



Major Incident Review

Extreme Weather Period 2022

Report date 30th January 2023

OFFICIAL – Sensitive – Commercial – Personal



OFFICIAL – Sensitive – Commercial – Personal

Contents

1. Summary	2
2. Background	6
2.1 Introduction: Extreme Weather, July/August 2022	6
2.2 Demand during the extreme weather period	8
2.3 The operational context	9
3. Identified learning and good practice	12
3.1 Service Areas	12
3.2 Learning and Good Practice identified – Prevention and Protection	12
3.3 Learning and Good Practice identified – Preparation	14
3.4 Learning and Good Practice identified – Response	19
3.5 Learning and Good Practice identified - Recovery	27
3.6 Learning and Good Practice identified – Engagement	28
4. Appendices	30
4.1 Appendix one: Methodology	30
4.2 Appendix two: Operational Improvement Process Extreme Heat July 2012 Learning Case	34
4.3 Appendix three: Timeline	36
4.4 Appendix four: Glossary	62
4.5 Appendix five: Bibliography	64

OFFICIAL – Sensitive – Commercial – Personal**1. Summary**

On 15 July 2022 the Meteorological Office (Met Office) issued an "red extreme" heat warning for the whole of the United Kingdom. On 19 July London Fire Brigade (LFB) declared a Major Incident because of pan-London incidents including numerous grass and wild fires exacerbated by these weather conditions. A major incident was also declared at the 15 pump fire in Wennington on the same day. A further major incident was declared at the 15 pump fire in Dagenham.

Whilst the extreme weather conditions experienced in the capital at this time were predicted, the impacts they had were unprecedented. The LFB faced one of its busiest days in the modern firefighting era. Specifically, this manifest itself as a significant increase in the numbers of large incidents, with 19 July recording 26 incidents of four or more pumping appliances. (The average is approximately two 4 pump fires or above per day)

Incidents of four or more pumps on 19 July	
Incident Size	Number
4 pump fires	6
6 pump fires	5
8 pump fires	4
10 pump fires	4
12 pump fires	2
15 pump fires	3
20 pump fire	1
30 pump fire	1
Total	26

Source: LFB Power BI Data

Similar conditions were experienced across the country with 11 of the 46 fire rescue services in the UK declaring a major incident.¹

Staff from the LFB responded to this unprecedented demand with bravery, tenacity and determination. The whole of the LFB rose to the challenges presented by this extreme weather event, with colleagues from across the LFB's vital support functions helping to maintain our response.

¹ 11 Major Incidents were declared between 13 and 19 July inclusive.

OFFICIAL – Sensitive – Commercial – Personal

Without this concerted and coordinated effort there is no doubt the damage to London's communities would have been much worse.

The LFB is a learning organisation. It seeks opportunities to learn from our staff and the communities we serve to deliver the best possible service. It is in this spirit that the Major Incident Review was established.

During the course of the review a number of key themes have emerged.

Prevention and Protection

Whilst efforts are being made to reduce global temperature rises, even the most optimistic forecasts indicate that global temperatures will continue to increase over the coming decades. Habitat adaptation will be key to managing the impact of wildfires in the future. These principles are well known and widely used in countries and fire and rescue services that have been exposed to the risks presented by extreme heat.

The review identified good practice in the area of prevention, and a great deal of national and international best practice is available which can be adapted to meet London's needs. The objective of this preventative work is to reduce both the likelihood and impact of extreme heat events, in particular preventing wildfires from crossing the urban rural interface. This is likely to be most effective if it is done in collaboration with partners.

The review has identified the LFB may benefit from reviewing its Prevention and Protection strategies in light of the events of July 2022, the subsequent good practice instigated in London, and best practice nationally and internationally; with the objective of reducing the frequency and impact of incidents that occur as a result of extreme heat.

Preparedness

The LFB has demonstrated over the course of the last 12 months that it is capable of rising to the challenge of short notice events, with our response to Storm Eunice and the Funeral of Her Majesty the Queen standing as examples of this ability. The events of 19 July have demonstrated that the LFB must be prepared to mobilise a similar level of response to the future extreme heat events that London will inevitably face.

Whilst the LFB is capable of preparing effectively for events of this nature, this tends to be done on an individual basis. This Major Incident Review has identified that other agencies within the partnership make effective use of "states of readiness" to inform their posture to a particular event. These states of readiness provide a framework for difficult decisions, such as the cancellation of

OFFICIAL – Sensitive – Commercial – Personal

training or leave, which support strategic leaders' decision making. The LFB may benefit from the adoption of a similar strategy.

The review has identified the London Fire Brigade may benefit from reviewing its Preparedness strategies in light of the events of July 2022 with the objective of ensuring that the good practice demonstrated in relation to other short and no notice events is applied to extreme heat warnings.

Response

LFB incident commanders have a great deal of experience when dealing with fires and incidents in the urban environment, and our training and exercising has traditionally focused on the challenges this presents. The experiences and feedback from the events of 19 July indicate that the LFB can do more to ensure that its incident commanders are able to assess the resource requirements of wildfires and develop tactical plans that are better suited to the resolution of this type of incident.

The LFB does encourage its operational leaders at both level two (intermediate) and level three (advanced) to consider the wider brigade when managing incidents. The events of the 19 July indicate that the LFB can do more to ensure that when incident commanders are developing tactical plans, they are actively considering how the resourcing of those plans will impact the wider organisation.

Equally, the LFB should review its Strategic Response Arrangements to ensure that they are able to support our operational response across the range of foreseeable risks.

The review of the LFB's tactical and strategic response should be done with the objective of ensuring that the LFB can manage its finite resources as effectively as possible during periods of extreme demand.

Operational learning

As part of the Brigade's Business as usual Operational Improvement Process, a systematic approach to reviewing operational performance on 19 July 2022 was undertaken. The feedback from this process was analysed against the strategic and tactical actions contained within National Operational Guidance and against LFB, policies, procedures and training.

This process has generated a clearer understanding of the root cause of any gaps or vulnerabilities in the Brigade's operational control measures and associated recommendations for improvement. The Operational Improvement Process recommendations have been subject to an organisational impact assessment.

OFFICIAL – Sensitive – Commercial – Personal

This process has demonstrated that the actions required to address the majority of learning identified within this review exist within National Operational Guidance. The LFB should embed the principles of National Operational Guidance into the LFB's corporate risk management planning process that evaluates prevention, protection, response and resilience arrangements.

OFFICIAL – Sensitive – Commercial – Personal**2. Background****2.1 Introduction: Extreme Weather, July/August 2022**

The Met Office issued a 'red extreme' heat warning by 09:45 on 15 July 2022. This was the first ever 'red extreme' heat warning issued in the United Kingdom as part of a new 'Extreme Heat National Service Weather Warning' system introduced by the Met Office in June 2021. This system provides for amber and red warnings to be issued "to inform the public of potential widespread disruption and adverse health effects." (Met Office, 2021)

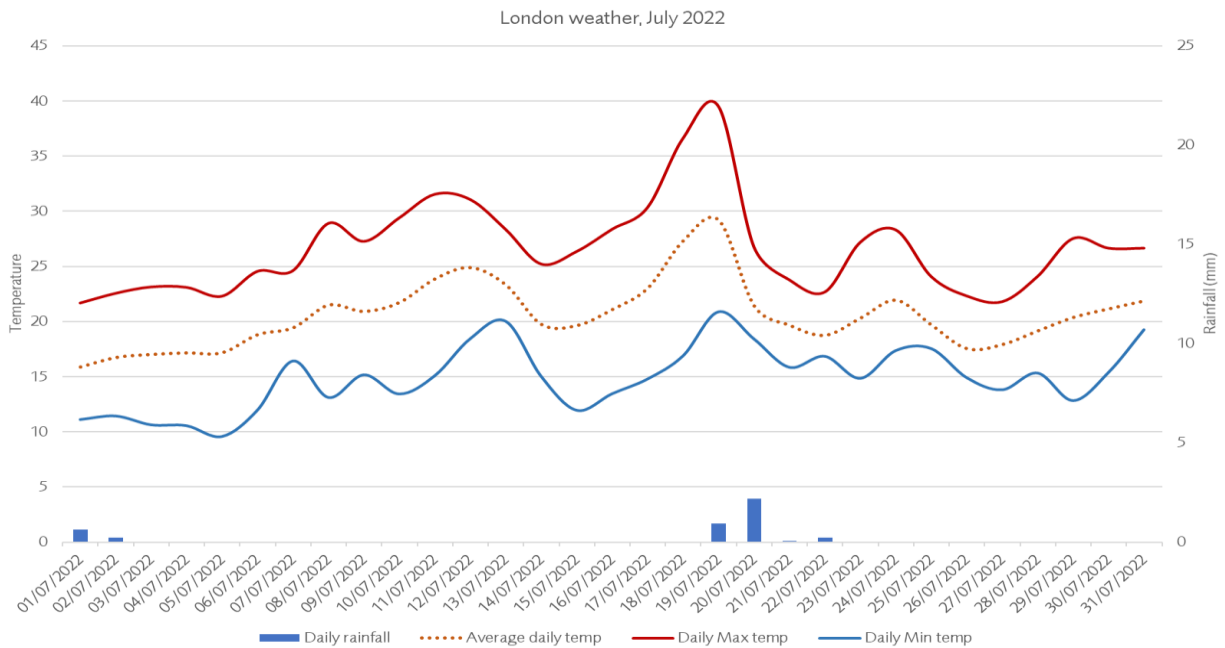
This heat warning was defined by the Met Office in terms of its potential impacts, with a red extreme heat warning having the potential for medium and/or high impacts:

MEDIUM IMPACT	HIGH IMPACT
Adverse health effects experienced by those vulnerable to extreme heat.	Adverse health effects experienced by all, not just limited to those most vulnerable to extreme heat, leading to serious illness or danger to life.
Some changes in working practices and daily routines may be required.	Changes in working practices and daily routines will be required.
Some heat-sensitive systems and equipment may fail, leading to power cuts and the loss of other services to some homes and businesses.	Failure of heat-sensitive systems and equipment with loss of power and other essential services, such as water, electricity, gas or mobile phone services.
Some delays to road, rail and air travel, with potential for welfare issues for those who experience long delays.	Delays on roads and road closures, along with delays and cancellations to rail and air travel, with significant welfare issues for those who experience even moderate delays.
More people visiting coastal areas, lakes and rivers leading to risk of water safety incidents.	Significantly more people are likely to visit coastal areas, lakes and rivers leading to risk of water safety incidents.

Source: (Met Office, 2022)

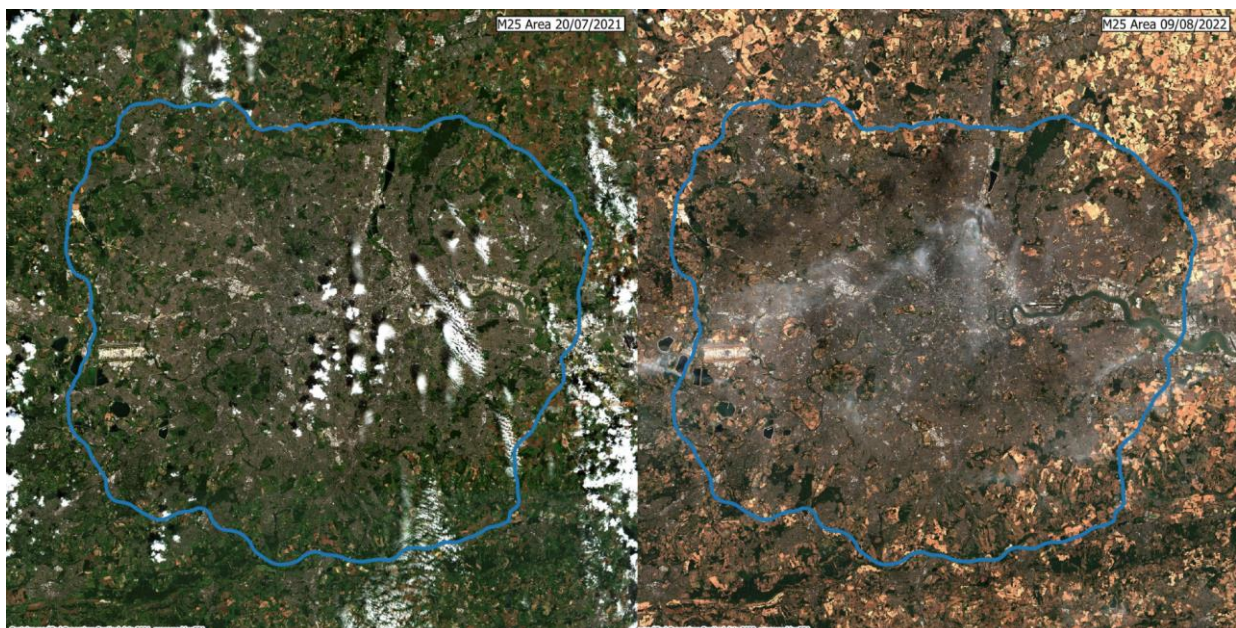
OFFICIAL – Sensitive – Commercial – Personal

This red extreme heat warning preceded extraordinary hot weather across the UK on 18 and 19 July 2022, which "marked a milestone in UK climate history": "Temperatures on 18 July were exceptional but they moved 2 to 4°C higher on 19 July, making this date unprecedented in the context of long-term climate records." (Met Office, 2022) London recorded its highest ever temperature on Tuesday, 19 July, with 40.2°C recorded at Heathrow.



Source: LFB Power BI Data

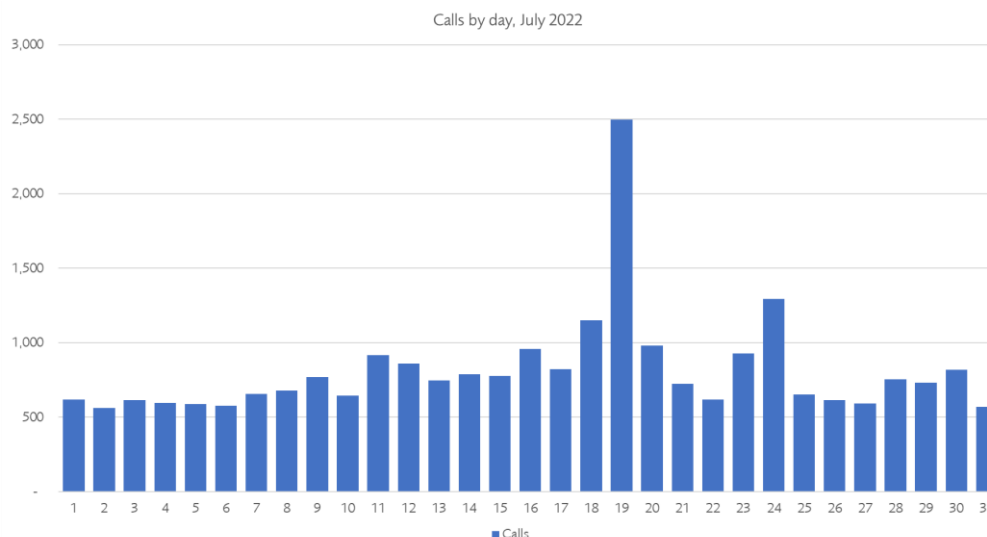
That conditions over the summer period had led to increased fire risk is clearly visible in this image (below), which provides a comparison between a satellite image of Greater London taken in July 2021 (left), with another image taken on 9 August 2022 (right):



OFFICIAL – Sensitive – Commercial – Personal

2.2 Demand during the extreme weather period

The extreme weather on 18 and 19 July 2022 resulted in multiple large fires, which led to a significant increase in calls to Control on 19 July:



Source: LFB Power BI Data

Between 08:00hrs on 19 July and 06:30hrs on 20 July there were:

- 2,496 calls to Control.
- 359 incidents.
- 740 calls relating to grass alight.
- 59 grass fires attended (*identified using the parent property type Grassland, Woodland and Crops*).
- 106 total fires attended.
- 822 fire engine mobilisations. (*to incidents that started between 08:00 19 July 2022 and 06:30 20 July, inc. mobilisation up to 09:00*).
- 1198 mobilisations (all assets). (*to incidents that started between 08:00 19 July 2022 and 06:30 20 July, inc. mobilisation up to 09:00*).

