

London Borough of Richmond upon Thames

BOROUGH RISK REGISTER

September 2024

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Notes:

This Borough Risk Register is collectively owned by the Category 1 Responders (as defined by Schedule 1 to the Civil Contingencies Act 2004) within the Richmond & Wandsworth Borough Resilience Forum area.

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Member Agencies of the Borough Resilience Forum

Category 1 Responders

LB Richmond upon Thames – Local Authority	HM Coastguard Environment Agency	South West London and St George's Mental Health NHS Trust
LB Wandsworth – Local Authority	UKHSA	St. Georges University Hospitals
Metropolitan Police Service	NHS England (London)	NHS Foundation Trust
British Transport Police	West Middlesex University Hospital	NHS Hounslow and Richmond Community Healthcare Trust
London Fire Brigade	Kingston Hospital	
London Ambulance Service		Southwest London Integrated Care Board

Category 2 Responders

Port of London Authority	SW Trains	Thames Water
The London Heliport	UK Power Networks	
Transport for London	National Grid	
Met Office		

Non-categorised Organisations

British Red Cross	Military Liaison	Achieving for Children (Local Authority Education Provider)
St. Johns Ambulance	Rugby Football Union	
Royal National Lifeboat Institution	Royal Parks	

Borough Risk Register

1 Introduction

Risk assessment is a core capability for London and underpins the work of the London Resilience Forum. The assessment of risk contained in the London Risk Register drives the development of work to prevent, mitigate, respond to and recover from those scenarios.

The London Risk Register is made publicly available to assist communities and businesses in developing their own emergency and business continuity arrangements and is used as a basis for the creation of Borough Risk Registers in most Boroughs across London. It is available to download from the [London Resilience](#) website.

Borough Risk Register

The Richmond Borough Risk Register is used by Richmond Borough Resilience Forum to assist in prioritisation of resilience activities for higher rated risks. It provides additional information not available in the London Risk Register for the purpose of developing local arrangements.

Communities and businesses are encouraged to use the Borough Risk Register to inform their own resilience arrangements and business continuity plans and is the reason for Borough Risk Register being made publicly available.

The risks included in the Borough Risk Register represent 'reasonable worst-case scenarios' and their inclusion in the register does not mean that they are going to happen, or that if they did do that they would be as serious as the descriptions included here. The reasonable worst-case scenarios are nationally developed and informed by historical and scientific data, modelling, trend surveillance and professional expert judgment.

The Richmond Borough Risk Register is structured to closely follow the format and content of the London Risk Register so that it takes full advantage of the work carried out at by the experts in the London Risk Advisory Group.

Each risk is assigned a score for impact and likelihood. Impact is ranked from Limited (1) to Catastrophic (5) and likelihood by how likely a risk is to happen over the next 2 years. These scores are combined to give an overall risk rating.

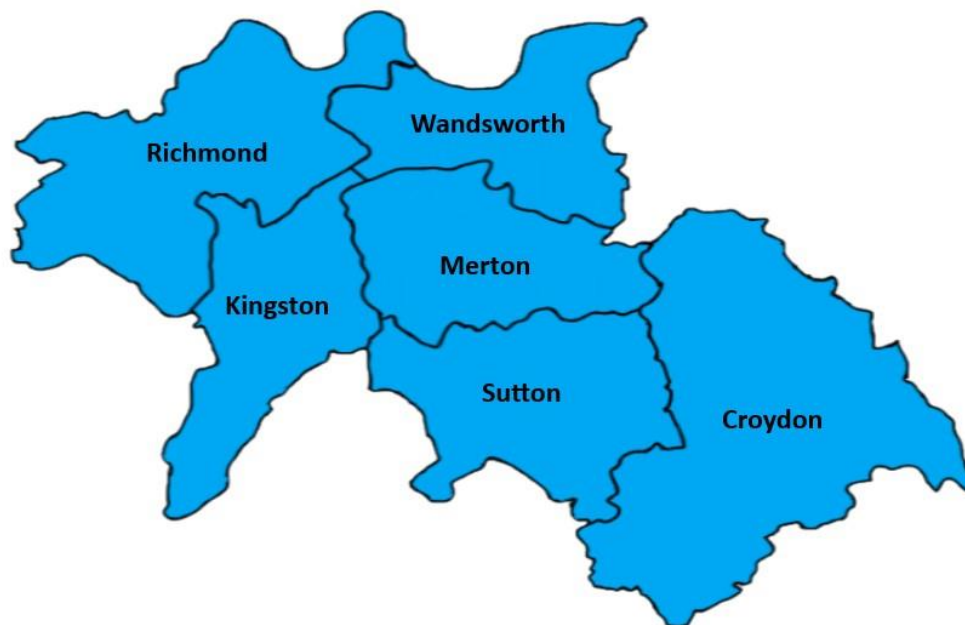
Richmond's Borough Risk Register differs from the London Risk Register in two respects:

