

Urban Firefighting Training

Report to:

Date:

Investment & Finance Board.....	26 October 2023
Commissioner's Board	7 November 2023
Deputy Mayor's Fire and Resilience Board.....	21 November 2023
London Fire Commissioner	

Report by:

Daniel Kipling, Deputy Assistant Commissioner, Learning and Professional Development

Report classification:

For decision

For publication

PART ONE

Non-confidential facts and advice to the decision-maker

Executive Summary

This report provides a roadmap for delivering the Urban Firefighting Course – a modern, realistic, and challenging real fire training course. It explains the reasons why London Fire Brigade (LFB) need to invest in their training for fighting fires to achieve the industry standard, and comprehensively deliver on the recommendations of the Regulator, and learning from major incidents including the Grenfell Tower fire.

The report details the cost of upskilling operational staff to carry out Positive Pressure Ventilation (PPV). It proposes the next steps for developing this core skills course into a modern, future-proofed training Centre of Excellence in partnership with the Brigade's training partner, Babcock Training Limited (BTL).

Proposed decision – the London Fire Commissioner

The London Fire Commissioner agrees to commit expenditure set out in Part Two for the purposes of developing the Urban Firefighting Course. This includes:

- delivering a two-day Positive Pressure Ventilation (PPV) course for station-based operational staff over a two-year period
- delivering a two-day advanced fire behaviour training course for firefighters on development
- procuring PPV fans and ancillary equipment for 142 pumping appliances, with associated vehicle modifications

In addition, it is recommended that the London Fire Commissioner explores long-term investment in partnership with LFB's training provider to develop a Centre of Excellence for fire behaviour training following the implementation of PPV.

1 Introduction and background

- 1.1 The London Fire Brigade (LFB) training offer, whether provided by Babcock or through local delivery, requires a radical overhaul to ensure it meets the demands of an emergency service responsible for the safety of a global city. LFB currently has a good baseline level of training provision, but it is clear from experiences over the last few years that it is no longer aligned to the risks faced today, or those anticipated for the future, so requires significant investments and resource to address this gap.
- 1.2 There is demonstrable evidence that failure to understand fire behaviour and adapt to changing circumstances leads to accidents, injuries, and firefighter fatalities. This evidence is detailed in Appendix 1.
- 1.3 The London Fire Brigade (LFB) Community Risk Management Plan (CRMP) 'Your London Fire Brigade' was published on 1 January 2023. The CRMP describes four pillars that the Brigade will work to over the

life of the plan, from which derive eight commitments to London and Londoners.

