stated		
			Signature (Client): _____		
			Name in Capitals (Client): _____		
(WHITE COPY = OFFICE) (PINK COPY = SITE)					
19-21 Roebuck Road, Hainault Business Park, Ilford, Essex IG6 3TU Tel: [REDACTED] Info@rgeservices.co.uk					