Grenfell Tower – fire safety investigation: Module 3

The Regulatory Reform (Fire Safety) Order 2005

Module 3 Report

The management and maintenance of Grenfell Tower

Chapter 11

Conclusions

REPORT OF

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Fire Safety Engineering

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Specialist Field	:	Fire Safety Engineering
On behalf of	:	Grenfell Tower Inquiry
On instructions of	:	Cathy Kennedy, Solicitor, Grenfell Tower Inquiry
Subject Matter		To examine the circumstances surrounding the fire at Grenfell Tower on 14th June 2017
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1 Introduction

1.1.1 These are the summary conclusions to my Module 3 report, which contains a total of ten chapters, plus this Chapter 11.

1.1.2 My Module 3 report is titled The management and maintenance of Grenfell Tower.

1.1.3 I should emphasise that the conclusions in this chapter are summary only and concentrate on the matters that I consider to be significant.

1.1.4 The reasoning and conclusions about the matters that I have been instructed to consider are set out in the relevant chapters of this report.

1.1.5 In my Phase 1 report, in Section 2 *Conclusions and Next Steps*, {BLAS0000002} I made reference to specific subjects I intended to return to when my Phase 2 analysis was completed.

1.1.6 I have provided those conclusions where relevant, in this Chapter 11.

1.1.7 I have returned to the issues associated with all aspects of the lobby smoke control system in my report *The lobby smoke control system at Grenfell Tower* ({BLARP20000035} to {BLARP20000038}) and have set out my conclusions on that topic separately there.

2 The Regulatory Reform (Fire Safety) Order 2005

2.1.1 I have presented my analysis of the Regulatory Reform (Fire Safety) Order 2005 [RR(FS)O] in Chapter 1. I also deal with fire doors as a *collective protective measure* in Chapter 4 and the external wall as a *collective protective measure* in Chapter 10.

2.1.2 The RR(FS)O is complex and the arrangements that it requires are relevant to a significant number of other matters that are considered in this report. I would, therefore, ask that Chapters 1, 4 and 10 are read together.

2.1.3 The RR(FS)O is a complex statutory instrument that defines fire safety duties through a series of articles. The *responsible person* must ensure any of the duties are complied with, in respect of the *premises* and *relevant persons,* in so far as the requirements relate to matters within their control.

2.1.4 One central question which emerges is whether the external wall is within the scope of the duties set out in the RR(FS)O.

2.1.5 In my view, the *responsible person* has the duty to take *general fire precautions* as set out in article 8 of the RR(FS)O 2005.

2.1.6 When considering *relevant persons* who are not employees, the RR(FS)O requires such *general fire precautions* as may reasonably be required in the circumstances of the case to ensure that the *premises* are safe.

2.1.7 When considering the *principles of prevention,* as required by the RR(FS)O, one should prioritise *collective protective measures* over individual measures for the *relevant persons*, when ensuring the *premises* are safe.

2.1.8 Because flat front entrance doors and the external wall offer collective protection from the harm caused by fire in a building with a Stay Put strategy, they are relevant components of a fire risk assessment.

2.1.9 If either cannot act as a protective measure, by definition they become a hazard in a building with a Stay Put strategy, and on that basis they are also relevant components of a fire risk assessment.

2.1.10 This is why the principle of *giving collective protective measures a priority* is fundamental to the safety case in a building with a Stay Put strategy.

2.1.11 Residents of individual flats in a high rise residential building are *relevant persons* and so those persons must be taken into account by the *responsible person*.

2.1.12 The RR(FS)O legislation and all its supporting guidance, makes clear that *"fire risk assessment should be the foundation for all the fire precautions in your premises"* (page 2 of HM Government Fire Safety risk assessment – Sleeping accommodation 2006 (reprinted in 2015) (*HM "Sleeping accommodation" guide* hereafter).

2.1.13 KCTMO's fire safety arrangements were required to protect the *relevant persons* and the KCTMO were required to ascertain from a fire risk assessment the required *preventive and protective measures*. At Grenfell Tower, the *relevant persons* were primarily the residents of the flats.

2.1.14 From that perspective, the KCTMO, should not have omitted the external wall construction from its assessment of risk, as it was so interlinked with the safety of *relevant persons* in Grenfell Tower and because Grenfell Tower relied on the Stay Put strategy.

2.1.15 In a similar vein, the KCTMO should not have disregarded defective flat entrance fire door sets, as they too were relied upon as a protective measure for all *relevant pers*ons in a building with a Stay Put strategy.

3 The relationship between the *LGA Guide* and other HM Government premises specific guidance

3.1.1 Since 2007, fourteen premises specific Government guidance documents were published in accordance with article 50 of the RR(FS)O .

3.1.2 On 20th May 2013 the Rt Hon Eric Pickles MP addressed the status of the Local Government Association guide Fire safety in purpose-built blocks of flats (2012, *LGA Guide* hereafter) in a letter to Her Honour Frances Kirkham CBE in her capacity as Coroner to the Lakanal House Inquest, confirming "*This fulfils my duty (under article 50 of the Fire Safety Order) to ensure that such guidance as I consider appropriate is available to assist responsible persons to discharge their duties under the Fire Safety Order.*"

3.1.3 Therefore, the *LGA Guide* also became published guidance under article 50 of the RR(FS)O.

3.1.4 If HM Government's intention was to ensure the LGA Guide (2012) superseded the premises specific guidance [Fire safety risk assessment - sleeping accommodation and Fire safety risk assessment - supplementary guide - means of escape for disabled people] for purpose built blocks of flats, I can find no publicly available information which clearly conveys this.

3.1.5 At Section 5.1 of the *LGA Guide* it states that, with respect to purpose-built blocks of flats, it "*builds on the advice given*" in the *HM "Sleeping accommodation" guide*, but it also states (two paragraphs later) at Section 5.3 that the *LGA Guide* is "*the more appropriate guide to use for purpose-built blocks of flats.*"

3.1.6 When the Fire safety risk assessment - sleeping accommodation guidance was reprinted by HM Government in 2015, it continued to make no reference to the LGA Guide (2012); just as the Fire safety risk assessment - supplementary guide - means of escape for disabled people when reprinted in 2015 made no reference to the LGA Guide (2012) either.

3.1.7 I have found no other publicly available evidence that *Fire safety risk assessment - sleeping accommodation* was superseded by the *LGA Guide* (which is not a HM Government publication) and therefore that the HM Government guides no longer applied to purpose built blocks of flats, with respect to article 50.

3.1.8 I have raised these points for consideration, as I understand that it is for the Inquiry panel to determine the significance of the *LGA Guide* (2012) and its relationship with the other guidance published by the Government.

3.1.9 It is my opinion that this state of affairs does not mean the *LGA Guide* (2012) superseded any HM Government guide.

4 Fire safety duties the LGA Guide fails to effectively specify

4.1.1 The *LGA Guide* and *HM "Sleeping accommodation" guide* are based on similar principles, and set out a similar approach to fire risk assessment process.

4.1.2 There are, however, in my opinion three substantial differences between them, in the context of the duties required of the (RR(FS)O.

4.1.3 These are (a) the treatment of vulnerable residents; (b) the recording of fire safety arrangements; and (c) the approach to the detail of the emergency plan.

4.1.4 I have dealt with the substance of these points in Chapter 6, Chapter 8 (with maintenance records in Chapter 7, and building works and alterations records in Chapter 5), and Chapter 9 respectively.

4.1.5 In my view, the *LGA Guide*'s approach to these matters did not fully or effectively reflect the duties imposed under the RR(FS)O for purpose built blocks of flats.

5 The KCTMO's approach to the guidance provided in the LGA Guide

5.1.1 KCTMO's fire risk assessor recorded the use of "HM Government guides" on each fire risk assessment for Grenfell Tower, from 2010, citing "Sleeping Accommodation". He also referenced the HM Government Guides for "Offices and Shops" for his fire risk assessment in 2010 and 2012.

5.1.2 By 2012, he also referenced "*Local Government Group Fire safety in purpose-built blocks of flats* (July 2011)" in his list of HM Government Guides.

5.1.3 **KCTMO's commitment to adopting the principles set out in the LGA Guide**

5.1.4 As to KTCMO's adoption of the advice in the *LGA Guide*, their approach was set out in the 2013 Fire Safety Strategy {TMO00830598}:

4.Standards & good practice applied to residential Housing

4.1 In addition to the legislation outlined above there are a number of guidance documents, British Standards, Codes of Practice, good practice guides etc. that cover fire safety in a residential environment and the TMO is committed to complying with these. The most important of these is "Fire Safety in Purpose Built blocks of Flats" which was published in July 2011 by the Local Government Group following extensive consultation with all stakeholders including ALMOs, the Chief Fire Officers Association etc. This is currently considered to represent good management practice and the TMO has adopted the principles set out in this guidance.

5.1.5 With regard to the three matters that in my opinion the *LGA Guide* failed to effectively specify (as explained in Section 4 above), I make the following points regarding the approach KCTMO took on these matters.

5.1.6 First, regarding planning for "*residents' physical and mental ability*" as referenced by the *LGA Guide*, the KCTMO suggested they would go much further and in setting out what they intended to do in each fire risk assessment, made clear they were not committed to the limited approach described in the *LGA Guide*.

5.1.7 As communicated by means of their formal records - their fire risk assessments – KCTMO advised they would gather information about tenants disabilities and physical ability and mobility, hold this centrally, and use this additional information to assess if residents required additional devices or development of a Personal Emergency Evacuation Plan (PEEPs).

5.1.8 Had these planned steps actually been taken by the KCTMO this could have been a robust process, and one which intended, pragmatically, to rely on existing operational processes within their organisation.

5.1.9 KCTMO were therefore confirming in every fire risk assessment for Grenfell Tower that it was their intention not to do as the LGA Guide advised "*It is usually unrealistic to expect landlords and other responsible persons to plan for this or to have in place special arrangements, such as 'personal emergency evacuation plans'.*

5.1.10 Regarding the standard of management and the records of the fire safety arrangements made, again KCTMO did not follow the guidance set out by the LGA. Instead, the KCTMO had a documented policy supplemented by multiple other procedures, as well as detailed fire risk assessments such as those produced for Grenfell Tower.

5.1.11 Finally with respect to their approach to the emergency plan, the KCTMO did adopt the approach taken in the *LGA Guide*, and therefore did not provide any fire action notices at Grenfell Tower, until intervention by LFEPA {TMO00832135}, culminating in notices being installed for the first time in the Tower sometime in 2017.

5.1.12 **KCTMO failing to comply with the *LGA Guide***

5.1.13 More substantively in my view the *LGA Guide* gave guidance on four fire safety measures, the treatment of which by the KCTMO I have made criticism of in my Module 3 report: fire doors; fire lift switches, smoke control systems and rainscreen cladding.

5.1.14 **Flat entrance fire doors**

5.1.15 On the subject of fire doors, there are three components to the advice given in the *LGA Guide* relevant to events in Grenfell Tower (1) the performance of existing/unknown condition flat entrance fire doors (2) the treatment of self-closers and (3) the maintenance regime for flat entrance fire doors.

5.1.16 Regarding the performance of existing/unknown flat entrance fire doors, KCTMO did not adopt the detailed standard set out in the *LGA guide* (as set out at paragraph 62.17).

5.1.17 Instead, KCTMO relied on something they termed "LFB required standards" (at section 17.3 of their 2013 fire safety strategy) and in doing so (a) omitted the upgrade standard provided in the *LGA Guide* (option 2), and (b) made no requirement for a replacement standard (option 3 in the *LGA Guide*).

5.1.18 Regarding self-closers, KCTMO did not adopt the *LGA Guide* advice on the door closers, which was (bold from the published text):

*62.20 The fitting of suitable self-closing devices – whether to replace rising butt hinges (pictured below) or because the doors are not fitted with self-closing devices – **must** be undertaken in the short term as a matter of priority.*

5.1.19 For example, rising butt hinges had not been replaced by KCTMO and were identified by LFEPA in Adair Tower after the 2015 fire. Furthermore there is substantial evidence that several doors in Grenfell Tower had no self-closer on the night of the fire (as explained in Chapter 4 of my Module 3 report).

5.1.20 I have also explained it was not KCTMO policy even by 2017, to fit self-closers in the short term *"as a matter of priority"* in any of their properties.

5.1.21 Finally KCTMO did not give consideration to, nor did they implement, a planned preventative maintenance regime for flat entrance fire doors, despite this being recommended at paragraph 82.3 and 82.4 of the *LGA Guide*.

5.1.22 **Fire lift switch**

5.1.23 As I have explained in Chapter 7, KCTMO did not arrange for weekly operation of the fire lift switch as recommended in the *LGA Guide*:

81.26 Lifts used for fire-fighting need to be subject to tests and maintenance on a regular basis. This will involve weekly operation of override switches and monthly inspections and annual testing and maintenance of the lifts.

5.1.24 I note too that at paragraph 86, the *LGA Guide* states

86.1 Alterations and improvements to a block of flats can also provide ideal opportunities to upgrade the fire safety measures, often at minimal extra cost. For example, when lift replacement becomes necessary, specifying that the old standard fireman's lift be upgraded to current fire-fighting lift standard, particularly in relation to power supplies, will significantly improve the protection afforded to fire-fighters at the time of an incident in the building.

5.1.25 **Smoke control system**

5.1.26 KCTMO did not arrange for the appropriate *Inspection, testing and maintenance* of the lobby smoke control system in Grenfell Tower, as described at paragraph 81.10 of the *LGA Guide*:

81.10 Other systems of smoke control – including smoke extract systems and pressurisation systems – should again be tested and serviced periodically in accordance with the manufacturer's instructions. This will normally be at least annually, but may involve monthly or more frequent functional tests where the systems are intended to protect the means of escape. It is important that those servicing such systems are familiar with the fire engineering performance parameters used in the design of the system.

81.11 Further guidance on testing and servicing of smoke control systems can be found in BS 9999.

5.1.27 As I have set out in Chapter 7 of this report {BLARP20000033}, BS EN 12101-6:2005 and BS 9999:2008 Code of practice for fire safety in the design, management and use of buildings (BS 9999:2008) states that the smoke control system should be activated weekly to ensure that all smoke control components including dampers and fans are operational.

Table 5-5: Frequency of actions to be carried out per BS EN 12101-6:2005 and BS 9999:2008

Frequency	BS EN 12101-6:2005	BS 9999:2008
Weekly	*13.3 Weekly tests* *13.3.1 Each week the pressure differential system shall be actuated. While the system is operating, checks shall be made that the fans are running satisfactorily and that the ventilation system has operated.* *13.3.2 Each week the fuel level for the secondary power supply shall be checked so that there is sufficient fuel to run the generator for the required time, if the secondary power supply is a generator.*	*V.3.5 Smoke control systems for means of escape* *Actuation of the system should be simulated once a week. It should be ensured that any fans and powered exhaust ventilators operate correctly, smoke dampers close (or open in some systems), natural exhaust ventilators open, automatic smoke curtains move into position, etc.*

Figure 5-1: Excerpt from Table 5-5 of {BLARP20000033}

5.1.28 At Grenfell Tower, ESAs carried out a weekly test from the control panel only (not a manual test), however no inspection of the dampers took place {BLARP20000033}. The weekly test comprised of activation of the smoke detector in the Ground floor lobby, allowing the system to run for a couple of minutes and inspecting the HMI panel to check for any warning messages.

5.1.29 The record of damper open/shut status displayed on the touch screen on the HMI panel, was not accurate, as the 6-core cable which enabled the damper position to be reported at the HMI panel was not connected to any of the dampers in Grenfell Tower.

5.1.30 Please refer to my report *The lobby smoke control system at Grenfell Tower* ({BLARP20000035} to {BLARP20000038}).

5.1.31 **Controlling alterations**

5.1.32 At paragraph 85. Controlling alterations so that they are not detrimental to fire safety, the LGA Guide states:

85.2 Processes should be in place for landlords and other responsible persons to scrutinise alterations and building work within common parts that could have an effect on fire safety

Examples include:

• a landlord undertaking a project to fit rain screen cladding to an existing block of flats without considering the potential for a fire from a flat to travel upwards through the cavity behind the cladding to spread into the flats above

5.1.33 As I have explained in Chapter 10 of my Module 3 report, KCTMO did not create nor implement such a process.

5.1.34 It is for these reasons I conclude that it is not the case that the KCTMO adopted the principles set out in the *LGA Guide* guidance when discharging its duties under the RR(FS)O at Grenfell Tower.

5.1.35 In addition there is no merit in any suggestion by any party, that the contents of the *LGA Guide* justified a difference in the standards the evidence shows was adopted at Grenfell Tower; it is clear instead that the *LGA Guide* itself was not complied with in important respects.

6 Mr Stokes training and qualifications

6.1.1 There is evidence that by 2010, when tendering for KCTMO's medium risk programme, Mr Stokes had undertaken various fire safety training courses as part of his role as *"Enforcement, Audit, Building Control and Technical Fire Protection Officer"* with Oxfordshire Fire and Rescue Service {SAL00000009}.

6.1.2 In particular I note that Mr Stokes attended a three day fire risk assessment course in 2007, approved by the IFE, verified by examination and certified by the Northern Ireland Fire Safety Panel, and C.S. Todd & Associates Ltd {CST00030166}.

6.1.3 Of note too is the evidence of Mr Stokes attending seven of the Fire Protection Association National Occupation Standards (NOS) courses which are directly related to assessment of risk and include subjects such as means of escape for disabled persons, high risk premises and fire safety during building works.

6.1.4 As to Mr Stokes' qualifications, for the reasons set out in Chapter 8 {BLARP20000027}, I have concluded that Mr Stokes relied upon a series of post-nominal letters in his risk assessments which either did not exist or he was not entitled to use.

6.1.5 In my opinion, the most substantial misrepresentation made by Mr Stokes was his use of the phrase IFE Assessor /Auditor (FSO). There is no evidence that Mr Stokes was ever included on the IFE register of risk assessors. I note that he has been asked to stop using this designation {MET00012981}.

6.1.6 I have shown in Chapter 8{BLARP20000027} the clear information from the IFE about their requirements to become registered, and I reject Mr Stokes' explanation in his second witness statement in which he relies on small print from his course certificate.

6.1.7 I would also highlight Mr Stokes's representation of his interaction with the FPA, which is the Fire Protection Association. Individual membership is available, but from the publicly available information provided by the FPA[1], they do not offer any qualification that results in the application of the post-nominal *FPA Dip FP (Europe)*, nor do they offer any qualification that results in the post-nominal *Fire Eng*.

6.1.8 The invention of the Fire Eng (FPA) designation gives a false impression of a professional level of qualification for fire engineering, that Mr Stokes simply did not have.

[1] https://www.thefpa.co.uk/training/, last accessed 22/07/2019

6.1.9 Regarding Mr Stokes use of the post-nominals NEBOSH, on the basis of the information contained on the NEBOSH website[2], only holders of NEBOSH Diploma level qualification are permitted to use the post-nominals NEBOSH. Mr Stokes had achieved a Certificate level qualification (the level below a NEBOSH Diploma), and, therefore, he was not permitted to claim Diploma level.

6.1.10 Mr Stokes invention of seemingly technical post-nominals relating to the design of detection and alarm systems and emergency lights etc, could also lead someone unfamiliar with the construction industry to rely on Mr Stokes knowledge and experience; when in fact he had only attended a one day course to obtain each certificate.

6.1.11 BS 5839 Part 1 and BS 5839 Part 6 are British Standards relevant to automatic fire detection and alarm. BS 5266 is a British Standard for the emergency lighting of premises. The courses Mr Stokes refers to are not one of the four recognised qualifications relating to detection and alarm systems provided by the FIA.

6.1.12 The four recognised qualifications are listed on the FIA's website[3]:

a) The FIA AO Level 3 in Fire Detection and Alarm Design Theory and Regulatory Requirements

b) The FIA AO Level 3 in Fire Detection and Alarm Installation, Theory and Regulatory Requirements

c) The FIA AO Level 3 in Fire Detection and Alarm Maintenance, Theory and Regulatory Requirements

d) The FIA AO Level 3 in Fire Detection and Alarm Commissioning Theory and Regulatory Requirements

6.1.13 In addition there is no such thing as a Competent Engineer BS 5266 - again Mr Stokes created this term based on courses he completed with the Fire Industry Association.

6.1.14 In short, the evidence shows Mr Stokes invented a series of post-nominals to include in his fire risk assessments.

