

HIGH RISE BUILDINGS: BREATHING APPARATUS SAFETY CAMPAIGN



CONTENTS

SECTION 1

Introduction by Matt Wrack. FBU defends firefighters' health and safety..... 3

SECTION 2

FBU, Briefing note: Breathing Apparatus Safety Campaign, 30 July 2021 7

SECTION 3

FBU, Health and Safety Advisory Panel submission, 29 March 2021 13

SECTION 4

Lewis Ramsay, PN633 Report, 22 March 2021 41

SECTION 5

Riccardo la Torre, Presentation to the panel, 14 April 2021 55

SECTION 6

Andrew Strawson, Health and Safety Advisory Panel report, 30 April 2021 69

SECTION 7

FBU, Letter to the NFCC, 26 May 2021 83

SECTION 8

NFCC, Response to the FBU letter, 10 June 2021 85

SECTION 9

FBU, Letter to the Health and Safety Executive, 27 May 2022 87

SECTION 10

Bibliography..... 97

SECTION 1

INTRODUCTION: FBU DEFENDS FIREFIGHTERS' HEALTH AND SAFETY

Since 2020, the Fire Brigades Union has been fighting to defend firefighter safety from one of the most dangerous assaults in the history of the fire and rescue service. Some chief fire officers, working through the National Fire Chiefs Council (NFCC), have proposed a procedure that would allow firefighters at high rise fires to be ordered to work beyond the entry control point at the bridgehead without first having started up their breathing apparatus (BA).



*Matt Wrack,
FBU general secretary*

The FBU believes that this procedure is unsafe, putting firefighters and the public at greater risk. It tears up half a century of health and safety law, best practice guidance, manufacturers' instructions and firefighter training. It will not make living and working in high rise buildings safer or tackle the wider crisis in building safety. It simply puts firefighters and residents at greater risk.

This publication includes the FBU's main submissions to avert this disaster. It also includes valuable support for the union's position from independent experts. This fight continues, because a small number of chief fire officers refuse to see sense.

LONDON FIRE BRIGADE

The London Fire Brigade (LFB) began revising its high rise firefighting policy, known as PN633, in the aftermath of the Grenfell Tower fire. LFB principal managers and the FBU agreed that the policy needed to be improved in light of longstanding failures in building safety. FBU officials participated in negotiations on the new policy, making many suggestions that were accepted.

However the union's officials in the London region, on the executive council and at head office could not accept new elements in LFB's draft policy for emergency evacuation and mass rescue, in circumstances where total building failure had occurred. LFB's proposed procedure would have allowed incident commanders at high rise fires to deploy firefighters to work beyond the entry control point at the bridgehead without first having started up their breathing apparatus.

THE HEALTH AND SAFETY PANEL

At the end of 2020, negotiations on LFB's high rise firefighting policy reached an impasse. The matter was referred via an LFB mechanism for resolving disagreements on health and safety matters, known as the Health and Safety Advisory Panel.

This process comprises a written submission by each of the two parties on the matters in dispute, which are then presented to a meeting of the panel members. The panel consists of

two representatives from each party (FBU and LFB management) and an independent chair. The panel chair is a suitably qualified person, who is mutually acceptable to both sides of the LFB's joint health and safety committee. In this instance the person selected was Mr Andrew Strawson, a former HSE inspector with long and well-respected experience of fire service matters.

On 14 April 2021, head office and London FBU officials participated in the LFB's Health and Safety Advisory Panel. This was a professional exchange of views, with both sides committed to finding an acceptable outcome.

The independent chair concluded after hearing the arguments from both sides that LFB should withdraw the proposed unsafe procedure of sending firefighters beyond the entry control point when not under air. The recommendations are:

- 49. My recommendation is that the proposed procedure in Para 6.30 of the latest draft of PN633 be removed as it does not represent appropriate and best practice at fires in high-rise buildings.*
- 50. In the course of the Panel deliberations it appeared that there were some inconsistencies and omissions in the proposed procedure. I am not of the opinion that rectifying these inconsistencies and omissions would change the recommendation.*

The London Fire Commissioner Andy Roe responded to the panel by accepting its recommendations and withdrawing the disputed aspects of the proposed procedure. The FBU welcomed Commissioner Roe's decision and has been working with the LFB to finalise the revised policy. This is the professional way to improve safety policy for the public and firefighters. It should have ended the row nationally.

THE FIGHT CONTINUES

Sadly, despite the recommendations of the panel and the agreement between LFB and the FBU, a small number of chief fire officers have continued to develop very similar procedures, which will put the public and firefighters at risk.

In late 2020, the NFCC published its own revised national guidance, which also licences the dangerous procedure. This guidance was not agreed by the FBU and our objections were communicated to the NFCC before it came out. The FBU is hugely disappointed that the NFCC chose to press on with its guidance and encourage its members to introduce unsafe BA procedures.

The majority of chief fire officers have rightly opted not to pursue the dangerous procedure. None of the devolved administrations have pursued it. After dialogue and negotiation between national and local FBU officials and principal managers in West Midlands, Cambridgeshire and Humberside, implementation of the new bad practice was halted.

The FBU has also had initiated legal proceedings where necessary. Recently, the union prepared an application for judicial review against Greater Manchester Combined Fire Authority (GMCA), but withdrew it after assurances from GMCA principal managers that they would remove the practice from all operational policy. Local FBU officials are now in discussions with local managers to develop an acceptable revised high rise firefighting policy.

In February 2022, the FBU made an application for judicial review against the decision of Hampshire and Isle of Wight Fire Authority to continue placing firefighters beyond the entry control point not under air. Sadly, the court refused the application, arguing that there were other routes to resolution.

To be clear, the practice in dispute was not ruled to be safe or lawful by judicial review. The decision simply meant the FBU was refused permission to take our arguments to be heard by the court in this instance.

In May 2022, the FBU wrote to the Health and Safety Executive (HSE) setting out our case. The FBU will seek every available channel to resolve this matter. The union will challenge this unsafe practice wherever it is raised, utilising all legal, political and industrial resources at our disposal.

DON'T PUT FIREFIGHTERS AT GREATER RISK

It is absolutely necessary for the FBU to challenge this policy on behalf of all professional firefighters, whether members or not. No other fire and rescue service organisation or body, including other 'representative bodies', challenged this unsafe practice. If the procedure is implemented, it would lead to injuries and deaths of firefighters. It would seriously compromise operations to rescue the public at incidents.

The FBU is committed to campaigning to make homes safer. Building safety has been compromised over 40 years under different governments and the crisis has been exacerbated by huge cuts in public services, including fire and rescue. At every stage, the FBU warned that deregulation and cuts would weaken fire safety and put the public at risk.

The solution is to demand that these safety failings are corrected. Measures that undermine the safety of firefighters will do nothing at all to improve public safety. A major part of the solution is for politicians, fire authorities and chief fire officers to listen to the union's representatives and the views of our members. The FBU will continue to campaign alongside the bereaved, survivors and residents of Grenfell and the tenants of high rise residential buildings to make our homes safe.

SECTION 2

BRIEFING NOTE: BREATHING APPARATUS SAFETY CAMPAIGN

We are facing one of our biggest threats in decades.

It is imperative that members take ownership of this issue, take part actively and continuously oppose its introduction and implementation.

It is important to set out from the start that the argument is not about the FBU disliking a solution adopted by the National Fire Chiefs Council (NFCC). It is that the NFCC have not identified a solution, but in fact created an additional major problem.

This is not a matter of firefighter safety vs. public safety - it is a matter of firefighter safety and public safety.

Finally, it's important to recognise that this is not just about fires in tall buildings. This is about breathing apparatus (BA) at all fires.

RISKS

Firefighters have long known the risks from inhaling smoke, carbon monoxide, hydrogen cyanide, toxic substances, asbestos and other particulates. Firefighters working in oxygen deficient atmospheres has led to:

- Firefighters becoming injured on the fireground
- Firefighters with long term disease and cancer.

The FBU is currently running the biggest ever UK research project into contaminants from the fireground and the impact on firefighters' health – a key issue for every member.

BA emergencies are the number one cause for the death and injury of firefighters in the line of duty.

BREATHING APPARATUS

Since World War Two, firefighters have used breathing apparatus to protect themselves on the fireground from these risks.

Since the Smithfield fire in 1958, the FBU has fought for operational procedures for the correct use of breathing apparatus. This was reflected in Fire Service circulars, the manuals of firemanship (as was), the drill book, technical bulletins and operational guidance.

These procedures, including BA entry control points, donning in fresh air, use of tallies and warning signals, are designed to keep firefighters safe and were developed as the result of deaths and injuries to firefighters.

Even with these procedures we lose too many firefighters in fires. The NFCC's policy will result in even more firefighters' deaths.

THREATS

For a number of years, some chief fire officers have been trying to push back against safe BA procedures. Since the Grenfell Tower fire, some chief fire officers have tried to downgrade procedures and firefighter safety to help the Westminster government with its building safety crisis.

Instead of dealing with cladding and the failure of compartmentation, ministers want firefighters to take on even more risks. The FBU has warned for decades about the risks of cladding, the lack of enforcement and against cuts to our service.

Putting firefighters at risk is not an answer to the building safety crisis. Letting those responsible be allowed to pay for decades of failure and deregulation with the safety, and possibly the lives, of firefighters, just because it is cheaper, is not the answer.

We want to stress - the NFCC plan does not provide the answer to the building safety crisis or the problems encountered at Grenfell.

NEW PROCEDURES

A number of chief fire officers want to introduce new procedures, which will allow firefighters to be deployed in high rise fires beyond the entry control point but not under air. These include:

- Wanting to deploy firefighters high up within the building, without BA started up.
- Wanting to deploy firefighters on stairways to assist with various activities.

These new procedures put firefighters at an even greater risk, which is why the FBU opposes them.

The National Fire Chiefs Council (NFCC) issued guidance last year, which leaves it to chief fire officers to introduce these dangerous new procedures. The FBU recently won at the health and safety panel in the London Fire Brigade regarding this issue.

Other chief fire officers are ignoring the panel outcome and are trying to implement these procedures, or are planning to implement them in the near future.

They have not consulted properly with FBU safety reps or explained how firefighters will be protected in these challenging new circumstances.

OPERATIONAL PROBLEMS

Breathing apparatus, the tallying system, warning whistles, Automatic Distress Signal Unit and related equipment are designed to be used in tandem with safe BA procedures, to reduce the risks when committing firefighters into hazardous situations.

BA sets are designed to be started up in fresh air. The BA entry control point is established and moved as necessary to ensure it is in fresh air. Pre-entry checks are essential safety requirements.

The time to find a fault is at the BA Entry Control Board, in safe air where it can be rectified or deployment stopped, not once deployed into the risk area, when it is likely to be impossible to rectify any failures in deteriorating conditions and will therefore unnecessarily endanger firefighters.

Adjusting other personal protective equipment such as helmet, fire hood, tunic and gloves on the move whilst in the hazard area would also be necessary if going under air beyond the BA entry control point and would therefore amplify the risk further. BA comms are rendered extremely limited if the BA mask isn't donned properly.

We want to emphasise here that in relation to tall buildings, the documentation correctly refers to the bridgehead. But if this is allowed to proceed in tall buildings, we will see this being extended by the NFCC to all fires on the basis of "if this can be done 100 metres above ground level, it can be done anywhere".

So this is about wearing BA under air beyond the entry control point. We need to remember that we have lost members in house fires, such as at Blaina Gwent.

BA EMERGENCY

These new procedures do not explain how officers managing the BA entry control could monitor and command those firefighters committed, or the wear, without wearers starting up.

If the BA entry control officer has concerns about safety, they may have to declare a BA emergency and deploy more firefighters to search for and rescue their colleagues.

These procedures explicitly and by design deploy firefighters beyond the bridgehead, to places beyond the duration and limitations of a BA set.

This would have knowingly and intentionally sent firefighters to points of the risk area beyond the capacity of an emergency BA team to reach and rescue them.

In those circumstances, BA wearers in distress would have become un-saveable. No chief fire officer has explained how firefighters can rescue other firefighters – or members of the public – in these circumstances.

PUBLIC SAFETY

The root of the problem is a building crisis – reducing BA safety doesn't make buildings safer, now or in the future. Dead or injured firefighters cannot save anybody.

In the event of a BA emergency all available resources would be redirected from rescue and firefighting operations resulting in reduced resident safety.

CFOs have not answered the questions:

- How much air would be saved?
- How much air needs to be saved? For what tasks?
- How much air is needed to perform those tasks?
- How does this alter per individual physiology?
- Do those tasks increase resident safety?

No clear identifiable benefit to operations or public safety has been identified. We are being asked to balance the intolerable risk of dead firefighters against an unknown benefit which has not even been identified to exist.

ILLEGAL

The FBU argues that these new procedures are illegal, because they unnecessarily breach obligations under the Health and Safety at Work etc. Act 1974 and other health and safety regulations.

The proposed procedures remove a safety critical, reasonably practicable risk control measure firefighters have relied upon for decades to protect themselves in already hazardous situations.

BA procedures are an established safety measure, which firefighters have been highly trained to implement. Removing this measure, knowing that firefighters could be killed, injured or suffer ill health, is extremely negligent and irresponsible.

The procedure intentionally lowers firefighter safety to lower than which can reasonably be expected and practicably achieved. This places our officer members at the potential and unacceptable risk of facing criminal charges.

SUMMARY

The proposed policy is unsafe because it would:

- Be in breach of a Fire and Rescue Authority's obligations as set out in the Health and Safety at Work etc. Act 1974 and associated health and safety regulations
- Remove a reasonably practicable and easily implemented risk control measure
- Reduce the level of safety below that which is known to be reasonably practicable to achieve
- Overturn decades of safe BA practice
- Undermine vital BA and PPE pre-entry checks and safe systems of work
- Render it impossible for BA teams to calculate working duration and safe turn-around pressures
- Expose firefighters to toxic fire effluents and other substances hazardous to their health
- Undermine public safety by the potential to hamper fire ground operations, rescue efforts and the redirection of available resources
- Ignore lessons learnt from previous firefighter deaths, injuries and BA emergencies, such as the 2003 Petershill Court fire in Strathclyde
- Knowingly place BA teams beyond the point of rescue
- Completely remove the responsibilities of the BA Entry Control Officer and their ability to monitor and supervise the BA wear
- Breach PPE regulations and undermine and render firefighter PPE ineffective. It would further require firefighters to commit a breach of the same health and safety regulations
- Not make buildings safer
- Offer no identifiable benefit to public safety.

CONCLUSIONS

The FBU wants members to understand fully why we have taken a stand on this issue.

- It is imperative that members take ownership of this issue
- It isn't an abstract policy position
- The union has a duty to protect our members – nobody goes to work to die or get hurt
- The FBU cannot accept more dead and injured firefighters because of this new procedure
- The union cannot accept firefighters being put at a greater risk for no obvious gain.

- The FBU does not want officers and other firefighters facing prosecution when things go wrong as a result of these new procedures
- The FBU opposes those Chief Fire Officers who say firefighter safety is their priority whilst at the same time placing us in avoidable and unnecessary danger
- This is about our safety and health, our lives and our job
- We need to stand together, look after each other and not throw out long established BA procedures
- We cannot let those responsible be allowed to pay for the failures that led to Grenfell with the safety of firefighters, just because it is cheaper!

WHAT FBU OFFICIALS ARE DOING

- Challenging this at national level in discussions with the Home Office, HSE, and NFCC
- National officials are providing information and advice to local officials who are challenging it at FRS level
- Taking legal advice in order to be prepared to take whatever steps are necessary on any front
- Preparing officials across the UK should any FRS decide to take steps to adopt the NFCC policy.

WHAT WE REQUIRE OF MEMBERS AT THIS STAGE

- Hold branch meetings to discuss this vital safety matter and vote on the standard motion – have your say
- When approached by management, in training or operationally, be informed of and ready with the arguments and challenges against this unsafe procedure – make your views known
- Inform your CFO that as a professional firefighter & BA wearer you will go under air when, where and how you assess to be safe and within a safe system of work – at the entry control board.

All documents relating to the FBU BA safety challenge can be found on the FBU website at:
www.fbu.org.uk/news/2021/05/13/fbu-defends-vital-breathing-apparatus-safety-procedures

SECTION 3

FBU SUBMISSION TO LFB: HEALTH AND SAFETY

ADVISORY PANEL: PN633 HIGH RISE FIREFIGHTING,

29 MARCH 2021

INTRODUCTION

1. This is the Fire Brigades Union (FBU) submission to the London Fire Brigade (LFB) Health and Safety Advisory Panel (HSAP) on the proposed revisions to *High Rise Firefighting – Policy Number 633* (PN633). The union represents 97% of wholetime operational firefighters in the LFB, as well as a significant proportion of fire control staff.
2. On 14 June 2017, the LFB was called to the fire at Grenfell Tower. The incident resulted in the deaths of 72 people. The Westminster government appointed the Grenfell Tower Inquiry (GTI) to investigate the fire. The FBU is a core participant in the GTI and totally committed to achieving justice for the bereaved, survivors and residents. But justice will not be done by undermining the health and safety of firefighters.
3. LFB has responded to the fire and the GTI's Phase 1 report with a revised PN633. FBU officials have participated fully in LFB's review. The FBU's principal concern is the paragraphs in PN633 on emergency evacuation and mass rescue. These would allow incident commanders to deploy firefighters to work beyond the entry control point at the bridgehead without first starting up their breathing apparatus (BA) sets. This is a new and unprecedented procedure, which is fundamentally flawed. The FBU believes:
 - PN633 is illegal because it necessarily breaches the London Fire Commissioner's obligations under the Health and Safety at Work Act, the Management of Health and Safety Regulations, Control of Substances Hazardous to Health Regulations, Personal Protective Equipment Regulations and other regulations
 - The proposed procedure creates too great a risk to the immediate and long term health of firefighters deployed in this way
 - LFB's proposed procedure would expose firefighters to toxic fire effluents, including hazardous gases and particles, which risk damaging their health and safety at these incidents and afterwards
 - The proposed procedure removes a safety critical, reasonably practicable risk control measure firefighters have used for decades to protect themselves in already hazardous situations
 - PN633 contradicts longstanding national operational guidance and best practice for breathing apparatus
 - The LFB has begun to implement the new policy, including the training of its firefighters, without agreement on the unsafe procedure. The last minute revisions to the PN633 show that the proposed policy is not fit for purpose.
4. The scope of the draft policy is not spelt out in the draft, but it is significant. Home Office figures indicate that there are more than 20,000 purpose built flats of four storeys

(11 metres) or greater in London.¹ LFB recently reported to the HMICFRS that London has 6,300 high rise buildings (six storeys/18 metres or higher) in residential use.² Last year, the mayor said that 4,256 residential high rise buildings had a premises risk assessment.³ PN633 and the proposed unsafe procedure will apply at thousands of premises where firefighters may have to intervene.

5. The FBU is committed to learning the lessons from the Grenfell Tower fire. However, LFB is attempting to introduce a BA procedure that is inherently unsafe for firefighters. LFB is seeking to address the crisis in building safety highlighted by the Grenfell Tower fire by downgrading the safety provisions for firefighters. This is unacceptable. Putting firefighters at increased risk of death and injury will not provide justice for the bereaved, survivors and residents of Grenfell Tower. It will not improve safety for people living in high rise buildings, now or in the future. Further endangering firefighters will **increase** the risks to those the public rely on.
6. The FBU believes that other measures are available to the LFB and to those responsible for high rise buildings which, if implemented, would immediately improve the safety of residents. The FBU is willing to work with the LFB to find solutions. But the union cannot agree to those aspects of the policy that may foreseeably lead to the death of, or injury to, firefighters.

PN633 – main paragraphs in dispute

7. The FBU has a range of concerns with LFB's revised High Rise Firefighting Policy PN633. In the last month and after the LFB requested convening the Health and Safety Advisory Panel, LFB has issued the following drafts:

LFC-0304x-D High Rise Firefighting Policy PN663	12 February 2020
PN633 High rise firefighting – 04.03.21 – Following physiological trials	4 March 2021
PN633 High rise firefighting – 04.03.21 – Following physiological trials	8 March 2021
PN633 High rise firefighting – Final HSAP Submission	16 March 2021
PN 633 High rise firefighting - Final HSAP Submission (3)	17 March 2021

8. When the panel was called, the draft in dispute was marked as “LFC-0304x-D High Rise Firefighting Policy PN663”, signed by the London Fire Commissioner on 12 February 2020. This version included an important summary with 41 numbered paragraphs, which has not been included in later draft.⁴ The February 2020 draft was the version presented to the Greater London Assembly's Fire, Resilience and Emergency Planning (FREP) Committee on 5 March 2020, according to the minutes.⁵

¹ Home Office, Number of premises and other fire safety activities, FS2 return, FIRE1204, 31 March 2020
<https://www.gov.uk/government/statistical-data-sets/fire-statistics-data-tables#fire-prevention-and-protection>

² HMICFRS, London Fire Brigade Inspection of the London Fire Brigade's progress to implement the recommendations from the Grenfell Tower Inquiry's Phase 1 report, 12 February 2021: 22
<https://www.justiceinspectorates.gov.uk/hmicfrs/publications/london-fire-brigades-progress-on-recommendations-grenfell-tower-phase-1/>

³ Mayor's Question Time (MQT), Operational risk database (ORD) review, answered 16 March 2020
<https://www.london.gov.uk/questions/2020/1352>

⁴ LFB, High Rise Firefighting – Policy Number 633, 12 February 2020
<https://www.london-fire.gov.uk/media/5160/lfc-304x-d-high-rise-firefighting-policy-663.pdf>

⁵ Greater London Authority, Fire, Resilience and Emergency Planning Committee, 5 March 2020
<https://www.london.gov.uk/about-us/londonassembly/meetings/documents/g6695/Public%20reports%20pack%20Thursday%2005-Mar-2020%2015.00%20Fire%20Resilience%20and%20Emergency%20Planning%20Committee.pdf?T=10>

9. LFB made numerous revisions to PN633 in March 2021. It claims they arose from the Professor Bilzon report, which LFB commissioned in October 2020. However the changes dealt with a wider range of matters unconnected with Bilzon's research. It is clear from the tracked version that some changes have been made as a result of the LFB's new Evacuation and Rescue Policy, issued in October 2020.⁶ This is a highly unusual way to conduct discussion on such an important document and especially in light of the agreement to proceed to a Health and Safety Advisory Panel.
10. The most recent version, marked as "PN 633 High rise firefighting - Final HSAP Submission (3)" was given to the FBU on 17 March 2021. This is the version we understand LFB wishes to bring before the panel. The FBU will refer to this version unless otherwise stated.
11. The FBU acknowledges that LFB has accepted a number of changes suggested by the union's officials. Originally, three paragraphs in particular were highlighted as areas of disagreement. All centred on the sending firefighters beyond the entry control point without first starting up their BA sets. Now two of those paragraphs have been eliminated. However serious concerns remain.
12. Key paragraphs of Section 6 *Emergency evacuation and mass rescue* are unacceptable. The union is particularly concerned about the paragraphs in the revised policy on the use of breathing apparatus in the context of calling an emergency mass rescue. The FBU's concerns begin with a paragraph not found in the February 2020 draft was added in March 2021:

6.3 The decision to initiate an emergency evacuation and/or mass rescue requires the IC to strike a proportionate balance between the prevailing risks and benefits. This cannot be exhaustively predicted in advance for every situation. [our emphasis]
13. However the pivotal disputed paragraph is towards the end of that section. It states:

6.30 There may be exceptional circumstances where it is advantageous for crews working or travelling beyond the bridgehead to conserve air by not starting up until necessary. This activity involves an increased level of risk and must be proportionate to the benefits such as saving saveable life. This is only for the purposes of carrying out an emergency evacuation and/or mass rescue where high rise buildings have failed to behave as they are designed. The following control measures for this activity must be in place:

 - (a) Teams must be committed through entry control wearing BA not started up and not under air.*
 - (b) Their tally must be inserted into the BA ECB and telemetry between the BA set and ECB established. This will display to the ECO the ECB clock time while the BA team are not under air. If the BA team go under air, the ECO will be alerted by the display changing from the ECB clock time to a time of whistle display. [our emphasis]*
14. The FBU would draw the panel's attention to the revisions made to this paragraph. In the February 2020 version (5.28), it referred to sending firefighters beyond the bridgehead without starting up their BA sets as an "extremely high risk activity":

5.28 In this case [of catastrophic failure of compartmentation], the IC may commit

⁶ LFB, Evacuation and Rescue Policy, 9 October 2020

<https://www.london-fire.gov.uk/media/5381/lfc-0391-evacuation-and-rescue-policy.pdf>

*teams beyond the bridgehead wearing BA sets that have not been started up. This is an **extremely high risk activity** which must only be implemented when the benefits are proportionate... [our emphasis]*

15. By 4 March 2021, the draft had been re-worded and toned down to refer to “an increased level of risk”. However, the removal of the words ‘extremely high risk activity’ does not alter the actual risk which was originally identified in the earlier draft.
16. The revised draft stated:

*6.29 There may be exceptional circumstances where it is advantageous for crews working or travelling beyond the bridgehead in **clean air** to conserve air by not starting up until necessary. This activity involves an **increased level of risk** and must be proportionate to the benefits such as saving saveable life. [our emphasis]*
17. On 16 March 2021, LFB deleted “in clear air” from paragraph 6.30 in the new draft.
18. The nub of the dispute concerns these issues. The FBU maintains that sending firefighters beyond the entry control point at the bridgehead without first starting up their BA sets is an “extremely high risk activity”. The issue of “clear air” – or lack of it beyond the bridgehead – is central to the disagreement. Under LFB’s proposed procedure, firefighters are expected to proceed from clear air at the bridgehead into an unknown situation with many hazards, including the risk of exposure to hazardous substances. With this proposed policy, they are not required to use a well-established, reasonably practicable control measure to reduce those known and foreseeable risks.
19. The FBU believes that paragraph 6.30 is unacceptable and should be removed. This would also remove or revise paragraphs 6.3 and 6.31 to 6.38. On the same grounds, additional safeguards are needed for paragraph 5.42, because it currently states that after a bridgehead has been set up, firefighters are allowed beyond it without starting up. It states:

*5.42 If pump operators report gauge readings that indicate that dry rising main outlets above the fire floor may be open, or there are other signs that this is the case, the IC may consider committing a team **above the bridgehead** without BA or extinguishing media for the specific task of closing DRM outlets.*
20. The remainder of this submission explains the FBU’s arguments at greater length.