- If the local risk in the Borough is assessed by the Borough Resilience Forum to be higher or lower than the rating provided in the London Risk Register.
- If the direct impacts of a risk would be realized exclusively outside of the Borough.

The [UK National Risk Register of Civil Emergencies](#) provides an outline of risk affecting the UK as a whole.

2 About Richmond upon Thames

The London Borough of Richmond upon Thames is part of the Southwest Sub-Region along with the London Boroughs of Croydon, Kingston, Merton, Sutton, and Wandsworth. It is part of the Richmond and Wandsworth Borough Resilience Forum.



Social Factors

- Ranked as one of the least densely populated boroughs in London (Estimated pop 198,000.)
- The black, minority and ethnic (BME) groups in Richmond constitute 16% of population, with no ethnical specific majorities.
- SW LRA standard of living is above London average.
- Richmond is identified as one of the least deprived boroughs in the Capital.

Environmental Factors

- Borough is made up of 35% parkland (incl. Richmond Park).
- Substantial flooding risk in this Borough (Thames tidal and non-tidal).
- Twickenham, Richmond, Kingston, and Wandsworth town centres are all close to the Thames, hence flooding vulnerability.
- Surface water flood risk continually being assessed as a significant risk in area.
- Sites of Special Scientific Interest (SSSIs) in Richmond are susceptible to contamination from sewage and other pollutants should there be flooding.

Economic Infrastructure

- Richmond, Twickenham, and Teddington two centres have significant numbers of shops and businesses.
- Large number of tourists visiting different sites, including Hampton Court Palace, Kew Gardens, and the National Archives.
- Major sporting venues include Twickenham RFU and Harlequins Rugby Grounds.

Transport Infrastructure

- Very well-developed main line rail infrastructure (61 main line stations), including the Southwest Line connecting boroughs to each other and Central London.
- Underground only two termini's, one being in Richmond.
- Important roads including, A3 (connects the M25 to Central London), A24, A316, and the A217.
- Extensive public bus network.
- Significant number of road and rail bridges cross the Thames (closure of one or more would be extremely disruptive).
- Under Heathrow flights Paths and river traffic on the Thames.