- 1.4 The Delivery Plan explains how LFB will achieve those commitments. The commitment to ‘adapt our services as your needs change’ is delivered through modern fire and rescue technology, training, and tactics. Introducing PPV and building to the Urban Firefighting Course is critical to achieving this aim.
- 1.5 LFB’s Response strategy details the organisation’s Assessment of Risk, which notes fire involving purpose-built flats and fire involving houses and bungalows as the highest likelihood risks, with most serious consequences. The Urban Firefighting Course is listed as part of the mitigation for these risks, by ensuring *‘that our firefighters have the necessary skills, equipment and vehicles to protect London, its people, and to work safely’* and allowing us to *‘adopt the most modern fire and rescue technology and tactics, to enable us respond better to all types of emerging risks’*.
- 1.6 Understanding fire behaviour and its relationship to building construction is essential for firefighters to stay safe, be effective and save life. Fighting fires in the complex and changing built environment has become more challenging. An agile training strategy about fighting fires is required to ensure operational staff are competent in understanding fire behaviour and applying appropriate tactics in this environment.
- 1.7 The Grenfell Tower Inquiry recommended that LFB ‘develop policies and training to ensure better deployments and use of resources’ and ‘that all fire and rescue services ensure that their personnel at all levels understand the risk of fire taking hold in the external walls of high-rise buildings and know how to recognise it when it occurs’.
- 1.8 The Lakanal House Rule 43 letter to the LFB recommended training on how ‘to anticipate that a fire might behave in a manner inconsistent with the compartmentation principle and ‘to be aware of the risks to those above and adjacent to the fire flat’.
- 1.9 Training must include the opportunity for staff to undertake a learning experience where they can make mistakes in a safe environment, practice their skills in realistic conditions with the appropriate level of scale and challenge and where those skills can be assessed and assured.
- 1.10 Transforming LFB into a modern fire service which uses the latest firefighting technology requires a training venue and training course which delivers realistic, challenging environments beyond what is currently provided by LFB’s facilities.
- 1.11 In planning the Urban Firefighting Course, LFB has reviewed current delivery of training against the industry standard (National Operational Guidance – N.O.G). This course will allow LFB to train staff in N.O.G training specifications currently not achievable at existing training venues.
- 1.12 Specifically, this skills gap relates to firefighter’s understanding of tactical ventilation to control fire behaviour, and the use of a technique known as Positive Pressure Ventilation (PPV). PPV is used by Fire Services worldwide to control the environment within a structure that is on fire or filled with hazardous fumes. Firefighters manipulate ventilation flow paths in a building to influence fire behaviour, often using mechanical fans to assist.
- 1.13 His Majesty’s Inspectorate of Constabulary and Fire and Rescue Services (HMICFRS) also recognised in broader terms the need to modernise LFB’s operational response to improve service to Londoners. In their last inspection of LFB in 2021/22 they found that:
 - The Brigade should make sure it puts in place and delivers a plan to adopt N.O.G
 - The Brigade should make sure its response strategy provides the most appropriate response for the public in line with its integrated risk management plan.
 - The Brigade needs to train all staff properly for their roles.
- 1.14 The restrictions of LFB’s baseline training offer are recognised in a range of risks on LFB’s corporate risk register, which can be mitigated by progressive, realistic, and challenging fire behaviour training:
 - Failure to achieve minimum service standards delivery (N.O.G) places the wider community

at risk: this proposal will address this gap.

- Failure to identify organisational learning through investigation and review of the LFB's response to the Grenfell Tower fire means that poor performance is repeated in the future exposing staff and public to unacceptable safety hazards. This course progresses the work already carried out in response to Phase 1 of the Grenfell Tower Inquiry and provides a vehicle to sustain change.
- The Grenfell Tower Public Inquiry results in further conclusions about Brigade policies or actions which reduce staff or public confidence. This course addresses some of the anticipated outcomes of Phase 2 of the Grenfell Tower Inquiry.
- The Brigade's leadership is not sufficiently focused on delivering an effective and improving safety culture to prevent injuries and ill health. Investing in risk critical staff training, and providing modern techniques and technologies demonstrates a commitment to a health and safety culture.
- Failure to identify high impact, low frequency events and train for them which exposes the safety of our staff their competence to deal with them. A modern, flexible training facility provides the vehicle to train staff on incident types which replicate the complexity and scale of the risk in London. This is currently not possible at LFB's existing venues.
- In an emergent and unregulated alternative fuels market, the Brigade is unable to keep pace with new fire and rescue responses to alternative fuel technology applications, complex fire dynamics and commercial uptake which potentially exposes the safety of our staff and the public at incidents. The facilities provided by this new training initiative provide the flexibility and realism to test and train on new and emergent risks.
- Lack of support afforded to trainees during their apprenticeships leaves trainees isolated from the Brigade and at risk from harm, from the start of their career journey at training school through to end point assessment. This proposal creates a bespoke two-day advanced fire behaviour course for trainees, which will support trainees in their journey onto station.

1.15 A full breakdown of these risks is detailed in Appendix 2.

1.16 Investing in staff development is also key to driving behavioural change and professionalising the service following the findings of the Independent Review of Culture. Delivering a challenging and realistic training environment is totemic in demonstrating to staff that LFB is changing.

2 Existing training provision for fighting fires

2.1 Following the Firefighter Development (FFD) training programme, a firefighter should have an adequate level of knowledge to respond to emergencies under supervision. It is recognized that the existing 13-week programme requires enhancement, and this is recognized in the 2023-26 training plan.