6.1.15 It is my opinion that Mr Stokes therefore made misleading statements to his clients about his training and qualifications. Whether the KCTMO was, in fact, misled will be a matter for the Panel to decide.

6.1.16 I note that PAS 79, at Clause 7iii, makes the following point, which from my perspective emphasises why such conduct was inappropriate, but particularly

[2] https://www.nebosh.org.uk/faqs/?p=6, last accessed 04/12/2020

[3] https://www.fia.uk.com/training/qualifications.html, last accessed 14/06/2021

so in the context of a building such as Grenfell Tower that had been classified by the KCTMO as a higher risk building:

Higher risk or more complex premises will require a higher level of knowledge and experience on the part of the fire risk assessor. For complex premises, there will be a need for the specific applied knowledge and skills of an appropriately qualified specialist. In such cases, evidence of specialist training and experience, or membership of a professional body, can enable competence to be demonstrated.

6.1.17 Mr Stokes was not a member of a professional body.

6.1.18 I note he had attended a five day course in 2006 - National Occupational Standards No.5 by the Fire Prevention Association *"Underpinning Knowledge & Risk Assessment of High Risk Premises"* {CST00030163}.

6.1.19 If I compare this to the IFE Register of fire risk assessors process, they require attendance at one registered course, the majority of which are also 5 days in duration.

6.1.20 I do not know enough about Mr Stokes's experience prior to 2010 to comment on that. His experience from 2010 is as I have described in Chapter 8{BLARP20000027} of my Module 3 report.

6.1.21 On that basis I do not consider Mr Stokes to have demonstrated a higher level of knowledge regarding *higher risk or more complex premises,* as PAS 79 would require.

7 Competence relevant to the RR(FS)O

7.1.1 First and foremost and irrespective of the correct reading of the RR(FS)O, it is my opinion that any person in a fire safety role must satisfy robust standards of competence and they should be subject to an ongoing process of education to ensure appropriate upkeep of knowledge and skill. For that reason, serious consideration should be given to introducing a mandatory professional registration process for fire risk assessors.

7.1.2 Turning to the RR(FS)O itself, it contains a formal definition of competence (in article 18(5) as discussed further below). Despite that, the published guidance documents make the following points regarding competency for fire risk assessments, as an example (bold by me):

LGA Guide: *"A3.1* ***The FSO does not require that fire risk assessments are carried out by competent specialists.*** *Responsible persons, or their employees, can often carry out a fire risk assessment for a small, simple block of flats without formal training in fire safety or fire risk assessment, simply by studying relevant guidance. However, where external professional fire risk assessors are employed, it is important that they are competent, as criminal liability will arise for the responsible person if the fire risk assessment is not suitable and sufficient, and people are placed at risk of death or serious injury as a result."*

HM "Sleeping accommodation" guide, page 5: *"It has been written to provide guidance for a responsible person, to help them to carry out a fire risk assessment in less complex premises. If you read the guide and decide that you are unable to apply the guidance, then you should seek expert advice from a competent person.* ***More complex premises will probably need to be assessed by a person who has comprehensive training or experience in fire risk assessment.*** *However this guide can be used for multi-occupied buildings to address fire safety issues within their individual occupancies."*

7.1.3 In Chapter 8{BLARP20000027} Section 4, I set out my understanding of the competence requirements for fire risk assessors, relying on the RR(FS)O and some supporting documentation. This type of analysis is sometimes necessary when trying to decipher the meaning of the RR(FS)O.

7.1.4 Article 18(1) [safety assistance] refers to *preventive and protective measures* (bold by me):

"18.—(1) The responsible person must, subject to paragraphs (6) and (7), appoint one or more competent persons to assist him in ***undertaking the preventive and protective measures."***

7.1.5 Competence is defined in article 18(5) [safety assistance]:

"(5) A person is to be regarded as ***competent*** *for the purposes of* ***this article*** *where he has sufficient training and experience or knowledge and*

other qualities to enable him properly to assist in undertaking the preventive and protective measures."

7.1.6 Article 9 the fire safety duty regarding risk assessment makes no direct reference to *preventive and protective measures*, nor to safety assistance.

7.1.7 The *preventive and protective* measures can only be identified and applied as a consequence of a risk assessment because these are the building-specific *general fire precautions*.

7.1.8 Whilst the definition of competence in article 18(5) of the RR(FS)O is identical to the definition provided at article 7(5) of the 1999 Management Regulations, article 18(1) of the RR(FS)O differs to that at article 7(1) of the Management Regulations, and is much wider in scope (difference marked in bold by me):

"7.—(1) Every employer shall, subject to paragraphs (6) and (7), appoint one or more competent persons to assist him in undertaking the ***measures he needs to take to comply with the requirements and prohibitions imposed upon him by or under the relevant statutory provisions and by Part II of the Fire Precautions (Workplace) Regulations 1997.***"

7.1.9 The meaning of *undertaking preventive and protective measure*s in the RR(FS)O is not given any further explanation. In my view, that omission causes unnecessary confusion mostly because the *preventive and protective measures* come from a risk assessment.

7.1.10 If the intention of the RR(FS)O was to remove the need for competency in carrying out the most fundamental of all the fire safety duties, I do not understand why, nor can I find any recorded explanation as to why, this difference was introduced (if that was the intention).

7.1.11 There is no obvious reason why a fire risk assessor would be required to be competent solely for the purposes of providing safety assistance, but not for any other purpose under the RR(FS)O.

7.1.12 If fire risk assessors are not required to be competent apart from for the purpose of providing safety assistance, that is inconsistent with and would undermine the wider objectives of the legislation. As para. 321 of the explanatory memorandum to the RR(FS)O said:

"The provisions of article 9 to 22 would enact in a ***substantively unmodified form existing obligations on employers contained in the Fire Precautions (Workplace) Regulations 1997, the Management of Health and Safety at Work Regulations 1999 and the Dangerous Substances and Explosive Atmospheres Regulations 2003****. The draft Order would extend these provisions in respect of non-employees as well as to non-employers in respect of non-domestic premises."*

7.1.13 The broader requirement that fire risk assessor should be competent for all purposes under the RR(FS)O is supported by the following text in PAS 79 2012 (bold by me):

*The fire risk assessment, and its periodic review (see Clause **20**), is a foundation for continued adequacy of fire precautions on an ongoing basis, after compliance with building regulations. **It is, therefore, essential that fire risk assessments are only carried out by a competent person** (see **3.14**). Legal liability may arise on the part of the dutyholder and the fire risk assessor if a fire risk assessment is not suitable and sufficient. If the inadequacy of the fire risk assessment puts one or more relevant persons at risk of serious injury or death in the event of fire, an offence is committed by the dutyholder. The same offence could also be committed by the fire risk assessor.*

7.1.14 Ultimately, creating a well-structured definition of competence, and associated qualifications, training and experience, as well as professionalising the role of fire risk assessor, would be an appropriate focus for recommendations from this Inquiry.

8 The *responsible person* for Grenfell Tower

8.1.1 In Chapter 1 I identified the *responsible persons* for Grenfell Tower and my understanding of their respective levels of control of the premises.

8.1.2 The most significant *responsible person*s were the KCTMO and the RBKC.

8.1.3 Each of the fire risk assessments for Grenfell Tower produced by Carl Stokes records the *responsible person* for the building as the Chief Executive of the Royal Borough of Kensington and Chelsea, but no additional information is provided in support of this statement.

8.1.4 I do not agree that the Chief Executive of the Royal Borough of Kensington and Chelsea was the sole *responsible person* at Grenfell Tower.

8.1.5 KCTMO had the greatest control over the day-to-day management and maintenance activities for the premises, due to the responsibilities delegated to them by RBKC, and also as an employer. KCTMO were required to cooperate and coordinate with all other duty holders (identified in chapter 1) in Grenfell Tower under article 22.

8.1.6 In my opinion KCTMO was the *responsible person* for Grenfell Tower under the RR(FS)O.

8.1.7 RBKC was the owner of Grenfell Tower, and it exercised a degree of control over the premises (by means of the *protective and preventive* measures), and a degree of control over the KCTMO, the extent and significance of which is a matter for the Panel.

8.1.8 RBKC was, therefore, also a *responsible person* for Grenfell Tower.

8.1.9 I have set out any evidence I found where RBKC contributed to, or even changed, a decision proposed by the KCTMO regarding their fire risk management system and therefore influenced the *preventive and protective measures* relied upon at Grenfell Tower. The evidence shows that there were interventions by RBKC.

8.1.10 There were other *responsible persons* at Grenfell Tower: first, leaseholders may have retained some contractual control over their flat entrance doors, but those doors act as a *collective protective measure* and, in my technical opinion, for that reason remained the responsibility of the KCTMO as *responsible person*.

8.1.11 Secondly, principal contractors undertaking works (tRIIO, Rydon and Manse Masterdor) were required as employers to assess the fire risk associated with their works and adequately to coordinate and cooperate with KCTMO as required by article 22.

8.1.12 Finally, maintenance contractors appointed by KCTMO, carried out activities which could impact on the performance of *general fire precautions* in

KCTMO buildings, and therefore had a duty to adequately cooperate and coordinate with KCTMO in accordance with article 22.

9 The division of responsibility in the KCTMO

9.1.1 In my Module 3 report the primary activities regarding KCTMO's fire risk management system typically centred around Ms Wray and Mr Stokes.

9.1.2 However, the 2016 KCTMO H&S Policy {TMO10024402} identified the Chief Executive as ultimately responsible for health and safety.

9.1.3 The Executive Team managing the KCTMO also held some responsibility for health and safety. It was required to adequately delegate authority and provide sufficient resources to others within the organisation to enable an adequate system of fire risk management to be developed and maintained.

9.1.4 The Executive Team was also responsible for ensuring that an Executive Team member continued to chair the KCTMO Health and Safety Committee, as well as providing feedback to Executive Team colleagues on Health and Safety issues raised, and that the Health and Safety Committee met regularly and functioned effectively in line with its terms of reference.

9.1.5 The Health, Safety and Facilities Manager (Ms Janice Wray) was assigned substantial responsibilities under section 2.8 of the 2016 KCTMO H&S Policy. These included formulating all policy and strategy, monitoring, reviewing and audit compliance of the policy; and advising on compliance with the RR(FS)O.

9.1.6 Ms Wray was not a member of the Executive Team.

9.1.7 The Operations Directorate at the KCTMO, were responsible for some specific issues to do with KCTMO's fire risk management system, specifically, co-ordinating fire risk assessment actions, and establishing an effective and compliant planned preventative maintenance programme. They had a duty too, regarding the primary monitoring committee, to *"attend the TMO's Health & Safety Committee where health and safety compliance across the company is reported, discussed and monitored."*

9.1.8 The Health and Safety Committee was classified by means of the Annual Health and Safety report, as *"the main forum for setting and reviewing h&s policy and strategy and for actively monitoring compliance with all relevant statutory provision"*.

9.1.9 Fire risk management was dealt with by this committee, I am not aware of a separate sub-committee for example dealing with matters of fire risk.

9.1.10 In each of my Chapters I have set out the evidence of required activity from the Executive Team ("top management"), the Health and Safety Manager, and others who were assigned relevant actions, as part of KCTMO's fire risk management system.

9.1.11 Five important themes arise as a result, for the Panel to consider:

a) The difference in duty required of a review and audit at "top management" level in comparison with that at "manager" level;

b) The effectiveness of any monitoring at manager level and how top management then act on that monitoring information;

c) The effectiveness of KCTMO's Health and Safety committee for monitoring compliance with the RR(FS)O;

d) The changes the Executive Team were required, but failed to make, after independent audits; and

e) The overall failure of the Executive Team to adapt the fire risk management system when data from monitoring or audits, demonstrated a problem or negative trend.

9.1.12 I consider the following to be some of the most significant examples of the five themes I observed in my review of the evidence.

9.1.13 **Top management (Executive Team) oversight duties**

9.1.14 KCTMO had an extensive property portfolio of varying risk and complexity.

9.1.15 The KCTMO invested almost entirely in their fire risk assessment process, for compliance with the RR(FS)O. Therefore the Executive team needed to assure themselves that the organisation's fire safety objectives were being met by means of that process.

9.1.16 In particular Mr Black as CEO, and primary duty holder, had the responsibility to review the effectiveness of the fire risk assessment process, and to instigate changes where required.

9.1.17 It is my opinion that the KCTMO's portfolio of properties created substantial fire safety duties for them and this merited a serious approach to the implementation and review of the fire safety arrangements.

9.1.18 Yet the KCTMO Fire Safety Strategy did not set out any audit or review protocol for the fire risk assessment process by KCTMO top management.

9.1.19 KCTMO had also taken the decision to rely on a single fire risk assessment company, and this was a sole trader company. They were therefore substantially reliant as a result, on Mr Stokes's competence.

9.1.20 The absence of an audit/review protocol by KCTMO top management resulted in four substantial failures.

9.1.21 First KCTMO's manager level process for understanding the consequences of Mr Stokes's fire risk assessments was not one which evaluated the resulting risk outcomes in each individual building, but instead was entirely focused on a "closing out the actions" process. The actions were neither individually nor collectively assessed or considered in the context of a need to control the level of fire risk in each of KCTMO's buildings.

9.1.22 Secondly, neither was there a mechanism for the Executive Team to review the fire risk overall across the KCTMO Estate; the outcome of which should then have triggered clear decision making and instructions to the wider organisation – based on risk profiling and the resulting level of risk acceptance. The primary result of which should have been communication regarding required actions and priorities.

9.1.23 Thirdly, the evidence shows there was no review mechanism regarding the overall quality of Mr Stokes' work expected of the Executive Team, even though the Executive Team had taken the decision to rely on a single sole trader company to assess the risk for the extensive portfolio for which they were responsible.

9.1.24 Fourthly, the Executive Team did not have a system to determine the competence and resulting training required by all staff, including for staff in roles upon which the Executive Team relied to operate their fire risk management system.

9.1.25 Those omissions, coupled with the absence of adequate building records, meant that it was difficult to assess the hazards posed to relevant persons effectively.

9.1.26 Ultimately Mr Stokes' fire risk assessments did not adequately assess the fire risk to the relevant persons in Grenfell Tower. The risk level assessed in Mr Stokes report consistently remained the same even when substantial issues were being clearly communicated at Executive Team level, and which logically would change/increase the risk level.

9.1.27 Mr Stokes did not adequately record the *general fire precautions* upon which his assessment of the risk was based. The fire risk assessment documents contained a range of inaccuracies and errors, presented repeatedly over several years.

9.1.28 Ms Wray did not correct the accuracy of any individual reports produced by Mr Stokes as would be expected of someone at "manager" level.

9.1.29 Nor is there evidence of an independent review of the fire risk assessments, instigated by top management (Executive Team).

9.1.30 **Dealing with monitoring data**

9.1.31 Ms Wray was responsible for gathering the relevant monitoring information from the fire risk assessment process, which was based only on actions recorded by Mr Stokes in his fire risk assessments, not assessed risk levels nor risk levels caused by the collective incomplete actions for each building.

9.1.32 There is evidence that Ms Wray was regularly reporting progress on fire risk assessment actions to the KCTMO Health and Safety Committee since 2013, in line with the process recorded in the KCTMO Fire Safety Strategy {TMO00830598}.

9.1.33 This is also evidence of concern at the Executive Team level of KCTMO, by means of Barbara Mathews and Peter Maddison, and Mr Black right up to the weeks preceding the fire.

9.1.34 The Health and Safety Committee meetings can be considered as review meetings too, based on their definition as *"at planned intervals to discuss the results of fire risk assessment audits, and efforts to address findings."*

9.1.35 But what the evidence that I have been provided with does not show, is a concerted effort by KCTMO's Executive Team to provide extra resources or any other assistance to Ms Wray, who was responsible for arrangements across a substantial portfolio of buildings.

9.1.36 For example, there was no attempt to adapt the fire risk management system, to improve the organisations ability to manage the cumulative risk, as was being communicated repeatedly through their fire risk assessment process, by means of the ongoing set of incomplete fire risk assessment actions.

9.1.37 There does appear to have been an understanding of the consequences of incomplete fire risk assessment actions, as demonstrated by the minutes of an Operational Health and Safety Meeting on 17th January 2014, attended by Sacha Jevans, where it was concluded that KCTMO would not disclose to the LFB the volume of outstanding FRA actions, as it could lead to possible enforcement action.

9.1.38 Due to the way that the KCTMO recorded their actions, on a cumulative basis each year, I have been unable to determine if they completed all their required fire safety actions for their first fire risk assessment for every property within the 5 year time limit agreed with LFEPA{LFB00001643}.

9.1.39 As the number of outstanding actions was KCMTO's chosen metric, I am not surprised that the minutes of the Health and Safety Committee meetings focus on that issue. However, what this committee needed to do was ascertain if the outstanding actions were a risk to life, and to what extent.

9.1.40 I have found no evidence that the Health and Safety Committee ever considered the compliance status, either on an individual building basis nor across the portfolio of KCTMO's buildings, with respect to KCTMO's fire safety duties in accordance with the RR(FS)O.

9.1.41 **Failing to act on outcomes from independent audits**

9.1.42 The safety management audit undertaken by Matt Hodgson Ltd in 2013 recorded a range of items pertaining to fire safety which KCTMO were required to action.

9.1.43 However many of the items raised had already been set out in the comprehensive audit undertaken in 2009 by Salvus Consulting Ltd (Salvus hereafter)

9.1.44 The common items related to the KCTMO's corporate structure and accountability, lack of formal policies and procedures, poor record keeping for fire risk assessment significant findings, and tracking compliance with statutory duties.

9.1.45 The fact that Mr Hodgson recorded those same issues approximately 4 years after Salvus' review is evidence that KCTMO, by means of their Executive Team, had not adequately made arrangements in their organisation to implement Salvus' recommendations from 2009.

9.1.46 It is my opinion that the outcome of Mr Hodgson's audit also indicates, that KCTMO did not have an effective system of management for their fire safety arrangements at the time of his review in 2013.

9.1.47 **Failure to adapt the fire risk management system by the KCTMO Senior Executive team**

9.1.48 The occupancy profile coupled with the building characteristics are the primary components that enable one to commence an assessment of fire risk; and therefore formulate a system of defining and implementing relevant *general fire precautions*.

9.1.49 I have explained the chronic absence of any consideration of accurate fire safety information on a premises by premises basis by the KCTMO both at Executive Team level and manager level (by means of Ms Wray) (see my separate conclusion in Section 10 below).

9.1.50 However, the failing with the highest potential risk to life, was KCTMO's failure to instigate a formal monitoring system relating to the vulnerable persons within their fire risk management system.

9.1.51 As I explained above, there was no attempt to adapt the fire risk management system, to improve the organisations' ability to manage the cumulative risk, as was being communicated repeatedly through their fire risk assessment process.

9.1.52 Regarding vulnerable persons, this was then compounded by the absence of any accurate data about building specific cohorts of vulnerable persons, due to Mr Stokes and indeed Ms Wray's failure to adopt the method recorded in every formal fire risk assessment for Grenfell Tower.

9.1.53 In the various arenas where the Executive Team review, of the scale of vulnerable persons forming part of KCTMO's overall fire safety duties, could or did occur, I have found no evidence of a focus on either understanding the performance of the occupancy profiling arrangements recorded as being in place, nor a review of how effectively this was being incorporated into KCTMO's fire risk assessment process.

9.1.54 Executive Team meetings, could have been used as an opportunity to report or raise any concerns about status of the information available regarding

vulnerable persons, such that the relevant Executive Directors could then feed this into the Health and Safety committee.

9.1.55 However I have no evidence that the Health and Safety committee had a standing item on the agenda to discuss the arrangements made for the protection of vulnerable persons in the event of a fire, nor did this Committee review those arrangements.

9.1.56 Change was being considered from January 2017 {TMO00840763} but was not in place by the night of the fire.

9.1.57 I have not found any Key Performance Indicators (KPIs) developed by KCTMO in relation to monitoring the performance of their occupancy profiling system. In June 2017, KCTMO did update their formal Fire Safety Strategy document to record their intention to carry out occupancy profiling, and to record that this would be relied upon to identify vulnerable residents and the relevant protection from fire.

9.1.58 Thus, KCTMO did not have a documented plan before this time, which outlined the process and procedures to be followed to identify residents especially at risk across the buildings under their management.

