LONDON FIRE BRIGADE

LFC-24-082

Assessment of Risk 2024

Report to:	Date:
Performance, Risk and Assurance Board	17 July 2024
Commissioner's Board	14 August 2024
Deputy Mayor's Fire Board	27 August 2024
London Fire Commissioner	
Audit Committee (appendix 9 and AoR only)	16 September 2024

Report by:
Assistant Director, Strategic Planning Susan Ellison-Bunce

Report classification:
For decision

For publication

I agree the recommended decision below.

Andy Roe
London Fire Commissioner

Date This decision was remotely signed on 9 September 2024

PART ONE
Non-confidential facts and advice to the decision-maker

Executive Summary

The Assessment of Risk (AoR) for London is the Brigade's current understanding of the risks affecting the capital to which London Fire Brigade could be expected to respond. This assessment is used to inform the London Fire Commissioner's plans for reducing risk in London, as set out in the Community Risk Management Plan (CRMP) and in the six associated service strategies; Prevent, Protect, Respond, Prepare, Recover and Engage. When the CRMP was approved, the London Fire Commissioner (LFC) committed to an annual review of the AoR and this report presents the Assessment of Risk 2024. This will replace the version that originally informed the CRMP and the update produced in 2023. No changes to the CRMP are required because of this updated assessment. The changed assessment of existing risks outlined in this document, and the new risks identified, will inform the Operational Capability Review, Officer Review, service strategies and the content of relevant programmes.

Proposed decisions – the London Fire Commissioner

That the London Fire Commissioner approves and publishes the Assessment of Risk 2024.

That the London fire Commissioner approves that the method for assessing risk used in 2024 be adopted for 2025 as described in this report.

1 Introduction and background

1.1 The Brigade's Assessment of Risk (AoR) underpins the Community Risk Management Plan (CRMP), which describes the changes that the Brigade needs to make to achieve its vision and how it will make those changes. The CRMP also identifies the improvements to existing services and the new services that are needed to respond to risk. The six service strategies that have their basis in the CRMP are: Prevent, Protect, Respond, Prepare, Recover and Engage.

1.2 The AoR is intended to support a common understanding of operational risk across services and departments. The review of the AoR for 2024 should be reflected in departmental planning, production of business cases and in local risk management plans and in reviews of service strategies.

1.3 The results of the AoR are integrated into the Brigade's approach to prioritisation of activity. The AoR is included as a corporate driver in the approach and new actions needed to adequately respond to red risks on the AoR have the highest priority. This informs decisions on resourcing where choices need to be made.

1.4 There are risks in the AoR that also affect the Brigade's ability to operate and officers in Strategic Planning work closely with those in Business Resilience so that relevant intelligence is shared and informs both assessments as relevant. For example, climate change may increase the likelihood and severity of wildfires in London; it may also impact on water supplies for firefighting. Risks to

the Brigade's ability to operate are captured on the corporate risk register, whereas the risk of wildfire appears in the AoR.

1.5 The AoR is intended to be used as a technical document by LFB staff to direct and prioritise work. It is available to the public, but it is acknowledged that due to its complexity it is not primarily intended as a public risk communication tool. Community engagement on risk is expected to focus on local risk, using the borough risk management plan as a vehicle.

1.6 Teams involved in direct risk communication work with the public should refer to the AoR when planning and prioritising their communication but use appropriate tools for the specific audience.

1.7 The AoR has been reviewed for 2024 and updated in line with the LFC's commitment to review the AoR annually. This AoR is attached at appendix one.

2 Key outcomes of the review

2.1 The following paragraphs set out the key outcomes from the update of the AoR. The changes do not require amendments to the CRMP itself, as any actions needed to respond to the amended risk profile are within the scope of the CRMP. However, service strategy owners and staff responsible for reviews of operational capability will need to be cognisant of the findings of this review and ensure high risks are prioritised.

2.2 Partnership planning, presented in the London Risk Register (LRR), has identified a more complex and varied threat picture in 2024. The LRR includes 11 new risks of which six are malicious threats and attacks. Multi-site incidents remain a concern to policy owners and subject matter experts. The level of public concern regarding malicious threats and security related risk has increased since last assessed. Respondents across all groups expressed concern around personal safety and security.

2.3 Increasing cooperation with partner agencies is reflected in the higher scores seen for incidents including effecting entry to people collapsed or injured behind locked doors and to incidents involving bariatric people.

2.4 Risks related to mental ill health, and those that may have their origins in an episode of poor mental health, including incidents involving people under trains, people threatening to jump from height and people in precarious positions have continued to increase.

2.5 Policy owners and Subject Matter Experts within LFB identified the increasing number of residential buildings above 30 floors as an operational challenge in the present and near-term future due to the physical and physiological constraints on operating in this environment.

2.6 The proliferation and wider adoption of new fuels, energy sources and bulk energy storage, in particular lithium-ion energy storage, present ongoing and developing operational challenges. The developing legislative environment around new fuels will be crucial in determining the controls required by LFB.

2.7 Climate change related incidents such as wildfire and flooding are likely to be linked with increasing numbers of large incidents, and incidents with high resource utilization. This will lead to increasing challenges with managing operational information flow and challenges in maintaining situational awareness pan-London during peak demand.

3 Approach to assessing risk

3.1 The review of the AoR in 2024 retains the layered structure and method proposed in the paper, "Proposed Process: Assessment of Risk 2024" presented to Commissioner's Board in October

2023. Because of the different types of risk that LFB must prepare for and respond to, the AoR presents different types of risks as 'layers'. A layered structure allows specific risk types to be highlighted separately and presented in the most appropriate way for the end user of the risk information. The methodology document for the Assessment of Risk as a whole and for layer four specifically can be found in appendix three.

3.2 The structure of the AoR is outlined below:

3.3 Layer One. Public Concerns and Public Risk Perception. This layer identifies the risks that Londoners are most concerned about in relation to fire and rescue service-related emergencies. These concerns will not necessarily reflect the likelihood or severity of actual incidents but reflect the concerns held by members of the public. More information about how this layer was developed is at section 6 in this report.

3.4 The purpose of this layer is to:

- Establish the primary concerns of the public as they relate to the fire service.
- Inform risk communication work and public engagement.
- Allow public concerns to be considered when setting organisational risk priorities.
- Use the lived experience of communities to inform Hazard Identification.

3.5 Layer 2. Risks relating to property, place and incident type. This is a data-led risk assessment using the most recent five calendar years' of incident data on casualties and of demand on LFB resources at incidents. This layer highlights risks which are relatively common under normal requirements. It highlights the type of incidents and locations associated with a high likelihood of casualties (e.g. road traffic accidents and domestic fires) and of larger draws on resources (e.g. fires in rural areas). The purpose of this layer is to:

- Assess which property types and locations and which incident types are associated with the most casualties under normal requirements.
- To assess which property types and locations and which incident types, have the potential for the greatest wider impacts and resourcing implications for LFB under normal requirements.
- To inform prioritisation work within LFB service strategies.

A table showing the highest risks on layer 2 and the relative movements since the last assessment can be found in appendix three.

3.6 Layer 3.1: Extraordinary risks and risks from the London Risk Register. This is a risk assessment of rare or "worst-case" scenarios which may not occur with sufficient frequency to appear in LFB incident data or are yet to have occurred. Worst-case risks are assessed against a range of impacts e.g., human welfare, behavioral impact, economic, infrastructure, environmental and security. These risks are taken directly from the London Risk Register (LRR), produced by the London Resilience Forum (LRF). A table showing the highest risks on the LRR by incident type and the relative movements since the last assessment can be found in appendix four. The Board should note that because some of these incident types happen infrequently, a small change in the number of those incidents or a change in the impact of those incidents (say a rare fatality) can result in movements from one year to the next which do not necessarily reflect a change to the underlying risk of that incident type.

3.7 Layer 3.2: Extraordinary risk scenario modelling. Modelling in this section is a development of the existing optimisation model and dynamic cover tool. This layer provides an operational stress test for reasonable worst-case scenarios under differing demand conditions. The purpose layers 3.1 and 3.2 is to allow the Brigade to plan and prepare for:

- Response to low frequency but high impact events.
- Plan for combinations of events leading to a high overall demand on LFB resources.

3.8 **Layer four: New and Emerging Risks.** This layer describes trends identified in incident data and the outcomes of workshops undertaken throughout early 2024. These workshops drew together the Brigade's various sources of expertise, information and horizon scanning functions to identify early warning signs of changes to risk or to the operating environment that may not yet be apparent in incident data or existing risk registers, but which have been identified by Brigade subject matter experts and policy owners. This allows for longer term planning to be undertaken and controls to be identified in the early stages of a risk's development. The purpose of this layer is:

- To gather information about emerging trends and developments that could have an impact on the Brigade.
- To explore how these trends and developments might combine and what impact they might have.
- To involve a range of people in futures thinking. To increase the knowledge and insight within LFB about new and emerging risks relevant to LFB operations.
- To develop a shared understanding of emerging risk across the Brigade's various functions and departments.

4 Changes to the agreed method

4.1 The following minor changes were made to the approach agreed by the Commissioner in October:

- Layer One: The data collection tool *Mentimeter* was used in place of the Pictorial Representation of Illness and Self-Measure (PRISM) technique on the advice of the Community Engagement Team
- Layer One: Acknowledging the limited reach of public and targeted workshops and the difficulty in providing full representation for a diverse city, officers commissioned an additional question on perceived risk as part of the regular YouGov polling conducted by the Community Engagement team, to broaden representation.
- Layer One: LFB Strategic Planning analysed website traffic on the LFB website to gauge public interest in different risk information. This was to identify any trends in public concern that differed from the workshop and YouGov information and to strengthen the conclusions made in layer one.

5 Data Sources

5.1 The AoR refers to different data sources for each layer of the assessment. Layer one uses the following data sets:

- Responses from attendees at workshops carried out by LFB collected using the Mentimeter tool and paper forms, analysed in MS Excel.
- Data on LFB website traffic analysed in MS Excel.
- Results from online YouGov survey.

5.2 Layer two uses the following data sets.

- LFB incident data, five calendar years between 1st January 2019 and 31st December 2023
- Key factors identified by NFCC (National Fire Chief Council) as linked to likelihood and consequence of dwelling fires including; car or home ownership, (un)employment, deprivation, property type and tenure. When considered collectively, these factors can be used to identify areas that are statistically more likely to contain people who are higher risk.
- RTC risk mapping files for FRS (Fire and Rescue Service) including key factors associated with Road Traffic Collison Risk. Key factors include; Road class and type Urban/rural category (based on ONS data) Speed limit data (from Basemap Ltd) Values for Likelihood Values for Consequence RTC risk score and category (H/M/L)
- Population density for London
- Building density for London

5.3 Layer three uses the following data sets;

- Risks identifiers and scores from London Risk Register.
- LFB Incident data and appliance status data stored on Dynamic Cover Tool

5.4 Because key factors associated with dwelling fire and RTC risk are included in the NFCC definition of risk work and mapped pan-London for the AoR, data sets on individual personal vulnerability are not assessed separately within the document.

5.5 Specific individual personal vulnerability data sets are used by the prevention team when planning the allocation of Home Fire Safety Visits and other prevention work. This process is outlined in LFB Policy 1010.

6 Community Engagement

6.1 LFB Strategic Planning worked in partnership with the Brigade Community Engagement Team to produce Layer One: Public Concerns and Public Risk Perception. The Strategic Planning team provided the overall objectives for the piece of work and provided risk information and risk content. The Engagement team carried out an Equalities Impact Assessment (appendix six), identifying specific groups for targeted engagement. Groups selected were either seldom heard or at-risk groups. In addition, an on-line workshop was held, open to any member of the public, and promoted through our social media accounts.

6.2 Oher steps taken to gauge public perceptions of risk are described in Section 4 above.

6.3 It is recommended that in future Assessments, the use of YouGov is continued to supplement data gathered from workshops.

6.4 It is also recommended to continue the use of the Mentimeter tool to capture and analyse the results from workshops following positive feedback from users. To improve our reach into the community and the representativeness of our data, the assessment for 2025 will use borough workshops in addition to centrally lead workshops; consequently, there will be a need to purchase more licenses for Mentimeter in 2025 and to provide strategic planning support and resource to borough teams. It is envisaged that the costs of this can be absorbed within existing budgets.

7 Addressing our Values

7.1 The approach to updating the Assessment of Risk has been undertaken in line with our values in the following key ways:

- Learning: officers have sought to listen to the lived experience and concerns of the communities we serve in developing layer one of the AoR
- Service: the AoR informs the priorities in our service strategies and enables the Brigade to be focused on risk. Our community layer demonstrates our intention to put the public first
- Equity and Teamwork: the approach is designed to capture input from different perspectives so that the AoR results in a shared understanding of risk in London

8 External Scrutiny and Review

8.1 The 2024 AoR was reviewed by an external panel of academics and subject matter experts. The purpose of the panel is to provide independent academic and subject matter expert feedback on the AoR with reference to the robustness and defensibility of the approach.

8.2 In 2024 the panel consisted of the following external academic and subject matter experts.

Chair	
Richard Abbot	Area Manager – Strategic Risk and Improvement, West Sussex Fire and Rescue Service.
Academic Experts	
Dr Bayes Ahmed	Associate Professor Inst for Risk & Disaster Reduction, University College London
Professor David Alexander	Professor of Emergency Planning and Management Inst for Risk & Disaster Reduction, University College London
Dr Sara Hadleigh-Dunn	Associate Professor in Risk Management and Resilience, University of Portsmouth
Dr Richard Teeuw	Professor of Geoinformatics and Disaster Risk Reduction, University of Portsmouth
Dr Nibedita Ray-Bennett	Associate Professor in Risk Management, University of Leicester
Dr Simon Bennett	Director of the Civil Safety and Security Unit, University of Leicester
Practitioner Experts	
Jeremy Reynolds	Deputy Head of London Resilience
Matthew Addison	London Resilience Support Officer

Terms of reference, agenda and panel biographies can be found in appendix six.

8.3 The comments from the panel have been addressed by the methodology statement in appendix two and this covering report. Wider comments from the Panel will be used in the further development of the AoR. The Panel agreed the following statement regarding the robustness and defensibility of the approach taken to assessing risk in 2024;

8.4 *"The panel recognises that through the AoR, the LFB has continued to develop and improve its approach to assessing fire and rescue related risks in London. LFB's approach continues to*

demonstrate a strong desire to engage with the communities of London in the construction of its community concerns layer, as well as using external and internal expertise in the development of the future and emerging risks layer.

8.5 *We have made several context specific and general recommendations to the Brigade which will enhance the document, making it more robust and defensible in the future. The panel understands that many of these improvements will be contained within a separate method statement which will be made available alongside the AoR itself. Overall, the panel endorses the LFB's 2024 AoR and will continue to work with LFB in its future evolutions as it continues to refine and enhance its approach to understanding fire and rescue related risk in London."*

9 Next Steps

9.1 This update of the AoR will be used to inform the delivery of the strategic objectives and risk reduction as set out in the CRMP. The changes in the AoR do not require amendments to the CRMP itself and any actions needed to respond to the amended risk profile are within the scope of the CRMP. However, officers in Strategic Planning will work with the Professional Head of Business Resilience so that these risks are incorporated into our risk management system appropriately.

9.2 The CRMP was underpinned by the 2022 version of the Assessment of Risk. At that time, the service strategies had not been written and there were no supporting department plans. As a result, a formal Response to the Assessment of Risk 2022 was also produced that explained how the Brigade would respond to London's risk profile. As those strategies and plans are now in place, no response to the AoR 2024 has been produced.

9.3 However, service strategy owners and staff responsible for reviews of operational capability will need to review their strategies and plans and make any necessary revisions in the light of the changes to London's risk profile.

9.4 Officers in Strategic Planning will work with the leads set out in the table below so that they are aware of the amendments to this version of the AoR. All relevant stakeholders have been made aware of the review of the Assessment of Risk and Strategic Planning will continue to work in collaboration with those stakeholders so that its relevance is understood and document owners understand where changes to strategies and plans are required.

9.5 The following table maps the key findings of the review to the service area where the predominant controls are required for the risks or issue identified.

Review Finding	Implication	Potential adjustment needed	Lead Officer
Partnership planning, presented in the London Risk Register (LRR), has identified a more complex and varied threat picture in 2024. The LRR includes 11 new risks of which six are malicious threats and attacks. Multi-site incidents remain a concern to policy owners and subject matter experts.	• LFB crews responding to malicious threats	• Respond Strategy • Capability review	• Jon Smith • Susan Ellison-Bunce

The level of public concern regarding malicious threats and security related risk has increased since last assessed. Respondents across all groups expressed concern around personal safety and security.	• Public concern and preparedness for security related risk	• Prepare strategy • Borough Risk Management Plans • Engagement Strategy	• Craig Carter • Spencer Sutcliffe • Anthony Tiernan
Increasing cooperation with partner agencies is reflected in the higher scores seen for incidents including effecting entry to people collapsed or injured behind locked doors and to incidents involving bariatric people.	• Increasing demand on operational resources	• Policy/training adaptations • Capability Review	• Keeley Foster • Susan Ellison-Bunce

Review Finding	Implication	Potential adjustment needed	
Risks related to mental ill health, and those that may have their origins in an episode of poor mental health, including incidents involving people under trains, people threatening to jump from height and people in precarious positions have continued to increase.	• Increasing demand on operational resources • Consideration of higher exposure to trauma of LFB staff	• Policy/training adaptations • Capability Review	• Keeley Foster • Susan Ellison-Bunce
Policy owners and Subject Matter Experts within LFB identified the increasing number of residential buildings above 30 floors as an operational challenge in the present and near-term future due to the physical and physiological constraints on operating in this environment.	• Effectiveness of firefighting interventions	• Capability Review • Policy/training adaptations • Research and development • Legislative input • Protect strategy • Prevent Strategy	• Susan Ellison-Bunce • Keeley Foster • Paul McCourt • Kathryn Robinson • Craig Carter • Craig Carter
The proliferation and wider adoption of new fuels, energy sources and bulk energy storage, in particular lithium-ion energy storage, present ongoing and developing operational challenges. The developing legislative environment around new fuels will be crucial in determining the controls required by LFB.	• Effectiveness of firefighting interventions • Built environment performance in lithium-ion involved fires	• Protect Strategy • Prevent Strategy • Legislative input • Capability Review	• Craig Carter • Craig Carter • Kathryn Robinson • Susan Ellison-Bunce
Climate change related incidents such as wildfire and flooding are likely to be linked with increasing numbers of large incidents, and incidents with high resource utilization. This will lead to increasing challenges with managing	• Information Management during high demand • Organizational responsiveness to high demand. • Response capability options • Potential increase in National Resilience Commitments	• Respond Strategy • Capability review • Policy adaptations • Programme 3, Modernising Services. Ensure initiatives deliver risk focused modernisation.	• Jon Smith • Susan Ellison-Bunce • Paul McCourt • Tom Goodall

operational information flow and challenges in maintaining situational awareness pan London during peak demand.			

9.6 The Assessment of Risk 2022 was reported to the Audit Committee and officers recommend that an update is presented to them to inform them about the developments in the production of the AoR and to seek their views on that in time to inform the AoR 2025. A draft report is at Appendix 9.

10 Equality comments

10.1 The LFC and the Deputy Mayor for Planning, Regeneration and the Fire Service are required to have due regard to the Public Sector Equality Duty (section 149 of the Equality Act 2010) when taking decisions. This in broad terms involves understanding the potential impact of policy and decisions on different people, taking this into account and then evidencing how decisions were reached.

10.2 It is important to note that consideration of the Public Sector Equality Duty is not a one-off task. The duty must be fulfilled before taking a decision, at the time of taking a decision, and after the decision has been taken.

10.3 The protected characteristics are age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership (but only in respect of the requirements to have due regard to the need to eliminate discrimination), race (ethnic or national origins, colour or nationality), religion or belief (including lack of belief), sex, and sexual orientation.

10.4 The Public Sector Equality Duty requires decision-takers in the exercise of all their functions, to have due regard to the need to:

- eliminate discrimination, harassment and victimisation and other prohibited conduct.
- advance equality of opportunity between people who share a relevant protected characteristic and persons who do not share it.
- foster good relations between people who share a relevant protected characteristic and persons who do not share it.

10.5 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- remove or minimise disadvantages suffered by persons who share a relevant protected characteristic where those disadvantages are connected to that characteristic.
- take steps to meet the needs of persons who share a relevant protected characteristic thatare different from the needs of persons who do not share it.
- encourage people who share a relevant protected characteristic to participate in publiclife or in any other activity in which participation by such persons is disproportionately low.

10.6 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

10.7 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- tackle prejudice
- promote understanding.

10.8 An Equalities Impact Assessment (EIA) was created for the public engagement element of the AoR 2024. This guided the creation of workshops for seldom heard and at-risk groups.

10.9 An EIA was completed for the AoR process as a whole; this can be found in appendix eight.

11 Other considerations

Workforce comments

11.1 The representative bodies have been engaged during the review of the AoR. In addition, workshops were carried out with Control Staff, Equalities Support Groups and the Operational Sounding Board, alongside an open workshop for all staff. Staff engagement did not indicate that any changes to the analysis of risk were required, however it is notable that both the senior staff involved in production of layer 4, and the staff engaged with during this process expressed concern about the extent to which the level of mental ill health in the population exerts upwards pressure on demand for LFB services.

Communications comments

11.2 This is an internal facing document that is used to inform service strategies and BRMPs (Borough Risk Management Plans). It also informs prioritisation of work in central departments, such as Operational Policy and Assurance. The document is not primarily intended as a tool for communicating risk information to the public, but communication and community engagement teams should use the document to inform their work.

11.3 All relevant stakeholders have been made aware of the review of the Assessment of Risk and Strategic Planning will continue to work in collaboration with those stakeholders so that its relevance is understood and document owners understand where changes to strategies and plans are required.