Health and Safety at Work Act

21. Paragraphs 6.3 and 6.30-6.38 increase foreseeable risks to the health, safety and welfare of firefighters, while removing the significant control measure previously used to reduce those risks.
22. The FBU believes this proposed procedure is not compliant with the Health and Safety at Work Act, the Management of Health and Safety Regulations, Control of Substances Hazardous to Health Regulations, Personal Protective Equipment Regulations and other regulations. The FBU believes the LFB is wrong in law.
23. In particular the FBU does not accept the interpretation of Sections 2 and 3 of the Health and Safety at Work Act 1974, contained in the LFB’s 12 February 2020 version presented to the FREP (and also in its new Evacuation and Rescue Policy), and which underpins the disputed paragraphs. This paragraph is no accident – it also appears in

the LFB's recent Evacuation and Rescue Policy.⁷ It is what lies behind paragraph 6.3, particularly the expression that incident commanders should “strike a proportionate balance” between risks and benefits when calling an emergency evacuation and/or mass rescue. The LFB states:

24. In approving this policy the Commissioner should comply with:...
*The Health and Safety at Work etc. Act 1974. Section 2 of the 1974 Act imposes a general duty on the employer to ‘ensure, so as is reasonably practicable, the health, safety and welfare at work of all of his employees.’... Section 3 of the 1974 Act imposes a general duty to ‘ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.’ In the exceptional circumstances encompassed by this policy, the LFC recognises that **striking the correct balance between these two general duties** is likely to depend upon and require nuanced, informed, and robust decision making. Such decisions may require an assessment to be made as to whether, and if so to what extent, it is or is not reasonably practicable to expose firefighters to increased risk in order to ensure that all reasonably practicable steps are taken to protect members of the public from risk. Those decisions may have to be taken rapidly and under pressure. Such decisions may properly be subject to scrutiny in subsequent legal proceedings... [our emphasis]*

24. The FBU believes the LFB misinterprets the law. First, the obligation imposed by Section 2 is strict. The section begins by stating the general duties of employers to their employees:

2 General duties of employers to their employees.

- (1) It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.*
- (2) Without prejudice to the generality of an employer's duty under the preceding subsection, the matters to which that duty extends include in particular—*
 - (a) the provision and maintenance of plant and systems of work that are, so far as is reasonably practicable, safe and without risks to health;*
 - (b) arrangements for ensuring, so far as is reasonably practicable, safety and absence of risks to health in connection with the use, handling, storage and transport of articles and substances;*
 - (c) the provision of such information, instruction, training and supervision as is necessary to ensure, so far as is reasonably practicable, the health and safety at work of his employees;*
 - (d) so far as is reasonably practicable as regards any place of work under the employer's control, the maintenance of it in a condition that is safe and without risks to health and the provision and maintenance of means of access to and egress from it that are safe and without such risks;*
 - (e) the provision and maintenance of a working environment for his employees that is, so far as is reasonably practicable, safe, without risks to health, and adequate as regards facilities and arrangements for their welfare at work.⁸*

25. It is a duty to ensure an outcome “so far as is reasonably practicable”. If the prescribed outcome is not achieved, it is for an employer to demonstrate that it was not reasonably practicable to have achieved it. Reasonable practicability is a matter of weighing the risk

⁷ LFB, Evacuation and Rescue Policy, 9 October 2020, paragraph 39

⁸ Health and Safety at Work etc. Act 1974

<https://www.legislation.gov.uk/ukpga/1974/37/contents>

against the cost involved in the measures necessary to avert it. Exceptionality is not part of the test.

26. The risk against which paragraph 6.30 of PN633 should seek to protect employees of the LFB is the risk of exposure to harmful substances when beyond the bridgehead. Weighing the quantum of the risk against the cost and trouble of averting it, it is already known to be reasonably practicable for the LFB to avert the risk. This is known because the control measure it has adopted in order to avert the risk prior to the revision of PN633 is the use of effective BA. The proposed procedure in PN633 expressly removes the control measure and thereby decreases the level of safety to employees to a level that is less than could reasonably practicably be achieved.
27. Second, LFB's misinterpretation of "striking a balance" between its duties under Section 2 and Section 3 is used to diminish the safety of its employees. In effect, the proposed revision to PN633 contends that in order to satisfy its obligation under Section 3, the LFB is entitled to reduce the level of safety it was hitherto otherwise reasonably practicable to ensure that its employees had.
28. Section 3 of the Health and Safety at Work Act begins:
3 General duties of employers and self-employed to persons other than their employees.
(1) It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.⁹
29. LFB seem to believe that the satisfaction of one duty under the Health and Safety at Work Act is an effective defence to a breach of a parallel duty. Or to put it another way, LFB seem to believe that compliance with Section 3 can only be achieved by exposing employees to a risk which it had previously been reasonably practicable to avoid. The FBU does not accept that interpretation of health and safety law.
30. Section 3 is generally understood to impose a duty on the employer to avoid exposing non-employees to risks caused by the manner in which the employer is conducting their undertaking. For the fire and rescue service, this means, for instance, taking care to ensure that members of the public are not injured by activities such as firefighting ladders, water jets or other equipment. The LFB appears to have stretched the scope of Section 3 to include its duty to the public beyond the Health and Safety at Work Act.
31. The FBU is of course aware of the HSE statement, *Striking the balance between operational and health and safety duties in the Fire and Rescue Service*.¹⁰ The FBU worked with HSE and other fire stakeholders during the production of the statement.
32. The "balance" referred to in this guidance is between the duties placed on fire and rescue authorities as employers under health and safety law and their duties to the public as set out in legislation, such as the Fire and Rescue Services Act 2004 and in the Regulatory Reform (Fire Safety Order) 2005.

⁹ Health and Safety at Work etc. Act 1974
<https://www.legislation.gov.uk/ukpga/1974/37/section/3>

¹⁰ HSE, *Striking the balance between operational and health and safety duties in the Fire and Rescue Service*, March 2010
<https://www.hse.gov.uk/services/fire/duties.pdf>

33. The HSE statement highlights key challenges for fire and rescue authorities as employers, when striking the balance between these duties:
- *they have to send firefighters into dangerous situations in order to save lives when anyone else would be seeking to get away from the danger;*
 - *there is often an unrealistic public expectation that firefighters will put themselves at risk even when such risks outweigh any potential benefits to be gained;*
 - *many incidents firefighters face can develop at speed, some can develop in unexpected ways – and firefighters may, from time to time, be confronted with situations outside their experience;*
 - *they have to prepare individual employees to be able to make decisions in dangerous, fast-moving, emotionally charged and pressurised situations, even when there may sometimes be incomplete or inaccurate information about the incident;*
 - *they have to respond to dangerous situations which are not of their own making – this is different to most other sectors where it is the employer’s own business that creates the hazards; and*
 - *they may not be able to control or mitigate some aspects of the working environment.*
34. This HSE guidance does not sanction the exposure of firefighters to increased risks while at the same time removing an existing, reasonably practicable control measure to control those risks. The “balance” to be struck is not between different sections of the Health and Safety at Work Act.

Management of Health and Safety at Work Regulations

35. The FBU also believes the LFB has misinterpreted the health and safety management process. The Management of Health and Safety at Work Regulations 1999 establish the process of risk assessment, the principles of prevention to be applied, health and safety arrangements, health surveillance and other vital matters. The Management Regulations, Approved Code of Practice and associated guidance establish a hierarchy of prevention and control measures. Schedule 1 of the regulations set out the general principles of prevention. These are:
- (a) *avoiding risks;*
 - (b) *evaluating the risks which cannot be avoided;*
 - (c) *combating the risks at source;*
 - (d) *adapting the work to the individual...*
 - (e) *adapting to technical progress;*
 - (f) *replacing the dangerous by the non-dangerous or the less dangerous;*
 - (g) *developing a coherent overall prevention policy which covers technology, organisation of work, working conditions, social relationships and the influence of factors relating to the working environment;*
 - (h) *giving collective protective measures priority over individual protective measures; and*
 - (i) *giving appropriate instructions to employees.*¹¹
36. The FBU believes that LFB’s risk assessment for PN633 is not “suitable and sufficient”. LFB’s risk assessment identifies the risk of oxygen deficit or toxic atmospheres (No.14) and identifies the control measure as “breathing apparatus and associated control measures”. However it then under the alternative BA procedures (No.3) removes that

¹¹ Management of Health and Safety at Work Regulations 1999
<https://www.legislation.gov.uk/uksi/1999/3242/contents/made>

control measure by authorising firefighters to go beyond the entry control point at the bridgehead without starting up their BA sets.¹²

37. Delaying the start up of breathing apparatus perversely downgrades a safety control measure in precisely a situation of increased risk. The LFB's risk assessment registers the increased risk, but removes the well-established and reasonably practicable control measure to control it.
38. In its risk assessment of 4 March 2021, LFB suggested that firefighters could go beyond the stairway and into lobbies and individual flats without going under air.¹³ The risks of exposure are even greater, yet the LFB wanted to authorise activity that would expose firefighters to even greater risks of hazardous substances.
39. On 8 March 2021, FBU officials pointed out these risks and the LFB withdrew its proposal for lobbies and individual flats in the following drafts. This episode illustrates the slippage towards exposing firefighters to greater risks, once the LFB decided to allow firefighters to proceed beyond the bridgehead without starting up their BA sets.
40. Unfortunately, LFB continues to retain the disputed procedure for the stairway, despite the risk of oxygen deficit and toxic atmospheres.

Control of Substances Hazardous to Health Regulations

41. Similarly the FBU believes the LFB's new PN633 is in breach of the Control of Substances Hazardous to Health Regulations 2002. These regulations provide that:
 - 6.—***(1) An employer shall not carry out work which is liable to expose any employees to any substance hazardous to health unless he has—*
 - (a) made a suitable and sufficient assessment of the risk created by that work to the health of those employees and of the steps that need to be taken to meet the requirements of these Regulations; and*
 - (b) implemented the steps referred to in sub-paragraph (a).*¹⁴
42. The regulations reiterate the hierarchy of measures by which the obligation to control exposure is to be achieved. It states:
 - 7.—***(1) Every employer shall ensure that the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled...*
 - 7.—***(3) Where it is not reasonably practicable to prevent exposure to a substance hazardous to health, the employer shall comply with his duty of control under paragraph (1) by applying protection measures appropriate to the activity and consistent with the risk assessment, including, in order of priority—*
 - (a) the design and use of appropriate work processes, systems and engineering controls and the provision and use of suitable work equipment and materials;*
 - (b) the control of exposure at source, including adequate ventilation systems and appropriate organisational measures; and*
 - (c) where adequate control of exposure cannot be achieved by other means, the provision of suitable personal protective equipment in addition to the measures required by sub-paragraphs (a) and (b).*

¹² LFB, PN633 High Rise Firefighting RA - Final HSAP submission, 16 March 2021

¹³ LFB, Grenfell PN633 High Rise Firefighting RA V7 040321, 4 March 2021

¹⁴ Control of Substances Hazardous to Health Regulations 2002
<https://www.legislation.gov.uk/uksi/2002/2677/contents>

43. Regulation 7(3)(c) requires an employer, as a last resort, to provide employees with suitable personal protective equipment in order adequately to control their exposure to hazardous substances. It does not countenance the concept of reasonable practicability as a reason not to provide such equipment. Unless it is used, BA is not (and cannot be) suitable PPE.
44. Regulation 8 is also pertinent. It states:
- 8.** – (1) *Every employer who provides any control measure, other thing or facility in accordance with these Regulations shall take all reasonable steps to ensure that it is properly used or applied as the case may be.*
 - 8.** – (2) *Every employee shall make full and proper use of any control measure, other thing or facility provided in accordance with these Regulations...*
45. The proper use of BA is for it to be operational. An employer who did not take reasonable steps to see that firefighters were operating BA when in an area in which they were likely to be exposed to a hazardous substance would be in breach of this obligation. An employer who instructed their employees not to operate BA in such areas would not only be committing a breach but instructing their employees to commit a breach. This is because full and proper use of BA is to turn it on before entering an area in which there is a foreseeable risk of exposure to a hazardous substance.

Other regulations

46. There are other health and safety regulations that may be breached by PN633, such as the Personal Protective Equipment at Work Regulations 1992, the Control of Asbestos Regulations 2012 and Confined Spaces Regulations 1997. HSE has also published important Approved Codes of Practice (ACOP) and guidance on these regulations. The FBU understands that these regulations apply in restricted circumstances. However breathing apparatus may be a control measure in these cases and therefore we believe they are relevant to the issues in dispute.
47. For example, the Personal Protective Equipment at Work Regulations state:
- 4.**—(1) *Every employer shall ensure that suitable personal protective equipment is provided to his employees who may be exposed to a risk to their health or safety while at work except where and to the extent that such risk has been adequately controlled by other means which are equally or more effective.*¹⁵
48. Regulation 4(3)(a) provides that equipment shall not be suitable unless it is appropriate for the risks involved, the conditions at the place where exposure to the risk may occur and the period for which it is worn. Regulation 4(3)(d) similarly states that equipment will not be suitable unless, so far as is practicable, it is effective to prevent or adequately control the risk involved without increasing overall risk. Regulation 10(1) provides that every employer shall take all reasonable steps to ensure that any personal protective equipment provided to his employees by virtue of Regulation 4(1) is properly used.
49. Breathing apparatus is a vital piece of personal protective equipment, part of a system of measures designed to reduce the risks to firefighters. The FBU believes that the disputed procedure is in breach of key health and safety regulations. The LFB is not justified proceeding in this way. Firefighters injured as a result of this proposed procedure will make claims for damages against the LFB for introducing unsafe systems of work, as will the survivors of firefighters who are killed in such circumstances.

¹⁵ The Personal Protective Equipment at Work Regulations 1992
<https://www.legislation.gov.uk/uksi/1992/2966/contents/made>

HSE enforcement action

50. The LFB also appear to have ignored previous warnings from HSE concerning firefighter safety in high rise buildings, in particular, the HSE improvement notice issued to Strathclyde Fire Brigade after an incident in which firefighters were injured through engagement in firefighting activity on the fire floor.
51. On 17 November 2003, Strathclyde Fire Brigade were called to a fire on the 24th floor of 30 Petershill Court, which was in tower six of the Red Road Flats complex. The station officer (incident commander) entered the right hand lift with three firefighters, two rigged in breathing apparatus (BA) and a third carrying the BA entry control board and travelled to the 21st floor, which they understood to be three floors below the fire. The two BA wearers donned their masks while travelling in the lift. Two further BA wearers got into the other lift and donned their masks while travelling to the 21st floor.
52. When the first lift arrived on the 21st floor, which was actually the fire floor, CCTV footage shows the door opening and the picture blacking out as smoke fills the lift car. The station officer and firefighter who were not wearing BA were overcome by smoke. Attempts were made to close the lift door but this was unsuccessful. The second lift car arrived, this lift car also filled with smoke and the crew successfully closed the door and then withdrew to the 20th floor. The second BA team then proceeded to assist in the rescue of the firefighter and station officer.
53. The station officer was seriously injured by smoke inhalation and the report states that it was the opinion of the ambulance service that if the treatment to the station officer had been delayed by more than one minute he may have gone into cardiac arrest. Several other firefighters and ambulance staff were also injured and treated for smoke inhalation.
54. The LFB does not appear to have taken into account HSE advice and guidance on other relevant matters. HSE's report, *The management of health and safety in the GB fire and rescue service consolidated report based on the 8 inspections completed by HSE in 2009/10* (October 2010) found "several occasions where inspectors discovered failings that were serious enough to warrant consideration of enforcement action". HSE inspectors raised serious concerns about BA training. The HSE's investigation took place in the context of a spike in firefighter fatalities, including at high rise incidents.

Fire toxicity

55. The FBU believes the LFB's revised policy PN633 increases the risks of firefighters' exposure to hazardous substances, which can lead to ill-health, injury and premature death. These risks for firefighters are well grounded in international and UK-based research.
56. The International Agency for Research on Cancer (IARC) published *Painting, Firefighting, and Shiftwork, Volume 98* (2010), part of its series of monographs on the evaluation of carcinogenic risks to humans. In the UK, the Industrial Injuries Advisory Council (IIAC) has published three reports about firefighters and cancer:
 - IIAC, *Testicular cancer in firefighters*, IIAC position paper 21, (20 June 2008).
 - Richard Graveling and Joanna Crawford, *Occupational health risks in firefighters* (1 November 2010)
 - Joanne Crawford, *Firefighters and cancer: the epidemiological evidence* (September 2017).

57. In 2018, Professor Anna Stec and colleagues published *Occupational exposure to polycyclic aromatic hydrocarbons and elevated cancer incidence in firefighters* in *Nature* journal, based on two stations in Hampshire Fire and Rescue Service. Researchers examined firefighter exposure to polycyclic aromatic hydrocarbons (PAHs), finding evidence not just on PPE and BA but on firefighters' necks, arms and legs, with skin absorption as well as inhalation. PAH concentrations in skin wipe samples of an instructor and three trainees were found. Concentrations of PAHs were found in helmets, gloves and jackets. Storing gloves in helmets may lead to transfer of contaminants from the gloves to the inside of the helmet. Other contaminants were identified on fire appliances, in offices and in the appliance bay.
58. In 2018 the FBU commissioned Professor Stec and her team to conduct further detailed research into the exposure of firefighters to contaminants. Researchers visited a number of brigades and 18 fire stations in late 2019 and early 2020, until interrupted by the national lockdown.
59. A UK-wide contaminants questionnaire commenced in November 2019 and finished in February 2020. The survey amassed more than 10,600 responses, which provided an impressive quantity of data for the researchers to analyse.
60. On 23 November 2020, Professor Stec and colleagues published the *Minimising Firefighters' Exposure to Toxic Fire Effluents: Interim Best Practice Report*.¹⁶ The report was circulated to politicians, fire and rescue service organisations and media outlets.
61. Indoor air testing at a number of fire stations and training centres highlighted that UK firefighters are exposed to the high levels of toxic contaminants during and after a fire, as cancer-causing chemicals remain on PPE clothing, equipment, and elsewhere at the fire ground. Test samples revealed carcinogens inside firefighters' helmets, on PPE, and even on breathing apparatus mask filters. The firefighters' survey revealed:
 - 4.1% of survey respondents had already been diagnosed with cancer, compared with less than 1% of the general population. Three quarters have served for at least 10 years before receiving their diagnosis. More than half were under the age of 50 and a fifth were under 40
 - Of those diagnosed, 26% have skin cancer, the most common, followed by testicular cancer (10%), head and neck cancer (4%) and Non-Hodgkin's lymphoma (3%)
 - Half of the survey respondents don't think their fire service takes decontamination practices, including cleaning PPE and equipment, seriously
 - 1 in 5 of the survey respondents store their fire gloves in their boots, 1 in 5 store in their pockets, and 1 in 10 store in their helmet, risking the transfer of toxic contaminants directly to skin
 - Nearly half of the survey respondents felt there was a "badge of honour" attitude in the service, particularly when emerging from fires with contaminants on their PPE or face as a sign of hard work.
62. The report made a series of urgent recommendations to minimise firefighters' exposure to toxic fire effluents. This included:
 - Every fire and rescue service must implement fully risk-assessed decontamination procedures en-route to, during and after fire incidents, and ensure all relevant staff are trained in implementing these procedures

¹⁶ UCLan, *Minimising Firefighters' Exposure to Toxic Fire Effluents: Interim Best Practice Report*, 2020
<https://www.fbu.org.uk/publication/minimising-firefighters-exposure-toxic-fire-effluents>

- Fire and rescue personnel should receive regular and up-to-date training on the harmful health effects of exposure to toxic fire effluents, and how these exposures can be reduced, minimised or eliminated
 - **Firefighters should wear respiratory protective equipment at all times while firefighting, including after a fire has been extinguished, but is still ‘gassing off’**
 - **BA should not be removed prematurely or donned too late**
 - PPE should be clean and should be thoroughly decontaminated after every incident to avoid a build-up of toxic contaminants
 - Firefighters should shower within an hour of returning from incidents
 - Regular health screening and recording attendance at fire incidents over the course of a firefighter’s career is strongly advised and will be key to the longer-term monitoring and management of their health.
63. After the interim report was published, the FBU held an initial, informal meeting with senior HSE staff, who confirmed that all the recommendations were as expected and would not be seen as controversial. These include the recommendation on the use of BA. Similarly, the LFB has welcomed the research and committed to implementing the recommendations. Yet its proposed procedure in PN633 clearly creates the risk of firefighters donning BA too late.
64. Although the research did not evaluate breathing apparatus procedures, it is clear that if anything control measures should be strengthened – and certainly not weakened. The LFB’s proposed new procedure is not consistent with this report’s evidence.

Operational matters

65. The FBU has a number of operational concerns with paragraphs 6.3, 6.30 and the related paragraphs, which authorise incident commanders to allow firefighters to work beyond the entry control point at the bridgehead without first starting up their BA sets.
66. First, the new disputed procedure creates additional, foreseeable risks to the lives and health of firefighters in a situation where the risks have already been elevated beyond the normal parameters of high rise firefighting. In the February 2020 draft – paragraph 5.28 – committing firefighters beyond the bridgehead wearing BA sets that have not been started up is described as “extremely high risk activity”. In the new draft (6.30), it is only “an increased level of risk”. It should be clear that merely changing the words in the document does not in any way alter the risks clearly acknowledged by the previous version.
67. Second, there is no indication of how the firefighters committed in this manner should judge when they need to start up their BA sets. The current draft (paragraph 5.23) refers to “safe air” at the bridgehead, but the policy does not explain how firefighters would judge or measure the air or conditions they may be committed into or when it would be “necessary” (6.30) to start up their sets. Firefighters will be exposed to noxious gases, which may not be detected (even with gas monitors); to oxygen deficient atmospheres undetectable without appropriate detection equipment; and to particles and other hazardous substances (such as asbestos) which may cause fatality or injury at the incident or some years afterwards. Adjusting other personal protective equipment (PPE, such as helmet, firehood and gloves), which may be necessary to initiate BA in such dynamic situations, amplifies the risk further.

68. Third, the LFB has not explained whether this use of BA is compliant with the instructions of the manufacturers of these sets. Breathing apparatus, the tallying system, whistle, Automatic Distress Signal Unit (ADSU) and related equipment are designed to be used in tandem to reduce the risks of committing firefighters into hazardous situations. The FBU has seen no evidence that the LFB's proposed procedure is compliant with the instructions of those who designed and made the technologies.
69. Further, the revised LFB policy does not explain how the officers managing the BA entry control can monitor and command those firefighters committed without starting up, to ensure their safety. This is important because, should the BA entry control officer have concerns about their safety, they may have to declare a BA emergency and deploy more firefighters to search and rescue for their colleagues.
70. The February 2020 draft (paragraph 5.29) introduced a further risk to the firefighters committed beyond the bridgehead while not under air. It stated:
*5.29 Teams committed through entry control wearing BA not started up and not under air should not force entry into flats unless they are **confident** that there is no fire spread into these flats. [our emphasis]*
71. This was disputed by the FBU, but remained until 16 March 2021 draft (as paragraph 6.30). LFB has now removed the wording from the disputed section, with the latter wording put into paragraph 6.25d, when firefighters would be committed under air, but without firefighting media, for search and rescue.
72. Had this paragraph remained, it would have further increased the risks facing firefighters. It did not explain how the firefighters sent beyond the entry control point without starting up their BA sets would make the "confident" decision to force entry. It is not effective, safe or professional to expect firefighters to work without going under air in what is, by definition, an extraordinary emergency situation.
73. The LFB has not evaluated the utility of the activities in the disputed paragraphs. It is not stated how much air time it expects to "save". It is not clear whether those minutes or seconds are sufficient to undertake the tasks, which may include arduous activity rescuing one or more residents. Instead the elevated risk may lead to the death or major injury of the firefighters deployed. If incident commanders have to redeploy firefighters to rescue their colleagues who have become incapacitated through exposure to heat or noxious fire gases, they would have to divert firefighting resources, including search and rescue, from the public. Even setting aside the risks to the firefighters themselves, the proposed policy may also be counter-productive to efforts to evacuate or rescue members of the public.
74. Finally, LFB has not taken steps in all such premises at risk of catastrophic failure, where people may be living (or working) at such a great distance from the bridgehead, so as to enable pre-planning to avoid committing firefighters in this way or to manage the risks with other prevention and control measures. It is unknown if the premises fire risk assessments consider this situation is appropriate, suitable and sufficient and whether LFB has satisfactorily audited the plans.
75. These paragraphs indicate that foreseeable elevated risks to firefighters are already present. Even without the planned deployment of firefighters above the bridgehead without starting up their BA sets, these firefighters will already be placed at greater risk of death, acute injury or chronic ill-health. Adding to these risks, without evaluating the harm this could cause, is not an acceptable way to proceed with a policy. It is not a safe system of work.

76. Additionally, it also creates a wider threat to safety beyond the types of incident addressed in this policy. If this essential control measure can be removed at very high levels of risk, it may end up getting dropped in less hazardous situations.
77. The FBU believes the LFB proposal to allow firefighters to work beyond the bridgehead without first starting up their BA sets is fundamentally at odds with operational best practice. The FBU commissioned former ACO Lewis Ramsay to provide an expert report on these matters, to assist the panel in its deliberations.¹⁷ The report explains how guidance has been developed, often based on learning lessons from incidents and fatalities, to ensure safe systems of work. It outlines how the LFB's proposed procedure breaks away from that best practice, putting the safety of firefighters at risk. The FBU appends Lewis Ramsay's report to this submission.

The Grenfell Tower fire and the public inquiry

78. The LFB's policy PN633 refers to incidents where there may be a catastrophic failure of compartmentation, which would require the measures set out. Clearly the LFB policy revision is motivated by the desire to do something to prevent such loss of life as occurred at the Grenfell Tower fire on 14 June 2017.
79. The FBU shares this sentiment and believes the Westminster government and local fire authorities can do much more reduce the risk of another similar fire taking place in the first place. More action to strip flammable cladding from buildings, alongside more resources for inspection and enforcement action are measures that are, or could be, currently available. These are matters the FBU campaigned on before the Grenfell Tower fire and has been demanding ever since that tragic day.
80. However the LFB's proposed procedure, sending firefighters beyond the entry control point at the bridgehead without starting up their BA sets, does not contribute to these goals. The Grenfell Tower Inquiry (GTI) phase 1 report does not require LFB to make these changes. The main recommendation on evacuation for LFB states:
*33.22b. that fire and rescue services develop policies for partial and total evacuation of high-rise residential buildings and training to support them.*¹⁸
81. The GTI has generated a great deal of evidence, including testimony that has a bearing on the matter in dispute. The GTI's Phase 1 report (30 October 2019) contains a detailed account of events.
82. Similarly, the LFB's own Operational Response to Grenfell Tower (v7, dated 7 February 2019 and published for the Fire, Resilience and Emergency Planning Committee meeting on 16 October 2019) contains a narrative of the events on the night.
83. Both reports show that the Grenfell Tower fire started on the fourth floor. As firefighters successfully put the fire out in the flat of origin, there was inevitably smoke in the lobby of that floor and then into the stairwell (because the door was partly opened by hose and because residents and firefighters had to pass through it).
84. The experiences and testimony of firefighters who were the first on scene are particularly relevant to this policy. These firefighters did everything possible to assist residents,

¹⁷ Lewis Ramsay, The Practical Danger Involved in Firefighters Going beyond the Bridgehead without Breathing Apparatus, Report to the Fire Brigades Union, March 2021

¹⁸ Grenfell Tower Inquiry, Phase 1 report, 30 October 2019: 777
<https://assets.grenfelltowerinquiry.org.uk/GTI%20-%20Phase%201%20full%20report%20-%20volume%204.pdf>

including putting themselves at considerable risk. LFB's own Operational Response highlights some key moments early in the fire:

01:07:21 Firefighter O'Beirne, Firefighter Badillo and Firefighter Dorgu retreat from the fourth floor lobby to the stairwell due to the smoke. They shut the door to the fourth floor behind them to stop smoke getting into the stairwell...