2.2 Continuous professional development (CPD) is currently provided through:

- Development and Maintenance of Operational Professionalism (DaMOP). Primarily watch-led and station-based training on basic core skills e.g. Pumps and pumping.
- Two-day firefighting course. An annual course combining classroom and practical application at a Real Fire Training Venue (RFTV) in London – Becton or Park Royal Training Centres.
- Borough exercises. Four-pump and large-scale exercises to practise DaMOP skills and support borough training plans and response to local risks.
- Breathing Apparatus (BA) exercises at area BA chambers

2.3 The two-day firefighting course is currently the primary learning opportunity to understand fire

behaviour and practise tactics. It also assists the London Fire Commissioner (LFC) to meet the minimum training requirement stipulated in the N.O.G breathing apparatus (NOGBA) training specification.

- 2.4 This specification requires the competence of personnel who undertake BA roles to be 'assessed at least once within a two-year period...in realistic conditions, including heat and smoke.'
- 2.5 The course content changes annually in response to learning from incidents; safety events; incident management process and national and international learning. All theory content is available on BigLearning to ensure legacy material is accessible.
- 2.6 DaMOP content is also updated where practises change as a result of these learning opportunities.
- 2.7 Some subject areas are complex and are built upon each year, as they take time to embed, for example, understanding fire dynamics and anti-ventilation.
- 2.8 RFTVs can facilitate foundation training for firefighting skills. However, a gap analysis of N.O.G firefighting competencies identified areas of required improvement.
- 2.9 This analysis also identified efficiencies where RFTV can be optimized by using other venues to deliver content that does not require real fires (such as BA Chambers).
- 2.10 As well as contributing to the funding of the Urban Firefighting Course, these efficiencies will also enable the release of staff.

3 Objectives and expected outcomes

- 3.1 The objective of this paper is to secure funding to introduce a real fire training course at a training venue where products of combustion can vent outside of the fire compartment. This course will be delivered to 4,320 fire station-based operational staff.
- 3.2 The delivery of this course represents an increase in the training delivery to operational staff, and as such capacity for staff release is an important factor. There are a range of measures that the project team have considered to manage this, including the phasing of the training, improving efficiencies in existing training delivery and the training plan for 2024/25.
- 3.3 A breakdown of the cost of this proposal is detailed in Part Two as Appendix 3 and includes the cost of procuring the equipment to introduce this skill.
- 3.4 Delivery of this course and capability will mitigate a range of corporate risks, as detailed in Appendix 1.
- 3.5 Initially, this will be a two-day course focused on introducing Positive Pressure Ventilation (PPV) for all operational staff. Training for this core skill cannot currently be carried out in London. PPV is a skills requirement within N.O.G and is a foundation skill from which more complex and challenging training can be built.
- 3.6 Training will be rolled out by Borough over a two-year period. The order in which Boroughs will participate in training will be based on the historic risk of fire in that Borough.
- 3.7 This proposal is included in the 2023-26 Training Plan (LFC-23-073) under Phase 1 of the 'Transforming our Future' section, which is a growth bid. BTL have committed to delivering the volume of courses alongside existing courses within the framework of the training contract.
- 3.8 Firefighters on development will also receive a separate two-day advanced fire behaviour course.
- 3.9 It is proposed this training takes place at the Fire Service College (FSC), delivered via the BTL training contract. The FSC has the capacity and facilities to deliver on the course requirements.
- 3.10 Work has been undertaken in partnership with BTL to investigate suitable training venues. This established that it is not possible to build a venue within London that meets the requirements of the course.

- 3.11 Venues outside of London in close enough proximity to facilitate the course were also considered. These included West Midlands Fire and Rescue Service, Northamptonshire Fire and Rescue Service and the services bordering London. However, these are unable to manage the capacity that would be required alongside their own training needs; others would not be able to deliver the required learning outcomes.
- 3.12 It is proposed that the existing two-day firefighting course delivered within London is reduced to one day, with content focused on foundation knowledge. This recognises that more advanced real fire training is delivered on the Urban Firefighting Course and delivers saving in Training Units equivalent to £2,328,300 per year.

