Grenfell Tower Inquiry

Phase 1 Closing Statement of the London Fire Brigade

Introduction

1. The catastrophic events of the night of 14th June 2017 at Grenfell Tower have rightly been the subject of intense scrutiny during Phase 1 of the Inquiry.

2. The London Fire Brigade (the Brigade) has always recognised the pressing need for the clearest understanding of what happened on the night be provided for the bereaved, survivors and residents of Grenfell Tower and others affected from within the local community, both as to the causes of the fire and the manner in which the firefighting and rescue operation was conducted.

3. Beyond that, in the wider public interest, the Brigade repeats the assertions made in its Opening Statement. Meaningful lessons must be learned and fundamental changes made wherever possible to ensure that a disaster of this kind never happens again. No-one again should be subject to the unimaginable suffering of the bereaved families and friends of those who tragically died in the fire, those who survived, and many of those nearby residents who witnessed the events of the night as they unfolded.

4. It is beyond question that on the night of the fire, the Brigade was faced with the biggest challenge any fire service in the UK has had to address in living memory. Its policies, procedures and training were strained to, and in some cases beyond, their limits because of the sheer scale and uniqueness of the incident in multiple respects.

5. It is a stark fact that the one of the largest fire services in the world was severely challenged and in some elements overwhelmed in the performance of its functions. This was not by reason of an insufficiency or inadequacy of the greatest number of resources ever deployed to a fire in residential premises, but by a savage fire that rapidly progressed through a building which, on the evidence of the Inquiry's experts, was catastrophically non-compliant with fire safety requirements in multiple respects.

6. There are lessons which obviously must be learned, with hindsight. Some have emerged during the Phase 1 hearings which will be addressed later in this Statement.

7. But there is a significant difference between an assessment of lessons which can and must be learned in hindsight, and a consideration of what incident commanders, firefighters and control staff did "in the moment" on the night of the fire. They went beyond what might have been expected of them in the ordinary course of their duties and many risked their lives time and again in doing so. Firefighters were pushed well beyond their physiological limits in trying to effect rescues and in firefighting. At the same time they were required to make very difficult decisions "in the moment" which had significant implications.

8. In addition to assisting the Inquiry to fulfil its terms of reference, and again with the benefit of hindsight, the Brigade has invested considerable time and effort in understanding and assessing the events of the night for the purpose of identifying lessons which may be learned. The London Fire Commissioner also ensured that a number of urgent actions were undertaken following the fire. Certain changes in policy and procedure have already been made and many are under detailed consideration. Further details of those actions and considerations are addressed below.

9. The evidence given by bereaved, survivors and residents, both orally and in writing, has been invaluable to the Inquiry and to the Brigade's learning process in much more than merely the provision of vital information about the conditions of the building during the night. It described the human suffering of those who were affected by the fire in the most poignant terms. It is a testament to their courage in facing and recounting the horrors of the night for the purpose of assisting the Inquiry and in honouring those who tragically perished.

10. The firefighters and control staff who gave evidence to the Inquiry also found the experience extremely challenging and, in many cases, particularly harrowing. Those who gave evidence did so from a sense of duty, which was applicable in equal measure to their conduct on the night of the fire and in coming to give evidence before the Inquiry to recount, and re-live, their experiences under public scrutiny.

11. Immediately following the fire, the Brigade, under the instruction of the London Fire Commissioner, deployed substantial resources to provide assistance in many forms to both Operation Northleigh and to the Inquiry. The Brigade continues to carry out the complex task of analysing the huge body of evidence which has been gathered in an effort to piece together the clearest possible picture of the events of the night. Work has included the compilation of Operational Response Reports for each of the first seven hours of the fire which provide a minutely detailed factual narrative, second by second where possible, of the actions of firefighters, drawing together key information from witness statements which are cross referenced with breathing apparatus telemetry, CCTV and other media. A similar exercise has been conducted in the preparation of a single Control Report which details the actions of officers situated in the Brigade Control room on the night.

12. The Brigade hopes that it has provided real and meaningful assistance to the Inquiry, both through the preparation of these reports and by facilitating the complex process of taking written statements from many hundreds of firefighters who attended on the night and ensuring the attendance at the Inquiry of over 90 Brigade staff who gave oral evidence.

13. It is no exaggeration to say that this Inquiry, in Phase 1 alone, has conducted one of the most extensive and forensic examinations of the events of a major fire which has ever been undertaken in the UK and, probably, world-wide. Those events did not occur in a vacuum and the Inquiry has inevitably considered matters which will be rigorously scrutinised in Phase 2. Evidence has been received, for example, concerning the design and construction of Grenfell Tower, but there remains much to be understood, as the Inquiry's experts have pointed out. This concerns, amongst other things, the manner in which the refurbishment of the building was undertaken and the impact which it had upon the active and passive fire safety measures. Many firefighters have been asked in detail about their individual understanding of and adherence to certain of the Brigade's policies and procedures; but the basis for the development of those policies must also await the Phase 2 evidential hearings.

14. The Brigade's process of extracting learning from the Grenfell Tower fire began on 14th June 2017, has continued throughout Phase 1 of this Inquiry, and will continue throughout Phase 2 and beyond. A number of issues identified in Phase 1 have already been addressed, to which we return below, whilst many are under current careful consideration.

15. Consequently, whilst much can be learned from the evidence at this stage, there remain many issues which cannot fully be addressed until further evidence is heard at Phase 2. It is for that reason, as the Brigade understands it, that the Inquiry's fire and rescue expert, Mr McGuirk, has not been required to prepare a report for Phase 1.

The design and construction of high rise residential buildings

16. Before it is possible to have any appreciation of the actions of Brigade staff on the night of the fire, it is essential to restate that fire and rescue services policies and procedures for different types of fires in different types of buildings are underpinned by the regulatory requirements for their design and construction.