This level of demand led to a pan-London Major Incident being declared at 13:48:49, and the standing-up of LFB's Strategic Response Arrangements (SRAs), with the Commissioner's Continuity Group (CCG) first meeting at 14:45 and the log from the Brigade Coordination Centre (BCC) beginning at 15:17.²

² This time likely reflects loggist availability more than the exact time the BCC was stood up.

OFFICIAL – Sensitive – Commercial – Personal

2.3 The operational context

2.3.1 National Operational Learning

One of the main operational contexts relevant to the Major Incident on 19 July was that of wildfires and grassfires. Of the 2,496 calls received by Control, 740 were calls relating to grass alight, and of the 106 total fires attended, 59 were grass fires (identified using the parent property type Grassland, Woodland and Crops).

The National Fire Chiefs Council (NFCC) issued a National Operational Learning (NOL) Action Note on 21 January 2021.³ This Action Note provided information resulting from the analysis of major wildfires that had occurred throughout the UK, stating that "several areas of commonality" had emerged throughout these incidents, and these were "being shared for fire and rescue services to examine their response to them." The Action Note also noted that "All fire and rescue services have a foreseeable wildfire risk." (National Fire Chiefs Council, 2021)

Action Note 20200302-2289-A's recommendations included:

- Identifying potential wildfire sites and producing plans.
- Early engagement with partner agencies such as land managers, forestry services and local authorities.
- Training of personnel in wildfire operations, including the embedding of the LACES protocol.⁴
- Planning of relief crews and maintaining an appropriate level of incident response, while keeping personnel and communities safe.
- Planning for and provision of logistical support; services had reported difficulty in keeping personnel fed and watered and appliances supplied with fuel.
- An understanding of intraoperability and interoperability as a significant wildfire incident "will almost inevitably require the co-operation of more than one fire and rescue service."
- The availability of National Resilience resources and advisors should be understood across fire and rescue services.
- Services should have contingency arrangements for communications as mobile phone and radio signals can be

³ Action Note 20200302-2289-A

⁴ LACES is an mnemonic acronym; Lookouts; Awareness; Communications; Escape Routes; Safety zones.

OFFICIAL – Sensitive – Commercial – Personal

poor in the remote locations in which wildfires often happen.

- Drones should be considered for the enhanced situational awareness they can provide.

Source: (National Fire Chiefs Council, 2021)

As a result of Action Note 20200302-2289-A, LFB Policy 870, *Firefighting and Rescue Operations in Rural Environments*, was updated on 5 February 2021. After these changes, the policy contained information on wildfires including the need for pre-planning during familiarisation visits, the practising of "the tactics and resources required to mount safe firefighting" in rural environments, the LACES mnemonic, the potential difficulties in providing for crew welfare and relief crews, the need to be aware that these incidents could "span administrative boundaries" and involve "a range of stakeholders", the potential difficulties in communication, information on suppression methods, terminology, and a Wildfire Prediction System.

No mention was made of the use of drones, though the use of aerial appliances or the Metropolitan Police helicopter down-link facility was noted as a means of observation or predicting likely fire spread.

No mention was made of National Resilience resources or advisors, though the bibliography of policy 870 did note *National Operational Guidance for Wildfires* (2016) as a document that "should be considered" when reading the policy.

As a result of work to bring LFB policies in line with National Operational Guidance (NOG) by having strategic-level policies supported by Standard Operating Procedure (SOP) documents, LFB Policy 981 Fires in the Open, was issued on 1 March 2022, containing the information already described as present in policy 870. It also suggested the use of drones.

Policy note 981a – Wildfires – Fires in the Open – Standard Operating Procedures was also issued. This contained the LACES mnemonic and information on Hazards and Control Measures.

This trail of documents and changes to documents shows that, by March 2022, LFB was aware of the national learning on wildfires identified by the NFCC and had incorporated the recommended learning into LFB policies and procedures.

OFFICIAL – Sensitive – Commercial – Personal

2.3.2 The London Safety Plan

LFB is required (by the government's National Framework for the Fire and Rescue Service 2018) to provide an integrated risk management plan that details how it will identify, assess, and act to mitigate, risks. This plan is called the Community Risk Management Plan (CRMP).

At the time of the Major Incident, the active CRMP was the London Safety Plan (LSP 2017). The new CRMP, *Your London Fire Brigade: Our plan to keep London safe 2023-2029*, was published in January 2023. Both CRMPs have, therefore, been considered as models of how LFB aims to perform when reviewing learning and good practice.

2.3.3 CRMP – Assessment of Risk

The Fire and Rescue National Framework for England 2018 places a duty on all Fire and Rescue Services to "identify and assess the full range of foreseeable fire and rescue related risks their areas face". The London Fire Commissioner (LFC)'s latest Assessment of Risk (AoR), completed April 2022, is the Brigade's response to that requirement. It sets out all foreseeable risks which LFB might be expected to respond to and assesses their potential impact based on a combination of their likelihood and consequence.

In the *Summary of highest rated risks* section, fire involving "rural land (urban rural interface)" is identified as one of the highest-rated risks.⁵ Later in the AoR, in the section titled *Emerging and future led risks*, fires at the urban rural interface are again identified as a high risk. In this section it is noted that future escalation of these fires could challenge LFB's ability to provide business as usual:

"A significant increase in the frequency of events or their impact, along with the possibility of new extreme weather events. Warming climate giving rise to more extreme weather events and hot dry summers like 2018, flooding of 2021 and the 2013 St Jude's day gales and storms. These incidents all put significant strain on the Brigade's resources, and it is therefore foreseeable that if the scale and intensity of these extreme weather events increase with climate change the Brigade's capacity to deal with these incidents whilst maintaining normal business may be exceeded in the future. " (London Fire Brigade, April 2022)

This represents a change from the assessment of risk that underpinned LSP 2017, which did not specifically identify the risk of wildfires to the capital.

⁵ It is recorded in the 'Extraordinary risks' section, with a consequence rating of 4/5 (out of 5) and a likelihood of 3 (out of 5).

OFFICIAL – Sensitive – Commercial – Personal**3. Identified learning and good practice****3.1 Service Areas**

The good practice and learning identified during this review is set out against the six service areas.

Prevention	Protection	Preparedness	Response	Recovery	Engagement
------------	------------	--------------	----------	----------	------------

3.2 Learning and Good Practice identified – Prevention and Protection**3.2.1 Prevention:**

Though LFB is a metropolitan Brigade, the events of July 2022 have shown the emerging new reality of climate change and increased wildfire conditions will necessitate a new focus for prevention activities.

As evidence of this new reality, the following table shows the wildfire count for London as compared to other UK FRSs, for the period between 1 January and 26 September 2022:

Service	Wildfires
M&WWFRS	120
Kent FRS	70
London FB	65
Norfolk FRS	63
Hants / IoW	60
South Wales	52
D&WFRS	48

Source: CFO [REDACTED], NFCC.⁶

⁶ This table reproduced by kind permission of CFO [REDACTED], and the NFCC. This data uses a specific definition of wildfires as meeting at least one of the following criteria:

- Involves a geographical area of > 1 hectare
- Has a sustained flame length of > 1.5 meters
- Requires a committed resource of ≥ 4 FRS appliances
- Requires resources to be committed for ≥ 6 hours
- Presents a serious threat to life, environment, property and infrastructure

The definition is shared by LFB and NFCC. The data does not, therefore, include grassfires in London for the period.

OFFICIAL – Sensitive – Commercial – Personal

3.2.2 The review has found that there are opportunities for the LFB to improve its wildfire preventative activity. There was some evidence of preventative activity, with the Communications department disseminating some external messaging in the time between 15 July and 19 July, with messaging associated with extreme heat and wildfires.

Following 19 July, the volume of messaging increased, and the Communications Department have already identified that it would be useful to develop "ready to go" packages to be released in anticipation of increased predicted risk.

3.2.3 **Good practice:** An example of good practical preventative practice occurred on the weekend of 13 and 14 August, when the LFB's Cadet Team, local Station Commanders and Local Fire Station Crews engaged with the local community in Wennington to provide fire safety advice and practical support to reduce the risk of further fire damage including:

- Cutting back and removal of unburnt marshland encroaching on residents' back gardens. which had been left in front gardens but not collected by private contractors.
- The removal and disposal of all items deemed unnecessary by residents, following fire safety advice, from their gardens to reduce fire loading.
- The cutting back and removal of overgrown front and back gardens.
- The cleaning of gravestones and clearing up of the grounds in St Mary & St Peter Church.
- The disposal of unburnt items already removed by residents
- Providing of home and garden fire safety advice and arranging HSFVs to be conducted by the local station.
- Operational staff including operational personnel from the Cadet Team helped with the removal of burnt items, alongside the removal of gas cylinders from both homes and from within the marshland.

This prevention work not only helped prevent future fires; it also helped to rebuild trust with a community badly affected by fire, forged relationships and partnerships, and gave Fire Cadets both practical experience and a sense of achievement.

OFFICIAL – Sensitive – Commercial – Personal

3.2.4 Protection

The Major Incident Review identified that the current Policy 800 – Management of Operational Risk Information does not easily facilitate the recording of locations where wildfires would be the primary risk. The policy details how risk is to be assessed for premises, how that risk will be scored, and how the resultant score will inform the frequency of visits made to that location by crews. The policy also goes into some detail about what information should be gathered and stored by crews. Policy 800 is effectively the instruction manual for '7.2d' familiarisation visits crews make, and the policy's scoring system determines what is eventually retained on the Operational Risk Database (ORD), thereby becoming available to attending crews via their Mobile Data Terminals (MDTs).

However, while the policy clarifies that it takes the term 'premises' to "refer to any location or structure likely to attract an attendance from the station", the system of identification, scoring and retention for provision to operational crews is designed for buildings.

This means that open spaces likely to be prime sites for grass and wildfires score low on the risk matrix, and would therefore not normally have any details retained in the ORD.

The Major Incident Review endorses recommendation nine from the LFB Operational Improvement Process: 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.

3.3 Learning and Good Practice identified – Preparation

3.3.1 The LFB has demonstrated a good ability to prepare for short and no notice events in the past. Good examples of this can be seen in the LFB's preparation for Her Majesty the Queen's Funeral on 19 September 2022. Equally, in response to Storm Eunice (February 2022), the LFB stood up strategic response arrangements (at a lower level than the Commissioner's Coordination Group) to good effect. With the LFB's response being complemented by both the LFC and the Mayor.

3.3.2 **Good Practice:** In anticipation of the forecast heatwave, LFB colleagues from the Bulk Media Advisor (TAB) cadre identified that the High Volume Pump (HVP) at Hainault was away for

OFFICIAL – Sensitive – Commercial – Personal

servicing. They requested that the sixth HVP, normally dedicated to training, be made available for operational deployment.

3.3.3 Good practice: In response to the extreme heat wave warning Control took a number of steps to ensure the availability of staff and bolster resilience, including:

- Cancellation of leave.
- Cancellation of non-essential training.
- Sought additional volunteers to ensure a minimum of 12 control officers were on duty for 18 and 19 July.

Preparedness was not only resource based, but also took account of risk. On 11 July, prior to the red extreme heat warning, but in the context of a growing heatwave, the following decisions were made by Control's leadership team, and communicated to staff:

- Calls to grass fires or fires in the open should be accompanied by 999Eye footage⁷ in order for call takers to make an observation-based assessment.
- If the incident had obvious potential for escalation, then additional resources should be mobilised.
- Informing LAS of incidents was to cease; they should only be requested if there was a confirmed or obvious case of illness/injury.⁸
- Requests from LAS/MPS for difficult removals were to be attended without delay, as there was concern that medical conditions could be exacerbated by the heat.
- Calls to individuals shut in lifts were to be attended without delay, regardless of engineer progress.

3.3.4 Good practice: Counselling and Trauma Services (CTS) – Major incident procedure

CTS have a pre-prepared Major Incident procedure and sets of emails pre-written in case of need to contact large amounts of staff rapidly. In response to the Major Incident declaration, they were able to provide the Head of People Services with details of the resources they could provide.

⁷ 999eye is a system that allows 999 callers to stream live footage of an incident through their phone into the Control room.

⁸ This was because of extreme demand and resource degradation in LAS, which was impacting their ability to resource requests for attendance as normal.

OFFICIAL – Sensitive – Commercial – Personal

When approached by the Major Incident Review team CTS were able to provide a short report on the review they had already conducted of their own good practice and learning during the Major Incident.

3.3.5 The Major Incident Review have identified that there are opportunities to develop this good practice further in response to future extreme heat weather events.

3.3.6 States of readiness.

As the rising temperatures in the capital became an increasing concern other partner agencies moved to higher states of readiness. For example:

The British Transport Police (BTP) recognised that "The Force Severe Weather plan stand-by activation posture criteria has been met," meaning BTP enacted a series of changes in readiness and operational procedures.

The LAS raised its Resource Escalation Action Plan (REAP) state from three to four, meaning LAS enacted a series of changes in readiness and operational procedures.

The Greater London Authority (GLA) invoked its Severe Weather Plan, meaning it upscaled its interactions with other agencies, and urgently sought additional funding,

A Mayor's Advisory Group convened. A further Service Continuity Group meeting was planned at short notice by the London Resilience Partnership. Across London, most organisations moved into a higher state of readiness.

LFB reported it had "identified the elevated risks posed by wildfires, the use of BBQs on balconies and open water swimming." No internal change in formal state of readiness occurred. Not least because there are no formal sets of states of readiness in LFB.

Having a pre-defined set of states of readiness, with the associated required actions assigned to departments who understand them and have rules on how to enact them, would enable LFB to move in an agile manner between different postures of alertness, meaning that rising tide events and predictable events – such as extreme weather – could be met by a prepared and proactive organisation.