01:15 Firefighter Badillo, whilst on the third floor, meets a group of individuals who show signs of having been in smoke. He states they have streaming eyes, they are coughing and look panicked. They say they are from the fifth and sixth floors...

01:28 Firefighter Badillo is travelling in the lift to the 20th floor. He states that the lift stops at the 15th floor, where the doors open and the lift car fills full of black smoke. He is not wearing BA. Firefighter Badillo manages to find his way through the lift lobby door and into the stairwell. He then descends the stairs...

01:33:33 BA Team Five: CM Secrett, Firefighter Dorgu and Firefighter Badillo, go under air and remove their BA tallies. They tell WM O'Keeffe they are going to the 20th floor to rescue a girl (now known to be Jessica Urbana). This is following Firefighter Badillo's earlier attempt to get to flat 176. Firefighter Badillo still has the keys to the flat...

01:37:12 BA Team Five: CM Secrett, Firefighter Badillo and Firefighter Dorgu exit the lift at this time, it is not confirmed which floor but the firefighters believe it to be around the sixth, seventh or eighth floor level. This is unexpected as they think they are going to the 20th floor. Thick black smoke enters the lift. They state they leave the lobby and make their way to the stairs and start to climb. They do not pass anyone on their way up the stairs to the 20th floor...¹⁹

85. The risks of exposure to smoke were further illustrated later in the incident, during the rescue of residents from Flat 95, 12th Floor. Again, the firefighter involved – David Hill – went to incredible lengths to rescue the family of four, at considerable risk to his own safety. LFB's Operational Response report records:

02:36 Firefighter Hill from BA Team 21 states as soon as a male, female and two children leave flat 95 the children are screaming that they can't breath. They get to the stairwell and the male is shouting at Firefighter Hill that his children can't breath. Firefighter Hill removes his fire helmet and BA facemask and tries to give the four people some air from his BA set (The BA Data shows that this happens three times between 02:34 and 02:36). Firefighter Hill thinks he is going to pass out because he is breathing in the smoke. He puts his BA facemask back on and they then start to descend the stairs. Firefighter Hill believes he is around the ninth or eighth floor and decides to pick up one of the daughters and run with her down the stairs to clean air, where he hands her to another firefighter.

86. Firefighter Hill's powerful testimony to the inquiry explains how, even in the stairway, conditions were exceptionally dangerous for anyone without breathing apparatus:
- I got the family all in a line, I led them and they were holding each other and we left. As soon as we were in the hall they were plunged into the darkness, I don't think they were expecting how bad it was. Very quickly the girls starting screaming "daddy*

¹⁹ LFB, Operational Response to Grenfell Tower (v7), 7 February 2019: 16, 24, 53, 70, 79-80
<https://www.london-fire.gov.uk/news/2019-news/october/brigade-urges-government-to-stop-neglecting-fire-safety-at-grenfell-report-committee/>

I can't breathe" I was saying "Let's go, let's go we have to get out of here". I did take in some of that smoke and one breath is toxic. We went through the door into the stairwell, they were making very slow progress and it took us quite a long time to get from the flat door out to the stairwell. They were screaming and the dad was shouting "Mr Fireman, Mr Fireman my children can't breathe" As I had come up I had seen a crew that had an extra set and a girl had walked out with a face mask, that stuck in my mind. I DRA'd [dynamic risk assessment] it and I knew there was safe air about 5 floors below which wasn't a long way. So I took my mask off, held my breath and gave the family each a breath. For some of them it worked well but it was very tricky to get the fittings of the back of the mask out of the way, especially for the youngest daughter. It's a sad reminder, now looking back I think the youngest girl hardly got any air. Some members of the family got more oxygen than others. I don't actually remember giving it to the mum at all.

Whilst they had my air I did take in a few breaths of the smoke. I put my mask back on and we continued down. It was again slow progress, I was shouting at them all the time that we needed to go.... I gave them air 2 or 3 times from my mask. I think I tried to hold my breath but there were times when I took in some deep breaths of the smoke. By possibly the third time I realised I would end up passing out which was good for no one, we just needed to get out. I knew the building wouldn't collapse on them, I just needed to get them out...

I got this lady down and by that point my time of whistle was going off on my set. I was absolutely exhausted at this point. I don't think I could have done much more and I was struggling to breathe. I soon realised that it was the mother not the daughter, she was however the same lady that I saw in the flat. Luckily another crew was there so they helped me with the mother... Taking her down took all that I had. I think at that I point I thought the dad must have taken the youngest daughter. I knew I couldn't go back up because I was exhausted and my time of whistle was going off. I thought wow that was intense, we'd got them all out.²⁰

87. The LFB's own operational response report captures both the impact of the rescue on firefighter David Hill:

02:40 BA Team 31: CM Hoare and Firefighter Tanner both see who they believe is Firefighter D Hill. Firefighter Tanner states "Then a fireman came in in a right state his name was Hills or Mills, I don't know where he was based. He was proper exhausted, just all floppy, eyes rolling, people were helping him, trying to take his set off." CM Hoare from BA Team 31 is waiting for their brief and also states he sees a female firefighter (known to be Firefighter Bloxham, BA Team 24) assisting Firefighter D Hill...

88. The operational response report also demonstrates the risks during search and rescue, including the fear that David Hill was missing and needed assistance from other firefighters:

*02:44:07 BA Team 28: Firefighter Reddington and Firefighter Upton report to the bridgehead on the third floor. They... are leaving the bridgehead when they hear firefighters shouting that a firefighter (Firefighter D Hill) is **missing**...*

02:55:05 BA Team 31: CM Hoare and Firefighter Tanner report to the bridgehead...

²⁰ FF David Hill, Witness statement, MET000083299_0009-10

<https://www.grenfelltowerinquiry.org.uk/evidence/witness-statements-david-hill>

WM De Silvo re-tasks them to go to the 12th floor for a declared **'firefighter emergency'** (believed to be Firefighter D Hill of BA Team 21)... [our emphasis]

02:58:17 BA Team 32: WM Aston-O'Donovan and Firefighter Green are climbing the stairs in the stairwell making their way to the 12th floor to respond to a 'firefighter emergency'...

03:10:00 AC Roe at CU8 confirms we have a potential firefighter emergency for Firefighter D Hill who is currently unaccounted for. At the same time WM De Silvo has already tasked BA Team 31: CM Hoare, Firefighter Tanner and BA Team 32: WM Aston-O'Donovan, Firefighter Green to go to the 12th floor to find Firefighter D Hill...²¹

89. Finally, the inquiry has highlighted the long term effects of intervention at Grenfell Tower. Firefighter Robbie Gentry was part of the crew that rescued the residents of Flat 82, 11th floor at around 05.00, one of the last rescues firefighters were able to carry out on the night. Again, we emphasise the incredible lengths firefighters went to in order to rescue people trapped in the building. However this came at considerable cost to those involved. In his testimony to the inquiry, Firefighter Gentry explained:

*Since the fire, and because of it, I've had treatment at the Brompton Hospital for scarring of my lungs. The condition was initially identified after I failed a brigade medical. My lung capacity had dropped and so I was sent for tests. The Brompton is a lung specialist hospital and the condition has developed since the fire.*²²

90. The inquiry has also taken valuable evidence from experts. Professor David Purser's report to the GTI explained the impact of toxic smoke:

265. Based on this assessment it is my opinion that if as little as 5% of the combustion products from the burning PIR outside each flat penetrated the flat after the flames reached the flat exterior but before the windows failed, then the flat would be filled with very dense smoke and almost zero visibility. This would result in some immediate distress and breathing difficulties. If the flat occupants did not evacuate immediately, then after a few minutes exposure (between approximately 2-25 minutes depending up on the exact conditions), they would collapse unconscious due to the combined asphyxiant effects of inhaling CO and HCN.
David Purser, Expert report, DAPR0000001_0077

91. The GTI has produced a great deal of evidence of the risks firefighters faced in a real incident, when there was a catastrophic building failure. This should inform LFB's PN633 revisions.

Physiological risks

92. The LFB has commissioned Professor James Bilzon and his colleagues to carry out some research on the physiological aspects of high rise firefighting. The union is familiar with Professor Bilzon's research on firefighter fitness, which has been used to inform the firefighter fitness standards discussed by the FBU with fire service employers, chief fire officers and governments.

²¹ LFB, Operational Response to Grenfell Tower (v7), 7 February 2019: 215, 226, 245, 251, 274

²² FF Robbie Gentry, Witness statement, MET00019991_0009

<https://www.grenfelltowerinquiry.org.uk/evidence/witness-statements-robbie-gentry>

93. The FBU welcomes all efforts to bring serious research to bear on this revised policy. Professor Bilzon's work adds to the Building Disaster Assessment Group (BDAG) research published by the Westminster government more than a decade ago. A key piece of research for that project examined high rise firefighting and concluded:
- Firefighters may need to climb stairs to deal with a fire on the upper floors of a tall building where either dedicated firefighting lifts have not been provided or where they have failed. Climbing stairs in PPE while carrying EDBA and hose is very physically demanding. Operational planning assumptions, including levels of resources, should take account of the physiological demands of reaching the upper floors of tall buildings with RPE and PPE including any equipment carried. As an example, while it takes only around 15 minutes for the lead team and 10 minutes for the supporting hose team to reach the 28th floor, the cardiovascular and thermal demands are substantial, especially on the lead team. As well as feeling hot and fatigued by the time they reached the 28th floor, the physiological data indicated that the lead team would not be fit to commit to the fire compartment.²³*
94. The new research comes to similar conclusions. First, the Bilzon report for LFB underlines the arduous nature of high rise firefighting:
- 5.1 The main findings of this study were that, regardless of the breathing apparatus worn, performing a 120-m vertical ascent and descent of a high-rise building in a full firefighting ensemble and carrying an item of firefighting equipment during the ascent is incredibly demanding and resulted in maximal or near maximal cardiovascular strain for sustained periods.*
- 6.2 Regardless of the breathing apparatus worn, core body temperature rose by an average of ~0.09°C for every 10-m of vertical ascent and 0.03°C for every 10-m of vertical descent. Heat-related exhaustion/illness appears to be a significant risk to firefighters during high-rise ascents.*
95. The FBU believes these are important findings, because they indicate that the principal physiological limitation for working on the higher floors is not the limited air supply, but the impact on firefighters of having to reach these floors by ascending stairs. It is about the difficulty of the task relative to the human limitations of the firefighter. Even for the fittest firefighters, such a process leaves them exhausted and unable to carry out other duties for very long, whether it is firefighting or search and rescue. This is particularly so if they have to assist members of the public on their descent. This aspect of the Bilzon research does not support LFB's proposal for firefighters to ascend without starting up their BA sets.
96. Second, the new research goes further, indicating that firefighters were not better off working without starting up their BA sets – and indeed many preferred to go under air when ascending the tower:
- 5.4 There was no difference in physiological strain when ascending under air (UA) or not under air (NUA) in EDBA. Given all other observations, we have no reason to believe that the responses would have been any different in SDBA. While we anticipated there may be some benefit to ascending NUA, primarily by removing the effort of breathing on a respirator, the demands of the high-rise task appear to have nullified any potential small gains. Furthermore, many of the participants reported feeling a benefit when inspiring the cooler air from the cylinder(s), while UA.²⁴*

²³ ODPM, Physiological Assessment of Firefighting, Search and Rescue in the Built Environment, December 2004: 50 <http://highrisefirefighting.co.uk/docs/BDAG07.pdf>

²⁴ Bilzon, James and Richard Stevenson, Physiological Demands of High-Rise Operations, 8 March 2021: 37-39

97. The FBU believes this is an important finding for the paragraphs in dispute in this proposed policy. There is no physiological advantage to the proposed procedure of ascending above the bridgehead without going under air. Indeed, there may be some physiological advantages of going under air. LFB has accepted this point – it was the last revision LFB made to the policy on 17 March 2021: “6.40 It is important to note that wearing BA not under air does not offer additional benefits for managing core body temperature and exertions levels as detailed in 6.27.” This finding of the research cannot be used by LFB to justify its proposed procedure.
98. The research makes recommendations that firefighters (7.1) using SDBA should not go beyond floors above 80 metres (~20 floors) and (7.4) those with EDBA not above 100 metres (~25 floors). These recommendations arise from physiological impact of ascending to these floors via the stairs. These limitations are important. LFB estimates there are 45 buildings 90 metres or higher in London.²⁵ The industry forum New London Architecture estimates 525 tall buildings, more than 20 storeys high, currently in the pipeline in the capital, including 89 under construction.²⁶
99. However the physiological limits of all firefighters cannot be used to justify the LFB’s proposal on working without air. Professor Bilzon was not asked to assess the risks of working in areas where hazardous substances may be present. The LFB is wrong to use the physiological limitations of firefighters to put them at further risk of injury and ill-health from hazardous substances or irrespirable atmospheres. Adapting the worker to the work is the wrong way around. Safe systems of work seek to adapt the work around the worker.

Home Office and MHCLG Evacuation Steering Group

100. The FBU believes that the disputed issues raised by the LFB’s revised policy have serious implications for firefighters across the UK. This is partly because LFB is the largest brigade in terms of employees and by the population it protects. The LFB may also set precedents that others will follow, on the assumption that if it’s safe for the capital city, it will be safe elsewhere.
101. The FBU also appreciates that the Grenfell Tower Inquiry has directed much of its attention to the LFB. For the record, the FBU argued when the terms of reference were set in 2017 that the LFB should not be the main focus, because the Grenfell Tower fire could have occurred in almost any other brigade in the UK and because UK-wide regulation and guidance set the parameters within which LFB operated.
102. It is important to note that the GTI’s key recommendation on evacuation in its Phase 1 report was placed on the Westminster government:
*33.22a. the government develop national guidelines for carrying out partial or total evacuations of high-rise residential buildings.*²⁷
103. As a result, in December 2019 the Westminster government established the Home Office and MHCLG Evacuation Steering Group, which includes representatives from the LFB and the FBU, to meet this recommendation. This body is convened by ministers and civil servants. It has met only a handful of times in the last year. The FBU has complained about the slow pace of the work. So far nothing has been produced. In view of the significant public attention to this issue, this lack of progress, in itself, may highlight just how complex the issues are which are being addressed.

²⁵ LFB communication to the FBU, 24 March 2021

²⁶ New London Architecture, London Tall Buildings Survey 2020, April 2020

²⁷ Grenfell Tower Inquiry, Phase 1 report, 30 October 2019: 777

104. However given the UK-wide significance of this work, it is a mistake for the LFB to push ahead with controversial changes before other bodies have concluded their work. The FBU agrees that the status quo at the time of the Grenfell Tower fire was unacceptable. The union has gone further than most in demanding systemic, regulatory changes, to be implemented urgently. However it would make no sense for the LFB to push ahead with measures that should be rejected by governments and other national bodies. The FBU points out that previously, the Central Fire Brigades Advisory Council (CFBAC) would have been able to carry out this work. It was however abolished in 2004 and never replaced. There is a significant hole in mechanisms for the development of fire service policy on such matters.

National Operational Guidance

105. The national significance of the LFB's revised policy PN633 is further complicated by ongoing discussions concerning national operational guidance. However, some earlier guidance is still relevant. In 2014, the Department for Communities and Local Government and its chief fire and rescue adviser published operational guidance on breathing apparatus. It issued a stark warning against the practice the LFB want to enshrine in the revised policy PN633:

6B1.2 BA is worn at incidents to provide respiratory protection for firefighters working in oxygen deficient, toxic and hazardous atmospheres. It must only be donned and removed in 'safe air'. The practice of firefighters rigging in safe air but not donning their face masks until they reach contaminated atmospheres and then starting up their BA sets is extremely dangerous and must not be permitted.²⁸

106. In 2018, the National Fire Chiefs Council (NFCC) issued further guidance on breathing apparatus.²⁹ Under, Role and responsibilities of the BA wearer, it states:

The BA wearer will:

- *Be responsible for managing their own air at all times in accordance with their briefing*
- *Ensure that they fully understand their brief, tasks and instructions, where and how they are required to enter the risk area, any identified hazards and any limitations on the duration of wear as determined by the person responsible for the BA entry control point*
- *On instruction from the person responsible for the BA entry control point, start up the BA set, complete required apparatus pre-entry checks and proceed to the BA entry control point*
- *Ensure an adequate face-fit seal is established in safe air*
- *Hand the BA tally to the BA entry control operative before entering the risk area, ensuring the tally is placed in the BA entry control board with the 'time in' completed*
- *Ensure that appropriate personal protective equipment is worn correctly*
- *Test all firefighting equipment before entering the risk area where there is, or is likely to be, a fire or flammable atmosphere*
- *Check cylinder contents immediately before entering the risk area. Calculate and select the required turn-around pressure in agreement with the person responsible for the BA entry control point and the BA team leader*
- *Carry out safe movement and search and rescue techniques at all times, maintaining close personal contact...*

²⁸ DCLG/CFRA, Fire and Rescue Authority Operational guidance: Breathing apparatus, January 2014: 32
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877179/131230-Operational_Guidance_Breathing_Apparatus__Web_archived.pdf

²⁹ NFCC, Foundation for Breathing Apparatus, 17 January 2018: 15-16, 18
<https://www.ukfrs.com/foundation-knowledge/foundation-breathing-apparatus>

107. Under the sub-heading Bridgehead or forward BA entry control point, the NFCC policy states:
- This arrangement allows an incident to be dealt with by deploying BA wearers from a safe-air environment within a structure while being as close as practical to the scene of operations. This may be considered necessary by an incident commander where there is a need to establish a BA entry control point at a distance from the first point of access to a building or risk area, such as in high-rise building or large, complex structure such as a shopping mall.*
- The location of the BA entry control point in these circumstances will be determined by the incident commander based on the incident plan and the outcome of a risk assessment.*
108. National operational guidance on high rise firefighting operative at the time of the Grenfell Tower fire, known as GRA 3.2, was withdrawn in March 2020. In May 2020, the NFCC began discussions on its draft national guidance on fires in tall buildings and fires in buildings that fail.
109. Last year the FBU held discussions with leading NFCC officials over their drafts. In those discussions, the union made very clear our opposition to any proposal to send firefighters above the bridgehead, but not under air.
110. In December 2020, the NFCC issued revised national operational guidance on *Fires in buildings*. It includes the following in the section: Hazard – fires in tall buildings:
- Extended travel distances to uppermost floors may mean that it is not practical for personnel to be deployed wearing breathing apparatus under air above the fire floor. In circumstances where teams need to work in an area above the bridgehead, that is not affected by fire or smoke and it has been confirmed that the building's construction and any fire engineered solutions have not been compromised, teams should follow **local service procedure**. If this allows personnel to be committed with breathing apparatus (BA) but not under air, then all appropriate control measures should be followed including appropriate Breathing Apparatus Entry Control procedures, using a different BA entry control board.[Our emphasis]³⁰*
111. The FBU does not accept this paragraph. It has the same flaws as the LFB's new procedure. The NFCC high rise paragraph (and LFB procedure) is in glaring contradiction with the NFCC's existing guidance on breathing apparatus, a contradiction which cannot currently be resolved. The FBU does not accept the suggestion that new breathing apparatus procedures should be left to local procedure. This is recipe for a race to the bottom on firefighter safety and the further fragmentation of national standards. Safety regulation and guidance is UK-wide and should apply to all firefighters.

Inadequate consultation

112. The LFB summary (12 February 2020) accompanying the draft claims:
- 1. The process of reviewing and amending PN633 began in the months immediately following the Grenfell Tower fire. The amendments to this policy have been informed by consultation with Representative Bodies (RBs)...*

³⁰ NFCC, Foundation for Breathing Apparatus, 17 January 2018: 15-16, 18
<https://www.ukfrs.com/foundation-knowledge/foundation-breathing-apparatus>

113. The FBU's officials in London have taken part in negotiations with the LFB in good faith. Several suggestions made by our officials have been included in the revised policy, underlining the valuable role the union plays in these matters. The FBU is strongly committed to the functioning of safety committees, including in the LFB and recognises that the panel is part of ongoing efforts to resolve the dispute.
114. Nevertheless the FBU has significant concerns about the consultation process with regard to this revised policy. Section 2(6) of the Health and Safety at Work Act 1974 obliges employers to make and maintain arrangements that will enable employer and employees *"to cooperate effectively in promoting and developing measures to ensure the health and safety at work of the employees"*.
115. Regulation 4A of the Safety Representatives and Safety Committees Regulations 1977 adds that *"every employer shall consult safety representatives in good time with regard to (a) the introduction of any measure at the workplace which may substantially affect the health and safety of the employees the safety representatives concerned represent..."*
116. The FBU explained why the disputed paragraphs were not acceptable. Our officials raised concerns with the disputed paragraphs at meetings with the LFB before the February 2020 draft and before it went to the FREP.
117. The union made a detailed submission on 23 March 2020, ahead of the LFB's Fire and Resilience Board meeting the following day (and at the beginning of national lockdown due to Covid-19).
118. Despite these legitimate concerns, the LFB has begun to train firefighters under the new policy in the second half of the year.
119. On 2 September 2020, when training packages were uploaded to the Big Learning site, the FBU only received the materials on the day of release, leaving no time for comment or amendment.
120. On 25 September 2020, FBU officials raised at the brigade joint committee for health and safety at work (BJCHSW) the concerns about the training (including on the disputed paragraphs) proceeding without agreement.
121. On 13 October 2020, senior FBU national officials joined a London Fire, Resilience and Emergency Planning Committee meeting about PN633.
122. On 15 October 2020, FBU officials again reiterated the request to cease training on the disputed paragraphs until the matter was resolved. LFB management refused to do so and invoked the advisory panel.
123. The FBU has made its senior national officials and staff available to assist with resolving the dispute. However the union cannot accept the introduction of this dangerous new practice.
124. When LFB asked for the HSAP to convene in December 2020, the draft in dispute was marked as "LFC-0304x·D High Rise Firefighting Policy PN663", dated 12 February 2020. This was the version presented to the Commissioner's Board originally on 29 January 2020 and then again on 4 March 2020 and the Greater London Assembly's Fire, Resilience and Emergency Planning (FREP) Committee of the on 5 March 2020,

according to the minutes. It was accompanied by version 5 of the risk assessment. It was this draft, which had remained untouched for a year, which LFB originally intended to put to the panel.

125. The LFB revised PN633 at the beginning of March 2021, after it received the Bilzon report. This version was entitled “PN633 High rise firefighting – 04.03.21 – Following physiological trials”. This was accompanied by version 7 of the risk assessment. It was provided to the FBU on Thursday 4 March 2021.
126. However the FBU did not receive the Bilzon report until Monday 8 March 2021. During that day, FBU London officials met with LFB, and a further version of the document was produced, incorporating some of the points they made at the meeting. (This had the same title).
127. LFB told the FBU they further intended to revise the PN633 policy, with the intention of giving a final copy to the FBU on Monday 15 March 2021. However another version, together with a new risk assessment, was not sent until the afternoon of Tuesday 16 March 2021. The LFB made a further change and sent its final submission on Wednesday afternoon, 17 March 2021.
128. All of these revisions have meant the FBU has had to repeatedly reassess the policy. These last minute revisions have delayed convening of the panel. The revisions LFB have made go well beyond their response to the Bilzon report. Bilzon did not deal with hazardous substances, yet LFB have amended paragraphs on these matters. The tracked versions indicate LFB added changes from their new evacuation policy.
129. To illustrate the point, three particular paragraphs were highlighted by LFB as critical to the dispute. All have been changed in the last few weeks, after the panel had been called.

12 Feb 20	4 March 21	16 March 21
5.27	Deleted	Deleted
5.28	6.29, with “extremely high risk activity” deleted	6.30, with “clean air deleted”
5.29	6.30	Deleted, with some wording used in an earlier paragraph, 6.25d, (in a section when firefighters are under air)

130. The risk assessment has also undergone significant revision. In the alternative procedures section, listed as No.3, in the 12 February draft, firefighters were only permitted to go beyond the bridgehead without starting their BA sets if they were on the stairway (“protected shaft”).
131. However on 4 March 2021, LFB worsened the risk assessment, allowing firefighters still not under air to enter lobbies, flats or other compartments. FBU officials challenged this on 8 March 2021, so LFB reverted back to original formulation.

12 Feb 20	4 March 21	16 March 21
Teams should not leave the protected shaft or protected lobby without starting up	Teams should not enter a compartment without starting up unless confident there is no fire spread within	Teams should not leave the protected shaft or protected lobby without starting up

132. Unfortunately LFB did not remove the unacceptable procedure for the stairway or anywhere else beyond the entry control point.

Immediate action

133. The LFB's motivation for trying to impose this proposed procedure appears to be that "something" has to be done, with urgency, at least until national building regulations and guidance are improved. The FBU shares this frustration with the slow pace of change. However the FBU has spent more than forty years warning that the regulatory system governing fire safety has been weakened and undermined, including by central government policy and the decisions of chief fire officers. In particular we have highlighted:
- The deregulatory changes to Building Regulations and guidance since the 1980s
 - The risks of external cladding systems, when the FBU gave testimony to the parliamentary inquiry in 1999
 - The deregulatory changes and downgrading of enforcement with the Fire Safety Order 2005
 - The problems with high rise stay put, including our investigation of the Harrow Court fire in 2005, the Lakanal House fire in 2009 and Shirley Towers fire in 2010
 - The austerity cuts imposed since 2010, which has reduced firefighter jobs by 20%, including inspectors carrying out enforcement work.
134. However, a hasty and ill-thought through new procedure that puts firefighters at risk of death and injury is no solution to these longstanding problems. LFB should scrap the proposed unsafe procedure of sending firefighters beyond the entry control point when not under air.
135. But the LFB can still take immediate significant steps to protect our communities, while simultaneously managing the risks to firefighters. Appendix 8 of the new PN633 states:
- Buildings with combustible cladding*
- 3. Over 200 buildings in London have been identified as having cladding systems and compartmentation issues that do not meet the required standard and subsequently present a risk of uncontrolled internal and external fire and smoke spread.*
136. The LFB has powers under Fire Safety Order to take enforcement action, which would benefit both public and firefighter safety. The LFB can immediately put in place prevention and control measures for these premises.
137. The FBU would point to the example of the North Bank building on Wicker Riverside in Sheffield, which was served a prohibition notice following an inspection by South Yorkshire Fire Service on 11 December 2020. The building is 10 storeys high and has 132 flats. The notice meant 35 flats from the sixth to the tenth floor had to be vacated because of the fire safety concerns.³¹ Rather than increase the risk to firefighters, in potential breach of requirements under safety legislation, the LFB has powers which it is not using, to remove or significantly mitigate the risk to both firefighters and the public.