17. The 'stay put' strategy is **not** a Brigade or fire and rescue service policy or procedure. It is a principle of building design and construction.

18. High rise residential buildings such as Grenfell Tower are subject to an extensive regulatory regime which governs the way in which they are designed, constructed, and maintained. The Inquiry's experts have addressed various aspects of that regime in their reports including certain basic principles which are of importance to understand how the Brigade conducted its fire and rescue operation on the night of the fire.

19. Fire safety is a crucial element of the building design process which dictates the way in which fire services are expected to carry out fire and rescue operations. Buildings such as Grenfell Tower were expressly designed so as to contain any fire in its compartment of origin for sufficient time to allow the fire service to extinguish it before it has the chance to spread. Accordingly, the building design is not intended to

facilitate simultaneous evacuation of residents, especially at the same time as firefighting. There is no common fire alarm provided for that purpose and the sole means of escape is by way of a single stairwell.

20. In simple terms, the design of such buildings is subject to the crucial building design principle known as 'compartmentation' which is intended to inhibit rapid fire spread within the building from one area to another. It is achieved by reducing the fuel available in the initial stages of a fire and by dividing the building into a series of compartments (or boxes) which form a barrier to the products of combustion, smoke, heat and toxic gases. That is achieved through a variety of passive and active fire safety measures such as fire stopping, fire resistant self closing doors, and the use of fire resistant materials in the construction and maintenance of the building.

21. This principle applies to each flat within the building, to the common corridors, and to the single central staircase and lobbies which must themselves be sufficiently protected from the effects of fire and smoke.

22. Similar, but differently expressed, principles apply to the external envelope of the building which is expected to be designed and constructed in such a way as to resist the spread of flame over its surface.

23. The express intention of the regulatory regime is that, in the event of fire, the occupants of flats within the building are safe to remain in place (to 'stay put') unless they are directly affected by fire, smoke or heat. That is particularly important given the fact that simultaneous evacuation of the building is not factored into its design. This 'stay put' strategy is not a creation of fire services in the UK but rather a principle of building design which fire services are expected to apply and which underpins the development of fire safety and operational policy for buildings of this kind.

24. It follows that strict adherence to the principle of compartmentation, through a range of active and passive fire protection measures, is obviously critical to the safety of such buildings and their residents in the event of fire. If, during the life of a high rise

residential building, proper active and passive fire safety measures are not maintained to the required standard, the entire basis upon which fire services are required to conduct fire and rescue operations in such buildings can be fundamentally undermined.

25. That said, in the experience of the Brigade, the regulatory provisions concerning the design and construction of buildings such as Grenfell Tower has, historically, been successful from a fire safety perspective in the vast majority of cases. From the information that is available there are around 5,000 residential buildings in London with an occupied height of over eighteen metres (high rise buildings). The Brigade attend approximately 700 primary fires in such buildings on an annual basis. In the five year period to December 2017, of 3,500 attendances, 94% were resolved by the initial attendance of four fire engines (pumps). A further 2% were resolved by five pumps or less with only 4% of high rise residential fires requiring six pumps or more.

26. In fires such as these, breaches of compartmentation to some degree have not been uncommon and it is a misunderstanding of fire and rescue policy to assume that any breach of compartmentation will always result in the need to effect a full evacuation of an entire high rise residential building, even if were possible to do so.

27. In practice, fire services address localised breaches of compartmentation through a system of sectorisation, detailed in Policy Note 434, which the Inquiry will no doubt wish to examine further in Phase 2. It involves establishing an operational fire sector where the main firefighting and rescue operations are taking place, which typically incorporates the floor involving the compartment of origin and one floor above and below. Within this fire sector the flats above and adjacent to the compartment of origin may be evacuated and further evacuation within the fire sector may be considered or implemented depending on the development of the fire beyond the compartment of origin and the resulting risk to those residents within the fire sector. A search sector, starting two floors above the compartment of origin is also established to support more extensive search and rescue, if required, tactical ventilation or other operations.

28. Brigade policy provides for sectorised firefighting and rescue and the practicality of partial evacuation in certain circumstances, such as those which occurred at Shepherds Court on 19th August 2016 where this policy was engaged. The fire sector was extended to account for fire spread within the building, and limited evacuation of flats in the localised sector was effected. The fire was extinguished within the sector without spreading to the rest of the building and without a full scale evacuation.

29. However, in the Grenfell Tower fire it was impossible to adopt a sectorisation process on the basis of localised fire spread, in a building which had performed according to its fire safety design principles for over 40 years until the refurbishment. The uniqueness of the fire which was evidenced in the rapid vertical, lateral, and downward spread, encouraged by the operation of the architectural crown, wholly compromised the 'stay put' strategy. As Dr Lane stated:

'The fire protection measures must be constructed and then maintained to ensure they are fit for purpose in the event of fire. The stay-put strategy is provided through design construction and ongoing maintenance. All building occupants, including the Fire Brigade, rely on it in the event of a fire. It is the single safety condition provided for in the design of high-rise residential buildings in England. The statutory guidance makes no provision within the building for anything other than a stay-put strategy. There is no means of warning nor a means to communicate the need to increase the areas to be evacuated as is currently regulated for other building uses.' (18th Jun 18/pp39-40).

The impact of high rise residential building design on fire and rescue procedures

30. As the evidence has made clear, the building design requirements set out in the published guidance are all matters of the Building Regulations and are not rooted in fire service policy.