The following are examples of actions that could be enacted automatically should the criteria for the highest state of readiness be met:

OFFICIAL – Sensitive – Commercial – Personal

- Cancellation of leave.⁹
- Cancellation of Strategic Resource.¹⁰
- Postponement of non-essential vehicle maintenance.
- Postponement of training.
- Release of pre-prepared communications packages to the public and to partner agencies.
- Creation of strategically located equipment stores, or changes to default loads, to address foreseeable risk.
- Proactive internal messaging on key activities, such as laundry procedures etc...
- Review staffing levels to ensure the organisation is able to meet the anticipated demand.
- Making certain skills or roles temporarily exclusive to preserve resilience of those skills and roles.
- Temporary suspension of alternate crewing arrangements for specialist capabilities if their use is anticipated.
- Introduction of enhanced command structures (both in Operational and Non-Operational departments).
- Amendments to pre-determined attendances.
- Enhanced call challenging.
- Proactively enacting Strategic Response Arrangements.
- Convening a pre-emptive tri-partite call to ensure a shared operational picture and assessment of risk.
- Reviewing staff welfare arrangements.
- Reviewing ORD entries for relevant areas of identified risk for on-arrival tactics.
- Tasking staff with pre-emptive targeted community engagement/prevention activities such as visiting high risk areas and talking to the public using those areas about how to reduce risk.¹¹

⁹ Cancellation of leave was discussed in the CCG meeting held at 18:00 on 19 July. A decision was made that it would not provide additional staff in time. It was also noted that no mechanism currently exists to achieve the cancellation of leave.

¹⁰ Strategic resource (SR) is the capacity for pre-planned activities to be undertaken in the knowledge that appliances or crews are unlikely to be interrupted by emergency calls. Appliances are scheduled for Strategic Resource in advance, then permission for them to become unavailable for calls is granted on the scheduled day by means of a teleprinter message.

¹¹ Greater Manchester Fire and Rescue Service (GMFRS) used this strategy during July 2022, with crews on day and night shifts visiting popular picnic and walking locations to deliver prevention messages about barbecues, litter, glass etc. The 'Be Moor Aware' prevention strategy (available online) which they share with partner organisations and FRSS, gives more details.

OFFICIAL – Sensitive – Commercial – Personal

3.3.7 Specialist vehicles and equipment.

In response to the extreme heat of 19 July LFB incident commanders demonstrated their flexibility and ability to use whatever resources were available to them to resolve operational incidents. For example:

- Local authority water bowsers.
- London Ambulance Service Polaris 6 wheel drive vehicle.
- MPS minibuses.

National Operational Guidance has identified the use of specialist vehicles or equipment as a control measure for the management of wildfires.

The NFCC already supports an asset register for flood and wildfire response. Consideration should be given to replicating this in the context of a multi-agency asset register for London.

3.3.8 Borough Training Plans.

The specific training needs for each borough are identified in accordance with *Policy 698 Borough Training Plans*. Borough Training Plans identify risk at borough level, via the Borough Risk Inventory (BRI), which contains both generic and specific risks relevant to a particular borough.

A number of elements feed into the BRI to create its content. One of the main elements is the London Risk Register (London Resilience Partnership, 2022), which is a document jointly owned by the Category one and two responders (as defined by Schedule one to the Civil Contingencies Act 2004) within the London Resilience Forum area.

The London Risk Register identifies wildfires in its *High-Level Summary Risk Matrix* as a medium risk, with a likelihood rating of three out of five, and an impact rating of two out of five. As control measures for this risk, the London Risk Register records "London Fire Brigade borough specific rural strategies. Specialist firefighting equipment and resources."

This background information shows that wildfires are an identified risk at the highest level of assessment for London, and that there should be borough-specific strategies for dealing with them.

The Major Incident Review endorses recommendation nine from the LFB Operational Improvement Process: Review operational guidance for site specific risk information gathering

OFFICIAL – Sensitive – Commercial – Personal

to ensure all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training. Specifically, to ensure Borough Training Plans reflect the risk of the local area.

3.4 Learning and Good Practice identified – Response

3.4.1 Response: On 19 July 2022 the London Fire Brigade faced one of its busiest days in the modern firefighting era. The LFB received nearly 2500 calls and undertook nearly 1200 mobilisations. Throughout this extremely challenging period operational staff responded selflessly to over 350 incidents, ably assisted by LFB support staff.

3.4.2 Resources: People. On 19 July 2022 the LFB had 39 appliances off the run because of insufficient staff, as shown in the following image, taken from the Daily Bulletin¹² for Wednesday 20 July:

¹² The Daily Bulletin is a document sent every day to stations and officers, detailing significant incidents in the past 24 hours, and showing appliance availability for the same period.

OFFICIAL – Sensitive – Commercial – Personal

3.4.3

Appliances off The Run								
Date	Watch	D/N	OTR Defective	OTR Maintenance	Insufficient			Stations covered by Standbys
					FFs	Officers	Skills	
19/07/22	R	D	NIL	F437, AT3	All Pumps off except H381 ¹³	NIL	M21, M24	NIL
	W	N	M69	F437, AT3	A332, A412, E232, F322, G232, G242 G272, G312, G362, G392, H352, H412	NIL	NIL	NIL

Source: Daily Bulletin 20 July

It is likely that this will have had an impact on the LFB's operational response. This will have manifested as longer response times, an inability to resource specific incidents at the level requested by incident commanders and an inability to relieve operational colleagues at protracted incidents. On 19 July there were 26 make ups (incidents where the incident

¹³ "H381" in this context is believed to be a typo: H381 is a pump ladder and it was the pump (H382) that was off the run.

OFFICIAL – Sensitive – Commercial – Personal

commander's risk assessment has indicated that more resources than the pre-determined attendance will be required to resolve the incident). The table below shows the scale of the large incidents the LFB faced on 19 July:

Incident Size	Number
4 pump fires	6
6 pump fires	5
8 pump fires	4
10 pump fires	4
12 pump fires	2
15 pump fires	3
20 pump fire	1
30 pump fire	1
Total	26

Source: Control/Vision

This compares with nine incidents of four pumps or more on 18 July and five incidents of four pumps or more on 20 July. Across a year the LFB averages approximately two incidents of four pumps or more per day.

Make ups (fires and special services) of four pumps and above, daily average by year	
2020	1.89
2021	1.84
2022	2.52

Source: LFB Power BI Data

Given the unprecedented demand on the LFB's resources on 19 July it is likely that, even had the LFB had those additional 39 pumps available, the service would have seen extended attendance times, difficulty in resourcing to incident commanders' risk assessments and delays in relieving crews.

The LFB has in place recruitment and promotion plans to address the establishment shortfall.

OFFICIAL – Sensitive – Commercial – Personal

3.4.4 **Good practice:** Resources: Vehicles and equipment. As identified in 3.3.7, incident commanders made good use of the non-LFB vehicles made available to them, demonstrating an ability to develop and deliver flexible operational plans to resolve the incidents they faced.

3.4.5 Resources: Vehicles and equipment. Numerous respondents to the review identified the need for suitable vehicles to tackle grass and wildfires.

Where neighbouring fire rescue services provided all-wheel drive vehicles and water bowsers, these proved very effective in supporting our operational response.

Work has begun to identify best practice, nationally and internationally, in terms of vehicles and equipment required to tackle the increasing risk of wildfires in the capital.

The Major Incident Review endorses recommendation three from the LFB Operational Improvement Process: Review operational guidance and equipment for wildfires to ensure that all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training.

3.4.6 **Good Practice:** Major incident response. The review noted a number of positive responses in relation to the declaration of the Major Incident on 19 July including:

- The declaration of a pan-London Major Incident in response to the extreme weather conditions ensured that partner agencies developed clearer shared situational awareness. Specifically, around the resource pressure the LFB was facing across the city.
- This situational awareness was also supported by rapid co-location at the MPS Special Operations Room (SOR), in accordance with joint Emergency Service Interoperability Principles (JESIP).

3.4.7 Major incident: The review has found opportunities for improvement in the way that the LFB responds to major incidents including:

- Policy 263 Major Incident Procedure states that "following the declaration of a Major Incident, a METHANE message must be sent as soon as possible; where possible, this should be an agreed tri-service message." Whilst the declaration of the pan-London Major incident happened at 13:48, the METHANE message was not recorded as having been sent until 14:47.

OFFICIAL – Sensitive – Commercial – Personal

- Control colleagues have identified through their own debrief process the need to declare a Major Incident when the definition is met by conditions in the Control room.
- The review identified that crews at incidents were not aware that a pan-London Major Incident had been declared. This meant that they were unaware of the operational imperative for them to book immediately available when they were released from incidents.

3.4.8 Strategic Resource Arrangements and the management of resources during periods of exceptional demand: The standard model for the allocation of operational resources is on a first come first served basis. During periods of exceptional demand or resource degradation this is supplemented by some risk-based mobilisations, with control officers making assessments of where resources can be most effective. LFB Strategic Response Arrangements provide a mechanism to supplement Control in extremis by standing up the BCC and its associated functional cells. This system came under pressure on 19 July, and Control's debrief suggests that more could have been done to proactively manage the high demand for finite resources.

3.4.9 The establishment of BCC is an infrequent event. Consideration should be given to the preparation and training offered to officers who may be assigned to undertake this role.

3.4.10 The Major Incident Review endorses recommendation eight from the LFB Operational Improvement Process: Review operational guidance for Major Incidents to ensure that all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training.

3.4.11 **Good Practice:** Tactical response. The LFB demonstrated flexibility in its approach to both individual incidents and the challenge of the pan-London Major incident. This is evidenced by a range of good practice, including:

- Flexible deployment of resources including decisions to split the Drone Team to allow them to provide situational awareness to more than one incident.
- The use of non-LFB resources to transport LFB personnel and equipment to and from the incident ground.
- The use of operational discretion for BA deployments without full structural PPE.

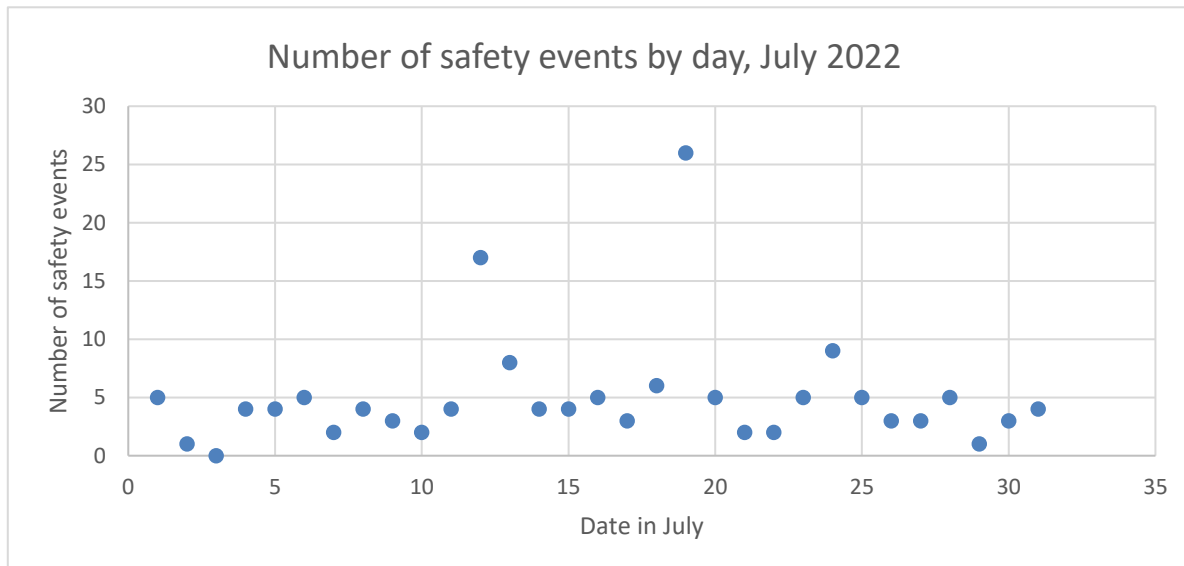
OFFICIAL – Sensitive – Commercial – Personal

- 3.4.12 Tactical response: The review has identified opportunities for improvement in relation to the tactical response to wildfires provided by the LFB.
- 3.4.13 Specialist advice: The LFB does not have a fully qualified Wildfire Tactical Advisor (TAW). We do have a colleague who was a TAW, however they have not been able to maintain their skills and qualification, although they do still appear on the NFCC Asset register.
- 3.4.14 Tactical response to wildfires: LFB incident commanders are highly experienced in dealing with incidents in an urban environment, and our training and exercising has traditionally focused on the challenges this presents. The LFB does have a standard operating procedure covering Wildfires, SOP PN981A Wildfires – Fires in the open. However, the experience of 19 July indicates that the LFB can do more to ensure that its incident commanders are able to assess the resource requirements of wildfires and develop tactical plans that are better suited to the resolution of these incidents.
- 3.4.15 Tactical response to pan-London major incidents: The LFB does encourage its incident commanders at both level two (intermediate) and level three (advanced) to consider the wider brigade when managing incidents. During incident command exercises, candidates will be asked to demonstrate that they have considered the implications of their requests for additional resources on the wider brigade. The events of 19 July indicate that the LFB can do more to ensure that when incident commanders are developing tactical plans, they are actively considering how the resourcing of those plans will impact the wider organisation.
- 3.4.16 The Major Incident Review endorses recommendation three from the LFB Operational Improvement Process: Review operational guidance and equipment for wildfires to ensure that all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training.
- 3.4.17 **Good practice:** Welfare. The review has identified a number of areas of good practice in relation to managing the welfare of LFB crews operating in extremely challenging heat wave environments, including:
- Local incident commanders instigating local purchases of refreshments for on-scene crews.
 - The Rapid Relief Team, a religious charity, deployed to the 15 pump Major Incident in Wennington to provide food and hydration to the attending crews, supplementing the welfare capability normally provided to the LFB by the Salvation Army.

OFFICIAL – Sensitive – Commercial – Personal

3.4.18 Welfare: The review has identified opportunities for improvement in relation to ensuring the welfare of our crews during a prolonged response to wildfires.

3.4.19 Safety event data for 19 July indicates that there were 26 safety events on that day.



Source: LFB Power BI Data

Of the 26 safety events on 19 July, 14 were directly heat related, five were slips, trips or falls (which are likely to become more prevalent while firefighting in grassland/rural areas), three were smoke inhalation suffered fighting a grass fire, one [REDACTED], [REDACTED], two were injuries sustained while lifting or pulling equipment, and one [REDACTED]. It is likely that 18, and potentially 23, of these safety events are attributable to the extreme temperatures.

[REDACTED]

Five safety events met the conditions requiring reporting under RIDDOR.¹⁴

The average number of safety events in the LFB per day is four.

It is possible that the longer than normal deployment times for LFB crews and limited knowledge of the risks of wildfires contributed to this spike in safety events.

¹⁴ Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations 2013. One of these five instances was actually recorded on 20 July; a firefighter became ill on 20 July as a delayed result of heat exposure on 19 July. This is in addition to the 26 safety events listed.

OFFICIAL – Sensitive – Commercial – Personal

3.4.20 Operational crews were presented with a choice of wearing full structural Personal Protective Equipment (PPE), designed to protect them from the extreme heat faced when fighting fires in enclosed compartments, or removing this and wearing their normal work wear, which in this context was an LFB t-shirt.