³¹BBC, Sheffield flats evacuated over fire safety failure, 12 December 2020
<https://www.bbc.co.uk/news/uk-england-south-yorkshire-55286739>

138. The LFB could also increase the pre-determined attendance to any fires reported at these premises. The new policy expects the incident commander to increase the make up. However increased pre-determined attendance early in the fire would expand the options available to the officer in charge.
139. The FBU is willing to continue discussions with the LFB to find suitable solutions. However the FBU cannot accept the introduction of a new proposed procedure that puts firefighters at greater risk.

REFERENCES

Bilzon, James and Richard Stevenson, Physiological Demands of High-Rise Operations, 8 March 2021

Control of Substances Hazardous to Health Regulations 2002

<https://www.legislation.gov.uk/uksi/2002/2677/contents>

DCLG/CFRA, Fire and Rescue Authority Operational guidance: Breathing apparatus, January 2014

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877179/131230-Operational_Guidance_Breathing_Apparatus__Web_archived.pdf

Gentry, Robbie, Witness statement, MET00019991_0009

<https://www.grenfelltowerinquiry.org.uk/evidence/witness-statements-robbie-gentry>

Greater London Authority, Fire, Resilience and Emergency Planning Committee, 5 March 2020. LFB, High Rise Firefighting – Policy Number 633, 12 February 2020

<https://www.london.gov.uk/about-us/londonassembly/meetings/documents/g6695/Public%20reports%20pack%20Thursday%2005-Mar-2020%2015.00%20Fire%20Resilience%20and%20Emergency%20Planning%20Committee.pdf?T=10>

Grenfell Tower Inquiry, Phase 1 report, 30 October 2019

<https://assets.grenfelltowerinquiry.org.uk/GTI%20-%20Phase%201%20full%20report%20-%20volume%204.pdf>

Health and Safety Executive, Striking the balance between operational and health and safety duties in the Fire and Rescue Service, March 2010

<https://www.hse.gov.uk/services/fire/duties.pdf>

Health and Safety at Work etc. Act 1974

<https://www.legislation.gov.uk/ukpga/1974/37/contents>

Hill, David FF, Witness statement, MET000083299_0009-10

<https://www.grenfelltowerinquiry.org.uk/evidence/witness-statements-david-hill>

LFB, Operational Response to Grenfell Tower (v7), 7 February 2019

<https://www.london-fire.gov.uk/news/2019-news/october/brigade-urges-government-to-stop-neglecting-fire-safety-at-grenfell-report-committee/>

LFB, LFC-0304x·D High Rise Firefighting Policy PN663, 12 February 2020

<https://www.london-fire.gov.uk/media/5160/lfc-304x-d-high-rise-firefighting-policy-663.pdf>

LFB, Risk Assessment Form High rise policy 633 V5, 25 August 2020

LFB, Evacuation and Rescue Policy, 9 October 2020

<https://www.london-fire.gov.uk/media/5381/lfc-0391-evacuation-and-rescue-policy.pdf>

LFB, PN633 High rise firefighting – 04.03.21 – Following physiological trials, 4 March 2021

LFB, Grenfell PN633 High Rise Firefighting RA V7 040321, 4 March 2021

LFB, PN633 High rise firefighting – 04.03.21 – Following physiological trials, 8 March 2021

LFB, PN633 High rise firefighting – Final HSAP Submission, 16 March 2021

LFB, PN633 High Rise Firefighting RA - Final HSAP submission, 16 March 2021

LFB, PN 633 High rise firefighting - Final HSAP Submission (3), 17 March 2021

Management of Health and Safety at Work Regulations 1999

<https://www.legislation.gov.uk/ukxi/1999/3242/contents/made>

NFCC, Foundation for Breathing Apparatus, 17 January 2018

<https://www.ukfrs.com/foundation-knowledge/foundation-breathing-apparatus>

NFCC, Guidance: Fires in buildings. National Operational Guidance, 2021

<https://www.ukfrs.com/guidance/fires-buildings>

New London Architecture, London Tall Buildings Survey 2020, April 2020

ODPM, Physiological Assessment of Firefighting, Search and Rescue in the Built Environment, December 2004

<http://highrisefirefighting.co.uk/docs/BDAG07.pdf>

Ramsay, Lewis, The Practical Danger Involved in Firefighters Going beyond the Bridgehead without Breathing Apparatus, Report to the Fire Brigades Union, March 2021

UCLan, Minimising Firefighters' Exposure to Toxic Fire Effluents: Interim Best Practice Report, 23 November 2020

<https://www.fbu.org.uk/publication/minimising-firefighters-exposure-toxic-fire-effluents>

SECTION 4

LEWIS RAMSAY, REPORT FOR THE FIRE BRIGADES UNION: THE PRACTICAL DANGER INVOLVED IN FIREFIGHTERS GOING BEYOND THE BRIDGEHEAD WITHOUT BREATHING APPARATUS, 22 MARCH 2021

INTRODUCTION

- 1.1 I have prepared this report on behalf of the Fire Brigades Union (FBU) and my instructions were issued to me within an email from Riccardo la Torre (National Officer, FBU) dated 5th March 2021. Within this correspondence I was instructed to provide expert opinion on the practical danger involved in firefighters going beyond the bridgehead without operational Breathing Apparatus (BA). In particular, I was asked to focus on the following details:
 - The nature and gravity of the risk faced
 - The limited practical benefit the revised policy is likely to provide, and
 - The difference between the revised practice and the practice hitherto in terms of the increased risk to firefighters.
- 1.2 The policy hereafter referred to is the London Fire Brigade (LFB) High Rise Firefighting Policy Number 633 (PN 633). This was drafted following the Grenfell Tower tragedy and proposes, amongst other things, a revision to the way firefighters could be deployed beyond the bridgehead in order to conduct search and rescue and assist evacuation. The policy identifies a situation where this would become an operational imperative and, to this end refers to failures in passive fire protection and compartmentation giving rise to fire spread beyond the origin of the fire thereby making search, rescue and mass evacuation a priority for the Incident Commander.
- 1.3 My interpretation of the policy is that it provides a mandate for those in Command to deploy firefighters beyond the bridgehead donned in BA but not necessarily 'in air'. My view is that it further provides firefighters with a sanction to employ on their own authority by donning the BA set (beyond the bridgehead and safe air environment) as a product of their own risk assessment and when the atmosphere is considered to be no longer expirable. The policy considers this justified to ensure BA air supplies are not exhausted before firefighters can reach parts of the building beyond the BA set's capacity.
- 1.4 The policy is silent on the physical limitations of the firefighters nor does it detail a process for deciding and agreeing their limits of exploitation.
- 1.5 In my view the policy creates a deviation from a well-established safe system of work and in so doing normalises a risky practice which may have further negative consequences in regard to how firefighters and fire commanders manage life safety on the incident ground.

- 1.6 With regard to my own experience, I retired from the Scottish Fire and Rescue Service (SFRS) in July 2019 after a career which extended just over thirty years. I completed my service in the rank of Assistant Chief Officer (ACO); I was promoted to this position in 2008 and was the Director responsible for Fire Safety Enforcement, Community Safety, Fire Engineering and Fire Investigation. I was also Director of Response and Resilience and Service Delivery and therefore had jurisdiction over all Scottish operational policy and its implementation including those which referred to BA, Incident Command and High-Rise Buildings. In a UK national perspective, I was a Director of the Chief Fire Officers Association (CFOA) and in this role had responsibility for Prevention, Protection and Road Safety.
- 1.7 I have an extensive knowledge of fighting fires within residential high-rise buildings and can draw down on experience gained at all operational ranks from firefighter to ACO. I have investigated a number of operational failures which include those within the high-rise environment. To this end, I led investigations in respect to 30 Petershill Court, Springburn, Glasgow 2003, Prospecthill Circus, Toryglen, Glasgow 2009, Charles Street, Springburn, Glasgow 2015. All of these incidents involved BA emergencies and or a spread of fire due to a failure in compartmentation.
- 1.8 In relation to the Petershill Court Fire, I was also responsible for the creation of a revised high-rise operational policy which was required to satisfy the terms of an HSE improvement notice served on the former Strathclyde Fire Brigade.
- 1.9 As a Station Officer with responsibility for health and safety, I attended the Garnock Court fire in 1999.
- 1.10 In 2009 I was (ACO) Incident Commander of the Waddell Court Fire, Glasgow. This involved a high-rise block in which fire, heat and smoke spread beyond the compartment of origin and required the mass evacuation of the full block.
- 1.11 In my Community Safety role, I led a partnership approach to dealing with the welfare of vulnerable and at-risk tenants of high-rise buildings and in doing so formed a partnership with housing associations and health and social care providers. This partnership co-produced a range of benefits not least being an immediate reduction in fire deaths; this was recognised within a citation which led to me being awarded the Queens Fire Service Medal in 2015.
- 1.12 In regard to investigative work, I further evidence my position with the Rosepark Care Home inquiry after which I was tasked to implement the Sheriff Principal's determination. Furthermore, I formed part of the Police led team which investigated the death of Firefighter Ewan Williamson at a fire in the Balmoral Bar, Edinburgh in 2009. I later led the implementation of the SFRS' improvement plan which included my lead role in the creation of the Service's Operational Assurance policy and procedures.
- 1.13 I am currently the interim Chief Executive of the British Approvals for Fire Equipment (BAFE) and undertake a range of consultancy work related to management and leadership including the creation of operational management systems for overseas Fire, Rescue and Civil Defence Authorities. I am also Chair of FireQual, an Awarding Organisation who offer accredited qualifications to those operating within the fire sector.
- 1.14 Within section 2 of this report, I set out those matters which I have been specifically instructed to address. Section 3 contains a short summary of my report. In section 4, I

set out my detailed views in respect to the issues detailed at section 1.1 above and the specific matters referred to within section 2. Within section 5, I offer my conclusions.

- 1.15 I understand that the FBU wish this expert report in relation to their submission to the LFB Health and Safety Advisory Panel. I further note that the FBU will thereafter challenge PN 633 and specifically those sections which relate to the policy's proposed deployment of firefighters beyond the bridgehead.

2. MATTERS TO BE ADDRESSED IN THIS REPORT

- 2.1 In order to address the main issues on which I am instructed to advise the FBU (as set out in section 1.1) I am also required to give my opinion on a number of specific questions relating to the firefighter safety aspects of BA procedures and practice. These are as follows:
- a) The role of the incident commander in deploying BA wearers.
 - b) The role of the incident commander in determining operational resources.
 - c) The role of sectorisation.
 - d) The reasons for teams of 2 or more, not lone working.
 - e) The role of the bridgehead, including the officer in charge.
 - f) The role of BA start up procedures.
 - g) The role of the BA entry control officer (BAECO).
 - h) The role of BAECO in PPE checks of wearers.
 - i) The functions of the entry control board.
 - j) The reasons for BA tallies.
 - k) The difficulties with adjusting BA and PPE in a dynamic situation if not under air.
 - l) The role of the warning whistle.
 - m) The role of the automatic distress signal unit (ADSU).
 - n) The additional equipment likely to be carried by BA wearers.
 - o) The limitations of gas monitoring and other equipment if BA sets are not started up.
 - p) The meaning of a BA emergency.
 - q) BA training on procedures, especially the safety steps built in ahead of deployment.
 - r) The instructions from manufacturers on correct BA use.

3. EXECUTIVE SUMMARY

- 3.1 The Commissioner of London Fire Brigade has signed and authorised a policy which revises the Service's existing policy on High Rise Firefighting. I note that this revised policy has undergone a series of amendments the most recent iteration being published on 17th March 2021.
- 3.2 These revisions specified inter alia the extended use of Breathing Apparatus (BA) at incidents involving high-rise buildings and, in doing will permit the deployment of firefighters wearing BA but not in air (sets not started up), to proceed to the floors beyond the bridgehead. Moreover, the policy acknowledges that the deployment would represent 'an extremely high-risk activity' and offers a set of controls to help mitigate these extremely high risks.
- 3.3 The policy confirms that BA wearers in air may not be able to deploy fully without first exhausting the contents of their BA sets and so authorises a deployment where the wearers would preserve supplies by passing through the BA Entry Control Point whilst not going into air. When and if the team suspect or detect 'unsafe respiratory conditions' then they would immediately start up their sets and go into air.

- 3.4 I have reviewed this policy and carefully applied myself to its purpose and intended outcomes. I have attempted to understand the underlying issues in an attempt to validate the proposed policy and in order to do so I have considered my own experience and knowledge.
- 3.5 The wearing of BA in order to undertake firefighting and, search and rescue remains a dangerous occupation and is a role that even with the current high levels of control measures have led to the injury and death of firefighters. With this in mind, I have reviewed PN 633 and whilst I recognise the policy's aims, I am unconvinced that it has been prepared following a thorough examination of the risk and the implementation of controls to mitigate their potential outcomes. My brief does not extend to the provision of alternative operational solutions but, it would appear likely that a further examination would reveal the potential to manage the risk through a careful balance of both response and preventative strategies particularly as they relate to the planning of personal rescues based on the provision of operational intelligence.
- 3.6 In arriving at my opinion, I have measured the policy against my own understanding of a range of control measures which encompass facets of command and control and the provision and use of work equipment as they relate to BA wearing. I have also applied myself to a number of earlier BA incidents and in doing so have tested the extent to which PN 633 would adhere to previous agreements and precedents.
- 3.7 It is my belief that the policy overrides these and disapplies them. I note this as it relates specifically to the pre-entry BA checks and the close supervision afforded by the BA Entry Control Officer. I also give attention to the probability that firefighters deploying in BA sets which have not be started (not in air) and who then determine a need to don them will do so in urgency and in an atmosphere, which is not safe to breath. It is foreseeable that, in the absence of supervision, the BA wearers in this position will not adhere to the basic life safety checks required by current policy and procedures.
- 3.8 I am also reminded of the need to ensure that BA wearers maintain close personal contact and in the dynamic circumstances described I feel certain that this will be usurped by events increasing the risk that a team become separated in unsafe and deteriorating environments beyond the bridgehead and the safe atmosphere that this offers.
- 3.9 One of the fundamental pre-entry conditions is that BA is donned in fresh and safe air. This cannot be guaranteed in relation to PN 633.
- 3.10 In preparing this report I have not completed a systematic risk assessment, nor have I attempted to quantify the risks I describe. That said, I conclude that PN 633 introduces a new hazard which has been acknowledged by LFB. To this end, I see no evidence of proper assessment and control to support the proposal. In this respect I am unable to detect any practical benefits that the policy may offer but instead can only predict and suggest an increased level of risk. In my opinion the policy represents a departure from current practice and does not offer a better solution nor does it solve the practical problems which relate to mass evacuation or rescue in deteriorating conditions.

4. FIREFIGHTER SAFETY ASPECTS OF BA PROCEDURES AND PRACTICE

- 4.1 The role of the Incident Commander (IC) regarding the deployment of BA wearers is clearly defined and in my opinion this role is understood across the UK Fire and Rescue Service; it is my view that this has been consistently assimilated and defined within local policy.
- 4.2 To understand the role of the IC I would advise of a fundamental need to acknowledge that this may vary as an incident develops or escalates. Thus, the IC of a stage one BA deployment may take direct responsibility for briefing and deploying BA wearers. Whilst this is the case, this task may in practice be designated to Sector Commanders as the incident escalates and further stages of BA control are applied. Irrespective of delegated command authority, the important issue to note is that under no circumstances is it acceptable for BA teams to self-deploy or operate out with the supervision of the IC, the Sector Commander or the parameters of the tactical plan. In offering this view I reference a range of incidents where self-deployment has led to the need to invoke a BA emergency. This demonstrates the immediate causal factors associated with a lack of supervision. [Ref 1 – Petershill Court]
- 4.3 Notwithstanding the fact that the supervisory levels will alter in response to the complexity of the incident, I would summarise the role of the IC as follows:
- Implement BA procedures and ensure that all firefighters are aware of the entry control procedures.
 - Prior to committing crews in BA the IC will establish a BA entry control point.
 - The IC must ensure that there are sufficient resources for the provision of BA teams at the incident. This is a vital safety element of the role and ensures there is adequate capacity to rotate crews during arduous operations or provide an emergency team(s).
 - The IC will assume full responsibility for ensuring that BA teams and the BA Entry Control Officer (BAECO) are fully briefed before operating within the risk area. In this regard they will provide clear instructions in relation to any objectives, detail the hazards, risks and control measures to be adopted. And, ensure that the BA team have appropriate firefighting media prior to entering the risk area.
 - Instruct and obtain verbal confirmation that BA teams understand the means of access and egress from the risk area.
 - Monitor operations to ensure that BA teams' welfare and safety is under close control.
- 4.4 I mention above that the IC has overall responsibility for leading resources on the incident ground and I will caveat this once again by stating that certain aspects of this may be delegated to the sectors or functional sectors depending on the incident's size and potential for escalation. That said, it is worth clarifying that resources and dispositions are matters for the IC to determine.
- 4.5 The IC will assess the demands that the incident is likely to place on the tactical plan and will lead and manage the implementation of a range of command options presented within the Incident Command System.
- 4.6 This brings me to the subject of sectorisation which is an area that requires close examination. Broadly speaking where an incident is of a size that the IC cannot fully control all aspects of command and safety then it is imperative that they implement a system to manage spans of control. Sectors in their simplest form align to the building involved where 'Sector 1' is located at the main scene of operations and all other sectors are installed thereafter in a clockwise rotation so that 'Sector 3' would appear to the rear of the main scene.

- 4.7 Whilst this is the case, a model for sectorisation can be applied to all incidents where the IC cannot have sight on the full scope of operations. This may include those involving, ships, rail and other modes of transport, forest and grassland, serious flooding and water rescue and, of relevance to this report within high-rise buildings. Here their [the sector's] orientation would be vertical in relation to the floors of the building. Sectors can also be established to manage certain functional roles for example, health and safety, foam, water, communications and BA.
- 4.8 I confirm that in all, but the smallest incidents sectors would be assigned and that these offer an ability to safely distribute resources and allocate responsibilities so as not to overburden the IC and ensure that firefighters are operating under sufficient supervision.
- 4.9 In my opinion, sectorisation is vital to the successful outcome of an incident. This ensures that where an incident escalates a scalable model is introduced which protects the IC from becoming overwhelmed by the need to manage multiple scenes and functional disciplines. Instead the IC can delegate authority to appointed individuals who possess the appropriate skills, knowledge, and experience to manage the sector they have been assigned responsibility for.
- 4.10 It is my assumption that the role of sectors is key to successful and safe outcomes and fundamental to this is the command and control that can be exercised by the sector commanders operating as part of an overall command team. The current UK national model for incident command details the general requirements for sectorisation and includes examples which specify the model to be adopted within high-rise buildings. I see no alternative to this and would not propose a deviation under any circumstances.
- 4.11 In this regard I refer specifically to occasions where firefighters may potentially be deployed beyond a bridgehead and fire sector to conduct work in the search sector without proper assignment or PPE. Where they fall within the BA sector then, they must abide by the rules and conventions laid down and not adopt a process that could result in an erosion of the safety standard. I shall explore this point within the following sections.
- 4.12 In turning to the composition of BA teams I reflect on the occasions where two team members have found themselves divided and with regret, I consider the tragic outcomes of such misfortunes where a BA team member has found themselves separated from their partner. I note specifically the death of Firefighter Ewan Williamson at the Balmoral Bar fire, Edinburgh 2009 [Ref 2, Balmoral Bar].
- 4.13 I declare an intimate knowledge of the circumstances surrounding Ewan's death as I formed part of the Police investigation team and was subsequently commissioned to implement the findings of the SFRS' lessons learned report. His loss was unacceptable and avoidable and whilst I will not dwell on the full range of recommendations here, I must point towards the need for BA team members to always secure close personal contact, this was a requirement determined by the Scottish legal process and therefore should be considered binding. I would define this as maintaining visual, verbal communication and / or physical contact with other BA teams members at all times within the risk area to ensure the safety of personnel and to ensure the exchange of risk critical information within the BA team.
- 4.14 The reason for avoiding lone working here is critical and one which is a cornerstone of BA safety bringing in a safeguard against failures which have resulted in the death of firefighters. I refer to the most recent NFCC publication which has been written to guide FRS' in developing safe systems of work. [Ref 3, NFCC Foundation for Breathing Apparatus]

- 4.15 I would further suggest that BA teams are comprised to form around a team leader who as a minimum should be a competent firefighter. This avoids occasions where two novice firefighters are paired together.
- 4.16 I must balance my assertions though and report that on rare occasions single firefighter BA deployments could be permitted. These are at incidents involving a single car fire in open ground where the BA set is worn for comfort and there is always a clear line of sight between the IC and the wearer. Furthermore, a single wearer at the head of a ladder can be deployed provided the wearer is not committed to the building and that stage one entry control is applied. At no time should a single BA wearer be deployed within a structure or building.
- 4.17 Forming a bridgehead is an important step in securing and maintaining a safe system of work. I would define a bridgehead as being a position, in safe air, where BA entry control procedures are established within the building and at a distant point from open air.
- 4.18 The IC will consider it essential to establish a bridgehead to provide BA entry control and this may be at some distance from the initial point of entry into the building (or risk area) whilst still securing and maintaining a safe air environment. I consider a bridgehead to be a vital component of a safe system of work within a high-rise premises.
- 4.19 The IC will determine the position of the bridgehead following a full and sufficient risk assessment which shall take account of the following factors:
- The safe air requirements necessary to don BA.
 - Effective access and egress to the Fire and Search Sectors.
 - The need to establish communications.
 - The distance from the initial point of access to the bridgehead.
 - The availability and location of further BA teams and Emergency Teams.
 - The potential for the incident to escalate or deteriorate forcing the bridgehead to be relocated and the potential risk this will pose to those working within the Fire and Search Sectors.
- 4.20 Deploying in BA is a risk critical activity which must be carefully controlled. I am not instructed to advise on the care and maintenance of BA but suffice it to say the checking of sets is a fundamental element of their overall preparedness. BA wearers are required to don the sets in a prescribed manner and one which will help ensure their safety within the risk area.
- 4.21 The following procedure is in my opinion a general sequence that should be followed by the wearer before starting up the BA set. I accept that local variations may occur, but these will depend on the manufacturer's specification. In general, I would expect the following to be adopted as a minimum:
- Secure the face mask around the neck using the neck strap provided.
 - Place the BA set on the back in the style of a ruck sack ensuring that both straps sit comfortably on the shoulders and are not twisted.
 - The straps should then be tightened by pulling down on the free ends to the point where the waist strap sits level with the wearer's hips.
 - Connect the waist strap buckle at the front and tighten until the set is secure and comfortable.
 - Re-adjust the straps as required.
 - Of importance, where the set is not to be donned then insert the standby plug to ensure that not debris and contaminants can enter the facemask.

- 4.22 Additionally, I suggest the following represents a list of pre-entry checks which should be conducted by the wearers before they commit to the risk area.
- Reset the positive pressure button.
 - Fully open the cylinder valve in a way that ensures the last cam is engaged thereby removing any chance that the valve wheel could inadvertently close during operations.
 - Check the cylinder contents ensuring they are not less than 80% of the cylinder's maximum contents.
 - Inspect the interior of the face mask to ensure that no debris or foreign items are present.
 - Don the face mask.
 - Gently lift the face mask seal away from the face using two fingers to ensure positive pressure.
 - Check the supplementary air supply button.
 - Hold breath and close the cylinder with hand on the cylinder valve wheel at all times.
 - In the closed position observe the display whilst the wearer moves their head. Hold for two seconds in each direction moved. This is to test for leaks and the display should not fall more than 60 bar.
 - Fully open the cylinder again as above.
- 4.23 I have been asked to confirm the instructions from manufacturers on the correct use of BA and advise that the aforementioned list has been derived from their requirements. I accept that these may differ and that certain brands may have their own specific matters to address. Whilst this is the case, I believe this is a standard and generic list which represents the key items to be observed in regard to a BA set's correct use.
- 4.24 The BAECO performs a vital role in deploying teams within the risk area and I cannot understate their important purpose within the whole command team. This is to provide a consistent method for the safe and effective command, control and management of the BA wearers. I shall cover some specific safety duties in the following sections but at this point would note the need for the BAECO to assume delegated authority over the management of the BA deployment.
- 4.25 In this regard I simply record my view that the BAECO's responsibilities would be entirely usurped on any occasion where teams are permitted to go into and out of air under their own supervision and depending on their assessment of risk. This would destroy the validity of BA control and delete entirely the BAECO's ability to monitor the wear from point of entry to time of whistle. In other words, such a deviation would remove control entirely and therefore BA teams would be operating within a risk area without sufficient supervision, information, or instruction. I consider this to be a weakness in the policy and I see no evidence within PN 633 which assures me that suitable controls would be in place to permit such deployments.
- 4.26 An important task of the BAECO is to confirm the team are ready before they deploy and in doing so the BAECO carries out a safety check to ensure the teams are properly prepared. This involves a physical examination by the BAECO to verify that the BA set is donned correctly, ancillary equipment is functioning, and that PPE is worn and does not compromise safety for example; breathing hoses kinked in straps or radio communications missing or defective (this is not an exhaustive list).
- 4.27 The BAECO would also ensure the team understand their task and the quality and content of this briefing is considered vital to the effectiveness of BA entry control and BA team safety. In my opinion strict compliance to BA entry control procedures is critical to the safety and

effectiveness of BA operations. Deviations are likely to give rise to failures and I consider it entirely foreseeable that BA teams going into air within a risk area or a deteriorating atmosphere would do so in a way that would potentially overlook some of the robust checks that would have been performed by the BAECO at the point of commitment.

