

30 May 2023

Subject

Extreme Weather Response 2023

Author

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Background

This briefing note provides an update on the work being undertaken by London Fire Brigade (LFB) following the extreme weather event of 19 July 2022 and declaration of a Major Incident. On 19 July 2022, LFB faced one of our busiest days in the modern firefighting era. Throughout the course of the day crews attended 26 incidents where an attendance of at least four pumping appliances was required, many of these simultaneously. To put this into context, on an average day LFB attends two four-pump or above fires. As a result, a pan-London Major Incident was declared.

A Major Incident Review was conducted which explored the events of the day and preparations for it, identifying good practice as well as learning for the future. This was then used to create a range of short and long-term recommendations. Many of these have or will be implemented by the summer (June) of 2023. Others will take longer and are part of an improvement plan that is managed through the Operational Improvement Plan process.

The recommendations, as they are recorded in the improvement plan, are detailed in full in Appendix 1.

Improvements in LFB's response

There are a range of measures that have been introduced by LFB since last summer that have improved our extreme weather capability ahead of summer 2023. These sit across three key areas which have been set out below.

Improved equipment to protect welfare of firefighters and the public.

- Personal Protective Equipment (PPE) has been reviewed to ensure that the welfare of operational crews working in hot weather conditions is prioritised. New protective headwear has been purchased with delivery and issue to staff scheduled for early June 2023.
- Research into enhanced PPE for extreme weather conditions has commenced. The resulting work is scheduled to be reported to LFB Clothing Board on 24 May.
- Operational crew hydration packs are now in place on all appliances following procurement in late summer 2022.
- Engagement with national and international fire and rescue services has taken place to understand best practice in wildfire firefighting. Part of this learning has resulted in the introduction of new equipment called 'Holey Hose' and dams. These will be carried on Operational Support Units (OSU) this summer. 'Holey Hose' is a type of fire service hose which has holes engineered into its walls, creating a water curtain of up to 2 metres high along its length when charged.
- LFB is exploring partnerships to enhance existing welfare arrangements (toilet, rest and washing facilities) in recognition of the scale and geography of these incident types. Borough Commanders are being supported to contact their local authorities to secure welfare support through already

established existing arrangements. Letters were sent to Transport for London, Metropolitan Police Service and London Ambulance Service to identify opportunities for collaboration in welfare and hygiene facilities for frontline workers. Duty Deputy Assistant Commissioners have autonomy to hire welfare facilities using corporate credit cards when current arrangements are exhausted, unavailable/already deployed. A revised list of alternative vendors is being assembled to be issued ahead of June 2023.

- Development of a pilot for permanent staffing of LFB's specialist All Wheel Drive (AWD) Vehicle throughout summer to ensure we have an ongoing response capability if needed.

Training and policy improvements

- In January 2023 LFB changed the way it does training so that individuals are trained as a watch on high volume courses, rather than being sent as individuals. This adjustment has a number of benefits: it means staff are trained as teams, it allows more efficient recall to duty of staff ahead of (or during) major incidents because teams are grouped together in one place, and it increases the availability of fire appliances to attend/support large scale incidents or ensure response standards are maintained across the wider London area.
- Updates have been made to the mobile phone technology previously used to inform staff of opportunities for pre-arranged overtime. The phone app has been updated to facilitate a major incident recall.
- Reinstatement of the National Fire Chief's Council (NFCC) 'National Wildfire Tactical Advisor' role to support strategic commanders in the efficient resolution of wildfires. It is anticipated that this capability can be grown into a cadre of advisors to improve experience of large-scale wildfires and contribute to National Resilience.
- New training courses are being provided for all operational levels. These commenced from 3 May 2023 and are drawn from the NFCC National Working Group for Wildfires:
 - Level 1: for all operational staff from Firefighter to Deputy Assistant Commissioner level
 - Level 2: 10 wildfire officers will be trained, drawn from Station Commanders and Group Commanders
 - Level 3: 30 Wildfire tactical advisors will be trained, drawn from Station Commanders and Group Commanders
 - Strategic input will be delivered to officers of Assistant Commissioner rank and above by subject matter experts.

The course contents are detailed in Appendix 2.