Hazardous Sites

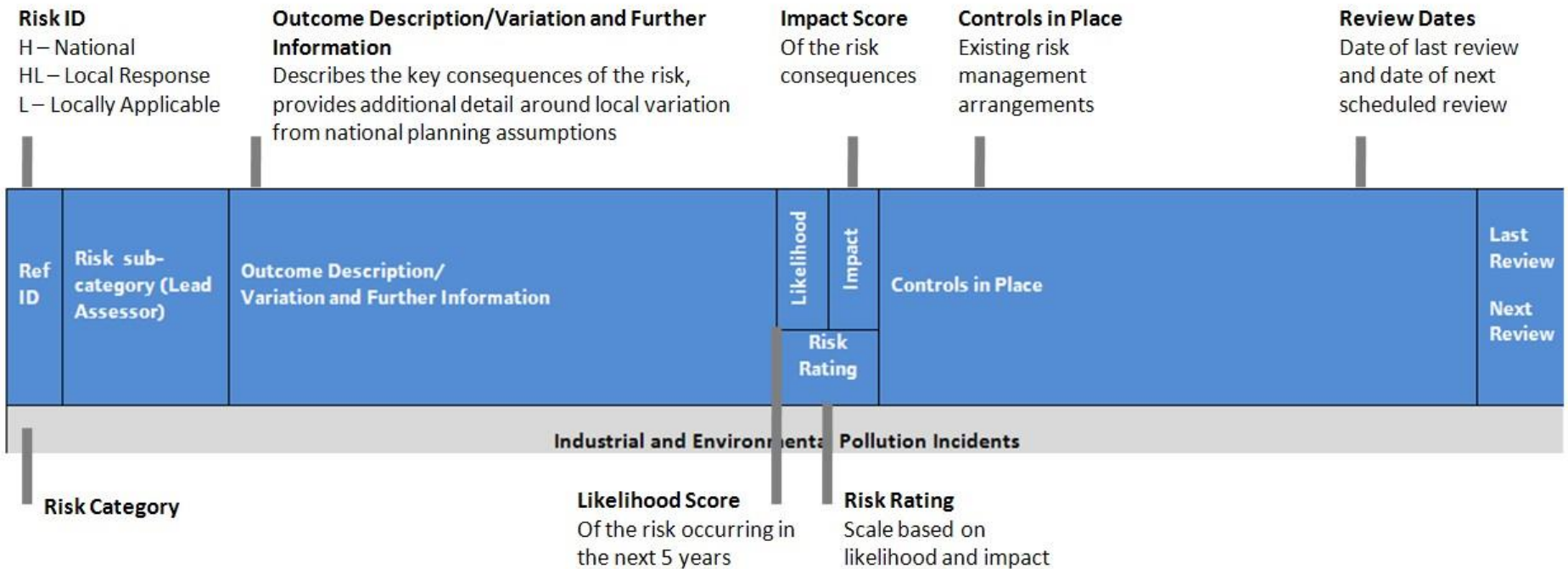
- Hampton water treatment plant lower tier COMAH site, large quantities of toxic chemicals, poses a risk to low lying areas.
- High pressure gas pipeline in Richmond (also present in Kingston) and the National Physical Laboratory.
- Sewage treatment plant on Mogden Lane in Hounslow with potential to affect resident of Richmond and also the River Crane under REPPiR (Radiation emergency preparedness and public information regulations) guidelines.
- The nearest top tier COMAH site is at Walton on Thames and could affect the borough in the event of a major incident there via water and or air pollution.

3 Borough Risk Register: Risk Matrix (High-Level Summary)

Impact	(5) Catastrophic		<p>R62 - Reservoir/dam collapse R76 - Drought R89 – High-Altitude Electromagnetic Pulse</p>	<p>R50a – Failure of national electricity transmission system T7 – Large Scale CBRN Attacks</p>	<p>R78 - Pandemic</p>	
	(4) Significant	<p>R45– Aviation Collision H5 – Fuel Supply Infrastructure (Pipeline) R66 – Radiation releases from overseas accidents R55 - Fire or explosion at a fuel distribution site R58 – Explosion at a high-pressure gas pipeline R57 – Accidental Large Toxic Chemical Release</p>	<p>R51 – Failure of Gas Supply Infrastructure L54b – Fire in large public and commercial buildings</p>	<p>R75c - Surface water flooding R75b - Fluvial flooding R71 – Severe Space weather R73 – High Temperatures and Heatwaves</p>	<p>T7 - Catastrophic unconventional attack R79 – Outbreak of an emerging infectious disease</p>	<p>RL4 - Loss of mortuary provision</p>
	(3) Moderate	<p>HL22 - Building collapse HL23 - Bridge collapse HL30 - Localized explosion at a natural gas main. RL1 - Fire involving acetylene cylinders. R59 – Fires or explosion at an onshore fuel pipeline L66 – Radioactive incident caused by mishandling of radioactive material</p>	<p>R63 - Water Infrastructure Failure RL3 - Fire in buildings containing asbestos R65 – Major Fire R60 - Localized industrial accident involving small toxic release R64 - Food Supply Contamination L71b– Minor aviation crash HL105 - Complex built environments R50b – Regional Failure of the Electricity Network R47 – Disruption of Space Based Services</p>	<p>R40 - Railway accident R74 – Low temperatures and heavy snow R75a – Coastal Flooding R96 – The growth and spread of anti-microbial resistance. R77 – Poor air quality HL10 – Local accident on motorways and major truck roads R44 – Accident involving high consequence dangerous goods L19 - Groundwater flooding</p>	<p>T3 - Attacks on transport system R67 - Volcanic eruption L54a – Fires in purpose built high-rise flats R82 – Public Disorder R72 – Storms and Gales T2 – Attacks on Infrastructure T6 – Medium Scale CBRN Attacks</p>	