11.4 This version of the Assessment of Risk will be published both on the external website and on hotwire. Active promotion of the document to staff is proposed as it is intended to both promote a common understanding of operational risk and serve as a prioritisation tool. The wider promotion of the document across the organization as a whole will be done in collaboration with the internal communications team.

11.5 Strategic Planning will develop a stakeholder engagement plan to promote the use and understanding of the AoR across departments with particular reference to those prioritising work or communicating with the public, partner agencies and other stakeholders about risk.

12 Financial comments

12.1 The update to the AoR will not directly result in any financial consequences. However, in line with reviewing all of LFB's material risks, if it is identified that the organisation's risk matrix has changed then there will be cost implications (both potentially in savings and additional investment). The cost implications would be as a result of placing mitigating factors to ensure the risk is managed appropriately.

12.2 Potential additional budgetary pressures relating to the update of the AoR will be managed within existing departmental budgets.

12.3 Any changes to the assessment of risk would be assessed to its financial implications and form part of the budget cycle process.

13 Legal comments

13.1 Under section 9 of the Policing and Crime Act 2017, the London Fire Commissioner ("Commissioner") is established as a corporation sole with the Mayor appointing the occupant of that office.

13.2 Section 1 of the Fire and Rescue Services Act 2004 states that the Commissioner is the fire and rescue authority for Greater London.

13.3 Under section 327D of the GLA (Greater London Authority) Act 1999, as amended by the Policing and Crime Act 2017, the Mayor may issue to the Commissioner specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.

13.4 By direction dated 1 April 2018, the Mayor set out those matters, for which the Commissioner would require the prior approval of either the Mayor or the Deputy Mayor for Planning, Regeneration and the Fire Service (the "Deputy Mayor").

13.5 Paragraph 3.1 of Part 3 of the said direction requires the Commissioner to consult with the Deputy Mayor as far as practicable in the circumstances before a decision is taken on (inter alia) any "[c] decision that can be reasonably considered to be novel, contentious or repercussive in nature, irrespective of the monetary value of the decision involved (which may be nil)".

13.6 The decisions recommended in this report are considered to be 'novel, contentious or repercussive' and therefore the Deputy Mayor must be consulted before a final decision is taken.

13.7 When carrying out his functions, the Commissioner, as the fire and rescue authority for Greater London, is required to "have regard" to the Fire and Rescue National Framework prepared by the Secretary of State ("Framework") (Fire and Rescue Service Act 2004, section 21).

13.8 The production of an Integrated Risk Management Plan (IRMP) is a requirement of the Framework. In line with guidance from the National Fire Chiefs' Council, the Commissioner is now referring to the IRMP as a Community Risk Management Plan (CRMP).

13.9 The Framework states that the Commissioner's CRMP "must" meet certain requirements, in considering the AoR 2023 the Commissioner must therefore have regards to the following requirement of the Framework; that the CRMP must:

- reflect up to date risk analyses including an assessment of all foreseeable fire and rescue related risks that could affect the area of the authority;

13.10 To assist the Commissioner in coming to a view on this matter it is recommended that the Commissioner should consider whether the CRMP properly reflects the updated AoR. It would not be sufficient to state it is met by reference to additional documents, the CRMP itself must demonstrate this in and of itself. When considering if the risk analysis is properly reflected in the CRMP it is not required that it reproduces the analysis completely but instead that it represents it accurately and in an appropriate way.

13.11 The recommendation in this report is that the CRMP does not need amending in response to the changes to the AoR 2023. If the Commissioner agrees with this recommendation, then it falls to the Commissioner to decide following consultation with the Deputy Mayor.

List of appendices

Appendix	Title	Open or confidential*
1	Assessment of Risk 2024	Open
2	Assessment of Risk 2024 Methodology	Open
3	Summary of Changes to High and Very High risk scores relating to incident type in Layer 2	Open
4	Summary of Changes to High and Very High London Risk Register risk scores in Layer 3	Open
5	Emerging Trends and Future Risks: Operational Horizon Scanning Workshop Series Method	Open
6	Equalities Impact Assessment: Layer 1. Public Concerns and Public Risk Perception.	Open
7	Academic and Professional Review Panel for the London Fire Brigade (LFB) Assessment of Risk (AoR) 2024 Terms of Reference	Open
8	Equalities Impact Assessment AoR 2024	Open
9	Audit Committee report: Update on the Assessment of Risk Process	Open

Part two confidentiality

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

Is there a Part Two form:NO

Appendix 1

LONDON FIRE BRIGADE

OFFICIAL

Assessment of Risk 2024

Table of contents

Assessment summary

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's (LFC) Assessment of Risk is the Brigade's response to that requirement. It sets out all foreseeable risks to which the LFB might be expected to respond, or which may impact its response, and assesses their risk based on a combination of their likelihood and consequence.

London Fire Brigade's (LFB or "Brigade") Assessment of Risk (AoR) is designed to increase understanding of how risk from fire and non-fire emergencies in London has changed over time and how the different elements combine to give a London-wide picture of risk. It fulfils the LFC's requirement to identify and assess the full range of foreseeable fire and rescue related risks. This assessment informs LFB's selection of and prioritisation of statutory and discretionary activity detailed in the Community Risk Management Plan (CRMP), known as "Your London Fire Brigade," and in the LFC's 6 service strategies; Prevent, Protect, Respond, Prepare, Recover and Engage.

The AoR is not the only process LFB uses to determine and provide its services, but it does give a high-level overview which can be used to understand the basic concepts and the steps that LFB is taking to make people safe. The AoR is reviewed annually, or as significant new data becomes available. This enables the Brigade to adapt its operations to London's changing environment.

In this assessment, risk is defined as a combination of the likelihood and potential consequence of hazardous events. This allows the risk of incidents that may have happened only rarely, or never, to be assessed alongside risks that are common.

The CRMP seeks to make the Brigade more community-focussed and service-led. By this we mean that we want to help people both feel safe as well as be safe; consequently, layer one of the AoR focuses on public concerns and risk perception.

The Brigade attends a wide range of emergencies that result in casualties and fatalities, the Brigade also holds a duty for conducting rescue across a range of incident types; natural, accidental, and malicious.

The UK Government and the London Resilience Forum (a partnership of organisations with responsibility for emergency preparedness in London, including LFB) each produce a risk register of worst-case risks. These are updated periodically and are used by them to prepare their response should these risks occur. The London Risk Register (LRR) is a register of the risks that most impact London. This risk assessment uses a broad definition of risk and includes impacts on human welfare, behaviour, economic, infrastructure, environment, and security. Risk are given individual identifying codes as well as a description. The inclusion of R in the code indicates it is also a national risk.

The highest risks on the register to which the Brigade would respond directly or in partnership are:

- R02 Conventional attack on government.
- R04b Land-based attack – Vehicle born improvised explosive device.
- R23 Malicious attack fuel infrastructure.
- R19 Conventional attack chemicals infrastructure.
- R17 Chemical Attack on water infrastructure.
- R75b Fluvial Flooding.
- R75c Surface Water Flooding.
- R07 Malicious Rail network incident.
- R16a Chemical Attack unenclosed area.
- R16b Chemical Attack enclosed area.
- R14 Biological Attack unenclosed urban area.
- R95 Nuclear Attack by State.
- R12 Non-state nuclear attack.

The LRR has changed considerably since last publication with an increased number and range of malicious threats detailed. Climate related and geophysical risks which are linked with high demand on LRB response resources such as R73 High temperatures and Heatwaves, R75b Fluvial Flooding and R75c Surface Water Flooding and remain very high on the register.

In addition to these risks, there are risks on the LRR that may cause disruption to the LFB's ability to provide an emergency service, such as R71 Severe Space Weather . The Brigade must therefore also plan for how it will continue to operate, even in these circumstances. LFB may also support other partners during periods of emergency. The full LRR is available here; London Risk Register | LGOV The National Risk register is available here, National Risk Register 2023 - GOV.UK (www.gov.uk)

This AoR has identified several high fire-risk location types based on incident data. The areas of highest demand and risk are generally where most people live (Urban Centres) or where specific vulnerabilities exist, either related to geographic exposure or related to social and demographic markers for increased risk. The highest fire risks and risk locations are:

- Fires in the home particularly purpose-built flats, converted flats and houses of multiple occupancy
- Fires in Bungalows
- Fires in private garages, sheds and outbuildings

High risk, non-fire incidents (special services) are more geographically dispersed and largely relate to releasing trapped people, for example people trapped as a result of road traffic collisions or effecting entry to people in medical need. Based on frequency of occurrence and casualty rate, the highest risk non-fire incidents type and locations are:

- Persons collapsed or injured behind locked doors.
- Persons trapped after road traffic collisions.
- Persons trapped excluding road traffic collisions.
- Reduced attendance special services and minor humanitarian incidents such as entrapments of digits and people fallen un the street.

The highest scoring response risks from both operational data and the LRR are presented in a composite matrix below. Lower scoring risks have been removed from this matrix for ease of presentation but are included on page 10 and 11. Incident data is aggregated by location in this matrix but presented as incident-type data on page 11. The geographic disposition of various risks is shown on pages 11-14. Population and building density are plotted against incident occurrence between 2019 and 2023 on map 1 on page 11. The geographic disposition of fire risk and road traffic collision risk is presented on pages 12 - 14.

Finally, the Brigade has identified emerging trends and future risks likely to impact the Brigade over the term of the CRMP which may require the Brigade to adapt the services it provides to meet London's changing needs. The highest risks are listed below:

- Development of the built environment in London including modern methods of construction and an increasing density of very tall residential buildings, presents operational challenges in the present and near-term future. These include the challenges in conducting emergency evacuation of buildings beyond the historic normal operating environment for firefighters.

- The proliferation and wider adoption of new fuels, energy sources and bulk energy storage solutions, in particular lithium-ion energy storage, present ongoing and developing operational challenges. New controls and procedures will be needed to address the different ways the technology is adopted and adapted commercially and domestically. The developing legislative environment around new fuels will be crucial in determining the controls required by LFB.

- Climate change and societal pressures are expected to lead to an increasing number of large incidents, multi-site incidents and incidents with high resource utilisation. This will lead to increasing challenges with managing operational information flows, challenges in maintaining situational awareness across London during peak demand and challenges managing high simultaneous demand.

Summary of change from previous assessment

Partnership planning around malicious threats has identified a more complex and varied threat picture in 2024. As a result, there is a greater number of malicious threat types listed on the LRR and there is an increase in likelihood and severity across several attack methodologies. New risks include: R46 Malicious Drone Incident and R89 High-Altitude Electromagnetic Pulse.

Other significant changes are:

The level of public concern regarding malicious threats and security related risk has increased since last assessed and is reflective of the threat assessment presented in the LRR. Respondents across all groups expressed concern around personal safety and security with 57% of responses falling into this category. Public responses included a wide range of concerns from individual encounters with violence to general concern regarding community cohesion and inter-group tensions, terrorism, and civil unrest.

Increasing cooperation with partner agencies is reflected in the increased risk scores for effecting entry to people collapsed or injured behind locked doors and to incidents involving bariatric people.

Risks related to mental ill health, and those that may have their origins in an episode of poor mental health, including incidents involving people under trains, people threatening to jump from height and people in precarious positions have increased over the last 24 months. Community groups and professionals reported concern around deteriorating mental health in the community as a driver of emergencies.

Composite Summary of highest risks from LFB data by location (black text) and London Risk Register (white text)

Consequence						
	5	R22 Malicious attack on nuclear infrastructure, R52 Civil Nuclear Accident Non-fire Camping tent, shelter, or marquee Fire Warehouse and bulk storage. Non-fire Boat Fire -Other Residential Property	R12 Non-state nuclear attack - urban area, R76 Drought, R89 High-Altitude Electromagnetic Pulse, R95 Nuclear Attack by State Non-fire Vegetation by road, track or canal Non-fire Trains Fire Manufacturing and processing. Fire Retail Fire Landfill or wasteland	R14 Biological Attack unenclosed urban area, R50a National Electricity Transmission Failure Fire Private Garage, shed or Outbuilding. Fire House or Bungalow Non-fire Transport Buildings	R21 Attack on UK electricity infrastructure, R78 Pandemic Fire – Purpose built flats. Non fire – Road Vehicle	
	4		L54b Fires in large public and commercial buildings, R08 Malicious Aviation Incident, R48 Loss of PNT Services, R51 Gas Supply Infrastructure Fire Short Stay Accommodation Fire Public administration and utilities. Non-fire Other residential property Fire Offices and call centres Fire Care and supported living	R07 Malicious Rail network incident, R16a Chemical Attack unenclosed area. R16b Chemical Attack enclosed area,R73 High temperatures and Heatwaves, R75b Fluvial Flooding, R75c Surface Water Flooding Fire Converted flats and HMOs Non-fire Rural Land	R17 Chemical Attack on water infrastructure, R19 Conventional attack chemicals infrastructure, R23 Malicious attack fuel infrastructure, R71 Severe Space Weather, R79 Emerging Infectious Disease Non-Fire Urban Infrastructure	R02 Conventional attack on government, R04b Land-based attack – VBIED Non-fire Converted flats and HMOs Non-fire Houses and bungalows Non-fire Purpose built flats
	3			HL10 Local Accident on Motorways/ Major Trunk Roads, L19 Groundwater Flooding, R40 Railway Accident, R44 High Consequence Dangerous Goods, R46 Malicious Drone Incident, R49 Disruption to telecoms systems, R74 Low temperatures and heavy Snow, R75a Coastal/Tidal Flooding, R77 Poor Air Quality Non-fire Entertainment and Culture Fire Rural Land Fire Urban Infrastructure Fire Road Vehicle Non-fire – food and drink Non-fire – Manufacturing and processing	L54a Fires in purpose built high-rise flats, R05b MTA – Passenger Ferry, R09 Malicious maritime incident, R15 Radiological attack unenclosed area, R20 Attack on UK gas infrastructure, R67 Volcanic Eruption, R72 Storms and Gales, R82 Public Disorder Non-fire Hospital and medical centres Non-fire Offices and call centres Non-fire Short Stay Accommodation Non-fire Retail Non-Fire Education	R04a Person-borne IED, R04c MTA – Low sophistication, R04d Marauding terrorist attack – firearms, R24 Cyber-attack on health and social care system, R55b Technological failure critical financial market infrastructure Non-fire Care and Supported Living
	2					
	1					
		1	2	3	4	5
		Likelihood				

Extraordinary risk likelihood rating

probability of occurring within London within next 12 months

1. Less than 0.2% chance of occurring
2. Between 0.2% and 1%
3. Between 1% and 5%
4. Between 5% and 25%
5. More than 25%

Fire/non-fire incident risk likelihood rating

likely frequency of incidents occurring within London

1. Between one a year and once a week
2. Between one a week and one a day
3. Between one and five a day
4. Between five and twenty a day
5. Twenty or more a day

Our layered approach to assessing risk

Our Assessment of Risk (AoR) looks at all foreseeable risks, both fire and non-fire, for which the London Fire Brigade may be expected to put in place appropriate controls. In doing so, it is mindful of the statutory requirements that are put on fire and rescue services. In particular, the duties established by the following legislation:

- Fire and Rescue Services Act 2004.
- The Regulatory Reform (Fire Safety) Order 2005.
- The Fire and Rescue Services (Emergencies) (England) Order 2007.
- Fire and Rescue Service National Framework for England (2018).
- Equalities Act 2010.
- Civil Contingencies Act 2004.
- Human Rights Act 1998.
- Fire Safety Act 2021

The Brigade takes a layered approach to understanding risks in London. By considering public concerns and public perception of risk in Layer One of the assessment the Brigade ensures communities' concerns are highlighted. This AoR assesses frequently occurring events from recent incident data, and low frequency but high impact events from the London Risk Register independently of each other, providing separate tools for both prioritisation of day-to-day activity and for worst case planning. LFB also uses this AoR to identify emerging trends and future risks which may impact the operating environment, or which may require the planning of additional capacity or capability.

This AoR provides tools for understanding geographic variation of specific risks. The Brigade uses methodology developed by the NFCC to highlight the geographic distribution of indicators for increased risk related to dwelling fires and road traffic collisions (RTC). These maps are on page 13 and 14. The Brigade has also developed Neighbourhood Density Zones, to illustrate where demand for services predominantly occurs and where different types of risk are concentrated. This map is on page 12.

Our Community Risk Management Plan and six supporting service strategies set out how we intend to help London reduce, manage, and respond to these risks. The six supporting strategies are; Prevent, Protect, Prepare, Respond Recover and Engage. The AoR update supports periodic review of service strategies and the CRMP to ensure they remain aligned to addressing the highest risks in London.

Description of layers

Layer 1. Public Concerns and Public Risk Perception

This layer identifies the risks that Londoners are most concerned about in relation to fire and rescue service-related emergencies. These concerns will not necessarily reflect the likelihood or severity of actual incidents but reflect the concerns held by members of the public.

The purpose of this layer is to:

- Establish the primary concerns of the public as they relate to the fire service.
- Inform risk communication work and public engagement.
- Allow public concerns to be considered when setting organisational risk priorities.
- Use the lived experience of communities to inform Hazard Identification.

Layer 2. Risks relating to property, places and incident type

This is a data-led risk assessment using the most recent five years of incident data on casualties and of demand on LFB resources at incidents. This layer highlights risks which are relatively common under normal requirements. Using recent incident data highlights the type of incidents and locations associated with high likelihood of casualties and of a larger draw on resources, e.g., road traffic accidents and domestic fires leading to casualties and fires in rural areas drawing on resources. Where incidents have most recently occurred has been shown to be a reliable predictor of where incidents are most likely to occur in the near future and is used to model our anticipated demand under normal requirements.

The purpose of this layer is to;

- Assess which property types and locations and which incident types are associated with the most casualties under normal requirements.
- To assess which property types and locations and which incident types, have the potential for the greatest wider impacts and resourcing implications for LFB under normal requirements.
- To inform prioritisation work within LFB service strategies.

Layer 3.1 Extraordinary risks and risks from the London Risk Register

This is a risk assessment of rare or "worst-case" scenarios which may not occur with sufficient frequency to appear in LFB five-year incident data or are yet to have occurred. Worst-case risks are assessed against a range of impacts e.g. human welfare, behavioural impact, economic, infrastructure, environmental and security. Risks are taken directly from the London Risk Register, produced by the London Resilience Forum (LRF). The risks for which LFB is the lead are scored using input from LFB subject matter experts. Risks on which other partners lead are scored in a similar way. This gives the Brigade a partner-wide perspective on risks. This register includes risks that LFB will not have to respond to but may be affected by and for which it may need continuity plans.

This is a different way of assessing risk from the data-driven assessment of commonly occurring risks in layer two as it looks at the possible severity of infrequent but high impact events and an assessment of what the possible implications are for London. This layer deals with risks that may not appear in incident data as they are infrequent or rare but none the less have been assessed as reasonable expectations in a worst-case scenario.

This difference in assessment method and focus is the reason that similar risks can appear in both scoring systems but scored slightly differently. For example, the reasonable worst-case scenario for a large residential high-rise fire is for a single large event to cause many casualties, this is however not typical and the commonly occurring risk is for more frequent fires, each producing fewer casualties.

Presented independently of the LRR are unlikely but possible events which do not yet appear in the LRR or in recent incident data but are highlighted through cross departmental engagement and as such are considered appropriate to highlight as part of the LFB's Assessment of Risk. Risks from this section may progress to the LRR through partner engagement in the London Resilience Forum.

Layer 3.2 Extraordinary risk scenario modelling

This AoR includes the first findings of developing scenario modelling which assesses the impact on service delivery and appliance mobilisation of reasonable worst-case scenarios from the London Risk Register. Modelling in this section is a development of the existing optimisation model and Dynamic Cover Tool (DCT) used by LFB to determine optimal disposition of resources in real time. Outcomes will provide an operational stress test for reasonable worst-case scenarios under differing demand conditions.

The purpose of these layers is to allow the Brigade to plan and prepare for:

- Response to low frequency but high impact events.
- Combinations of events leading to a high overall demand on LFB resources.

Layer 4. Emerging trends and future risks

This layer describes trends identified in incident data and the outcomes of workshops undertaken throughout early 2024. These workshops drew together the Brigade's various sources of expertise, information and horizon scanning functions to identify early warning signs of changes to risk or to the operating environment that may not yet be apparent in incident data or existing risk registers, but which have been identified by Brigade subject matter experts and policy owners. This allows for longer term planning to be undertaken and controls to be identified in the early stages of a risk's development.

The purpose of this layer is:

- To gather information about emerging trends and developments that could have an impact on the Brigade.
- To explore how these trends and developments might combine and what impact they might have.
- To involve a range of people in futures thinking. To increase the knowledge and insight within LFB about new and emerging risks relevant to LFB operations.
- To develop a shared understanding of emerging risk across the Brigade's various functions and departments.

Layer 1: Public Concerns and Public Risk Perception

LFB undertook a period of focussed engagement in early 2024. Community group workshops were held, alongside analysis of website traffic and YouGov polling to identify areas of concern and highest perceived risk amongst the public. Workshop participants were asked what their main concerns were, related to emergencies that may require the LFB's intervention. Participants were also asked more broadly about threats and concerns in their lives and the perceived underlying drivers. Understanding these concerns and perceptions informs effective risk communication and hazard identification and allows public concern to be considered when setting organisational objectives.

By fostering open dialogue and informing professional and public understanding of risk, the Brigade aim to strengthen the relationship between emergency responders and the communities they serve. This report serves as a tool to align the Brigade's six strategies with the needs and concerns of Londoners, ultimately contributing to a safer and more resilient city.

The results of the engagement identified key themes that communities were concerned about in addition to fire service specific incidents. When grouped into broad categories 26% of responses related to social and economic challenges with 17% relating specifically to cost of living and poverty.