Simultaneous Evacuation

31. Since the early 1960s the design of active and passive fire protection measures in buildings of this kind has not contemplated a total building evacuation. That is not to say that a full evacuation of such a building, in certain circumstances, might not be possible given time and with favourable conditions, particularly where residents are aware of an evacuation strategy provided by the building owner. But the challenges faced by the Brigade on the night of the fire were significant, rendering the possibility of simultaneous and immediate full evacuation virtually impracticable, with the following factors being particularly pertinent:

a. that the building was not designed or constructed to facilitate such evacuations through the provision of fire alarms or a detailed evacuation plan produced by the building owner and shared with residents;

b. the absence of any practical mechanism by which to effectively communicate with the occupants of the entire building;

c. the availability of a single staircase as a fire escape route which was also the only means by which firefighters wearing breathing apparatus, carrying firefighting media and other equipment, could access the upper floors (in the absence of a working firefighter lift);

d. the likelihood that rapidly changing conditions in the building as the fire developed might create toxic and potentially lethal conditions through which residents would be required to pass without respiratory protection.

Internal firefighting

32. The statutory requirements for the design of high rise residential buildings are predicated on the basis that fires in compartments must be fought internally and that is the principle which supports fire service policy and training for such fires.

33. The Inquiry has heard that the deployment of external jets of water into an internal compartment through a window cannot be done safely in a high rise residential premise because of the risks which firefighters or residents within the compartment would be exposed to. In the course of the hearings it has been suggested that it may have been an option to abandon internal firefighting in the early stages of the fire so as to allow an external jet to aggressively attack the fire on the cladding above and below the window of Flat 16 without risks to firefighters within the compartment.

34. Of course, several attempts were made to attack the fire externally in order to prevent vertical fire spread. An external jet was applied to the cladding in the vicinity of the window of Flat 16 in the early stages but with care, in the knowledge that firefighters were within the compartment attacking the internal fire. Hoses were deployed externally from within Flat 16 itself, at considerable risk to the firefighters who did so, and later aerial appliances were used. In all cases, these efforts were made without material effect on the vertical fire spread.

35. However, assuming that it would have been reasonable at the early stages to anticipate that the fire in the external cladding would spread as far and as rapidly as it did, it would have been a fundamental and unprecedented departure from high rise firefighting procedure to abandon internal firefighting because it would have allowed the internal fire to develop further, breaching compartmentation and potentially impacting on access and egress routes.

36. There have also been suggestions that the fire might have been fought externally in the initial stages using an aerial ladder. The Inquiry is aware that the Brigade's initial pre-determined attendance (PDA) to a high rise fire in June 2017 did not include an aerial ladder however, even if an aerial appliance had been on the PDA, it is unlikely it could have positioned and set up in sufficient time to have been used to undertake firefighting operations that could have stopped the external fire spread.

Fires on Multiple Floors

37. While the statutory requirements for the design of high rise residential buildings provide for internal firefighting, they do not contemplate that fire services may be required to fight fires on multiple floors simultaneously.

38. At Grenfell Tower, firefighting on multiple floors was essential notwithstanding the fact that the building was not designed to facilitate it. This meant that doorways from numerous lobbies to the stairwell were required to be open for a significant period, thereby necessarily breaching the protection provided for the escape route.

39. Importantly, whether a building is fitted with a dry or a wet riser, the provision is for only two firefighting jets to be connected to the rising main, which is sufficient to deal with the single compartment fire envisaged by the Building Regulations. The use of further hoses connected to riser outlets to fight fires on other floors at the same time results in an exponential reduction in water pressure to a degree which renders the ability to extinguish a fire inadequate. In short, the available water supplied via the rising main and the associated water pressures are insufficient to accommodate multiple hoses in the riser outlets on multiple floors so that the possibility that firefighting may need to be effected in such circumstances is simply not contemplated by the regulatory regime.

40. The whole basis upon which active and passive fire protection measures are provided in buildings of this kind is on the understanding that a fire will occur in one compartment and, subject to relatively localised breaches of compartmentation, will be contained for sufficient time to allow fire services to address the fire and put it out.

41. As a further example, that is why the ventilation system was designed only to extract smoke from one lobby at a time and was not capable, even if working correctly, of doing the same job on multiple floors. In the event, according to the Inquiry's experts, this ventilation system did not work as it should do in a number of respects.

Singular nature of the Grenfell Tower fire

42. The initial fire, of a kind which long term residents described as being similar to a number of fires which had been attended by the fire service in the past without difficulty, resulted in a major incident involving a residential premises on a scale never before experienced by fire services in the UK. The fire safety measures in the building (which for more than 40 years had served its occupants well from a fire safety perspective) were compromised to a significant but not yet fully understood extent by mid 2017.

43. That exceptional scale and the rapidity with which the fire at Grenfell Tower spread from the flat of origin, across the external envelope and within the building itself, is already well documented and provides the answers to many of the questions why firefighters and control staff acted in the way they did on the night.

44. There have been references to other buildings in the UK and around the world which have seen fires break out in external cladding and which has spread, usually vertically. The Inquiry's experts have said that information about those other fires is not as well documented as they would wish in order to make comparisons and draw specific conclusions. The Brigade agrees and also points out that they were very different fires, in different buildings with different regulatory regimes. For example:

a. In some of the fires, there was little or no breach of internal fire safety measures.

b. Some involved external vertical spread of fire only so that most of the building was unaffected

c. Sprinkler systems effectively extinguished or slowed internal fire in certain of the incidents. This is a key fire safety factor in high rise buildings and the Brigade has campaigned for many years for the retrospective fitting of sprinklers in buildings such as Grenfell Tower.

d. In others, the buildings were expressly designed for simultaneous evacuation, with phased general fire alarms, tannoy systems, evacuation plans factored into the design and more than one protected stairwell so that firefighting could be conducted while residents were evacuated via a separate protected route.