(2) Minor	R42 – Major Maritime pollution incident R38 – Insolvency affecting fuel supply R61 – Accidental release of a hazardous pathogen	HL7 - Industrial explosions and major fires R49 – Simultaneous loss of communications R86 – Industrial action (fuel supply) R80 – Outbreak of Animal Diseases R84 – Industrial Action - Firefighters	HL26a - Non-zoonotic notifiable animal diseases R83 – Industrial action (public transport). L54e – Major fire in care homes and hospitals T4 – Cyber attacks R37a – Insolvency of Supplier of Critical Services to Public Sector	R87 – Reception and integration of British Nationals arriving from overseas T5 - Small scale unconventional attacks R55a – Technology failure at systemically important bank R80 – Systemic Financial Crisis R36 – Major social care provider failure R37b – Collapse of a major government contractor R85 – Industrial action (Prison Staff) R66 - Wildfires R39 – Failure of a Supplier of CNI Chemicals	L54c – Fires involving landfill waste processing sites T1 – Attack on PALS
	(1) Limited	RL2 - Misuse and release of toxic or corrosive chemicals R54 – Radiation Exposure from transported, stolen or lost goods R68 – Earthquake	R32 -Major interference in UK democratic process R41 – Larger Passenger Vessel Accident HL21 – Land Movement		
	(1) Low	(2) Medium Low	(3) Medium	(4) Medium High	(5) High
Likelihood					

Each risk is assigned a Risk ID which is nationally consistent and relates to a more detailed and protectively marked, Individual Risk Assessment.



4 Borough Risk Register						
Ref ID	Risk sub-category	Outcome Description/ Variation and Further Information (<i>Lead Assessor</i>)	Likelihood	Impact	Controls in Place	Last Review
			Risk Rating			Next Review
Accident Hazards						
R65	Accident Hazards	Major Fire Major Fire A major fire in a building resulting in up to 140 fatalities and 200 casualties, significant damage to the building affected and disruption to local transport services for up to a week.	2	3	<ul style="list-style-type: none"> Regulatory Reform (Fire Safety) Order 2005 Fire Safety Approved Document B Fire & Rescue Services Act 2004 LFB Guidance Note 29 LFB Operational tactical and building plans LFB Urban Search & Rescue Teams (USAR) Fire Service National Resilience Assets LAS Hazardous Area Response Team (HART) Local Authority Dangerous Structures Engineer Casualty Bureau London Frameworks including: Strategic Coordination Protocol Mass Fatalities Framework Mass Casualties Framework Humanitarian Assistance Framework 	Sep 2024 Sep 2026 LFB
			Medium			
L54a	Accident Hazards	Fires in purpose built high-rise flats Major fire in block of flats containing 80 compartments. Potential for 150-200 fatalities and 200 casualties	4	3	<ul style="list-style-type: none"> Regulatory Reform (Fire Safety) Order 2005 Fire Safety Approved Document B Fire & Rescue Services Act 2004 	Sep 2024 Sep 2026 LFB