Respondents across all groups expressed concern around personal safety and security with 57% of responses falling into this category. Responses included a wide range of concerns from the very specific, such as a fear of encountering street violence to a general concern regarding community cohesion and intergroup tensions. Terrorism, civil unrest, antisemitism, islamophobia, and racism were all recurring themes in people's reported concerns.

Climate change, pollution, air quality and specific climate related incidents such as flooding and wildfire featured notably amongst community concerns, along with the specific difficulties experienced by individuals with health conditions negotiating the increasingly complex built environment. Respondents were concerned about lack of regulation of the built environment and difficulties in evacuation and emergency egress from buildings, as well as more general building and living standards.

When asked to identify concerns related to underlying causes or drivers of threat in their lives, respondents identified the following perceived key drivers;

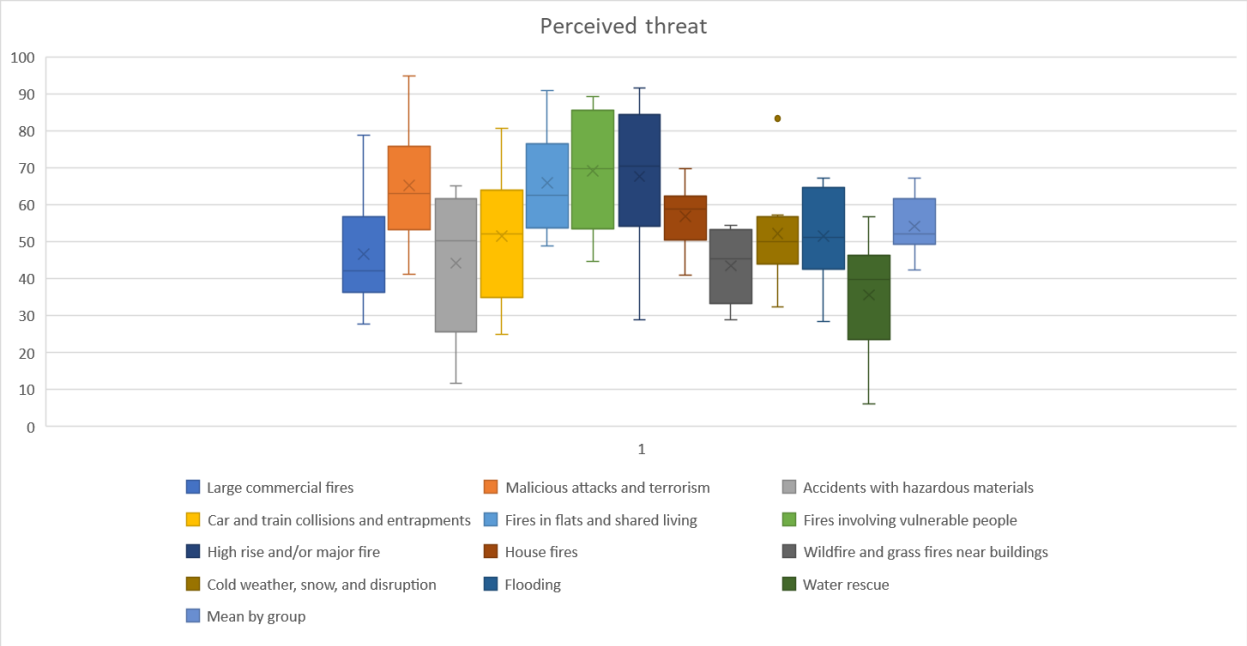
- Security threats including various violent acts, crime and disorder accounted for 34% of responses.
- 21% of responses identified lithium-ion and related electrical items as a driver of perceived fire risk in their life.
- 20% of responses identified mental health problems in the community as a driver of non-fire incidents with 15% of responses identifying poor mental health as a perceived driver of fire risk specifically.
- 13% of responders identified climate change as a driver of threat in their lives.
- 8% of responders felt that community tensions were a driver of threat in their lives.

When asked to consider which single risk, from a list of higher risks provided by LFB was the most concerning, 19% of YouGov respondents identified fires in flats and communal living as being the most concerning. This was followed by malicious attacks and terrorism (11%) and High rise and/or major fire (10%). Interestingly 16% of respondents stated that none of LFBs pre-identified risks were their main concern. This lack of priority of fire service-specific risks, reflects the high levels of concern reported around social and economic challenges, crime, violence, and disorder as being communities most pressing worries and reflects the responses recorded regarding underlying drivers of threat.

Workshop participants were asked to score pre-identified higher risks from 2023's AoR according to the level of threat each type of risk represented in their life. Perceived level of threat varied considerably between individuals and between groups both in terms of specific risks and in the overall level of perceived threat.

Box and Whisker chart 1 shows the level of perceived threat reported by risk type and the range of responses within each risk type.

Box and Whisker Chart 1. showing perceived threat by risk type and distribution of responses.



Overall, the highest perceived threat in people's lives related to malicious attacks and terrorism, although there was a wide range of responses, and some groups rated this threat below fires in high-rise buildings and fires involving vulnerable people. Fires involving vulnerable people and fires involving high rise buildings were the second and third highest perceived threats in people's lives, although response varied considerably again, and high-rise fires also received some of the lowest scores from some groups. Risk perception, as measured in this engagement activity, reflects a tendency to focus on risks that have proximity to individuals and to which they feel more exposed. These findings support personalised or localised risk communication techniques and suggest that London-wide risk communication tools may be of limited effectiveness at influencing behaviour unless exposure to a given threat is widespread.

Risks related to water rescue were perceived as the least threatening by participants. This contrasts with the high casualty rate of water incidents. This may indicate an underappreciation of the threat posed by open water among London's communities and indicates a priority for risk communication and engagement work.

Although climate change was reported as an underlying driver of risk in people's lives by many respondents, the threat of wildfires in this engagement activity was one of the lower scores recorded. This may reflect the fact that wildfires or grass fires tend to occur in more peripheral areas of London and that fewer people feel geographically exposed than to other risks, or that the proximity effect of the risk has been reduced by the recent moderate summer where wildfires were fewer. Communicating the long-term trends towards warmer wetter winters and hotter dryer summers, and the consequent increasing risk profile of wildfire and flooding incidents may present a challenge to LFB when individual seasons do not follow the long-term trend.

It is noted that many respondents reported perceived drivers of threat in their lives that related to increasing societal, social, and economic challenges beyond the control of LFB. Strategies for risk communication should be informed by the overall threat environment perceived by communities and the individual challenges faced by different groups. The LFB Prepare strategy outlines the Brigade's approach to helping communities prepare themselves for when threats are realised. The strategy also outlines the partnership approach taken by LFB to addressing wider commu nity threats beyond core statutory functions of LFB.

Layer 2.1. Risks relating to property, place and incident type.

This layer sets out the risks associated with incidents attended in the last five calendar years by LFB. As such this layer is primarily concerned with risks that occur sufficiently often to be considered "normal requirements". This is a term used in the Fire and Rescue Services Act 2004 to describe the level of "personnel, services and equipment" that should be provided for firefighting and road traffic accidents. Less frequently occurring events which would cause significant harm or damage outside of normal requirements are considered in the 'extraordinary risks' layer.

In this layer incidents can score high on the risk matrices due to the number of resources that were deployed to an incident or because of the casualty rate of a given incident type. By having two metrics for consequence the approach captures incidents that have a relatively low resource draw but a high casualty rate, such as persons trapped in road traffic collisions, and incidents such as fires in rural areas that have a relatively low casualty rate but a high draw on resources. Both incident types present risk to the community of London in their own way.

Risk information is displayed on two separate risk matrices below. The different presentations allow the same incident data to be viewed in different ways by different intended users. Risk is presented by location and building type in table 1. This is intended for users where the geography or location of a risk is important, for instance, understanding the distribution of risk between different property types or highlighting risks associated with rural areas. For users where the geography is less important, and it is the specific activity that is relevant, the second table shows incident risk data by the LFB Incident Type Code (ITC). This presentation allows users to focus on incident types that have high casualty rates such as "C3 Acid attack on a person" that are less visible in the location-based data, as they are not constrained by building type or location and may occur anywhere.

Key findings:

The highest fire risks and risk locations are:

- Fires in the home particularly purpose-built flats, converted flats and houses of multiple occupancy.
- Fires in Bungalows
- Fires in private garages, sheds, and outbuildings.

Based on frequency of occurrence and casualty rate the highest risk non-fire incidents type and locations are:

- Persons collapsed or injured behind locked doors.
- Persons trapped after road traffic collisions.
- Persons trapped excluding road traffic collisions.
- Humanitarian incidents

Incident risk - data by type and location

Consequence						
	5	Non-fire Camping tent, shelter, or marquee Fire Warehouse and bulk storage. Non-fire Boat Fire -Other Residential Property	Non-fire Vegetation by road, track or canal Non-fire Trains Fire Manufacturing and processing. Fire Retail Fire Landfill or wasteland	Fire Private Garage, shed or Outbuilding. Fire House or Bungalow Non-fire Transport Buildings	Fire – Purpose built flats. Non fire – Road Vehicle	
	4	Fire Sports and Leisure Fire Boat Fire Aircraft	Fire Short Stay Accommodation Fire Public administration and utilities. Non-fire Other residential property Fire Offices and call centres Fire Care and supported living	Fire Converted flats and HMOs Non-fire Rural Land	Non-Fire Urban Infrastructure	Non-fire Converted flats and HMOs Non-fire Houses and bungalows Non-fire Purpose built flats
	3	Fire Religious Non-fire Static Caravan, Houseboat, Towing Caravan Fire Entertainment and culture. Fire Communal Living	Non-fire Urban Furnishings Non-Fire Carpark and Transport Non-fire Other non-residential property Fire Hospitals and Medical Care Non-fire Religious Fire Education Fire Food and Drink Fire Farming and Agriculture	Non-fire Entertainment and Culture Fire Rural Land Fire Urban Infrastructure Fire Road Vehicle Non-fire – food and drink Non-fire – Manufacturing and processing	Non-fire Hospital and medical centres Non-fire Offices and call centres Non-fire Short Stay Accommodation Non-fire Retail Non-Fire Education	Non-fire Care and Supported Living
	2	Fire Trains Fire Barbeque	Fire Transport Buildings Non-fire Aircraft Fire Urban Furnishings	Non-fire public administration, utilities and amenities	Fire Refuse Rubbish or Recycling	
	1	Fire Car Park and Transport	Non-fire Barbeque Fire- Vegetation by road, track or canal. Non-fire false alarm – property not found	Non-fire Refuse Rubbish or Recycling Non-fire Warehouse and Bulk Storage		
		1	2	3	4	5
		Likelihood				

Incident risk data by Incident Type Code

Consequence						
	5	B1B RTC Involving vehicle into building. B14 Minor collision involving brigade vehicle. B13 Serious collision involving brigade vehicle. ROAD RTC on motorway ES5 Emergency Services Chanel E3 Aircraft Accident Imminent J7 Fire on vessel on Thames B7 Train/Tram Crash J12 Person threatening to jump from bridge structure over Thames B93 Collapse of building/Structure (Level 3) D3 Sub Surface Workings J1 Mid-Stream incident on Thames	VEHICLE: Vehicle fires small and large J3 Person in waterway / on foreshore accessible from land B1T Person under train or tram and person struck by train J0 FBT Running call received from MCA G11 Nilo Assessment – Nil attendance B10 Person in precarious position requiring rescue. C3 Acid attack on person B19 Assist LAS with Bariatric/Difficult removal.	NO Nil Attendance B1 Person trapped (not RTC) Persons Trapped RTC C1 Hazmat including cylinder and refrigerant	B11 Person Collapsed or injured behind locked door	A1 Fire A2 Fire
	4	FUEL- Fuel spill on motorway. MA Mutual Assistance B92 Collapse of building structure (level 2) FSG1. 1 or more FSG calls in any premises type	A4 Fire involving Hazmat A3 Reduced Fire Attendance Involving Railway MULTI – Multi lane make safe RTC B0 – No Attendance b92 to supervisor.	Make Safe RTC	B2 Reduced Special Service	
	3	C4 Mercury Spill	A12 Siege/Person threatening to set light. AO Tests Exercises	A8 Fire all out B12 Person threatening to jump	C5 Natural Gas Leak commercial or residential A1HR Fire in High Rise Flats/Commercial Building	B4 Flooding A10 AFA Commercial Premises B3 Effecting Entry person locked out/in
	2	B17 Large Animal Rescue AFR Alleged Fire Risk FIRE Fire on motorway. B91 Minor Collapse of structure A7 Fire on vessel accessible by land	B6 Burst water main E1 Aircraft Full Emergency Ground Incident			
	1	J2 Houseboat/vessel sinking accessible by land G01 Operation Plato -RVP ACCIDENT Accident Involving Brigade Vehicle D2 Train Crash in railway tunnel C11S HazMat British Transport Police Support H2 Suspect Ordnance/Incendiary Device D1 Fire in road/rail tunnel SPECIAL Special Service - Motorway	B8 Commercial Flooding AFA		B2NE Person Shut In lift non-emergency B2E Person Shut in Lift Emergency	
		1	2	3	4	5
		Likelihood				

Layer 2.2. Geographic disposition of risk.

The Brigade uses methodology developed by the NFCC to highlight the geographic distribution of indicators for increased risk related to dwelling fires and road traffic collisions (RTC). Dwelling fire risk is calculated using correlation between demographic factors and fire risk to assign a geographical area with a fire risk rating. The approach uses national incident data and is developed by the NFCC. A similar approach is used to map road traffic collision (RTC) risk but using features of the road network to correlate with risk rather than demographic factors. The Brigade has also developed Neighbourhood Density Zones, to illustrate where demand for services predominantly occurs and where different types of risk are concentrated.

Key findings;

- There is an increased demand for all our services in areas of higher population and building density and a concentration of public and private infrastructure to be protected. These areas of higher demand are predominantly central.

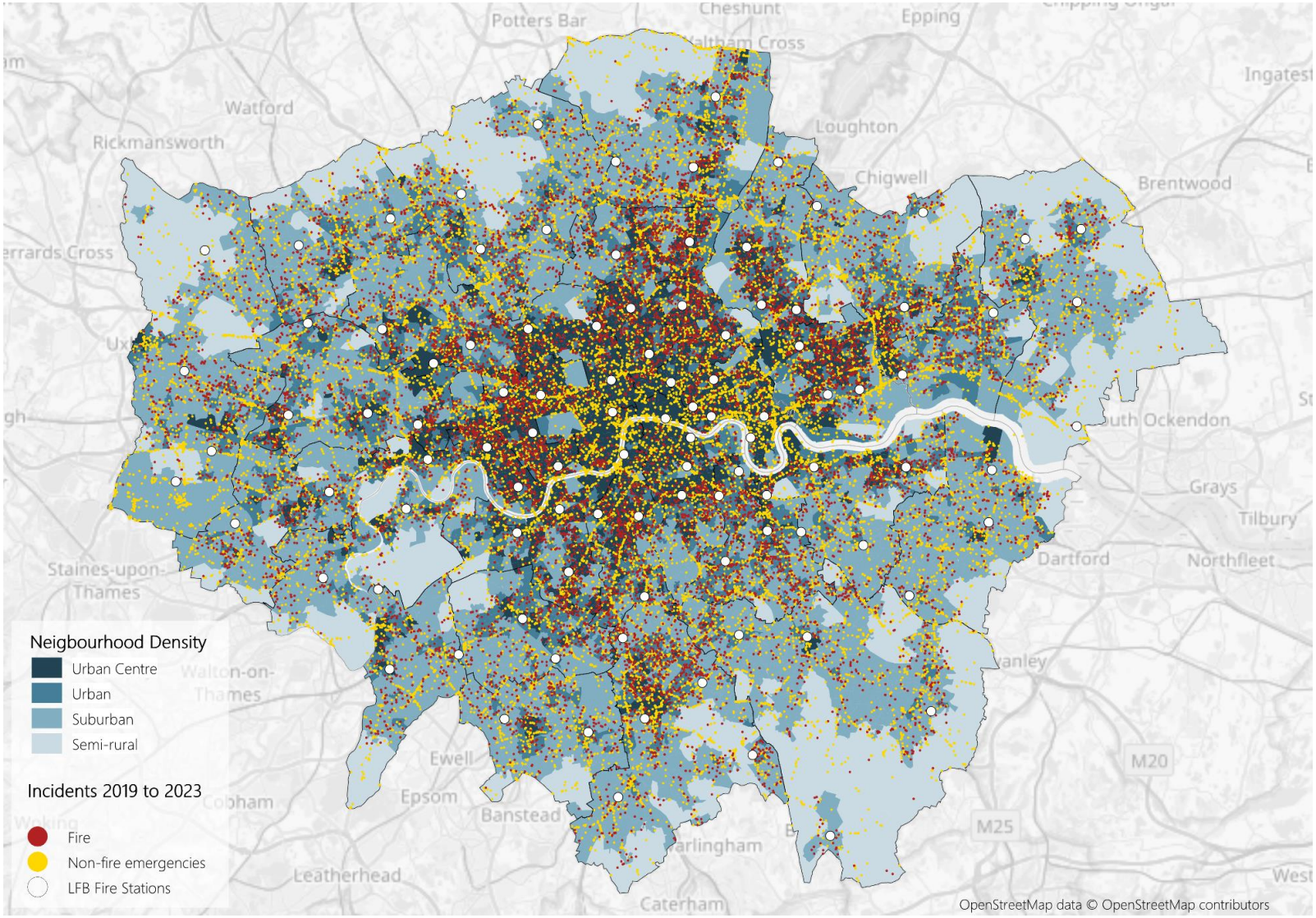
- Dwelling fire risk using the NFCC definition of risk methodology indicates a disposition of dwelling fire risk that largely reflects areas of higher density and higher general demand for services.

- Each neighbourhood zone has a different risk profile reflective of its level of density. There are some high risks that occur more commonly in less dense zones such as fires involving rural land, particularly at the boundaries of more and less dense areas, (urban rural interface).

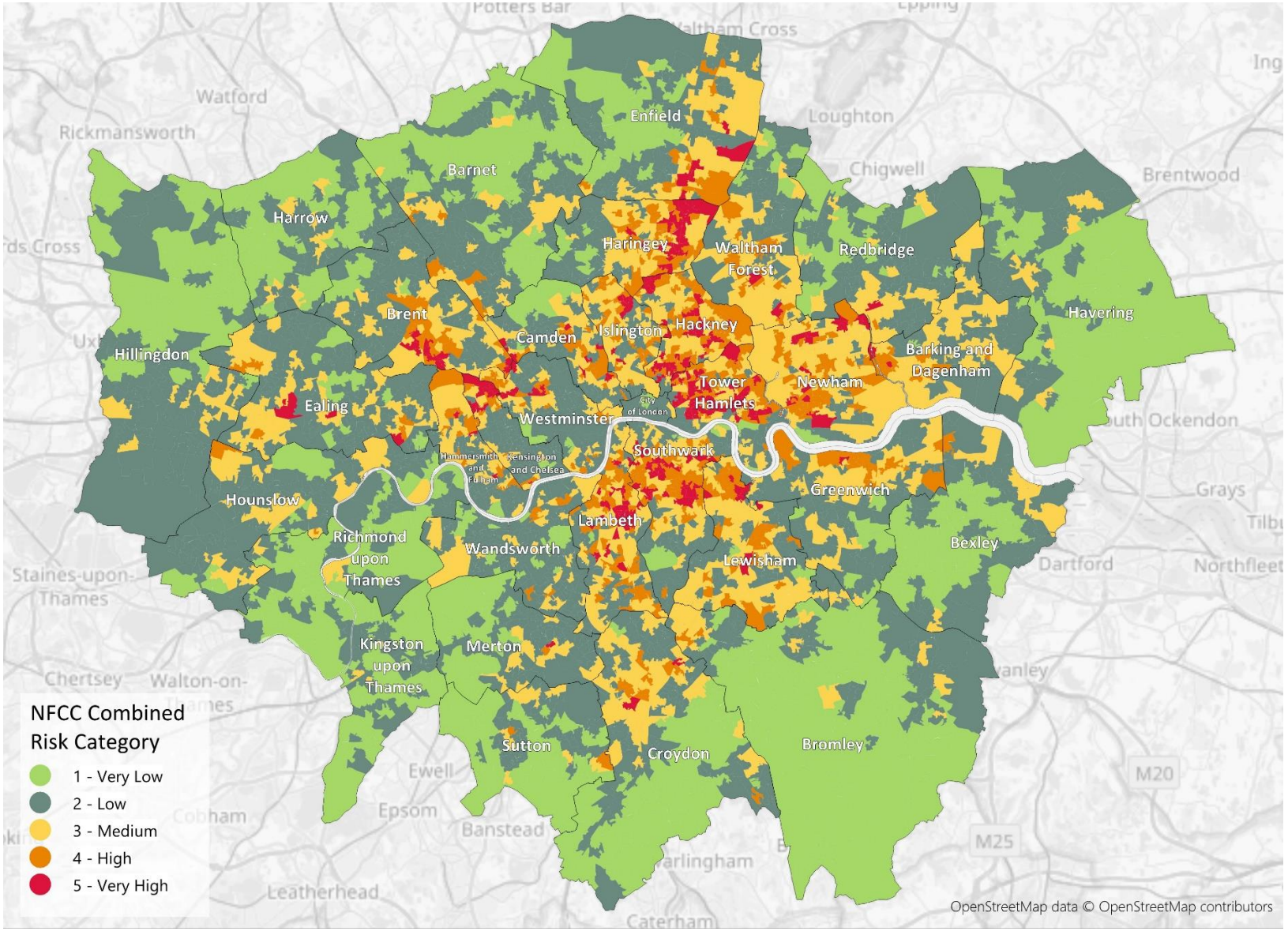
- Using the NFCC methodology to identify road traffic collision risk, indicates higher risk in the road network towards the periphery of London and reflects the main routes into the capital.