Full structural PPE is excellent at protecting firefighters from heat in fire situations, however in the context of the extreme ambient heat of 19 July this PPE prevents the escape of heat from a firefighter's body.

Whilst operational crews were permitted to relax their PPE, and remove their tunics and helmets, this meant that they were exposed to direct sunlight for extended periods of time.

Whilst sun cream is provided to crews, feedback to the review suggests that this proved inadequate in the arduous operating environment of 19 July.

3.4.21 The provision of areas for crews to recover was varied from incident to incident. Some incidents provided shade and cool, ventilated areas, whilst others had very little effective shade or opportunity for crews to cool down.

3.4.22 The Major Incident Review endorses recommendation four from the LFB Operational Improvement Process: Review operational guidance and equipment for welfare arrangements, PPE and RPE to ensure that all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training.

3.4.23 **Good Practice:** Command and control. Control – Incident Command structure. Historically, a collegiate approach to incident resolution has been taken between the Officer in Charge (OIC) Control and the duty Brigade Control Senior Managers (BCSMs). In addition, Control Room Officers may look to any rank or supervisor for advice and guidance during their work. For most incidents this approach works and aids the resolution. However, for larger scale incidents and those with challenging decisions to make, a single Control Commander should be identified. This allows for a single individual, with the right training, skills, and authority, and with the support of tactical advisors, if necessary, to devise a tactical plan, have it recorded appropriately and then distributed to Control staff. It also avoids the potential for advice and guidance given by Control staff to not reflect the Control Commander's tactical plan before briefing has taken place. Control have recognised the importance of adopting an Incident Command approach to the handover of Command in the Control room.

OFFICIAL – Sensitive – Commercial – Personal

3.4.24 **Good practice:** Communications department – Command structure. Members of the Communications department, through their own review process, have identified that during 19 July they were not entirely sure who was responsible for signing off on work or leading on activities. After the benefit of learning from a Crisis Communications away day the team recognised that a clear command structure with pre-defined roles would be beneficial for future Major Incidents.

3.5 Learning and Good Practice identified - Recovery

3.5.1 **Good practice:** Bristol PPE contract. MSA Bristol identified a significant increase in the demand for PPE in July 2022 as a result of the extreme heat event. This led to an unprecedented demand which impacted their ability to attend and rectify instances where a lack of PPE meant that staff were off the run.

In response to this situation, and in conjunction with the NFCC, they instigated an investigation into the reasons for this short fall and provided a swift action plan to improve their response.

MSA Bristol also provided the LFB with a monthly management pack as part of the normal reporting process. This allowed the LFB to identify that the correct laundry processes were not being followed and demonstrated that approximately 50% of the 190 instances where staff were off the run for PPE could be avoided by the correct application of the laundry process.

3.5.2 The review identified there are opportunities for improvement in the provision of PPE to female firefighters, with this group being disproportionately impacted by PPE shortages, with female firefighters twice as likely to be off the run because of no PPE. The Major Incident Review endorses recommendation four from the LFB Operational Improvement Process: Review operational guidance and equipment for welfare arrangements, PPE and RPE to ensure that all strategic and tactical action of National Operational Guidance have been embedded into policy, procedure and training.

3.5.3 **Good practice.** Property and Technical Service Support proactive recovery. The Property and Technical Service Support (TSS) department demonstrated a proactive approach to the recovery phase of the major incident. TSS enacted its flexible equipment repatriation process to ensure that the large volumes of equipment used during the major incident were returned to their appropriate locations as quickly as possible. This action was complimented by Babcock Critical Services standing up their own major incident response, coordinated from Ruislip Workshops.

OFFICIAL – Sensitive – Commercial – Personal

Property instituted a rapid programme of station cleaning at Wennington fire station to ensure that the impacts of its location close to the 15 pump Major Incident were mitigated.

3.5.4 Preservation of key documents. The team conducting this review encountered difficulty in accessing some of the written records relating to the major incident of 19 July.

3.5.5 The major incident review team identified, in the course of the drafting of this report, a risk of duplication of work between the review team and the LFB business as usual Operational Improvement Processes.

3.5.6 The Major Incident Review endorses recommendation eight from the LFB Operational Improvement Process: Review operational guidance for Major Incidents to ensure that all strategic and tactical actions of National Operational Guidance have been embedded into policy, procedure and training.

3.6 Learning and Good Practice identified – Engagement

3.6.1 **Good practice:** Community Engagement Team. LFB has had a Community Engagement team for approximately two years. This team attends incidents if there is a risk to LFB's reputation, if a protected characteristic is involved, if there are issues around community cohesion, or if there is a risk of civil unrest. They can also attempt to deal with issues over the phone and can advise Incident Commanders on community engagement issues. The team take a person-centred and trauma-informed approach to engagement and conflict resolution.

On 19 July the Community Engagement team attended multiple incidents. They were requested by some senior officers, and they provided advice and aided the resolution of issues where they were requested. Feedback indicated that they were a valued asset and that members of the community wanted to see members of the Community Engagement team in rest centres/shelter areas.

3.6.2 **Good practice:** Prioritisation of community engagement across departments had notable positive effects during incidents.

The Communications department were asked to participate in efforts to engage with communities during incidents and during the recovery phase of incidents. The department worked with the Brigade's Community Engagement team to address a number of issues that emerged from incidents. For example, team members from both LFB areas were able to engage

OFFICIAL – Sensitive – Commercial – Personal

with residents, taking a trauma-based approach, developing an on-going dialogue with the residents, working closely with a local religious leader, and having a physical presence on-site to be available to the residents.

The Communications department were also able to work with the Community Engagement team on how to best tell residents the tragic news that they had lost their homes.

3.6.3 Good practice: Joint working, Cadets, Station crews and Local authority at Wennington 13 and 14 August. See Para 3.2.3.



Wennington village following Major Incident of 19 July.

3.6.4 Good practice: Proactive press response. In their own review of learning and good practice, LFB's Communications Department recognised the value of having a presence at incidents. This supported the management of members of the Press at specific incident locations and enhanced the LFB's ability to engage with a suffering community, as highlighted in para 3.6.2.

3.6.5 Good practice: Single spokesperson for media engagement. During 19 July a single senior officer was used for the majority of interviews and media engagement work. The Communication department found this to be an advantageous way of working, with that spokesperson able to deliver key prevention messages and keep the media focus on climate change and response. Feedback from stakeholders also emphasised the positive impact of this spokesperson.

OFFICIAL – Sensitive – Commercial – Personal

4. Appendices

4.1 Appendix one: Methodology

4.1.1 Objective

This review aims to identify good practice and learning across all key functions of LFB during the period of extreme weather. This will enable better preparation to be made for extreme weather events. The review will also enable the Brigade to ensure that it is using resources efficiently and preparing as well as possible to minimise risks to our staff and communities.

4.1.2 Statement of intent

LFB is a learning organisation. It seeks opportunities to learn from our staff and the communities we serve to deliver the best possible service, adapting to the changing needs of London.

Undertaking this review, we have:

- Always follow our behaviours
- Take a 'no-blame' approach
- Take a whole workforce approach
- Engage with, listen to and learn from our staff and our communities
- Take an evidence based and data driven approach
- Work together with communities and staff to provide the best outcomes and best value
- Be transparent and proactive in sharing our findings
- Deliver outcomes in a timely manner
- Ensure all relevant materials, gathered and produced (including documents, reports, analyses etc.), associated with this review are stored appropriately and accessible in the future

4.1.3 Review Logistics

This review was conducted by a team of four; one operational officer, one member of staff detached from Control, and two members of FRS staff.

The team was convened specifically for this review. The review began work in August 2022, and deadlines for governance procedures meant that a total of three months were available to the team to identify, contact, and brief departments, guide departments' reviews of learning and good practice,

OFFICIAL – Sensitive – Commercial – Personal

collate responses from departments, and secure background and further data as evidence for assertions.

The depth at which the team were able to analyse feedback and the extent to which data is used to evidence assertions reflect the timeframe that was available for this review.

The ways in which departments, teams and individuals engaged with this review varied widely. While it is recognised that workloads impact availability, buy-in to a review of a Major Incident should be automatic, and engagement helpful and timely. It is beyond the remit of this review, but a resistance to reflection and review was evident in some areas, and LFB would benefit from addressing this.

4.1.4 Time Period

All activity occurring from the date and time of the Met Office warning (15 July 2022) that relates to planning for, response to, or recovery from, the Major Incident was considered in scope for this review. This time period is intentionally not given a specific end date as individual departments will have experienced consequences over differing periods, and an open-ended timeframe allows the review to capture the learning and good practice related to such consequences.

4.1.5 Key Lines of Enquiry

Key lines of enquiry included, but were not limited to:

- London Resilience Group (LRG) partnership review
- Training (incl. operational response and function delivery e.g., BCC, CCG)
- Resource availability incl. appliances, assets, skills, personnel
- Training recall
- Strategic Resource arrangements
- Operational policies and procedures
- Strategic Response Arrangements – incl. CCG
- Common Recognised Information Picture e.g., Operational Resilience summary
- Degradation strategy
- BCC
- Review of command outcomes
- Incident debriefs
- Working with neighbouring brigades
- Working with partners and other agencies
- Community engagement and support

OFFICIAL – Sensitive – Commercial – Personal

- Safety events
- Asset/equipment logistics, incl. return to operational readiness
- Staff welfare and wellbeing (incl. trauma support) during and post incident
- Working (and engagement with) local and central government
- Emergency call handling and resource mobilisation
- Voluntary sector engagement and coordination
- Provision of replacement Personal Protective Equipment (PPE)

4.1.6 Departments

A total of 26 departments or teams were identified for the review. Of these, nine were subsequently determined to not be directly relevant to the review. These were:

- Training Commissioning and Design
- Strategic Planning
- Portfolio and Business Change
- Strategic Communications
- HMI/NOG
- Brands and events
- Performance Improvement
- Service Delivery and Assurance
- Stakeholder and Community Engagement

A further three were deemed to have a governance, overview or commentary function for the review, rather than a contributory function. These were:

- Finance
- General Counsel
- FBU

This left the following 14 departments contributing their learning and good practice from the extreme weather period:

- Operational Resilience
- Health and Safety
- Procurement
- Learning and Professional Development
- Control

OFFICIAL – Sensitive – Commercial – Personal

- | | |
|-------------------------------------|---|
| vi. Counselling and Trauma Services | xi. Central Operations and Establishment and Performance Team |
| vii. London Resilience | xii. Prevention and Protection |
| viii. ICT | xiii. Communications |
| ix. Property | xiv. Fire Stations |
| x. Operational Policy and Assurance | |

In addition, feedback on learning and good practice was sought from the Drone Team, every staff support group listed on Hotwire,¹⁵ the Community Engagement Team, an ex-Wildfire Tactical Advisor, and charities engaged in welfare provision at incidents.

Wherever possible, data was sought that evidenced the learning or good practice provided by departments and teams, the ethos of this review being to be data-driven and evidence-based.

4.1.7 Internal departmental reviews and other reviews

A number of departments conducted their own reviews of learning and good practice, as part of their business as usual, prior to the engagement of the team conducting this review. The departments that did this included Control, Property and Technical and Service Support, Counselling and Trauma Services, Procurement, Communications, and London Resilience.

4.1.8 Operational Improvement Process

As part of the Brigade's Operational Improvement Process, a systematic approach to reviewing operational performance on 19 July 2022 was undertaken. This process gathered learning observations from all staff who attended incidents through an electronic hot debriefing system. These observations were analysed and used to identify specific incidents that required structured operational debriefs to gather more detailed feedback. These operational debriefs were conducted by trained facilitators and have been used to undertake a barrier failure analysis of the operational control measures for responding to incidents in periods of extreme heat. Any gaps or vulnerabilities in the control measures have been reviewed against National Operational Guidance, and any other

¹⁵ LFB's intranet.

OFFICIAL – Sensitive – Commercial – Personal

relevant best practice, guidance or good practice from 19 July 2022 that could improve performance in future.

This analysis process has generated a clearer understanding of the root cause of any gaps or vulnerabilities in the Brigade's operational control measures. This systematic approach for identified learning meant that clear recommendations to resolve the root causes have been generated, which have been subjected to a robust impact assessment. These recommendations have been agreed as part of the Operational Improvement Process and will be monitored regularly as the required actions to address the recommendations are progressed.

4.1.9 Unused contributions

A large amount of information was received by the team conducting this review. Not all of the information was at a sufficiently strategic level for inclusion in this report. Where this was the case, the review team are feeding back to contributing departments about which information was not included, and the measures that can be taken to ensure that information is usefully managed within individual departments.

4.1.10 Service Areas - Overview

LFB's draft Community Risk Management Plan ('Your London Fire Brigade') details six services that LFB provides. Departments were asked to review their learning and good practice from the extreme weather Major Incident against each of the six service areas, using them as broad themes of review.

Good practice and learning identified during that review is set out in this document against the six service areas, which are:

Prevention	Protection	Preparedness	Response	Recovery	Engagement
------------	------------	--------------	----------	----------	------------

4.2 Appendix two: Operational Improvement Process Extreme Heat July 2012 Learning Case

The Operational Improvement Process delivered 15 recommendations, which are referenced in this report. Those recommendations, with the associated impact assessments, are as follows:

OFFICIAL – Sensitive – Commercial – Personal

	Recommendation to OPB:	LFB Impact Assessment
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	Red: Changes that are of organisational significance
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.	Red: Changes that are of organisational significance
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	Red: Changes that are of organisational significance
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	Red: Changes that are of organisational significance
5	Implement a recall to duty arrangement for operational and Control personnel for times of excessive demand	Red: Changes that are of organisational significance
6	Consider measures to increase availability of drones to support situational awareness at widespread incidents	Red: Changes that are of organisational significance
7	Establish a stakeholder group involving recent joiners with relevant experience to support review of Fires in the Open guidance	Amber: Changes required that are of departmental significance
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	Amber: Changes required that are of departmental significance
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	Amber: Changes required that are of departmental significance
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	Amber: Changes required that are of departmental significance
11	Review MoUs with water authorities to improve information sharing on pressure reductions	Amber: Changes required that are of departmental significance
12	Review operational guidance for People - Warn, inform and advise people to ensure all strategic and tactical actions are embedded, and develop community engagement officer role for significant incidents	Amber: Changes required that are of departmental significance

OFFICIAL – Sensitive – Commercial – Personal

13	Ensure in review of Operational Improvement Process that regular scrutiny and reporting of issues takes place on a risk-based frequency	Amber: Changes required that are of departmental significance
14	Review operational guidance for emergency evacuation and mass rescue to determine whether declaration terminology can be simplified	Green: Events that require minor change
15	Review all incident consideration and emergency evacuation and tactical withdrawal of responders guidance to ensure whistles are placed in pockets if removing PPE	Green: Events that require minor change

The full LFB Extreme Heat July 2022 Learning Case can be shared on request.

4.3 Appendix three: Timeline

4.3.1 Scope of timeline: Time Period

All related activity occurring from the time of the Met Office warning (15 July 2022) in planning for, response to and recovery from the Major Incident is considered in scope. The time period was left open-ended in order to allow for the inclusion of later actions.