- 4.28 To be clear, my view is that if PN 633 were adopted then it is very likely that crews who are faced with worsening conditions would don their sets in a rushed manner and in a way that prejudices and overrides the donning process and start up procedures mentioned above.
- 4.29 I therefore consider it likely that a BA team expected to don BA and get into air in a dynamic situation would do so in a way that overlooks the basic and primary safety checks. Therefore, the BA set, the ancillary equipment and the firefighter's PPE could all be compromised due to the urgency required and the lack of supervision without the BAECO's pre-deployment checks.
- 4.30 This was shown to be a contributory factor at the fire involving the Clarendon Bar, Glasgow 2004. [Ref 4, Clarendon Bar report].
- 4.31 In further explaining BA command and control I now turn my attention to the BA Entry Control Board, the use of a BA Tally and the Automatic Distress Signal Unit (ADSU).
- 4.32 The BA Entry Control Board is used by the BAECO to organise all the BA teams under their control. It allows the teams to be identified, their time of whistle to be calculated and a record to be made of the team's location within the risk area. It should be noted that in addition, the BA Entry Control Board permits other functions. These are the management of the rapid deployment team and emergency teams.
- 4.33 I understand that across the UK FRS a number of BA Entry Control Boards are used by individual Services. Whilst this is the case I reflect on a typical BA Entry Control Board and notes that these are provided with a clock, duration tables to allow the BAECO to calculate the time of whistle, a rapid deployment digital timer and slots for BA Tallies.
- 4.34 The BA Tally is assigned to each BA set and it is intended that its sections are completed by both the wearer and BAECO. The wearer at the commencement of a working shift would check the BA and complete the Tally noting their [the wearer's] name and the cylinder's contents; should the wearers be rotated during the course of the shift then the new wearer would check the set and complete the Tally to include their own details.
- 4.35 The Tally also includes sections to provide details of the station to which the BA set is assigned and the set's number. Attached to the Tally is a key which is inserted into the BA set's ADSU. The Tally is therefore attached to the BA set by virtue of its insertion within the BA set's ADSU. When the wearers present themselves to the BAECO the Tally would be removed and the BAECO would check the wearer's name and cylinder contents. They would check the contents of the cylinder as shown on the BA pressure gauge and amend the Tally should some air be consumed during start up.
- 4.36 The BAECO will insert the Tally into the BA Entry Control Board and calculate the time of whistle. It must be noted that, when the Tally is removed, the action of withdrawing the key from the ADSU activates its functions. Should the ADSU operate it can only be silenced by reinserting the key. When the BA wearer is committed that key and Tally are held by the BAECO within the BA Board.

- 4.37 The ADSU can be activated manually by the wearer, a team member, or the member of another team such as the emergency team. The ADSU will signal as a pre-alert and then fully actuate following a period of inactivity thus overriding the need for manual intervention. The tone of the signal is distinctive and when it is heard BA crews already committed inform the BAECO and seek authority to suspend their current task in order to investigate and locate the wearer in distress.
- 4.38 Whilst I have only briefly outlined the functions of the BA Entry Control Board, the Tally and the ADSU, I consider it prudent to note that the BA Entry Control Board and its associated procedures are vital in relation to the safe deployment of BA Teams. Any digression from these procedures or a departure from the control the process secures is in my opinion a risk critical failure and one which should not be permitted within any new policy no matter that policy's intentions.
- 4.39 I have explained the important role of the BAECO and would further detail this now in respect to calculating a BA team's working duration and therefore the time at which they should remove themselves from the risk area and return to the BA Entry Control Point.
- 4.40 I note above the purpose of the BA Tally and refer again to the fact that upon it the contents of the cylinder pack are noted. This is used to establish the duration of the wear which alerts the BAECO and the BA team to a point when extraction from the risk area must occur. This is referred to as the time of whistle and there is a section within the BA Board to allow this to be clearly annotated / displayed as mentioned at section 4.15 of this report.
- 4.41 At the point when the BA wearer's cylinder contents are running low the wearers will be alerted by the sound of a whistle. BA wearers are trained to return to the BA Entry Control Point at a time immediately before this whistle sounds because when it sounds there is only a limited amount of air left and therefore time to return to safety.
- 4.42 In my view PN 633 erodes this long-established safety procedure, and I have reservations regarding the BAECO's ability to accurately monitor the proposed wear under actual operational conditions.
- 4.43 The policy refers to the fact that telemetry will give an 'indication' as to when or if the wearers go into air. This is an insufficient guarantee, and I am unconvinced if this control measure will prove reliable on every occasion it is deployed. Even if communications were robust and telemetry reliable there could be occasions where interruptions could throw out the time of whistle thereby creating a false impression of the set's duration and working time. This would only need to fail once to have negative outcomes and I consider this to be a weakness in the proposed safety system and one which is not sufficiently addressed within the policy.
- 4.44 I see no evidence that high-rise buildings within the service area have been surveyed for conditions which would render radio communications or telemetry inoperable. I have not been advised if a survey or its findings have been used to assist in the risk assessment which helped inform the writing of PN 633.
- 4.45 I note the use of communications and telemetry as proposed controls in respect to BA operations. I accept that FRS' use telemetry which can remove the need for the BAECO to determine the time of whistle as this would be calculated and monitored as a feature of the technology. Whilst this is the case, these deployments (BA wearers getting into

air under the supervision of the BAECO) are not what is proposed within PN 633. In this regard I do not consider the controls to be sufficient solutions to support the proposed deployment and can predict occasions where these facilities could be compromised.

- 4.46 PN 633 considers this within section 4.55 of the policy and notes that communications within the high-rise environment can fail. PN 633 further references this issue within section 5.26 where it acknowledges that radio communications and telemetry signals could be lost. On these occasions I consider the proposed control measure to be inadequate. This states that crews should immediately withdraw to the bridgehead and whilst I understand the directive, I consider it highly likely that in the operational environment this could be overlooked or simply missed by crews.
- 4.47 I therefore conclude that to rely on telemetry and radio communications to support risk critical deployments beyond the bridgehead and / or, to calculate a wearer's working duration based on them declaring when they go into air and / or relying on the technology is not an adequate control measure.
- 4.48 A BA crew will carry some basic items of ancillary equipment in order to safeguard their deployment. I recognise that individual FRSs may require certain items but in general terms I consider the following to be a useful minimum complement of equipment namely: intrinsically safe torch, cable cutters, BA radio communications, retractable personal line, thermal imaging camera and extinguishing media.
- 4.49 I note PN 633 makes provision for the use of gas detection and monitoring. I confess that I cannot claim expertise in the scientific use of such devices and in my operational past have relied on the support of qualified chemists through the deployment of a Technical Support Unit. To this end, my observations are purely practical and not based on competence in the field of scientific monitoring.
- 4.50 I am aware of the use of Detection, Identification and Monitoring equipment by the FRS and see this as an important attribute in respect to certain incident types. I have used these analytical devices at various incidents to identify and confirm the presence of various hazardous materials and would provide asbestos as a key risk to be identified and managed.
- 4.51 I am unclear to what end PN 633 proposes the use of such equipment at high-rise fires and conclude that it may be to identify a potential in-expirable atmosphere created in a confined space due to the products of combustion. I conclude that this would be used to help BA wearers decide if their sets should be started up. I am unsure how equipment would add to the successful management of BA wearers beyond the bridgehead and in my opinion, this cannot be deployed as a replacement to already existing BA procedures that would not permit the donning (getting into air) of BA within a risk area. My point being that if such devices are used and they detect contaminants then it is already too late to ensure the safe donning of BA.
- 4.52 On occasion issues may arise which require the declaration of a BA emergency. The following list would define and constitute a BA emergency:
- When a BA team declare that they are in distress.
 - Where a BA team fails to return to the BA Entry Control Point by the calculated time of whistle and cannot be contacted by any means to confirm their safety.
 - An ADSU is heard – unless of course this occurs by accident which can be confirmed immediately.

- Where audible or visual indicators suggest the BA team are in distress or imminent danger.
 - An unexplained or prolonged breakdown in communications.
 - The Team's access and or egress has been compromised.
 - Any other circumstances that may warrant emergency arrangements to be initiated.
- 4.53 Training in the correct use of BA is a core element of any FRS training regime and is designed to promote the safety of those who wear or manage BA operations. Each FRS is required to produce their own BA training policy which establishes minimum standards in respect to both the training of their personnel and a means to assure the competence of those who are required to wear BA, those managing BA deployments and those who are engaged to provide BA training.
- 4.54 This policy will in turn create a suite of training modules with learning outcomes which will be supported by training standards detailing the frequency of the training activity and the assessment criteria required to satisfy competence.
- 4.55 I have considered a range of training regimes and cannot identify anything that would assure me that suitable steps have been taken to ensure that the provisions of PN 633 have been adequately covered by current training standards.
- 4.56 I refer to the start up procedures outlined earlier in my report and confirm that these would be covered within current training programmes, but it is not obviously apparent that they have been incorporated into the training of firefighters required to deploy within the parameters of PN 633.

5. CONCLUSIONS

- 5.1 In this section of my report, I set out my conclusions and opinions in respect of the matters that I am instructed to address.
- 5.2 PN 633 introduces revisions in regard to LFB's policy on high-rise firefighting and these were deemed necessary following the Grenfell tragedy of 14th June 2017.
- 5.3 The policy introduces a new position which LFB concede moves PN 633 beyond the current National Operational Guidance. I consider that this is not without risk to LFB, its firefighters and the communities they serve.
- 5.4 I have discussed the range of risks which are manifest on occasions where firefighters are deployed beyond the bridgehead and in circumstances where they are not controlled by nationally accepted and agreed protocols. I have not made this the subject of a systematic risk assessment but conclude that such a position represents a step change and to use LFB's own words from their version of PN 633 dated 12th February 2020, is an 'extremely high-risk activity'. I note that recent drafts have removed this reference but, this has not been accompanied with new systems to manage the risk and in my opinion the description in the earlier versions of PN 633 still stands.
- 5.5 Given what I have studied and in applying my experience and knowledge I cannot envisage any occasions where this deployment would offer a safe and secure operational advantage.

- 5.6 In reaching this conclusion, I balance the advantages of deploying firefighters out with normalised control procedures with the potential negative outcomes that such a decision may attract. I opine that to do so would provide firefighters with authority to employ following their initial deployment and in doing so elect to get into air at a point where they feel it would be operationally prudent.
- 5.7 This introduces a set of risks which have not been accurately assessed and controlled. These include the starting of sets in a non-safe air environment and the extension of the wear prolonged by the wearer who could be working in the risk area both in and out of air. I consider this to be an unacceptable departure from existing policy and one which places firefighters at unnecessary risk of harm through foreseeable risk of breathing in-expirable conditions and exhaustion from working beyond their physical capabilities. Moreover, it overrides the accepted rules which govern incident command and removes the IC et, al. from the leadership and management of the BA team.
- 5.8 Given the above I conclude that there is no benefit in enacting PN 633 as it relates to BA wearing beyond or above the bridgehead. Moreover, I see nothing other than a denigration of existing practices which have been substituted with a proposal which is likely to become haphazard and almost impossible to manage in the real world of operational command.
- 5.9 I have studied the current acceptable standards relating to the role of the IC in relation to BA wearers and their management within the parameters of the incident command system. I am concerned that PN 633 introduces scope for BA wearers to self-deploy and I see no evidence which encourages me to believe that their deployment would be adequately controlled by the IC or their delegated Sector Commander and BAECO.
- 5.10 The convention that BA wearing should not be subject to lone working is of vital importance as is the need to maintain close personal contact. PN 633 does not make this explicit and I am of the view that this must be reinforced as a matter of priority.
- 5.11 I detail my understanding of the bridgehead and in doing so underscore the importance of such an operational requirement. Working beyond the bridgehead in the manner described appears to me to undermine its very existence and in pushing further into the building without proper control I am concerned with the extent to which the bridgehead would remain viable.
- 5.12 I apply myself to a range of matters relating to BA Entry Control, pre deployment checks and emergency extraction based on time of whistle. I place some faith in existing policy but report that in my experience failures occur when this practice is not followed. I conclude that PN 633 would usurp these procedures and render them incapable of safeguarding and controlling wearers who are deployed with the notion that they will enter air at a later point.
- 5.13 In turning my attention to training I have considered current requirements and have been unable to find any reference to a nationally agreed standard that permits crews to deploy and then get into air within the risk area. I conclude therefore that there is no safe practiced exercise to teach and facilitate this proposed operational tactic.

6. REFERENCES

- 6.1 Ref 1: Strathclyde Fire Brigade, Health and Safety Section, Accident Investigation Report, Incident at 30 Petershill Court 17th November 2003 – January 2004
- 6.2 Ref 2: Scottish Fire and Rescue Service, Lessons Learned Report, Balmoral Bar, SFRS – March 2016
<https://www.firescotland.gov.uk/media/918533/balmorralbarlessonsidentifiedreport.pdf>
- 6.3 Ref 3: NFCC, Fire Central Programme Office, Foundation for Breathing Apparatus - 17th January 2018
<https://www.ukfrs.com/training-specification/breathing-apparatus>
- 6.4 Ref 4: Strathclyde Fire Brigade, Health and Safety Section Accident Investigation Report, Clarendon Bar, Strathclyde Fire Brigade – March 2004
<https://www.highrisefirefighting.co.uk/docs/strathclyde2004.pdf>

SECTION 5

RICCARDO LA TORRE, PRESENTATION GIVEN TO THE LONDON FIRE BRIGADE (LFB) HEALTH AND SAFETY ADVISORY PANEL BY NATIONAL OFFICER, 14 APRIL 2021

Throughout this presentation the PN633 revisions/proposals referred to relate to the activity of deploying firefighters beyond the bridgehead and breathing apparatus entry control board (BAECB) not under air

INTRODUCTION

I will utilise the Fire Brigades Union's sector competence and professional understanding, precedent both operational and legal, expert reports and academic research. This presentation will explore several themes and demonstrate comprehensively why the proposal to deploy firefighters beyond the bridgehead and BAECB not under air is both unsafe and unlawful. Whilst understanding and having sympathy with the situation LFB in particular find themselves in, and their intentions, I will present to the panel why the proposed revisions to *High Rise Firefighting Policy PN633*, to permit the aforementioned activity, are in breach of not just the obligations imposed by the Health and Safety at Work Act 1974 and its regulations, but indeed go against all safe practice and introduces an unsafe system of work.

I will then move on to explain the serious operational flaws presented by the proposed revisions. This will also serve to explore and identify the size of the increased risk, both to firefighters and the public; immediately and long term, created by the proposals. This part of the presentation will also point to the contradictions that exist in the policy, and why any intended benefits of the policy are, in its application, non-existent and in some circumstances will in fact present further obstacles to fire ground operations and rescue efforts. I shall then address a number of more general points and concerns that don't necessarily fit under the themes I have just set out.

I note that in addition, the chair has asked presenters to address three specific areas within the presentations, these being: (a) what is often termed "balancing" health and safety duties in the legal and societal context; (b) how policies and procedures should be applied at incidents (sometimes termed "operational discretion") and (c) what benefits and risks are involved in the proposed policy. I have sought to address these areas throughout the presentation, and will seek to summarise them further at its conclusion.

Before I commence with the main body of the presentation, I would like to address the matter of the number of revised versions of PN633 the FBU have received since the February version of the document provided by and discussed with LFB, and presented to Greater London Assembly's Fire, Resilience and Emergency Planning (FREP) Committee on 5 March 2020. This is also the version that was delivered to junior officers of the LFB for training purposes. I don't wish to dwell on it, but there are matters that need acknowledging before proceeding.

Since the panel was called LFB have continued to make numerous changes to PN633, five versions in total. It claims they arose from the Professor Bilzon report, which LFB commissioned in October 2020. However the changes have clearly dealt with a wider range of matters unconnected with Bilzon's research. This is a highly unusual way to conduct discussion on such an important document and especially in light of the agreement to proceed to this Health and Safety Advisory Panel. It in fact created significant additional work in preparing for today's panel and delayed the originally agreed timelines. Ultimately it reflects the misguided and unacceptable manner in which we believe PN633 to have been developed.

I would draw the panel's attention to one of the revisions made in particular. In the February 2020 version para 5.28, it referred to sending firefighters beyond the bridgehead without starting up their BA sets, the very matter the panel is here today to discuss, as an **"extremely high risk activity"**. By 4 March 2021, the draft had been re-worded and toned down to refer to "an increased level of risk". The provision to deploy firefighters beyond the bridgehead without starting up their BA sets remained. The FBU want to be clear here, simply by removing the words "extremely high risk activity" in no way alters the actual risk which was originally identified in the earlier draft. Risk is not a matter of language and this is not the time to engage in sophistry, it has no place in health and safety.

HEALTH AND SAFETY LAW

In this opening section I will now set out why the proposed revisions to PN633 do not meet the obligations imposed by the Health and Safety at Work Act 1974 and its regulations. I understand that this section may appear legalistic, but it can't be avoided. It is essential that the issues are addressed, because the FBU is clear that in the future this matter will be tested in court – whether as the result of the death and injury of firefighters or members of the public, this matter will be tested legally and it's important we address that now. There is precedent here and the FBU have found ourselves on both sides. Whether representing the family of a dead firefighter or where officers, our members, have found themselves answering criminal charges of negligence. And in those cases we have found that it is the FBU who represents firefighters, not the fire and rescue service.

When this panel was first called, the PN633 policy in dispute was in a different draft, as just mentioned, and was signed by the London Fire Commissioner (LFC) on 12 February 2020. This February 2020 draft was the version presented to the Greater London Assembly's Fire, Resilience and Emergency Planning (FREP) Committee on 5 March 2020. This version included an important summary report with 41 numbered paragraphs, which has not been included in later drafts. A statement of the justification for the revisions to PN633 is contained within that report of the Assistant Commissioner which proposed the revisions to the London Fire Commission (LFC).

The justification makes express reference to the legal obligations which PN633 is stated to discharge. The report accepts that the LFC is obliged to comply with the requirements of s.2 of the 1974 Act in approving PN633. It also registers that the LFC has a duty to comply with the obligations imposed by s.3 of the 1974 Act.

Although, as previously stated, LFB have revised the language somewhat since the panel was first called, when considering whether the revised PN633 complies with obligations under the 1974 Act the statements made in the Assistant Commissioner's report are incredibly significant because they illustrate how the LFC has interpreted relevant parts of the Act in relation to PN633.

THE HEALTH AND SAFETY AT WORK ACT 1974 AND DERIVED REGULATIONS

There are no grounds for the LFC to dispute that he, as a fire authority, is subject to the obligations imposed by the 1974 Act and its regulations.

The report states that ***“In the exceptional circumstances encompassed by this policy, the LFC recognises that striking the correct balance between these two general duties [i.e. those imposed by s.2 and s.3 of the 1974 Act] is likely to depend upon and require nuanced, informed, and robust decision making. Such decisions may require an assessment to be made as to whether, and to what extent, it is or is not reasonably practicable to expose firefighters to increased risk to ensure that all reasonably practicable steps are taken to protect members of the public from risk”.***

This explanation for, and justification of, the revisions to PN633 evidences a fundamental misunderstanding of both the relationship between s.2 and s.3 of the 1974 Act and the nature of the obligations imposed by those sections.

The duty for which s.2(1) provides is: ***“It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees”.***

This obligation is strict. It is a duty to ensure an outcome so far as is reasonably practicable. If the prescribed outcome is not achieved, it is for an employer to demonstrate that it was not reasonably practicable to have achieved it. Reasonable practicability is a matter of weighing the quantum of risk against the cost and trouble involved in the measures necessary to avert it.

The duty imposed by s.3(1) is that ***“It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health and safety”.***

The risk which is referred to, and against which that LFB should seek to protect employees is the risk of inhalation of harmful respirable substances when beyond the bridgehead. Weighing the quantum of the risk against the cost and trouble of averting it, it is known to be reasonably practicable for the LFB to avert the risk. This is known because the control measure it has adopted in order to avert the risk prior to the revision of PN633 is the use of effective BA. The revision of PN633 expressly removes the control measure and thereby decreases the level of safety to employees to a level which is less than could reasonably practicably be achieved. The assessment to which the Feb 2020 report refers to is an assessment as to whether to intentionally and knowingly “expose firefighters to increased risk”.

In effect, the proposal for revision to PN633 argues that in order to satisfy its obligation under s.3(1) the LFB is entitled to reduce the level of safety it has been until now reasonably practicable to ensure that its employees had. The LFB argument is that satisfaction of one duty under the 1974 Act is an effective justification to a breach of a parallel duty. To argue that compliance with s.3 can only be achieved by exposing employees to a risk which it had previously been reasonably practicable to avoid is an irrational one.

MANAGEMENT OF HEALTH AND SAFETY AT WORK REGULATIONS 1999

The Management of Health and Safety at Work Regulations 1999 establish the process of risk assessment, the principles of prevention to be applied, health and safety arrangements, health surveillance and other vital matters.

LFB's risk assessment for PN633 is not "suitable and sufficient" as required by the regulations. LFB's risk assessment correctly identifies the risk of "oxygen deficient or toxic atmospheres" and identifies the control measure as "breathing apparatus and associated control measures". However it then under the alternative BA procedures removes that control measure by authorising firefighters to go beyond the entry control point at the bridgehead without starting up their BA sets.

Delaying the start-up of breathing apparatus removes the safety control measure in precisely a situation of increased risk. The LFB's risk assessment registers the increased risk, but removes the well-established and reasonably practicable control measure to control it. The LFB has misinterpreted the health and safety management process and are in breach of the regulations.

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 2002

The proposed PN633 policy contains a method of work which contravenes the requirements imposed for use of personal protective equipment by parallel regulations. In circumstances in which the Control of Substances Hazardous to Health Regulations 2002 apply, Regulation 7(1) says: ***"Every employer shall ensure that the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled"***.

An employer may therefore discharge this duty either by preventing exposure to a hazardous substance or, if that is not reasonably practicable, by "adequately controlling" it. Regulation 7(3) provides for the means by which the obligation to control exposure is to be achieved where it states:

"(3) Where it is not reasonably practicable to prevent exposure to a substance hazardous to health, the employer shall comply with his duty of control under paragraph (1) by applying protection measures appropriate to the activity and consistent with the risk assessment..."

As an employer therefore LFB is subject to a duty to adequately control exposure to substances hazardous to health where they can demonstrate that it was not reasonably practicable to avoid exposure and that duty to control exposure adequately is absolute. It is not justification for an employer to show that it was not reasonably practicable to control exposure adequately.

Regulation 7(3)(c) requires an employer, as a last resort, to provide employees with suitable personal protective equipment in order to adequately control their exposure to hazardous substances. It does not countenance the concept of reasonable practicability as a reason not to provide such equipment. BA is not suitable, and not even protective equipment, unless it is operational and unless it is turned on.

Further Regulation 8(1) of the 2002 Regulations provides that: ***"Every employer who provides any control measure, other thing or facility in accordance with these Regulations shall take all reasonable steps to ensure that it is properly used or applied as the case may be"***. The proper use of BA is for it to be operational. An employer

who does not take reasonable steps to see that firefighters are operating BA when in an area in which they are likely to be exposed to a hazardous substance will not be meeting this obligation. Therefore it is clear that if an employer instructed their employees not to operate BA in such areas, they would not only be committing a breach but instructing their employees to commit a breach as well. This is because Regulation 8(2) goes on to provide: **“Every employee shall make full and proper use of any control measure, other thing or facility provided in accordance with these Regulations ...”** I’ll say again, full and proper use of BA is to turn it on when entering an area in which there is a foreseeable risk of exposure to a hazardous substance.

Therefore, for these reasons I have set out the revised terms of PN633 are not compliant with the obligations of the LFC under the 1974 Act and the associated regulations. And the negative consequences of such don’t just fall onto firefighter, it also sets up liabilities and serious reputational damage for the fire and rescue service.

STRIKING THE BALANCE

I note the HSE publication “Striking the Balance”, a document asked to be circulated to panellists by the chair, it addresses the matter of ‘balance’ with other duties to some degree but doesn’t go as far as to address the legal complexity of the relevant issues we are discussing today. It certainly doesn’t state that employers can justify committing breaches of duty in order to discharge other perceived obligations. One sentence in the publication that is of particular note is:

“The HSWA, therefore, does not require all risks to be eliminated, and HSE recognises that, even when all reasonably practicable precautions have been taken to deal with foreseeable risks, harm could still occur”.

This statement strongly suggests that the HSE expects all reasonably practicable measures to be taken but recognises that even when they have been taken residual risks will remain. It does not suggest that the HSE believes an employer can legitimately remove a measure which, for some time, it has been reasonably practicable to adopt and thereby increase a risk to an employee in order to pursue a speculative aim.

OPERATIONAL MATTERS

In this section I shall now move on to the operational considerations of PN633 and the operational flaws it contains.

The wearing of BA in order to undertake firefighting and, search and rescue remains an extremely dangerous occupation and is a role that even with the **current** high levels of control measures have led to the injury and death of firefighters. Whilst recognising the aims of the proposed revisions to PN633, it is clear on examination that it hasn’t been prepared following a thorough examination of the risk.

The proposed revisions to PN633 provides for those in Command to deploy firefighters beyond the bridgehead donned in BA but not ‘under air’. It further provides firefighters with a sanction to deploy on their own authority by donning their BA set, beyond the bridgehead and safe air environment, as a product of their own risk assessment and when they consider the atmosphere to be no longer safe. The policy considers this justified to ensure BA air supplies are not exhausted before firefighters can reach parts of the building beyond the BA set’s capacity.

The policy is silent on monitoring the physical limitations of firefighters and it doesn't detail a process for deciding and agreeing those limits of exploitation are.

Although we do note Professor Bilzon's research and the LFB's reference to it. It is very interesting work and it would be helpful to discuss and examine its findings further in relation to other work, however in regards the specific matter we are considering today, it doesn't add anything to the consideration of whether or not deploying beyond the bridgehead not under air is a safe practice. PN633 creates a deviation from a well-established and proven safe system of work and in doing so normalises an extremely high risk practice which will also have further negative consequences in regard to how firefighters and Incident Commanders (IC) manage life safety on the incident ground, in addition to the immediate and long term safety of the BA wearers themselves. And as covered previously, earlier versions of the policy acknowledge that this deployment would represent ***"an extremely high-risk activity"***.

It introduces a set of serious risks which have not been accurately assessed and controlled, risks I'll now expand on. These include the starting of sets in a non-safe air environment and prolonging the duration of a wear for a wearer working in the risk area both under and not under air. This is an unacceptable departure from existing policy and one which places firefighters at unnecessary risk of harm through foreseeable risk of breathing irrespirable, unsafe conditions and exhaustion from working beyond their physical capabilities. Additionally, it completely cuts through the accepted and proven rules which govern incident command and it removes the Incident Commander and BA Entry Control Officer (BAECO) from the leadership and management of the BA team.

BUILDINGS FAILING TO BEHAVE AS DESIGNED TO

I'll first address here the significant contradiction that runs through the provision of the policy to allow those in command to deploy firefighters beyond the bridgehead but not under air. The proposed revisions state in para 6.30 that this provision will only be ***"for the purposes of carrying out an emergency evacuation and/or mass rescue where high rise buildings have failed to behave as they are designed"***.

Yet para 6.31 goes on to provide that this is only intended to operate in protected shafts, ***"Once teams are committed through entry control in to a protected shaft they must not leave the protected shaft without starting up their BA sets and going under air."***

Once a building has failed and ceased to behave as it is designed to do so then there can be no certainty whatsoever that a protected shaft can exist, we know this both from our professional judgement and from operational precedent such as the Grenfell Tower fire. The two concepts cannot be assumed to exist at the same time. Therefore the provision in the policy is fundamentally flawed from the start.