9.1.59 I have not found any KPI's against which the carrying out of fire risk assessments, and/or the production of PEEPs, or indeed the provision of other protection measures for vulnerable persons, could be monitored against.

9.1.60 This was the most substantial failure of the KCTMO's Executive Team i.e. to assure themselves (and indeed the RBKC), that the organisation's fire safety objectives were being met, and that their fire risk management system was fit for purpose with respect to delivering compliance with the RR(FS)O – which in my opinion it was not.

10 KCTMO's approach to fire safety information

10.1.1 In 2009, Salvus raised the following points relevant to premises specific information:

It is reported that there is an individual document file for each premises in which all relevant fire safety records are kept. An example of such a folder was not available for review at the time of the assessment. See also 4.1 below. There does not appear to be any fire safety manual as recommended in BS 9999 (previously BS5588).

10.1.2 Salvus also recommended that *"TMO confirm that the individual premises folders contain all relevant fire safety information and that it is up to date."*

10.1.3 Both the *HM "Sleeping accommodation" guide* and the LACoRS Housing – fire safety -Fire Safety Guidance on fire safety provisions for certain types of existing housing, LACoRS Guide, 2008 (*LACoRS Guide* {CST00002516}) provide throughout each respective publication multiple issues to consider that would warrant a fire risk assessor to carry out an information gathering process with the *responsible person*.

10.1.4 The *LGA Guide* and PAS 79:2012, approach the question of records differently and go as far as providing lists of information to gather and consider in the fire risk assessment process.

10.1.5 In my view no "*individual document file for each premises*" as Salvus had recommended, was ever made available by the KCTMO to Mr Stokes.

10.1.6 I have set out the evidence regarding the incorrect description, by Mr Stokes in the fire risk assessment documents from 2010 to 2016, of many of the general fire precautions in Grenfell Tower, such as the fire performance description of the lifts, the doors, the smoke control system, and ultimately the external wall.

10.1.7 While paragraph 87.6 of the LGA Guide anticipated that "*in practice, there will be no need for a specific record of the fire safety arrangements in many blocks, particularly if the fire safety measures are detailed sufficiently in the fire risk assessment*" even the latter could not be provided in relation to Grenfell Tower.

10.1.8 This was because of the incorrect descriptions consistently adopted and applied by Mr Stokes in the fire risk assessment documents he produced for the building.

10.1.9 That failure caused the *responsible person* (KCTMO) in turn to fail to produce records of the *general fire precautions* for Grenfell Tower.

10.1.10 I have explained in my Module 1 report *The Fire Safety Engineer* (Version 2 Updated 22 October 2020) {BLARP20000017}, that there was no fire strategy document for Grenfell Tower, before or after the primary

refurbishment, that described its condition. I have found no evidence that Mr Stokes communicated that he needed such a document to fulfil his instructions adequately.

10.1.11 The Rydon Building Manual ({TMOM00000001} to {TMOM00002199}) omitted critical pieces of *fire safety information* including an as-built fire safety strategy. Overall the *fire safety information* that was provided did not comply with the guidance in BS 9999:2008 and therefore Regulation 38.

10.1.12 Therefore between 2009 and 2017 fire safety information does not appear to have been considered an important matter by the KCTMO (or their advisors), nor considered relevant to their assessment of fire risk. That is, in my view, unacceptable.

10.1.13 I consider fire safety information regarding the *collective protective measures* relied upon in the Stay Put strategy for any type of high rise residential building, to be a critical component of a competent and robust fire risk assessment.

10.1.14 The collection and recording of that information is directly within the remit of the *responsible person*.

10.1.15 It is increasingly clear that a new approach to creating and maintaining digital records of existing buildings, to improve the quality of fire risk assessments for *relevant persons*, will be an important consideration for the Inquiry panel at its recommendations stage.

11 KCTMO's approach to the hazard building works and alterations posed to residents

11.1.1 During Phase 1, I had become increasingly concerned about the KCTMO's culture of non-compliance. Set against that background, there were three reasons I analysed KCTMO's treatment of building works and alterations.

11.1.2 First, building work and alterations are a well-documented hazard for consideration by the *responsible person*, by means of the published guidance including the article 50 guidance.

11.1.3 Secondly, as there was evidence of works at Grenfell Tower over a period of time, I wanted to understand how the arrangements changed (if at all) and what improvements were made by the KCTMO.

11.1.4 Finally, this hazard required co-ordination and communication with other *responsible persons*, the need for which is again well documented in the guidance; plus the interface with construction related legislation is referred to directly in the RR(FS)O.

11.1.5 My investigation revealed a lack of control by the KCTMO, mainly due to the lack of arrangements made relevant to this hazard, and the lack of implementation of the partial arrangements they did formulate through their policy documents.

11.1.6 Overall, there was no improvement over time in the arrangements KCTMO made.

11.1.7 The evidence also shows KCTMO did not consider joint fire risk assessment or a co-ordinated approach to the assessment of risk, during any of the three works programmes I analysed.

11.1.8 To identify responsibility for monitoring health and safety during works or alterations in an occupied buildings for which KCTMO were responsible for, it was necessary to have access to the Health and Safety Policy which assigned responsibility to the Operations Directorate, the Fire Safety Strategy which set an objective to consider resident safety at every stage of construction, and unusually the Health and Safety Annual Reports which assigned responsibility for specific monitoring activities to Project Administrators/Project Managers/Contract Managers.

11.1.9 However, I have seen no evidence that the Health and Safety Annual Reports were given to staff or any other relevant party.

11.1.10 The KCTMO Estate Staff Quick Reference Handbook {TMO10028449} set out specific responsibilities regarding the provision of information to the contractor and a monitoring of works function for the ESAs. However, these responsibilities were not referred to in any other KCTMO policy or procedure. Nor was any provision made in the procedures for recording, monitoring or reviewing the assigned activities. Therefore, I do not consider

this approach constituted fire safety arrangements in accordance with article 11 of the RR(FS)O.

11.1.11 Works and alterations were carried out regularly in Grenfell Tower from 2011 to the night of the fire in June 2017.

11.1.12 The absence of arrangements meant during periods of work and construction in Grenfell Tower, the risk to *relevant persons* was increased and the KCTMO had insufficient arrangements to control the hazard created by those works.

11.1.13 Focusing on the primary refurbishment the main conclusions are as follows.

11.1.14 The KCTMO did not instruct a joint or co-ordinated fire risk assessment during the works, nor did they carry out a review of the emergency plan and any changes needed to it during the work, despite major changes to the evacuation routes and changes to the provisions to make those routes safe.

11.1.15 There is substantial evidence of Rydon carrying out fire risk assessments, but there was no co-ordination of Rydon's activity by the KCTMO, as the KCTMO were required to do.

11.1.16 Ms Wray instructed three fire risk assessments during the 2014-2016 construction period of the primary refurbishment, the timing of which meant KCTMO failed to instruct and undertake a fire risk assessment of Grenfell Tower for an 18 month period during major construction works. This was despite being in receipt of information regarding hazards created by the works from the contractor Rydon, and being informed repeatedly by Rydon for example, of the non-operational status of the smoke control system.

11.1.17 These matters are not material to the events the night of the fire, but they are material to a culture of non-compliance with the fire safety duties set out in the RR(FS)O.

11.1.18 By not assessing the hazard the works posed to the *relevant persons*, KCTMO's formal records for Grenfell Tower were not evidence of a suitable and sufficient fire risk assessment because no risk assessment of the works had actually been carried out.

11.1.19 I would also highlight the following particular points.

11.1.20 **Assessment of risk during the refurbishment**

11.1.21 I have found no evidence that Mr Stokes advised KCTMO that they should update their emergency plan.

11.1.22 Mr Stokes made no assessment of the new occupancy profile for Grenfell Tower, which was changed by means of employees from Rydon and various other companies now using Grenfell Tower as their workplace.

11.1.23 Also, Mr Stokes did not incorporate the hazards posed by the works as he had observed himself or as advised by Rydon. By April 2016 Mr Stokes was still

asking for what he termed Rydon's evacuation policy, Rydon's procedure for a fire incident within the area of Grenfell Tower under their control, and Rydon's fire risk assessment.

11.1.24 Notwithstanding these matters, Mr Stokes retained the risk level ranking at "Tolerable" throughout the primary refurbishment. In my view, Mr Stokes had no reasonable evidence or relevant information to support his decision to continue to record a risk ranking of "Tolerable".

11.1.25 I am clear that these events are not material to the fire, but the failings are relevant to the Panel's assessment of Mr Stokes' competence.

11.1.26 **Gas riser replacement works**

11.1.27 My primary concern is that, despite the residents raising reasonable queries about building work and its effect on a single means of escape route, the technical response and activity in response to their concerns was wrong.

11.1.28 I have studied the evidence carefully to try to work out why the residents' concerns were not taken as a relevant parameter in the assessment of risk, and I can find no reasonable explanation.

11.1.29 The gas riser replacement works were still under way the night of the fire and the fire protection measures required were not in place; yet the fire risk assessment had not been reviewed or updated, and no communication regarding the emergency plan had taken place. This was despite the fact the works were taking place in an evacuation route and impacted the protection provisions.

11.1.30 It was an error on the part of both Mr Stokes and Ms Wray to fail so substantially to recognise the works as a hazard, particularly when those works were being carried out within a single means of escape route in a high rise residential building.

11.1.31 Mr Stokes observed unprotected penetrations in the compartment wall of the protected stair and lobbies, yet he failed to advise KCTMO of the resulting risk to *relevant persons* and the potential impact on the means of escape and firefighting provisions.

11.1.32 Complaints raised by the Grenfell Leaseholders Association were escalated to KCTMO's top management, RBKC and the KCTMO Board; and prompted KCTMO to pursue Cadent and tRIIO to hasten the provision of fire protection to the replacement riser and laterals in the stairs and lobbies of Grenfell Tower. That work hadn't been completed by the night of the fire.

11.1.33 The review by KCTMO Executive Team, as a result of the Leaseholders complaint, did not incorporate a request for assurance that resident safety was being dealt with during the works, nor a request for an update to the fire risk assessment at the time.

11.1.34 As a consequence at no time during the works did KCTMO make a suitable and sufficient assessment of the risks the works posed to residents.

11.1.35 This was in my technical opinion, a breach of KCTMO's fire safety duty set out in article 9 of the RR(FS)O.

11.1.36 Despite this I note that Mr Black still told Cllr Blakeman on the 23rd March 2017 that a risk assessment had been done, when, in my opinion, it had not been done.

12 The duty to protect vulnerable persons in the event of a fire

12.1.1 It is indisputable that there was and remains, a duty on the *responsible person* to make arrangements to protect vulnerable persons in the event of a fire.

12.1.2 The most relevant fire safety duty is provided for at article 14 of the RR(FS)O which imposes the duty on the *responsible person* to make specific provisions for emergency routes and exits. These duties are concerned with safeguarding the safety of *relevant persons*.

12.1.3 As for all the articles in the RR(FS)O, article 14 addresses *relevant persons*; for the avoidance of doubt it does not introduce any limits to persons deemed relevant.

12.1.4 The critical components of article 14 include that (a) emergency routes and exits must lead as directly as possible to a place of safety; and (b) in the event of danger, it must be possible for persons to evacuate the premises as quickly and as safely as possible.

12.1.5 I have set out the broad range of potential reasons that may result in persons being considered especially at risk, based on the published guidance, and the information regarding their distinct needs when considering suitable assistance and protection methods, as part of a fire risk management system.

12.1.6 The risk factors include building-specific factors such as low familiarity with the premises or location within the premises; or personal attributes or circumstances (e.g. age, mobility, visual impairment); or the intersection of multiple risk factors.

12.1.7 Each of these factors potentially affect individuals in different ways and might require different adjustments by the *responsible person* to support those persons in the event of an evacuation.

12.1.8 It is critical that the current over-simplification of the Stay Put strategy, is the subject of some substantial intervention and improvement.

12.1.9 There are always persons who must evacuate in the event of a fire in a high rise residential building, when the Stay Put strategy is being implemented.

12.1.10 The Stay Put strategy is about limiting the numbers of people who will evacuate in the event of a single flat fire; it does not mean, by any published or reasonable definition of it, that no evacuation of any person will be necessary.

12.1.11 Currently, the published guidance documents are based on the principle too, that additional care and attention must be paid to the particular needs of vulnerable persons, rather than outlining a prescriptive or uniform approach for accommodating the needs of such persons.

12.1.12 The only exception is paragraph 79.9 of the *LGA Guide* which states:

79.9 In 'general needs' blocks of flats, it can equally be expected that a resident's physical and mental ability will vary. It is usually unrealistic to expect landlords and other responsible persons to plan for this or to have in place special arrangements, such as 'personal emergency evacuation plans'. Such plans rely on the presence of staff or others available to assist the person to escape in a fire.

12.1.13 No alternative protection method is then proposed.

12.1.14 As I have set out in Chapter 2 {BLARP20000024} the RR(FS)O defines safe as:

"safety" means the safety of persons in respect of harm caused by fire; and "safe" shall be interpreted accordingly;"

12.1.15 The general fire precautions are the preventive and protective measures and should be *"reasonable in the circumstances"*, to ensure the premises are safe.

12.1.16 The RR(FS)O makes no refence to any qualification or minimising of this duty in regard to vulnerable persons on the basis that it is *"unrealistic"* to undertake the stated task.

12.1.17 As set out in Chapter 6, in my view paragraph 79.9 of the *LGA Guide* is an incorrect explanation of the duties placed on any *responsible person*. More worryingly, it is, in my view, a fundamental breach of the fire safety duties imposed by the RR(FS)O.

13 KCTMO's approach to vulnerable persons at policy level

13.1.1 At the outset it is important to be clear that the KCTMO did not record arrangements that purported to follow the guidance set out in the *LGA Guide*. Instead, the KCTMO communicated far more substantial arrangements over and above that set out in the *LGA Guide*.

13.1.2 In 2010, Mr Black confirmed that KCTMO would deal with evacuation procedures for disabled people by means of Personal Emergency Evacuation Plans (PEEPs) in larger blocks and on a reactive basis.

13.1.3 Subsequently, in each of Mr Stokes fire risk assessments, accepted and retained by KCTMO as their formal record for Grenfell Tower, he recorded a formal information gathering programme, the development of PEEPs and the availability of evacuation/firefighting lifts for disabled residents.

13.1.4 However, from a policy perspective, the records demonstrate that there was no fire safety objective set with regard to identifying persons *especially at risk* in KCTMO's residential buildings, nor a process to be followed to ensure those persons were provided with the necessary *preventive and protective measures*.

13.1.5 The policy documents record the provision of Personal Emergency Evacuation Plans for KCTMO staff only.

13.1.6 The draft 2014 KCTMO Fire Safety Policy was the only document which included the objective to consider vulnerable persons as part of the risk assessment process. That was then apparently deleted by Ms Wray.

13.1.7 Of the two process and procedure documents I have seen, the Supporting People Procedure document was not implemented by the night of the fire and the Estate Services Assistant Handbook set out the role for ESA's to advise the customer service centre of known vulnerable residents, but I do not know the procedure they were to use to enable this communication {TMO10028449}.

13.1.8 I understand from the available evidence that the People, Performance, and Governance team were responsible for the systems to store resident information and managing complaints raised by residents through the complaints team.

13.1.9 However, the information to feed into that system was gathered by staff overseen by the Director of Housing (Teresa Brown) i.e. Neighbourhood officers and Estate Service Assistances and the Customer Service Centre.

13.1.10 Of those persons within the KCTMO organisation who had been assigned duties to gather relevant occupancy profile information, the witness statements from individuals holding those roles, all confirm they had no

direction to provide occupancy profile information for the purposes of preparing a Personal Emergency Evacuation Plans.

13.1.11 The evidence shows that KCTMO had drafted a policy for vulnerable persons with this work being carried out mostly by Mr David Noble between 2014 and 2017.

13.1.12 Mr Noble confirmed it had not been considered by the Executive Team by the night of the fire, which also meant that KCTMO had not closed out the recommendation made nearly eight years earlier by Salvus that they *"strongly recommended that TMO consider development of formal procedures to deal effectively with fire safety issues associated with disabled or vulnerable tenants and leaseholders, and also any employees."* {SAL00000013}

13.1.13 On 7th December 2016, Ms Wray wrote to Mr Noble stating {TMO00865834}:

I am reviewing our fire policy and as part of the discussions with the H&S Committee there have been some questions about data on vulnerability – how is this captured, where is it stored , how reliable is it?

13.1.14 This indicates therefore, that Ms Wray was not aware of how KCTMO captured and stored data regarding vulnerable persons. This was despite Mr Stokes fire risk assessments consistently referring to a KCTMO process that incorporated this data being captured, stored, and then relied upon in the fire risk assessment process.

13.1.15 It is of considerable significance that Ms Wray never queried or corrected Mr Stokes on this subject.

13.1.16 There is no evidence that KCTMO's Executive Team and, in particular, Mr Black, returned to this issue until December 2016, when KCTMO commenced their considerations of the drafting of a new section for a planned updated version of KCTMO Fire Safety Strategy.

13.1.17 Overall, the evidence shows there was an organisational awareness of a need to consider vulnerable persons in the event of a fire, and a loose presumption that it was being addressed as part of the fire risk assessment process.

13.1.18 The most significant failing of the KCTMO as *responsible person* due to omitting vulnerable persons from their fire safety policy, was the failure to recognise the increased potential for harm to vulnerable persons in the event of a fire.

13.1.19 As a result the KCTMO, as *responsible person*, did not make nor give effect to such arrangements as were appropriate, for the *planning, organisation, control, monitoring and review* of the *preventive* and *protective* measures for *relevant persons* that were vulnerable, as required of their fire risk management system.

14 Mr Stokes approach to the assessment of persons being *especially at risk*

14.1.1 There are many significant errors in Mr Stokes' assumptions about vulnerable persons and the protection being made available to vulnerable persons in Grenfell Tower. Ultimately, the absence of any PEEPs for any vulnerable person in the building speaks for itself.

14.1.2 First, Mr Stokes said he relied on a KCTMO process to formulate what I refer to as an occupancy profile for his work. Every version of his fire risk assessment referred to the *"TP Tracker system"*, even when this system had been disbanded by the KCTMO.

14.1.3 Mr Stokes clearly stated that KCTMO gathered this information about residents for the purpose of preparing PEEPs:

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).

14.1.4 Yet there is no evidence that Mr Stokes requested directly or indirectly from the KCTMO any information regarding the presence of vulnerable residents in Grenfell Tower, despite his reference to a central source of specially gathered information about residents (by means of the TP Tracker system).

14.1.5 Secondly, Mr Stokes recorded in all his risk assessments that reasonable arrangements for means of escape have been provided for "disabled people":

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?	✓		

Figure 14-1: Excerpt from June *fire risk assessment* {LFB00000066}

14.1.6 Mr Stokes recorded also, that the two lifts at Grenfell Tower were 'evacuation/fire fighter lifts' and could be used in an evacuation:

"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."

14.1.7 That was incorrect. As I have explained in my Phase 1 report, the lifts did not have the necessary safety features to enable their use for evacuation.

14.1.8 In fact, Mr Stokes did not know if there were any "disabled persons" in Grenfell Tower, and made no provision for them other than a generic and incorrect assumption about a lift being available. There was no clear

explanation either, as to how this would work to protect *relevant persons* in practice.

14.1.9 Mr Stokes made no reference to an emergency plan for Grenfell Tower, nor did he deal with the issue of ascertaining what if any residents should be the subject of the PEEP process, as promoted by means of his fire risk assessment.

14.1.10 The published guidance at the time made clear that Mr Stokes was required to have a knowledge of the issues relating to persons especially at risk, and had a duty to identify vulnerabilities with respect to fire as part of his *fire risk assessment*.

14.1.11 Ms Wray received all copies of Mr Stokes fire risk assessments and never corrected Mr Stokes regarding his incorrect description of KCTMO arrangements for formulating the occupancy profile of vulnerable persons.

14.1.12 It was Ms Wray's responsibility to obtain the relevant information and make the arrangements defined in the fire risk assessment; or else to correct the arrangements as recorded so that they were in line with what KCTMO were actually implementing at the time. Neither activity occurred.

14.1.13 As I have explained in detail in Chapter 6, there were residents of Grenfell Tower with various impairments (mobility, sensory, cognitive), and there was information available about those residents within the KCTMO organisation in the years before, and by the night of the fire.