- Road fatalities in London often occur more centrally than would be predicted by the NFCC method of assessing road risk. These central areas are areas of high vehicle and vulnerable road user interaction.

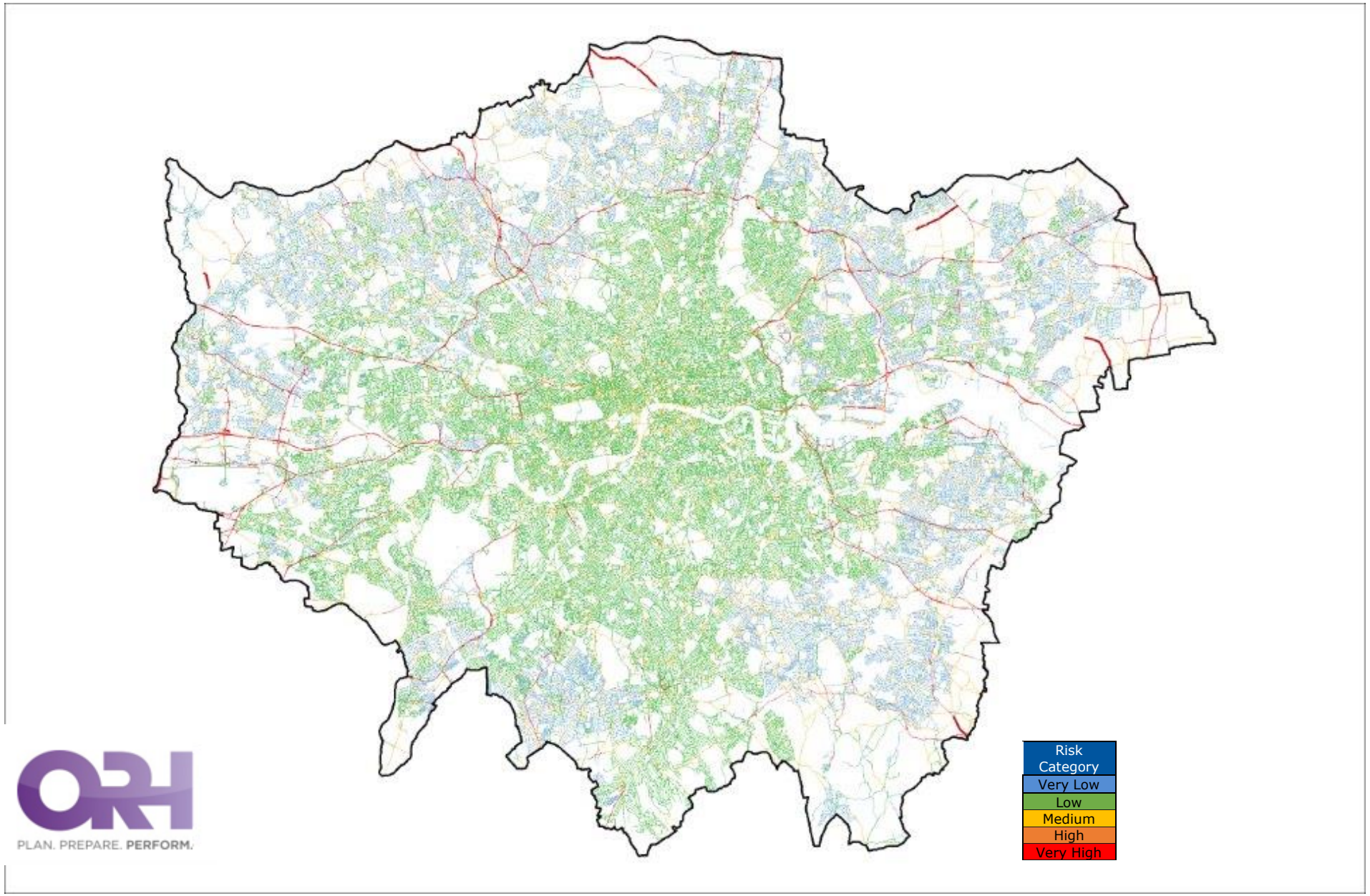
Map 1. Combined map Showing Neighbourhood Density zones overlayed with incidents between 2019 and 2023.



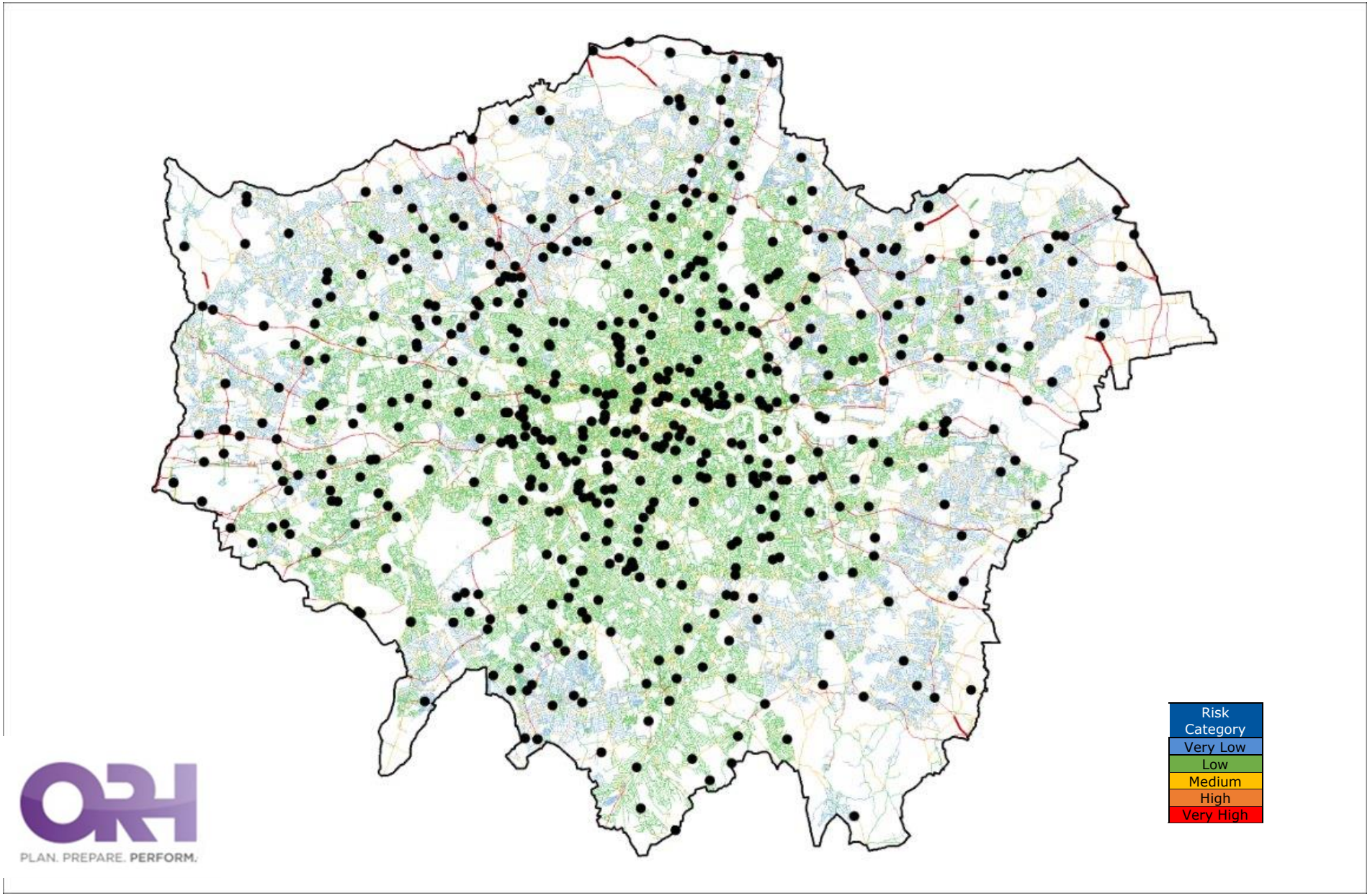
Map 2. Dwelling fire risk map of London using NFCC definition of risk for dwelling fires methodology.



Map 3. Road Traffic Collison Risk Map of London using NFCC Definition of risk method.



Map 4. Road factalities overlaid with NFCC Road Traffic Collsion risk Map.



Layer 3.1 Extraordinary risks and risks from the London Risk Register

This is a subjective risk assessment for rare or "worst-case" scenarios. These worst-case risks are assessed against a broad range of impacts: human welfare, behavioural impact, economic, infrastructure, environmental and security and are made up of three categories: accidents, threats, and natural hazards.

These risks are taken directly from the London Risk Register (LRR), which is informed by the National Risk Register. The National Risk Register is produced by Government and the London Risk Register is produced by the London Resilience Forum (LRF). The risks for which LFB is the lead are scored using input from LFB subject matter experts. Risks on which other partners lead are scored in a similar way. This gives the Brigade a wider, partner perspective on risks faced in London and England. This register includes risks that LFB will not directly respond to, however the inclusion of risks on the register indicates that LFB should plan for continued delivery of core functions during an event.

The purpose of this layer is to allow the Brigade to plan and prepare for:

- Response to low frequency but high impact events
- Events that LFB will not respond to directly but during which LFB will need to continue to deliver its core function, i.e. events that have a business continuity implication for LFB.

The ratings for the fire service-related risks on the LRR are based on our recommendations. In producing this risk assessment, we have reviewed the ratings that we have provided to the LRF. Risks on this assessment are reviewed cyclically with higher scoring risks reviewed at greater frequency. Changes in the LRR will also reflect changes in the national threat picture and will reflect partnership planning and information sources available to central government.

- **Key findings:** The number of malicious act threats recorded on the LRR has increased notably in comparison to when last published.

- The preponderance of malicious acts on the LRR reflects the current partnership assessment of threat level across a spectrum of attack methodologies.

- LFB will be required to respond directly to incidents involving malicious acts where its capabilities are required or where statutory duties exist.

- Items on this register such as R89 High Altitude Electromagnetic Pulse, R50a National Electricity Transmission Failure and R21 Attack on UK electricity Infrastructure are likely to pose business continuity challenges for LFB.

- Two separate red risks and one amber risk relating to different types flooding are recorded in the LRR. Although LFB does not hold the statutory duty for flooding, these risks, if actualised, are likely to impose a significant operational demand on LFB as a category one responder with a duty for rescue.

Extraordinary scenario risk matrix - London Risk Register.

Consequence						
	5	**R22** Malicious attack on nuclear infrastructure, **R52** Civil Nuclear Accident	**R12** Non-state nuclear attack - urban area, **R76** Drought, **R89** High-Altitude Electromagnetic Pulse, **R95** Nuclear Attack by State	**R14** Biological Attack unenclosed urban area, **R50a** National Electricity Transmission Failure	**R21** Attack on UK electricity infrastructure, **R78** Pandemic	
	4	**R45** Aviation Collision, **R53** Radiation release from overseas, **R56** Fire or Explosion at onshore COMAH site, **R57** Large Toxic Chemical Release from onshore COMAH site, **R58** Explosion at offshore oil or gas installation, **R62** Reservoir/Dam Collapse	**L54b** Fires in large public and commercial buildings, **R08** Malicious Aviation Incident, **R48** Loss of PNT Services, **R51** Gas Supply Infrastructure	**R07** Malicious Rail network incident, **R16a** Chemical Attack unenclosed area. **R16b** Chemical Attack enclosed area,**R73** High temperatures and Heatwaves, **R75b** Fluvial Flooding, **R75c** Surface Water Flooding	**R17** Chemical Attack on water infrastructure, **R19** Conventional attack chemicals infrastructure, **R23** Malicious attack fuel infrastructure, **R71** Severe Space Weather, **R79** Emerging Infectious Disease	**R02** Conventional attack on government, **R04b** Land-based attack - VBIED
	3	**HL22** Building Collapse, **HL23** Bridge Collapse, **L66** Incident caused by mishandling of radioactive material, **R59** Fire and Explosion at an onshore fuel pipeline, **R63** Water Supply Infrastructure	**HL105** Complex Built Environments, **L71a** Large Aircraft Incident, **R10** Strategic Hostage Taking, **R47** Disruption Space-based services, **R50b** Regional Failure of the electricity network, **R60** Localised industrial accident involving small toxic release, **R64** Food Supply Contamination, **R65** Major Fire	**HL10** Local Accident on Motorways/ Major Trunk Roads, **L19** Groundwater Flooding, **R40** Railway Accident, **R44** High Consequence Dangerous Goods, **R46** Malicious Drone Incident, **R49** Disruption to telecoms systems, **R74** Low temperatures and heavy Snow, **R75a** Coastal/Tidal Flooding, **R77** Poor Air Quality	**L54a** Fires in purpose built high-rise flats, **R05b** MTA – Passenger Ferry, **R09** Malicious maritime incident, **R15** Radiological attack unenclosed area, **R20** Attack on UK gas infrastructure, **R67** Volcanic Eruption, **R72** Storms and Gales, **R82** Public Disorder	**R04a** Person-borne IED, **R04c** MTA – Low sophistication, **R04d** Marauding terrorist attack – firearms, **R24** Cyber-attack on health and social care system, **R55b** Technological failure critical financial market infrastructure
	2	**R38** Insolvency affecting fuel supply, **R42** Maritime Pollution, **R61** Accidental Release of a Biological Substance	**R80a** Animal Disease – foot and mouth **R80b** Animal Disease – avian influenza, **R80c** Animal Disease – African horse sickness, **R80d** Animal Disease – African swine fever, **R84** Industrial Action (firefighters), **R86** Industrial Action (fuel)	**L54e** Major fire in care homes and hospitals, **L71b** Small Aircraft Incident, **R26** Cyber-attack on telecommunications systems, **R37** Insolvency Suppliers Critical Services, **R83** Industrial action public transport	**R05a** MTA – VBIED, **R13** Anthrax letters, **R36** Major Social care Provider, **R37** Collapse of major government contractor, **R39** Failure of Supplier of CNI Chemicals, **R55a** Technological failure at a retail bank, **R66** Wildfires, **R85** Industrial action (prison officers), **R87** Influx of British Nationals	**L54c** Fires involving landfill and waste processing sites, **R11** High profile assassination
	1	**R54** Radiation exposure from stolen goods, **R68** Earthquake	**R30** Cyber-attack SWIFT system	**HL21** Land Movement, **R28** Cyber-attack Gov't critical systems, **R29** Cyber-attack Gov't data breach, **R32** Undermining democratic activity, **R41** Evacuation of passenger ship	**R25** Cyber-attack incident - transport	
		1	2	3	4	5
		Likelihood				

Layer 3.2. Modelling Impacts of high demand and extraordinary risks.

The Mayor of London's City Resilience Strategy 2020 describes London as a global city and the economic engine of the United Kingdon (UK), accounting for 23 percent of the UK's economic output. London is a city with an unusual density of risk. As well as the seat of government for the United Kingdon Government, London holds the residence of the head of state, is the UK's financial hub and contains approximately 15% of the United Kingdom population. Both the UK Government and London's Mayors Office have declared a climate emergency, London has experienced both surface water flooding and wildfires in recent years.

London's unusual density of risk is reflected in the range of risks recorded in the LRR. Whilst this document is informed by the National Risk Register, and represents low frequency high impact events nationally, the density of risk in London meant that risks on this register are likely to be realised within the capital. The City Resilience Strategy states that sudden impact events can immediately disrupt a city and may have wide ranging and unexpected impacts. Consequently, resourcing to risk for LFB indicates the Brigade must resource to be able to respond both to demand under normal requirements and to the likely occurrence of one or more extraordinary risks.

LFB used Reasonable Worst-Case Scenarios from the London Risk Register within the existing Brigade optimisation model and dynamic cover tool to examine the resilience of our response capability under high demand and extraordinary risk scenarios. This work was based on the development of exceedance curves for appliance deployment. Early results from this developing work provide an operational stress test for our response capability.

Key Findings:

- LFBs pumping appliance capacity is resilient under high simultaneous demand. Over a 12-month period in 2023 at the 99th percentile of demand LFB could expect an average first appliance attendance time of under 7 minutes.

- LFBs pumping appliance capacity is resilient under combined high demand and extraordinary risk. Modelled scenario 1. (20 pump incident occurring in central London at a period of 99th percentile demand) indicates that LFB can achieve its backstop attendance standards under high demand if proactive steps are taken by control staff to provide dynamic cover and relocate pumping appliances as incidents occur.

- LFBs Specialist Appliance capacity becomes challenged more quickly under high demand. In the scenario modelled of a subsurface train accident or incident; Command Unit, Urban Search and Rescue and EDBA resources approached capacity along with the Fire Rescue Unit appliance fleet which is the current delivery mechanism for several specialist capabilities.

Extraordinary Risks of note in addition to data-led matrices and LRR.

These are foreseeable risks which are not identified in the last five years of LFB data as being very high or high and are not currently featured on the London Risk Register but are highlighted through cross departmental engagement and as such are considered appropriate to highlight as part of the LFB's Assessment of Risk. Risks from this section may progress to the LRR through partner engagement in the London Resilience Forum.

Risk	Outcome description	Examples of recent significant incidents that have occurred in London or in other countries
Fires in major heritage buildings	London has approximately 40,000 listed buildings and houses four UNESCO World Heritage Sites including Westminster Abbey, Westminster Palace and the Tower of London. LFB responded to 1244 incidents in 2023 that involved the heritage-built environment. Heritage buildings present unique firefighting challenges due to historic construction methods and rapid fire spread. Salvage and damage control operations require careful planning and prioritisation. A significant fire in a heritage building in London is likely to have large direct and indirect costs to the capital and country including impacts on tourism. A large fire could destroy items of international heritage value which will be impossible to replace. There is likely to be significant moral pressure on firefighters to act to save national heritage in a structure not designed to resist fire spread due to its historic nature leading to significant operational risks.	• Cutty Sark Fire – 2007 – Large fire occurred on the Cutty Sark, almost destroying the historic ship. • Glasgow School of Art, Glasgow – 2014 – Large fire at the Glasgow School of Art. • Morden Mosque fire – 2015 – Large fire damaging 50% of ground floor of Europe's largest mosque. • Notre-Dame de Paris fire – 2019 – Major fire in a historical cathedral in Paris requiring over 400 firefighters to extinguish costing over €1 billion to restore. • Copenhagen Børsen fire – 2024 - Fire in a major Danish heritage building under renovation leading to loss of significant historical architecture
Fires in buildings with simultaneous evacuation strategies.	London Fire Brigade (LFB) collects data for buildings with a temporary suspension of 'stay put' where an interim simultaneous evacuation strategy has been put in place. These buildings are likely to perform in such a way during a fire that a stay put strategy is untenable. The total numbers of buildings of this type can change daily, when interim measures are required, or a building is remediated and no longer requires the measures. However as of 14th June 2024 1298 buildings required suspension of "stay put" in London. Fires in these buildings present operational challenges to crews due to the behaviour and spread of fire and due to the numbers of residents evacuating.	New Providence Wharf fire - 2021 - Large fire in a building requiring evacuation. Hurlock Heights fire – 2021 - Balcony fire with potential to spread. Relay Building fire – 2022- Balcony involved in fire with potential to spread.

Layer 4. Emerging trends and future risk

This layer identifies and prioritises new and emerging operational risks and trends. These risks and trends have been identified by bringing together LFB subject matter experts, policy owners and key stakeholders to a series of workshops where risk information is shared cross departmentally and a joint understanding of future risk developed. Participants used tools from the Government Office for Science, Futures Toolkit to examine trends and risk information regarding the operational environment. The broad operating contexts provided by National Operational Guidance are used to present the resultant information, however many risks and trends cross contexts. Future risks are presented here as a summary aligned to the main or most appropriate context for ease of presentation. An additional context has been added to the seven described in National Operation Guidance to present information relating to demographic, societal and operational trends.

When assessing the immediacy of an emerging trend or future risk, the three horizons concept described in the Futures Tool Kit is used. Horizon one (H1) issues are strategically important now. They are visible and describable and LFB are responding to related incidents now. These issues are current but yet to become business as usual. Further control measure may need to be developed. Horizon two (H2) issues are issues that are visible but will develop in a way that may not be apparent yet. Many of the key trends and factors are visible allowing policy development for H2 issues. Horizon three (H3) issues are new challenges that will emerge or more general concerns. It is not clear how these factors will develop but the lead time is greater indicating there is both need and time for further research.

Emerging trends and future risks are presented in the two tables below. Table 1 shows the main themes prioritised by level of concern and immediacy. Table 2. Contains further detail by context.

Key findings:

- Development of the built environment in London including modern methods of construction and an increasing density of very tall residential buildings, presents operational challenges in the present and near-term future. These include the challenges in conducting emergency evacuation of buildings beyond the historic normal operating environment.

- The proliferation and wider adoption of new fuels, energy sources and bulk energy storage, in particular lithium-ion energy storage, present ongoing and developing operational challenges. New controls and procedures will be needed to address the different ways the technology is adopted and adapted commercially and domestically. The developing legislative environment around new fuels will be crucial in determining the controls required by LFB.

- Climate change and societal pressures are viewed to be associated with an increasing number of large incidents and incidents with high resource utilisation. This will lead to increasing challenges with managing operational information flow, challenges in maintaining situational awareness pan London during peak demand and challenges managing high simultaneous demand at maximum utilisation.

- Malicious or security related incidents remain a concern in particular the potential for multisite incidents and the impact this has on resources and deployment.