4. Funding and Future development

- 4.1 In order to truly realise its ambition to become a leading fire and rescue service in modern firefighting technologies and tactics, LFB must continue to train staff in complex and challenging real fire environments.
- 4.2 Due to the large-scale investment required in this area and past decisions made around training provision (notably the outsourcing to BTL in a long-term contract), it will not be achievable for LFB to deliver the level of capability uplift required from existing revenue budgets and also to deliver a balanced budget, without making significant reductions to services.
- 4.3 Therefore, at this point the LFB is proposing an investment bid to fund additional firefighter training to ensure modern day standards are upheld. The funding for this bid is subject to commercial sensitivities, and as such is detailed in Part Two.
- 4.4 After the delivery of the PPV course, LFB will look to build on the establishment of this core skill, as well as continue to deliver CPD.
- 4.5 This will take place in year three and will be delivered in partnership with BTL to develop the best commercial model which considers the need to minimise up front capital required from LFB, provide an exceptional bespoke urban training environment and balance the best value for money solution with an appropriate return for Babcock. This is intended to move LFB away from the Fire Service College and into its own facility.
- 4.6 As detailed in 3.11, LFB have identified the training unit equivalent of £2,328,300 efficiencies in training to support this and will look for support from central and local government to sustain this over the longer term.

5. Equality comments

- 5.1 The LFC and the Deputy Mayor for Fire and Resilience are required to have due regard to the Public Sector Equality Duty (section 149 of the Equality Act 2010) when taking decisions. This in broad terms involves understanding the potential impact of policy and decisions on different people, taking this into account and then evidencing how decisions were reached.
- 5.2 It is important to note that consideration of the Public Sector Equality Duty is not a one-off task. The duty must be fulfilled before taking a decision, at the time of taking a decision, and after the decision has been taken.
- 5.3 The protected characteristics are: age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership (but only in respect of the requirements to have due regard to the need to eliminate discrimination), race (ethnic or national origins, colour or nationality), religion or belief (including lack of belief), sex, and sexual orientation.
- 5.4 The Public Sector Equality Duty requires decision-takers in the exercise of all their functions, to have due regard to the need to:
- eliminate discrimination, harassment and victimisation and other prohibited conduct.
 - advance equality of opportunity between people who share a relevant protected characteristic and persons who do not share it.

- foster good relations between people who share a relevant protected characteristic and persons who do not share it.
- 5.5 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:
- remove or minimise disadvantages suffered by persons who share a relevant protected characteristic where those disadvantages are connected to that characteristic.
 - take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.
 - encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.
- 5.6 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.
- 5.7 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:
- tackle prejudice
 - promote understanding.
- 5.8 The development of the Equalities Impact Assessment (EIA) for this proposal has identified that there are a number of impacts and opportunities for this course. For instance, as this is a residential course it will impact on people with caring responsibilities. Data indicates that women are proportionately more likely to be carers than men, so would be disproportionately affected. There is also an opportunity here to consider gender neutral facilities in the selection of training venue. The design of the course provides an opportunity to mitigate some of these impacts, such as thorough course planning (providing advance notice of any training) and selection of facilities.
- 5.9 The course's aim is to align LFB operational staff with modern, national standards of fire behaviour and fire equipment, which means that it will result in saving lives of Londoners more efficiently. That means that the course has potentially highly positive impact on the LFB customers (London communities) and LFB staff (less risk and fewer injuries). In particular, the residents of high rises and council estates, who are often immigrants and non-English speakers, but also those who are fragile, like the elderly and people with disabilities, meaning that this provides positive opportunities.
- 5.10 The EIA that has been produced is an initial assessment to identify potential impacts in securing the budget to design and deliver this course. This will continue to be developed in partnership with Inclusion colleagues as the course design matures to ensure as far as possible that the training is accessible to all relevant staff groups, and the opportunities of its delivery are fully realised for both staff and Londoners.

6 Other considerations

Workforce comments

- 6.1** Workforce engagement indicates that investment in training is welcomed, as is the implementation of modern firefighting technology and tactics. Trade Unions, in particular the Fire Brigades Union (FBU) and Fire Officers Association (FOA), which represents the majority of station-based staff and officers, will require significant consultation as part of the course development, and will require a place on the project board.

Sustainability comments

- 6.2** To ensure sustainability, all strategies, policies, and projects originating from the LFB should be analysed under the Sustainable Development Impact Assessment (SDIA) process. The SDIA process supports the Brigade to avoid or minimise environmental impact and take opportunities to improve social and economic outcomes in London through the service we provide.