14.1.14 Mr Stokes' and Ms Wray's failure to obtain the necessary occupancy profile information was a considerable one, particularly because the fire risk assessment statement referred to that information as if it was a component of the assessment of risk level, when in fact it was not.

14.1.15 Mr Stokes and Ms Wray do not apparently dispute that the KCTMO's health and safety team were unaware of the location of vulnerable residents or those with disabilities.[4]

14.1.16 As a minimum Ms Wray and Mr Stokes needed to produce a fire risk assessment record that was a correct representation of the arrangements KCTMO were implementing in practice. This was not the case.

[4] Para. 115 of Wray's 3rd statement {TMO00847305}; paras. 143 and 144 of Stokes' 2nd statement {CST00030186}.

15 KCTMO's access to information to protect vulnerable residents

15.1.1 KCTMO had access to processes that gathered pertinent information about residents in Grenfell Tower, regarding their vulnerabilities relevant to a fire condition, as I explained in Chapter 6.

15.1.2 KCTMO's access to those processes, and their reference to them in their formal fire risk assessment records, casts the resulting failure in arrangements for vulnerable persons in a particularly negative light.

15.1.3 I have not found in the evidence available to me that KCTMO monitored the effectiveness of their occupancy profiling system as a means to identify vulnerable persons for the purposes of a fire risk assessment, as they claimed.

15.1.4 Further, the *fire risk assessments* do not appear to have factored in any information held on the TP Tracker system, nor when this was replaced by the Civica W2 and Capita Housing systems.

15.1.5 Therefore I have found no evidence to support KCTMO's claim that they sought to "target" vulnerable persons, as part of their fire risk assessment process, as first advised by Mr Black in 2010.

15.1.6 It appears to me that, in fact, the occupancy profiling information recorded, was never used as part of the fire risk assessment.

15.1.7 On the night of the fire the KCTMO did access data available to them about vulnerable residents.

15.1.8 However I have not been able to find an explanation in the evidence as to why such data was not used prior to the fire by Ms Wray for the purposes of assessing risk to those residents.

15.1.9 Nor, as I have explained in Chapter 6, have I been able to establish why Mr Noble's spreadsheet produced the night of the fire failed to incorporate the full set of data available within the KCTMO, from their tenancy creation and tenancy audit processes.

15.1.10 The spreadsheet produced that night listed ten vulnerable residents, when in fact a total of twenty vulnerable residents in Grenfell Tower, were already recorded by means of KCTMO's tenancy creation and tenancy audit processes.

15.1.11 I have found no evidence that a PEEP was considered or produced for any of those twenty vulnerable residents either.

15.1.12 In fact Ms Wray confirmed in her witness statement that PEEPs were not prepared for residents at Grenfell Tower, but does not explain why that was, other than to state it was not sheltered housing.

15.1.13 If that was the position taken by the KCTMO (although this is not supported by evidence available to me) it does not explain either, why the vulnerable persons process recorded in the fire risk assessment for Grenfell Tower, was never corrected by Ms Wray.

15.1.14 I note that the two PEEPs disclosed to me, for residents of Markland House and Gillray House, were not prepared as a consequence of Mr Stokes risk assessments; they were made following specific requests from those residents, as explained by Ms Wray in her witness statement {TMO00862589}.

15.1.15 I conclude therefore that even when residents were known as vulnerable to the KCTMO, such as the twenty vulnerable persons recorded by the KCTMO as living in Grenfell Tower, that the KCTMO did not undertake the procedure first outlined in a fire risk assessment progress meeting with Salvus in February 2010 {RBK00052537}, then by Robert Black in September 2010, and as recorded by means of every fire risk assessment produced thereafter.

16 KCTMO's treatment of vulnerable residents in the emergency plan

16.1.1 For obvious reasons, it is important that vulnerable persons are always part of the formal fire risk assessment process, and that practical and pragmatic protection solutions are then found which reflect the needs of all *relevant persons*.

16.1.2 That is particularly so in the typical operating conditions for high rise residential buildings, which tend to have no on-site staff for the purposes of evacuation assistance.

16.1.3 In my Phase 1 report in Section 2.27.5 – 2.27.12 {BLAS0000002}, I made reference to the work I intended to do in Phase 2. My conclusions are as follows.

16.1.4 KCTMO did not communicate information about the needs of vulnerable residents in Grenfell Tower, to the LFB, despite KCTMO having made formal arrangements for regular meetings with LFB and LFEPA (the "bi-monthly meetings").

16.1.5 From my review of the bimonthly meetings I have found that KCTMO's arrangements for vulnerable persons were discussed on four occasions. None of these were about vulnerable residents in Grenfell Tower. This shows that vulnerable persons were considered relevant to the fire safety discussions held by KCTMO and the LFEPA/LFB.

16.1.6 The discussions between KCTMO and LFB were, however, limited to the fire safety measures provided to individual residents and no further discussion occurred concerning KCTMOs wider arrangements for vulnerable persons.

16.1.7 These meetings were not treated as a formal mechanism for KCTMO to communicate up to date information, as part of an emergency plan, as to which residents had vulnerabilities, including those that merited a PEEP procedure by KCTMO and whether there were any consequential effects for the fire and rescue services.

16.1.8 What could (and should) have been a productive process was not, in fact, used to share premises specific information regarding evacuation needs with the fire and rescue services.

16.1.9 It remains my opinion that a failure to provide adequate means of escape for persons requiring assistance causes a breach of the RR(FS)O, which I consider to have explained in detail in this Module 3 report.

16.1.10 KCTMO's duty at the time, was to identify persons especially at risk and make provision for protective measures, including specific provisions for (a) emergency routes and exits which must lead as directly as possible to a place of safety; and (b) in the event of danger, it must be possible for persons to evacuate the premises as quickly and as safely as possible.

16.1.11 Instead, the KCTMO Executive Team failed to make suitable arrangements for the evacuation of vulnerable persons - they relied fully on their Health and Safety Manager Ms Wray and their fire risk assessor Mr Stokes and did not carry out the required monitoring or review activities needed to assure themselves of compliance with the RR(FS)O.

16.1.12 Mr Stokes and Ms Wray had made substantial technical errors and omissions in their work and had consistently failed to produce an accurate record, by means of the fire risk assessment documents for Grenfell Tower, of the reality of the arrangements being implemented in Grenfell Tower.

16.1.13 That reality was no vulnerable residents were incorporated into the fire risk assessment for Grenfell Tower and no emergency plan was made for any vulnerable residents.

17 The arrangements for maintenance made by the KCTMO

17.1.1 KCTMO were responsible for the management of Grenfell Tower, which included maintenance arrangements, and therefore the maintenance of all the fire safety features relied upon in Grenfell Tower.

17.1.2 I first became concerned about the quality of the maintenance arrangements in the process of my Phase 1 work.

17.1.3 The Regulatory Reform (Fire Safety) Order devotes two articles to the subject of maintenance, and as I have set out in Chapter 7 {BLARP20000033}, there is extensive guidance available regarding the maintenance of active fire protection systems, and generally this guidance is all consistent.

17.1.4 In considering the evidence associated with KCTMO's maintenance activity I identified extensive documentation. This included documentation showing chains of activity stretching over years regarding the systems installed in Grenfell Tower. It also included documentation on core maintenance activities carried out by KCTMO's own employees, as well as by external companies employed by KCTMO.

17.1.5 Despite being provided with this extensive documentation, I did not find consistent recorded evidence that the active fire protection systems in Grenfell Tower were subject to a suitable system of maintenance, maintained in an efficient state and in efficient working order and in good repair.

17.1.6 The condition of the lifts and the smoke control system remain in my opinion relevant to events on the night of the fire.

17.1.7 The dry riser and emergency lighting systems have acted as a useful reference point with respect to understanding the success of KCTMO's maintenance arrangements.

17.1.8 The Senior Management Team members with responsibilities relevant to KCTMO system of maintenance for the fire precautions were the Director of Housing, Teresa Brown and the Director of Assets and Regeneration, Peter Maddison.

17.1.9 Both reported to the Executive Director of Operations, Ms Sacha Jevans.

17.1.10 The Director of Housing, Teresa Brown, had responsibilities relevant to the KCTMO's system of maintenance through directorship for the following portfolios:

a) Estate Services - The ESAs were assigned inspection tasks through the KCTMO Fire Safety Strategy and the Estate Staff Quick Reference Handbook.

b) Customer Service Centre - raising repair requests reported by ESAs, KCTMO Staff, or residents.

17.1.11 The Director of Assets and Regeneration, Peter Maddison, had responsibilities relevant to the KCTMO's system of maintenance through his directorship of the following portfolios:

a) Contract Management – responsible for procuring, monitoring and reviewing maintenance; this was primarily for active systems.

b) Investment Strategy – responsible for KCTMO's computer systems recording the condition of the portfolio of buildings under their management.

17.1.12 I reviewed the documents prepared by KCTMO relevant to policy and procedures, in order to understand what arrangements they planned to make regarding their maintenance duties, and I conclude the following.

17.1.13 The primary document containing relevant information was the Fire Safety Strategy authored by Ms Wray; with the supporting procedures as I explained in Chapter 7 for each fire protection systems, lifts and communal lighting.

17.1.14 KCTMO planned a maintenance regime for their active fire protection systems comprised of three core processes:

a) Planned preventive maintenance – to be carried out by competent contractors in accordance with the relevant British Standard.

b) Reactive maintenance – to be initiated by KCTMO staff and/or residents and carried out by competent contractors via the Customer Service Centre during working hours, and by Pinnacle (an external service provider) outside working hours.

c) Routine inspections and testing – to be carried out by competent contractors in accordance with the relevant British Standard. These were to be supplemented by ESAs per the "*Daily Routine Checks*".

17.1.15 KCTMO set out no plans for recording and monitoring of their planned maintenance, nor their routine inspection and testing component of their maintenance regime; however they did make such plans for their reactive maintenance/repairs component in their Fire Protection Systems Policy and Procedures document {TMO00870933}; Lift Safety, Breakdown & Trap In Policy & Procedure {TMO00849330}; and Communal Lighting inc Emergency Lighting Policy and Procedure {TMO00863420}.

17.1.16 More substantially KCTMO's formal policy and procedures failed to explain when the arrangements for the fire risk assessment works needed to interact with the system of maintenance, in order to enable compliance with the maintenance duties set out in the RR(FS)O.

17.1.17 There were three substantial interfaces required between the process of fire risk assessment and the maintenance works programme, which KCTMO failed to make arrangements for, as follows:

a) No process or plans were created to enable the managers of KCTMO's system of maintenance to be informed of the *preventive and protective measures* required for each building as a consequence of the risk assessment and therefore the protection measures which KCTMO had a duty to maintain. Instead the systems requiring maintenance were generally described and critical protection measures such as smoke control, which was relied upon by the Grenfell Tower risk assessment, amongst other high rise buildings under KCTMO's management, were omitted from policy documents.

b) No formal process or plans existed to require the fire risk assessment process to include an assessment of the arrangements made for the building specific system of maintenance.

c) No formal process or plans existed for making available records of maintenance, routine inspections or testing, as evidence of system functionality, for the fire risk assessment process.

17.1.18 Maintenance and fire risk assessments were objectives referred to within the KCTMO corporate risk map. Integration of these two distinct sets of formal arrangements was critical, as was the communication of the need for these two processes to be considered together, to all the relevant role holders relied upon by the KCTMO.

17.1.19 Formal arrangements were required to enable communication of information from KCTMO's system of maintenance into the fire risk assessments programme, to allow KCTMO to monitor compliance with their statutory duties regarding maintenance under the RR(FS)O.

17.1.20 KCTMO relied on information being passed between each of their processes. I have been clear in Chapter 7{BLARP20000033} that despite no formal arrangements having been made, I have found evidence in practice of some integration between these two distinct components of KCTMO's overall fire risk management system.

17.1.21 The review undertaken by Salvus in 2009 (undertaken by Mr Swain) outlined a series of significant shortcomings in KCTMO's arrangements for the maintenance of fire protection measures, and provided a comprehensive list of actions KCTMO should complete, as a minimum, for statutory compliance, as well as making recommendations to follow 'best practice'.

17.1.22 I conclude from my own analysis of the evidence, that the arrangements made by KCTMO failed to rectify by the night of the fire, any of the statutory breaches that had already been pointed out to them in 2009.

18 Mr Stokes' approach to the arrangements made by the KCTMO for maintenance

18.1.1 The RR(FS)O creates two distinct duties relating to the maintenance of the premises, facilities, equipment, and devices; these are:

a) The provision of a suitable system of maintenance; and

b) Ensuring the fire safety measures are maintained in an efficient state, in efficient working order and in good repair.

18.1.2 The published guidance in support of the RR(FS)O is clear on the importance of assessing the inspection, testing and maintenance arrangements during the fire risk assessment process, in support of these duties.

18.1.3 From the evidence available to me, Mr Stokes appears to have undertaken just one assessment of the arrangements designed by KCTMO to support their system of maintenance. That assessment was recorded in a letter to Ms Wray {CST00003061} dated 27th September 2010.

18.1.4 Mr Stokes outlines the matters in his letter to Ms Wray, which he would consider in future fire risk assessments of residential buildings under KCTMO's control, and implied he would adopt these standards in future.

18.1.5 I do not know what documents Mr Stokes had reviewed to reach his conclusion, nor how he returned to check these conclusions each year (see Section 15 of my Chapter 8 {BLARP20000027}).

18.1.6 I can find no evidence that Mr Stokes requested KCTMO to provide evidence or even confirmation that the issues raised by his previous employer Salvus, had been resolved nor that he sought confirmation if the actions specified by Salvus had been undertaken by the KCTMO.

18.1.7 No reference is provided in the letter to any specific KCTMO documentation Mr Stokes reviewed or relied upon to satisfy himself that the arrangements in place at KCTMO for their system of maintenance were adequate.

18.1.8 The short letter produced by Mr Stokes is in my opinion, not a "*thorough assessment*" of KCTMO's fire risk management system, especially in light of the fact that KCTMO's portfolio of buildings comprised "*of just under 7,000 homes, more than 2,500 leasehold properties...*" (KCTMO Asset Management Strategy 2014-2019 dated May 2015 {TMO00873596}).

18.1.9 I have not seen any other letter/report on this item issued ever again, in the evidence available to me.

18.1.10 Therefore, I consider Mr Stokes' assessment of KCTMO's arrangements for a system of maintenance to be inadequate.

18.1.11 KCTMO had no documented process or procedure for providing maintenance information to Mr Stokes for the fire risk assessments.

18.1.12 From the evidence available to me there were three possible ways Mr Stokes could obtain maintenance information regarding the active fire protection systems for the purposes of his own work: (a) the spreadsheet asset registers used by the contract management team; (b) Keystone (KCTMO's asset management system); and (c) Ms Wray manually requesting records from Assets and Regeneration and providing these to Mr Stokes. I deal with each in turn.

18.1.13 **The Asset Registers**

18.1.14 In his letter dated 27th September 2010, under the heading *"Planned, Preventive Servicing and Maintenance of Fixed Installations in Residential Buildings"* {CST00003061}, Mr Stokes stated two things he would do.

18.1.15 First, he would use his risk assessment inspections to verify the accuracy of the list of systems he has been provided with for each property (Asset Register).

18.1.16 Secondly, Mr Stokes states that it is *"taken that if the item is on the list, ie emergency lighting in Anytown House then servicing and maintenance is being undertaken and records kept."* {CST00003061}.

18.1.17 Mr Stokes did not intend to verify the undertaking of maintenance or the keeping of records by KCTMO. Therefore, Mr Stokes did not intend to make his own assessment of KCTMO's arrangements and instead relied upon KCTMO assertions only.

18.1.18 This is significant because as just one example, the last Asset Register made available to Mr Stokes in January 2016 for Grenfell Tower recorded the presence of the dry riser only, with the last service date '05/08/2015' {CST00001711}; no description of the maintenance, inspection, or testing regimes were recorded. The smoke control system, and associated fire detection, firefighting lifts, and emergency lighting were not listed at all.

18.1.19 **Keystone**

18.1.20 Mr Stokes states at Paragraph 67i. of his witness statement {CST00003063}:

The KCTMO's online document storage space – I was given access to a form of "drop box" (I cannot remember the precise software), in which the KCTMO stored various documents in relation to their buildings ("Online Platform"). When carrying out a FRA, I would check, for example, to see that there were maintenance and/or service records for (provided or installed) fire equipment and/or measures. Although I cannot recall precisely, I believe I was given access to this resource sometime in 2014;

18.1.21 I have also seen notes prepared by Ms Wray following meetings with Alex Bosman (March 2015 {TMO00852270}, April 2015 {TMO00852310}, and June 2015 {TMO00852358}) which include "*Possibility of getting Carl remote access to the Keystone Kiosk to be investigated.*"

18.1.22 John Parsons states in Paragraph 27 of his witness statement {TMO00870938}:

I have been asked to provide information in relation to a proposal to give Carl Stokes remote access to 'Keystone Kiosk'. I cannot see any evidence that access was granted to Carl Stokes.

18.1.23 However, Keystone did not hold maintenance records for fire protection systems – with the exception of lifts as outlined in Paragraph 10 of Mr Parsons witness statement:

Keystone holds servicing and inspection records for ..., lifts,...

18.1.24 Further, Mr Parsons records (Paragraph 14, {TMO00870938}:

... Keystone also holds data regarding the expected life cycle of each building component,...

18.1.25 Therefore, it is my understanding that maintenance and servicing records for the smoke control system, dry fire main, and emergency lighting were not held on Keystone.

18.1.26 **Ad-hoc provision of records**

18.1.27 The third means by which Mr Stokes was provided with maintenance and servicing information was on an ad-hoc basis by KCTMO staff.

18.1.28 I have not found a consistent means by which KCTMO provided records of maintenance to Mr Stokes, and therefore, I do not know what consistent method Mr Stokes applied to his investigations of the maintenance arrangements and required records, in the buildings he was fire risk assessing for the KCTMO.

18.1.29 What is clear is that Mr Stokes was not consistently requesting maintenance certificates/records for systems to independently verify they were being maintained. I have shown in Chapter 7 that all fire safety guidance is clear on the duties of the fire risk assessor with regard to obtaining records of maintenance.

19 The impact of maintenance arrangements on risk levels

19.1.1 Mr Stokes had no responsibility for maintenance other than to understand overall the effectiveness of maintenance activity. He was required to rely on his assessment of KCTMO's system of maintenance and the resulting operating condition of the systems his assessment found, when calculating the resulting risk level in Grenfell Tower.

19.1.2 From my review of the evidence, and when I compare it with the minimum activity recommended in the respective guidance documents for each active fire protection system as I explained in Section 5 of Chapter 7, I have found the status was as shown in the Table 19-1 below.

19.1.3 I have coloured the cells as follows:

a) Red - No evidence of required maintenance activity being completed

b) Amber – Evidence available to me but not for the full period in question

c) Green – Evidence available to me and meets the requirements of the relevant British Standard

Table 19-1: Summary comparison of whether the maintenance action per the minimum requirement derived in Section 5 of my Chapter 7 was completed

Fire protection measure	**Required frequency of maintenance action from the performance standard presented in Section 5 of my Chapter 7**	**Recorded evidence of required maintenance activity being completed:**	
		Prior to primary refurbishment	After primary refurbishment
Lift with fire switch (fire switch only)	Weekly [KCTMO Staff]		
	Annual [Competent Person]		
Smoke control system	Daily [KCTMO Staff]		
	Weekly [KCTMO Staff]		
	Monthly [KCTMO Staff]		
	Quarterly [KCTMO Staff/Competent Person]		
	Six monthly [Competent Person]		
	Annual [Competent Person]		
Emergency lighting	Daily [KCTMO Staff]		
	Monthly [KCTMO Staff]		
	Annual [KCTMO Staff]		
Dry rising main	Six monthly [Competent Person]		
	Annual [Competent Person]		

19.1.4 Additionally, the fire risk assessment process, incorporating a check on the maintenance arrangements, was an important means for Ms Wray to independently monitor and review the system of maintenance KCTMO's Assets and Regeneration team were delivering.

19.1.5 Instead, Ms Wray, Mr Maddison and the Contract Managers appear to have used knowledge of forthcoming risk assessments and LFEPA audits to target overdue maintenance activities.