Emerging Trends and Future Risks Table 1. Prioritisation

	Horizon 1	Horizon 2	Horizon 3
Increasing risk ↑	• Modern methods of construction and an increasing density of very tall residential buildings, including buildings over 30 floors, which present unique operational challenges, including evacuation in emergencies. • The proliferation and wider adoption of new fuels, energy sources and energy storage solutions in particular lithium-ion energy storage. • Climate change is viewed to be associated with an increasing number of large incidents and incidents with high resource utilisation. This will lead to increasing challenges with managing operational information flow, challenges in maintaining situational awareness pan London during peak demand and challenges managing high simultaneous demand at maximum utilisation. • Malicious or security related incidents remain a concern in particular the potential for multisite incidents and the impact this has on resources and deployment.	• Proliferation of electric vehicles and associated infrastructure including underground car park charging facilities leading to large and complex fires. • Development and proliferation of alternative fuels and bulk energy storage and fires involving these sites. • Firefighting water supply difficulties driven by increasing population and environmental demands including drought.	• Disposal and waste issues around aging lithium-ion energy batteries and fires in disposal or recycling facilities for these fuels.
	• Increasing mental and physical ill health in the community leading to increased vulnerability to fire and emergencies	• Proliferation of mega warehouses and automated industrial process • Cyber incidents affecting mobilising and response capability. • Contaminated water run-off from fires involving new and alternative fuels including lithium-ion	• Increasingly demanding tunnel and subsurface rescues related to increasingly complex built environment. • Wide adoption of bulk energy storage systems in domestic properties • Widespread degradation of private and public infrastructure driven by economic and social issues leading to increased demand on emergency services. • Increasing need for mass rescue or evacuation with drivers such as climate change • Increasing civil unrest and protest driving demand for emergency services.

Emerging Trends and Future Risks Table 2. Detail by context.

Context	Detail of emerging trends and future risks of concern in 2024
Industry	• New processes such as automation reducing staff at industrial buildings reducing live information sources to LFB on arrival at incidents. • Increased fires in waste recycling plants as new fuels including lithium-ion age and reach end of life. • Concerns about impact of alternative fuels on operational incidents including the creation of contaminated water run off due to the presence of minerals and metals in the fuels. • Erosion of trust in emergency services and their instructions leading to changed public behaviour exacerbated by cyber-attacks and AI misuse. • Geopolitical tensions affecting operations through increased incident demand and malicious threats. • Post-COVID impacts on population including mental and physical ill-health. • Higher operating and living costs leading to reduced maintenance across private and public property and infrastructure leading to increased demand on emergency services through equipment, plant and system failures. • Terrorism threats and security challenges. • Design of mega warehouses leading to large areas of fire spread and complicated internal structures within buildings hampering firefighting and rescue.
Height, Structures and Confined Space	• Concerns about modern construction methods, building regulations, and compliance with industry standards including the development of cross laminated timber structures and performance during fire or collapse. • Perception of lagging legislation regarding evacuation of high-rise buildings. • Challenges with evacuation in high-rise buildings, exacerbated by their increasing number and height. • Lack of personal evacuation plans, especially for vulnerable people. • Electric vehicle fires in underground car parks. • Extreme weather exacerbating wildfires. • Waste management issues, including recycling fires and environmental impact.
Transport	• Impact of wide area flooding on transport network including flooding of underground transport and infrastructure. • Alternative fuels becoming involved in fire within the transport network including electric and hydrogen buses and private vehicles in difficult to access locations within the network. • Challenges with evacuating vulnerable people within the transport network
Utilities and Fuel	• Proliferation of alternative fuels and changing user profile over time leading to increasing number of alternative fuel fires • Public tampering with lithium-ion batteries • Lack of safe disposal systems for lithium-ion batteries • Proliferation of photovoltaic supplies combined with batteries in the domestic and commercial setting. • Increasing number of Electrical vehicle fires as ownership increases and existing vehicles age. • Degradation of water supply infrastructure causing flooding and interruption to water supply including that used for firefighting. • Cost of living crisis leading to unsafe heating and uses of improvised or substandard heating devices • Introduction of Hydrogen as a domestic fuel leading to domestic fires involving hydrogen. • Public protests against fuel price increases leading to incidents to which LFB will respond • Cyber-attacks against critical infrastructure leading to incidents to which LFB might respond

Major Incidents	• Another pandemic leading to high demand on partner agencies and LFB support. • Increasing risk of requirement for mass evacuation and relocation of resident driven by climate change. • Managing flooding impacts as frequency and severity of flooding increases due to climate change. • Increasing number of large incidents, multi-site incidents and incidents with high resource utilisation leading to challenges with managing operational information flow, developing a shared operating understanding pan London and, and in managing simultaneous demand. • Increasing likelihood of outages and blackouts affecting business community including operations and communications and driving demand in the community • Managing cross-border and national incidents as regional impacts of incident like flooding. • Addressing multi-site terrorism and multi-site or wide area incidents such as floods and wildfires.
Geophysical Hazards	• Increasing likelihood of surface water flooding, urban flash flooding, wide area flooding and wildfire due to impact of climate change. Issues such as drought and heatwave impacting operations through increased demand, water supply disruption and physiological impacts on crews. • Wide area flooding impacting LFBs own estate and consequently impacting operational response. • Wide area geophysical incidents impacting on LFBs own core functions and business continuity. • Increasing interaction with contaminated water due to high rainfall impacts on water systems and impacts of wide area flooding. • Increasing demand for ISAR support internationally due to climate change leading to high demand on small group of staff and impacts on capability availability within London. • Increasing prevalence of sinkholes and land movement due to higher peak rainfall driven by climate change.
Terrorist Attacks	• A concern of malicious threats developing directed at emergency responders such as malicious calls used as traps. • Increasing sophistication of threat through state aligned actors. • Increasing political extremism driving threat including through low sophistication lone actors • Attacks against critical national infrastructure leading fire service incidents • Attacks against places of worship increasing due to community tensions. • Threats from foreign states due to geopolitical factors. • Blurred lines between state and criminal actors leading to wider range of threats. • Cybersecurity threats leading to impacts on response capability. • Malicious use of drones leading to fire service response incidents. • Resource and societal challenges including local authority resource pressures impacting prevention work, increase in incidents motivated by local tensions, the impact of misinformation on public behaviour.
Demographic, Social and Operational Trends	• Increasing concern of attacks against uniformed staff • Social unrest, protests, and riots leading to increased operational demand. • Increasing frequency of incidents associated with mental ill-health due to increasing prevalence in the community. • Health inequality and aging population leading to higher demand for services. • Impact of misinformation and disinformation on social media • London Ambulance Service resource pressures having secondary impacts on LFB operations. • Increasing demand for assistance due to social and economic factors • Impact of increasing air pollution • Challenges with poverty, cost of living, and population growth • Effects of migration, and urban overcrowding reflected through social tension, operational demand, and population density. • Increasing population density leading to higher demand on public amenity space and consequent increase in ignition sources such as disposable BBQs.

Planned development of the Assessment of Risk

Further development of the Assessment of Risk in 2025 will focus on increasing sophistication of Layer One, Public Concerns and Risk Perception. LFB will seek to extend the reach of workshop-based activity and explore new tools including artificial intelligence and search engine measurement tools to explore public concerns. This layer informs work on local risk management plans and a key area of development will be increasing the reach of the Assessment of Risk through borough level engagement with communities.

LFB is developing an horizon scanning function, with early findings reflected in Layer Four, Emerging Trends and Future Risk. This layer will be developed further with the intention of extending the scope of workshops to include external experts and partners.

- LFB will continue to develop its demand modelling capability including modelling of impacts of rare and extraordinary risks.

Appendix 2

LONDON FIRE BRIGADE

Assessment of Risk Methodology 2024

Contents

Layer 1. Public Concerns and Public Risk Perception

LFB Strategic Planning worked in Partnership with the Brigade Engagement Team. The Strategic Planning team provided the overall objectives for the piece of work and provided risk information and risk content. The Engagement team carried out an Equalities Impact Assessment, identifying specific groups for targeted engagement who represented either seldom heard or at-risk groups. The Engagement team also held focus groups with the LFB Community Forum and organisations/representatives who work with communities (in particular on community risk and resilience).Contact and administration was provided by the LFB Engagement Team.

In addition to identified groups an open workshop was held that any member of the public could attend. Groups within the demographics referenced in the EIA were approached via existing relationships, links made through previous LFB engagement, or contacts provided to the team by colleagues / partners / other organisations. A target number of attendees was not set, as this engagement piece was designed to speak to a number of groups to understand how they might perceive risk, rather than to be a fully representative sample of London.

Workshop attendees received a presentation on the nature and purpose of the AoR followed by a discussion around what, "Risk," meant to individuals.

Workshop attendees were then asked about the level of threat perceived in their lives currently of various pre identified risks taken from the higher risks on 2023s AoR.

Attendees were able to either use an interactive online tool (via Mentimeter) or fill out a paper form, rating each risk category on a scale from 0-100 to represent how personally concerned they were about each one.

Attendees were then asked three open-ended questions, asking them to share any underlying causes of fire, any underlying causes of non-fire incidents, and any other risks that they are concerned about.

This data was recorded in spreadsheet format, to be analysed by the Strategic Planning team for the public perception of risk portion of the Assessment of Risk 2024.

The following workshops were held.

Group	**Date**	**Delivery Mode**	**Attendee Numbers**
LFB Community Forum	02/07/2024	In-person	12
Faith (Christian Family Concern)	2/14/2024	In-person	4
Faith (Board of Deputies of British Jews)	2/21/2024	Online	12
London Councils Community Engagement Network & London resilience group	2/22/2024	Online	28
Royal Borough of Kensington and Chelsea Over 50s Forum	2/28/2024	In-person	11
Open Public	2/29/2024	Online	10
Deaf and Disabled People's Organisations	03/01/2024	Online	4
Young people (youth outreach groups)	03/04/2024	In-person	26
			107

A further focus group was initially planned with Islington Interfaith Forum, but due to calendar constraints of the Forum was unable to go ahead. Follow up focus groups with additional faith and community groups are planned. Including broadening Islamic representation.

AoR risks were grouped into more general categories to aid public understanding and examples were provided for each. The table below shows the AoR item, the simplified grouping for public engagement.

AoR Risk Descriptor (highest risks)	**Descriptor for Public Engagement**
Fire involving warehouses and bulk storage.	Large commercial fires
Fire involving manufacturing and processing plants.	
Fire involving landfill or wasteland.	
Fires in large public and commercial buildings	
Fire involving food and drink outlets	
Fire involving offices and call centres	
Fire involving retail outlets	
Fire involving rural land (urban rural interface)	Wildfire and grass fires near buildings
Non-fire incidents involving trains and transport buildings.	Car and train collisions and entrapments
Non-fire incidents involving road vehicles and urban infrastructure.	
Non-fire incidents involving outdoor water and boats	Water rescue
Fire involving purpose-built flats.	Fires in flats and shared living
Fire involving converted flats or HMOs	
Fires in purpose built high-rise flats	High rise and/or major fire
Major Fire	
Fire involving short stay accommodation	Fires involving vulnerable people.
Fire involving care homes and specialised living	
Fire involving houses and bungalows	House fires
Fire involving private garages and sheds	
Surface Water Flooding	Flooding
Fluvial Flooding	
Groundwater Flooding	
Coastal/Tidal Flooding	
Low temperatures and heavy Snow	Cold weather, snow, and disruption
Accidental Release of a Biological Substance	Accidents with hazardous materials
High Consequence Dangerous Goods	
Attacks on Infrastructure	Malicious attacks and terrorism
Attacks on Transport	
Medium Scale CBRN Attacks	
Larger Scale CBRN Attacks	

Acknowledging the limited reach of public and targeted workshops and the difficulty in providing full representation for a diverse city, LFB commissioned a supporting question on perceived risk using the YouGov platform to broaden representation.

This question presented respondents with all 12 risks on the list as well as options of, "none of these", and, "don't know". Respondents were asked which of the listed risks was of most concern to them.

LFB Strategic Planning analysed website traffic on the LFB public facing website to gauge public interest in different risk information. This was to identify any trends in public concern that differed from the workshop and YouGov information.

Layer 2. Risks relating to property, places, and incident type

2.1 Risk Matrices

Risk information is presented both by incident type and location and by incident type code. The calculations for likelihood and severity are the same in each matrix. LFB incident data is is linked to Power BI for automated reporting. The most recent five full calender years years of incident incident data are analysed. Information is presented by both type and location and by Incident Type Code to allow disaggregation of specific incident types from the wider location data.

2.2 Calculation of likelihood

Likelihood score is based on frequency of incidents occuring. This is calculated by, Number of occurences in data/ data period. The score is then taken from Table 1.

Table 1. Likelihood score table

Score	Descriptor
1	Between once a year and once a week
2	Between one a week and one a day
3	Between one and five a day
4	Between five and twenty a day
5	Twenty or more a day

2.3 Calculation of severity by casulaty rate

Casualty rate is determined by calculating the number of incident type required on average to generate a casualty. This is calculated by, number of incidents in data period/number of casualties for incident type in data period. Severity score is taken from Table 2.

Table 2. Consequence by casualty rate score table

Score	Life consequence
1	One casualty occurs per 100 or more incidents
2	One casualty occurs per 25 - 100 incidents
3	One casualty occurs per 10 - 25 incidents or a fatality occurs in 300 or more incidents
4	One casualty occurs per 5 – 10 incidents or a fatality occurs per 100 – 300 incidents
5	One casualty occurs per 5 or fewer incidents or a fatality occurs per 100 or fewer incidents

2.4 Calculation of severity by wider consequence score

The wider consequence of an incident is indicated by the sum of fire appliances used over the full duration of the incident including the operational and post-operational phases, initial attendance and all required reliefs. This measure serves as a proxy for the wider impacts of an incident on the community as well as the overall scale and the impact on LFB. Where the wider impact score is higher than the life consequence score it has been used to moderate the score upwards. Below is an indicative worked example.

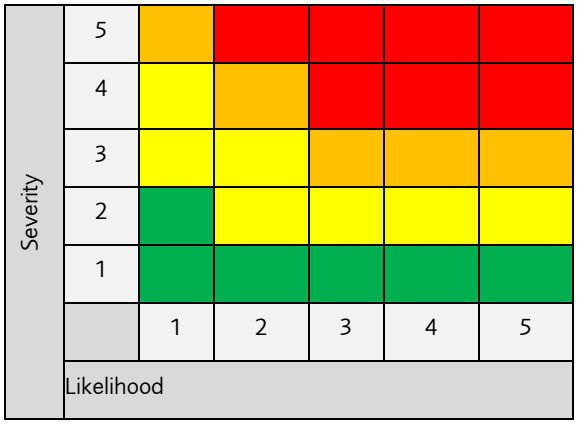
Table 3. Wider consequence score table

Score	Wider impact consequence
1	One or more incidents of this type have needed over 4 pumps in the last five years
2	One or more incidents of this type have needed over 40 pumps in last five years
3	One or more incidents of this type have needed over 60 pumps in last five years
4	One or more incidents of this type have needed over 80 pumps in last five years
5	One or more incidents of this type have needed over 100 pumps in last five years

2.5 Using the Risk Matrices

Once incidents have been scored for likelihood and consequence they are placed on the relevant matrix and displayed either by individual incident type code or by incident type and location. Incidents displayed by type code are placed in matrix 1 and Incidents displayed by type and location are placed in matrix 2. The base data is the same. The different presentation allow the same risk data to be viewed by location and by individual incident type.

Incidents with high severity but low likelihood are prioritised in this matrix over high frequency low severity incidents.



2.6 Risk Score: Worked example

An incident of *fire* in the location *purpose built flat*, occurs in London on average 7.26 times per day giving a likelihood score of 4. On average, one casualty occurs every 7 incidents in this location type, giving a consequence score of 4. The combination of likelihood and consequence returns an overall risk score of 16 for the incident type *fire in a purpose built flat*. However, the wider consequence score of fires in purpose built flats is 5 due to the large number of resources required to resolve these incidents, indicating a higher overall impact. The score is therefore moderated up to a 5 for consequence as per the table. The overall risk score is now 20.

Neighbourhood densities and local risk profiles

Neighbourhood Density Zones highlight the areas of London with different densities of people and buildings.

The map graphic is created by the LFB Information Management Team

Urban Centres are the areas with highest population and building density (more than 15,000 people per sq. km) and are shown in red. Urban areas have above average population and building density (between 9,000 and 15,000 people per sq. km) and are shown in amber. Suburban areas have below average population andbuilding density (between 2,000 and 9,000 people per sq. km) and are shown in grey. Semi-Rural areas have the lowest population and building density (below 2,000 people per km) are shown in green.

NFCC Definition of Risk Maps

Maps showing dwelling fire and road traffic accident risk are produced by the LFB Business Intelligence Team and ORH respectively. The method published by the NFCC is used to produce maps to identify areas of risk based on demographic, geographic and socio-economic factors associated with incident frequency and outcomes.

Layer 3.1 Extraordinary risks and risks from the London risk Register.

These risks are taken directly from the London Risk Register. The London Risk Register is produced by the London Resilience Forum (LRF). The London Risk Register reflects risks recorded on the National Risk Register and National Security Risk Assessment as appropriate.

These risk registers deal with low frequency, high impact events and take a subjective approach to assess the reasonable worst-case scenario for each risk identified. Due to the limited data available on rare events subject matter experts and partners use indicator tables, professional judgment and extrapolate from past events to produce risk ratings.

The ratings for the fire-related risks on the London Risk Register are based on LFB recommendations. Risk on which LFB does not lead are scored by partners in the London Resilience Forum. This layer uses the information directly from the LRR, we don't re-score any of the risks. If drawing these LRR risks into the AoR causes us to reconsider our recommended scores for any of the risks, we would seek to get the risk rescored by the LRF rather than show a different score on our own risk register for that year.

Both the London Risk Register and the National Risk Register are available publicly and include method statements with the main documents. The national security risk assessment is not published publicly but is reflected in the national risks register.

Layer 3.2: Extraordinary risk scenario modelling.

Modelling in this section is a development of the existing optimisation model and dynamic cover tool used by LFB and provided by a contractor ORH

Historic periods of high appliance unavailability were identified by using the saved data in the Dynamic Cover Tool (DCT). By navigating back to periods of 99th percentile appliance unavailability Strategic Planning were able to identify periods of operational stress.

Individual risks on the London Risk Register were then modelled using historically similar incidents, mobilising policies and subject matter expert input to build a mobilising profile for the risk type.

These incident profiles were then added to the DCT at the pre identified 99th percentile periods of demand and impacts on projected attendance time were measured.

In 2024 three incident types were modelled. A subsurface train derailment, a major residential high-rise fire and concurrent wildfires across London.

Historic data on appliance availability was used to calculate the percentage of the time that sufficient applainces of each type were available to respond to the modelled incidents

In the first iteration of this approach data was used for calendar years in 2022 and 2023.

In future iteration this approach will be developed to include a larger data set.

Layer 4. New and Emerging Risks

The approach taken to new and emerging risks is to draw together the Brigade's various sources of risk information including departmental horizon scanning. Subject matter experts, policy owners and key stake holders were identified by strategic planning and brought together for a series of two workshops. Detailed methodology for the workshops is found in; Emerging Trends and Future Risks: Operational Horizon Scanning Workshop Series Method.

Appendix 3. Summary of High and Very High Incident Type Code Risk Scores and movement.

Risk Rating	Risk ID	Movement
Very High	A1 Fire	Static
	A2 Fire Reduced fire attendance	Static
	B1 Person trapped excluding RTC	Static
	B1T Train or Tram incident involving trapped person	Static
	B2 reduced special service	UP
	B10 Person in Precarious Position	UP
	B11 Person collapsed / injured including behind doors	Static
	C1 Hazmat Incident initial call	Static
	C3 Acid attack on Person	Static
	J3 Person in waterway / on foreshore accessible from land	Static
	Make safe RTC	Static
	PERSONS TRAPPED- RTC	Static
High	A1HR Fire High Rise Buildings	Down
	A4 Fire Involving Hazmat	Static
	A8 Fire All out	Static
	B0 Refer to supervisor	Down
	B1B Vehicle into Building	Static
	B7 Train/Tram Crash	Static
	B13 Serious collision involving Brigade Vehicles	Static
	B93 Collapse of Building/Structure Persons involved	Static
	C2 Minor spillage of flammable liquids	Static
	D3 Sub Surface Workings	Static
	J1 Mid-Stream incident on Thames	Static
	J7 Fire on Vessels on River Thames	Static
	Persons on fire	Static
	RTC on motorway	Static
	RTC Person Trapped	Static

Appendix 4. Summary of Changes to High and Very High London Risk Register Risk Scores

Risk Rating	Risk ID	Outcome Description	Likelihood	Impact	Movement
Very High	**R50a**	Failure of the National Electricity Transmission System (NETS)	3	5	Static (R76 2022)
	R78	Pandemic	4	5	Static (R95 2022)
	R79	Outbreak of an Emerging infectious disease	4	4	Up (R97 2022)
	R89	High-Altitude Electromagnetic Pulse (HEMP)	2	5	New
	R95	Nuclear attack by a state on the UK mainland or UK overseas interests	2	5	New
	R71	Severe Space Weather	4	4	Static (R92 2022)
	R73	High Temperatures and Heatwaves	3	4	UP (R90 2022)
	R75b	Fluvial Flooding	3	4	Static (L21 2022)
	R75c	Surface Water Flooding	3	4	Static (R83 2022)
	R76	Drought	2	5	Static (R84 2022)
	T7	Larger Scale CBRN Attacks	3	5	Static
High	**HL10**	Local accident on motorways and major trunk roads	3	3	Static
	L54a	Fires in purpose built high-rise flats	4	3	Static
	L54b	Fires in large public and commercial buildings	2	4	Static
	R40	Rail Accident	3	3	Up (HL11 2022)
	R44	Accident involving high consequence dangerous goods	3	3	Static (R68 2022)
	R46	Malicious Drone Incident	3	3	New
	R48	Loss of Positioning, Navigation and Timing (PNT) Services	2	4	New
	R49	Simultaneous loss of all fixed and mobile forms of communication	3	3	New
	R51	Failure of Gas Supply Infrastructure	2	4	Static
	R52	Civil Nuclear Accident	1	5	Up (R66 2022)
	R55b	Technological failure at a UK critical financial market infrastructure	5	3	New
	R82	Public Disorder	4	3	Static (R104 2022)

Appendix 5

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Assessment of Risk 2024

Emerging Trends and Future Risks: Operational Horizon Scanning Workshop Series

Method

2024

Purpose and Approach

Purpose

The purpose of the workshop series is to identify and prioritise new and emerging operational risks and trends for inclusion in the Assessment of Risk for London (AoR).