4.3.2 Scope of timeline: Activities included

Activities recorded in the timeline include, but are not limited to:

- Mobilisations and make-ups of four pumps and above
- Decisions made in Control regarding regulating or redirecting attendances (e.g. Restricted Attendance)
- Implementation of Operation Willow Beck (call redistribution from Control)
- Operational engagement with neighbouring brigades, whether to provide mutual aid or to receive it
- Substantial resource availability changes Brigade-wide, incl. appliances, assets, skills, personnel
- Standing up (and down) of Strategic Response arrangements
- Significant engagements with partners and other agencies during the relevant period
- Safety events
- Significant engagements with local and central government

OFFICIAL – Sensitive – Commercial – Personal

- Safety messaging/communications with the general public¹⁶
- Cancellation of or recall from Strategic Resource
- Declarations of operational discretion in use

4.3.3 Out of scope

Items excluded from the timeline include; activity outside of the prescribed time period; mobilisations to incidents of less than four pumps; detail at the level of, for example, times of appliance mobilisations and arrivals, unless of significance.

4.3.4 Timeline

TIME	EVENT
MONDAY 11TH JULY 2022	
08:56 and 10:36	Instructions issued to Control Room Officers via email from Brigade Senior Managers: All grass fires and fires in the open should be accompanied by 999 Eye footage in order to establish whether additional resources are required to prevent escalation. Informing of London Ambulance Service (LAS) of incidents (where they are not required to attend), should cease until further notice. Calls to persons shut in lift (PSIL) should be attended without delay.
FRIDAY 15 JULY 2022	
09:00	UK Health Security Agency raised its Heat Health Alert Service level from 3 – Heatwave Action – to 4 – National Emergency.
08:00	All non-essential training for Control cancelled. The only training that took place was the new entrant's course.
10:55	Met office issues first ever 'red extreme' heat warning (time of Twitter post).
11:30	A Strategic Coordination Group (SCG) meeting was held. No actions or decisions recorded in the minutes related directly to LFB. Another SCG was scheduled for 16 July at 16:00, to take account of outcomes from government meetings on 15 July. The SCG Group agreed there was no requirement for a Tactical Coordinating Group to be activated at this time.
12:30	London Resilience Group provided their 'Weekly Update'. This noted the Met Office's weather update with "the possibility of maximum recorded temperatures being exceeded", with "health impacts for all, not just those usually considered as vulnerable.

¹⁶ Only main Twitter posts are included, not retweets or repeats of messages posted earlier.

OFFICIAL – Sensitive – Commercial – Personal

	Potential for disruption to heat sensitive systems, water supplies, power outages and transport disruption. In addition, there was an increased risk of wildfires".
13:00	An urgent meeting was called by Operational Resilience in response to the red extreme weather warning and the Level 4 Heat Health Alert. This meeting was called by the Deputy Head of Operational Resilience and was attended by members of the Operational Resilience team. The meeting covered communications to staff and decisions regarding training (on station) and second line activity.
20:00	LFB Facebook Post: Warning about having bonfires during the heatwave after 6 gardens were destroyed in Kingston Upon Thames. Mentioned how hard firefighters had worked to control the fire. Urging people not to have bonfires or barbecues and warned of a "scorching weekend ahead" (439 reactions, 82 comments, 221 shares)
SATURDAY 16 JULY 2022	
08:00	<p>Communication sent to Control staff from Senior Leadership Team, in preparation for the expected hot weather:</p> <ul style="list-style-type: none"> • Control should mobilise resources to all 'Person shut in lift' calls. • Control should assist all LAS and MPS calls, such as difficult removal of patient, to avoid further harm. • All actions to 'inform LAS' of an incident should be suspended. <p>Staffing was increased to 12 staff for both day and night duties for Monday and Tuesday. 12 pump fire exercises and Development and Maintenance of Operational Professionalism (DaMOP) training cancelled for Control officers for Monday and Tuesday.</p> <p>Further plans were put in place for on-duty Brigade Control Senior Managers to be on site and for the OST (training) team to assist in Control (Monday and Tuesday).</p>
16:02	LFB Instagram Post: Top tips to remember in the heat. Warnings about grass/ vegetation catching fire and how to prevent this happening; No barbecues on dry grass, clear rubbish, not putting cigarettes out on dry grass, etc. (252 likes, 7 comments)
SUNDAY 17 JULY 2022	
12:56	The Tactical Advisor Bulk Media Officers group lead sent an email to Deputy Assistant Commissioners advising of High Volume Pump crewing, availability and spare vehicle. Other actions taken during the day by the Bulk Media officers group lead included a conversation with the Resource Management Centre (RMC) about High Volume Pump crewing and keeping them on the run, and a request being made to Babcock not to use the spare High Volume Pump for training, in anticipation that it may need to be collected
16:00	LFB Facebook Post: Top tips to remember in the heat. Warnings about grass/vegetation catching fire and how to prevent this happening; No barbecues on dry grass, clear

OFFICIAL – Sensitive – Commercial – Personal

	<p>rubbish, not putting cigarettes out on dry grass, etc. (871 reactions, 31 comments, 71 shares)</p>
21:42	<p>The Tactical Advisor Bulk Media Officers group lead sent another email to DACs advising of High Volume Pump crewing, availability and spare vehicle. during the week for use in the heatwave (Hainault's High Volume Pump was due for its annual service).</p>
<p>MONDAY 18 JULY 2022</p>	
16:53	<p>An email was sent from the Assistant Commissioner for Fire Stations to all operational staff informing them that the new system for offering PAO would begin use on the following day, Tuesday 19 July:</p> <p>"Allocation of pre-arranged overtime (PAO)</p> <p>From Tuesday, 19 July 2022 changes will be introduced to streamline the offering and allocation of PAO. From that date, PAO assignments will be offered via a text message to your mobile phone number registered within StARS. You will then need to log in to StARS via an online portal where you can view any PAO assignments. From there you will also be able to accept assignments. If you are successful, you will receive a confirmation message.</p> <p>Changes have been made to policy 375, pre-arranged overtime. The most important change is paragraph 4.2, the registration process. This paragraph states that staff must register an 11-digit mobile telephone number in their overtime registration as this will be the means of communication. More detailed guidance can be found on Hotwire.</p> <p>Please contact the Establishment and Performance Team with any queries."</p>
18:00	<p>LFB Facebook post: Warning of the risk of grass fires as the temperature rises. Described an incident attended in Hayes that covered around 6 hectares. Tips to help prevent grass fires: get rid of cigarettes safely, keep your barbecues off dry grass, and never leave glass lying around. (156 reactions, 11 comments, 45 shares)</p>
<p>TUESDAY 19 JULY 2022</p>	
00:57:27	<p>15 Pump Fire. Incident 110136. Location: F39 Hornchurch. Description: This was a fire in an assisted living block, with persons reported involved. 51 persons were evacuated from the assisted living block, and five police officers and [REDACTED] were treated for smoke inhalation, [REDACTED]. The structure was declared unsafe as a result of the fire by a dangerous structures engineer.</p> <p>01:49:43: The Operational Support Unit (OSU) was requested at to provide bottled water to the incident. The Drone Team also attended. A ten-pump relief with four Station Officers was requested for 04:30.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>04:16:14: an amendment was made, reducing the relief to eight pumps. One turntable ladder was also required for the relief. An officer relief was requested for 05:00, consisting of one Group Commander, three Station Commanders and one Command Unit. A Command Unit relief was requested again for 07:00. A three-pump relief with one Station Officer in charge was requested for 08:30, A further three pump relief with one Sub Officer in charge was requested for 12:00.</p> <p>11:29:43: this relief was downgraded to a two-pump relief, with a turntable ladder required as an observation tower.</p> <p>04:52:02: The stop message was received.</p> <p>14:26:19: The last appliance left the incident</p> <p>20:23:34. Fire Investigation Unit attended the scene</p>
03:40	<p>SAFETY EVENT [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
08:28	<p>LFB Twitter post: (17.2k views, 38 retweets, 126 likes, 9 comments)</p> <p>Drone footage of fire damage to roofs of properties. Advising that investigations had begun into the cause of the 15 appliance fire in Hornchurch.</p>
08:34	<p>Four Pump Fire. Incident 110291.</p> <p>Location: A24 Soho.</p> <p>Description: A call was received to two AFA call points actuating at Oxford Circus Station. The cause of the AFA was smoke issuing from overheating brake pads on the Northbound Victoria Line escalator.</p> <p>08:52 The incident commander made pumps four.</p> <p>11:58 Crews left the scene.</p>
09:10	<p>SAFETY EVENT [REDACTED]</p> <p>A minor vehicle collision while on route to a flooding incident (Incident [REDACTED] E271 (Erith's ladder appliance) sustained minor damage but stayed on the run.</p>
09:22	<p>10 Pump Fire. Incident 110317.</p> <p>Location: A36 Southgate.</p> <p>Description: This was a fire in a mid-terrace restaurant, with persons reported involved. One person was treated and removed by LAS. It began as a four-pump fire. 18 repeat calls were received to this incident. A turntable ladder was used as a water tower. A water relay was required at this incident.</p> <p>10:12:23 The incident commander made pumps six.</p> <p>11:02:49 The incident commander made pumps ten.</p>

OFFICIAL – Sensitive – Commercial – Personal

11:11:09 The Operational Support Unit (OSU) was requested to provide bottled water to the incident. A Fire rescue Unit (FRU) and two turntable ladders (TLs) were also requested from the incident. The incident commander also requested a Canteen Van.

11:36:23 The CU was informed by Control that the Salvation Army would recontact them with an ETA as their only available unit at this stage was in Bexleyheath.

11:36:45 The CU requested that a check be made with the OSU that they were carrying drinking water and a shade tent.

11:51:07 An immediate eight pump relief was requested.

11:57:23 A message was recorded on Vision: "Confirmed with CU7 this relief has been amended to 1330 or sooner if possible." Control have confirmed that this amendment was made because Control "could not provide sufficient appliances for the relief and were inundated with calls." An Assistant Operations Manager had discussed this situation with the Operations Manager, and they had agreed to ask the incident ground for more time to achieve the relief. This was agreed with CU7.

12:18:43 The IC sent a message saying that this would be a protracted incident.

12:23:44 Permission was noted on Vision for relief pumps to attend 'on the bell', meaning using their emergency lights and sirens to make more rapid progress.

12:28:17 One of the stations tasked with providing a relief pump were noted as having 'night crews hanging on,' meaning staff from the night shift had stayed on duty into the day shift to keep a fire engine available for calls.

13:00 SAFETY EVENT [REDACTED]
[REDACTED]
[REDACTED]

14:39:40 An informative message sent from the incident indicated [REDACTED] were "suffering effects of heat"; [REDACTED]
[REDACTED]

14:59:02 An officer relief of one Group Commander and two Station Commanders was requested for 16:00.

16:47:48 CU7 requested an ETA for the officer relief. A further relief appears to have been requested during the incident, but data on Vision does not record clearly when this happened, or how many pumps were required (this is believed to have been a four or three pump relief.)

16:58 The incident was downgraded to a six-pump fire. The IC reiterated that this would be a protracted incident.

20:06:16 The stop message was received.

20:06:37 A one pump and one turntable ladder relief was recorded as implemented.

OFFICIAL – Sensitive – Commercial – Personal

	<p>20:33:27 An immediate two pump relief and one turntable ladder was requested.</p> <p>00:07:20 (on 20 July) A relief was recorded as implemented, and a one pump relief requested for 03:00.</p> <p>03:17:07 (on 20 July) The last relief, a one TL, one pump relief, was implemented.</p> <p>07:51:51 (on 20 July) A revisit by a local station appliance was concluded.</p>
0930	<p>Change of watch.</p> <p>All pump appliances off the run, except for H382.</p>
09:34	<p>Four Pump grass fire – F30. Incident 110341.</p> <p>Location: F30 Leytonstone.</p> <p>Description: This was a fire in grassland. 18 repeat calls were received to this incident. Initially two mobilisations were made; a two pump attendance to the 09:34 call, and a three pump mobilisation at 10:04 (incident 110372). The incident commander recognised the situation, and declared a four pump fire, enabling appliance F241 to be released from the incident. No reliefs were requested from this incident.</p> <p>12:13:46 The stop message was received.</p> <p>13:00:15 The last appliance left the incident.</p>
11:15	<p>Message sent to all stations (via teleprinter):</p> <p><i>"Strategic Resource has now been released"</i></p> <p>(This comprised 4 appliances on red SR and 20 appliances on green SR. The Business Sheet shows a total of 24 appliances due off).</p>
11:15	<p>SAFETY EVENT [REDACTED]</p> <p>While manoeuvring G391, Feltham's ladder appliance, made contact with a wooden fence. The vehicle stayed on the run.</p>
11:17	<p>E420 (Biggin Hill's 4x4 vehicle) came off the run due to insufficient crew.</p>
11:23	<p>30 Pump grass fire. Incident 110428.</p> <p>Location: F39 Hornchurch</p> <p>Description: This was a fire involving 15 hectares of standing crop. 200 members of public were evacuated from a caravan site. 60 cylinders of assorted types were involved, and were removed to safety by crews. 99 calls received in total to this incident. Multiple calls were received within the first 40 minutes, stating that the fire was spreading quickly towards railway sidings, properties, a campsite and a site used by members of the Traveller community. Assistance was requested from Essex FRS for 7 x PA's, 1 x off-road vehicle, 1 x water bowser and 2 x Officers, at various times. While the initial mobilisation was at 11:23:32, an accidental mobilisation of a second appliance at 11:25:03, to the same incident, was left running, due to concerns around potential fire spread.</p> <p>11:39:48 999Eye was used by Control for situational awareness.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>11:42 The incident commander made pumps four.</p> <p>11:56 The incident commander made pumps eight.</p> <p>12:04:22 This was made 'persons reported' (by Control).</p> <p>12:23 The incident commander made pumps 12.</p> <p>12:41 The incident commander made pumps 20.</p> <p>12:55 The incident commander made pumps 30.</p> <p>13:09 An HVP was requested from scene.</p> <p>13:25 A request for a Wildfire Tactical Advisor was made but not fulfilled – this role does not exist within LFB.</p> <p>17:44:08 The Stop message was received. No relief crews and no further Brigade attendance were required.</p>
<p>11:30</p>	<p>6 Pump grass fire. Incident 110438.</p> <p>Location: A40 Hendon</p> <p>Description: Fire involving two areas of parkland. This was divided into: Sector North - approximately three hectares of grass, shrubbery and trees, one hundred percent damaged by fire, and Sector South - approximately one hectare of grass, shrubbery and trees one hundred percent damaged by fire.</p> <p>12:06 A hose layer was requested from the incident and attended from H41 (Kingston).</p> <p>14:48 A 'fire surrounded' message was received.</p> <p>14:54 The Stop message was received.</p> <p>Local station re-visits took place after change of watch (after 20:00) and again the following morning at 07:30.</p>
<p>11:36</p>	<p>LFB Twitter post: (12.1k views, 97 retweets, 233 likes, 8 comments)</p> <p>Drone footage showing damage caused by wildfires. Stating that crews still remain at the scene of several significant incidents across London. Urging people to help to prevent further grass fires and giving advice not to have barbecues or bonfires, not to leave glass on the ground and to dispose of cigarettes responsibly. Also, to only call if it's an emergency and if it is an emergency then not to hesitate to call.</p>
<p>11:53</p>	<p>Four Pump Fire. Incident 110547</p> <p>Location: F39 Hornchurch</p> <p>Description: A fire involving a range of trees, shrubbery, fences and timber sheds adjacent to the railway line.</p> <p>13:08 It was confirmed that this was the same incident as the nearby 30 pump fire (incident 110428).</p> <p>13:11 The incident commander made pumps four.</p>