					<ul style="list-style-type: none"> LFB Guidance Note 29 LFB Operational tactical and building plans LFB Urban Search & Rescue Teams (USAR) Fire Service National Resilience Assets LAS Hazardous Area Response Team (HART) Local Authority Dangerous Structures Engineer Casualty Bureau London Frameworks including: Strategic Coordination Protocol Mass Fatalities Framework Mass Casualties Framework Humanitarian Assistance Framework 	
L54e	Accident Hazards	<p>Major fire in care homes and hospitals Fire causing up to 20 fatalities of vulnerable people in residence causing the closure of an entire hospital or care home.</p>	3	2	<ul style="list-style-type: none"> Regulatory Reform (Fire Safety) Order 2005 Fire Safety Approved Document B Fire & Rescue Services Act 2004 LFB Guidance Note 29 LFB Operational tactical and building plans LFB Urban Search & Rescue Teams (USAR) Fire Service National Resilience Assets LAS Hazardous Area Response Team (HART) Local Authority Dangerous Structures Engineer Casualty Bureau London Frameworks including: Strategic Coordination Protocol Mass Fatalities Framework 	<p>Sep 2024 Sep 2026</p> <p>LFB</p>
R55	Accident Hazards	<p>Fuel Supply Infrastructure (Pipelines) Fire or explosion at a fuel distribution site, or at a site storing flammable and/or toxic liquids.</p>	1	4	<ul style="list-style-type: none"> Control of Major Accident Hazard 1999 (COMAH) Regulations The Dangerous Substances and Explosive Atmosphere Regulations 2002 Petroleum Regulations Regulatory Reform (Fire Safety) Order 2005 Site Operators on-site contingency plans Emergency Services specialist resources 	<p>Sep 2024 Sep 2026</p> <p>LFB</p>
R53	Accident Hazards	<p>Radiation Releases from Overseas Accidents A radioactive substance release that</p>	1	4	<ul style="list-style-type: none"> REPPiR 	<p>Sep 2024 Sep 2026</p>

		affects the UK because of a nuclear accident overseas e.g. at a waste storage facility. UK outcome could include initial food restrictions, potential transport disruptions and impacts to the health system including the presentation of worried well.	Medium			LFB
R59	Accident Hazards	Fire or explosion at an onshore fuel Pipeline (risk to align with 2022 NSRA following risk review in 2024-2025) Accidental fire or explosion occurs at an onshore fuel pipeline close to a populated area affecting an area around the explosion of up to 1km.	1	3	<ul style="list-style-type: none"> Control of Major Accident Hazard 1999 (COMAH) Regulations. The Dangerous Substances and Explosive Atmosphere Regulations 2002 Petroleum Regulations Regulatory Reform (Fire Safety) Order 2005 Site Operators on-site contingency plans Emergency Services specialist resources 	Sep 2024 Sep 2026 LFB
R55	Accident Hazard	Fire or explosion at a fuel distribution site Fire or explosion at a fuel distribution site, or at a site storing flammable and/or toxic liquids	1	4	<ul style="list-style-type: none"> Control of Major Accident Hazard 1999 (COMAH) Regulations. The Dangerous Substances and Explosive Atmosphere Regulations 2002 Petroleum Regulations Regulatory Reform (Fire Safety) Order 2005 Site Operators on-site contingency plans Emergency Services specialist resources 	Sep 2024 Sep 2026 LFB
L66	Accident Hazards	Radioactive incident caused by mishandling of radioactive material A radioactive substance released in London because of an accident at a site or during transportation of radioactive material.	1	3	<ul style="list-style-type: none"> Radiation Monitoring Equipment deployed in affected areas. London Fire Brigade Mass Decontamination Procedures Scientific Technical Advice Cell (STAC) Scientific Advice to Government in Emergencies (SAGE) Radiation Protection Advisors 	Sep 2024 Sep 2026 LFB
R58	Accident Hazards	Explosion at a high-pressure gas pipeline (risk to align with 2022 NSRA following risk review in 2024-2025) Fire or explosion at a gas pipeline following ignition of gas under high pressure. This could result in a crater, destruction of buildings and evacuation of homes, as well as a cloud of gas/vapor. (<i>London Fire Brigade</i>)	1	4	<ul style="list-style-type: none"> Pipeline Safety Regulations 1996. Regulatory and industry measures including provision of maps for excavation. Emergency Services and other responder specialist resources. 	Sep 2024 Sep 2026 LFB