Output: A workshop report that summarises analysis of future operational risk, with priority areas identified. This report is to form Layer Four of the AoR

Approach

The workshop series is designed to bring to draw together the Brigade's various sources of risk information including departmental horizon scanning to develop a shared understanding of future operational risk and emerging trends. Subject matter experts, policy owners and key stake holders were identified by Strategic Planning and brought together for a series of two workshops. Representatives were sought from the following departments.

- Ops Policy and Assurance
- Ops Resilience and Control
- Prevention
- Protection
- Medical intervention and IEC
- Business Continuity
- Business Intelligence
- Fire Investigation

The structure of the workshop series is informed by The Cabinet Office for Science, Futures Toolkit.

Future Toolkit

The workshop series begins in March to feed the AoR update which currently follows an annual pattern of entering governance in at PRAB in July. The Schedule of the workshop series is as follows;

- **Workshop 1.** Full day workshop 18th March 2024
- **Workshop 2**: 1/2 day workshop 25th March 2024

Workshop One detail

Workshop one focusses on identifying emerging trends and future risks in the operational environment.

Prior to workshop 1 delegates are asked to conduct their own analysis of emerging trends and future risk identified in their own departments and areas of expertise

Strategic Planning carry out desk research on trends and risks with support from the business intelligence team for presentation at the beginning of workshop one.
Delegates are placed into multi-disciplinary syndicates of four to six.

Guest speakers present information on risk in areas of concern identified by strategic planning.

Delegates are presented with the seven NFCC contexts; Industry, Height, structures and confined spaces, Transport, Utilities and fuel, Major incidents, Geophysical hazards, Terrorist attacks with an eighth context of social and demographic change.

Syndicates are asked to discuss and record their identified risks and trends for each context using a grid to position each trend or risk against it predominate area of concern; firefighter harm, environmental harm, public harm and operational demand.

Example recording grid for context of Industry.

Industry	
Firefighter Harm	Public Harm
Environmental Harm	Operational Demand

The Seven Questions approach from the futures toolkit is used to prompt discussion in each syndicate. Questions four and seven are reserved for workshop two.

7 Questions approach

1. What would you identify as the critical issues, threats and risks for the future within this context?
2. If things went well, being optimistic but realistic, talk about what you would see as a desirable future in this context given the threats risks and issues you have identified?
3. If things went wrong, what factors would you worry about most?
4. Looking at internal systems policies procedures and equipment, how might these need to be changed to help bring about the desired operational outcome?
5. Looking back, what would you identify as the significant events which have produced the current situation or provide evidence that this is an emerging risk or trend?
6. Looking forward, what do you see as priority areas for research or action?
7. If all constraints were removed and you could direct what is done, what more would you wish to do in this context

Workshop 1. Agenda

09:00 – 09:10 Introduction

09:10 – 09: 30 London Risk Registers and the AoR: the current state risk assessment.

09:30 - 09:45 Aims and approach.

09:45 – 10:15 Guest Speakers

10:15 – 10:45 Break

10: 45 – 11:00 NOG Contexts

11:00 – 12:30 Contexts 1 – 3 Industry, Transport, Utilities and fuel

12:30 - 13:15 Lunch

13:15 – 14:30 Contexts 4 and 5. Height Structures and Confined Space BAU trends and risks outside of NOG contexts

14:30 – 14:45 Break

14:45 – 16:15 Contexts 6-8. Major Incidents, Geophysical hazards, Terrorist attacks

16:15 - 1700 `Questions, Feedback, Sum up

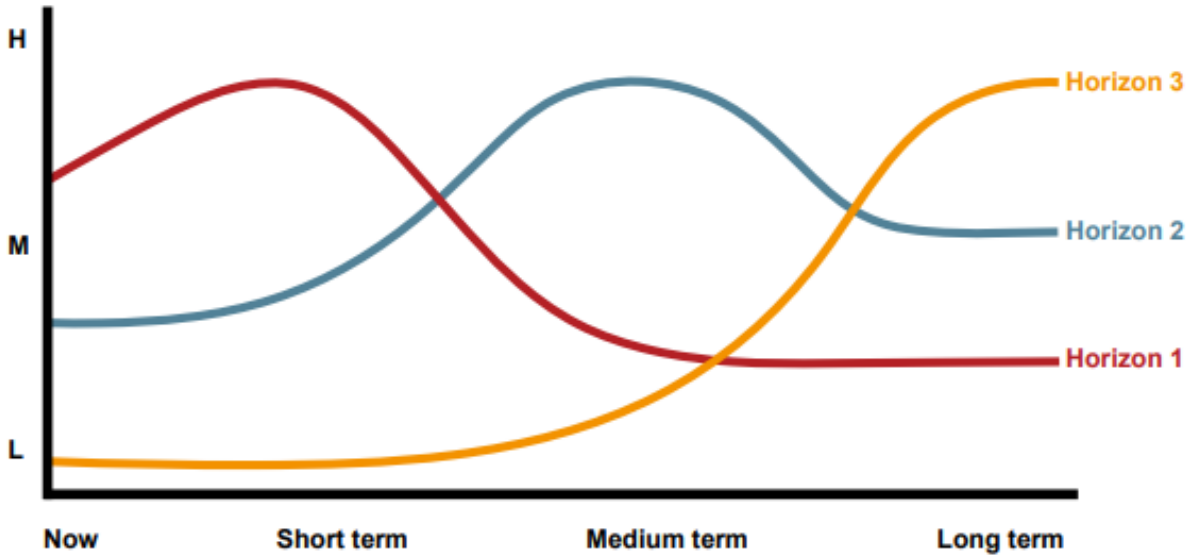
Workshop Two detail

Workshop two focusses on prioritisation of new and emerging operational risks and trends identified in workshop one and identification of future control measures or areas for investigation. Areas identified as requiring further investigation or new control measures will be included in the review process for CRMP, Service strategies and Target Operating Model on completion of the AoR.

Workshop two begins with a review of workshop 1 output, compiled by Strategic Planning and presented to syndicates. Delegates are placed in multidisciplinary syndicates as in workshop one. Syndicates receive a short presentation on the three horizons concept and asked to use the concept to prioritise the risks identified in workshop one.

Three Horizons concept

Horizon 1 issues are strategically important now.
They are visible and are generally the issues that we are responding to now or concerned about right now. Ideally H1 issues will become less important over time as policy and strategy develops.
Horizon 2 issues will develop in a way that may not be apparent yet, but many of the key trends and factors – the change drivers – are already in play. The task for policy makers and strategists is to look at these issues closely, to explore the possible outcomes and to adapt policy and strategy in anticipation of future need
Horizon 3 issues are new challenges that will emerge, but the change drivers are difficult to see in the present. It is not clear how H3 factors will develop The task here is therefore to identify and track the drivers that will shape H3



Prioritisation grid.

To prioritise the issues identified in workshop one, syndicates use the prioritisation grid and the three horizon concept to assess severity and immediacy of each issue, placing each risk in the appropriate box. Some risks will be relevant across each horizon as the risk develops over time as shown in the example.

Severity and Immediacy

	Horizon 1	Horizon 2	Horizon 3
Higher Risk			
Lower Risk			

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Example showing lithium ion risk developing across three horizons.

	Horizon 1	Horizon 2	Horizon 3
Increasing risk ↑	• Modern methods of construction and an increasing density of very tall residential buildings, including buildings over 30 floors, which present unique operational challenges, including evacuation in emergencies. • The proliferation and wider adoption of new fuels, energy sources and energy storage solutions in particular lithium-ion energy storage. • Increasing number of large incidents, multi-site incidents and incidents with high resource utilisation leading to challenges with managing operational information flow, challenges in maintaining situational awareness pan London when operating under high simultaneous demand.	• Proliferation of electric vehicles and associated infrastructure including underground car park charging facilities leading to large and complex fires. • Development and proliferation of alternative fuels and bulk energy storage and fires involving these sites. • Firefighting water supply difficulties driven by increasing population and environmental demands including drought.	• Disposal and waste issues around aging lithium-ion energy batteries and fires in disposal or recycling facilities for these fuels.
	• Increasing mental and physical ill health in the community leading to increased vulnerability to fire and emergencies	• Proliferation of mega warehouses and automated industrial process • Cyber incidents affecting mobilising and response capability. • Contaminated water run-off from fires involving new and alternative fuels including lithium-ion	• Increasingly demanding tunnel and subsurface rescues related to increasingly complex built environment. • Wide adoption of bulk energy storage systems in domestic properties • Widespread degradation of private and public infrastructure driven by economic and social issues leading to increased demand on emergency services. • Increasing need for mass rescue or evacuation with drivers such as climate change • Increasing civil unrest and protest driving demand for emergency services.

Workshop 2. Agenda and Schedules

09:30 - 10:30	Introduction and Review of Workshop 1 findings
10:30 – 12:30	Ranking of identified risks threats and issues in workshop 1. For all risks, threats and issues identify which area/s of policy it will impact in the short, medium or long term
12:30 -13:30	Break
13:30 -1530	Questions to inform response to AoR Based on highest ranked risks or issues from morning session consider the following questions

1. Looking at internal systems policies procedures and equipment, how might these need to be changed to help bring about the desired operational outcome?
2. If all constraints were removed and you could direct what is done, what more would you wish to do in this context

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Part 1: Equality Impact Assessment – submitter to complete

Before carrying out an Equality Impact Assessment (EIA), you should familiarise yourself with the guidance notes (see Appendix) and our other resources located within the EIA section on Hotwire

An EIA should be carried out whenever you are starting (or reviewing) any major new activity/programme/policy/project/strategy/campaign *, or where you propose changes or a review of the previous one.

*In this document, any kind of activity/programme/policy/project will be called an ACTIVITY for an easy read, while you specify the type of your event from your end.

The purpose of an EIA is to meet and justify the legal obligation required under the Public Sector Equality Duty (PSED), namely, the 'DUE REGARD' that documents that your activity/programme/policy will:

- **1. eliminate discrimination, harassment, and victimisation**
- **2. advance equality of opportunity**
- **3. foster good relations between people who share a relevant protected characteristic and people who do not share it.**

In the EIA, you need to show that your activity meets the 3 conditions of the due regard, as listed above, and provide any relevant information showing that your activity caters for people with protected characteristics (where applicable), but also that it promotes equality and eliminates potential discrimination and offers additional opportunities to advance equality.

Where you identified any possible negative impacts on individuals and groups with protected characteristics, you need to complete a mitigating action plan (Section F below). After your mitigating action plan has been implemented, you need to inform the EAI Team by sending the same form again with the notification of the date when the mitigation action plan was completed.

A. Name, goal and the expected outcomes of the programme/ activity

Assessment of Risk – Public Engagement

Layer one of the Assessment of Risk (AoR) is intended to identify the risks and hazards that members of the public are most concerned about in relation to the fire and rescue service. These

will not necessarily reflect the likelihood or severity of actual incidents (this is captured elsewhere through analysis of incident data), but reflect the concerns held by members of the public. A new approach to collecting data is proposed. There is a need to produce a simple and repeatable measure of public risk perception that can be used to track changes year on year and to highlight any differences in risk perception or concern between different geographies or demographics. It is proposed to collect this data through planned engagement with the public.

The tool for data collection is Mentimeter, along with qualitative data collected from community engagement activities.

The expected outcome is the identification and measurement of the public perception of risk across London.

B. Reason for Equality Impact Assessment

Proposed changes to the existing activity – in 2023 the public perception of risk was produced via the CRMP consultation, whilst for 2024 we are planning to engage with the public specifically on the AoR, and thus create a method that can be repeated year-on-year.

C. Names of the team responsible for the programme/ activity

Responsibility for the EIA:

Name: Ruth Walshe
Job title: Senior Community Engagement Officer
Department: Communications and Engagement

Name: Donna Peters
Job title: Head of Community Engagement
Department: Communications and Engagement

Responsibility for the whole activity:

Name: Thomas Ronan
Job title: Station Commander, Strategic Planning
Department: Transformation

Name: Claiton Murray
Job title: Group Commander, Strategic Planning
Department: Transformation

Name: Donna Peters
Job title: Head of Community Engagement

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Department: Communications and Engagement

Name: Ruth Walshe
Job title: Senior Community Engagement Officer
Department: Communications and Engagement

D. Who is this activity for, who is impacted by it (all LFB staff, specific department, external communities)

The general public (those who live/work in or visit London), partner agencies and local government, LFB strategic risk and planning, all LFB staff.

E. What other policies/documents are relevant to this EIA?

LFB Assessment of Risk 2023 [link]
Accessible Communication guide [link]
Make it Accessible – GLA toolkit [link]

F. Equality and diversity considerations

Describe the ways how your activity meets the conditions of the due regard of the PSED and how LFB employees and communities of London may be affected by your activity, especially those ones with protected characteristics. Explain whether your programme/ activity may disproportionately affect any group named below?

Protected characteristics Equality Act 2010:
- Age
- Disability/Barrier
- Gender and gender reassignment
- Marriage and civil partnership
- Pregnancy and maternity
- Race including ethnicity and nationality
- Religion or belief
- Sexual orientation
- Socio-economic backgrounds
- Caring responsibilities

Do not provide databases, graphs, or tables in this Section, just key findings and the outcomes of your learning about these different groups. For detailed evidence and lists of data used, use Section E 1.

The activity is intended to capture the public perception of risk across London, to provide LFB with a comprehensive understanding of how our communities understand and perceive risk, and what they see to be the highest risks or greatest threats to their safety, health, and wellbeing. As such, the data gathered must be representative of the diverse communities across London, and the engagement activity will be targeted to ensure this. The engagement activity must also be carried out in an inclusive and accessible manner, following the principles of the accessible communication guide and the GLA 'Make it Accessible' toolkit, listening to communities about what their needs and access requirements are, and using the experience and training of the specialists within the Community Engagement team, to ensure that no-one is excluded or left behind due to the methods used.

There are three key areas in which communities may be impacted, and which must take into account the public sector equality duty. These are:

1. Who we engage with
2. How the engagement is carried out
3. The tool used to capture data

Age:
The 2021 census showed that 24% of London residents are aged 19 and under, and 12% are aged 65 and over.

Both young people and older persons may have different vulnerabilities and perceptions of risk due to their age, and the engagement activity must ensure that these are captured. In the AoR 2023 both older people and younger people were highlighted as a concern around physical vulnerability – that physical characteristics increase an individual's risk.

Age may impact the accessibility of the engagement activity – for example, digital access, ability to attend something in-person, or understanding the tool used to collect data.

Disability/Barrier:
The 2021 census showed that 16% of London residents identified themselves as disabled, with 5% of households having two or more disabled people/people with disabilities.

Persons with disabilities may have specific needs and vulnerabilities, impacting their perceptions of risk, so the engagement activity must ensure that these are captured, and that this reflects a range of disabilities and long-term conditions. In the AoR 2023 health & disability and mental health were highlighted as a concern around physical vulnerability – that these characteristics increase an individual's risk. There were also concerns that emerged from the AoR 2023 around behavioural vulnerability, including taking prescription drugs, and hoarders.

Disability may impact the accessibility of the engagement activity – for physical disabilities this could include access to in-person/online engagement or the need for alternative materials for visual/hearing impairments, and for developmental disabilities / neurodiversity this could include the need for information to be presented in alternative ways.

Gender and gender reassignment:
The 2021 census showed that 1% of London residents identified with a gender different to that which they were assigned at birth.

Trans people and/or those of marginalised genders may have specific concerns or vulnerabilities regarding personal risk, which may impact their perceptions of risk. The engagement activity must ensure that these are captured.

Marriage and civil partnership:
It is unlikely that persons in a marriage and civil partnership could be disproportionately impacted by the activity. However, in designing the engagement it must be ensured that it won't exclude this group in any way.

Pregnancy and maternity:
Persons experiencing pregnancy and maternity may have specific perceptions of risk related to this, and as such the engagement activity must ensure that these are captured.

This group may also have accessibility needs when it comes to engagement, and the activity must be designed to take this into account.

Race including ethnicity and nationality:
The 2021 census showed that 37% of London's population identifies as White British, with White groups making up a total of 54% of London's population. Of the remaining 46%, Asian groups made up 21%, Black groups 14%, Mixed groups 6%, and other ethnic groups 6%. In addition, 22% of London residents spoke a main language other than English, and for 4% of London residents they reported not being able to speak English well at all. Further, 41% of London's population was born outside of the UK.

Persons of different races, ethnicities, and nationalities may have varying perceptions of risk, depending on their communities, ways of life, and specific vulnerabilities that they experience. This must be captured, to ensure they are accurately reflected in the perception of risk data. In the AoR 2023 there were a number of concerns that certain socioeconomic factors increase an individual's risk, including communication and language difficulties, cultural differences, immigration, and low trust levels in uniformed services.

Religion or belief:
The 2021 census showed that 40% of London residents are Christian, 15% Muslim, 5% Hindu, 2% Jewish, 2% Sikh, 1% Buddhist, and 1% other religion, with 27% reporting that they do not have a religion. In addition, these numbers were often concentrated in boroughs – for example, 40% of residents in Tower Hamlets are Muslim, 14% of residents in Barnet are Jewish, and 25% of residents in Harrow are Hindu.

Persons of different religions or beliefs may have varying perceptions of risk, depending on their communities, ways of life, and specific vulnerabilities that they experience. This must be captured, to ensure they are accurately reflected in the perception of risk data. In the AoR 2023 there were a number of concerns that certain socioeconomic factors increase an individual's risk, including communication and language difficulties, and cultural differences. There were also concerns around behavioural vulnerability, including use of candles.

Sexual orientation:
The 2021 census showed that 4.8% of London residents identified as LGB+, with a lower proportion of people identifying as heterosexual in London compared with the rest of England.

People of varying sexualities may have specific concerns or vulnerabilities regarding personal risk, which may impact their perceptions of risk. The engagement activity must ensure that these are captured.

Socioeconomic backgrounds:
The 2021 census showed that just over half of all households in London are deprived on at least one dimension, with 13,000 households showing all aspects of deprivation (across four dimensions) – a higher proportion than any other region in England.

People from differing socioeconomic backgrounds may have differing vulnerabilities and perceptions of risk, dependent on their personal situations. The engagement activity must ensure that these are captured. In the AoR 2023 there were a number of concerns that certain socioeconomic factors increase an individual's risk, including employment, deprivation, homelessness, and overcrowding. There were also concerns around buildings and building management, including private rental properties with negligent landlords, social housing, worries about building materials (such as cladding), and derelict buildings and accumulated rubbish.

Caring responsibilities:
The 2021 census showed that 8% of London residents provide unpaid care to someone in their lives.

People with caring responsibilities may have specific perceptions of risk related to this, and as such the engagement activity must ensure that these are captured.

G. Evidencing Impact
Please answer the following six questions:

1. **Have you gathered and utilised information from various sources, including consultations with individuals, wider research, and resources from the EIA website, to comprehensively understand the people involved in or impacted by the activity, particularly those with protected characteristics?**

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2021 Census data – London Datastore [link]
2023 Assessment of Risk [link]

Have you acknowledged and explained any gaps in evidence for assessing your activity's impact, and if so, can you justify proceeding with the EIA without addressing them or are you considering a mitigation action plan?

The only gaps identified are the lack of London-specific data regarding marriage/civil partnership and pregnancy/maternity.

How does your activity promote equality of opportunity and caters for equity? i.e. what adjustments have you considered for people with protected characteristics?

The activity will allow London Fire Brigade to understand how different people across London perceive risk, so we can better serve and protect our diverse communities. The activity will include targeted engagement with different protected characteristics, to ensure their voices are heard. The engagement will be tailored to ensure it is accessible, including any required adjustments for people's different needs. For specifics, see section F.

The decisions on who to target for engagement, on the data collection tool and method, and on how to structure the focus group sessions will all be informed by what is highlighted in section F. This includes:

- Disability accommodations and accessibility considerations, including listening to communities/attendees about the specific adjustments they require.
- Multiple methods of data collection (online and written/paper) and multiple formats of sessions (online and in-person), to account for digital literally and access differences.
- The use of simple language, to ensure the information is accessible to those with learning disabilities, those whose first language isn't English, etc.
- Expert practitioners from the Community Engagement team at every session, to ensure exclusionary language or actions are not present, and that facilities are adequate.
- Attendees will be able to make accessibility requests, which may include different formats of information, translation into other languages, specific facilities, certain times/days, etc.
- Reimbursement of costs incurred can be offered if necessary.

How does your activity foster positive relations promoting equality between different groups, and what specific examples facilitates this interaction, highlighting the benefits for individuals with protected characteristics?

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By engaging with different communities to understand their specific perception of risk, LFB is able to ensure our strategic planning is equitable and considers the varying perspectives of different groups across London, promoting equality between these groups.

How do you communicate the activity to those involved, especially with protected characteristics, and have you considered diverse formats such as audio, large print, easy read, and other accessibility options in various materials?

Communications will be targeted to specific groups, as identified within section F. This will include accessible options for completing the engagement, such as diverse formats, alternative materials, and both in-person and online engagement, as well as the option to contact LFB to make any further accessibility requests.

An open session to the public will also be offered, and advertised across LFB's social media and within the community engagement newsletter, to ensure anyone who wishes to be involved in this activity is able to.

The Communications Plan is available here.