THE BRIDGEHEAD

The bridgehead exists for a reason and serves as a vital component of a safe system of work within a high-rise premises. The bridgehead should be in safe air and, importantly here, where BA entry control procedures are established. An IC will consider it essential to establish a bridgehead to provide BA entry control.

For the reasons I will now explain, working beyond the bridgehead in the manner proposed by PN633 would undermine its very existence, it would remove the safety critical, command and control function it is designed to serve and render it incapable of safeguarding and controlling

wearers who are deployed beyond it, completely out of step with accepted and proven protocols, with the notion that the BA team will go under air at a later point.

THE BA ENTRY CONTROL OFFICER (BAECO)

I will now look to the role that the BAECO performs at the bridgehead. The BAECO performs a vital role in deploying teams within the risk area and holds an important purpose within the whole command team. The BAECO provides a consistent method for the safe and effective command, control and management of the BA wearers.

The BAECO confirms that a BA team are ready before they deploy and to do so the BAECO carries out a number of vital safety checks to ensure this.

The BAECO carries out a physical examination to ensure that the BA set is donned correctly, all ancillary equipment and communications are functioning, and that PPE is worn and worn correctly.

These procedures are critical to the safety and effectiveness of BA operations. The deviations from these procedures as proposed by PN633 will give rise to failures and it is therefore entirely foreseeable that BA teams required to go under air dynamically and within deteriorating conditions would do so in a way that would overlook these vital safety checks that would have been performed by the BAECO at the bridgehead at the point of going under air. Crews expected to don BA when faced with worsening conditions would have no choice but to don their sets in a rushed manner and in doing so completely eliminate the safe donning process, start up procedures and safety checks. This lack of supervision, outside of spans of command and control, utterly compromises the PPE of the firefighter.

It is unclear as to how a firefighter would even detect or assess the point at which an atmosphere becomes unsafe as they are being asked to do so. And it is clear that at the point of detection, whether by training, human senses or technology (all of which have their limitations) it is already too late and the exposure to harmful substances has begun. For this very reason, one of the fundamental pre-entry conditions is that BA is donned in fresh and safe air, as is reinforced in other LFB policies. This cannot be guaranteed in relation to PN 633.

The dynamic and urgent circumstances I refer to aren't without precedent. We only need consider the testimonies of firefighters who were in the failed stairwell at Grenfell or fires such as the 2003 Petershill Court fire in Strathclyde where firefighters were overcome and injured, to understand the rapid changing nature of conditions firefighters will be presented with. The latter lead to an HSE improvement notice being issued to Strathclyde Fire Brigade, a notice the LFB appears to have ignored here.

MONITORING THE BA TEAM AND TURN AROUND PRESSURE

The BAECO also plays a vital role in respect of calculating, monitoring and supervising a BA team's working duration and therefore the time at which they should remove themselves from the risk area and return to the BA Entry Control Point.

I would refer you to Lewis Ramsay's report here, in particular the sections beginning at para 4.39 on page 18, where he details this procedure and the vital role of the BAECO in some detail.

To summarise the process, at the point when the BA wearer's cylinder contents are running low the wearers will be alerted by the sound of a whistle. BA wearers are trained to return to the BA Entry Control Point at a time immediately before this whistle sounds because when it sounds there is only a limited amount of air left and therefore time to return to safety.

This practice is safety critical, and relies on calculating a Turn Around Pressure known as a TAP, the pressure at which a firefighter calculates to turn around in time to return to safety. This process and requirement is clearly set out in a number of LFB policies and documents referenced in LFB BA Policy 466. Yet the proposed revisions to PN 633 completely erodes this long-established safety procedure, and it raises serious concerns regarding the BAECO's ability to accurately monitor the proposed wear under actual operational conditions, if even possible at all.

As far as monitoring a BA team's air who have donned after deploying beyond the bridgehead, a BAECO will only have a time of whistle indicated by telemetry, if and where telemetry is still functioning. I say this last point deliberately as PN633 itself acknowledges the unreliability of telemetry and communications and that they may fail. It is also unclear as to whether LFB have surveyed any high-rise buildings within their territory for conditions which would render radio communications or telemetry inoperable or obstructed or if any such findings have informed the risk assessment. Although even when functioning, there are unanswered questions of how a BAECO would communicate with the BA team who haven't yet donned. The BA radio communications set to the BA channel 6 are fitted into the BA mask, and only audible and usable when the mask is donned properly and being worn, not when it is hanging around a wearer's neck. We already know in the sector through experience of the communications difficulties that regularly present at large scale incidents, and as a result the risk this poses to firefighters, especially those in the risk area. Various reports point to failings linked to communications failures at Kings Cross, the World Trade Center, Bethnal Green Rd, Harrow Ct, 7/7, Balmoral Bar, Lakanal House, Oldham St and Grenfell just to cite a few. We cannot develop policy reliant on communications and telemetry alone.

Either way, by telemetry and communications alone neither wearer nor BAECO will be able to accurately calculate the safe point at which a BA wearer should turn around in time to get back to safety. A concern I know the LFB are aware of as a number of employees have raised concerns on this very point and to my knowledge, are yet to receive an answer. In fact, the policy leaves it completely unclear as to where the BA team who have self-assessed when to don BA, should even return to. The bridgehead? Or the point at which they went under air? Either way, the ability to calculate a TAP would be removed by PN633.

The BAECO's responsibilities would be impossible in these circumstances where teams are permitted to go under air at their own supervision. This would destroy the validity of BA control and remove entirely the BAECO's ability to monitor the wear from point of entry to time of whistle and therefore the safe exit of the BA team. Put simply, such a deviation would remove control entirely and therefore BA teams would be operating within a risk area without proper supervision, information, or instruction. And it cannot be ignored here, the pressure placed on the BAECO by this practice, not just morally but also legally. I would remind the panel that we have already seen officers in court following incidents, and knowingly placing officers in this position is quite simply unacceptable.

GOING UNDER AIR AND PRE ENTRY CHECKS

It is important to note at this point that going under air, even once the set is on your back, whether rushed or otherwise isn't just a simple matter of placing a mask over your face as we may see in Hollywood movies.

Again I refer to Lewis Ramsay's report where he provides in detail, in paragraph 4.22 page 14, the pre entry checks that are fundamental to ensuring overall preparedness of a BA set and safety in the risk area in line with national and manufacturer's guidance as a requirement. Acknowledging that there will be local variations due to manufacturer specifications, Ramsay provides these as:

- Reset the positive pressure button
- Fully open the cylinder valve in a way that ensures the last cam is engaged thereby removing any chance that the valve wheel could inadvertently close during operations
- Check the cylinder contents ensuring they are not less than 80% of the cylinder's maximum contents
- Inspect the interior of the face mask to ensure that no debris or foreign items are present
- Don the face mask
- Gently lift the face mask seal away from the face using two fingers to ensure positive pressure
- Check the supplementary air supply button
- Hold breath and close the cylinder with hand on the cylinder valve wheel at all times
- In the closed position observe the display whilst the wearer moves their head. Hold for two seconds in each direction moved. This is to test for leaks and the display should not fall more than 60 bar
- Fully open the cylinder again as above.

These checks are not niceties, they are essential safety requirements. Having personally carried these tests out over 17 years of firefighting I can contest to this not being a process than can be cut down in time, and certainly not in importance, as I'm sure every firefighter could do. These checks exist to identify faults. The time to find a fault is at the Entry Control Board in safe air, not once deployed into the risk area rendering it impossible to rectify any failures in deteriorating conditions.

REMOVAL OF PPE

To expand on the point further, that going under air isn't simply a matter of putting on a mask, the policy revisions are silent on the fact that going under air requires the removal and adjustment of other items of PPE. The removal of gloves and helmet are a certain requirement to be able to don BA as well as the adjustment of fire hoods and fire tunics is. So by carrying out the provision of paragraph 6.30, an IC isn't only asking firefighters to proceed into a risk area without donning the identified control measure of BA in so doing instructing them not to use an item of PPE properly, but they are also knowingly instructing them to remove other items of PPE at a later, and critical stage. This practice exposes firefighters to even further risks beyond irrespirable atmospheres and presents them with risks of other injuries, burns and exposure to toxic fire effluents to just name a few.

BA EMERGENCY AND EMERGENCY TEAMS

I will now refer back to a previous statement, and one which arguably holds most significance when considering 'balance' and precisely the size of the increased risk we are being asked to 'balance'. **The wearing of BA in order to undertake firefighting and, search and rescue remains an extremely dangerous occupation and is a role that even with the current high levels of control measures have led to the injury and death of firefighters.** For all of the reasons already mentioned and more, the provisions of PN633 increase the likelihood of occasions that issues may arise which require the declaration of a BA emergency. The LFB acknowledge the increase in risk.

We must be clear here. If the proposed provisions of PN633, particularly 6.30, are adopted and implemented, and by their very explicit intentions, we deploy firefighters beyond the bridgehead to points beyond the duration and limitations of a BA set, the very thing this provision of the policy aims to achieve – we are knowingly and intentionally sending firefighters to points of the risk area beyond which an emergency BA team will be able to reach them and rescue them. In those circumstances BA wearers in distress will become **un-saveable**, and will become so knowingly and by instruction by way of the provision of this policy. The revision exists to deploy a firefighter beyond the reach of a BA set, that isn't in dispute. What we are being asked to 'balance' here is not only the intentional exposure of firefighters to an extremely high risk by removal of a previous control measure known to be reasonably practicable, but also to do so in the knowledge that if that risk is realised we are intentionally placing them beyond rescue.

There will be extreme and undeniable pressures placed on BA emergency teams deploying to rescue colleagues if they are aware that those colleagues in distress didn't don until a certain point beyond the bridgehead. Regardless of the conditions that the emergency team are exposed to prior to that point, they will know that if they want to reach their colleagues they simply cannot go under air until at least the point the wearers they are rescuing did. Air consumption all the time exacerbated by the additional sets and equipment required to be carried by an emergency team.

I'll be clearer yet, and I make no apologies for this, when it comes to intentionally deploying firefighters into situations which we are unable to rescue them from, we are talking about dead firefighters and there is absolutely no balance at all to be had with that.

The consequences of a BA wearer in distress go beyond the obvious and direct consequences to the wearer as well, and again on the subject of balance, provide no benefit to the public in that regard. In fact quite the opposite – they negatively affect any public rescue efforts. Not only will significant resources be re directed to the rescue of the BA team in the event of BA emergency, but the entire focus of the command and control and incident plan is compromised, distracted and re directed. Additional resources would be required, and the attendance of any make up would add yet further minutes to any rescue operations. We understand there is a problem to solve here, but **dead or injured rescuers cannot rescue anybody.** We are being asked here to consider balancing an intolerable risk, with a benefit we don't even know will exist and in some circumstances as just explained, would in fact be a burden, not a benefit.

TOXICOLOGY AND CONTAMINANTS

The increased risk of exposure to harmful substances and irrespirable atmosphere also presents a serious risk to health beyond causing immediate distress to BA wearers at the incident. Even if the firefighter isn't overcome at the time of exposure, thorough research has now been conducted in the UK and internationally to evidence the longer term harmful effects on the health of firefighters exposed to toxic fire effluents.

The revised policy PN633 increases the risks of firefighters' exposure to hazardous substances for the reasons already set out, which can lead to ill-health, injury and premature death.

The FBU has referenced much of this research in our submission. I make particular reference now to the most recent, and arguably most comprehensive, area of research that's been carried out. On 23 November 2020, Professor Stec and colleagues based at the University of Central Lancashire published the *Minimising Firefighters' Exposure to Toxic Fire Effluents: Interim Best Practice Report*. Amongst other methods, Professor Stec's work was informed by the indoor testing of a number of Fire Services and a UK wide contaminants survey amassing more than 10,000 responses from firefighters. We believe the biggest of its kind in the UK.

Many findings were made, but perhaps the most startling finding of the research was that 4.1% of firefighter survey respondents had already been diagnosed with cancer, compared with less than 1% of the general population. More than half were under the age of 50 and a fifth were under 40.

The report made a series of urgent recommendations to minimise firefighters' exposure to toxic fire effluents. I won't detail them all, they again are set out in our submission, I will point however to 2 in particular:

- Firefighters should wear respiratory protective equipment at all times while firefighting, including after a fire has been extinguished, but is still 'gassing off'
- BA should not be removed prematurely or **donned too late**.

It's important to note here that the Environmental Audit Committee of the House of Commons recommended that the Health and Safety Executive should work to implement this report's recommendations. And the FBU has since held an initial, informal meeting with senior HSE staff, who confirmed that all the recommendations were as expected and would not be seen as controversial.

Confusingly, although welcome at the time, the LFB have recently set out in a communication known as 'Hotwire', to all staff welcoming the report, acknowledging it provides evidence of an increased risk and commits to implementing all recommendations, including the two I've just mentioned, as quickly as possible. A position, I won't need to explain further, that is completely at odds to the revisions of PN633.

LFB RATIONALE

Looking at the LFB's submissions, particularly the section titled Operational Discretion, they make an argument that because, in the past, in certain circumstances officers have allowed firefighters to pass beyond the bridgehead without being under air that it should become LFB policy that they are empowered to instruct firefighters to do so is, this is erroneous as a justification. It cannot be an employer's argument that because an unsafe practice has been tolerated occasionally in the past it should be instituted as a devised method of work irrespective of the legal obligations to which that employer is subject and knowing that it increases risk. It's startling to note the argument that this practice was adopted at times at the

Grenfell Tower Fire. It was yes, officers and firefighters were as failed by the building and the building safety crisis that night as the residents were. Testimonies of officers and firefighters who attended repeatedly state just how lucky we are not to have lost firefighters on that night. To develop future policy in the hope that 'luck' will be repeated is unacceptable approach to health and safety.

The LFB also argue, that following the tragedy of the Grenfell Tower fire and in the absence of a national answer being arrived by government or anyone else, now that we know buildings can fail it is therefore foreseeable and the LFB has to do something. This together with other societal, media and governmental pressures on the LFB to 'do something' is a situation the FBU have great sympathy with. We in no way disregard it, and this is why our officials have worked with LFB since the Grenfell Tower fire, and will continue to on this challenge that presents itself. There has to be a response to the issues highlighted by Grenfell, but the fact remains, that the response to Grenfell has to be the correct response, not a forced response. Removing safety from firefighters does not serve to make buildings any safer, it compromises rescue efforts and the safety of residents. It simply does not address the problem LFB are looking to solve with these revisions.

SUMMARY

In summary, we see no evidence of proper assessment and control to support the proposed revisions to PN633.

LFB state that they have considered alternatives and rejected them. We are not here today to identify or evaluate alternatives and we feel that is work that still needs to be explored further. But either way, even if alternatives have been rejected after evaluation we cannot adopt an unsafe option just because it may be considered to be the least worst of the unsafe practices. It is unacceptable.

The proposed way of working intentionally breaches duties imposed on the LFC by the Health and Safety at Work Act 1974 and its regulations.

It instructs employees not to meet the regulations regards use of PPE.

It demonstrates a misinterpretation of the duties imposed by the 1974 Act.

It expressly removes the control measure which has to date been effective and thereby decreases the level of safety to employees to a level which is less than could reasonably practicably be achieved.

This brings us to the question of 'balance'.

We have demonstrated the extremely high risk which is created by the ways of working proposed in the revision of PN633.

We have demonstrated how by departing from nationally accepted and proven protocols and safe systems of work, firefighters will be exposed to harmful substances as well as the risk of other injury related to the instructed inappropriate use, application and removal of PPE.

By way of our submission and presentation, we have provided the panel with significant evidence not only of the long term risks of firefighters' exposure to hazardous substances which can lead to ill-health, injury and premature death, but of the immediate risks of situations arising placing

BA wearers in distress and resulting in a BA emergency.

We have set out, how not only would the policy provide to knowingly expose firefighters to this increased risk, but by the very clear and explicit intentions of the revisions it would place firefighters beyond the point of rescue in doing so, rendering firefighters un-saveable. An un-saveable BA team in distress, is a dead BA team. I make no apologies for repeating this point, there are no circumstances in which that is tolerable and there is no balance to be had with that.

We understand the intentions of the PN633 revisions, and as explained have sympathy with those intentions and the problem that the LFB are attempting to address. The problem of buildings not behaving as they are designed to, unsafe buildings. And the subsequent and serious challenges presented by that fact to stay put and evacuation procedures.

However, we have demonstrated that there are no practical benefits that the policy offers and instead have identified an increased level of risk. By explaining in detail how the level of risk posed demonstrates serious potential to undermine, detract and obstruct rescue efforts and fire ground operations.

In addition the LFB have only offered speculative aims and no thorough analysis of what precisely they aim to achieve by intentionally adopting this extremely high level of risk.

We conclude that at best the benefits are unclear and not fully understood and at worst they are non-existent and in fact present a burden to resident safety and rescue efforts.

The policy not only represents a serious departure from current practice, but it does not offer a better solution nor does it solve the practical problems which relate to mass evacuation or rescue in deteriorating conditions.

In conclusion, what we are being asked to balance here is the intolerable risk of dead and injured firefighters against a benefit we don't even know to exist and in operational reality will be the exact opposite of a benefit, it will compromise rescue efforts and public safety.

SECTION 6

ANDREW STRAWSON, LONDON FIRE BRIGADE: HEALTH AND SAFETY ADVISORY PANEL REPORT, 30 APRIL 2021

1. As the two sides on the Brigade Joint Committee for Health, Safety and Welfare (BJCHSW) were unable to reach agreement on certain aspects of the proposed revision of Policy Note 633 – High Rise Firefighting, an advisory panel was set up to assist management and the constituent trade unions in reaching a consensus on the issue.
2. The issue in dispute that the Panel is being convened to consider is as follows:
The dispute is in relation to the activity of deploying firefighters above the bridgehead, in safe air, wearing breathing apparatus equipment but not started up (i.e. not under air when going above the bridgehead), in specific circumstances as detailed in the 'How to manage increased risk' section (section 6; 6.20 to 6.40) of the Brigade's revised High Rise policy (Policy Note 633).
3. The Terms of Reference limit the Panel's deliberations to the specific issue in dispute but do allow the Panel to consider wider issues that affect or are affected by that issue. Accordingly, any additional recommendations are not, and are not intended to be, a full consideration of any such issues.
4. The Panel met using Microsoft Teams on Wednesday 14th April 2021 and this report summarises the presentations and discussion during the hearing. In accordance with the Terms of Reference (ToR), this report gives the Chair's conclusions and recommendations for consideration by the London Fire Commissioner (LFC). The representatives of management and the Union are to assist the Panel Chair in reaching those conclusions and recommendations but the Chair is solely responsible for them.
5. A note of the meeting was produced by the secretariat and is the record for the Brigade Joint Committee for Health, Safety and Welfare of the Panel proceedings. It is not reproduced in this report.

Terms of Reference and Panel Composition

6. The Terms of Reference of the Panel are at Appendix 1.
7. The members of the Panel were:
Andrew Strawson (Independent Chair)
DAC Andy Hearn (Representing Brigade Management)
AC Andy Bell (Representing Brigade Management)
Andy Dark, Assistant General Secretary (Representing the Fire Brigades Union)
Dave Shek, Executive Council member for the London Region (Representing the Fire Brigades Union)
8. Technical support to the Panel was provided by Adrian Bevan, Assistant Director – Health and Safety, and his team.

Background

9. Following the fire at Grenfell Tower in June 2017 and, in particular, the recommendation by the Grenfell Tower Inquiry (GTI), LFB has been working on reviewing and revising its policies for dealing with fires in high-rise buildings. The specific recommendations in the GTI Part I Report were:
 - 9e *that policies be developed for managing a transition from “stay put” to “get out”*
 - 12b *that fire and rescue services develop policies for partial and total evacuation of high-rise residential buildings and training to support them.*
10. At the Grenfell Tower fire the building suffered a serious and catastrophic failure of fire compartmentation in a way that was not foreseen by LFB. This was not the first time that standards of fire protection in high-rise buildings had failed, either because building codes were inadequate, were not followed or the structural integrity had subsequently been compromised. These failures call into question strategies for protecting residents that are based on only one or a limited number of compartments being affected by a fire, heat or smoke.
11. LFB has now undertaken a review of its policy for high-rise firefighting and published revisions to its fire survival guidance policy, together with a new policy for Evacuation and Rescue.
12. While there are a number of methods of alerting residents to the need to evacuate, it is still the case that knocking on doors to alert occupants and, as necessary, assisting those who are less mobile to evacuate, remains a key action to be carried out by firefighters at such incidents.
13. There have been other incidents that also show that fires in high-rise buildings are extremely challenging for firefighters, stretching incident commanders' skills and competence, presenting a high level of risk to both firefighters and the public.
14. The revision of PN633 is but one thread of the totality of the work to improve fire service response to high-rise incidents by LFB and in national forums.

Issue in dispute

15. The revision of PN633 has been subject to consultation with the Fire Brigades Union and one specific issue is in dispute and is for the Panel to advise on. Management propose that, in specific circumstances, firefighters be allowed to proceed past the bridgehead (and so Entry Control Point (ECP) for Breathing Apparatus (BA) purposes) wearing their BA set but not under air. The focus is on Para 6.30, although any change to this paragraph would require other changes in the policy.

Management Case

16. The rationale for this approach and information as to how the activity would be controlled is in the written presentation to the Panel (at Appendix 2) so these will not be repeated in this report. In essence, it is considered that this would enable firefighters to reach further into (or up) the building and so reach and evacuate a larger number of residents. The Risk Assessment concludes that this does present an increased risk to firefighters and so additional control measures are proposed to mitigate the increased risk.

17. In response to questions from the Fire Brigades Union presenters and the Panel, Management included the following additional points:
- The management team explained how BA start-up procedures would be different in the proposed policy;
 - There is a difference in Brigade policies between guidance and step-by-step requirements;
 - Trials to see how long it took for Firefighters to don BA took place in clean air. The proposed policy was not intended for use in smoke or otherwise compromised atmospheres;
 - Management considered the proposed policy would make it less likely that Firefighters would feel the need to go beyond that allowed;
 - Comms have been an issue at most, if not all, Firefighter fatalities and action was being taken to address the known issues. In context, the policy would be for Firefighters to withdraw in the event of a comms/telemetry failure;
 - Operations could be out of sight from the stairwell (where the safety officers would be based);
 - There had been discussions with HSE but they had not given any approval or otherwise for the proposed policy;
 - PDA has been changed for such incidents to provide EDBA sets at an earlier stage;
 - No specific evaluation of how much extra time would be provided to BA crews by the proposed policy;
 - Management hadn't specifically asked Draeger if the change in procedure affected their certification of the BA sets vis a vis it being fit for purpose but had been in contact with Draeger.
18. LFB had also commissioned the University of Bath to carry out research¹ into the physiological effects on firefighters having to climb stairs in high-rise buildings up to 120 metres, building on work done by the Building Disaster Assessment Group (BDAG) in 2004 .

Fire Brigades Union Case

19. The Fire Brigades Union (FBU) consider that the proposed policy would expose firefighters to an increased risk of injury and ill-health while not actually providing any significant benefit in terms of rescuing residents of high-rise buildings. BA is a last line of defence against hazardous substances, with well-established procedures to ensure it is used as safely and effectively as possible. They consider that there is no evidence to support moving away from these procedures. They therefore consider that the proposed policy changes are in breach of LFB's duties under the Health & Safety at Work etc. Act 1974. The arguments presented by the FBU are in their written presentation to the Panel (Appendix 3).²
20. In response to questions from the Management presenters and the Panel the FBU included the following additional points:
- The FBU were very happy to work with LFB on improved procedures but did not consider they should be suggesting alternatives;
 - The risk assessment process should be about getting safe procedures not writing into policy what Firefighters might be thought to do anyway. If Firefighters go beyond policy then that is a management issue;

¹ Bilzon JLJ and Stevenson RDM. (2021). Physiological Demands of High-Rise Operations. University of Bath on behalf of London Fire Brigade.

² Office of the Deputy Prime Minister. (2004). Physiological Assessment of Firefighting, Search and Rescue in the Built Environment. Optimal Performance Ltd on behalf of the Office for the Deputy Prime Minister, London. Fire Service Technical Report dated December 2004.

- The FBU did not include examples of telemetry failures at incidents in their presentations but could do so;
 - Everything above the bridgehead should be considered a hazardous area.
21. In addition, the FBU commissioned a report from Lewis Ramsay, a retired principal officer in the Scottish Fire Service.³ On the basis of his experience, both as a participant in relevant incidents, an investigating officer subsequent to such incidents and as part of teams reviewing and revising policies, he concludes that the additional risks to firefighters by implementing the proposal outweigh any benefits that might be gained.

Context

22. The specific change proposed does not sit in isolation and so there are two more general issues that I consider need some analysis before turning to the issue in dispute. These are the legal framework and how it should be applied and then what is termed “Operational Discretion”.

Legal Framework

23. I have to make it clear that only the courts can provide a definitive view on the interpretation of the law and that I am, in any event, not a lawyer. However, I had many years’ experience as an Inspector with the Health and Safety Executive (HSE) providing advice to employers and others on the practical implementation of health and safety law and making decisions on appropriate enforcement action. I was also project manager for HSE’s work with the police and fire services giving guidance on how they should comply with health and safety legislation while fulfilling their other duties to protect the public.⁴
24. The most relevant health and safety provisions are Sections 2 and 3 of the Health & Safety at Work etc. Act 1974 (dealing with an employer’s duties to employees and non-employees respectively). Regulations made under that Act include the Management of Health and Safety at Work Regulations 1999, the Control of Substances Hazardous to Health Regulations 2002 and the Personal Protective Equipment at Work Regulations 1992. The key issue is how the qualification “so far as is reasonably practicable” should be interpreted in the context of the work of the Fire and Rescue Service.
25. London Fire Brigade also has duties under the Fire and Rescue Services Act 2004, Human Rights legislation and (potentially) Equalities legislation.
26. As far as I am aware, no legal judgements have directly addressed the issue that the Panel is considering. The most useful appears to be the case of *A and others v East Sussex County Council* and another - [2003] All ER (D) 233 (Feb). This was a judicial review of a County Council’s decisions regarding manual handling of severely disabled clients for whom the council was required to provide a care package. A judicial review primarily considers the process of decision making, that is whether the public body has gone about its business in the right way, rather than the content of the decision, which would only be set aside if it was irrational, i.e. so unreasonable that no reasonable person, acting reasonably, could have made it.

³ Ramsay L. (2021). The Practical Danger Involved in Firefighters Going beyond the Bridgehead without Breathing Apparatus. Report for the Fire Brigades Union.