45. What is clear, however, is that the fires in other buildings around the world which involved cladding materials are important factors to consider when assessing the collective knowledge of fire services about rapid fire spread on the exterior of buildings and lessons which can be learned from them. The extent to which the Brigade was fixed with this knowledge and the manner in which it was used and disseminated will be a significant issue at Phase 2 when those with relevant responsibility and expertise will have an opportunity to provide a detailed explanation.

46. The Brigade acknowledges the importance of the issue and has taken certain actions which are addressed later in this Statement. For example, there is already a new procedure through the National Operational Learning User Group (NOLUG) process involving the Institute of Fire Engineers (IFE) to extract learning from international events and disseminate relevant learning coherently on a nationwide basis.

47. But what was unusual about the Grenfell Tower fire was the extent of the lateral and downward spread in the external envelope and the extent to which internal compartmentation was compromised. That fire behaviour was, according to the experts, the function of a combination of factors including the nature of the materials used in the cladding and their complex arrangement, the involvement of the architectural crown, the manner in which the new window sets had been installed. This combined with a range of internal active and passive fire protection measures which were found wanting created a unique set of circumstances.

48. It is partly for those reasons that the Brigade stands by the position which it adopted in its Opening Statement concerning the singular nature of the fire. That is, that whilst the incidence of external fire spread on high rise buildings is not entirely

unprecedented in the UK it is extremely rare and has never occurred on the scale of the Grenfell Tower fire. Likewise, internal fire spread beyond the flat of origin, such as that which occurred at Lakanal House in 2009, is not unknown but is also a rare occurrence in the UK and the extent and rapidity with which the fire spread inside Grenfell Tower was extraordinary. The Brigade believes that the scale of the fire resulted from a combination of factors which, taken together, created a unique and, in the UK at least, unprecedented set of challenges for the fire service operation.

Firefighting Operations at Grenfell Tower

49. The primary cause of the problems faced by firefighters was described by Dr Lane as:

'the rainscreen cladding assembly together with the insulation fitted to the existing external wall and the missing or defective barriers became part of the successful combustion process. This created a condition (in the event of an internal fire, cavity fire or external fire) which connected every flat on a storey; and every storey from level three to the roof, which supported the spread of external fire back into the building, through windows, and created a series of internal fire events.' (5th Nov 18/p. 13).

50. As Dr Lane has recognised in her reports, those who were involved in the emergency response will have been wholly unaware of defects in the fabric of the building from a fire safety perspective and will not have known much of the information as to the state of the building and the conditions within it which has since emerged so as to provide the benefit of hindsight. Dr Lane expressly states:

'2.19.1 I do not consider it reasonable that in the event of the installation of a combustible rainscreen cladding system on a high rise residential building, the fire brigade should be expected to fully mitigate any resulting fire event. That is particularly so in circumstances where the fire brigade had never been informed that a combustible rainscreen cladding system had been installed in the first place. Further, there are so many combinations of events, that could fall entirely outside the reach of external firefighting activity. This is important when only internal firefighting arrangements are made for high-rise residential buildings by Regulation at this time.' (5th Nov 18/p.14).

51. The extensive fire and rescue policies and procedures which the Brigade has established through generations of learning were tested to their limits during the fire and the Inquiry has heard evidence from many firefighters of the need to depart from such policies because of the challenging circumstances in which they found themselves and the need to continue the rescue operation despite those challenges.

52. It has been suggested during the course of the Phase 1 hearings that there must have come a time when it was clear to firefighters that the fire could not be controlled and that there should have been a decision to abandon firefighting in favour of the rescue effort. In addressing that suggestion it is first important to point out that firefighting and rescue operations in high rise residential buildings are not mutually exclusive. In all cases it is of paramount importance for firefighters to attack and extinguish an initial fire so that it is not given an opportunity to spread. In cases involving multiple fires it is equally important to continue firefighting efforts, notwithstanding the difficulties created by the building design, not only to prevent further spread but also to protect escape routes and to allow rescue attempts to be made.

53. As the fire developed through Grenfell Tower it was essential that firefighting operations continued, for to abandon them would have further prejudiced the possibility of escape from the floors on which the fires had broken out and from other floors, both above and below, by reason of the smoke and heat which the fires generated.

54. It was also essential that so long as there might be saveable life within the building, firefighting operations continued so as to check the continued development of the internal fire and to maintain the structural integrity of the building.

The Rescue Operation

55. The Inquiry has now taken both oral and written evidence from firefighters, telling of the multiple dilemmas they faced when they were committed to the interior of the building. More firefighters in breathing apparatus were deployed into the building than in any other single incident in the collective memory of the Brigade, with more than 700 fire service personnel engaged in the emergency response during and after the fire. Firefighters with breathing apparatus carried out many rescues of residents from within flats and assisted many other residents who they encountered elsewhere in the building to make their escape down the stairwell, in many cases removing their own facemasks to provide clean air to residents suffering the effects of the toxic conditions in the lobbies and the stairwell.

56. They have described in vivid terms the dangerous and rapidly changing conditions in the flats, common corridors, lobbies and stairwell. The instinct of those firefighters who encountered residents in the common areas and within individual flats was to effect rescues wherever possible, often at significant risk to themselves and to the residents, which in itself presented a significant problem for the bridgehead commanders when committing crews to specific flats to carry out rescues. The evidence has revealed that there were many occasions when crews, en route to the flats to which they were committed, encountered residents on the stairs or in the lobbies who were in need of assistance. They could not pass them by and in certain cases were compelled by the plight of the residents to bring or assist those residents down the stairs.

57. Accounts were given by firefighters during the hearings of difficult choices they were required to make involving the viability of immediate rescue, the number and vulnerability of the residents they encountered, and whether to advise residents to remain in relatively clean air or to encourage them to venture into a hazardous and toxic environment and attempt escape down the stairwell in conditions which were constantly changing. The Brigade has given the causes for these dilemmas great consideration; one urgent action was the introduction of fire escape hoods, to which this Statement will return.