19.1.6 Overall Mr Stokes' approach, which was supported by Ms Wray, meant the risk assessment process could not be relied upon to provide an accurate assessment of the quality of KCTMO's system of maintenance.

19.1.7 I conclude this was wholly unsatisfactory, and more substantially was not in line with the available guidance for fire risk assessors for carrying out their professional activities in preparing a suitable and sufficient risk assessment.

19.1.8 It is important to note that as part of his fire risk assessment work at Grenfell Tower, whilst Mr Stokes did not assess the veracity of the maintenance arrangements nor consider the resulting impact on the risk to the *relevant persons*, he did raise repeated queries regarding specific activities associated with the system of maintenance for lifts, smoke control system, emergency lighting system and the dry riser.

19.1.9 Despite his repeated queries the absence of this information year on year had no bearing on his assessment of the risk level at Grenfell Tower; nor did it merit any direction from him to the KCTMO about the meaning of these persistent failures.

20 LFEPA interventions about KCTMO's arrangements for maintenance

20.1.1 LFEPA however did give clear warning to KCTMO that there were matters of concern with their overall system of maintenance.

20.1.2 In the evidence available to me, I have seen seven *Notification of fire safety deficiencies* (NOD hereafter) that were issued to KCTMO from the LFEPA between 2009 and 2017:

a) **2nd December 2009** – Trellick Tower {SAL00000049};
b) 8th February 2010 – King Charles House {SAL00000045};
c) **19th September 2012** – Trellick Tower {RBK00058261};
d) **24th March 2014** – Grenfell Tower {LFB00000068};
e) **12th October 2015** – Adair Tower {RBK00013996};
f) **28th October 2015** – Balfour House {LFB00084101}; and
g) **17th November 2016** – Grenfell Tower {CST00000065}.

20.1.3 Six of these, shown with bold dates above, raised article 17 maintenance as an "*Area of Concern*". Two were issued for Grenfell Tower.

20.1.4 Near-annually, KCTMO were issued with notices by the LFEPA that their system of maintenance was failing to meet their duties under the RR(FS)O.

20.1.5 The first NOD for Grenfell Tower was issued on 24th March 2014 relating to issues about the maintenance of the smoke control and emergency lighting systems. The schedule attached to that NOD cites article 11 *Fire safety arrangements* and article 17 *Maintenance*.

20.1.6 The second NOD for Grenfell Tower, was issued on 17th November 2016 with regard to the maintenance of fire doors.

20.1.7 The evidence highlights that the LFEPA/LFB repeatedly brought to KCTMO's attention issues relevant to maintenance through their own inspections, by issuing of NODs and by other ad-hoc communications, as I have set out in Chapter 7 {BLARP20000027}.

20.1.8 This highlights a further failure in KCTMO's arrangements for maintenance, in that the maintenance issues raised in the *fire risk assessments* were left unresolved and eventually then also raised by the LFEPA.

20.1.9 Taken together, I conclude that there were well documented concerns regarding both maintenance arrangements and the resulting operating condition of the fire safety systems in Grenfell Tower i.e. the lobby smoke control system, emergency lighting and fire doors and this is evidence of the failure of KCTMO's overall arrangements regarding maintenance as required by the RR(FS)O.

21 Consequences of KCTMO's fire risk management system – condition of the active systems

21.1.1 The maintenance regime and the fire risk assessment regime are intrinsically linked, and one cannot be effective without the other.

21.1.2 KCTMO's approach was reactive (a) relying heavily on the contractor to identify all KCTMO's assets and carry out the necessary maintenance/inspection testing; and (b) requesting maintenance records in advance of FRAs or LFEPA visits being carried out.

21.1.3 Both Mr Stokes and Ms Wray had awareness of the maintenance regime and some of its failings, but I could not find evidence that either raised concerns with the Executive Team; the aim of which should have been to call for improvements in the organisational approach to maintenance of fire safety systems.

21.1.4 I provide my conclusions on the resulting condition of the active fire safety systems in Grenfell Tower, and how their condition was incorporated into Mr Stokes fire risk assessments for Grenfell Tower, together, as follows.

21.2 The lifts at Grenfell Tower

21.2.1 As I have set out in the conclusions of Appendix L of my Phase 1 report {BLAS0000033}, the lifts at Grenfell Tower were not firefighting lifts, but had the features of 'fire lifts' as per CP3 1971.

21.2.2 A fire lift has substantially fewer fire safety features than a firefighting lift. For the purposes of maintenance, and the set of activities required, it is therefore important to understand the type of lift that requires maintenance.

21.2.3 The presence of and correct operation of a 'fire lift switch' is an important fire safety feature because it allows firefighters to take control of the lifts, and prevent the lifts being used by occupants so that they are not exposed to harm should the lift doors open on a fire affected floor. The fire lift switch also enables firefighters to take control of the fire lift to aid in their firefighting operations.

21.2.4 It is important to note that when there is no automatic recall function for a lift connected to a fire alarm for a building, the only way to prevent *relevant persons* controlling the lift in the event of a fire, is after the fire brigade have used their key correctly, to take control of the lift functions.

21.2.5 This is why I consider the maintenance regime for the fire lift switch so important in the context of RR(FS)O relevant fire safety duties.

21.2.6 **Minimum performance standard for maintenance of the fire lift switch**

21.2.7 My investigation of the guidance pertaining to maintenance requirements for fire lift switches has demonstrated the complexity that has arisen from evolving performance standards in fire lifts and firefighting switches.

21.2.8 It was, therefore, essential for any maintenance contractor, employed by KCTMO to correctly understand the type of lift installation and its specific fire features, from the perspective of maintenance duties in accordance with the RR(FS)O.

21.2.9 From the available guidance, it is reasonable to expect the following activity to be carried out as a minimum for the fire lift switch for the fire lifts at Grenfell Tower:

a) Weekly operation to check the lift returns to the fire service access level, parks with its doors open, and check that the lift does not respond to landing calls. This could be undertaken by a KCTMO member of staff who has been suitably trained; and

b) Annual full operational test following the procedure in Annex C.1 of BS 5588-5:1991. This should be undertaken by suitably qualified and experienced personnel, such as a lift maintenance contractor.

21.2.10 **Ms Wray's decision to rely on a bespoke definition of firefighting lift for the KCTMO's portfolio of buildings and Mr Stokes' consideration of this definition**

21.2.11 Just as I have explained for the external wall, a lift should be categorised and maintained as a *protective* measure, or else maintained to prevent it becoming a hazard in the event of a fire.

21.2.12 The evidence shows confused records made by the KCTMO, when categorising the type of lifts installed in Grenfell Tower, as follows.

21.2.13 First, Mr Cahalarn, KCTMO's Senior Lift Engineer, signed a spreadsheet that defined the lifts at Grenfell Tower as firefighting lifts: R.T.C. 05/03/10 {CST00002923}. The metadata on this file confirms it was created on the 2nd March 2010.

21.2.14 The evidence shows that Ms Wray subsequently provided her own definition of a firefighting lift to Salvus on 3rd March 2010, stating she had consulted with Mr Cahalarn {CST00003102}.

21.2.15 However, Ms Wray omitted several safety characteristics, such as the requirement for an escape hatch, and secondary power, for lifts she intended to categorise on this revised basis, as firefighting lifts for the KCTMO Estate.

21.2.16 Thereafter, the nature of the lifts in Grenfell Tower was not always consistently described. For example, in 2012, Version 11 of the Lift Safety, Breakdown & Trap In Policy & Procedure {TMO00849330} categorised the two lifts at Grenfell Tower as "*passenger lifts*". But by the time the 2013 Fire

Safety Strategy, the two lifts in Grenfell Tower were categorised as fire-fighting lifts {TMO00830598}.

21.2.17 A year later, in Version 12 of the Lift Safety, Breakdown & Trap In Policy & Procedure dated February 2014 {TMO00880434}, the *Schedule of Lifts*, classifying the two lifts in Grenfell Tower as "*passenger lifts*" was removed. Ms Wray is recorded as signing off the document on page 8.

21.2.18 It is not clear to me why Ms Wray had records with a different categorisation of the lifts in Grenfell Tower, nor why this was not recognised by her.

21.2.19 I consider this a significant failing by KCTMO to coordinate their policy and procedure documents; particularly in this case for the designation of a fire safety measure to assist firefighters, and to protect *relevant persons*.

21.2.20 It was Ms Wray who communicated her own definition of a firefighting lift for KCTMO's portfolio of buildings, to Salvus and to Mr Stokes. It is therefore unclear why Ms Wray therefore states what she did in her first witness statement{TMO00000890} at paragraph 117. –

I understand that Carl believed the lifts were both firefighting lifts as he was confident that they met all the criteria which enabled them to be described in this way. My understanding is that the lifts were firefighter lifts in the sense that the LFB were able to override them taking control of them in an emergency situation.

21.2.21 The evidence from the time simply does not support this claim.

21.2.22 I have no evidence, other than the issuing of the *Schedule of Lifts*, of how the lift categorisation was communicated to the maintenance contractors.

21.2.23 Finally, as I have explained in Chapter 8 {BLARP20000027}, Mr Stokes made the following serious failures:

a) He failed to recognise that KCTMO's decision to define their own description of "TMO fire fighting lifts" resulted in a lower standard of performance than the relevant guidance;

b) He failed to record an accurate description of the performance of the lifts in Grenfell Tower in his own risk assessment. By this I mean, he did not clearly set out how the lifts complied (or not) with the relevant standards;

c) As a result, Mr Stokes failed to warn KCTMO that relying on their own definition for "TMO fire fighting lifts" with a lower performance standard than that set out in the British Standards, and as recorded in their register of the "Location of all TMO Lifts" {TMO00830598}, posed a potential risk to life;

d) And therefore Mr Stokes failed to consider the potential risk to life the lifts in Grenfell Tower posed in his fire risk assessments.

21.2.24 **Maintenance status before the primary refurbishment works to the lifts were completed**

21.2.25 The maintenance records available to me, are evidence that the lifts were subject to routine inspection on a monthly basis by the lift maintenance contractors, ILS, until PDERS took over.

21.2.26 None of the records available to me confirm the lift performance at Grenfell Tower as being designated by the maintenance contractor as fire lifts.

21.2.27 Further, none of the records of inspections by ILS, Zurich, Bureau Veritas, or PDERS record that the operation of the fire lift switch was physically checked as part of their routine procedure.

21.2.28 In 2014 Ms Wray had removed the monthly operational check of the fire lift switch which was previously recorded in Version 11 of the Lift Safety, Breakdown & Trap In Policy & Procedure policy{TMO00849330}, and this activity was never provided for again in KCTMO's policy documentation.

21.2.29 I note that up to 2014 it was the KCTMO Senior Lift Engineer, who was assigned this responsibility; Robin Cahalarn was KCTMO's senior lift engineer until sometime in 2012 and my understanding is he was not replaced. I have no records this activity ever occurred.

21.2.30 I conclude that between December 2010 (the earliest inspection records available to me) and 25th June 2015, there are no records from the routine inspection and maintenance activity that confirm the fire lift switch for the lifts at Grenfell Tower was being tested to check for its operational response in the event of a fire.

21.2.31 **Evidence of previous concerns regarding the fire lift switches on the KCTMO's portfolio of buildings**

21.2.32 I have identified in the evidence three occasions when concerns were raised about the fire lift switch at KCTMO properties.

21.2.33 First, concerns were raised by Ms O'Hara of LFB to Ms Wray as a result of the fire in Grenfell Tower in 2010. Ms Wray re-assured Ms O'Hara by confirming that there was ongoing activity by KCTMO's lift maintenance contractor {LFB00031977} "*ILS our lift maintenance contractors tested the fire fighters overrise [sic] switched [sic] etc. on both lifts yesterday and confirmed that both were operating perfectly and lifts had both returned to ground when called as required.*"

21.2.34 I have not seen evidence of monthly or six-monthly inspections being carried out between 30th April 2010 and November 2010, nor have I seen any evidence to corroborate Ms Wray's statement above that the fire lift switch was operating as required.

21.2.35 Secondly, in an email from Ms Wray to Lornette Pemberton (KCTMO) on 16th March 2012, Ms Wray states that there was a visit to Trellick Tower and concerns raised by LFB regarding the fire lift switch {TMO10037573} (bold by me):

Two separate visits to Trellick ... Second visit, accompanied by our senior lift engineer, to investigate concerns raised following attendance at the block by firefighters from the local LFB station. Specifically these related to a ***faulty FB override switch etc.*** *which have now been resolved & LFB advised.*

21.2.36 Finally, there was an incident during an LFB training exercise in Grenfell Tower in June 2013. This culminated in a user guide being prepared by Ms Wray regarding the use of fire lift switches at Grenfell Tower.

21.2.37 Ms Wray emailed Richard Bourke, Managing Director of ILS, on 18th July 2013 stating {TMO00855611} (bold by me):

Grateful if you could advise on one simple point please – ***how should the LFB operate this switch ? I was on site recently with them and witnessed them turn the key in both directions (panicking) as they were unclear of what to do and further they were not sure when the lifts had transferred to their control*** *and when they were still available to passengers for normal use. Therefore, if I could provide the LFB with very simple instructions on how they should proceed I think that would be helpful them and would reduce the likelihood of our lift becoming damaged etc.*

21.2.38 It appears Ms Wray then used information she received from ILS to set out the operating instructions for the use of the fire lift switch to control the lifts in a word document which was created on the 19th July 2013{CST00002451}.

21.2.39 I have not seen who was provided with this document, nor evidence that it was available in Grenfell Tower for use by the fire and rescue service.

21.2.40 **Maintenance status after the primary refurbishment**

21.2.41 First, there is no evidence KCTMO had an O&M manual for the lifts in Grenfell Tower after the primary refurbishment.

21.2.42 I have seen no evidence of the Contract Management Team or Health, Safety and Facilities manager attempting to obtain one for the purpose of defining any new maintenance procedures nor for the purposes of sharing with their appointed maintenance contractor.

21.2.43 I can find no evidence that KCTMO changed their policies or procedures in any way. Therefore, from the evidence it appears their system of maintenance for the refurbished lifts remained unchanged.

21.2.44 Consequently, the nature of maintenance activities carried out appears unchanged and I can find no evidence of KCTMO staff, their appointed maintenance contractor PDERS or their insurer (via Bureau Veritas) recording inspections or operational tests of the fire lift switch in Grenfell Tower.

21.2.45 I have explained in Chapter 7, that it was during the primary refurbishment that the second fire lift switch appears to have been installed in Grenfell Tower at Level 2.

21.2.46 It is concerning that in none of the 27 records of inspections by PDERS and Bureau Veritas undertaken between completion of the primary refurbishment works to the lifts (see Chapter 7, Table 19-2) and the night of the fire are the two fire lift switches identified. Nor do these records formally record any operational test having been carried out by their staff, from either the Ground or 2nd floor location.

21.2.47 Operational testing of these switches to establish their purpose, seems a particularly relevant activity when no O&M manual was forthcoming at the time the lifts and the fire lift switches were handed back over to the control of KCTMO.

21.2.48 Regarding the last two service visits on the lifts at Grenfell Tower on 12th April 2017 and 9th May 2017 the Service Visit Reports for those monthly inspections were undertaken by a Mr Wallis ({PDR00000041}, {PDR00000047}) and do not record the operational status of the fire lift switch, or even if it was part of the 'works completed'.

21.2.49 This is significant, as a report prepared by WSP, dated 8th August 2018, for the Metropolitan Police Service states {MET00019973} (bold by me):

As the fireman's switch on the 2nd floor (walkway) was not connected to the controllers we can only assume that it was never tested at regular intervals.

As there was no event log of the fireman's switch on the ground floor being operated we can only assume the lifts were in normal service at the time of the incident. This means that passengers were able to call the lift to a floor during the fire or maybe the fire brigade used them on normal service until such time as they failed to operate.

As the mechanism on the fireman's switch on the ground floor was defective then we can assume this had not been examined by the lift service company at regular intervals.

21.2.50 I understand there have been subsequent investigations which show some particles/debris may have caused the mechanism on the Ground floor lift switch to jam, although it is not clear from my review of the documentation as to when these particles entered the lift switch box {MET00056700}.

21.2.51 What is certain however is KCTMO have no record from before the fire to prove the fire lift switch was in an efficient state, in efficient working order and in good repair.

21.2.52 From my perspective neither the firefighter's lift switch at Walkway (Level 2), which was not connected, nor the apparently defective firefighter's lift switch at Ground level, were recorded in the *'observations'* for any of the Service Visit Reports by PDERS:

a) For lift H090, in every inspection carried out by PDERS between October 2014 and May 2017 (except for the visit on 11/2/2017) (pages 10-35 of {PDR00000047} and page 16 of {PDR00000041}).

b) For lift H091, in every inspection carried out by PDERS between October 2014 and March 2017 (except for the visit on 11/2/2017) (pages 11-35 of {PDR00000041}).

21.2.53 Bureau Veritas carried out five six-monthly routine inspections of the lifts at Grenfell Tower between July 2015 and the night of the fire.

21.2.54 Isiaka Lasisi {BVL00000015}, who carried out the inspection on 2nd November 2016 for Bureau Veritas, outlines in paragraph 11 of his witness statement that he did "*not recall the inspection itself*" but stated in paragraph 22:

I would have checked any fire safety features that were on the lifts. For example, I would have performed a functional check on the fire control switch, if it was present.

21.2.55 Michael Arnold, Engineer Surveyor for Bureau Veritas, who carried out the lift inspection on 10th April 2017 states in paragraph 6a of their witness statement {BVL00000017}:

"... The fire lift switch as I recall was situated in the ground floor lobby...."

21.2.56 And at paragraph 6b:

"The test on the fire control switch was carried out using a drop release key..."

21.2.57 And at paragraph 6c:

The outcome of the fire control switch test was not documented separately. The Report of Thorough Examination of Lifting Equipment was utilised to record all defects, observations and recommendations. The outcome of the fire control switch test would therefore be documented... if it was found to be defective... or required noting as an observation...

21.2.58 Mr Arnold also references in paragraph 4 of his witness statement two procedure documents to be adopted {BVL00000011} and {BVL00000013}. Neither document prescribes a procedure to be followed for testing the operation of a fire lift switch.

21.2.59 Michael Arnold states in paragraph 2 of his witness statement that he attended Grenfell Tower on 10th April 2017{BVL00000017}; this was the last insurer's inspection before the night of the fire.

21.2.60 It is not clear to me why both Mr Lasisi and Mr Arnold did not record the unusual presence of a second fire lift switch as a defect; or at least a query that required further investigation for action by the KCTMO.

21.2.61 I have seen no documented evidence in any of the Bureau Veritas reports that the fire lift switch was checked.

21.2.62 I do not know why the absence of records for functional checks of a fire lift switch was considered to be reasonable practice at the time, as the records from Grenfell Tower imply. In particular due to the significance of a fire lift switch which is relied upon in the protection of *relevant persons,* in the context of the RR(FS)O.

21.2.63 I conclude that neither Ms Wray, Ms Williams or Mr Stokes, knew if one or both of the fire lift switches were operational or not at Grenfell Tower, and despite clearly understanding this was not known, they did not take any action to verify this for themselves; nor to ensure that one fire lift switch was operating as was required.

21.2.64 With regard to Mr Stokes' duties on this matter:

a) He failed to independently check for himself, what the operation of the fire lifts in Grenfell Tower was, once controlled by a signal from the fire lift switch;

b) He failed to advise KCTMO there were no records available proving the operation of the fire lifts in Grenfell Tower, once controlled by a signal from the fire lift switch, as was required from the routine test component of maintenance arrangements; and

c) He failed to direct KCTMO via his *record of significant findings and action plan*, to independently check for themselves the operation of the fire lift was to the right standard, once controlled by a signal from the fire lift switch; and to check for themselves that this was being tested in practice, as part of their routine maintenance arrangements.

21.2.65 There were other professionals also involved in the resulting state of the lifts in Grenfell Tower, such as various maintenance contractors, and in-house lift engineers as I have explained and I leave it to the Inquiry's lift expert to address this matter if he deems it necessary.

21.2.66 As I explained in my Phase 1 report, the failure of the fire lift switch at Ground floor, meant that the lifts continued to function as normal in the early hours of the fire. Had the fire lift switch been operable, LFB could have used the fire lift switch to isolate the lifts and so prevent residents from using the lifts during the fire. This would have removed an unnecessary hazard to residents.