R45	Accident Hazards	Aviation Collision The worst-case scenario involves the collision of two commercial aircrafts. <i>(London Fire Brigade)</i>	1	4	<ul style="list-style-type: none"> Stringent controls on aircraft entering UK Airspace including the mandatory use of Aircraft Collision Avoidance systems on heavy aircraft. Number of Airlines detailed in above history are regulated not to enter UK airspace. CAA Maintenance and Flight safety standards exceed ICAO recommendations Airline maintenance regimes subject to CAA scrutiny and regulation. Strict controls over London Approach. 	Sep 2024 Sep 2026 LFB
			Medium			
L54c	Accident Hazards	Fires involving landfill and waste processing sites Major fire lasting several days with significant environmental and local impacts.	5	2	<ul style="list-style-type: none"> Regulatory Reform (Fire Safety) Order 2005 Fire Safety Approved Document B Fire & Rescue Services Act 2004 LFB Guidance Note 29 LFB Operational tactical and building plans LFB Urban Search & Rescue Teams (USAR) Fire Service National Resilience Assets LAS Hazardous Area Response Team (HART) Local Authority Dangerous Structures Engineer Casualty Bureau London Frameworks including: Strategic Coordination Protocol Mass Fatalities Framework Mass Casualties Framework Humanitarian Assistance Framework 	Sep 2024 Sep 2026 LFB
			Medium			
R60	Accident Hazards	Localized industrial accident involving small toxic release Localized industrial accident involving small toxic release impacting up to 1km from site causing up to 10 fatalities and up to 100 casualties. <i>(London Fire Brigade)</i>	2	3	<ul style="list-style-type: none"> Control of Major Accident Hazards Regulations 2005 (COMAH). Regulatory Reform (Fire Safety) Order 2005. Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 LFB
			Medium			
L54b		Fires in large public and commercial buildings	2	4	<ul style="list-style-type: none"> Regulatory Reform (Fire Safety) Order 2005 	Sep 2024

	Accident Hazards	Fire in large public building e.g. nightclub, sports stadium, shopping center, transport hub or other. Potential for up to 50 fatalities and 50 casualties.	High		<ul style="list-style-type: none"> • Fire Safety Approved Document B • Fire & Rescue Services Act 2004 • LFB Guidance Note 29 • LFB Operational tactical and building plans • LFB Urban Search & Rescue Teams (USAR) • Fire Service National Resilience Assets • LAS Hazardous Area Response Team (HART) • Local Authority Dangerous Structures Engineer • Casualty Bureau • London Frameworks including: <ul style="list-style-type: none"> • Strategic Coordination Protocol • Mass Fatalities Framework • Mass Casualties Framework 	Sep 2026 LFB
HL7	Accident Hazards	<p>Industrial explosions and major fires</p> <p>A fire or explosion at a flammable gas terminal (including LPG/LNG storage sites) reaching 1km around site, causing up to 50 fatalities and 150 casualties. <i>(London Fire Brigade)</i></p>	2	2	<ul style="list-style-type: none"> • Legislation: Control of Major Accident Hazards (COMAH) Regulations 1999. • Regulatory Reform (Fire Safety) Order 2005. • Building design and fire protection systems to prevent or limit the spread of fire. 	Sep 2024 Sep 2026 LFB
L71b	Accident Hazards	<p>Minor Aviation Crash</p> <p>Accident involving one commercial aircraft on takeoff or landing. Aviation accident causing up to 50 fatalities and up to 250 casualties. <i>(London Fire Brigade)</i></p>	2	3	<ul style="list-style-type: none"> • Stringent controls on aircraft entering UK Airspace including the mandatory use of Aircraft Collision Avoidance systems on heavy aircraft. • UK flight separation rules. • CAA Maintenance and Flight safety standards. • Airline maintenance regimes. • Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 LFB
HL10	Accident Hazards	<p>Local accident on motorways and major trunk roads</p> <p>Multiple vehicle incident causing up to 10 fatalities and up to 20 casualties (internal injuries, fractures, possible burns); closure of lanes or carriageway causing major disruption and delay. <i>(Metropolitan Police Service)</i></p>	3	3	<ul style="list-style-type: none"> • The Road Traffic Act 1988. • The Road Vehicle (Construction and Use) Regulations 1986. • The Traffic Management Act 2004. 	Sep 2024 Sep 2026 MPS