How have you engaged people with a wide range of protected characteristics in the design of your activity, and how will be engaging them in the implementation and monitoring of the activity?

The engagement activity necessitates engaging with people with a wide range of protected characteristics (through targeted engagement), and throughout this we will be asking for input and feedback on the implementation of the activity, to contribute to the monitoring of the engagement, and to make any adjustments needed to how the activity is carried out.

Given the timeline of the activity, groups and organisations have been identified via existing relationships with LFB.

After each session a feedback form will be provided, ensuring participants are able to communicate any issues or changes that should be made.

H. Mitigating action plan (where an adverse impact has been identified, please record the steps that are being taken to mitigate or justify it?)

Protected characteristic and potential adverse impact	Action being taken to mitigate or justify	Lead person/department responsible for the mitigating action
1. Age – the activity is inaccessible for older persons or young persons	The language used will be simple and accessible, help and assistance will be available where required, and there will be multiple ways to participate in the engagement to avoid exclusion.	Community Engagement
2. Disability – the activity is inaccessible for people with disabilities	Varying methods of engagement will be considered where necessary, alternative materials for visual/hearing impairments will be available upon request, BSL translation and captioning will be provided for the specific D/deaf and disabled session, and the presentation of information will be considered for neurodiverse accessibility.	Community Engagement
3. Race (including ethnicity and nationality) – the activity is inaccessible/ exclusionary for certain ethnic groups	Information may be provided in different languages if requested, the activity will be advertised in a variety of spaces catering to different groups, and engagement will be offered at varying times/places.	Community Engagement
4. Religion – the activity is inaccessible/ exclusionary for people of certain religions.	The time and day of the engagement will be considered, and if in-person the location of the engagement and the facilities available (such as private spaces, prayer rooms, etc.) will be taken into account.	Community Engagement
5. Socioeconomic backgrounds	Varying options for engagement will be considered, taking into account time and place. The engagement will be advertised in a range of different places.	Community Engagement

I. Signed by the Submitter
Name: Ruth Walshe

Rank/Grade: FRS E **Date:** 11/01/2024

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Part 2: Inclusion team to complete - feedback and recommendations

J. EIA Outcomes Select one of the four options below to indicate next steps:
Recommendation 1: No change required – the assessment is that the activity is/will be robust. **Recommendation 2:** Continue and correct the activity accordingly following our feedback – this involves taking steps to remove any barriers, to better advance equality and/or to foster good relations. **Recommendation 3:** You must complete the mitigation action plan and continue the activity despite the potential for adverse impact with mitigation in place. **Recommendation 4:** Stop the activity as there are adverse effects which cannot be prevented/mitigated.
K. Feedback Please specify the actions required to implement the findings of this EIA and how the programme/ activity's equality impact will be monitored in the future. It may be helpful to complete the table.
L. Sign off by EIA Inclusion team
Date:

Appendix 7

LONDON FIRE BRIGADE

Academic and Professional Review Panel for the London Fire Brigade (LFB) Assessment of Risk (AoR) 2024

Terms of Reference

Contents

1 Purpose

The purpose of the panel is to provide academic and subject matter expert (SME) feedback on the London Fire Brigade (LFB) Assessment of Risk (AoR), paying particular attention to the robustness and defensibility of the approach to assessing risk in London.
Feedback will be considered by LFB within the constraints of time, capacity and need regarding any actions taken. Feedback from the panel may be addressed or included in subsequent updates to the Assessment of Risk.

2 Ultra Vires (Beyond the Powers of)

The panel shall not act as a decision-making body nor impose any mandate for LFB to adopt feedback as policy. Feedback will be fed into existing Brigade decision making structures.

3 Responsibilities

The panel's responsibilities include:

i. Evaluate the LFB Assessment of Risk document and methodology against best practice in individual area of expertise.
ii. Provide evaluation of level of robustness and defensibility of methodology and approach to risk assessment resulting in a panel statement of either support for the AoR (which may include areas requiring improvement) or a statement including reasons for disagreement with the AoR.

4 Members

i. The Evaluation Panel shall have a maximum of 15 members.
ii. The Evaluation Panel shall be formed of external academic, and practitioner subject matter experts selected by the LFB Strategic Planning team.
iii. Academic Experts will hold a PhD in a related discipline, be research active with published work with relevance to emergency services or emergency planning from the last 3 years.
iv. Practitioner Experts will be currently working at senior level in a risk management related discipline in either the private or public sector with a specific skill set related to emergency planning, risk assessment or management or catastrophe modelling.
v. The Evaluation Panel shall be chaired by a suitable and qualified person appointed by the Strategic Planning team.

5 Panel Composition 2024

Chair		
Richard Abbot	Area Manager – Strategic Risk and Improvement, West Sussex Fire and Rescue Service.	
Academic Experts		**Areas of Expertise**
Dr Bayes Ahmed	Associate Professor Inst for Risk & Disaster Reduction, University College London	Research topics include disaster risk reduction (DRR), conflict and migration, climate change adaptation, community vulnerability assessment, climate mobility, and geospatial data science.
Professor David Alexander	Professor of Emergency Planning and Management Inst for Risk & Disaster Reduction, University College London	Research interests include natural hazards, cascading disasters, disability and disaster, earthquake emergencies, emergency planning and crisis management. is head the IRDR cascading disasters research group. Published works include "Natural Disasters", "Confronting Catastrophe", and "Principles of Emergency Planning and Management". Professor Alexander is Editor-in-Chief of the International Journal of Disaster Risk Reduction, and Vice-President of the Institute of Civil Protection and Emergency Management
Dr Sara Hadleigh-Dunn	Associate Professor in Risk Management and Resilience, University of Portsmouth	Dr Hadleigh-Dunn has served as the Risk and Security Theme Representative on the University Global Challenges Research Fund Delivery Group and as the interim lead for the combined 'Economy and Business' and 'Policy and Governance' sub-group of the University Resilient Communities Research Centre.
Dr Richard Teeuw	Professor of Geoinformatics and Disaster Risk Reduction, University of Portsmouth	Dr Teeuw's research includes low-cost uses of remote sensing for assessing hazards,

		vulnerability and risk, as well as geoinformatic capacity building in low-income countries and risk perception studies. Dr Teeuw led a NERC-funded team surveying impacts of Hurricane Maria in Dominica, using satellite data, drone photography and GIS for a forensic geomorphological analysis of destroyed infrastructure and fatality locations. He is the Risk Science theme leader of the UK Space Agency IPP-funded CommonSensing project.
Dr Nibedita Ray-Bennett	Associate Professor in Risk Management, University of Leicester	Dr Ray-Bennett's expertise centres on the complexities around disasters and vulnerability in order to reduce deaths. Her work aims to help policymakers to incorporate voices of women on the frontlines, and ensure attention is given to sexual and reproductive health rights. With research locations in India, Bangladesh, and Uganda, Dr Ray-Bennett's expertise includes tackling the impact of lockdown on vulnerable populations, and the challenges of social distancing in low-and middle-income countries where health systems are weak.
Dr Simon Bennett	Director of the Civil Safety and Security Unit,	Dr Simon Bennett directs the Civil Safety and Security Unit at University of Leicester. He is interested in the organisational social economic and political origins of risk. He has published extensively on aviation safety issues. His aviation research takes in flight-deck human factors and functionalist cultural transformation tools such as crew resource management (CRM). He is a Member of the Air Safety Group of the Parliamentary Advisory Council for Transport Safety (PACTS). He has trained pilots in CRM and

		fatigue-risk management. Dr Bennett has worked with the Royal Air Force and UK National Police Air Service (NPAS) on human-factors issues
Practitioner Experts		
Jeremy Reynolds	Deputy Head of London Resilience	The London Resilience Group (LRG), is the central team which supports the partner organisations who each have specific responsibilities for preparing for and responding to emergencies. The LRG is jointly funded by the London Fire Brigade, London local authorities and the Greater London Authority.
Matthew Addison	London Resilience Support Officer	

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Part 1: Equality Impact Assessment – submitter to complete

Before carrying out an Equality Impact Assessment (EIA), you should familiarise yourself with the guidance notes and our other resources located within the EIA section on Hotwire

An EIA should be carried out whenever you are starting (or reviewing) any major new activity/programme/policy/project/strategy/campaign *, or where you propose changes or a review of the previous one.

*In this document, any kind of activity/programme/policy/project will be called an ACTIVITY for an easy read, while you specify the type of your event from your end.

The purpose of an EIA is to meet and justify the legal obligation required under the Public Sector Equality Duty (PSED), namely, the 'DUE REGARD' that documents that your activity/programme/policy will:

- **1. eliminate discrimination, harassment, and victimisation**
- **2. advance equality of opportunity**
- **3. foster good relations between people who share a relevant protected characteristic and people who do not share it.**

In the EIA, you need to show that your activity meets the 3 conditions of the due regard, as listed above, and provide any relevant information showing that your activity caters for people with protected characteristics (where applicable), but also that it promotes equality and eliminates potential discrimination and offers additional opportunities to advance equality.

Where you identified any possible negative impacts on individuals and groups with protected characteristics, you need to complete a mitigating action plan (Section H below). After your mitigating action plan has been implemented, you need to inform the EAI Team by sending the same form again with the notification of the date when the mitigation action plan was completed.

A. Name, goal and the expected outcomes of the programme/ activity

Annual Review of Assessment of Risk 2024

The Brigade's Assessment of Risk (AoR) underpins the Community Risk Management Plan (CRMP), and the six service strategies that have their basis in the CRMP; Prevent, Protect, Respond, Prepare, Recover and Engage. The AoR is intended to support a common understanding of operational risk across services and departments. Annual review of the AoR is used to inform departmental planning, production of business cases and in local risk management plans and reviews of service strategies and the CRMP.

LONDON FIRE BRIGADE

This EIA relates to the process used to update the AoR for 2024

The review of the AoR in 2024 retains the layered structure and method proposed in the paper, "Proposed Process; Assessment of Risk 2024" presented to Commissioners Board in October 2023. Because of the different types of risk that LFB must prepare for and respond to the AoR presents different types of risks as, "layers". A layered structure allows specific risk types to be highlighted separately and presented in the most appropriate way for the end user of the risk information

Layers are outlines below.

Layer One. Public Concerns and Public Risk Perception. This layer identifies the risks that Londoners are most concerned about in relation to fire and rescue service-related emergencies. These concerns will not necessarily reflect the likelihood or severity of actual incidents but reflect the concerns held by members of the public.

The purpose of this layer is to:

- Establish the primary concerns of the public as they relate to the fire service.
- Inform risk communication work and public engagement.
- Allow public concerns to be considered when setting organisational risk priorities.
- Use the lived experience of communities to inform Hazard Identification.

There is a need to produce a simple and repeatable measure of public risk perception that can be used to track changes year on year and to highlight any differences in risk perception or concern between different geographies or demographics. It is proposed to collect this data through planned engagement with the public. The tool for data collection is Mentimeter, along with qualitative data collected from community engagement activities. The expected outcome is the identification and measurement of the public perception of risk across London.

Layer 2. Risks relating to property, place and incident type. This is a data-led risk assessment using the most recent five calendar years of incident data on casualties and of demand on LFB resources at incidents. This layer highlights risks which are relatively common under normal requirements. This layer highlights the type of incidents and locations associated with high likelihood of casualties (e.g. road traffic accidents and domestic fires) and of larger draws on resources (e.g. fires in rural areas). The purpose of this layer is to:

- Assess which property types and locations and which incident types are associated with the most casualties under normal requirements.
- To assess which property types and locations and which incident types, have the potential for the greatest wider impacts and resourcing implications for LFB under normal requirements.

LONDON FIRE BRIGADE

- To inform prioritisation work within LFB service strategies.

Layer 3.1: Extraordinary risks and risks from the London Risk Register. This is a risk assessment of rare or "worst-case" scenarios which may not occur with sufficient frequency to appear in LFB incident data or are yet to have occurred. Worst-case risks are assessed against a range of impacts e.g., human welfare, behavioral impact, economic, infrastructure, environmental and security.Risks are taken directly from the London Risk Register (LRR), produced by the London Resilience Forum (LRF).

Layer 3.2: Extraordinary risk scenario modelling. Modelling in this section is a development of the existing optimisation model and dynamic cover tool. This layer provides an operational stress test for reasonable worst-case scenarios under differing demand conditions. The purpose layers 3.1 and 3.2 is to allow the Brigade to plan and prepare for:

- Response to low frequency but high impact events.
- Plan for combinations of events leading to a high overall demand on LFB resources.

Layer four: New and Emerging Risks. This layer describes trends identified in incident data and the outcomes of workshops undertaken throughout early 2024. These workshops drew together the Brigade's various sources of expertise, information and horizon scanning functions to identify early warning signs of changes to risk or to the operating environment that may not yet be apparent in incident data or existing risk registers, but which have been identified by Brigade subject matter experts and policy owners. This allows for longer term planning to be undertaken and controls to be identified in the early stages of a risk's development. The purpose of this layer is:

- To gather information about emerging trends and developments that could have an impact on the Brigade.
- To explore how these trends and developments might combine and what impact they might have.
- To involve a range of people in futures thinking. To increase the knowledge and insight within LFB about new and emerging risks relevant to LFB operations.
- To develop a shared understanding of emerging risk across the Brigade's various functions and departments.

B. Reason for Equality Impact Assessment

The reason for an EIA is developments to the AoR process from the method used in 2023 leading to an updated method for 2024.

Across the four layers these are the main changes.

Layer 1: This layer retains the intent to measure public concerns from 2023's AoR and proposes a new approach to collecting data. Previous AoRs used data collected as part of the consultation for the CRMP. The change reflects the need to update this data outside of formal consultation using targeted workshops and engagement.

Layer 2: This layer is retained from 2023, however it is proposed to move to calendar year data capture. The advantage of this change is alignment with other published data sets. This will provide greater clarity and transparency to the risk data and make external review and challenge easier.

Layer 3: This layer is retained from 2023s AoR but has been expanded to include early results of scenario modelling development. The benefit of this addition is to develop a more mature demand forecasting capability. Risks will be taken directly from the London Risk Register (LRR), produced by the London Resilience Forum (LRF).

Layer 4: This layer retains the intent to describe future risks from the AoR 2023and proposes a new method of data collection. The purpose of the change is to include outcomes from the developing LFB horizon scanning function with the AoR. Previous AoRs used the findings from horizon scanning done by external think-tank reports.

C. Names of the team responsible for the programme/ activity

Responsibility for the EIA:

Name: Thomas Ronan
Job title: Station Commander Strategic Planning
Department: Strategic Planning

Name: Lauren Whitney
Job title: Stakeholder Manager
Department: Strategic Planning

Name: Susan Ellison-Bunce
Job title: Assistant Director Strategic Planning
Department: Strategic Planning

Responsibility for the whole activity:

LONDON FIRE BRIGADE

Name: Thomas Ronan
Job title: Station Commander Strategic Planning
Department: Strategic Planning

Name: Susan Ellison-Bunce
Job title: Assistant Director Strategic Planning
Department: Strategic Planning

Name: Lauren Whitney
Job title: Stakeholder Manager
Department: Strategic Planning

D. Who is this activity for, who is impacted by it (all LFB staff, specific department, external communities)

The AoR is intended to be used primarily as a technical document by LFB staff to direct and prioritise work. It is available to the public, but it is acknowledged that due to it's complexity it is not intended to be a public risk communication tool.

The document impacts all LFB staff, but its primary audience is those planning or prioritising work that requires operational risk information as a driver.

All members of the public, including those who live and work in London are impacted by the AoR in a downstream way due to the documents use as a prioritisation tool within service strategies, departmental plans and business cases.

E. What other policies/documents are relevant to this EIA?

Assessment of Risk 2023 – lfc-23-068-assessment-of-risk-2023-signed-v2.pdf (london-fire.gov.uk)

Community Risk Management Plan; Your London Fire Brigade - https://www.london-fire.gov.uk/about-us/your-london-fire-brigade-our-plan-for-2023-29/

F. Equality and diversity considerations
Describe the ways how your activity meets the conditions of the due regard of the PSED and how LFB employees and communities of London may be affected by your activity, especially those ones with protected characteristics. Explain whether your programme/ activity may disproportionately affect any group named below?

LONDON FIRE BRIGADE

Protected characteristics Equality Act 2010:
- Age
- Disability/Barrier
- Gender and gender reassignment
- Marriage and civil partnership
- Pregnancy and maternity
- Race including ethnicity and nationality
- Religion or belief
- Sexual orientation

Also considering:
- Caring responsibilities
- Socio-economic backgrounds

At the end of your explanation, please, list the sources you have used.

Assessing operational risk in London is complex due to the concentration of political, financial, and demographic risks, often distributed across several cities in other countries, into one relatively dense built environment. Despite it's density London includes some more rural areas at the periphery and geophysical risks such as flooding and wildfire have the potential for high consequence.

London has a diverse population outlined below;

Age:
The 2021 census showed that 24% of London residents are aged 19 and under, and 12% are aged 65 and over.
Disability/Barrier:
The 2021 census showed that 16% of London residents identified themselves as disabled, with 5% of households having two or more disabled people/people with disabilities.
Gender and gender reassignment:
The 2021 census showed that 1% of London residents identified with a gender different to that which they were assigned at birth.
Marriage and civil partnership:
It is unlikely that persons in a marriage and civil partnership could be disproportionately impacted by risk assessment activity. However, in designing the engagement for layer one it must be ensured that it won't exclude this group in any way.
Pregnancy and maternity:
Persons experiencing pregnancy and maternity may have specific perceptions of risk related to this.
Race including ethnicity and nationality:
The 2021 census showed that 37% of London's population identifies as White British, with White groups making up a total of 54% of London's population. Of the remaining 46%, Asian

groups made up 21%, Black groups 14%, Mixed groups 6%, and other ethnic groups 6%. In addition, 22% of London residents spoke a main language other than English, and for 4% of London residents they reported not being able to speak English well at all. Further, 41% of London's population was born outside of the UK.

Religion or belief:

The 2021 census showed that 40% of London residents are Christian, 15% Muslim, 5% Hindu, 2% Jewish, 2% Sikh, 1% Buddhist, and 1% other religion, with 27% reporting that they do not have a religion. In addition, these numbers were often concentrated in boroughs – for example, 40% of residents in Tower Hamlets are Muslim, 14% of residents in Barnet are Jewish, and 25% of residents in Harrow are Hindu.

Sexual orientation:

The 2021 census showed that 4.8% of London residents identified as LGB+, with a lower proportion of people identifying as heterosexual in London compared with the rest of England.

Socioeconomic backgrounds:

The 2021 census showed that just over half of all households in London are deprived on at least one dimension, with 13,000 households showing all aspects of deprivation (across four dimensions) – a higher proportion than any other region in England.

Caring responsibilities:

The 2021 census showed that 8% of London residents provide unpaid care to someone in their lives.

The exposure of individual members of the public to various risks will differ significantly with their location and activity, this exposure may be correlated or independent to any individual protected characteristic. The layered approach adopted to assessing risk ensures that each type of risk an individual may be exposed to, for whatever reason, is assessed allowing mitigation to be planned.

The NFCC have developed a national approach to assessing risk for dwelling fires and road traffic collisions. The AoR adopts this approach as a means of identifying geographic areas across London most likely to be associated with higher risk. The findings of the NFCC work indicate that some of the key factors linked to likelihood of dwelling fires include car or home ownership, (un)employment, deprivation, property type and tenure. Similar factors are associated with consequence; however, these differ for life and property consequences, and neither provide robust predictions as for likelihood. Individually, the correlated factors that have been identified do not necessarily contribute to higher risk, however, when considered collectively, these factors can be used to identify areas that are statistically more likely to contain people who are higher risk. Using the NFCC methodology ensures that a robust approach to dwelling fire risk is adopted. Any risks associated with protected characteristics whilst not directly addressed in the NFCC work is addressed through the including and aggregation of the identified factors that correlate with likelihood and consequence of a fire.

Key factors associated with risk on individual road segments include: Road class and type Urban/rural category (based on ONS data) Speed limit data (from Basemap Ltd) Values for Likelihood Values for Consequence RTC risk score and category (H/M/L). The AoR uses the NFCC methodology to map RTC risk onto London road maps.

Because key factors associated with dwelling fire and RTC risk are included in the NFCC definition of risk work and mapped pan London for the AoR, data sets on individual personal vulnerability are not assessed separately within the AoR document.

Specific individual personal vulnerability data sets are used by the prevention team when planning the allocation of Home Fire Safety Visits and other prevention work. This process is outlined in LFB Policy 1010.

Because individuals may experience or perceive risk uniquely as a function of their lived experience, and because this may differ from assessments made using historical incident data, 2024s assessment of risk includes as its first layer, Public Concerns and Public Risk Perception. This layer identifies the risks that Londoners are most concerned about in relation to fire and rescue service-related emergencies. These concerns will not necessarily reflect the likelihood or severity of actual incidents but reflect the concerns held by members of the public.

The purpose of this layer is to:

- Establish the primary concerns of the public as they relate to the fire service.
- Inform risk communication work and public engagement.
- Allow public concerns to be considered when setting organisational risk priorities.
- Use the lived experience of communities to inform Hazard Identification.

By including this layer any experience of risk that falls outside the data based assessment can be assessed.

Layer one has a separate EIA in appendix five of the Assessment of Risk 2024.

G. Evidencing Impact
Please answer the following four questions:

G1.
a. List all the internal/external stakeholders and organisations you have consulted or contacted regarding your activity, along with the insights gained from these interactions?

b. Explain how you have gained and evaluated your insights and whether you intend to conduct a follow-up or seek post-activity feedback from those stakeholders?

a. **External stakeholders**

1. YouGov polling was undertaken with 1000 members of the community representing a wide cross section of ages, ethnicities, religions.