21.2.67 I conclude on the basis of the extensive evidence I have set out in Chapter 7 and Chapter 8 that as there are no records confirming the fire lift switch at Grenfell Tower was properly maintained nor are there record proving its performance was adequate, it is more likely the Ground floor fire lift switch was faulty before the fire.

21.2.68 I have identified evidence of the LFB having difficulty operating the fire lift switch in Grenfell Tower at other times, not the night of the fire.

21.2.69 This difficulty also needs to be considered in the context of the observed LFB operations of the fire lift switch during the night of Grenfell Tower fire. I have assumed the Inquiry's lift expert has investigated this also.

21.2.70 The evidence is clear that the second fire lift switch at Level 2 was not connected and could not operate. It is also clear that no lift maintenance contractor raised this as a concern to the KCTMO.

21.2.71 KCTMO (Ms Wray and Ms Williams) knew about this switch and their fire risk assessor Mr Stokes warned them about it. It was solely KCTMO's failure this second lift switch was not removed. Fortunately, there is no evidence that LFB attempted to rely on this switch during the fire.

21.2.72 Ultimately, I conclude a haphazard and potentially incompetent approach to maintenance was in place at Grenfell Tower – noting on the matter of competence it is for the Panel to decide.

21.2.73 But, as demonstrated by the evidence, the arrangements culminated in the entirely unsatisfactory situation where no one knows if the fire lift switch was working or not. This is not in accordance with KCTMO's duties so clearly set out at article 17 (and article 38) of the RR(FS)O.

21.3 The lobby smoke control system

21.3.1 I have been asked by the Inquiry to update Appendix J from my Phase 1 report {BLAS0000031}, as a result of additional evidence including witness statements from relevant parties.

21.3.2 I provide my final conclusions on the design, installation, commissioning and operational performance in my final report *The lobby smoke control system at Grenfell Tower* ({BLARP20000035} to {BLARP20000038}).

21.3.3 I have also carried out additional analysis of the detailed maintenance activity from KCTMO and other parties, regarding the lobby smoke control system, which builds on Chapter 7 {BLARP20000033} of my Module 3 report.

21.3.4 I provide all conclusions relevant to the smoke control system in Grenfell Tower, together in my final report *The lobby smoke control system at Grenfell Tower*. ({BLARP20000035} to {BLARP20000038})

21.4 Emergency Lighting

21.4.1 The evidence available to me indicates that in the period between 2009 and 17th May 2016, only six monthly operational tests and one annual full duration (3 hour) operational test were recorded.

21.4.2 Further, there were four instances where inspections were either not carried out by Allied Protection or cancelled by Ms Williams during the primary refurbishment works.

21.4.3 Therefore, between 2009 and 17th May 2016, testing was not in compliance with either the guidance (BS EN 50172:2004) or the KCTMO's own Communal Lighting Inc Emergency Lighting Policy document.

21.4.4 That document required that *"two planned preventive maintenance / service visits per annum and a breakdown and malfunction service covering 24 hours per day, 7 days per week 52 weeks a year"* {TMO00880399}.

21.4.5 I have found only one maintenance record in the 1-year period after the primary refurbishment works were completed.

21.4.6 This is another example of KCTMO failing to maintain a protective measure to the standards required by article 17 of the RR(FS)O.

21.4.7 Regarding the emergency lighting installed by Rydon, which I understand to be on the lower four floors only, Rydon provided an emergency lighting test procedure which is included in the Electrical Operation and Maintenance Manual (Part 3, Section 2, {TMOM00001911}).

21.4.8 I have limited evidence that this procedure was relied on in the monthly ESA checks or the twice-yearly checks by the maintenance contractor Allied Protection.

21.4.9 There is no evidence that KCTMO changed their policy and procedure documents to incorporate this emergency lighting test procedure.

21.5 Dry rising main

21.5.1 The evidence shows that prior to the primary refurbishment works, 2013 was the only year records were available to confirm the dry rising main was being maintained per the requirements of BS 9990: 2006.

21.5.2 Following the primary refurbishment works in 2016, and until the night of the fire, the evidence confirms the dry rising main was being maintained per the requirements of BS 9990.

21.5.3 Mr Stokes raised a defect with regard to the dry riser in the 2010 *record of significant findings and action plan* {CST00000448}. Mr Stokes raised lack of maintenance records for the dry riser as an item in the 2012 {CST00000182} and 2014 {CST00000094} *record of significant findings and action plan.*

21.5.4 Yet no control measures were specified by Mr Stokes, in the absence of evidence that the dry riser was operable.

21.5.5 Additionally, between October 2014 and April 2015 KCTMO described the dry fire main at Grenfell Tower as having 'failed'.

21.5.6 The evidence shows that, contrary to BS 9990:2006, KCMTO did not notify the Fire and Rescue Service of this failure, despite there being three bi-monthly meetings between KCTMO and LFEPA/LFB in November 2014

{LFB00000070}, January 2015 {LFB00000056} and March 2015 {RBK00013999}.

21.5.7 Finally, the 2016 *fire risk assessments* in April {CST00000087} and June {LFB00000066} state 'No' next to the field:

Six monthly inspections, (pipe and pump(s)) and annual testing of any wet or dry rising mains, with records kept?

21.5.8 But the *fire risk assessment* later contradicts this and states:

According to the contractors testing label fixed with the dry riser inlet box this dry rising main was last tested on the 19th February 2016 by the external contractors Select Fire.

...

The comments on the contractors label say "sat" this is I am assuming short for satisfactory. Testing, servicing and maintenance is undertaken on this dry rising main by the professional third party contractor on a planned preventive maintenance programme with records kept centrally by TMO at the "Hub" and by the contractors. The certificate for this dry rising main with all the test pressure information is at the Hub.

21.5.9 Therefore, it appears Mr Stokes had not seen certificates of inspections or tests for the dry rising main in April or June 2016. He relied instead on a label on the equipment; yet in 2016 neither the April ({CST00000087}, {CST00000451}) or June ({LFB00000066}, {CST00000101}) *record of significant findings and action plans* record an action required of KCTMO with regard to the dry fire main at Grenfell Tower.

21.5.10 Despite this Mr Stokes identified no hazard associated with the lack of maintenance evidence, specified no action for KCTMO and specified no control measures to address the unknown operability of the dry fire main.

21.5.11 In failing to record an action, the KCTMO was not informed in the risk assessment of the lack of appropriate evidence of maintenance of the dry fire main.

21.5.12 This situation was compounded by the lack of any action associated with the dry riser logged on the "*RBKC Spreadsheet log of repairs carried out at Grenfell by TMO Repairs Direct between 2013 and 2017*" {RBK00053297} (which I set out in Chapter 4).

21.5.13 However, even when in receipt of maintenance records demonstrating fault with the dry fire main there is no evidence Ms Wray considered this a risk to *relevant persons* that was required to be assessed by KCTMO's risk assessor.

21.5.14 As a result KCTMO failed in their responsibility to carry out a suitable and sufficient assessment of the risks per article 9 and did not assure themselves of the necessary *general fire precautions* per article 8.

21.5.15 After the primary refurbishment of Grenfell Tower the evidence indicates that KCTMO's arrangements for maintenance of the dry fire main were meeting the standard required by BS 9990:2015.

21.5.16 The maintenance of the dry fire main after the primary refurbishment is the only system of the four that I have investigated where I have found this to be the case.

22 Consequences of KCTMO's fire risk management system – fire doors

22.1 KCTMO as primary duty holder for all flat entrance fire doors

22.1.1 The arrangements KCTMO made regarding the fire risk assessment and maintenance of the critical protective measure, fire doors, proved a challenging test for their fire risk management system.

22.1.2 In making the arrangements they did, as described in Chapter 4 {BLARP20000030}, it required significant co-ordination across multiple teams in the KCTMO.

22.1.3 In the context of Grenfell Tower, these were the arrangements too that most interfaced with leaseholders, and the evidence shows the extent of technical co-ordination needed with leaseholders regarding their flat entrance doors.

22.1.4 Doors to the protected stair are located in the wall separating the common lobbies and the common stair, and are therefore solely under the control of the *responsible person* for the non-domestic areas of the building. In the case of Grenfell Tower this was the KCTMO.

22.1.5 Flat front entrance doors form the boundary between the *domestic premises* (which is excluded from the scope of the RR(FS)O and the non-domestic areas of purpose-built blocks of flats). This introduces what I consider to be unnecessary complexity in high rise residential buildings.

22.1.6 As I have explained in Section 4 of Chapter 1 {BLARP20000023}, flat front entrance doors are crucial element of the *collective protective measures* in high rise residential buildings, to protect the *relevant persons* in the non-domestic areas of the building.

22.1.7 It is my opinion that KCTMO had primary responsibility to ensure the protection of all *relevant persons* which included the leaseholders.

22.1.8 On that point, the published guidance is consistent in saying that flat front entrance doors are critical to protect the *relevant person* in the non-domestic areas of purpose-built flats. The only consideration is by what means fire safety standards should be enforced - either through the RR(FS)O or the *Housing Act*.

22.1.9 On that basis I make the following conclusions.

22.2 The quality of the arrangements made by the KCTMO

22.2.1 The most significant document regarding KCTMO's arrangements for fire doors was the 2013 KCTMO Fire Safety Strategy {TMO00830598}. This stated that when a routine inspection found a defect with a fire door it was reported to the Customer Service Centre who would instigate the repair.

22.2.2 Sub-section 5.1 of the KCTMO Fire Safety Strategy {TMO00830598} stated repairs to fire doors and self-closers were classified as a priority.

22.2.3 The 2013 KCTMO Fire Safety Strategy {TMO00830598} also set out the arrangements for undertaking fire risk assessments in buildings in KCTMO's portfolio.

22.2.4 The repairs raised either through the routine inspections or the fire risk assessment process were logged via the customer service centre on KCTMO's Capita/ CRM system then actioned by the company Repairs Direct.

22.2.5 The 2013 KCTMO Fire Safety Strategy {TMO00830598} set a performance standard for flat front entrance doors in KCTMO's portfolio of buildings but did not set a performance standard for doors to the protected stair. This performance standard played a significant role in KCTMO's later engagement with LFEPA, when they raised concerns with KCTMO's overall arrangements for fire doors across their portfolio of buildings.

22.2.6 There was no role assigned responsibility in the Contracts Management Directorate, for the planned maintenance of fire doors, although this Directorate was responsible for the maintenance of other protective measures.

22.2.7 Instead, the responsibility for fire doors in buildings in KCTMO's portfolio was apparently split between the routine inspections by the Estate Services Assistants (ESAs) and the fire risk assessments organised by Ms Wray.

22.2.8 The resulting monitoring and reporting mechanism relied upon, created a strong reliance on co-ordination. I have shown in Chapter 4 {BLARP20000030} Figure 7-5 that there was no interaction between ESAs reporting defects to the Customer Service Centre (who progressed them to Repairs Direct), with the defects identified through Mr Stokes risk assessments which were passed to Ms Wray (who progressed them to Repairs Direct).

22.2.9 There was also no direct connection either between the monitoring activities undertaken by Ms Wray regarding fire risk assessment actions; and the monitoring of the ESA routine inspections undertaken by Estate Services Team Leader/ Area Housing Manager for Lancaster West.

22.2.10 The only direct oversight Ms Wray had of the actions of the ESAs was Mr Bowmans monitoring of the ESAs as a result of the fire risk assessments and but he did not monitor the number and type of communal fire door defects found by the ESAs in their routine inspections.

22.2.11 The evidence demonstrates that many fire doors in Grenfell Tower came to be in place without adequate self-closers, due to the absence of the required co-ordinated activity – this should have included planned maintenance, supported by routine inspections and reactive repairs; within a formal reporting mechanism that maintained an accurate register of the status of self-closer faults/failures.

22.2.12 That status was relevant to both the assessment of risk to *relevant persons*, and to the timely implementation of planned maintenance/repairs work.

22.3 The specific fire risk management system failures by the KCTMO

22.3.1 KCTMO's failure to arrange for the installation of fire doors with the necessary fire performance

22.3.2 Between 2011 and 2013 the KCTMO decided to carry out a programme of replacing flat front entrance doors of dwellings occupied by KCTMO tenants.

22.3.3 The Health and Safety Manager, Ms Wray, relied on advice from her external fire risk assessor Mr Stokes when deciding which high risk buildings were to be have replacement flat front entrance fire doors.

22.3.4 BS 8214:2008, the *LACoRS Guide* {CST00002516} and BS 9991:2011 each state that when a fire door is installed every component must comply with the tested specification and that any changes may significantly affect the fire resistance performance of the door. I have found no evidence that KCTMO formally appointed any party to check that the products installed on site were in accordance with the specification from a relevant test report.

22.3.5 It is reasonable, therefore, to conclude this was not an effective monitoring arrangement put in place by KCTMO, as it resulted in the majority of components installed in the flat front entrance fire doors in Grenfell Tower not being as per those recorded in the fire test report relied upon to demonstrate performance.

22.3.6 A suitable and sufficient risk assessment was required to account for any increased hazard to the *relevant persons* as a result of the works; but more substantially a suitable and sufficient risk assessment was required upon completion of the works.

22.3.7 This is because in my opinion the new flat entrance fire doors represented *"a significant change in the matters"* as referred to by article 9 of the RR(FS)O.

22.3.8 The defects due to the differing standard of door components as installed, were not identified in Mr Stokes subsequent fire risk assessments for Grenfell Tower.

22.3.9 Neither were the defects identified through KCTMO's formal arrangements to carry out routine inspections.

22.3.10 However, it would require detailed training to make this a reasonable expectation of the ESA's and I am not aware they were provided with such training by the KCTMO.

22.3.11 Therefore KCTMO's arrangements, did not result in the specified performance standard.

22.3.12 KCTMO's approach to the fire performance of leaseholder doors

22.3.13 Leaseholder flat entrance front doors were excluded from the replacement programme. But then after the leaseholders reasonably raised queries as to the resulting fire performance standard they were to implement outside the wider replacement programme, extensive communications on the subject took place within the KCTMO and RBKC, and they involved LFEPA also.

22.3.14 With respect to Grenfell Tower however, Mr Stokes concluded that the leaseholder doors were so called nominal doors with self-closing devices, and therefore, by means of the arrangements made for leaseholder doors by KCTMO, no further action was required.

22.3.15 There is no available evidence as to how Mr Stokes reached this conclusion. Mr Stokes did not incorporate the inspection of fire doors routinely or methodically in his work.

22.3.16 As I stated in Appendix I of my Phase 1 report {BLAS0000030}, all of the leaseholder doors in Grenfell Tower were destroyed on the night of the fire. I was not able to inspect them to confirm Mr Stokes' assessment that they were nominal fire doors with self-closing devices.

22.3.17 In terms of identifying leaseholder doors that KCTMO did categorise as requiring replacement, I have significant concerns with the methodology created by Ms Wray.

22.3.18 Ms Wray assembled a list of leaseholder doors, and categorised a subset of those doors for replacement only, by reference to limited information provided by Mr Stokes in his *record of significant findings and action plans* produced prior to June 2012.

22.3.19 These records were at best an ad hoc and random sample of comments from Mr Stokes building inspections, because his inspections did not incorporate a methodical survey of flat entrance fire doors.

22.3.20 The limited portion of leaseholder doors that were logged in the amalgamated list Ms Wray created, were referred to as *high risk* leaseholder doors, and KCTMO focused their efforts on ensuring those doors were replaced only.

22.3.21 I have summarised below what the evidence allows me to conclude:

a) Mr Stokes had not individually assessed all leaseholder doors in his fire risk assessments;

b) Individual assessments of all flat front entrance doors including their self-closing function was not within the scope of ESAs routine inspections;

c) KCTMO could not therefore in fact collate a complete list of *high risk* leaseholder doors;

d) KCTMO were therefore wrong to use the list they did, as the sole decision making basis to require those leaseholders to replace their own flat entrance fire doors,

e) KCTMO were also wrong to use the list as they did, as a basis for confirming to both LFEPA and the KCTMO Board, that the leaseholder door issue had been resolved.

22.3.22 This is evidence of a substantial failure in KCTMO's overall organisational arrangements regarding both the quality of the maintenance arrangements (routine inspections), and the quality of their fire risk assessments (which excluded fire door surveys).

22.3.23 This is because neither set of arrangements allowed KCTMO to know the protective measure, provided by means of flat entrance fire doors, could be relied upon as part of the *general fire precautions* for Grenfell Tower.

22.3.24 **The significance of the performance issues with the Manse Masterdor fire doors**

22.3.25 However, there were further warning signs that there was an issue with the quality of the fire doors provided in the fire door replacement programme.

22.3.26 It is my opinion that all of the issues as they emerged throughout the replacement programme, were sufficient to merit closer monitoring of the fire doors, should have triggered an Executive Team review, and then caused corrective action to be taken in Grenfell Tower.

22.3.27 This did not occur however, and again I conclude this was a failure in the fire risk management system created by the KCTMO, on the following basis.

22.3.28 Three reoccurring faults developed with the Manse Masterdor flat front entrance doors during 2011 and 2012, relatively early in the programme of work:

a) failure of self-closer device fixings;

b) excessive force required to open the doors; and

c) mechanical faults with the self-closing devices.

22.3.29 These faults currently appear to have been the result of inherent design problems with the Manse Masterdor doors, rather than caused by installation failures or due to a failure to undertake planned preventative maintenance.

22.3.30 Mr Webster (Manse Masterdor) had stated on 26th July 2011 to Ms Acosta "*We are aware there was a problem and we started last Thursday going through the block changing the fixings if necessary*" regarding the failure of the fixings for the self-closing devices {TMO00867783}.

22.3.31 Based on the evidence disclosed to me to date, I have been unable to confirm whether Manse Masterdor remediated every fire door where failure of the fixings for the self-closing devices had occurred. I have also been unable to confirm whether they checked any other replaced fire door to see whether there was the potential for the self-closer fixings to fail.

22.3.32 I have found no evidence that Ms Wray was aware of this particular problem regarding the failure of the fixings for the self-closing devices with the fire doors. This was because the capital investment team project manager Ms Acosta, failed to coordinate and communicate with the Health and Safety team during the replacement works.

22.3.33 Over time, Ms Acosta became aware of not just the failure of the self-closer fixings, but also resident's experiences of the new fire doors being unable to close fully. However Ms Acosta dealt with Manse Masterdor directly to attempt to remediate the issues and did not report them to Ms Wray or anyone else within the KCTMO, including failing to communicate this at any of the progress meetings held during the replacement works.

22.3.34 Ultimately it was the third defect type that Ms Wray appears to have been made aware of only - the excessive force required to open the doors - and this was brought to her attention by the Neighbourhood team not Ms Acosta.

22.3.35 The Neighbourhood team were aware through residents' complaints that there was an ongoing mechanical defect with the door self-closers but that more substantially Manse Masterdor were removing self-closers as a temporary solution.

22.3.36 I have seen no evidence that they informed Ms Wray that the self-closers were being removed, at that time, nor have I found evidence that this was logged with the external companies responsible for reactive repairs as an outstanding defect which required urgent repair.

22.3.37 However regardless of why these faults occurred, the fact the fire door self-closers were faulty should have become a significant maintenance issue for the KCTMO.

22.3.38 Instead, there is evidence of multiple failures in KCTMO's system of fire risk management.

22.3.39 First, I have not been able to find in the evidence that Mr Stokes nor any employee of KCTMO ever investigated the performance of the fire doors in Grenfell Tower to assure themselves they had indeed been repaired as Manse Masterdor had originally claimed.

22.3.40 Secondly, KCTMO's system of routine inspections regarding fire doors could not act as a monitoring procedure as it consisted of visual observations on an ad hoc basis from the common lobby only, and so performance of the self-closer was not part of what should have been an independent monitoring process in KCTMO's fire risk management system.

22.3.41 But most significantly of all, the defective performance of the self-closers was impacting residents; resulting in the Caretaker for Grenfell Tower, Mr Dunlea, removing self closing devices from some flat entrance fire doors in Grenfell Tower.

22.3.42 This was an inappropriate response to the problem, as self-closers are life safety equipment and should therefore not be removed. It demonstrates a lack of effective training on the role those self-closers had in protecting the *relevant persons*.