OFFICIAL – Sensitive – Commercial – Personal

12:07	<p>Eight Pump Grass Fire. Incident 110603. Location: H28 Woodside Description: A fire involving 1 hectare of woodland. This incident was identified as the same as incident 110720. The Met Police, a Local Authority Liaison Officer and a Croydon council Woodlands Officer were all on scene assisting crews. 12:26 The incident commander made pumps four. 13:29 The incident commander made pumps eight. 14:21 'Fire surrounded' was declared. 16:30 A 4 pump relief was requested and crews remained on scene damping down hot spots. 20:26 Crews left the scene.</p>
12:20	<p>Four Pump Grass Fire. Incident 110637 Location: H26 Addington Description: A fire involving 1 hectare of woodland and undergrowth, 100% damaged by fire. 12:54 Crews made pumps four. There were no Command Units available to send. 13:34 It was confirmed by the Officer in Charge that a Command Unit would not be required. 15:07 Crews left the scene. 16:10 SAFETY EVENT [REDACTED] [REDACTED]</p>
12:23	<p>Available fire appliances dropped below 30.</p>
12:29	<p>LFB Twitter post: (25 retweets, 23 likes, 1 comment) Picture of grassfire (stock image). Advising that LFB had attended more than 800 grassfires and urging people not to have barbecues in parks and public spaces.</p>
12:31	<p>Message sent to all stations (via teleprinter): <i>"Regulated attendance has been implemented across the whole Brigade area due to spate conditions".</i></p>
12:34	<p>LFB Twitter post: (40 retweets, 88 likes, 1 comment) Picture of firefighter and appliance. Stating that firefighters were tackling a grass fire on Pea Lane, Upminster, causing smoke to blow over the M25. Warning that the Control room was exceptionally busy and had taken more than 70 calls relating to this incident alone.</p>
12:43	<p>Message sent to all stations (via teleprinter): <i>"URGENT MESSAGE FROM CONTROL: ***SR IS NOW CANCELLED*** Please make yourselves available as soon as possible"</i></p>

OFFICIAL – Sensitive – Commercial – Personal

12:54	<p>Four Pump Fire. Incident 110720</p> <p>Location: H26 Addington</p> <p>Description: One appliance mobilised to a report of grass alight.</p> <p>13:30 An assistance message was received to make pumps four for water relay.</p> <p>No assistance was available to fulfil the make-up request, and over the border Brigades were unable to support.</p> <p>14:37 A Station Commander arrived at this incident.</p> <p>The SC confirmed that this was the same as incident 110603.</p> <p>15:11:13 This incident was closed as a repeat of incident 11063.</p>
12:59	<p>12 Pump Grass Fire. Incident 110728</p> <p>Location: G21 Harrow</p> <p>Description: A total of 18 calls were received to this incident in which a tree had fallen onto the overhead power lines of the train track, to the rear of residential properties. A fire started on the embankment. No buildings were involved in the fire. Support was provided by Network Rail and the Met Police. 12 pumps were requested at this incident but only eight were used, due to delays in availability. On arrival, crews had been mobilised to the wrong side of the railway. Crews relocated, the address was then updated, and trains were stopped. This incident was sectorised.</p> <p>13:10 The incident commander made pumps four.</p> <p>13:19 The incident commander made pumps six for water shuttle.</p> <p>13:37 The incident commander made pumps 12. Control informed crews that this could not be fulfilled due to lack of appliance availability.</p> <p>14:28 'Fire surrounded' was received, with a confirmation that "this is an 8 pump fire".</p> <p>15:14:24 Stop message received.</p> <p>16:02:58 A message was sent from the incident reporting that all appeared cool and requesting a local station visit at change of watch.</p> <p>06:59 (20 July) A local appliance was mobilised to revisit the scene.</p> <p>07:36:27 (20 July) A message was received from the incident saying hotspots remained and crews were turning over and damping down.</p> <p>09:01 (20 July) The incident commander requested a further revisit at 12:00</p> <p>11:50 (20 July) A local appliance was assigned to revisit the scene.</p> <p>15:38 (20 July) A further revisit was requested for 16:00.</p> <p>15:39 (20 July) A local appliance was assigned to revisit the scene.</p> <p>16:50:47 (20 July) The incident commander declared that all appeared cool and no further revisits were required.</p>
13:06	<p>15 Pump, Persons Reported Fire. Incident 110740 (MAJOR INCIDENT)</p>

OFFICIAL – Sensitive – Commercial – Personal

Location: F40 Wennington

Description: A total of 40 hectares of grassland, 2 detached houses, 2 semi-detached houses, 4 terraced houses, 2 outbuildings, 6 single storey garages, a further 5 terraced houses, 1 detached manor house, 12 stables and 5 cars, were all 100% damaged by fire. A further 3 terraced houses were 75% damaged by fire. 88 properties were evacuated and 45 members of the public self-evacuated. 19 calls were received in total to this incident. A total of 8 injuries/safety events were reported from this incident and [REDACTED] [REDACTED] [REDACTED] and 7 members of the public were treated by London Ambulance Service for heat exhaustion.

Further assistance was received by the Brigade from the Metropolitan Police Service, who provided help with a personnel carrier to shuttle LFB crews out and reliefs in. A water bowser was provided by a local farmer. All persons accounted for was not confirmed until 2 days later on 21 July.

13:11 The incident was made 'persons reported' following a 999 call stating there were persons inside a building.

13:12 The incident commander made pumps six.

13:20 The incident commander made pumps 10.

13:28 A message was sent from the sole appliance on scene, requesting assistance from the nearby 30 pump fire.

13:30 SAFETY EVENT [REDACTED] [REDACTED]
[REDACTED]

13:52 The incident commander made pumps 15.

14:00 SAFETY EVENT [REDACTED] [REDACTED]
[REDACTED]

14:02 This was declared a Major Incident due to the resource requirements.

14:16 A METHANE message was sent:

M = Major Incident declared at 14:00 by LFB

E = The Green, Wennington

T = 15 pump fire, persons reported

H = Inc cylinders

A = Access via Wennington Road

N = Unconfirmed number of casualties. [REDACTED] multiple residents suffering smoke inhalation.

E = LFB.

14:30 A hose layer and a High Volume Pump were requested. Neither were sent to scene as they were not available.

OFFICIAL – Sensitive – Commercial – Personal

	<p>15:00 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED].</p> <p>15:00 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED] [REDACTED]</p> <p>15:00 SAFETY EVENTS [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]</p> <p>15:30 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED]</p> <p>[REDACTED] discretion was declared; Firefighters progressed in relaxed fire kit and under air for respiratory protection.</p> <p>16:42 A 15 pump relief was requested.</p> <p>20:00 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED] [REDACTED] appliance was in attendance at the incident at 13:34:43, and not shown as released from the incident and unavailable until 23:35:46.</p> <p>23:43 With Control unable to fulfil the 15 pump relief because of resource availability, a 10 pump relief was implemented.</p> <p>01:19 (20 July) A further 5 pump relief requested.</p> <p>01:48 (20 July) The Stop message was sent.</p> <p>13:35 (24 July) LFB left the scene.</p>
13:11	<p>LFB Twitter post: (125 retweets, 207 likes, 13 comments) Picture of grassfire (stock image). Advising that firefighters were tackling grass fires in Croydon on Oaks Road, as the heatwave continued.</p>
13:35	<p>LFB Twitter post: (69 retweets, 121 likes, 3 comments) Picture of a CRO. Advice to only call if it's an emergency and if it is an emergency then to not hesitate to call.</p>
13:37	<p>Message of assistance sent out to Control Room staff via "Control Emergency" WhatsApp group. This message was sent by the Senior Control Commander, asking if anyone could assist due to high call levels. The Commander asked staff to let them know before attending. However, at 13:39 this message was followed up with another asking any</p>

OFFICIAL – Sensitive – Commercial – Personal

	available staff to make their way to Control. A number of staff who live nearby attended, and others who were due on the night shift came in early to assist.
13:44	LFB Twitter post: (41 retweets, 69 likes, 4 comments) Picture of front of an appliance. Advising that eight appliances and 60 firefighters were in attendance at Oaks Road. Warning to avoid the area as crews continued to tackle the fire.
13:48	10 Pump Fire . Incident 110834. Location: F41 Dagenham Description: This incident is linked to incident number 110945. For stop details, refer to entry at 14:15.
13:48:49	Declaration of Pan London Major Incident "due to weather conditions". Incident number 110844. Methane Message: METHANE MESSAGE : M = MAJOR INCIDENT DECLARED AT 13:51 BY LFB (Time of incident in Vision is 13:48:49) E = PAN LONDON INCIDENTS AT UPMINSTER WENNINGTON PINNER AND OTHER LOCATIONS PAN LONDON T = MULTIPLE BUILDINGS AND GRASS FIRES H = FIRE AND SMOKE POOR AIR QUALITY EXTREME WEATHER TEMPERATURES A = SPECIFIC FOR EACH LOCATION N = UNCONFIRMED NUMBER OF CASUALTIES PAN LONDON E = LFB MPS LAS
14:00	Between 11:30 and 14:00, 449 emergency calls had been taken in Control. (On average, around 500 calls are taken in a 24 hour period). Additionally, 203 admin calls were taken during this time.
14:00	SAFETY EVENT ██████████ A fire appliance from H32 Norbury was involved in a minor collision while on route to an incident. The vehicle remained on the run.
14:08	LFB Twitter post: (259 RTs, 499 likes, 33 comments) Advising that LFB have called for an urgent ban on disposable barbecues in parks and public spaces due to the heatwave and the fact that LFB had already attended over 1,000 grass fires.
14:09	12 Pump Fire, cylinders reported. Incident 110908. Location: G30 Wembley Description: A fire involving a range of shops, dwellings, outbuildings and vehicles. 50 members of the public were evacuated. 43 calls were received for this incident. Due to

OFFICIAL – Sensitive – Commercial – Personal

	<p>the critical situation in Control, the required actions for the 6 pump make-up were not completed. The incident was resolved with 8 appliances, despite the 12 pump request. 4 safety events were reported from this incident; [REDACTED] [REDACTED].</p> <p>14:15 SAFETY EVENT [REDACTED] [REDACTED]</p> <p>14:29 The incident commander made pumps six.</p> <p>14:35 The incident commander made pumps eight, cylinders reported.</p> <p>14:38 Control were unable to fulfil the requirement for a Command Unit, a BA Unit, a Damage Control Unit and a Fire Investigation Unit.</p> <p>15:00 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED]</p> <p>15:30 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED]</p> <p>15:46 The incident commander made pumps 12.</p> <p>20:56 The stop message was received.</p> <p>21:35 A two pump relief were implemented.</p> <p>01:11 A one pump relief was implemented.</p> <p>04:22 A one pump relief was implemented.</p> <p>07:53 A one pump relief was implemented.</p>
14:12	<p>Operation Willow Beck initiated.</p> <p>Operation Willow Beck is a process designed in collaboration between the Home Office, the NFCC Mobilising Officers Group, the NFCC Fire Control Room Project and British Telecom to mitigate increased emergency call volumes during spike conditions, such as flooding or wildfires. Operation Willow Beck places FRSs into groups to take overflow calls from other FRSs suffering large volumes of calls.</p>
14:15	<p>15 Pump Fire. Incident 110945.</p> <p>Location: F41 Dagenham</p> <p>Description: 79 calls were received by Control to a fire involving a range of residential and commercial properties, 25 vehicles and an area of 8 hectares of parkland. Two [REDACTED] members of the public were treated for smoke inhalation along with two Police Officers and six Firefighters. One Firefighter was removed to hospital by LAS. A total of 135 members of the public were evacuated to safety. Two acetylene cylinders were involved in the fire.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>SAFETY EVENTS [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>14:15 First call received.</p> <p>14:32 First mobilisation to this incident.</p> <p>14:44 The incident commander made pumps eight. There were no Fire Rescue Units or Command Units available for Control to send..</p> <p>15:00 The incident commander made pumps 12. Control were unable to fulfil this request through lack of resource availability. 10 pumps were mobilised.</p> <p>15:05 SAFETY EVENT [REDACTED] A fire appliance from H21 Clapham, on route to this incident was involved in a minor collision with another vehicle. The appliance stayed on the run.</p> <p>15:11 The incident commander made pumps 15.</p> <p>18:25 A major incident was declared by LFB and the Met Police:</p> <p>M = Major Incident declared by LFB and Met Police.</p> <p>E = Ballards Road, Bowlin Gardens and Farm Close.</p> <p>T = Grassland fire spread to commercial and residential properties.</p> <p>H = Smoke plume, cylinders.</p> <p>A = Ballards Road access via Rainham Road South.</p> <p>N = Number of casualties – 2 members of the public removed by LAS, 4 Firefighters and 2 Police Officers [REDACTED]</p> <p>E = Emergency Services – Met Police, London Ambulance Service, Local Authority, Other.</p> <p>22:40 The stop message was received.</p> <p>Diminishing reliefs were implemented until 22 July.</p> <p>10:53:52 (22 July) LFB left the scene.</p>
14:24	<p>6 Pump Fire. Incident 111004</p> <p>Location: E30 Erith.</p> <p>Description: A fire in a building comprised of a shop and dwellings. 'Fire surrounded' by 15:17. Though six appliances were mobilised to this incident, the incident commander sent a message saying oncoming appliances were not needed, confirming this as a 4 pump-fire.</p> <p>14:43 The incident commander made pumps four.</p> <p>15:02 The incident commander made pumps six.</p> <p>15:54 The stop message was received.</p> <p>16:36 The last LFB resource left the incident.</p>