2. Expert Review Panel (consisting of six academics and two members of London Resilience Group)

3. Community engagement sessions
During February and March 2024 London Fire Brigade's Community Engagement and Strategic Planning teams held 8 focus groups on the public perception of risk. The schedule of focus groups can be seen in the table below. Across these focus groups there were a total of 107 attendees recorded. From these 107 attendees, we received 81 completed responses to the questions asked during the sessions. The breakdown of numbers across the groups can be seen in the table below.

Date	Group
7 February 2024	LFB Community Forum
14 February 2024	Christian Family Concern
21 February 2024	Board of Deputies of British Jews
22 February 2024	London Councils Community Engagement Network & London resilience group
28 February 2024	Kensington & Chelsea Over 50s Forum
29 February 2024	Open public session
1 March 2024	Deaf and Disabled People's Organisations Forum
4 March 2024	Pollards Hill Youth Group

Internal Stakeholders

Across February and March internal staff focus groups were held to gather views of staff. We used the same tool (Mentimeter) to

The groups consulted included:

- Equality Support Group Leads
- Control staff
- Operational Sounding Board
- An open session advised through hotwire and LFB update which any staff member could register to attend.
- Operational Sounding Board.

G2. Have you faced any gaps in evidence for assessing your activity's impact, and if so, can you justify proceeding with the EIA without addressing them or are you considering a mitigation action plan?

Acknowledging the limited reach of public and targeted workshops and the difficulty in providing full representation for a diverse city, LFB commissioned a supporting question on perceived risk using the YouGov platform to broaden representation.

LFB Strategic Planning analysed website traffic on the LFB public facing website to gauge public interest in different risk information. This was to identify any trends in public concern that differed from the workshop and YouGov information and from measured incident data.

To develop this layer of the assessment further in 2025 it is intended to adopt the use of a YouGov survey as a standing feature of the assessment.

It is intended to retain the use of the Mentimeter tool used during the engagement for layer one following positive feedback from users. To improve our reach into the community and the representativeness of our data 2025s assessment will utilise borough workshops in addition to centrally lead workshops; consequently there will be a need to adopt a wider licensing approach to Mentimeter in 2025 and to provide strategic planning support and resource to borough teams. This broader reach will reduce the risk that an individual or communities experience of risk is overlooked.

G3. What adjustments have you considered for people with protected characteristics, and how does your activity promote equality of opportunity and caters for equity for them?

Although not primally a risk communication tool, when published the AoR will be available as a PDF with alternative text provided for charts and tables. This will make it accessible to users with automated reading software.

Layer one workshops were available in a variety of formats both online and in person and using both digital and paper means of data collection a separate EIA exists for this work.

G4. How do you communicate the activity to those involved, especially with protected characteristics, and have you considered diverse formats such as audio, large print, easy read, and other accessibility options in various materials?

The AoR is intended to be used primarily as a technical document by LFB staff to direct and prioritise work. It is available to the public, but it is acknowledged that due to it's complexity it is not intended to be a public risk communication tool.

Teams involved in direct risk communication work with the public should refer to the AoR when planning and prioritising their communication but use appropriate tools for the specific audience they are communicating with.

When published, the AoR will be in a PDF format with alternative text for images and charts to allow accessibility to those members of the public choosing to engage with the document.

H. Mitigating action plan (where an adverse impact has been identified, please record the steps that are being taken to mitigate or justify it?)

No adverse effect identified

Protected characteristic and potential adverse impact	Action being taken to mitigate or justify	Lead person/department responsible for the mitigating action
1.		
2.		
3.		
4.		

I. Signed by the Submitter

Name: Thomas Ronan

Rank/Grade: Station Commander

Date: [text here]

LONDON FIRE BRIGADE

Part 2: Inclusion team to complete - feedback and recommendations

J. EIA Outcomes Select one of the four options below to indicate next steps:
Recommendation 1: No change required – the assessment showed that the activity is/will be robust. **Recommendation 2:** Continue and correct the activity accordingly following our feedback – this involves taking steps to remove any barriers to better advance equality and/or to foster good relations. **Recommendation 3:** You must complete the mitigation action plan and continue the activity despite the potential for adverse impact with mitigation in place. **Recommendation 4:** Stop the activity as there are adverse effects which cannot be prevented/mitigated.
K. Feedback Please specify the actions required to implement the findings of this EIA and how the programme/ activity's equality impact will be monitored in the future. It may be helpful to complete the table.
[text to be completed by the EIA Team]
L. Sign off by EIA Inclusion team
Date:

Appendix 9

LFC – 0000

Completed by Governance Team

LONDON FIRE BRIGADE

Update on the Assessment of Risk Process

Report to:
Commissioner's Board
Audit Committee

Date:
14 August 2024
tbc

Report by:
Assistant Director, Strategic Planning Susan Ellison-Bunce

Report classification:
For information

For publication

PART ONE
Non-confidential facts and advice to the decision-maker

Executive Summary

The Assessment of Risk (AoR) for London is the Brigade's current understanding of the risks affecting the capital to which London Fire Brigade could be expected to respond. This assessment is used to inform the London Fire Commissioner's plans for reducing risk in London, as set out in the Community Risk Management Plan (CRMP) and in the six associated service strategies; Prevent, Protect, Respond, Prepare, Recover and Engage.

When the CRMP was approved, the London Fire Commissioner (LFC) committed to an annual review of the AoR and this report provides an update to the Audit Committee on the approach for developing the AoR.

Proposed decision

That the Audit Committee notes the report.

1 Introduction and background

1.1 The Brigade's Assessment of Risk (AoR) underpins the Community Risk Management Plan (CRMP), which describes the changes that the Brigade needs to make to achieve its vision and how it will make those changes. The CRMP also identifies the improvements to existing services and the new services that are needed to respond to risk. The six service strategies that have their basis in the CRMP are: Prevent, Protect, Respond, Prepare, Recover and Engage.

1.2 The AoR is intended to support a common understanding of operational risk across services and departments. When the AoR is updated, any relevant changes should be reflected in departmental planning, production of business cases and in local risk management plans and in the reviews of service strategies.

1.3 The results of the AoR are integrated into the Brigade's approach to prioritisation of activity. The AoR is included as a corporate driver in the approach and new actions needed to adequately respond to red risks on the AoR have the highest priority, This informs decisions on resourcing where choices need to be made.

1.4 There are risks in the AoR that also affect the Brigade's ability to operate and officers in Strategic Planning work closely with those in Business Resilience so that relevant intelligence is shared and informs both assessments as relevant. For example, climate change may increase the likelihood and severity of wildfires in London; it may also impact on water supplies for firefighting. Risks to the Brigade's ability to operate are captured on the corporate risk register, whereas the risk of wildfire appears in the AoR. The AoR is intended to be used as a technical document by LFB staff to direct and prioritise work. It is available to the public, but it is acknowledged that due to its complexity it is not primarily intended as a public risk communication tool. Community engagement on risk is expected to focus on local risk, using the borough risk management plan as a vehicle.

1.5 Teams involved in direct risk communication work with the public should refer to the AoR when planning and prioritising their communication but use appropriate tools for the specific audience.

1.6 The most recent update of the AoR is attached for information at appendix one.

2 Approach to assessing risk

2.1 Because of the different types of risk that LFB must prepare for and respond to, the AoR presents different types of risks as 'layers'. A layered structure allows specific risk types to be highlighted separately and presented in the most appropriate way for the end user of the risk information.

2.2 The structure of the AoR is outlined below:

2.3 **Layer One. Public Concerns and Public Risk Perception.** This layer identifies the risks that Londoners are most concerned about in relation to fire and rescue service-related emergencies. These concerns will not necessarily reflect the likelihood or severity of actual incidents but reflect the concerns held by members of the public.

2.4 The purpose of this layer is to:

- Establish the primary concerns of the public as they relate to the fire service.
- Inform risk communication work and public engagement.
- Allow public concerns to be considered when setting organisational risk priorities.
- Use the lived experience of communities to inform Hazard Identification.

2.5 This layer is comprised of information obtained from workshops with community groups and our Community Forum, supplemented with YouGov polling on perceived risk and an analysis of traffic on the Brigade website to gauge public interest in different risk information.

2.6 The Community Engagement team carry out an Equalities Impact Assessment, identifying specific groups for targeted engagement. Groups selected are either seldom heard or at-risk groups. In addition, an on-line workshop is held, open to any member of the public, and promoted through our social media accounts. For the 2025 update, borough workshops will also be held to gather local information that will inform the London-wide risk assessment as well as the Borough Risk Management Plans.

2.7 The YouGov survey is undertaken in acknowledgement of the limited reach of the public and targeted workshops and the challenges in providing full representation for a diverse city.

2.8 **Layer 2. Risks relating to property, place and incident type.** This is a data-led risk assessment using the most recent five calendar years' of incident data on casualties and of demand on LFB resources at incidents. This layer highlights risks which are relatively common under normal requirements. It highlights the type of incidents and locations associated with a high likelihood of casualties (e.g. road traffic accidents and domestic fires) and of larger draws on resources (e.g. fires in rural areas). The purpose of this layer is to:

- Assess which property types and locations and which incident types are associated with the most casualties under normal requirements.
- To assess which property types and locations and which incident types, have the potential for the greatest wider impacts and resourcing implications for LFB under normal requirements.
- To inform prioritisation work within LFB service strategies.

2.9 **Layer 3.1: Extraordinary risks and risks from the London Risk Register.** This is a risk

assessment of rare or "worst-case" scenarios which may not occur with sufficient frequency to appear in LFB incident data or are yet to have occurred. Worst-case risks are assessed against a range of impacts e.g., human welfare, behavioral impact, economic, infrastructure, environmental and security. These risks are taken directly from the London Risk Register (LRR), produced by the London Resilience Forum (LRF).

2.10 The Committee should note that because some of these incident types happen infrequently, a small change in the number of those incidents or a change in the impact of those incidents (say a rare fatality) can result in movements from one year to the next which do not necessarily reflect a change to the underlying risk of that incident type.

2.11 Layer 3.2: Extraordinary risk scenario modelling. Modelling in this section is a development of the existing optimisation model and dynamic cover tool (which is used by the London Operations Centre to determine the optimal locations for fire appliances in real time). This layer provides an operational stress test for reasonable worst-case scenarios under differing demand conditions. The purpose of layers 3.1 and 3.2 is to allow the Brigade to plan and prepare for:

- Response to low frequency but high impact events.
- Plan for combinations of events leading to a high overall demand on LFB resources.

2.12 Layer four: New and Emerging Risks. This layer describes trends identified in incident data and the outcomes of workshops with internal subject matter experts. These workshops drew together the Brigade's various sources of expertise, information and horizon scanning functions to identify early warning signs of changes to risk or to the operating environment that may not yet be apparent in incident data or existing risk registers, but which have been identified by Brigade subject matter experts and policy owners. This allows for longer term planning to be undertaken and controls to be identified in the early stages of a risk's development. The purpose of this layer is:

- To gather information about emerging trends and developments that could have an impact on the Brigade.
- To explore how these trends and developments might combine and what impact they might have.
- To involve a range of people in futures thinking. To increase the knowledge and insight within LFB about new and emerging risks relevant to LFB operations.
- To develop a shared understanding of emerging risk across the Brigade's various functions and departments.

3 Data Sources

3.1 The AoR refers to different data sources for each layer of the assessment. Layer one uses the following data sets:

- Responses from attendees at workshops carried out by LFB collected using the Mentimeter tool and paper forms, analysed in MS Excel.
- Data on LFB website traffic analysed in MS Excel.
- Results from online YouGov survey.

3.2 Layer two uses the following data sets.

- LFB incident data, five calendar years. For the AoR 2024, these years were between 1st January 2019 and 31st December 2023

- Key factors identified by NFCC (National Fire Chief Council) as linked to likelihood and consequence of dwelling fires including; car or home ownership, (un)employment, deprivation, property type and tenure. When considered collectively, these factors can be used to identify areas that are statistically more likely to contain people who are higher risk.
- RTC risk mapping files for FRS (Fire and Rescue Service) including key factors associated with Road Traffic Collison Risk. Key factors include; Road class and type Urban/rural category (based on ONS data) Speed limit data (from Basemap Ltd) Values for Likelihood Values for Consequence RTC risk score and category (H/M/L)
- Population density for London
- Building density for London

3.3 Layer three uses the following data sets;

- Risks identifiers and scores from London Risk Register.
- LFB Incident data and appliance status data stored on Dynamic Cover Tool

3.4 Because key factors associated with dwelling fire and RTC risk are included in the NFCC definition of risk work and mapped pan-London for the AoR, data sets on individual personal vulnerability are not assessed separately within the document.

3.5 Specific individual personal vulnerability data sets are used by the prevention team when planning the allocation of Home Fire Safety Visits and other prevention work. This process is outlined in LFB Policy 1010.

4 Addressing our Values

4.1 The approach to updating the Assessment of Risk has been undertaken in line with our values in the following key ways:

- Learning: officers have sought to listen to the lived experience and concerns of the communities we serve in developing layer one of the AoR
- Service: the AoR informs the priorities in our service strategies and enables the Brigade to be focused on risk. Our community layer demonstrates our intention to put the public first
- Equity and Teamwork: the approach is designed to capture input from different perspectives so that the AoR results in a shared understanding of risk in London

5 External Scrutiny and Review

5.1 The AoR 2024 was reviewed by an external panel of academics and subject matter experts. The purpose of the panel is to provide independent academic and subject matter expert feedback on the AoR with reference to the robustness and defensibility of the approach.

5.2 In 2024 the panel consisted of the following external academic and subject matter experts.

Chair	
Richard Abbot	Area Manager – Strategic Risk and Improvement, West Sussex Fire and Rescue Service.
Academic Experts	
Dr Bayes Ahmed	Associate Professor Inst for Risk & Disaster Reduction, University College London

Professor David Alexander	Professor of Emergency Planning and Management Inst for Risk & Disaster Reduction, University College London
Dr Sara Hadleigh-Dunn	Associate Professor in Risk Management and Resilience, University of Portsmouth
Dr Richard Teeuw	Professor of Geoinformatics and Disaster Risk Reduction, University of Portsmouth
Dr Nibedita Ray-Bennett	Associate Professor in Risk Management, University of Leicester
Dr Simon Bennett	Director of the Civil Safety and Security Unit, University of Leicester
Practitioner Experts	
Jeremy Reynolds	Deputy Head of London Resilience
Matthew Addison	London Resilience Support Officer

5.3 The comments from the panel have been addressed by the creation of a methodology statement the covering report that went to Commissioner's Board. Wider comments from the Panel will be used in the further development of the AoR. The Panel agreed the following statement regarding the robustness and defensibility of the approach taken to assessing risk in 2024;

5.4 *"The panel recognises that through the AoR, the LFB has continued to develop and improve its approach to assessing fire and rescue related risks in London. LFB's approach continues to demonstrate a strong desire to engage with the communities of London in the construction of its community concerns layer, as well as using external and internal expertise in the development of the future and emerging risks layer.*

5.5 *We have made several context specific and general recommendations to the Brigade which will enhance the document, making it more robust and defensible in the future. The panel understands that many of these improvements will be contained within a separate method statement which will be made available alongside the AoR itself. Overall, the panel endorses the LFB's 2024 AoR and will continue to work with LFB in its future evolutions as it continues to refine and enhance its approach to understanding fire and rescue related risk in London."*

6 Conclusion

6.1 Updates of the AoR are used to inform the delivery of the strategic objectives and risk reduction as set out in the CRMP. An assessment is undertaken to determine whether or not changes in the AoR require amendments to the CRMP itself and any actions needed to respond to the amended risk profile are within the scope of the CRMP. However, service strategy owners and staff responsible for reviews of operational capability will need to be cognisant of the findings of updatesand ensure high risks are prioritised.

7 Equality comments

7.1 The LFC and the Deputy Mayor for Fire and Resilience are required to have due regard to the Public Sector Equality Duty (section 149 of the Equality Act 2010) when taking decisions. This in broad terms involves understanding the potential impact of policy and decisions on different people, taking this into account and then evidencing how decisions were reached.

7.2 It is important to note that consideration of the Public Sector Equality Duty is not a one-off task. The duty must be fulfilled before taking a decision, at the time of taking a decision, and after the decision has been taken.

7.3 The protected characteristics are age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership (but only in respect of the requirements to have due regard to the need to eliminate discrimination), race (ethnic or national origins, colour or nationality), religion or belief (including lack of belief), sex, and sexual orientation.

7.4 The Public Sector Equality Duty requires decision-takers in the exercise of all their functions, to have due regard to the need to:

- eliminate discrimination, harassment and victimisation and other prohibited conduct.
- advance equality of opportunity between people who share a relevant protected characteristic and persons who do not share it.
- foster good relations between people who share a relevant protected characteristic and persons who do not share it.

7.5 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- remove or minimise disadvantages suffered by persons who share a relevant protected characteristic where those disadvantages are connected to that characteristic.
- take steps to meet the needs of persons who share a relevant protected characteristic thatare different from the needs of persons who do not share it.
- encourage people who share a relevant protected characteristic to participate in publiclife or in any other activity in which participation by such persons is disproportionately low.

7.6 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

7.7 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- tackle prejudice
- promote understanding.

7.8 An Equalities Impact Assessment (EIA) was created for the public engagement element of the AoR 2024. This guided the creation of workshops for seldom heard and at-risk groups.

7.9 An EIA has also been completed for the AoR process as a whole.

8 Other considerations

Workforce comments

8.1 The representative bodies have been engaged during the review of the AoR. In addition, workshops were carried out with Control Staff, Equalities Support Groups and the Operational Sounding Board, alongside an open workshop for all staff. Staff engagement did not indicate that any changes to the analysis of risk were required, however it is notable that both the senior staff involved in production of layer 4, and the staff engaged with during this process expressed concern about the extent to which the level of mental ill health in the population exerts upwards pressure on demand for LFB services.

Communications comments

8.2 This is an internal facing document that is used to inform service strategies and BRMPs (Borough Risk Management Plans). It also informs prioritisation of work in central departments, such as Operational Policy and Assurance. The document is not primarily intended as a tool for

communicating risk information to the public, but communication and community engagement teams should use the document to inform their work. All relevant stakeholders have been made aware of the review of the Assessment of Risk and Strategic Planning will continue to work in collaboration with those stakeholders so that its relevance is understood.

8.3 The Assessment of Risk will be published both on the external website and on hotwire. Active promotion of the document to staff is proposed as it is intended to both promote a common understanding of operational risk and serve as a prioritisation tool. The wider promotion of the document across the organization as a whole will be done in collaboration with the internal communications team.

8.4 Strategic Planning will develop a stakeholder engagement plan to promote the use and understanding of the AoR across departments with particular reference to those prioritising work or communicating with the public, partner agencies and other stakeholders about risk.

9 Financial comments

9.1 Updates to the AoR are not expected to directly result in any financial consequences. However, in line with reviewing all of LFB's material risks, if it is identified that the organisation's risk matrix has changed then there could be cost implications (both potentially in savings and additional investment). The cost implications would be as a result of placing mitigating factors to ensure the risk is managed appropriately.

9.2 Potential additional budgetary pressures relating to the update of the AoR will be managed within existing departmental budgets.

9.3 Any changes to the assessment of risk would be assessed to its financial implications and form part of the budget cycle process

10 Legal comments

10.1 Under section 9 of the Policing and Crime Act 2017, the London Fire Commissioner ("Commissioner") is established as a corporation sole with the Mayor appointing the occupant of that office.

10.2 Section 1 of the Fire and Rescue Services Act 2004 states that the Commissioner is the fire and rescue authority for Greater London.

10.3 Under section 327D of the GLA (Greater London Authority) Act 1999, as amended by the Policing and Crime Act 2017, the Mayor may issue to the Commissioner specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.

10.4 By direction dated 1 April 2018, the Mayor set out those matters, for which the Commissioner would require the prior approval of either the Mayor or the Deputy Mayor for Fire and Resilience (the "Deputy Mayor").

10.5 Paragraph 3.1 of Part 3 of the said direction requires the Commissioner to consult with the Deputy Mayor as far as practicable in the circumstances before a decision is taken on (inter alia) any "[c] decision that can be reasonably considered to be novel, contentious or repercussive in nature, irrespective of the monetary value of the decision involved (which may be nil)".

10.6 The decisions recommended in this report are considered to be 'novel, contentious or repercussive' and therefore the Deputy Mayor must be consulted before a final decision is taken.

10.7 When carrying out his functions, the Commissioner, as the fire and rescue authority for Greater London, is required to "have regard" to the Fire and Rescue National Framework prepared by the Secretary of State ("Framework") (Fire and Rescue Service Act 2004, section 21).

10.8 The production of an Integrated Risk Management Plan (IRMP) is a requirement of the Framework. In line with guidance from the National Fire Chiefs' Council, the Commissioner is now

referring to the IRMP as a Community Risk Management Plan (CRMP).

10.9 The Framework states that the Commissioner's CRMP "must" meet certain requirements, in considering the AoR 2023 the Commissioner must therefore have regards to the following requirement of the Framework; that the CRMP must:

- reflect up to date risk analyses including an assessment of all foreseeable fire and rescue related risks that could affect the area of the authority;

10.10 To assist the Commissioner in coming to a view on this matter it is recommended that the Commissioner should consider whether the CRMP properly reflects the updated AoR. It would not be sufficient to state it is met by reference to additional documents, the CRMP itself must demonstrate this in and of itself. When considering if the risk analysis is properly reflected in the CRMP it is not required that it reproduces the analysis completely but instead that it represents it accurately and in an appropriate way.

10.11 The recommendation is that the CRMP does not need amending in response to the changes to the AoR 2023. If the Commissioner agrees with this recommendation, then it falls to the Commissioner to decide following consultation with the Deputy Mayor.

List of appendices

Appendix	Title	Open or confidential*
1	Assessment of Risk 2024	Open

Part two confidentiality

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

Is there a Part Two form: NO