⁴ Striking the balance between operational and health and safety duties in the Fire and Rescue Service. (2010) Health and Safety Executive
Striking the balance between operational and health and safety duties in the Police Service. (2018) Health and Safety Executive

27. Clearly the actual circumstances are very different but the judgement set out certain principles that relate to circumstances where there are several different legal requirements all of which have to be complied with. It is a lengthy judgement, much of which is not relevant to the general issue of how London Fire Brigade complies with the various duties. The judgement does, however, address how “reasonably practicable” should be interpreted, balancing “cost and benefit”. The principle involved was set out in *Edwards v National Coal Board* [1949] 1 KB 704 where the Court of Appeal had to consider the meaning of the phrase “reasonably practicable”. To quote:

“Reasonably practicable” is a narrower term than “physically possible” and seems to me to imply that a computation must be made by the owner, in which the quantum of risk is placed on one scale and the sacrifice involved in the measures necessary for averting the risk (whether in money, time or trouble) is placed in the other; and that if it be shown that there is a gross disproportion between them - the risk being insignificant in relation to the sacrifice - the defendants discharge the onus on them.

28. In the application of this principle to the emergency services, the judge in the *East Sussex* case refers to a number of other cases and clarifies the factors relevant to that computation as follows:

an employee whose job is to lift people (the ambulance man) may have to accept a greater degree of risk than one who is employed to move inanimate objects (the furniture remover) and that what is reasonable (and, I would add, practicable) has to be evaluated having regard to the social utility of the operation and a public authority's duties to the public and to the particular member of the public who has called for the authority's help. At the same time one has to recognise, of course, that none of this can justify exposing an employee to “unacceptable risk”. (My emphasis)

In considering what may be an “unacceptable risk” I take note of the judge's comment:

There may be no duty to rescue unless the rescuer is employed and paid to do so, but even the paid rescuer is not required to play the hero, much as we may applaud the heroism so often displayed, for example, by members of the emergency services.

29. In passing, I note that the FBU submission suggests that the scope of Section 3 of the Health & Safety at Work etc. Act 1974 is somewhat limited. I do not agree with that interpretation. The Health and Safety Executive, as a matter of policy, does not get involved in certain “public safety” issues where there are other, more appropriate, regulatory regimes but that is not a legal limitation of scope. Fortunately, nothing depends on the issue, so I do not need to consider it further.

30. Overall then, the computation to be made when assessing compliance with a “reasonably practicable” duty by London Fire Brigade has to consider all the risks involved in a particular policy or procedure, the difficulty of carrying out the policy or procedure and the object to be achieved, e.g. the saving of life. A course of action, involving considerable risk to firefighters, may only be justified when the public benefit of saving life is also considerable. Conditions during the type of incident being considered will change over the course of the incident, potentially very quickly. The computation as to what is “reasonably practicable” may well change as well to reflect the different conditions and actions required.

Operational Discretion

31. One justification given for the change of policy is that management know that, on occasion, firefighters have gone beyond the ECP not under air, in order to conserve air for subsequent evacuation and/or rescue. I am not clear whether any assessment has been made as to whether it was under the circumstances envisaged in the proposed policy or what difference it made to deployment. The suggestion is that such action is now foreseeable and so management are required to either explicitly ban such action or incorporate it into an official policy. While I appreciate the reason for this view, I am not convinced that such a stark dichotomy is necessary.
32. While there are many common characteristics, every incident is unique and presents particular challenges. Incident Commanders devise action plans for each incident based on the service's policy framework, their training and experience, the resources available at the time and the setting of appropriate objectives. It is not possible and, in my view, not in general desirable for policies and procedures to be over prescriptive. Rather, most policies and procedures should provide a sound but flexible framework within which Incident Commanders can devise as good action plans as possible, given the likely lack of complete information and the way in which incidents and develop and change very quickly. This is part of "normal" business and there should be no need to work outside the framework to which firefighters and Incident Commanders are trained.
33. However, there are some policies that, correctly, lay down quite strict procedures which are necessary for the safety of firefighters or enable those actions to be done quickly and effectively even under the stress of incidents. One such policy is that for the deployment of Breathing Apparatus (BA).
34. In London Fire Brigade, Operational Discretion is taken to be the ability of an Incident Commander to work outside a policy, on a rare occasion when the policy clearly does not envisage the situation being encountered. It may be that the deviation will involve equipment being used in ways that are not envisaged or agreed by the manufacturer. This could particularly be the case where life is immediately at risk and so urgent action should be taken, subject always to a robust risk/benefit analysis.
35. I consider that generally policies should provide an adequate and suitable framework that enables Incident Commanders to devise appropriate and, so far as is reasonably practicable, safe plans at incidents. Those that require strict procedures should be positive in language (such and such must be done) but do not need to contain explicit prohibitions unless management intend that any deviation (irrespective of circumstances) will lead to disciplinary action.
36. Policies cannot deal with every eventuality found at incidents and singling out particular scenarios in otherwise framework policies could lead to Incident Commanders focussing on inappropriate courses of action. I recognise the concern that Incident Commanders may feel vulnerable to subsequent investigation if injury or death occurs and that following policy is felt to be a safeguard. HSE's document does provide some assurance in that decisions will not be revisited with the benefit of hindsight (except, of course, as learning points for the future).

Breathing Apparatus (BA)

37. BA is a critical part of the Personal Protective Equipment (PPE) provided for firefighters. It is, I hope, common ground that proper use of BA is vital and procedures need to be followed in order to ensure safety.
38. It must be noted that PPE is the last line of defence against hazards encountered in the workplace. All other control measures must be considered and, if possible, applied before relying on PPE. Even when PPE is used, care is needed as, in the majority of cases, PPE only provides partial protection. BA is, perhaps, very good at protecting the wearer but that protection does depend critically on how well it fits and the surrounding management measures.
39. The Fire Service almost never has significant control over the physical environment in which firefighters work. It follows that most, if not all, of the control measures that would ordinarily be used to control exposures to hazardous substances will not be available when saving life and so PPE, specifically BA, will be the normal means of protection for firefighters.
40. In order to provide protection, BA has to be worn at all times when the wearer is in a hazardous atmosphere, there are grounds to suppose the atmosphere is already hazardous or the atmosphere may become hazardous while the wearer is present.
41. An important part of the management measures is the correct use of the Entry Control Board (ECB) at the Entry Control Point (ECP) and the role of the Entry Control Officer (ECO or BAECO). Together, these monitor firefighters who are wearing BA and working in hazardous (or deemed hazardous) environments. Recognising the real possibility of firefighters getting into difficulty and/or running out of air, a back-up rescue team is available at the ECP. If it is to be of use, the rescue team has to be able to reach the firefighter who is in difficulty and withdraw with that firefighter to a place of safety.
42. The start-up procedure for BA at the ECP includes:
 - Physical check of the BA set etc. by a second person (either a “buddy”, probably the other BA Team member, or the BAECO, although the BA Policy is not really clear about responsibilities here);
 - Face-fit test to check for any leakage;
 - Entry of the BA set Tally into the ECB, which starts the time to whistle (at which point the wearer needs to be back in clean air);
43. Under the proposed procedure, having carried out a normal start-up at the ECP, under the supervision of the BAECO, the wearer will then remove their mask and close down the air supply (which resets the ECB to zero). When they reach the point at which they decide to start up again, they will go through the face-fit test etc. Provided the telemetry connects, the ECB will then show the time remaining from that point. However, the time to whistle is calculated by the board on the basis of a return to this point above the ECP and not to the ECP itself. Checks at the point where the second start-up take place cannot be done by the BAECO, relying on the other team member.

Benefits and risks

44. The benefit of adopting the proposed procedure is that firefighters carrying out the evacuation of a residential high-rise building would be able to spend longer contacting and assisting residents before the limits on their air supply required withdrawal to a safe place. This would be particularly the case where a significant time was taken up climbing to higher floors of the building. Therefore, more floors could be covered than would be the case if all access beyond the ECP was “under air” and so more residents would be evacuated who would otherwise be at risk of death due to the failure of built-in fire compartmentation. It may appear strange to members of the public if firefighters are wearing BA in what appears to be clear air.
45. Firefighters entering a high-rise building to fight fires and evacuate residents face various hazards, irrespective of whether or not they go “under air” beyond the ECP. However, a number of additional hazards can be identified leading to an additional risk of firefighters being affected by a hazardous atmosphere:
- Face-fit procedures may not be followed as rigorously reducing the level of protection afforded by the BA set;
 - Uncertainty over the point at which firefighters should go under air;
 - Reduced monitoring by the BAECO;
 - Possibility that firefighters will have gone beyond the reach of emergency crews, even in Extended Duration Breathing Apparatus (EDBA);
 - Since the fixed fire control measures in the building have already failed, uncertainty over what contaminants have entered or will enter the stairway;
 - Greater reliance on the integrity of comms/telemetry which could lead to the ECB not picking up when a firefighter has gone under air.
46. An additional factor to consider is that the additional control measures require Stairwell Safety Officers. There is a lack of clarity in the proposed policy about their deployment, e.g. whether they are under air; how it is decided whether it is safe for them. As they also would have to work in teams of two, the resource requirement is high.
47. Separate work has been done on the impact on firefighters’ health of contamination by hazardous substances in fires.⁵ One of the recommendations (all of which I am told are regarded as non-contentious) is **“BA should not be removed prematurely or donned too late”**.

Findings

48. I have considered the written submissions from both management and the FBU, the additional material presented at the Panel hearing on the 14th April and the other documents and reports provided to the Panel. On the basis of all the information available to me I have the following findings:
- a) LFB is presented with a difficult, if not impossible, task in dealing with fires in many residential high-rise buildings. The evidence is clear that, at the moment, fire compartmentation cannot always be relied on to protect residents;
 - b) In the long-term improvements to building safety will provide considerably better protection for residents. However, even then fire spreading beyond the original compartment cannot be ruled out and mass evacuation of residents may be required;

⁵ A Stc. Minimising Firefighters’ Exposure to Toxic Fire Effluents: Interim Best Practice Report, (2020) UCLan for the FBU.

- c) Research shows that there are physiological limits to how far firefighters can climb up a high-rise building without core body temperatures rising to an unacceptable level. There may, therefore, be parts of a high-rise building that firefighters cannot reach irrespective of whether the proposal is implemented;
- d) As the proposed procedure requires the stairwell to be free from contaminants it is likely to be most useful in the early stages of an incident before compartmentation is compromised;
- e) Historically, evacuation at this early stage has not been a consideration because of reliance upon and trust in the past effectiveness of compartmentation and perhaps because resources sent as part of the pre-determined attendance have been limited;
- f) Firefighters entering hazardous atmospheres rely on BA for protection as other measures in the hierarchy of control are not available. It is important that BA is used correctly and that a sound management system is in place to ensure that and to monitor wearers. Donning BA too late or removing too early have been identified as involving extra risk;
- g) Emergency teams are an integral part of a sound management system, required by the Confined Spaces Regulations 1997 and plans need to provide for the emergency teams to be able to reach any firefighter who needs their assistance/rescue;
- h) Firefighters are trained in the correct procedures and any variation during an incident has the potential to lead to confusion and so improper use. Therefore, it would require very clear benefits to justify moving away from those procedures;
- i) Incident Commanders have the task of devising and implementing appropriate plans that include saving saveable life. The purpose of policies and procedures is to provide a sound framework within which Incident Commanders can be trained and so plan an effective and safe way of dealing with incidents;
- j) Given the caveats in the proposed policy, there are quite limited circumstances in which it could be of benefit while there being adequate resources to implement it;
- k) In my opinion the inclusion of the procedure in PN633 could lead to it being regarded as a normal procedure rather than one for truly exceptional circumstances.

Recommendation

- 49. My recommendation is that the proposed procedure in Para 6.30 of the latest draft of PN633 be removed as it does not represent appropriate and best practice at fires in high-rise buildings.
- 50. In the course of the Panel deliberations it appeared that there were some inconsistencies and omissions in the proposed procedure. I am not of the opinion that rectifying these inconsistencies and omissions would change the recommendation.

Other matters

- 51. The scope of the Panel deliberations was limited to considering whether firefighters going above the bridgehead “not under air” was an acceptable policy to include in the revised PN633. In particular, no real consideration was given to alternatives and no recommendations can be made. However, I am aware that LFB has the task of devising policies for dealing with fires in high-rise buildings. Many of the solutions are outside LFB’s control but I suggest further consideration be given to the benefits and risks involved in a different “stay put/get out” policy, at least for these currently very high risk buildings, and ways in which LFB can communicate with residents at all stages of an incident.

52. I suggest the application of “Operational Discretion” be reviewed. It can refer to the way in which action plans are devised within the framework of policies or how action plans are devised when situations arise that have not been foreseen within policies.
53. Para 7.4.2 of the existing policy (more or less transcribed into 5.4.2 in the proposed policy) allows Firefighters (not wearing BA) to be deployed beyond the ECP for the specific task of closing open valves on a rising main. I was not asked to consider that paragraph, but I suggest further consideration be given as to whether, in current circumstances, it is appropriate advice.

Thanks

54. I would like to thank all parties for their submissions, presentations and very constructive participation in the discussions including all the supplementary information provided throughout the day. I would also like to thank the panel members for their assistance and spirit of co-operation. Their helpful input has clarified many issues for me. However, as provided for in the Terms of Reference, I am responsible for the conclusions and recommendation.
55. The Panel would also like to thank the secretariat for their assistance in running the panel so smoothly

Andrew Strawson
Chair, Health and Safety Advisory Panel
30 April 2021

APPENDIX 1

HEALTH AND SAFETY ADVISORY PANEL – TERMS OF REFERENCE

Brigade policy 222 ‘Safety Representatives and Safety Committees’ provides for the referral to a Health and Safety Advisory Panel (the ‘Panel’) in circumstances where the two sides of the Brigade Joint Committee for Health, Safety and Welfare (BJCHSW) are unable to reach consensus on any matter under discussion.

The Panel is intended to assist management and the constituent trade unions to reach a consensus on health and safety issues. The underlying principle of this procedure is that health and safety matters are consultative and not subject to negotiation.

The Panel is ‘advisory’; it cannot produce any conclusions or recommendations that are binding on the Commissioner. Its task is to consider all of the information before it and come to a conclusion. It is then for the Chair of the Panel to summarise the conclusions and prepare a written submission to the Commissioner giving the Panel’s comments and observations as to the cause of lack of consensus and legitimacy of the views expressed.

The Commissioner must have regard to the submissions before making a decision on how the issue should be resolved. The legal duties for health and safety rest with the employer and the final response to any health and safety issue is for the Commissioner to determine.

The Panel will be restricted to the issue under dispute (which must be agreed in advance of the provision of written submissions) and not broadened out to other Brigade activities. However, other policies and procedures may be considered in as much as they impact on or are affected by the issue under dispute.

1. MEMBERSHIP OF THE PANEL

The Panel is comprised of:

- The Panel Chair. An independent person with the required competence to manage both the panel and to review evidence and provide recommendations on an appropriate course of action.
The panel Chair is identified by the Assistant Director Health and Safety and will be appointed following agreement between Management and trade union Joint Secretaries to BJCHSW.
The Assistant Director Health and Safety will, wherever possible, nominate a health and safety practitioner or other specialist appropriate to the nature of the issue under debate.
- 2 representatives of Brigade management. Representatives should not be substantive members of the BJCHSW.
- 2 representatives of trade unions. Representatives should not be substantive members of the BJCHSW.

2. WHAT WILL THE PANEL DO

- Consider written submissions from Brigade management and the trade unions in relation to the issue under dispute
- Consider, via questioning in the Panel hearing, any issues that have not been fully understood through written submissions or background reports or evidence
- Provide support to the Chair such that the Chair can effectively make their determination on the matter in dispute
- Provide support to the Chair such that the Chair can effectively identify any recommendations that may be required to be presented to the Commissioner

3. SPECIFIC RESPONSIBILITIES OF THE CHAIR OF THE PANEL

- The Chair of the Panel is responsible for the proper conduct of the Panel hearing, which will include:
 - Ensuring the Panel hearing is conducted impartially and efficiently, taking into account the further guidance for the Chair (see Annex 1)
 - Ensuring the hearing is restricted to matters relevant to the issue under dispute, which has been agreed in advance
 - Ensuring relevant evidence is heard
 - Ensuring members of the Panel and staff invited to attend the Panel behave appropriately toward each other
- The Chair is solely responsible for summarising the conclusions of the Panel and preparing written submissions to the Commissioner.
- The Chair, on making their decision in relation to the matter under dispute, will provide this in writing, normally within two weeks of the Panel hearing (this may be varied depending on the complexity and outcome of the Panel hearing). This will include a written summary of the Panel hearing, the Chair's decision on the matter in dispute and any recommendations to the Commissioner.

4. PANEL SUPPORT AND ADMINISTRATION.

Meeting support and administration is provided by the Brigade's Health and Safety team. This will include facilitating the provision of reports, written submissions and other supporting documentation in advance of the Panel, in organising the Panel itself and in administrative support to the Chair in preparing their report and recommendations.

The Health and Safety team will assist in convening the Panel hearing and in recording the hearing (e.g. minute taking) where this is required.

GUIDANCE NOTES FOR THE CHAIRING OF THE HEALTH AND SAFETY ADVISORY PANEL

The Chair shall open the meeting of the Panel and call on members and advisers to identify themselves.

- 1 The Chair will agree with Panel members which party shall make the first presentation to the panel.
- 2 Any member of the Panel may question any adviser as necessary through the Chair (or otherwise directed or agreed by the Chair).
- 3 When the submissions of all parties have been heard, and the Chair is satisfied there are no outstanding questions, the Chair shall require the advisers to leave the Panel to its deliberations.
- 4 The Panel shall discuss the submissions, in support of the Chair reaching a conclusion on the matter that has been referred
- 5 The Chair shall summarise the conclusion and shall prepare a written submission to the Commissioner giving the Panel's comments and observations as to the nature and cause to the lack of consensus and the legitimacy of the views expressed by all parties to the debate.
- 6 The advisers to the Panel shall be informed as soon as is practical of the content of the written submission to the Commissioner.

SECTION 7

FBU, LETTER TO THE NFCC, 26 MAY 2021

26 May 2021

Mark Hardingham
Chair
National Fire Chiefs Council
The Chief Fire Officers Association

Dear Mark,

You are aware of the outcome of the meeting of the London Fire Brigade's (LFB's) Health and Safety Advisory Panel (HSAP) held on 14 April 2021.

The matter under consideration was the LFB's proposed revision to its High Rise Firefighting policy Note PN633, and in particular the 'How to manage increased risk' section (section 6; 6.20 to 6.4) and the provision contained within it to permit and instruct the deployment of firefighters beyond the bridgehead wearing Breathing Apparatus (BA) but not 'under air'.

The FBU challenged this provision on grounds of safety and legality. We argued that the policy was fundamentally flawed; would lead to a seriously increased risk of death and injury for firefighters and would do nothing to improve public safety but instead put high rise residents at even greater risk.

The LFB's HSAP process comprised a written submission by each of the two parties to the disagreement (FBU and LFB management) which were then presented to a meeting of the panel, conducted remotely.

The panel chair is a suitably qualified person who is mutually acceptable to both sides of the of the London Fire Brigade's joint health and safety committee. In this instance the person selected was Mr Andrew Strawson, a former HSE inspector with long and well-respected experience of fire service matters.

The independent chair concluded after hearing the arguments from both sides that LFB should withdraw the proposed unsafe procedure of sending firefighters beyond the entry control point when not under air. The FBU were successful in our challenge. The recommendations are:

49. *My recommendation is that the proposed procedure in Para 6.30 of the latest draft of PN633 be removed as it does not represent appropriate and best practice at fires in high-rise buildings.*
50. *In the course of the Panel deliberations it appeared that there were some inconsistencies and omissions in the proposed procedure. I am not of the opinion that rectifying these inconsistencies and omissions would change the recommendation.*

The recommendations unequivocally advise that the disputed practice should not be implemented and makes clear that this is a matter of principle, the principle of firefighters being deployed in **circumstances where** they are required to wear BA but they are not under air, rather than the drafting or wording of the procedure. I have attached the final HSAP report for your reference.

The FBU is fully committed to negotiating new high rise policies that learn lessons from the Grenfell Tower fire. However the FBU cannot accept the introduction of any procedures that put firefighters and residents at greater risk.

The advantages of the HSAP mechanism in place in London, through the joint agreement between LFB and the FBU for some years, is obvious. It has allowed for genuine independent scrutiny and, all being well, has obviated the need for the union to seek redress through the courts or other more direct but also prolonged, expensive and divisive approaches.

The terms of reference of the LFB's HSAP are specific to matters considered in the context of the LFB. However, as I am sure you appreciate, the report and the Chair's detailed findings therein have significance beyond the London Fire Brigade. The FBU has been made aware that some other FRSs have similar arrangements to those set out in paragraph 6.30 of the proposed revised version of LFB's PN633, and indeed the NFCC has produced national guidance for Fires in Tall Buildings that promotes or allows this unsafe practice. The FBU is clear that such policies, if introduced, would be unlawful.

The FBU believes it is necessary for the NFCC to retract and remove this advice / guidance with immediate effect and communicate this action to all FRS's.

In a similar vein, the introduction or maintenance of any such element within BA policy or practice by any fire and rescue service will not be acceptable to us. The FBU will be seeking an immediate removal of the practice in any and every FRS that currently has it in place. The FBU trusts that the NFCC will provide advice to those FRSs recommending such removal in order that the matter will be resolved without the need for any alternative recourse. We hope that we can now work together to identify a way forward on addressing the current fire safety crisis in the interests of the communities we serve, specifically residents of high rise buildings, taking full account of the need to protect the safety of firefighters.

Yours sincerely,

Riccardo la Torre
National Officer

SECTION 8

NFCC, RESPONSE TO THE FBU LETTER, 10 JUNE 2021

Riccardo la Torre
National Officer
Fire Brigades Union

10 June 2021

Dear Riccardo

I refer to your letter of 26 May 2021. The National Fire Chiefs Council (NFCC) has been in dialogue with London Fire Brigade (LFB) in relation to this matter and we are aware of the findings of LFB's Health and Safety Advisory Panel.

It is clear that this is a difficult matter, created in large part due to the fire safety issues in the built environment, the cause of which does not lie with the fire and rescue service. This difficult operational issue has significant implications for the public, fire services and responding firefighters. We will continue to work with the LFB, the Fire Brigades Union (FBU), and other important partners, to study and understand the findings from LFB's Health and Safety Advisory Panel and how they pertain to NFCC and other FRS.

Ultimately, public and firefighter safety is most effectively achieved within a safer built environment – both within existing buildings and those that continue to be built across the UK. In that regard, the NFCC and its Protection policy team is playing a significant role informing and advising Government and other bodies, as well as supporting UK FRS Protection teams, to create and play an important part in a better building safety system that has the safety of residents and responding firefighters as its core purpose.

However, it is clear that despite these efforts, the issues across the built environment will not be resolved for many years and will likely always remain to some degree, and we need to plan and provide guidance accordingly.

We welcome the short-term plans to arrange a meeting between the NFCC, LFB, Home Office and the FBU to work together and seek an acceptable outcome. We further welcome the efforts to involve the Health and Safety Executive as part of discussions given the potential implications.

For some time, the NFCC has sought to support fire services through the development of National Operational Guidance, informed by National Operational Learning, that balances the expectations and needs of the public with the safety of firefighters. National Operational Guidance relating to Fires in Tall Buildings is clear, informed and evidenced guidance. It builds on previous guidance and reflects, in part, activity that has been underway in FRS for many years. As with all guidance, it is subject to ongoing review through the outcomes of National Operational Learning and other means. In this context we are of course considering the report in the context of NOG, in discussion with how other FRS have applied NOG or aspects of it (in some cases for several years), and from the perspective of foreseeability and the application of operational discretion.

In closing, at this stage, and until those discussions have been exhausted, we will maintain the existing guidance. We will be engaging with all FRS to discuss this further and, as set out previously, welcome the continued meetings with yourselves and LFB.

Yours sincerely

Mark Hardingham QFSM

Chair

National Fire Chiefs Council

SECTION 9

FBU, LETTER TO THE HSE, 27 MAY 2022

27 May 2022

Carol Downes MBE
HM Inspector of Health and Safety
Health and Safety Executive

Dear Carol

Contraventions of statutory obligations by the Hampshire and Isle of Wight Fire and Rescue Authority and the Dorset and Wiltshire Fire and Rescue Authority

The Fire Brigades Union (“FBU”) is the union recognised to represent the interests of firefighters who serve in the fire and rescue services operated by the authorities which are the subject of this report.

In this letter the FBU serves to make a formal report to the Health and Safety Executive (“HSE”) about certain operating provisions that have been introduced by a number of fire and rescue authorities in England and which have committed those authorities to working practices which are both unlawful and unsafe for firefighters who serve under them.

The working practices which the fire and rescue authorities intend to implement are unlawful because they cannot operate without contravening their obligations as employers to firefighters under the Health and Safety at Work etc. Act 1974 (“the 1974 Act”); the Management of Health and Safety at Work Regulations 1999 (“the 1999 Regulations”); Control of Substances Hazardous to Health Regulations 2002 (“the 2002 Regulations”) and / or the Personal Protective Equipment at Work Regulations 1992 (“the 1992 Regulations”).

The intended new working practices are also demonstrably unsafe because they involve the removal of long established control measures which protect employees against foreseeable risks and because they condone and permit the exposure of firefighters to levels of risk which are far greater than could be achieved by the use of readily available and established control measures. The established control measures have long been identified as being appropriate as a consequence of the obligation to meet regulatory requirements; the obligation to meet manufacturers’ advised methods of use to make the equipment’s use fit for intended purpose; necessary to mitigate or remove the hazards which have led to serious firefighter injury or death at fires and other incidents.

The FBU is making this report to the HSE following a recent decision of the High Court which stated that the decisions by the fire and rescue authorities to implement such provisions were not, in the first instance, amenable to judicial review but were instead decisions as to working practices which the HSE held the statutory obligation and power to investigate.

We shall summarise the unsafe operating provisions which we understand each fire and rescue authority is seeking to implement and then explain the grounds for the FBU’s concern.

The unsafe operating practices

The Hampshire and Isle of Wight Fire and Rescue Authority (“HIWFRA”) is a fire and rescue authority for the purposes of s.1 of the Fire and Rescue Services Act 2004 (“the 2004 Act”). It was created by Article 4 of the Hampshire and Isle of Wight Fire and Rescue Authority (Combination Scheme) Order 2020 (as amended). Its statutory obligations are discharged by the Hampshire and Isle of Wight Fire and Rescue Service (“HIWFRS”).

The Dorset and Wiltshire Fire and Rescue Authority (“DWFRS”) is also a fire and rescue authority for the purposes of s.1 of the 2004 Act. It was created by Article 2 of the Dorset and Wiltshire Fire and Rescue Authority (Combination Scheme) Order 2015. Its statutory obligations are discharged by the Dorset and Wiltshire Fire and Rescue Service (“DWFRS”).