- New risk assessments and policy updates have been introduced to support new training and operational competencies.
- Weekly strategic forecasting meetings have been introduced highlighting key organisational risks for the following seven days, which includes risk of warm weather and flooding. These inform Brigade resourcing for skills and personnel.
- Daily briefings are held with the duty officers to ensure handovers are clear and are recorded where appropriate. Strategic Response Arrangements (SRA) and Brigade Coordination Centre (BCC) policies have been reviewed to include the learning from 2022 and are in the process of being tested.
- An 'Extreme Weather' Borough Commander toolkit will be in place by June to assist with reviews of Borough Risk Management Plans. This means key areas of wildfire risk are identified, recorded and risk assessed, and engagement with local authority risk planners is conducted.

Engaging with stakeholders and the public

- Communications are being prepared to provide safety messaging on extreme weather for our communities in the run up to summer 2023.
- The City of London Corporation has been engaged to establish a Memorandum of Understanding (MoU) to assist LFB by providing equipment and plant to support the management of extreme weather risk across approximately 15,000 acres of open land in London.
- LFB has joined the England and Wales Wildfire Forum to assist engagement with all London local authorities. Fire and Rescue Service representation at this Forum normally sits with the NFCC but LFB has secured an individual place due to London's unique and emergent extreme weather risk profile.

- Better partnership working with the water authorities is in place so that water authority technicians attend joint development sessions with fire officers. An application has also been launched, which is available on all fire appliance tablets, and provides improved information on Emergency Water supplies at incidents. Fire stations are conducting visits to confirm the data carried on the application, and this will conclude at the end of June.

Adapting to extreme weather events in the long-term

Climate change will continue to give rise to more extreme weather events. Both hot, dry summers and increased wet weather events will impact on the number and scale of weather-related incidents LFB responds to. Planning for the changing risk in London is complex and will require ongoing research and investment as we continue to adapt to meet the changing needs of our communities.

In addition to the activity highlighted above, work is ongoing to implement all the recommendations from the Major Incident Review (set out in Appendix 1). Additional resource has been allocated to establish a group to deliver the recommendations. Regular progress on this delivery will be reported through the Operational Improvement Process.

LFB will continue working with the NFCC National Working Group for Wildfires to ensure adoption of national learning and best practice. Research and development will continue to lead engagement with other fire and rescue services internationally to draw on experience from those with a long history of managing these types of risk. This builds on engagement that has already taken place with Berlin Feuerwehr, Victoria Australia County Fire Authority, Oakland California Fire Department and New York Fire Department.

Appendix 1 – Long term recommendations following Major Incident Review

| Recommendation | Status | Owner | Deadline |
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| 1 | Ensure sufficient resource is secured to progress full adoption of National Operational Guidance corporate guidance to develop a revised risk management planning process that evaluates prevention, protection, response and resilience arrangements. | Resourcing requirement moving through governance process throughout May. NOG implementation project will commence delivery and monitoring through Programme 8 of LFB Delivery Plan | AC Operational Policy & Assurance Implementation commenced. Completion November 2026 |
| 2 | Prioritise review of organisational risk assessment for fires in periods of extreme heat within NOG corporate guidance adoption project. Include within that review consideration of the hazard presented by the Urban/Rural interface in sections of LFB area. | Delivered through recommendation 1. NOG implementation project will incorporate revision of organisational risk assessment. | AC Operational Policy & Assurance Implementation commenced. Completion November 2026 |
| 3 | Review operational guidance and equipment for wildfires to ensure all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training | Review of operational guidance and equipment has taken place for Summer '23: this incorporates the immediate changes to tactical and strategic capabilities. Wider NOG review will take place as part of recommendation 1 | AC Operational Policy & Assurance Immediate change review complete NOG Implementation commenced. Completion November 2026 |
| 4 | Review operational guidance and equipment for Welfare arrangements, PPE and RPE to ensure all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training | Operational guidance and equipment for welfare arrangements have been reviewed ahead of summer 2023. PPE review and provision is described earlier in this report. RPE has been reviewed and is scheduled for delivery under Programme 3 of LFB delivery plan for January 2024. The delivery of the NOG Implementation Project (Recommendation 1) will encapsulate a review of related operational guidance and equipment to come into line with National Operational Guidance. | AC Operational Policy & Assurance Immediate change review complete PPE review & provision partially complete (head protection), non-structural PPE review commenced. RPE due January 2024 NOG Implementation commenced. Full completion November 2026 |
| 5 | Implement a recall to duty arrangement for operational and Control personnel for times of excessive demand. | In progress. PAO Overtime App (Recall) in place and Training as a Watch in place. | AC Fire Stations & AC Operational Resilience |