58. The Brigade hopes that the Inquiry will acknowledge the extraordinary courage and selflessness of individual firefighters in facing those challenges;

The women and men who attended to fight the fire and conduct rescue operations were often placed in intolerable positions and were required to make decisions which, in some cases, involved stark choices with serious consequences whatever they decided to do.

The Control Room

59. Taken as a body of evidence, it is clear in the accounts given by control room operators of their experiences on the night of the fire that the Brigade Control room was overwhelmed by the scale of the incident from an early point in the fire.

60. As has been stated on a number of occasions, Brigade Control at Stratford was required to handle more calls from residents requiring fire survival guidance within Grenfell Tower on the night of the fire than the total number of such calls in the previous ten years from the whole of London.

61. As we have also learned, so voluminous were the calls to the Brigade that it was necessary for a number of other fire services to assist in dealing with them using the established mutual aid arrangements.

62. There are undoubtedly lessons which must be learned from the night of the fire in respect of control room policy and training which are addressed later in this Statement, but the extraordinary challenges faced by control room operators on the night were exacerbated by the incontrovertible fact that the Brigade's policies and procedures did not contemplate a demand on control room resources which the Grenfell Tower fire required. Such a demand had never before been experienced by any fire service in the UK.

63. Amongst the many issues explored by the Inquiry was the extent to which control room operators should interrogate callers to ascertain the conditions within and immediately outside their flats. That is an issue which has always presented real

difficulties in the training of control staff nationally. Remote from the fire ground, they have no means of carrying out an objective assessment of the conditions immediately outside the callers' flats or beyond. They are reliant to a very large extent on what they are being told by the caller.

64. The dilemma faced by control room officers in these circumstances is vividly described by Mr Roncolato, who called Brigade Control on a number of occasions on the night. He had made two attempts to leave his flat and had found it impossible to do so, by reason of the conditions that he faced. In respect of the call-back at 04:49:59, Mr Ronoclato was asked by the Counsel to the Inquiry what he would have done if the control room operator had told him to get out of his flat. He said:

'Well ... I would have assessed again if I was in the condition to go out. But obviously she would've taken a big responsibility to do so on her behalf, because she wouldn't know how bad the conditions outside were. I knew, she didn't. She wouldn't know.' (3rd Oct 18/p68).

In his call to Brigade Control at 05:05, during which the control room operator did instruct him to leave his flat, he said that he could not do so and decided to remain where he was. He went on to state:

'*Now let's say I would be convinced by this person to go out, and if something had happened to me, how would that person feel if I had not made it out, basically? So that's why I said, you know, I don't want to think of someone thinking, "Oh, because I gave him that advice, look what happened to him". How would that person then live for the rest of their life?* (3rd Oct 18/p77).

65. The Inquiry has heard that many of those who made calls during the fire felt extremely and understandably reluctant to leave their flats and to face the conditions beyond. Some were simply unable to do so whatever advice they may have received. Some, who self-evacuated, tragically lost their lives in the lobbies or stairwell.

66. The appalling dilemma which control room operators face in circumstances such as these is that even if they seek to explore with a caller the conditions immediately

outside their flats, they cannot know what the conditions may be beyond the immediate vicinity and on multiple floors below when considering whether to advise residents to leave their flats. There always remains a real risk that they will be directing them into dangerous, untenable and potentially lethally toxic conditions.

67. There have been numerous examples in the evidence of rapidly changing conditions within the building, by which smoke, toxicity and visibility radically changed within periods of time sometimes measured in seconds. It follows that advice to residents provided by officers positioned remotely in the Control room involved assessments of risk which are complex and in a fire such as that which developed at Grenfell Tower, advice to residents whether to stay or leave inevitably involved substantial risk either way.

68. The lessons which must be learned for control rooms within the UK must be considered in the context of the enormous scale of the Grenfell Tower fire and the fact that the decision to suspend the 'stay put' strategy, provided for by the building design, for an entire building was made for the first time in history in the UK, so far as is known. Those lessons concern not only call handling but also means of communication with the fire ground in a major disaster.

Interim Safety Measures

69. Immediately after the 14th June 2017, the Brigade was in close liaison with the National Fire Chiefs Council (NFCC) for the purpose of recommending interim control measures to fire services nationally to mitigate failings in high rise buildings which exhibit characteristics of a similar nature to those which we now know were present in Grenfell Tower.

70. The result of that liaison is the publication on 1st May 2018 of a document entitled *'Guidance: To support a temporary change to simultaneous evacuation strategy in purpose-built blocks of flats'.*

71. This guidance, which is a revised version of an earlier document issued by the NFCC after the Grenfell Tower fire, recommends a process by which certain types of high rise residential buildings be subject to fresh and immediate fire risk assessments carried out by suitably qualified 'competent' persons on behalf of the persons or organisations responsible for the buildings. Where appropriate a policy of immediate and simultaneous evacuation in the event of fire is to be implemented. The guidance applies to purpose-built residential blocks of flats where a 'stay put' strategy was part of the original design, but has cladding similar to that found at Grenfell Tower. In addition, the cladding will have failed the large-scale tests commissioned by the government and carried out by the Building Research Establishment (BRE). The guidance makes it clear that a simultaneous evacuation strategy should only be a temporary measure until any risks have been rectified.

72. Given that the majority of high rise residential buildings were designed to have a 'stay put' strategy under the current regulatory regime, it is essential to acknowledge that such evacuation cannot be carried out without additional measures being put in place by the owners or occupiers. In essence this is achieved by either establishing a twenty four hour 'waking watch' by numbers of suitably trained personnel whose responsibility it is to effect an immediate evacuation from within the building as soon as a fire is reported, or the provision of a central alarm system.