22.3.43 By December 2015 Ms Wray was aware self-closers were being removed and she wrote to Ms Rumble (KCTMO Neighbourhood Manager) {TMO00859693}:

Our fire risk assessor has raised his concern that in conversation with a few of the tenants at Grenfell Tower they have advised that Seamus had disconnected the self-closers on their flat entrance door – in at least one of these cases this was said to be due to the tenant perpetually locking himself out of his flat. It is imperative that these fire doors are self-closing so I would be grateful if you could please impress this upon Seamus and insist that he refrains from disconnecting or removing any other self-closing devices.

22.3.44 Mr Stokes was, therefore, also aware that Mr Dunlea had been removing self closers, yet he made no reference to this in his subsequent April 2016 *fire risk assessment* {CST00000087}.

22.3.45 I have not been able to find in the evidence that Mr Stokes or any employee of KCTMO ever investigated the performance of the fire doors in Grenfell Tower to assure themselves that self-closers removed by Mr Dunlea had then been replaced.

22.3.46 Overall, I conclude the flat entrance doors were not *"maintained in an efficient state, in efficient working order and in good repair"* hence the arrangements made by KCTMO were not compliant with article 17 of the RR(FS)O; this was despite KCTMO Fire Safety Strategy 2013 making the statement that fire door repairs were a "priority".

22.3.47 Mr Stokes did not record the issues that arose between fire risk assessment visits to Grenfell Tower, but more substantially he did not attempt to confirm if the door self-closer issue had been resolved either, before finalising his assessment of the risk level for Grenfell Tower.

22.3.48 This also meant because of the process KCTMO applied to their fire risk assessments, that any defects or performance concerns with any general fire precaution, including fire doors, not recorded in Mr Stokes *record of significant findings and action plan* (2010 {CST00000448}, 2012 {CST00000182}, 2014 {CST00000094}, April 2016 {CST00000451}, June 2016 {CST00000101}) were subsequently not incorporated into KCTMO's Action Tracker process either.

22.3.49 KCTMO relied entirely on this Action Tracker process for closing out fire safety issues when they arose in KCTMO's portfolio of buildings, except if raised through a complaints or any other form of reactive maintenance process.

22.3.50 When Mr Stokes failed to identify any doors with removed self-closing devices in either of his 2016 *fire risk assessments* of Grenfell Tower (refer to Section 13 of Chapter 8), this was a serious omission, as if at that time the self-closers were non-functional, it already posed a potential risk to life of the *relevant persons*, and those doors could not be relied upon to act as a *collective protective measure* except in some circumstances.

22.3.51 I conclude this was a failure of KCTMO's fire risk assessment arrangements, first because the fire risk assessor did not record failures which were known to him, despite those failures still being the subject of correspondence about 4 years after he first became aware of them; and secondly because a methodical form of risk assessment, inspection and record of the condition of the fire doors, was not being carried out either by Mr Stokes or other KCTMO staff.

22.3.52 Ms Wray failed to correct Mr Stokes inaccurate record of the fire door closers at Grenfell Tower; and failed to warn the Executive team of the risk to life the absence of fire door self-closers posed.

22.3.53 The only evidence that I have seen that the Executive Team was made aware of any issues with the Manse Masterdor fire doors was the excessive force defect, which Ms Wray stated in the "Minutes of the TMO health & safety committee meeting - *seems to have been resolved with an alternative closer* - –17th November 2011{TMO10000959}.

22.3.54 These systemic defect problems with the replacement door programme were therefore never reported by Ms Wray and therefore never dealt with by the KCTMO Executive Team, through their monitoring committee (the Health and Safety committee).

22.3.55 The issues that arose with the fire door self-closers exposed multiple inadequacies with the arrangements put in place by the KCTMO.

22.3.56 **The two other significant tests of KCTMO's fire risk management system relevant to fire doors**

22.3.57 There were two other significant tests of KCTMO's management arrangements, relevant to their duty to make a suitable and sufficient assessment of the risk the installed fire doors posed on their premises, and their ongoing routine inspections and reactive repairs duties for those doors.

22.3.58 These were, first the discovery by Ms Wray that Repairs Direct had instructed works to the fire doors on the stairs in Grenfell Tower, without co-ordinating with KCTMO's Health and Safety Team.

22.3.59 And second, the issue of the fire doors in Adair tower which were found by LFEPA on 12th October 2015 {LFB00001613} to not provide either the fire protection standard or self-closing devices.

22.3.60 Later after the fire in Adair Tower on 31st October 2015, and further investigations by LFEPA, they issued an *enforcement notice* for Adair Tower on 23rd December 2015 {LFB00032950}.

22.3.61 The evidence then shows that KCTMO did not understand and more substantially simply did not accept that planned maintenance and routine inspections of flat front entrance fire door sets was a requirement of them.

22.3.62 Yet the planned maintenance and routine inspections of self-closers had always been and remained, by October 2015 and beyond, a significant duty required of KCTMO's fire risk management system.

22.3.63 With regard to Adair Tower Mr Stokes advised that an action to make good his post-fire significant findings about self-closers was high priority. But he subsequently acquiesced to Ms Matthew's written request to downgrade this from high priority, which he did *"to appease the LFB"* on 20th November 2015 {CST00026445}:

My advice is that the item ref fitting self closing devices stays as a high but as there is the policy in place regarding advice on fitting door self closing devices I do not have a problem with the priority being stated as "strong advice" this is partly to appease the LFB.

But the fitting of the door self closing devices must be given a high priority by the TMO and repairs direct.

22.3.64 There was no priority time scale given to actions with "*Strong advice*".

22.3.65 By the night of the fire, KCTMO's main consideration regarding self-closers was a 5-year installation programme across KCTMO's portfolio of buildings, as advised by Ms Johnson, (Director of Housing RBKC), but that they would not be instigating a dedicated programme of routine inspection / planned maintenance for their self closing devices.

22.3.66 I do not know if Ms Johnson sought competent advice regarding the approach she decided to take regarding the maintenance of fire door self-closers or if this was a technical view held by her independently.

22.3.67 However it was on the basis of this advice from Ms Johnson (Director of Housing RBKC) that KCTMO's original proposal for a three year self-closer installation programme should be extended five years, and that KCTMO would not instigate a dedicated planned maintenance, or routine inspections programme, for the devices.

23 The emergency plan for Grenfell Tower

23.1.1 The available guidance, including the guidance published specifically to assist the *responsible person* in accordance with article 50 of the RR(FS)O, is clear on the requirement to provide a documented emergency plan.

23.1.2 Despite important advice from Salvus in 2009 about the need for building specific emergency plans, and despite being clear on the presence of several cohorts of *relevant persons* within Grenfell Tower the evidence shows an absence of co-ordinated activity by the KCTMO in response to this advice.

23.1.3 It is my opinion that Salvus could not have communicated the issues, and the responses needed to resolve those issues, any clearer than they did, and their findings served as a robust "basis for design" had the KCTMO decided to act.

23.1.4 Ms Wray apparently shared KCTMO's generic emergency plan with Salvus, though it was not in fact for the purposes of RR(FS)O duties, and then made no further attempt to create building specific emergency plan documents for the KCTMO's portfolio of buildings.

23.1.5 Ultimately, I have not found any mention by KCTMO of the need for a building-specific emergency plan for Grenfell Tower. I have also seen no evidence that a building-specific emergency plan was discussed by either Ms Wray or Mr Stokes.

23.1.6 Mr Stokes' description of the emergency plan for Grenfell Tower, in his fire risk assessment reports, contained what can only be categorised as substantial errors, as follows:

a) Mr Stokes' failed to ensure there was a documented premises specific emergency plan as part of his fire risk assessment process, and he failed to ensure changes were made to it when works occurred, or when protective measures were not available/defective;

b) Mr Stokes' assumption that a general evacuation of Grenfell Tower would be arranged by KCTMO staff;

c) Mr Stokes' failure to consider persons especially at risk in Grenfell Tower; and

d) Mr Stokes' incorrect assumption there were evacuation lifts in Grenfell Tower, the use of which by 2016 he had even commenced recommending staff training.

23.1.7 No employee of KCTMO ever corrected Mr Stokes' errors or the information he provided on these subjects.

23.1.8 No employee of KCTMO made any attempt to instigate those arrangements at Grenfell Tower either. Staff were not trained to support a general evacuation nor to use the lifts to evacuate vulnerable residents in an emergency.

23.1.9 Not once in Mr Stokes' *fire risk assessments* did he raise any concern about the absence of a documented emergency plan. Nor did the Health and Safety manager for KCTMO, Ms Wray, ever raise a concern in this regard either.

23.1.10 The duty to create an emergency plan was never incorporated into the fire risk assessment arrangements in the first place; and those arrangements fell under the responsibility of Ms Wray, as best described in the 2016 Health and Safety Policy {TMO10024402}.

23.1.11 Regarding emergency planning, I have found nothing in the evidence available to me at this time, that either Mr Black, nor any member of his Executive Team, knew anything about the intricacies or meaning of what Salvus found at the time of their audit in 2009.

23.1.12 It is my opinion they needed to know this, and it is a matter for the Inquiry panel to decide, how far the Executive Team needed to exert themselves independently, as opposed to solely rely on advice particularly from Ms Wray, and also Mr Stokes.

23.1.13 I say this because of the specific guidance from Salvus (Please see Table 7-1 in Chapter 9) {SAL00000013}:

There does not appear to be any senior managerial audit of fire safety arrangements adopted by the TMO to ensure that all fire safety related policy and procedures are being carried out diligently and in accord with set standards to meet the organisations strategic fire safety objectives.

23.1.14 Additionally, concerns raised by residents during the primary refurbishment and the gas riser replacement works, about evacuation provisions in Grenfell Tower which were known to Mr Black and his Executive Team, were relevant warnings too, and merited a *top management* review of emergency planning arrangements.

23.1.15 The various published guidance documents available to executives, responsible for matters of safety, are clear that review activity, and also seeking out independent audit activity, are two of the most substantial responsibilities assigned to senior executives.

23.1.16 I consider the findings from this particular piece of work relevant to my professional opinion that the KCTMO presided over a culture of non-compliance at Grenfell Tower, with regard to their relevant duties under the RR(FS)O.

24 The issues that arise when sole reliance is placed on *fire action notices* for communicating the emergency plan

24.1.1 The important point about fire action notices is they can only serve a limited or very specific purpose, within the overall remit of an emergency plan, namely, to communicate evacuation procedures.

24.1.2 Fire action notices are therefore, particularly useful for residents or contractors who can independently evacuate.

24.1.3 An emergency plan, as explained in the guidance, should deal with more than evacuation procedures for a limited cohort of people. It should deal with building-specific issues relevant to the fire and rescue services[5] regarding the facilities provided to them, it should communicate building-specific information to aid staff relied upon during an evacuation, it should include the assistance arrangements for persons identified as especially at risk, and it should enable other *responsible persons* make their own arrangements for their *relevant persons* in the building as needed.

24.1.4 Further, in buildings with a Stay Put strategy, there are various scenarios to consider, for *relevant persons* evacuating, and *relevant persons* staying put, as I have set out in Chapter 9.

24.1.5 The evidence (such as LFEPA's NOD of 17 November 2016 issued in relation to Grenfell Tower) {CST00000065}, suggests that fire action notices were not displayed in common parts.

24.1.6 Both LFEPA's audit forming the basis of this NOD, and KCTMO response, were focused on the provision of fire action notices; not on any wider issues of a system of emergency planning, nor on a formal record of the full emergency plan for their buildings.

24.1.7 I have not seen evidence to support that the installation of fire action notices at Grenfell Tower established "*an emergency plan including the measures for ensuring the effective operation of the plan...*" as was recommended by MHCLG 2007 "Regulatory Reform (Fire Safety) Order 2005 Guidance Note No. 1: Enforcement"

24.1.8 The fire action notices were primarily reactive and did not constitute a process of planning, and they only provided a single evacuation procedure.

[5] This is building-specific information regarding the *general fire precautions*. This is a separate duty to that set out in the Fire and Rescue Services Act 2004. The emergency plan is not intended to satisfy requirements of that Act. It is relevant to the RR(FS)O only.

24.1.9 The fire action notices installed at Grenfell Tower, furthermore, did not *"give effect to appropriate procedures, including safety drills, to be followed..."* as was required to comply with article 15 of the RR(FS)O.

24.1.10 I have not been able to ascertain why this deficiency, but more particularly KCTMO's response to it, was not serious enough to warrant further discussion, either by LFEPA or within KCTMO.

24.1.11 I note it is for the responsible person, not LFEPA, to take the appropriate course of action necessary to enable compliance with the RR(FS)O.

24.1.12 It is useful to consider this in the context of the document produced by MHCLG in 2007 titled "Regulatory Reform (Fire Safety) Order 2005 Guidance Note No. 1: Enforcement" which states at "Article 15 – Procedures for serious and imminent danger and for danger areas (bold by me):

78. The responsible person is under a duty to provide appropriate procedures to be followed in the event of serious and imminent danger from fire to relevant persons. He must nominate a sufficient number of competent persons to implement these procedures to ensure the safety of all relevant persons. The procedures must be supported by appropriate training and instruction including safety drills (see articles 16 and 18–21)."

79. It is for the enforcing authority to make a judgement as to whether the responsible person has established an adequate emergency plan. *Such a plan (which may include diagrams or drawings) will include requirements to inform persons of the nature of the hazard and of the steps to be taken to protect them, to stop work immediately and proceed to a place of safety, and to prevent the resumption of work where a serious danger still exists.*

24.1.13 I recommend that the Inquiry panel explore this matter further when considering any future recommendations, namely an appropriate format for emergency plans, and how the published guidance documents to support the *responsible person*, for high rise blocks of flats, might be changed to improve current standards.

24.1.14 It is my opinion, having reviewed the evidence to date, that it would be by exception only a simple fire action notice would suffice for purpose built blocks of flats.

24.1.15 The level of detail required of an emergency plan and how to communicate that to the *relevant persons* for purpose built blocks of flats, is currently complicated by the position taken in the *LGA Guide*. Whilst it acknowledges the requirement in the RR(FS)O for a suitable emergency plan, for purpose-built blocks of flats the *LGA Guide* goes on to recommend the simple fire action notice format, but then states it is not *universally necessary to display such notices*.

24.1.16 Any guidance issued under article 50 should, in my opinion, make clear the need for a comprehensive emergency plan, and the need to communicate that

effectively. In doing so this could limit the potential for harm to the *relevant persons*, including vulnerable persons.

25 The issues that arise when "blocks of flats" are categorised as "simple"

25.1.1 The categorisation of buildings as simple or complex is part of the narrative throughout the guidance published in accordance with article 50 of the RR(FS)O (the *LGA Guide*, and *HM "Sleeping accommodation" guide*).

25.1.2 This differentiation is most prevalent in the guidance, when considering the following topics relevant to the RR(FS)O:

a) The competence of the fire risk assessor;

b) The format of an emergency plan; and

c) The fire safety management arrangements and records of those arrangements.

25.1.3 As I have explained in Chapter 8 {BLARP20000027} and Chapter 9 {BLARP20000028}, *HM "Sleeping accommodation" guide* considers "*simple*" premises as those which meet one or more of the following criteria: one or two stories, limited occupancy numbers, limited types of occupancy, and a limited number of simple escape routes.

25.1.4 The *HM "Sleeping accommodation" guide* considers "*complex*" premises as those which meet one or more of the following criteria: contain multiple stories, have multiple occupancy types, have more complex escape routes, or due to the transient nature of staff.

25.1.5 The *LGA Guide* does not explicitly use the terms simple or complex when referring to types of premises, with the following exceptions – to generalise that most blocks of flats are of a *"simple nature"* and that sheltered accommodation can vary in complexity.

25.1.6 The LGA Guide makes two references to complex blocks of flats. First, in Paragraph 79.2, it is stated *"In large, more complex blocks of flats, it can be of great assistance to the fire and rescue service to keep plans on the premises detailing information on the layout of the building and its services"*.

25.1.7 Later, in Section 87 "*Maintaining records*" it is stated *"more complex blocks of flats built recently"* may have records of fire safety design information.

25.1.8 It also references large mixed-use developments and buildings where fire engineering has been used, as reasons that records may be kept; this implies that these are also considered complex premises.

25.1.9 There is therefore a contradiction between the *LGA Guide* and the *HM "Sleeping accommodation" guide* in that the *LGA Guide* generalises that blocks of flats are of a "simple nature" and identifies a limited set of circumstances when the *responsible person* may need to make further consideration.

25.1.10 In contrast the *HM "Sleeping accommodation" guide* considers any building that is not either one or two stories, limited occupancy numbers, limited types of occupancy, or a limited number of simple escape routes, as a complex building.

25.1.11 Where the "sector led" *LGA Guide* firmly categorises purpose built blocks of flats as "simple" regarding issues of management, emergency planning and employee instruction and training, it appears to reduce the onus on the *responsible person* for those provisions, and I can find no explanation as to why.

25.1.12 The complexity of a building with respect to its scale, functions within it (residential, non-residential, building works), safety equipment available (smoke control, evacuation lifts) and the occupancy profile too (persons requiring assistance in the event of a fire, non-residential mixed with residential) are all key considerations when carrying out a fire risk assessment; and are all parameters that can introduce considerable complexity.

25.1.13 This requires consideration by a competent person.

25.1.14 But the need for competence in persons carrying out fire risk assessments, is also dealt with by means of categorising a building as simple or complex, in the guidance documents.

25.1.15 The *HM "Sleeping accommodation" guide* states that "*More complex premises will probably need to be assessed by a person who has comprehensive training or experience in fire risk assessment*".

25.1.16 The LGA Guide communicates on the subject somewhat differently, stating "*The FSO does not require that fire risk assessments are carried out by competent specialists. responsible persons, or their employees, can often carry out a fire risk assessment for a small, simple block of flats without formal training in fire safety or fire risk assessment, simply by studying relevant guidance. However, where external professional fire risk assessors are employed, it is important that they are competent, ...*"

25.1.17 In my opinion "blocks of flats" will be multi-storey buildings, with a typically varied occupancy profile (with respect to assistance needs in the event of a fire), some may have more complex escape routes, and all "blocks of flats" are currently heavily reliant on multiple layers of fire safety measures in support of the Stay Put strategy.

25.1.18 The maintenance of those fire safety measures, and the understanding needed to determine the hazard they can pose, is a complex matter in my opinion, and as the evidence I have presented in my Module 3 report demonstrates also.

25.1.19 But whilst "blocks of flats" would be considered complex by the *HM "Sleeping accommodation" guide* they are mostly referred to as "simple nature" in the *LGA Guide*.

25.1.20 As I had already set out in my Phase 1 report, in my opinion Grenfell Tower was a complex building with a mixture of domestic and non-domestic accommodation, with multiple *responsible persons,* and over 300 residents.

25.1.21 It contained a single means of escape shared by the domestic and non-domestic *relevant persons*; and after the primary refurbishment was served by a hybrid smoke/environmental system in the common lobbies.

25.1.22 Regarding the residents, as I have explained in Chapter 6 in this Module 3 report, Grenfell Tower had an occupancy profile with several tenants with vulnerabilities relevant to a fire risk assessment, and relatively few transitory residents, for example 79% adult residents had lived in the Tower for more than one year, and 45% had lived in Tower for more than 5 years.

25.1.23 KCTMO as an organisation had categorised Grenfell Tower in their *high risk* category {RBK00013498}. I would suggest that *high risk* introduces a degree of complexity also.

25.1.24 Other purpose built blocks of flats will, for similar or other distinctive reasons, reasonably be categorised as complex buildings also.

25.1.25 Therefore the contradiction in definition of *complex* that is caused by the meaning set out in *LGA Guide* when compared with the meaning relied upon in *HM "Sleeping accommodation" guide*, needs to be resolved.

25.1.26 The guidance issued under article 50 should also, in my opinion, make clear purpose built blocks of flats are not by default simple; and provide fire safety guidance for *responsible persons* accordingly.

26 The final fire risk assessment for Grenfell Tower

26.1.1 It was imperative that after Rydon had completed the primary refurbishment works that a suitable and sufficient risk assessment was in place which accounted for the significant changes to the building.

26.1.2 I conclude that the final fire risk assessment instructed by the KCTMO and carried out by Mr Stokes, before the works were completed, was again not a suitable and sufficient assessment of the risks to which *relevant persons* were exposed.