Along with Devon and Cornwall Fire and Rescue Service, HWFRS and DWFRS are members of the Networked Fire Services Partnership (“NFSP”). Although documents which contain operating practices are published bearing the NFSP name, the individual fire and rescue services which are the NFSP’s constituent members do not uniformly adopt or follow those operating practices. Rather, each fire and rescue service makes its own decisions as to which NFSP published operating practices it wishes to adopt.

In June 2021 the HIWFRS circulated in draft form Operational Prompt 1049 and Tactical Guidance 003. These documents, which were published by the NFSP, contained new operating procedures for the use of personnel without activated breathing apparatus as part of stairwell protection teams in tall buildings. In a letter dated 24 June 2021 the FBU set out its opposition to the proposed operating procedures but, on 9 July 2021 the Chief Fire Officer for the HIWFRS stated in writing his intention to adopt and implement the new operating procedures. Despite a request by the FBU that the new operating procedures be subject to consultation and scrutiny by the Joint Health and Safety Committee within the HIWFRS, on 1 October 2021 the HIWFRS made the decision to implement the operating procedures contained in Operational Information Note 11B21 Stairwell Protection (“OIN – 11B21”), TG003 - Fires in Tall Buildings (“TG003”), and Operational Prompt 1049 Stairwell Protection Teams (“OP 1049”).

In December 2021 the FBU became aware of the DWFRS’s intention also to introduce into operational practice the contents of OIN – 11B21, TG003, and OP 1049. The FBU again objected to the introduction of the operating procedures set out in the above documents. On 10 December 2021 a letter was sent by the FBU to DWFRS setting out the FBU’s objections. Despite the FBU’s opposition, DWFRS introduced the new operating procedures on 10 December 2021. These operating procedures were introduced unilaterally without DWFRS providing a formal response to the concerns set out by the appointed safety representatives.

We attach copies of OIN – 11B21, TG003 and OP 1049 to this letter.

OIN – 11B21 contains revised procedures for the use of stairwell protection teams in tall *“buildings performing as expected”*. OIN – 11B21 authorises personnel not under air (i.e. without activated breathing apparatus) to be deployed, as members of stairwell protection teams, beyond the entry control point (“ECP”) or bridgeheads in buildings in which a fire was located. As you may be aware, the bridgehead acts as the point of demarcation between areas of “safe air” and areas in which there exists a foreseeable risk for personnel to be exposed to hazardous substances. The published guidance of the National Fire Chiefs Council (“NFCC”) on the function of the bridgehead as a control measure expressly includes as a factor for consideration in the location of a bridgehead the provision that it should be located in a

“Safe air environment necessary to start up BA”. The NFCC guidance can be found here: <https://www.ukfrs.com/guidance/search/bridgehead?msckid=a08b7433b9a011ec8c45f5184a184f3a>

A PDF version downloaded on 26 May 2022 is attached to this letter in case the online guidance should subsequently be altered.

The ECP is therefore commonly situated at the bridgehead.

OIN – 11B21 permits deployment into the stairwell areas in which smoke or products of combustion could become present whilst the members of the stairwell protection teams are not in use of activated breathing apparatus. It also recognises that its operating procedure requires personnel to enter areas of tall buildings, beyond the bridgehead, where the atmosphere has the potential to become hazardous whilst the wearer is present.

In the latter respect OIN – 11B21 recognises that the operating procedure it contains foreseeably requires personnel to be present in areas where the air is hazardous without activated breathing apparatus and in areas where the atmosphere may change from being safe to unsafe air in an instant. The procedure for the second eventuality is stated to be:

“When the gas monitor that the SPT is carrying alarms, they must go “under air” and return to the bridgehead. The IC can then redeploy them under air to monitor condition if it is confirmed that the building is not failing”.

The reference to “gas monitors” as a relevant control measure within OIN – 11B21 is a source of concern to the FBU. Gas monitors are no substitute for activated breathing apparatus as a form of personal protective equipment. Technical information about the operational properties of gas monitors is underdeveloped and very far from sufficient to provide any clear sense of their capacity to provide protection. It is, at present, entirely unclear as to how gas monitors are able to detect or convey necessary information about the range of substances with the potential to cause harm to firefighters beyond the bridgehead. It remains unclear from any published scientific material of which the FBU is aware as to the substances or particulates which gas monitors are able to detect. Even for those substances which they may be able to detect, gas monitors are not able to indicate the rate at which the environment will become harmful, whether the wearer has the time to complete safety checks and go under air, or if a place of safety even exists to which the wearer may retreat.

Inherent in the above operating procedure is (i) the recognition that OIN – 11B21 authorises personnel to work in areas where the atmosphere has the potential to become hazardous whilst the wearer is present and where it is unsafe for them to attempt to activate previously non-activated breathing apparatus; (ii) an acceptance that personnel may be exposed to unsafe air without use of breathing apparatus for an unpredictable and unmeasurable period of time whilst they attempt to activate their breathing apparatus under uncontrolled conditions; (iii) an acceptance that members of stairwell protection teams may be exposed to the risk of attempting to activate breathing apparatus in hazardous air and / or conditions.

Further OIN – 11B21 tacitly recognises that its operating procedures, which authorise the deployment of personnel beyond the bridgehead without being “under air” (i.e. without activated protective breathing apparatus), differ from the operating procedures instituted by neighbouring fire and rescue services. It contains an express instruction that personnel from neighbouring fire and rescue services should not be instructed to serve in a stairwell protection team under the proposed procedure – “BA wearers from neighbouring FRS’s should not be deployed to work as STP’s”.

The revised provisions in OIN – 11B21 are inconsistent with guidance contained in the most recently published National Operational Guidance (NOG) Foundation for Breathing Apparatus which require all breathing apparatus to be donned and removed in safe air (i.e. in a safe area not beyond the bridgehead). This guidance is reproduced in the NFSP's own Operational Article on the Functional Role and Duties of a BA Wearer and Team Leader (OA014BA) which expressly requires all wearers to "Ensure BA is donned and fitted correctly in safe air".

The revised provisions are also inconsistent with relevant manufacturer's instructions on use of breathing apparatus. We include the published manufacturer's instructions and user manuals for Drager FPS 7000 and Interspiro Incurve-E. As can be seen, both require breathing apparatus only to be donned and doffed in safe air.

The manufacturer of relevant breathing apparatus sets and facemasks has also set out these instructions in supplementary videos. We include a link to an example of which can be seen here for the benefit of the HSE. <https://youtu.be/OFaEDuvzDNw>

The instructions clearly show that, amongst other tests, a seal test has to be carried out (in fresh air) with a seal not compromised by debris and a seal confirmed. The video shows one method of doing this. FRSs commonly, if not universally, achieve seal test by a slightly altered method of turning off the cylinder whilst the mask is donned, keeping one hand on the cylinder valve and breathing in until the mask sucks to the wearer's face and a seal is achieved. However, a seal test by one method or another takes time and must be carried out in safe air, in good lighting. It must be carried out in an environment where there is no immediate distraction or imperative not to do the test thoroughly, without undue pressure and where there is an opportunity to discard a set and readily obtain a replacement in the event of test failure. The imposed procedure doesn't allow for this.

These safety critical facemask seal tests and donning procedures are also set out and expanded upon in the attached HIWFRS Training Manual.

In order to understand the necessity of activating breathing apparatus in safe air prior to passing beyond the bridgehead / ECP, it is important to understand the process involved in activating the apparatus. As the relevant user manuals and training instructions make clear, the process of ensuring that the breathing apparatus is in a safely usable condition requires the wearer to establish and check that the facemasks effectively sealed at the start of use. An effective seal can only be achieved when the breathing apparatus is activated. In simple terms, the face piece cannot be worn unless the breathing apparatus is activated. Therefore any person deployed beyond the bridgehead without activated breathing apparatus would not be able to wear the face piece in anticipation of its future use. Any firefighter deployed beyond the bridgehead with non-activated breathing apparatus who was confronted with the need to activate breathing apparatus would need to remove both their firehood and their helmet in order to don the face piece and then replace each item. For obvious reasons, an operating procedure which requires a firefighter to remove protective clothing in an area of a tall building beyond the bridgehead is inherently unsafe. This fact compounds the manifest lack of safety in a procedure which requires firefighters to attempt to don and test breathing apparatus in emergency conditions, with the air either being hazardous or rapidly becoming so at unknown speed.

In his attached reports, Mr. Lewis Ramsay has set out comprehensively how the tests required to don and activate breathing apparatus would be completely undermined in rushed or dynamic conditions, and in some cases impossible to achieve in the conditions presented by the procedures in question.

No attempt is made in OIN – 11B21 to identify any reputable guidance that authorises or recommends a safe method of work which involves the deployment of personnel without activated breathing apparatus where the atmosphere has the potential to become hazardous whilst the wearer is present and therefore requires the activation of breathing apparatus outside of safe air. OIN – 11B21 does not seek to identify any benefit purported to be gained by the increased level of risk to which it exposes members of stairwell protections teams. The FBU is unaware of any appropriate risk assessment by a competent person which has been undertaken by HIWFRA or DWFRA in respect of the new operating procedures. It is unaware of any expert advice (or advice from a competent person) which has been obtained by HIWFRA or DWFRA concerning the amended operating procedures.

In similar terms, OP1049 authorises personnel to pass beyond the bridgehead/ECP as part of a stairwell protection team without activated breathing apparatus in order to undertake a number of listed tasks. The diagrams contained within OP1049 indicate that personnel without activated breathing apparatus can be expected to access floors at the very top of high rise buildings, potentially 20 or more floors beyond a bridgehead. OP1049 contains a confused instruction that on *“encounter [with] irrespirable/ hazardous conditions (e.g. multi gas monitor alarm sounds, or pre-agreed gas levels are reached), SPTs must start up BA”* and only then *“withdraw to ‘safe air’ (such as a corridor or protected lobby)”*. There is no consideration for a procedure to be adopted in the foreseeable (indeed highly probable) event of there being no such corridor or lobby available.

The grounds for the FBU’s concern about the unsafe and unlawful working practices for personnel introduced by the revised operating procedures are informed by the fact that the new working practices cited above are contrary to the National Operational Guidance for Breathing Apparatus, published by the Department for Communities and Local Government and the Chief Fire and Rescue Adviser. The National Operational Guidance for Breathing Apparatus was published in January 2014. It was withdrawn in March 2020 without any substitute guidance being published.

The context of the introduction of the new operating practices

In February 2020 the London Fire Commissioner (“LFC”), published plans to make materially the same revisions to its operational policy for High Rise Firefighting (“PN633”). The proposed revisions to PN633 by the LFC authorised the deployment of personnel equipped with non-activated breathing apparatus to areas beyond the ECP at the bridgehead in high rise buildings where the atmosphere had the potential to become hazardous whilst the wearer was present.

The proposed revisions by the LFC were subject to a formal, collectively agreed, consultation process. The process included a consideration of the proposed operational policy by a Health and Safety Advisory Panel chaired by Mr. Andrew Strawson. Mr. Strawson was an independent expert in health and safety. He was employed as the Head of Health and Safety at East Sussex Fire and Rescue Service for around 13 years. Prior to that, for most of his career, Mr. Strawson was an Inspector employed by the HSE.

The review by the LFC Health and Safety Advisory Panel represents the only occasion to date on which the safety of operating procedures which permit the deployment of personnel beyond the bridgehead during fire in tall buildings have been subject to scrutiny by an independent and suitably qualified expert. It came as no surprise to the FBU that those operating procedures were found to be fundamentally unsafe.

In a decision published in April 2021 Mr. Strawson determined that the proposed revision to the operational policy which permitted personnel to be admitted to areas beyond the bridgehead ECP where the atmosphere had the potential to become hazardous was inherently

unsafe. He considered whether any modifications to the proposals were capable of rendering the operational policy safe and appropriate but held that they could not. The departure from a safe system of working, to which every FRS adhered for decades, to a principle of permitting personnel to go beyond an established bridgehead without activated breathing apparatus was, in itself, unacceptably unsafe. A copy of that decision is provided to the HSE with this letter. As a result of the findings of the Health and Safety Advisory Panel, the LFC correctly withdrew the proposed revisions to its PN633.

One of the documents which was provided for consideration by the Panel was a report by Mr. Lewis Ramsay. From 2008 to 2019 Mr. Ramsay was the Assistant Chief Officer in the Scottish FRS. He was the Director responsible for Fire Safety Enforcement, Community Safety, Fire Engineering and Fire Investigation as well as Director of Response and Resilience and Service Delivery. He had jurisdiction over all Scottish operational policy and its implementation including those which referred to BA, Incident Command and High-Rise Buildings. He also served as a Director of the Chief Fire Officers Association and in this role had responsibility for Prevention, Protection and Road Safety.

Mr. Ramsay conducted a careful analysis of the proposed plans and identified a number of serious flaws to them in terms of health and safety. We have attached a copy of that report to this letter. Mr. Ramsay has subsequently produced reports which address similar concerns with the safety of the practices introduced by HIWFRA and DWFRA which are the subject of this report to the HSE. He has provided cogent and professional evidence as to why such working practices as the operating procedures permit are fundamentally unsafe. Copies of those reports are also provided to the HSE with this letter.

As can be seen, there is no material difference in terms of risk to personnel between the proposed revision to working practice set out in the HIWFRA's and DWFRA's proposed operating procedures for stairwell protection teams and that rejected by the LFC in relation to the now abandoned proposed revisions in PN633. Both operational policies authorised the deployment of personnel not under air (i.e. without operative breathing apparatus) into areas in high rise buildings where the atmosphere has the potential to become hazardous whilst the wearer was present.

Prior to HIWFRA's introduction of its new operating procedures, to the best of the FBU's knowledge, the only fire and rescue authority in England which authorised the deployment of personnel without activated breathing apparatus beyond the bridgehead during fires in tall buildings was Greater Manchester Combined Authority ("GMCA"). However, on 10 December 2021 GMCA announced, in a document entitled Ops Alert, its decision to revoke its operating procedure for fires in high rise buildings which permitted personnel to pass beyond the bridgehead without activated breathing apparatus. The FBU believes that GMCA revoked its earlier decision following concerns being raised about the safety and lawfulness of the relevant operating procedures. The operating procedure revoked by GMCA was materially the same as that which HIWFRA and DWFRA have since introduced.

Following the revocation of the unsafe operating procedure, GMCA and local FBU safety representatives are now in the latter stages of consultation with the view to develop a safe and agreeable SPT policy, where all functions beyond the bridgehead are carried out by personnel in activated breathing apparatus.

It may well be significant that none of the fire and rescue authorities which contain the metropolitan conurbations (e.g. London, Birmingham, Manchester) in which the vast majority of the country's tall buildings are situated are now seeking to introduce unsafe operating procedures for fires in such buildings which permit deployment beyond the bridgehead / ECP of personnel without activated breathing apparatus.

The FBU made an application to the Administrative Court for judicial review of the decision by HIWFRA to introduce the practices identified above. On 10 February 2022 Sir Duncan Ousely, sitting as a judge of the High Court, refused to grant permission for the application to be heard on the grounds that the HSE were the body tasked with investigating concerns about the safety and lawfulness of the relevant operating practices. It is for that reason that the FBU now makes this report to the HSE about its concerns as to the unlawful and dangerous practices recently introduced by the relevant fire and rescue authorities.

Contraventions of statutory obligations

This report to the HSE is founded on the FBU's belief that the unsafe procedures the relevant fire and rescue authorities have introduced breach a number of statutory obligations to which they are subject and which it lies within the power of the HSE to enforce.

As we have said, fundamental to the operating procedure for stairwell safety in high rise buildings is the institution of the bridgehead (normally where the breathing apparatus ECP is situated) as the point of demarcation between areas of "safe air" and areas in which there exists a foreseeable risk for personnel to be exposed to a hazardous substance. Areas beyond the ECP are areas in which there is a risk of exposure to hazardous airborne substances. Each of the relevant fire and rescue authorities' proposals authorise personnel to be deployed within the latter area without activated breathing apparatus. They thereby permit exposure to a risk which it is reasonably practicable to avoid. If implemented, they would fail to meet the primary objective of the hierarchy of risk controls *i.e. elimination of a risk*.

Each of the fire and rescue authorities (or the fire and rescue services through which they discharge their obligations) are employers. As employers they are subject to the obligations imposed by the 1974 Act and regulations made under s.15 of the 1974 Act. The FBU believes that by the newly introduced operating procedures each fire and rescue authority contravenes statutory obligations which serve to protect the health and safety of employees whilst at work. Accordingly, the FBU is making this report to the HSE, as the HSE is the statutory body tasked with investigation and enforcement of such contraventions.

By way of further explanation, the operational authorisation for deployment of personnel beyond the bridgehead ECP without activated breathing apparatus, which is a constituent feature of each newly introduced operating procedure, is a method of work which directly contravenes the requirements imposed for use of personal protective equipment for which the 2002 Regulations provide.

- Regulation 7(1) of the 2002 Regulations provides: "Every employer shall ensure that the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled". An employer is required to discharge this duty first by preventing exposure to a hazardous substance and, only in circumstances where that is not reasonably practicable, by "*adequately controlling*" it.
- Regulation 7(3) of the 2002 Regulations provides for the means by which the obligation to control exposure is to be achieved. It states: 7(3) *Where it is not reasonably practicable to prevent exposure to a substance hazardous to health, the employer shall comply with his duty of control under paragraph (1) by applying protection measures appropriate to the activity and consistent with the risk assessment, including, in order of priority—*
 - (a) *the design and use of appropriate work processes, systems and engineering controls and the provision and use of suitable work equipment and materials;*
 - (b) *the control of exposure at source, including adequate ventilation systems and appropriate organisational measures; and*

- (c) where adequate control of exposure cannot be achieved by other means, the provision of suitable personal protective equipment in addition to the measures required by sub-paragraphs (a) and (b).*

An employer is therefore subject to a duty to adequately control exposure to substances hazardous to health where it can demonstrate that it was not reasonably practicable to avoid exposure. The duty to control exposure adequately is absolute. As we do not need to remind you, it is not a defence for an employer to show that it was not reasonably practicable to control exposure adequately. Regulation 7(3)(c) requires an employer, as a last resort, to provide employees with suitable personal protective equipment in order adequately to control their exposure to hazardous substances. It does not countenance the concept of reasonable practicability as a reason not to provide such equipment. For the purposes of the 2002 Regulations breathing apparatus is neither suitable nor even protective equipment unless activated.

- Further Regulation 8(1) of the 2002 Regulations provides that: *“Every employer who provides any control measure, other thing or facility in accordance with these Regulations shall take all reasonable steps to ensure that it is properly used or applied as the case may be”.*

For breathing apparatus, as a form of respiratory protective equipment, to be properly used it must be operational. For an employer not to take reasonable steps to ensure that firefighters have activated breathing apparatus when in an area in which they had the potential to be exposed to a hazardous substance, indeed to authorise the non-activation of breathing apparatus, constitutes a breach of Regulation 8(1) of the 2002 Regulations. For an employer to instruct employees not to operate breathing apparatus in relevant areas would constitute not only the commission of a breach but an instruction to employees to commit a breach. This is because Regulation 8(2) provides: *“Every employee shall make full and proper use of any control measure, other thing or facility provided in accordance with these Regulations...”* Full and proper use of breathing apparatus is to turn it on and be under air when entering an area in which there is a foreseeable risk of exposure to a hazardous substance.

Further, each fire and rescue authority, as an employer, is subject to the provisions of the 1992 Regulations.

- Regulation 4(1) of the 1992 Regulations provides: *“every employer shall ensure that suitable personal protective equipment is provided to his employees who may be exposed to a risk to their health or safety while at work except where and to the extent that such risk has been adequately controlled by other means which are equally or more effective”.*
- Regulation 4(3)(a) of the 1992 Regulations provides that equipment shall not be suitable unless it is appropriate for the risks involved, the conditions at the place where exposure to the risk may occur and the period for which it is worn.
- Regulation 4(3)(d) states that equipment will not be suitable unless, so far as is practicable, it is effective to prevent or adequately control the risk involved without increasing overall risk.
- Regulation 10(1) provides that every employer shall take all reasonable steps to ensure that any personal protective equipment provided to his employees by virtue of Regulation 4(1) is properly used.

The system of work permitted under the newly introduced operational requirements in which employees may be instructed (and therefore required) to enter into areas in which there is

a foreseeable risk that smoke, toxins or fumes harmful to their health may become present without using effective respiratory protection directly contravenes the Regulation 4 of the 1992 Regulations. For an employer to cause or permit an employee to enter an area where there is foreseeable risk of harmful smoke or other substances without operational breathing apparatus constitutes a breach of Regulation 10. The obligation under Regulation 4(1) is not qualified by a defence of reasonable practicability.

Further, employers are subject to the requirements of the 1999 Regulations and the general principles of prevention for which Schedule 1 of those Regulations provides. The newly introduced operating procedures identify a risk which is capable of avoidance, and which prior to the introduction of the permitted deployment beyond the bridgehead ECP of personnel without activated breathing apparatus was avoided, but then re-introduces the risk. Such a procedure is a breach of Regulation 4 of the 1999 Regulations.

Further, each fire and rescue authority (as an employer) is subject to the obligations imposed on employers by the 1974 Act. S.2(1) of the 1974 Act provides is: *"It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees"*. The obligation imposed by s.2(1) is strict. S.3(1) of the 1974 Act provides as follows: *"It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health and safety"*.

The newly introduced operating procedure which authorises deployment of personnel without activated breathing apparatus beyond the ECP expressly removes the fundamental control measure which serves to protect firefighters from risk of death and serious injury by the inhalation of smoke and hazardous substances. It thereby decreases the level of safety to employees to a level which is less than could reasonably practicably be achieved. As such it necessitates a breach of a statutory duty to which each employer is subject.

Further concerns

The FBU has very real concerns about the risks to which the operating procedures identified above expose serving firefighters because of its experience of a number of incidents in which injuries and deaths have resulted from exposure to hazardous air conditions which developed rapidly and unpredictably. We provide the following examples, of which the HSE is doubtless aware. In each case we provide a link which gives further details of the incidents concerned.

- On 17 November 2004 during a fire in a tall building at Petershill Court, Strathclyde a firefighter suffered very serious injury as a result of not wearing activated breathing apparatus in an area in which the air became hazardous almost instantly. The air safety changed with such rapidity that there was no time for breathing apparatus to be activated before injury occurred. The incident serves to show not only how quickly and unpredictably the quality of air in a building can change but how obviously unsafe it is to permit personnel without activated breathing apparatus to enter areas in which changes in air quality are foreseeable.
<https://www.ife.org.uk/Firefighter-Safety-Incidents/2003-petershill-court/38513>
- On 2 February 2005 at Harrow Court in Stevenage, Hertfordshire two firefighters lost their lives as a result of an unpredictable rapid fire development, in which an area became fatally hazardous at rapid speed.
<https://www.ife.org.uk/Firefighter-Safety-Incidents/2005-harrow-court/34309>

- On 6 April 2010 at Shirley Towers in Shirley, Southampton two firefighters lost their lives again as a result of an unpredictable rapid fire development, in which conditions became fatally hazardous in an instant.

<https://www.ife.org.uk/Firefighter-Safety-Incidents/shirley-towers-2010/34619>

Any operating procedure which is predicated on the premise that changes in air quality cannot occur instantly or that rapid fire development will leave time for firefighters to remove their protective clothing in order to don and test their breathing apparatus is fundamentally flawed and manifestly unsafe.

Conclusion

For the reasons set out above, we wish to report HIWFRA and DWFRA to the HSE. We seek for the HSE to investigate our complaint and use its statutory powers to bring an end to the unsafe and unlawful practices to which HIWFRA and DWFRA have committed. Should the HSE require further information which it is in the power of the FBU to provide, we are happy to assist. Do please let us know if further material is required. We also extend the offer to meet and discuss the contents of this letter further at the earliest opportunity.

The FBU understands that at present neither the HIWFRS nor the DWFRS have attempted to make use of the new operating procedures during the course of a real fire. Nevertheless, the FBU has concerns that it is only a matter of time before a foolish attempt is made to do so. This is therefore a case in which there is an urgency to the need for the HSE to use its powers to bring these obviously unsafe practices to an end.

We are aware that, in addition to the FRSs mentioned in the body of this letter, others are considering imposing similar new procedures. We understand that we may not properly be able to ask you to take action against what are at this stage mere proposals but we consider that these initiatives add to the potential risk involved here and to the need for the HSE to act with urgency on this matter.

Yours sincerely

Matt Wrack
General Secretary

Riccardo la Torre
National Officer

SECTION 10

BIBLIOGRAPHY

The following documents are referred to in the FBU's letter to HSE, 27 May 2022 and elsewhere in this publication.

Dorset and Wiltshire Fire and Rescue, Stairwell Protection. Operational Information Note 11B21, December 2021

Draeger, Facemask with Filter Attachment, EDS/10/14/14 (IJ 3/02)

Dräger, FPS 7000: Instructions for use. Edition 01. August 2017

Dräger, PSS 7000 Series with Sentinel 7000. Self-contained breathing apparatus with electronic monitoring system. Edition 06. January 2020

Hampshire Fire and Rescue Service, Breathing Apparatus Training Manual. Version 1.2. 25 March 2020

Interspiro, INCURVE-E Generic User Manual (EN). 55168C01. 2017

NFCC, Control measure. Bridgehead. National Operational Guidance.

Networked Fire Services Partnership, Operational Article. Functional Role and Duties of a BA Wearer and Team Leader. OA014BA v2.0. March 2019

Networked Fire Services Partnership, Stairwell Protection Teams, Operational Prompt 1049. 10 March 2021

Networked Fire Services Partnership, Tactical Guidance 003. Fires in Tall Buildings. 10 March 2021

Lewis Ramsay, Report for the Fire Brigades Union. Supplementary Report. The Practical Danger Involved in Firefighters Going beyond the Bridgehead without Breathing Apparatus – a Comparison with DWFRS Proposals. 28 January 2022

Lewis Ramsay, Report for the Fire Brigades Union. Supplementary Report. The Practical Danger Involved in Firefighters Going beyond the Bridgehead without Breathing Apparatus – a Comparison with HIWFRS Proposals. 12 August 2021

Lewis Ramsay, Report for the Fire Brigades Union: The Practical Danger Involved in Firefighters Going beyond the Bridgehead without Breathing Apparatus. 22 March 2021

Andrew Strawson, Covering Letter. 30 April 2021

Andrew Strawson, London Fire Brigade: Health and Safety Advisory Panel Report, 30 April 2021

ISBN: 978-0-9930244-3-6
June 2022



Bradley House
68 Coombe Road
Kingston upon Thames
Surrey KT2 7AE
twitter: @fbunational
website: www.fbu.org.uk