73. In London, the Brigade has also provided an increase in the Pre-Determined Attendance (PDA) required for such buildings for an interim period, which increases the number of personnel and fire appliances which will attend a fire in the first instance (see the 'Organisational Overview' document for further details).

74. All of these are obviously significant measures, which are dependent upon urgent and immediate risk assessments carried out by competent persons. In the absence of a system by which simultaneous evacuation can be carried out quickly and safely there is no doubt that all fire services face significant challenges when conducting the type of fire and rescue operation which the Brigade faced on the night of the Grenfell Tower fire.

Further Actions

75. As a result of the Brigade's own internal 'safety and learning' review, which has been further informed by the evidence given by witnesses in Phase 1 of the Inquiry, the Brigade has identified a number of issues that now require further consideration so that any lessons learned from the Grenfell Tower fire can be addressed.

Operational Risk Information

76. The Brigade accepts that quality of the operational risk information recorded for Grenfell Tower at the time of fire fell below the standards expected by the Brigade, as was acknowledged by the London Fire Commissioner during her oral evidence to the Inquiry. It also points to a wider concern the Brigade has in the way that this type of information is gathered, recorded and disseminated across the organisation. Brigade's witnesses have highlighted certain issues and practical challenges, particularly for fire station personnel, in being able to capture all of the information identified in various policies and noted as relevant to 7(2)d visits.

77. The evidence heard during Phase 1 has further highlighted that improvements need to be made in the way operational risk and premise information is used to ensure that information held in one part of the organisation is shared effectively with other parts of the organisation that would benefit from this knowledge and understanding. For example, there has been evidence that the Brigade was fixed with information about the potential hazard of rapid external fire spread in high rise buildings but the extent to which this should be disseminated to operational firefighters and officers is now subject to a new corporate project known as the Operational Risk Information (ORI) project.

78. This project will review and improve the current approach to the gathering, recording and dissemination of operational risk information. The review will also assess the effectiveness of how the Brigade risk assesses buildings and will define a unified approach that can be used across the organisation.

79. Separately, the Fire Safety Regulation (FSR) department has been carrying out a pilot since April 2017 to provide fire station staff with increased FSR knowledge so they can carry out fire safety checks whilst carrying out 7(2)(d) visits, premises risk assessments (PRA) and Operational Risk Database (ORD) visits. This pilot aims to improve the quality of risk information held about premises and will in turn will provide additional capacity for FSR staff to focus on higher risk premises and more complex premises.

80. A revised 'Station Notification' procedure will be established for quick and efficient transfer of information between FSR and operational staff and vice versa. Therefore, if during the fire safety check, operational crews find regulatory fire safety issues beyond their training or capability they will pass the case on to the local FSR team. Separately, the Brigade will also look at the ability of local FSR teams to process and inspect premises referred to them by operational crews.

81. The risk matrix and risk definitions, currently detailed in the Brigade's Policy Note 800 will also be reviewed to ensure they are fit for purpose. While the policy is being reviewed the Brigade can confirm that residential buildings identified with Aluminium Composite Material have been added to the ORD and designated to be included in the mandatory high risk category for inspection purposes. Any revisions to the risk matrix and/or risk definitions, should ensure higher risk properties are prioritised and greater emphasis is given to challenging repeat visits to lower risk properties. It is planned for the risk assessment process to incorporate data sets to assist with the prioritisation of inspections and visits.

82. These revised procedures will be underpinned utilising a new software application which will be available on appliance based tablets and the Brigade's desktop computers. Fire safety check training will also be carried out using face to face training methods. It is planned for the ORI training solution to compliment this training using advanced training support packages. Mandatory continuous professional development (CPD) will also be factored in to the training requirements.

83. While all of the above activities are to be welcomed and will introduce improvements in the way operational risk information is gathered, recorded and disseminated, it should be noted that certain aspects of building design, such as cladding and ventilation systems, are extremely complex and therefore it is unrealistic to expect operational firefighters to understand these systems in detail. This is why the Brigade uses Fire Safety Inspecting Officers (FSIOs) and Fire Engineers to engage with building developers and the 'Responsible Person' for high risk and complex buildings. It would be unrealistic and inappropriate for front line operational firefighters to be trained to the same standard as the FSIOs and Fire Engineers as this training would detract from all the other risk critical operational skills training that firefighters need to undertake.

Evacuation

84. Brigade Policy Note 633 refers to the need to consider evacuation even for a building with a 'stay put' strategy. The policy does not go on to provide specific guidance for operational crews, officers and control room operators in how this can be achieved, particularly in situations where there is a catastrophic failure of a building's fire protection measures as experienced on the night of the fire.

85. While it is still the Brigade's position that the statutory guidance makes no provision within the type of building design used in Grenfell Tower for anything other than a 'stay put' strategy, the Brigade is considering amendments to these policy notes to provide additional guidance to crews, officers and control room operators. That said, the Brigade wishes to emphasise that there is no simple and expedient 'Plan B' for implementing a full scale simultaneous evacuation plan when a catastrophic failure of a building's fire safety provision occurs, especially in residential buildings that only have a single staircase and operate a 'stay put' strategy.

86. The factors that make a full scale simultaneous evacuation so challenging have already been detailed earlier in this Statement and are not repeated here. However, the fact that the protected single staircase at Grenfell Tower became compromised at an early stage of the fire was one of the key challenges faced by firefighters and officers in

respect to rescue and evacuation. To help overcome this issue the Brigade has now introduced fire escape hoods that are designed to be used by members of the public where they need rescuing through smoke filled environments. These hoods provide members of the public with up to 15 minutes protection from four of the main fire gases (carbon monoxide, hydrogen cyanide, hydrogen chloride and acrolein) and can be worn by conscious or unconscious people. If more than 15 minutes protection is required then another hood can be given to each wearer. Firefighters will be able to offer people a hood to wear whilst they are being rescued and they will also be used to protect those who aren't able to escape easily, such as the elderly or wheelchair users.