OFFICIAL – Sensitive – Commercial – Personal

14:39	<p>10 Pump Grass Fire. Incident 111101</p> <p>Location: G23 Hillingdon</p> <p>Description: 36 emergency calls were received to this fire involving 40 hectares of farmland and a stack of tyres, with incomplete and conflicting information given on the location. [REDACTED]. Two Royal Air Force water bowsers from nearby RAF Northolt attended to support LFB operations. A water shuttle was used. A local landowner's machinery was used to create fire breaks.</p> <p>15:00 SAFETY EVENT 17356509 While attending this fire the incident commander requested additional resources. They did not get the resources they asked for and recorded this as a safety event because the situation was "placing crews in danger of heat exhaustion or worse."</p> <p>15:06 The incident commander made pumps four.</p> <p>15:20 A request was made to both Surrey Fire and Rescue and Buckinghamshire Fire and Rescue Service for support but both services were unable to assist at this time.</p> <p>15:39 The incident commander informed Control that RAF Northolt were able to supply two 9500 litre water bowsers.</p> <p>16:06 The two RAF water bowsers arrived on scene.</p> <p>16:19, Control were still unable to fulfil the 'make pumps 4' request, with no 4th pumping appliance available to send.</p> <p>16:20 SAFETY EVENT [REDACTED]</p> <p>[REDACTED]</p> <p>16:37 The incident commander sent a further assistance message stating "make pumps 10 – when resources allow". An ambulance was also requested at this time, [REDACTED]</p> <p>[REDACTED]</p> <p>16:58 a turntable ladder requested.</p> <p>17:24 A 4x4 vehicle 'with on-board tank' was requested from the incident. London Fire Brigade does not have any off-road vehicles (4x4s) and none were available from neighbouring Brigades.</p> <p>19:50 A 10 pump relief was requested for after change of watch.</p> <p>20:29 The 10 pump relief request was amended to eight pumps.</p> <p>23:13 Crews were withdrawn to a perimeter due to poor light, with the plan being to monitor hotspots and reassess at dawn.</p> <p>23:13 A 3 pump relief was implemented.</p> <p>00:17 (20 July) Wind caused multiple flare-ups of the fire, leading the incident commander to send a request to make pumps six.</p> <p>This was made up again at 00:17 (20 July) due to an increase in the wind.</p> <p>02:48 (20 July) A further six pump relief was requested for 03:20.</p>
-------	---

OFFICIAL – Sensitive – Commercial – Personal

	<p>03:57 (20 July) A 4x4 vehicle mobilised from Maidenhead (Thames Valley FRS) arrived on scene.</p> <p>05:04 (20 July) The six pump relief was recorded as implemented.</p> <p>06:00 (20 July) The stop message was sent from the incident.</p> <p>07:45 (20 July) Thames Valley FRS requested that the 4x4 vehicle be returned to them by 09:00.</p> <p>07:53 (20 July) A four pump relief was requested for as soon as possible after change of watch..</p> <p>11:53 (20 July) A two pump relief was recorded as implemented.</p> <p>15:16 (20 July) A further two pump relief was recorded as implemented.</p> <p>16:15 (20 July) A local station revisit was requested for 19:00.</p> <p>18:33 (20 July) An amended stop message was sent from the incident.</p> <p>20:58 (20 July) A one pump relief was requested for as soon as possible to continue with cutting away and damping down.</p> <p>07:30 (21 July) A local station revisit was requested for 08:00. Re-inspections and revisits were ongoing until 07:49 on 24 July when the incident was declared 'no further attendance required' and the last LFB resource left the scene.</p>
14:45	A Commissioner's Continuity Group meeting was called by the London Fire Commissioner.
14:47:09	METHANE message from pan-London incident 110740 recorded on Vision.
14:57	<p>LFB Twitter post: (263.7k views, 167 retweets, 232 likes, 29 comments)</p> <p>Sky News' Breaking News video post on the UK-wide heatwave. LFB advising that 15 appliances and approximately 100 firefighters were dealing with the fire on The Green in Wennington.</p>
15:21	<p>LFB Twitter Post: (191.1k views, 719 Re-Tweets, 1,277 likes)</p> <p>Video message; LFB has declared a Major Incident. Advice to only call if it's an emergency and if it is an emergency then not to hesitate to call.</p>
15:28	<p>8 Pump Grass Fire. Incident 111265.</p> <p>Location: A34 Edmonton</p> <p>Description: 48 calls were received to a fire in a park. Approximately four hectares were 30% damaged by fire.</p> <p>15:48 An initial attendance of 1 appliance was mobilised.</p> <p>16:17 Crews arrived on scene.</p> <p>16:19 The incident commander made pumps four. Control were able to fulfil this in part by sending two further pumping appliances. This left the incident deficient of one pumping appliance and one Command Unit.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>17:00 The incident commander made pumps eight.</p> <p>17:03 Two further appliances were mobilised to meet the request to make pumps eight. One of them was a Fire Rescue Unit (FRU), not a pumping appliance.</p> <p>17:18 A further two pumping appliances were mobilised, bringing the fulfilment of the 'make pumps eight' request up to a total of six pumping appliances and an FRU.</p> <p>18:13 'Fire surrounded' was sent to Control.</p> <p>18:55 The stop message was sent from the incident.</p> <p>23:05 The last LFB resource left the scene.</p>
15:35	<p>LFB Twitter post: (34.9k views, 314 retweets, 349 likes, 16 comments)</p> <p>Advice strongly urging people not to have BBQs or bonfires today. Video message saying LFB have declared a Major Incident.</p>
15:47	<p>Operational discretion was declared at incident 110740, the fifteen pump fire at Wennington. This was to enable the deployment of BA crews "in relaxed fire kit, under air for respiratory protection due to temperatures and heat".</p>
16:17	<p>10 Pump Fire. Incident 111415.</p> <p>Location: G21 Harrow</p> <p>Description: A fire involving a disused church hall, a car wash, two houses and nine motor vehicles, all 100% damaged by fire. A further three houses were five per cent damaged by the fire. A cylinder was involved. [REDACTED]. Eight firefighters were treated on scene [REDACTED] and remained on scene. [REDACTED].</p> <p>16:37 The incident commander made pumps fours.</p> <p>16:39 The incident commander made pumps 10, and made the incident 'persons reported'. Control were unable to provide the resources required by this level of 'make up', lacking two Command Units, one Fire Investigation Unit, one Damage Control Unit, one Breathing Apparatus Unit and one Canteen Van.</p> <p>16:47 Cylinders were reported involved.</p> <p>17:00 SAFETY EVENT [REDACTED] [REDACTED] [REDACTED] [REDACTED]</p> <p>20:17 The incident commander downgraded the incident to an eight pump fire.</p> <p>20:22 The fire surrounded message was sent from the incident.</p> <p>21:42 The stop message was received, but due to ongoing issues with isolation of the gas and electricity at the scene, as well as the requirement for a dangerous structures engineer</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>and demolition team, crews and a Fire Investigation Unit remained on scene until 19:18 the following day (20 July). Diminishing reliefs were implemented up until that time.</p> <p>23:45 SAFETY EVENT [REDACTED]</p> <p>[REDACTED]</p>
16:25	<p>Six Pump Grass Fire. Incident 111452 Location: F35 Woodford Description: A total of 48 emergency calls were received to a fire, with an eight acre area of park, woodland and scrubland alight.</p> <p>17:52 An attendance was not mobilised until this time, when a one pump attendance was sent.</p> <p>18:06 The one pump attendance arrived on scene.</p> <p>18:32 The incident commander made pumps six.</p> <p>18:34 Control informed the incident commander that there were only two pumps available at that time.</p> <p>18:35 Control informed the incident commander that there were only three pumps available at that time.</p> <p>19:02 The Command Unit assigned to the incident informed Control that it had an estimated journey duration of 90 minutes as it was 50 miles from the incident.</p> <p>19:44 The incident commander downgraded the incident to a four pump fire.</p> <p>19:55 A message was sent to Control saying the Command Unit (which had not arrived) was no longer required.</p> <p>21:57 The stop message was sent.</p> <p>21:57 A request was made for a revisit by a local station at first light the next day, as crews were unable to access the scrub and woodland in fading light.</p> <p>07:08 The incident was closed. No local revisit was recorded prior to this.</p>
16:30	<p>A CCG meeting was held in the Commissioner's Conference Suite.</p>
16:30	<p>An email was sent from the Commissioner to all staff:</p> <p>"Major incident declared</p> <p>You will be aware from ongoing media reports, and our own updates on social media, that we are under severe pressure as the second day of unprecedented temperatures sparks several significant fires across London.</p> <p>This afternoon, I chaired an emergency meeting of the Commissioner's Continuity Group (CCG) and declared a major incident, as this enables us to focus our available resources.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>Our colleagues on fire stations are facing incredibly difficult conditions on the incident ground and our colleagues at Control are dealing with high numbers of calls and the challenges of managing our resources during a major incident.</p> <p>However, we remain ready to respond to incidents and we are working with the media to get the message out to members of the public that if they see a smouldering fire, they should not hesitate to call us so that we can bring it under control and prevent it from spreading further.</p> <p>In preparation for the heatwave, we have been sharing safety messaging across our social media channels, this afternoon we have enhanced that messaging urging people not to have barbecues or bonfires today, as given the dry conditions even the smallest spark could cause a fire. I encourage you all to follow this same advice.</p> <p>Temperatures have not yet started to drop so we have a long day ahead of us. I will share my thanks to all those involved when we come out the other side of this major incident. I am, however, incredibly proud of our response so far and the commitment and professionalism demonstrated by every member of staff on duty today."</p>
<p>17:20</p>	<p>6 Pump Fire, Persons reported. Incident 111619</p> <p>Location: F36 Walthamstow</p> <p>Description: This was a persons reported fire in a four storey residential block in which a flat and balcony on the first floor and a flat and balcony on the second floor were all 100% damaged. A further flat on the third floor was 10% damaged by the fire. 40 residents were evacuated from the building and [REDACTED] was rescued by firefighters via ladder. [REDACTED]. Fire survival guidance was given prior to the arrival of crews. A total of 23 emergency calls were taken to this incident.</p> <p>17:25 An appliance from Turner's Hill station (West Sussex FRS) that had been standing by at Reigate fire station (Surrey FRS) was mobilised to this incident.</p> <p>17:25 The Station Commander mobilised to the incident reported a 'considerable journey time' due to their location at time of mobilisation. It was 45 minutes until they booked on scene.</p> <p>17:50 The incident commander made pumps six.</p> <p>18:44 A fire surrounded message was sent from the incident.</p> <p>18:52 A Fire Investigation Unit was requested from the scene, but none were available. It was not possible to mobilise a Command Unit to this incident for 60 minutes.</p> <p>19:53 The stop message was received.</p> <p>19:54 A local station revisit was requested for 21:00. No revisit is recorded on Vision.</p> <p>21:06 All appliances had left the scene.</p> <p>A fire investigation unit (not available during the incident) attended on 22 July.</p>

OFFICIAL – Sensitive – Commercial – Personal

17:30	SAFETY EVENT [REDACTED] [REDACTED] [REDACTED]
17:39	<p>Four Pump Grass Fire. Incident 111697. Location: F39 Hornchurch. Description: This incident involved two separate areas of grassland, both around 1 hectare in size. Of the 4 appliances attending this fire, 3 were from neighbouring FRSs.</p> <p>17:39 The initial call was received. 17:59 The first appliance was mobilised. 18:11 The incident commander made pumps four. 19:14 The stop message was received. 20:57 Crews had left scene by this time.</p>
17:41:06	<p>LFB Instagram Post: Video. Declared Major Incident. Footage of the wildfires and a plea for people to help prevent more fires and reiterated the warnings given previously. (12,147 views, 31 comments)</p>
17:44	<p>LFB Twitter post: (36.8k views, 148 retweets, 257 likes) Video footage of a fire in Dagenham affecting a number of houses and grassland. Advising residents to keep doors and windows shut, motorists to avoid the area and that there are 15 appliances in attendance.</p>
17:44	<p>LFB Twitter post: (13.8k views, 77 retweets, 107 likes, 3 comments) BBC interview with Deputy Commissioner Jonathan Smith, talking about the declaration of a major incident, and the cause of it being extreme temperatures. Advising the public to only call 999 in a life-threatening situation and to not hesitate to call if there is a fire. Repeating the advice to not to have barbecues or bonfires, not to leave glass on the ground and to dispose of cigarettes responsibly.</p>
18:00	<p>A CCG meeting was held in the Commissioner's Conference Suite.</p>
18:33	<p>20 Pump Grass Fire, Persons reported. Incident 111869 Location: E27 Erith Description: A total of 22 calls were received to this fire in which two warehouses were 100% destroyed by fire and a further warehouse was 30% damaged by fire. Five hectares of grassland and bushes were also alight. Approximately 300 litres of heating oil were alight, and foam was used in firefighting. 13 persons were led to safety and a further 15 persons were rescued by Firefighters using smoke hoods.</p> <p>18:37 One appliance was mobilised to this incident. 19:13 The appliance in attendance requested an additional pumping appliance from scene, 'for water shuttle'.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>19:32 Control mobilised this additional appliance.</p> <p>20:07 The incident commander made pumps four.</p> <p>20:24 The incident commander made pumps six.</p> <p>20:29 A hose layer was requested and was mobilised to scene but Control were unable to deploy all the resources required, including: Fire Investigation Unit, Command Unit, four Station Commanders, Press Officer, Fire Safety Officer, Tactical Advisor Bulk Media and a Damage Control Unit. Some of these were met as time elapsed.</p> <p>21:40 The incident commander made pumps 15.</p> <p>22:09 The incident commander requested the attendance of the drone team.</p> <p>22:49 The incident commander made pumps 20.</p> <p>01:23 (20 July) The incident commander requested contact with the fire boat to establish if they could assist with fighting fires from the river.</p> <p>01:33 (20 July) The incident commander declared the incident a 16 pump fire.</p> <p>02:53 (20 July) The stop message was sent.</p> <p>Multiple reliefs were requested and implemented before the incident was finally closed on 22 July, following a fire investigation which included further assistance from the Drone Team.</p>
18:39	LFB Facebook Post: Video. Declared Major Incident. Footage of the wildfires and a plea for people to help prevent more fires and reiterated the warnings given previously. (539 reactions, 96 comments, 269 shares, 16k views)
18:48	An email was circulated to Brigade staff cancelling all Strategic Resource for 20 July.
18:55	LFB Twitter post: (119.5k views, 155 retweets, 382 likes, 22 comments) Drone footage from Sky News covering the grass fire in Wennington. LFB advising that firefighters were continuing to work hard in challenging conditions to bring the Wennington fire under control. Warning that an area of 40 hectares of grassland was alight as well as farm buildings, houses, and garages.
19:00	SAFETY EVENT [REDACTED] While manoeuvring at an incident, a turntable ladder from G30 Wembley made contact with a low garden wall. The vehicle stayed on the run.
19:15	LFB Twitter Post: (39.8k views, 365 RTs, 545 likes, 35 comments) Drone footage showing damage caused by wildfires. Advice urging people not to have barbecues or bonfires, not to leave glass on the ground and to dispose of cigarettes responsibly.
19:23	Four Pump Grass Fire. Incident 112033. Location: H43 Twickenham