Procurement comments

- 6.3** The procurement process for the equipment required to deliver this course will be carried out by Babcock Critical Services and will be carried out under a competitive tender process. This will follow the usual process, where Babcock will produce a Tender Specification which details all the LFB requirements and gives them a score, which relates to the importance that the feature. In the case of PPV, this will be procured from a Framework.
- 6.4** Once the tenders are received, they will be scored using the scores detailed in the tender specification. Additional scores will be included which cover the company's financial standing and ability to support the product over its expected life. In this case it would be a 5-year operational life. The scoring is divided between technical compliance and financials, with a ratio of 60% of the score attributed to the procurement and financial aspects, with 40% on the products engineering aspects. The scoring process involves OP&A, FLEET and Babcock.
- 6.5** The product that scores the highest will usually be the one that is accepted; however, operational tests are also carried out which may highlight issues or concerns which might override the highest scoring product. Babcock will negotiate the contract to supply the product with the selected supplier and will manage the ongoing support and repair of the product for the full operational life. The cost of this is covered within the slot price, which must be agreed as part of the procurement process.
- 6.6** The provision of training will be delivered by the Brigade's training partner, Babcock Training Limited, and will be delivered within the Framework of the training contract.

Communications comments

- 6.7** Communication for this will be created closer to the launch of the equipment and training.

7. Financial comments

- 7.1 Finance comments are included in Part Two of this paper.

8. Legal comments

- 8.1 This report seeks approval for training of operational staff in Positive Pressure Ventilation, as part of a suite of Urban Firefighting skills.
- 8.2 By virtue of section 9 of the Policing and Crime Act 2017, the London Fire Commissioner (the "Commissioner") was established as a corporation sole with the Mayor appointing the occupant of that office. Under section 327D of the GLA Act 1999, as amended by the Policing and Crime Act 2017, the Mayor may issue to the Commissioner specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.
- 8.3 By direction dated 1 April 2018, the Mayor set out those matters, for which the Commissioner would require the prior approval of either the Mayor or the Deputy Mayor for Fire and Resilience (the "Deputy Mayor"). Paragraph (b) of Part 2 of that direction

requires the Commissioner to seek the prior approval of the Deputy Mayor before “[a] commitment to expenditure (capital or revenue) of £150,000 or above is identified in accordance with normal accounting practices...”. Funding for the Urban Firefighting Course, as detailed in this report, exceeds the specified limit and, as such, requires prior approval of the Deputy Mayor.

- 8.4 Under section 1 of the Fire and Rescue Services Act 2004 [‘the 2004 Act’], the Commissioner is the fire and rescue authority for Greater London. Section 7(2) of the 2004 Act, requires the Commissioner to secure provision of the necessary training for personnel to discharge the duty of firefighting.
- 8.5 On 14th June 2017 there was a fire at Grenfell Tower, which claimed the lives of 72 people. The subsequent inquiry – The subsequent Grenfell Tower Inquiry [‘GTI’] established by virtue of the Inquiries Act 2005, examined factors leading to and causative of the fire - , was heard in two parts. Phase one examined the events on the night of the fire, how it was handled by the emergency services and how the building behaved in the fire.
- 8.6 Recommendation 5 of the GTI Phase One report cites LFB’s high rise policy PN633, and modifications required therein, to avoid events on the night of Grenfell Tower being repeated in future. Training of operational personnel in Urban firefighting techniques form part of the skills covered by PN633.
- 8.7 In the 2018/19 inspection report on LFB by His Majesty’s Inspectorate of Constabulary and Fire and Rescue Services [‘HMICFRS’] alignment of policies with National Operational Guidance [‘NOG’] was referenced. Training in Urban Firefighting is in part fulfilment of this objective.

List of appendices

Appendix	Title	Open or confidential*
1	Fire behaviour findings from firefighter fatality and Senior Accident Investigations	Open
2	LFB corporate risks mitigated by urban firefighting course	Open
3	Cost breakdown (Part 2)	Confidential
4	Business Case	Confidential

Part two confidentiality

Only the facts or advice considered to be exempt from disclosure under the FOI Act should be in the separate Part Two form, together with the legal rationale for non-publication.

Is there a Part Two form: YES