87. These fire escape hoods are now carried on the Brigade's Standard Duration and Extended Duration Breathing Apparatus (SDBA/EDBA) sets which means a total of 649 are available on front line fire engines. An additional reserve of 78 are held at the Brigade Distribution Centre. The fire escape hoods were introduced in November 2018 and have already been used in the successful rescue of a casualty trapped by heat and smoke at a house fire in Hammersmith on 21 November 2018.

88. This new capability gives firefighters and officers a new tactical option should a similar building failure to the one experienced at the Grenfell Tower fire occur in the future. The Brigade is one of the first two UK fire and rescue services to provide this new capability, having worked closely with Kent Fire and Rescue Service, which will also be launching fire escape hoods on its front line fire engines.

89. Despite these improvements it is hoped that the Inquiry will acknowledge the very real constraints and challenges that the fire and rescue service faced on the night of the fire.

Incident Communications

90. The Brigade is aware of a range of incident communication challenges, both in relation to fire ground radio and the breathing apparatus (BA) radio equipment and capacity that occurred at the Grenfell Tower fire. It also acknowledges that there was a lack of feedback information being communicated to the Brigade Control by reason

of the exceptionally large number of fire survival guidance calls that were being handled during the fire. The Brigade accept that there are improvements that can be made in this area of its service even though the primary factor that impacted on all the fire ground and Brigade Control communications was the significant and unprecedented volume of FSG calls being handled and the sheer number of operational resources deployed at the incident.

91. It is accepted that all communications systems have a finite capacity and in the case of the Grenfell Tower fire the Brigade's current systems were overwhelmed by the volume of radio traffic that was being generated. That said, there are clearly improvements that can be made to optimise the use of the available radio communications equipment and ensure that there is a more effective and reliable protocol for sharing FSG call information between Brigade Control and the fire ground.

92. The Brigade is currently trialling various options to ensure that the exchange protocol relating to the FSG call information is more streamlined and effective, particularly in situations where multiple and/or large numbers of FSG calls are being handled. This includes assessing whether it would be effective for Brigade Control to pass FSG call information direct to the Bridgehead and for there to be a dedicated Airwave radio channel allocated for this purpose. This would provide a dedicated link between Brigade Control and the part of the incident command structure responsible for the tactical plan to carry out search and rescue operations. While there is still more testing and evaluation work to be conducted it is anticipated that a revised FSG policy note (790) will be published within the next 6-months which will contain improvements in the way FSG call information is managed between Brigade Control and the fire ground.

93. In respect to the Brigade's fireground and BA radio equipment provision, both systems are scheduled for replacement in the financial year 2019/20. The lessons learned and experience from the Grenfell Tower fire will be considered as part of the development of the technical specification for these replacement radio projects. Notwithstanding this, and as an interim solution, the Brigade is currently evaluating a

BA radio solution which aims to enhance the quality of the voice communications between BA wearers and others, which would include casualties located in a fire and/or rescue situation.

94. In addition to the above, the Brigade is introducing three radio communication training support packages aimed at senior officers and station based staff as part of its January 2019 Operational News publication. The three training packages cover radio equipment and usage, and messages.

95. To supplement these training packages, which will be mandatory for all operational staff, the Brigade is in the process of training its cadre of Operational Review Team (ORT) officers to become Airwave Tactical Advisors. To become a Airwave Tactical Advisor the ORT officers are required to attend the national College of Policing, who deliver this accredited training course to all agencies that utilise Airwave technology. It is anticipated that all of the ORT officers will have completed this course by the middle of 2019.

Brigade Control

96. The Inquiry has heard evidence explaining the challenges faced by the Brigade Control staff as a result of the unprecedented volume of 999 emergency and FSG calls generated during the Grenfell Tower fire. While there are already mutual aid arrangements to deal with overflow calls which are beyond the capacity of the parent control room, these were never designed to cope with the sheer scale of calls that were generated on the night of this fire. As a result of this Brigade Control senior managers have engaged with the NFCC Mobilising Officers Group (MOG) and discussed improving the communication of risk critical information between Control rooms involved in taking overflow calls under the established mutual aid arrangements.

97. The group has carefully considered the Grenfell Tower incident and the challenges presented by a number of Control rooms simultaneously handling calls relating to the same incident. The group propose the establishment of a dedicated national Airwave

talk group for fire service control rooms to enable to more effective exchange of information.

98. In addition to the national mutual aid issues, the Brigade Control senior management team are also considering the ad hoc actions implemented on the night of the fire to mitigate the unprecedented nature of the incident, recognising that established policies and procedures were overwhelmed. A training package is being developed and will be delivered to ensure that all staff are aware of the actions taken on the night where these were considered effective. Where improvements to the actions taken on the night are identified staff will receive input on the original action and the identified improvement. It is recognised this training is an interim measure prior to the implementation of revised policies, technological and training solutions that will be associated with the updated FSG Policy Note 790.

99. All Brigade Control staff are also currently undertaking refresher FSG training and it is anticipated that the majority of the control room operators will have completed this by the end of 2018. Further FSG training will be undertaken in 2019 once the revision to the FSG Policy Note 790 is published.