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| | | Tested during Kings Coronation | | |
| 6 | Consider measures to increase availability of drones to support situational awareness at widespread incidents. | Cost/benefit/risk analysis for the increase in the availability of drone technology 'Drones2' Project (enhancement of current provision) has commenced. | AC Operational Policy & Assurance | Drones 2 considerations due December 2024 |
| 7 | Establish a stakeholder group involving recent joiners with relevant experience to support review of Fires in the Open guidance. | Engagement with NFCC Wildfire national workstreams completed. Guidance & Learning outcomes developed into Level 1-3 Wildfire Training Courses for all operational staff Ff- DAC National Wildfire Tactical Advisor role reprised | AC Operational Policy & Assurance | Level 1-3 training completion due June 2023 National Tactical Advisor (x1) due for completion Dec 2023 (LFB is working with NFCC to accelerate qualifications ahead of summer 2023). A further x3 National Tactical Advisor roles are anticipated to be brought online by summer 2024 |
| 8 | Review operational guidance for Major Incidents to ensure all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training. | This will commence with recommendation 1 | AC Operational Policy & Assurance | Implementation commenced. Completion November 2026 |
| 9 | Review operational guidance for Site-Specific Risk Information gathering to ensure all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training | Review of guidance will commence with recommendation 1. Emergency Water Supplies application completed. Emergency Water Supplies confirmation & hydrant testing underway. Improvements to site specific risk information also underway. | AC Operational Policy & Guidance AC Fire Stations | Implementation commenced. Completion November 2026 Completion June 2023 |
| 10 | Review Brigade Control guidance to ensure all strategic and tactical actions of National Operational Guidance for Fire Control have been embedded into policy, procedure and training. | This will commence with recommendation 1 | AC Operational Policy & Assurance & AC Operational Resilience | Implementation commenced. Completion November 2026 |
| 11 | Review MoUs with water authorities to improve information sharing on pressure reductions. | In progress, delivered and monitored as part of LFB delivery plan Programme 3 (Water Strategy) Emergency Water Supply confirmation & Hydrant testing underway. | AC Operational Policy & Assurance AC Fire Stations | June 2023 June 2023 |
| 12 | Review operational guidance for People - Warn, inform and advise | In progress | AC Fire Safety & | Warning & Informing Package completed. |

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| | people to ensure all strategic and tactical actions are embedded, and develop community engagement officer role for significant incidents. | | Dir.Communications AC Operational Policy & Assurance | Key messages roll out to the public commencing late June. Training Specification under development. Completion due June 2024 |
| 13 | Ensure in review of Operational Improvement Process that regular scrutiny and reporting of issues takes place on a risk-based frequency. | In progress, and enhanced by Recommendation 1 | AC Operational Policy & Assurance | December 2023 |
| 14 | Review operational guidance for emergency evacuation and mass rescue to determine whether declaration terminology can be simplified. | In progress | AC Operational Policy & Assurance | December 2023 |
| 15 | Review all incident consideration and emergency evacuation and tactical withdrawal of responders guidance to ensure whistles are placed in pockets if removing PPE. | In progress | AC Operational Policy & Assurance | June 2023 |
| 16 | Develop an appropriate extreme weather prevention toolkit through engagement with London Resilience and other key stakeholders in promoting safe land and open space/vegetation management at times of heatwave and other extreme weather events. | In progress | AC Fire Safety & AC Operational Resilience | June 2023 |
| 17 | Incorporate a 'state of readiness' for extreme weather events to ensure maximum operational availability at times of high risk. By June 2023: (a) Incorporate formal 'state of readiness' protocols into appropriate policies and guidance. | Complete | AC Operational Resilience | Complete |
| 18 | Engage with NFCC Wildfire Team with a view to review and commission training available to firefighters and senior officers. By June 2023 (Recommendation 3 of the Major Incident Review). | In progress | AC Operational Policy & Assurance | Engagement Completed. Training commenced. Completion due June 2023 |

Appendix 2 – Content overview for Wildfire knowledge acquisition (Levels 1-3)

Level 1 Course consists of 8 computer-based training modules which detail:

- Wildfire Terminology
- Map reading
- Topography
- Weather
- Fuel
- Wildfire Prediction System
- LACES Safety Protocol
- Suppression

Level 2 course content covers modules 1-8 in a greater detail, taught by a subject matter expert with practical activities and a formal theory assessment to confirm knowledge and understanding.

Level 3 course content builds further upon modules 1-8, this is in a rural setting, where delegates must demonstrate the theory that they have learnt on the level 2 course. There is a practical assessment exercise, with role players, assessed to confirm that the delegates have met the required standard.