26.1.3 Further the fire risk assessment did not accurately identify the *general fire precautions* that were needed to be taken to comply with the requirements and prohibitions imposed on the KCTMO under the RR(FS)O; and the risk assessment contained several substantial errors that contributed to an incorrect hazard assessment and so an incorrect assessment of fire risk.

26.1.4 The timing of KCTMO's instruction to the fire risk assessor, before the required *fire safety information* transfer from Rydon occurred, failed to enable the fire risk assessor and therefore the *responsible person* to comply with the duty to review an existing assessment, when a significant change in the matters to which it relates had occurred.

26.1.5 The timing of the instruction, and the substantial inaccuracies in the fire risk assessment documentation produced, meant the *responsible person* failed to make the required changes to the existing fire risk assessment for Grenfell Tower.

26.1.6 The records produced contained statements that were quite simply false – particularly the statement that vulnerable persons had been factored into the assessment of risk when no such activity had occurred.

26.1.7 The records produced contained statements that was substantially incorrect, including the use of the TP Tracker system, the performance of the cladding being described as fire rated, and the performance of the lifts being evacuation/fire-fighting lifts and available for disabled persons and firefighters.

26.1.8 Overall, the records produced by Mr Stokes, and retained by the KCTMO as their formal records, were based on a set of assumptions by Mr Stokes, that were in general terms, not adequately verified by him, but were also not verified by Ms Wray.

26.1.9 The RR(FS)O required *prescribed information,* with reference to article 9(7) of the RR(FS)O, as produced by Mr Stokes was therefore wrong in terms of both the significant findings, and also his failure to identify any group of persons as being *especially at risk*.

26.1.10 Whilst the KCTMO had a history of not retaining up to date fire safety records of their building stock, the primary refurbishment of Grenfell Tower offered an opportunity to make a change at this building.

26.1.11 Despite Mr Stokes explaining Regulation 38 and formally recording it as an action that required KCTMO's attention, even when Rydon produced a building manual, it was never even considered.

26.1.12 The primary refurbishment was a major piece of work, and KCTMO had a duty to all *relevant persons*, to recognise this and comply with all resulting duties under the RR(FS)O.

26.1.13 I have not found any evidence KCTMO employees recognised and understood that this was the position of responsibility that fell upon them, as a result of the works. This was a substantial failure on the part of the KCTMO and in particular of Ms Wray and Ms Williams.

26.1.14 Updating the fire risk assessment to reflect the impact of these changes was a requirement of the RR(FS)O as set out at article 9(3)(b); and it was also a requirement to provide a record of the information prescribed by article 9(7); this did not occur.

27 The scope of the RR(FS)O with respect to external wall fire performance

27.1.1 It was not possible to derive the common fire precautions at Grenfell Tower, after the primary refurbishment (primarily an over cladding project), if one ignored the external wall construction.

27.1.2 The fire safety information, as was required to be provided to the *responsible person,* was needed to assess the wall as a *collective protective measure* in support of the Stay Put strategy; where the *responsible person* intended to rely on that Stay Put strategy.

27.1.3 The only mechanism to do this assessment is by means of a fire risk assessment. From that perspective, the KCTMO, could not omit the external wall construction from its assessment of risk, as it was so interlinked with the safety of *relevant persons* in Grenfell Tower; and because Grenfell Tower relied on the Stay Put strategy.

27.1.4 I conclude therefore, on the basis of my analysis in Chapter 10 {BLARP20000032}, that the scope of the RR(FS)O cannot be shown to exclude the external wall from the scope of the Order, for any high rise residential building with a Stay Put strategy.

27.1.5 I acknowledge that Mr Stokes makes a contrary assertion, as has the industry body the FIA.

27.1.6 However the *LGA Guide* provides the clearest advice to the *responsible person*, noting particularly it states regarding rainscreen cladding systems (bold by me):

> *72.1 The* ***external façades of blocks of flats should not provide potential for extensive fire-spread.*** *When assessing existing blocks of flats,* ***particular attention should be given to any rainscreen or other external cladding system that has been applied and to façades that have been replaced.***

27.1.7 Additionally the *enforcing authority* of the RR(FS)O in London, the LFEPA, informed either RBKC or KCTMO of the risk of external fire spread due to components of external wall construction on three occasions between 2009 and 2017. On all three occasions LFEPA stated that these issues should be considered as part of the fire risk assessment process.

27.1.8 On all three occasions I conclude that the KCTMO failed to act sufficiently in response to the communications from the LFEPA, as I have set out in Chapter 10. KCTMO relied on advice from Mr Stokes, in their considerations of the information from LFEPA on two of those occasions (2012 and 2017).

27.1.9 Yet in his witness statement to the Inquiry, KCTMO's appointed fire risk assessor Mr Stokes (para 145 {CST00003063}) stated:

145 There has been some suggestion that the scope of the FSO should be deemed to require Fire Risk Assessors to ***consider the external facade of a building, rather than just the Common Parts****, albeit so far as I am aware no evidence has been adduced to date to substantiate such an interpretation.*

146 I ***have never understood this to be the case****, ... **Furthermore, from my experience (both in the Fire Service and as a Fire Risk Assessor), neither is this the understanding of the profession, nor common practice.***

27.1.10 However as I have set out also in Chapter 10 {BLARP20000032}, the evidence that the external wall was considered by a fire risk assessor employed by Salvus, and for KCTMO properties.

27.1.11 From the evidence available to me, I conclude therefore that it is wrong of Mr Stokes, just as it is wrong that the industry body the FIA, to assert, that "*... regulators, enforcing authorities and fire risk assessors never, at any time since the Fire Safety Order came into force in 2006, regarded the external walls of a block of flats as falling within the scope of the Fire Safety Order.*"

28 How KCTMO and Mr Stokes' discharged their duty to consider the hazard posed by the external wall

28.1.1 Mr Stokes classified the external wall construction in the final fire risk assessment for Grenfell Tower as "fire rated cladding" [June 2016 *fire risk assessment* {LFB00000066}] stating:

Information has been gathered from the buildings occupants and employees of TMO and from an analysis of documents provided by TMO.

New external cladding has been fitted to this building as part of the project of refurbishment/construction work being undertaken on and within this building. The original external face of this building has been over clad, the new fire rated cladding is fixed to the out face of the building by metal fixings and the whole process has been overseen by the RBKC Building Control Department and Officers. They have approved and accepted the fixing system and cladding used.

28.1.2 Mr Stokes made this assessment on the basis of an onsite conversation with an unknown employee of Rydon. I have found no evidence that he requested nor was given *fire safety information* about the cladding, to support the statement recorded in his *fire risk assessment* document, as I have set out in Chapter 10.

28.1.3 I conclude this is evidence of professionally reckless behaviour on his part.

28.1.4 There are a few points I want to make in support of my conclusion.

28.1.5 First, the phrase *"fire rated"* was not even used in the Approved Document B on fire safety at the time. It is however commonly used informally in industry to refer to fire *resistance* rating.

28.1.6 Secondly, cladding is typically only ever *"fire rated"* due to significant boundary proximity issues. Such fire resisting external walls are unusual in a high rise residential buildings; and would result in fire resisting construction including fire resisting glazing forming the external wall construction. This performance is as referred to in Section 12.3 in ADB 2013.

28.1.7 This has nothing to do with *reaction to fire* performance, as described at Section 12.5 in ADB 2013.

28.1.8 Formal definitions of fire resistance and the relevant tests to measure the fire resistance of elements of construction (e.g. 30 minutes, 90 minutes etc) are explained in ADB 2013, and for example BS 476 Part 10; and their difference in comparison with the reaction to fire test series are well documented over many years.

28.1.9 Mr Stokes had no reason to refer to the over-cladding as *"fire rated"*. In the absence of *fire safety information* (which he was well aware was missing,

having requested it repeatedly from 2014), he would have discharged his own professional duties more adequately by recording instead, that he did not know what the cladding was formed with.

28.1.10 Alternatively, he could have made it an action for KCTMO to confirm the fire performance of the cladding.

28.1.11 The latter was preferable as the evidence shows that KCTMO were substantially focused on the *record of significant findings and action plan*, and how they transferred the information recorded there, to their action tracker process; not the content of the *fire risk assessment* documents.

28.1.12 Mr Stokes significant findings would then have been accurate; albeit incomplete.

28.1.13 Instead Mr Stokes recorded the highest performance standard possible for an external wall – *"fire rated"* - with no fire safety information available to him regarding the external wall whatsoever.

28.1.14 Mr Stokes fire risk assessments omitted significant components of the external wall formed with combustible materials, and so Mr Stokes significantly under estimated the hazard the external wall posed.

28.1.15 Overall with respect to Mr Stokes' record of information in accordance with article 9 of the RR(FS)O, by means of his *fire risk assessment* for Grenfell Tower, incorrectly described the hazard the external wall posed, by categorising the cladding performance as fire rated when it was not.

28.1.16 As a result KCTMO held an incorrect record for Grenfell Tower, which was made before the *fire safety information* could be provided to their fire risk assessor.

28.1.17 Neither Ms Wray nor Ms Williams appear to have appreciated that no member of the design team had referred to the cladding as *"fire rated";* and I have seen no evidence to suggest that they questioned Mr Stokes's assertion in this regard in his risk assessments.

28.1.18 In fact, the evidence shows that Ms Williams did not provide any Regulation 38 information to Ms Wray or Mr Stokes regarding the cladding, before Mr Stokes concluded his 2016 *fire risk assessment*.

28.1.19 The evidence shows anyway that Ms Wray did not consider the Building Manual an important source of obtaining *fire safety information* for Grenfell Tower after the primary refurbishment.

28.1.20 This is because the evidence shows that even when the Building Manual became available, Ms Wray did not instruct a post-handover fire risk assessment.

29 The adequacy of KCTMO's organisational response to LFEPA's warning in April 2017

29.1.1 I have set out the evidence in Chapter 10 {BLARP20000032}, of the activities carried out by the KCTMO in response to Laura Johnson, Director of Housing for RBKC, who had received a letter from the LFEPA (AC Daly) on 6th April 2017{CST00001571}, as a result of the Shepherd's Court fire in 2016.

29.1.2 KCTMO top management provided limited instructions to Ms Wray; asking only for confirmation as to whether any of KCTMO's properties had the construction described by LFEPA. I note that Grenfell Tower, was specifically mentioned by Ms Mathews, at the time.

29.1.3 Ms Wray appears to have relied on the opinion of Mr Stokes only, obtained in brief correspondence, and failed to rely on KCTMO's own fire safety arrangements.

29.1.4 Ms Wray had initially stated to Ms Matthews that Assets and Regeneration were best placed to answer whether any of KCTMO's building had the type of construction referred to by LFEPA's letter{TMO00861972}.

29.1.5 I have found no evidence of Ms Wray discussing with Assets and Regeneration whether any of KCTMO's buildings had the type of construction referred to by LFEPA's letter.

29.1.6 I have found no evidence that KCTMO's response to RBKC in relation to the April 2017 LFEPA letter was ever discussed or reported at the one Health and Safety Committee which occurred between April and June 2017 (13th June 2017 {TMO10017541}).

29.1.7 I can find no evidence that Ms Matthews or Mr Black challenged the adequacy of this approach.

29.1.8 I have no evidence that Ms Matthews or Mr Black sought any assurance from Ms Wray as to how she had been able to provide confirmation regarding the construction of all of KCTMO 'blocks'.

29.1.9 I say this because I note that KCTMO's emergency plan listed 25 high rise blocks and a further 307 entries made up of low and medium rise blocks of flats and street addresses with individual houses {TMO10013898}.

29.1.10 It was therefore no simple matter to prepare an accurate response to the issues raised by LFEPA.

29.1.11 On the 27th April 2017 Ms Wray e-mailed Mr Black stating that no blocks managed by KCTMO have the cladding referred to LFEPA; Ms Matthews was copied into this email {RBK00002385}:

Hi Robert

Apologies for the delay but I wanted to check with our Fire Risk Assessor before I responded to you.

I can confirm that it is our understanding that we do not have any block with cladding of the nature described in the LFB's letter (which was present at the Shepherds Bush tower block). Grenfell Tower did have external cladding panels fitted as part of the recent refurbishment work, however, our assessor investigated thoroughly the details of the installation with the contractor (Rydons) when the works were on site and he is able to confirm that this complies with the requirements of the current Building Regulations.

29.1.12 Mr Black (KCTMO) relied fully on the information provided to him by Ms Wray, contained as a statement in one email only; he stated {RBK00002385}:

Laura

For information. Not sure we have to do anything but may be useful to update your scrutiny committee.

Robert

29.1.13 The evidence shows that KCTMO failed to utilise their own fire risk management system to ascertain relevant *fire safety information* about their buildings.

29.1.14 The approach taken relied on no formal records and was made without any relevant information about the "*façade scheme*"; I conclude therefore that the answer provided to the RBKC, was as a result substantially wrong.

29.1.15 This meant too that the KCTMO failed again, to carry out a suitable and sufficient fire risk assessment of the external wall at Grenfell Tower, when this opportunity arose for them to do so, nearly one year after Mr Stokes' last recorded document for Grenfell Tower.

29.1.16 Neither Ms Wray or Mr Stokes, made an attempt to review Building Manual information for Grenfell Tower nor any other property relevant to AC Daly's letter.

29.1.17 The Building Manual for Grenfell Tower did not contain, as AC Daly had recommended:

... all relevant information about any replacement window and facade schemes is fully available to fire risk assessors.

29.1.18 As a minimum it is my opinion that KCTMO needed to establish this was the condition of the *fire safety information* for all of the buildings under their control, including Grenfell Tower.

29.1.19 This was for the purposes of being in a position to take the next step, as recommended by Mr Daly, when reliable information was not available:

Where no reliable information is available for a given property, it is our general expectation that a ***strategy to assess the risk*** *and where necessary* ***implement short, medium and long term actions*** *to address the risk. This assessment will need to take account of other fire safety measures already in place in the building as well as potential mitigation measures to* ***ensure that any potential fire spread does not pose a risk to health and safety.***

29.1.20 KCTMO did not make "*all relevant information*" fully available to Mr Stokes; nor did Mr Stokes ask for it.

29.1.21 Therefore again in April 2017, just as it seems was the case in June 2016, I have no evidence that Ms Wray understood that Mr Stokes had underestimated the risk level so considerably, for Grenfell Tower.

29.1.22 By failing to act competently in response to information from LFEPA about the potential hazard replacement windows and façade schemes could pose, and failing to act competently by means of reviewing documented *fire safety information*, KCTMO, under the cursory guidance of Mr Stokes, retained formal records for Grenfell Tower that categorised the risk level as *Tolerable*, when it was not.

30 Third party concerns about the quality of Mr Stokes work

30.1.1 I am particularly concerned that both the LFEPA and a Mr Graham Fieldhouse communicated concerns, before the Grenfell Tower fire, in writing, about the quality of Mr Stokes working methods, and that Ms Wray was aware of those concerns.

30.1.2 The evidence from the time, regarding first the concerns expressed by LFEPA, emanated from events relating to both the self - closers and the fire door sets at Adair Tower. I have explained this in detail in Chapter 4 {BLARP20000030}.

30.1.3 But despite those concerns being recorded in January 2016, I cannot find any evidence that Ms Wray told her relevant superiors at KCTMO – by this I mean Ms Matthews mostly; but there was no reason not to communicate with Mr Black if needed – the evidence shows that Ms Wray had full access to Mr Black and that this was an acceptable line of communication within the culture of the KCTMO.

30.1.4 I also note that in her witness statement, IO Burton {LFB00084098} recalls a meeting with Ms Wray on the 13th November 2015. At paragraph 16 she states:

I was very frank and told her that I did not think that he was providing a good service to the KCTMO, as illustrated by the quality of the FRA for Adair Tower, which was mirrored in the FRA for its sister tower, Hazlewood Tower, which I had also reviewed following the Adair Tower Fire. Enforcement Notices were subsequently issued for Adair and Hazlewood Towers.

30.1.5 There is no evidence available to explain why Ms Wray decided not to tell the Executive Team of IO Burton's concerns with regard to Mr Stokes. It was information Ms Wray needed to share so as to enable and inform a review of Mr Stokes' work.

30.1.6 The second piece of substantial evidence on this subject relates to a review by a Mr Graham Fieldhouse, a health and safety advisor for the London Borough of Southwark, according to Ms Wray.

30.1.7 Unlike many other events over the years involving KCTMO staff, there is very little written evidence available, as to what prompted Ms Wray on the 10th May 2017 to forward 2 recent fire risk assessments by Mr Stokes (not for Grenfell Tower) to Mr Hylton of the KCTMO {TMO00894233}, who then sent them on to Mr Fieldhouse.

30.1.8 Mr Fieldhouse's review identified various significant technical errors (categorised as "*completely wrong*") and he concluded that neither of the fire risk assessments he reviewed were "*suitable and sufficient*".

30.1.9 One of the premises the subject of a fire risk assessment Mr Fieldhouse reviewed, was reported as receiving a NOD, in KCTMO's Health and Safety Meeting Minutes on 16th March 2017{TMO10016738}.

30.1.10 Based on the evidence available to me, I have seen no evidence that Ms Wray escalated the outcome of this review by Mr Fieldhouse, to the KCTMO Executive Team.

30.1.11 I conclude therefore, there is no evidence that either Ms Mathews or Mr Black knew about the findings made by Mr Fieldhouse. Nor can I find evidence if they personally had instructed Mr Hylton, to trigger this review.

30.1.12 I have been unable to establish if Mr Hylton was acting independently, and if so, why he made the decision to obtain a review of Mr Stokes work by an employee of a different Borough.

30.1.13 Based on the written evidence available to me, therefore I conclude that there is no evidence that Ms Wray acted upon the concerns that had been raised to her by competent fire safety professionals, regarding both Mr Stokes inadequate working methods and his inadequate and incorrect professional advice, between November 2015 and May 2017.

30.1.14 Ms Wray failed to carry out her own review of Mr Stokes work in that time too, and more substantially she failed to elevate a serious concern to the Executive Team who had primary responsibility for monitoring fire safety arrangements.

31 Expert Declaration

I, Barbara Lane declare that:

1. I understand that my duty in providing written reports and giving evidence is to help the Court, and that this duty overrides any obligation to the party by whom I am engaged or the person who has paid or is liable to pay me. I confirm that I have complied and will continue to comply with my duty.
2. I confirm that I have not entered into any arrangement where the amount or payment of my fees is in any way dependent on the outcome of the case.
3. I know of no conflict of interest of any kind, other than any which I have disclosed in my report.
4. I do not consider that any interest which I have disclosed affects my suitability as an expert witness on any issues on which I have given evidence.
5. I will advise the party by whom I am instructed if, there is any change in circumstances which affect my answers to points 3 and 4 above.
6. I have shown the sources of all information I have used.
7. I have exercised reasonable care and skill in order to be accurate and complete in preparing this report.
8. I have endeavored to include in my report those matters, of which I have knowledge or of which I have been made aware, that might adversely affect the validity of my opinion. I have clearly stated any qualifications to my opinion.
9. I have not, without forming an independent view, included or excluded anything which has been suggested to me by others, including my instructing lawyers.
10. I will notify those instructing me immediately and confirm in writing if, for any reason, my existing report requires any correction or qualification.
11. I understand that;
    a. my report will form the evidence to be given under oath or affirmation;
    b. questions may be put to me in writing for the purposes of clarifying my report and that my answers will be treated as part of my report and covered by my statement of truth;
    c. the Court may at any stage direct a discussion to take place between experts for the purpose of identifying and discussing the expert issues in the proceedings, where possible reaching an agreed opinion on those issues and identifying what action, if any, may be taken to resolve any of the outstanding issues between the parties;
    d. the Court may direct that following a discussion between the experts that a statement should be prepared showing those issues which are agreed, and those issues which are not agreed, together with a summary of the reasons for disagreeing;
    e. I may be required to attend court to be cross-examined on my report by a cross-examiner assisted by an expert;
    f. I am likely to be the subject of public adverse criticism by the judge if the Court concludes that I have not taken reasonable care in trying to meet the standards set out above.

12. I have read Part 35 of the Civil Procedure Rules, the accompanying practice direction and the Guidance for the instruction of experts in civil claims and I have complied with their requirements.
13. I am aware of the practice direction on pre-action conduct. I have acted in accordance with the Code of Practice for Experts.

STATEMENT OF TRUTH

I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

Signature Barbara Lane. Date 15 June 2021

Name in full Dr Barbara Ann Lane