100. The Inquiry has also heard evidence from a number of the control room operators in relation to their training records. The Brigade accepts that it needs to implement a more effective training recording system for these staff with the facility to automatically update Individual Training Records (ITRs). This new system, a bespoke version of the Station Diary used on fire stations has been implemented this month. Additionally, a more effective system to ensure core skills, aligned to National Occupational Standards, are identified and maintained is being developed and will be implemented in 2019. This is also similar to the system used for fire station staff.

101. The Brigade Control 'fallback' facility located in Stratford has already been upgraded to enable the National Police Air Service (NPAS) helicopter downlink to be displayed on the large screens in this control room. This may give control room operators the opportunity to gain improved situational awareness of an incident when NPAS images are being broadcast.

102. The Brigade's 'Dynamic Cover Tool' (DCT), which assists control room officers to optimise the available fire cover resources during periods of high demand, is currently being tested to make it accessible at Stratford through a web based application. The DCT is already available at the Brigade's primary control room in Merton.

High Rise Policy

103. The Brigade is currently reviewing policy note (633) 'High rise firefighting' and the associated training materials, which is at present out for consultation with the Brigade's Heads of Service. It is also being extensively consulted on with the two main Representative Bodies; the Fire Brigades Union (FBU) and Fire Officers Association (FOA). This revised policy will provide for an interim position ahead of any new National Operational Guidance being published relating to the hazard of 'rapid fire spread in high rise premises'.

104. The Brigade also recognises that consideration should be given to operational staff's skills, knowledge and understanding relating to building construction and modern building materials. This issue has been fed into the Fire Central Programme Office, which forms part of the National Operational Learning governance process. This has resulted in the National Operational Learning User Group issuing an 'Action Note' to 'Skills for Justice'. This 'Action Note' makes a recommendation for a review of the National Occupational Standards (NOS), for the purpose of ensuring relevant knowledge and understanding of building construction, fixed installations, fire science and fire engineered solutions to complement National Operational Guidance – 'Fires in buildings'

High Rise Tactics and Equipment

105. As part of the ongoing review of high rise policy, the Brigade is continuing to evaluate various operational response options for the purpose of potentially enhancing its capability to fight fires in high rise premises. The actions taken thus far are set out in the Brigade's Position Statement on 'Actions since the Grenfell Tower Fire' dated 26 September 2018.

106. The Brigade is currently in negotiations with the London Borough of Bexley regarding the potential use of three residential tower blocks that will become vacant in 2019. It is hoped that the Brigade can utilise at least one of the vacant tower blocks prior to their demolition to test and assess new firefighting tactics as well as undertaking a number of large scale training exercises. As the Inquiry will be aware, the opportunities to carry our tactical research and training on high rise residential premises is extremely limited so the Brigade will be endeavouring to secure the use of at least one of these tower blocks (for a limited time) once they become vacant.

Incident Command Training

107. During 2018 the Brigade has been delivering Level 3 Advanced Incident Command courses for all substantive and temporary Deputy Assistant Commissioners (DAC) and those Group Managers eligible to provide operational cover on the DAC rota. Two more courses are scheduled for December 2018 and one for January 2019. A date for the newly developed Level 4 Strategic Incident Command course aimed at aspiring and existing Brigade Managers has also been set for February 2019.

108. In addition to the above, the Brigade has undertaken a review of the current Incident Command training courses available for Crew Managers to Group Managers. This has resulted in the following additional training solutions being added to the Brigade's training portfolio. These workshops will cover:

a. Reinforcement of the FSG co-ordinator role, incorporating the relationship between Search Coordinator, Brigade Control and Incident Commander

b. Effective use and deployment of multiple Command Units at a single incident

c. Management of a functional BA Sector, including the effective resourcing and management of BA logistics to support the operational needs of the incident.

109. There is also a new Command Team exercise being added to the Brigade's training portfolio which covers high rise incidents. This exercise demonstrates the structures and processes required to run successful fire, lobby, and search sector(s).

110. To supplement the above, the Brigade is considering using a high rise scenario along with its associated themes in the formal incident command exercises that form an integral part of the Brigade's assessment and promotion process.

Conclusion

111. The Brigade will continue to pursue the actions identified above and will, where practicable, adopt measures to address the lessons which can be learned from the Grenfell Tower fire. It is expected that the Inquiry will wish to examine many of those issues in close detail in Phase 2, and the Brigade will continue to provide every assistance it can to that end. However, the Brigade returns to the question it posed in its opening statement, as an expression of the issues with which fire services nationally must wrestle.

112. Is it in the public interest either:

a. To make changes to the regulatory design and construction regime which governs high rise residential premises, which address potential non-adherence to fundamental fire safety principles and provides a mechanism by which proper compliance can be achieved so that fire services may have greater certainty and confidence in the development of operational policies for responding to and dealing effectively with high rise residential fires; and/or

b. To require fire services to develop new high rise fire and rescue policy and capability and receive the appropriate associated funding, on the express assumption that high rise residential buildings have not been maintained in such a way as to comply with the regulatory regime under which they

were originally designed and constructed so as to render them inherently unsafe in the event of fire?

114. Fire and rescue services undertake their functions in the built environment on an assumption that it is governed by rigorous regulations, robust testing and competent individuals making choices about the methods of construction and the materials used to ensure buildings are safe. Whatever changes may be made in fire service policy arising from lessons learned from the Grenfell Tower fire cannot extend to overcoming any short comings in the system of building regulation that is the primary basis upon which fire safety is maintained in high rise residential buildings.

115. These are challenging issues which must be scrutinised in the next phase of the Inquiry. For the present the Brigade repeats its continuing commitment to the bereaved, survivors and residents of Grenfell Tower to do everything in its power to meet their justifiable demand that meaningful lessons, some of which have been already been identified in this Statement, must be learned from the night of 14th June 2017.

Stephen Walsh Q.C.

Sarah LeFevre

6 December 2018