OFFICIAL – Sensitive – Commercial – Personal

	<p>Description: Two hectares of trees and undergrowth were involved in this fire which generated a total of 64 calls. 999 Eye was used by Control Room Officers for situational awareness and the initial attending appliance was requested from Berkshire Fire and Rescue Service.</p> <p>20:02 The incident commander made pumps four.</p> <p>21:46 The stop message was sent from the incident.</p> <p>Crews remained on scene damping down and turning over and left scene at 00:24 (20 July).</p>
19:33	<p>Eight Pump Fire – G22. Incident 112088</p> <p>Location: G22 Stanmore</p> <p>Description: This eight pump incident involved multiple buildings including five semi-detached houses, outbuildings, surrounding fencing, trees and shrubbery – all 80-100% damaged by fire. one 15kg propane cylinder was also involved. 25 calls were received by Brigade Control and into Hertfordshire Fire and Rescue Control (Herts) - at Thames Valley. Herts mobilised Watford to the incident.</p> <p>20:04 The incident commander made pumps four.</p> <p>20:12 The incident commander made pumps eight and reported cylinders involved. At 'make pumps eight', the incident was deficient of one pumping appliance, one Command Unit, one Station Commander, one Fire Safety Officer and one Tactical Advisor Bulk Media.</p> <p>21:44 The fire surrounded message was sent.</p> <p>21:59 The stop message was sent.</p> <p>23:23 Crews had left the scene by this time, with no further re-inspections deemed necessary.</p>
20:00	<p>Change of watch.</p> <p>12 Pumps off the run.</p>
20:57	<p>Eight pump grass fire. Incident 112392.</p> <p>Location: F41 Dagenham</p> <p>Description: 49 calls were received to this grass fire that damaged approximately 3 hectares of grass and shrubs.</p> <p>20:57:55 The first call was received.</p> <p>21:22:23 The first appliance was assigned.</p> <p>21:22:23 The first appliance reported difficulty accessing the fire and that they were relocating.</p> <p>21:22:51 First appliance in attendance.</p> <p>21:32:29 The incident commander made pumps four.</p>

OFFICIAL – Sensitive – Commercial – Personal

	<p>21:59:07 The incident commander made pumps eight.</p> <p>22:03:00 No Press or Fire Safety Officers were available for the incident.</p> <p>22:08:02 No Fire Investigation Team was available for the incident.</p> <p>22:10:01 A Control Officer noted that Essex were sending two appliances.</p> <p>22:28:48 The OSU assigned to the incident reported their Trell Tent was defective.</p> <p>22:33:15 The incident commander requested a Lightweight Portable Pump.</p> <p>23:31:15 A Command Unit booked in as Incident Command Vehicle.</p> <p>00:01:11 (20 July) A Fire Surrounded message was received.</p> <p>00:27:22 (20 July) The stop message was received.</p>
<p>21:03</p>	<p>Six pump fire. Incident 112410</p> <p>Location: F42 Ilford</p> <p>Description: 9 calls were received by Control to this fire in a semi-detached house being used as a cannabis factory. The incident was declared a Hazmat incident because of the cannabis factory. 100% of the first floor and 100% of the roof were damaged by fire. A total of four LFB appliances attended the incident, plus a TL. They were aided by three Essex appliances.</p> <p>21:03:53 The first call to this incident was received. Mobilisation occurred straight away. Two LFB appliances and one Essex appliance were sent.</p> <p>21:08:49 Multiple calls had been received. A Control Officer noted on Vision "Multiple Calls – Attendance not sent as insufficient fire engines – Major Incident Declared."</p> <p>21:09:16 A Control Officer noted on Vision "No Command Units available".</p> <p>21:10:29 The first appliance was in attendance.</p> <p>21:11:46 The incident commander made pumps four.</p> <p>21:16:31 – No Fire Investigation Team were available.</p> <p>21:21:04 The incident commander made pumps six.</p> <p>21:48:46 The Deputy Assistant Commissioner monitoring this incident informed Control they were just returning from a 10 pump fire so they would be delayed if required to attend.</p> <p>22:14:59 The incident commander declared this was a confirmed Hazmat incident, but a full hazmat attendance was not required.</p> <p>23:24:50 Stop message received.</p> <p>00:23:43 (20 July) LFB's last resource at the incident left.</p>
<p>21:27</p>	<p>LFB Twitter post: (13.3k views, 89 retweets, 113 likes, 16 comments)</p> <p>Video footage of the scale of the damage caused by the fire in Dagenham. Advising that crews would be in attendance throughout the night and that 5 hectares of grassland remained alight as well as some residential properties.</p>

OFFICIAL – Sensitive – Commercial – Personal

21:51	<p>LFB Twitter post: (29 retweets, 148 likes, 5 comments)</p> <p>Picture of smoke from grassfire. Advising that firefighters have brought two large grass fires under control in one day. One being grassland at Cranford Park in Hayes and the other being Woolwich Common. Asking followers to spare a thought for firefighters during this heat.</p>
21:59	<p>An email was sent from the Officer of the Day to all Station Commanders and all Group Commanders:</p> <p>"Due to the declaration of a Major incident and the standing up of the BCC all Cat 1 and Cat 2 has been cancelled for Senior Officers on Wednesday 20th July to facilitate greater resilience throughout the Brigade."</p>
22:00	<p>SAFETY EVENT [REDACTED]</p> <p>While leaving the roadway to access a fire on open parkland at Hollow Pond, Walthamstow, a fire appliance from F45 Plaistow made contact with a low-level obstacle at the side of the track. The vehicle stayed on the run.</p>
23:45	<p>SAFETY EVENT [REDACTED]</p> <p>The front tyres of an appliance were reported as worn. Babcock advised this was a code two on the run defect. The reporting officer overruled this and took the vehicle off the run, believing it to be unroadworthy, stating "tyre worn down to the cords, evidence of extreme tyre wear in an extremely short period of time."</p>
23:55	<p>LFB Twitter post: (35 retweets, 83 likes, 3 comments)</p> <p>Pictures of the fire/fire damage in Dagenham. Advising that the fire was under control, but crews would remain to dampen down throughout the night. Warning that properties had been damaged and destroyed as well as vehicles and grassland.</p>
<p>WEDNESDAY 20 JULY 2022</p>	
08:30	<p>A CCG meeting was held in the Commissioner's Conference Suite. This meeting closed the pan-London Major Incident.</p>
09:23	<p>LFB Major Incident stood down.</p>
10:08	<p>An email was sent from the Deputy Commissioner to all Station Commanders, all Group Commanders and all Deputy Assistant Commissioners:</p> <p>"Fire-fighting tactics and resources</p> <p>Due to the unprecedented ongoing call demand anticipated, incident commanders are reminded to consider their fire-fighting tactics and the level of resources they are requesting to safely resolve incidents. Requests for make-ups should consider the objectives for each incident, the impact on wider pan-London resources and fully utilise the skills of the on-scene crews.</p> <p>Thank you for your continuing hard work in the most challenging circumstances."</p>

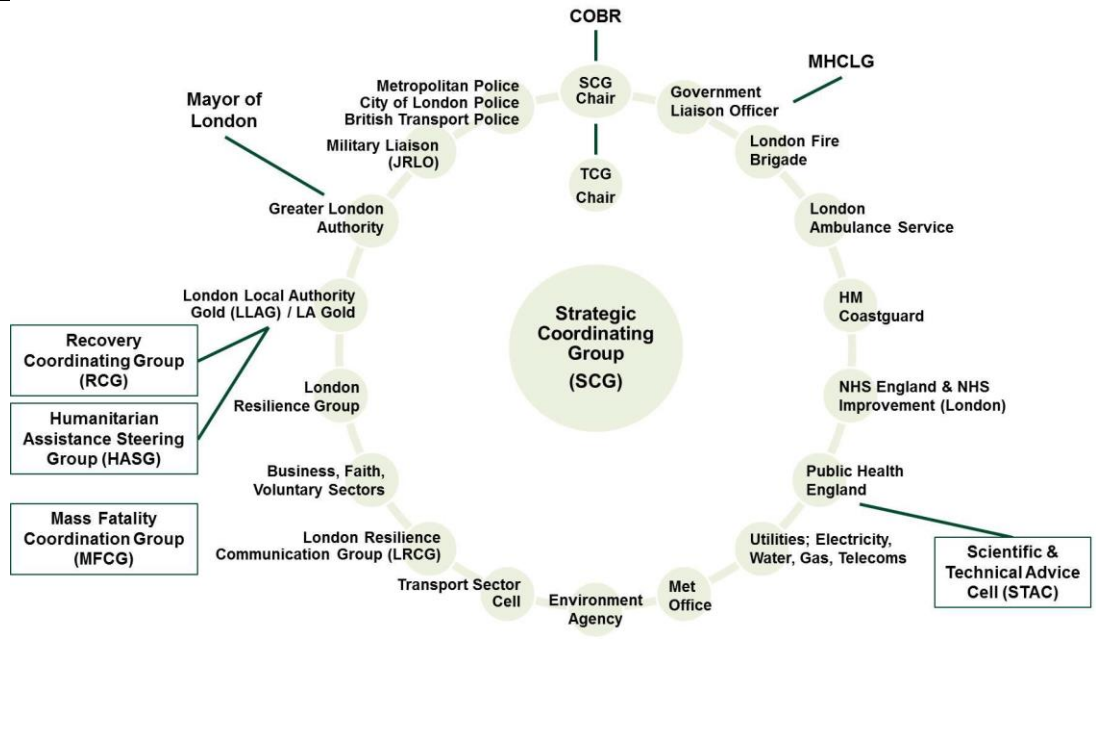
OFFICIAL – Sensitive – Commercial – Personal

15:30	A final CCG meeting was held in the Commissioner's Conference Suite.
16:03	<p>Email sent on behalf of the Commissioner from Communications Mailbox to all staff:</p> <p>"This morning, I chaired a meeting of the Commissioner's Continuity Group, where our major incident was stood down."</p>
18:23	<p>An email was sent from the Head of Procurement to all operational staff:</p> <p>"PPE laundry process</p> <p>Following yesterday's major incident, Bristol Uniforms are currently managing any "off the run" related call outs to replenish any required PPE. This is a reminder that the usual PPE laundry process needs to be followed by all stations. Full guidance can be found in PN693 Structural firefighting personal protective equipment (PPE).</p> <p>For contaminated PPE please ensure that it is bagged up appropriately (using the bags provided on the appliance) and stored the correct way while pending collection by Bristol Uniforms. If holding the laundry is a challenge at your station, for example there is limited storage space at your station, or if volumes of dirty PPE is a concern, please contact Bristol Uniforms on the usual helpline to inform them and they will prioritise collection of PPE for you.</p> <p>Bristol Uniforms operate a 24/7 helpline which can be accessed from the Brigade telephone system by a short dial number of # [REDACTED] or by calling [REDACTED]. The 24/7 helpline should be used to report any PPE problems that render personnel unable to meet their operational requirement, including the collection of PPE."</p>
18:38	<p>An email was sent from the Deputy Assistant Commissioner Central Operations to all Group Commanders and Station Commanders:</p> <p>"Due to the current conditions and the standing up of the BCC, all Cat 1 and Cat 2 for Senior Officers has been suspended for the next 10 days, to facilitate greater resilience throughout the Brigade.</p> <p>This will be in place until the 30th of July, however, will remain under review.</p> <p>The use of Status 7 should only be used when absolutely necessary to maintain operational cover."</p>
18:56	<p>Email sent from Assistant Director of Learning and Development to all staff:</p> <p>Following this afternoon's Commissioner's Continuity Group meeting, the decision has been taken to return to normal business arrangements in relation to training courses.</p>

OFFICIAL – Sensitive – Commercial – Personal**4.4 Appendix four: Glossary**

TERM	DEFINITION
BCC	Brigade Coordination Centre. Part of LFB's Strategic Response Arrangements. Usually staffed by Station and Group Commanders, working with ORSOs and other staff to manage a variety of functions.
FRS	Fire and Rescue Service. Only two areas in the UK now have a fire 'Brigade', the rest are all called FRSs.
MDT	Mobile Data Terminal; a device on fire appliances used by crews to obtain risk information, plans, hydrant information etc.
NFCC	The National Fire Chiefs Council.
ORD	Operational Risk Database.
ORSO	Operational Resilience Support Officer
PAO	Pre-Arranged Overtime, where a member of operational staff agrees in advance to work an extra shift.
SCG	<p>Strategic Coordination Group meeting.</p> <p>All forms of multi-agency strategic level meetings are referred to as 'Strategic Coordinating Groups' (SCGs).</p> <p>The SCG is responsible for determining the strategic aim, objectives and priorities for an incident on behalf of London. The SCG will continue to meet throughout the response phase as long as there is a requirement, or until the group hands over to a Recovery Coordinating Group (RCG) or stands down.</p> <p>The SCG should be chaired by the most appropriate agency, depending on the nature of the incident. Initially, the MPS will chair as default. This may change as the incident progresses.</p> <p>Typical stakeholders would be:</p>

OFFICIAL – Sensitive – Commercial – Personal

	 <p>(This information and chart are taken from The Strategic Coordination Protocol, v8.72020.)</p>
<p>TAB</p>	<p>Tactical Advisor Bulk Media; a specialist Station or Group Commander with training and expertise in water and bulk foam provision to incidents.</p>
<p>TAW</p>	<p>National Tactical Advisor for Wildfires.</p>
<p>UKHSA</p>	<p>United Kingdom Health Security Agency. The UKHSA operates the Heat Health Alert Service from June to September. The alert service is aimed at the health sector, and covers England only, with the aim of enabling health and social care professionals to take action to minimise the impact of the heat on people's health.</p>
<p>Wildfire</p>	<p>LFB policy 870 defines a wildfire as a fire meeting one or more of the following criteria:</p> <ul style="list-style-type: none"> • Involves a geographical area of at least one hectare (10,000 square metres). • Has a sustained flame length of more than 1.5 metres. • Requires a committed resource of at least four fire and rescue service appliances/resources. • Requires resources to be committed for at least six hours.

OFFICIAL – Sensitive – Commercial – Personal

	<ul style="list-style-type: none">• Presents a serious threat to life, environment, property and infrastructure.
--	--

4.5 Appendix five: Bibliography

Essex County Fire and Rescue Service. (2022, July 22). *Latest News*. Retrieved from essex-fire.gov.uk: https://www.essex-fire.gov.uk/news/Fire_Service_has_exceptionally_busy_week_during_heatwave/

JESIP. (2022, December 3). *Major Incident*. Retrieved from JESIP - Working Together - Saving Lives: <https://www.jesip.org.uk/uploads/media/app/Jesip-web-version/major.html>

London Fire Brigade. (2017). *London Safety Plan*. London: LFB.

London Fire Brigade. (2019). Preparing for wildfire incidents. *Operational News*, 11.

London Fire Brigade. (April 2022). *Assessment of Risk*. London: LFB.

London Resilience Partnership. (2022). *London Risk Register*. London: London Resilience Group.

Met Office. (2021, June 18). *Why the Met Office is launching a new extreme heat warning*. Retrieved from MetOffice.gov.uk: <https://blog.metoffice.gov.uk/2021/06/18/why-the-met-office-is-launching-a-new-extreme-heat-warning>

Met Office. (2022, November 7). *July Heat Review*. Retrieved from MetOffice.gov.uk: <https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/july-heat-review>

Met Office. (2022, October 1). *Severe weather advice extreme heat*. Retrieved from MetOffice.gov.uk: <https://www.metoffice.gov.uk/weather/guides/severe-weather-advice#extreme%20heat>

Met Office. (2022, June 21). *Why the Met Office is launching a new extreme heat warning*. Retrieved from MetOffice.gov.uk: <https://blog.metoffice.gov.uk/2021/06/18/why-the-met-office-is-launching-a-new-extreme-heat-warning/>

National Fire Chiefs Council. (2021). *Action Note 20200302-2289-A*. NFCC.

Singleton, J. (2019). Wildfires in the capital city. *Fire Times*, 43.