R40	Accident Hazards	<p>Railway Accident Up to 30 fatalities and up to 100 casualties (fractures, internal injuries – burns less likely). Possible loss of freight. Major disruption to rail line including possible closure of rail tunnel. <i>(British Transport Police)</i></p>	3	3	<ul style="list-style-type: none"> • Railway and Transport Safety Act 2003. • Railways (Access and Management) Regulations 2005. • Railways (Accident Investigation and Reporting) Regulations 2005 • Railways (Licensing of Railway Undertakings) Regulations 2005. • Railways Act 2005. • The Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006. • The Railway Safety Levy Regulations 2006. • The Railways Act 1993. • Transport Act 2000. • Health and Safety at Work etc. Act 1974. • The Railway (Safety Case) Regulations 2000. • Periodic multi-agency on-site training and exercise 	Sep 2024 Sep 2026 TfL
			<p>High</p>			

HL 22	Accident Hazards	Building Collapse Collapse of a large building (high-rise block, shopping mall etc). Up to 100 fatalities depending on the size and construction of building, and occupation rates, and 350 casualties. Potential for a number of persons to be trapped or missing. Localized loss of power and other essential services. Local access routes affected due to road closures. <i>(Local Authorities)</i>	1	3	<ul style="list-style-type: none"> • Building Control regulations enforced by Local Authorities. • Construction, renovation, maintenance and demolition standards and enforcement. • Emergency Services and other responder’s specialist resources. • Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 Local Authority
			Medium			
HL23	Accident Hazards	Bridge Collapse Roads, access roads and transport infrastructure impassable for considerable length of time. Severe congestion over wide geographical area. Emergency access into / out of large, populated areas severely restricted. Potential for a number of persons to be trapped or missing. <i>(Local Authorities)</i>	1	3	<ul style="list-style-type: none"> • Building Control regulations enforced by Local Authorities. • Highways Act Regular inspections. • Height and weight restrictions and signs reduce the likelihood of an incident. • Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 Local Authority
			Medium			
HL30	Accident Hazards	Localized explosion at a natural gas main. Localized explosion at a natural gas (low and medium pressure main causing up to 100 fatalities and up to 100 casualties. <i>(London Fire Brigade)</i>	1	3	<ul style="list-style-type: none"> • Pipeline Safety Regulations 1996. • Regulatory and industry measures including provision of maps for excavation. • Emergency Services and other responder specialist resources. 	Sep 2024 Sep 2026 LFB
			Medium			
R41	Accident Hazards	Large Passenger Vessel Accident Incident involving a passenger vessel in or close to UK waters leading to the ship's evacuation (or partial evacuation). A major incident involving a passenger vessel operating on the tidal Thames within the London Resilience area may result in a major loss of life by drowning. <i>(Maritime and Coastguard Agency)</i>	3	1	<ul style="list-style-type: none"> • Port of London Act 1968 (as amended), • General Directions for Navigating in the Port of London, • Port of London Thames Byelaws 2012, • International and national regulation of shipping aimed at preventing accidents by the safe construction, equipment and operation of ships by competent crews and shipping operators, Regulations enforced by Flag States and subject to rigorous Port State Control checks, coordinated in European waters MCA (Class V legislation and High Speed Craft Code), • Port Marine Safety Code • Port of London Authority Emergency Plans 	Sep 2024 Sep 2026 Maritime and Coastguard Agency
			Low			
HL37	Accident Hazards	Maritime pollution incident The release of significant quantities of hazardous chemicals/materials as a result of a major shipping incident.	1	2	<ul style="list-style-type: none"> • Port of London Thames Byelaws 2012 • Dangerous Substances in Harbor Areas Regulations 1987 • Dangerous Substances in Bulk Byelaws 1991 	Sep 2024 Sep 2026 PLA

		Fatalities and casualties unlikely. Significant environmental/ecological damage expected. <i>(Maritime and Coastguard Agency)</i>	Low		<ul style="list-style-type: none"> Merchant Shipping (Oil Pollution Prevention, Response and Cooperation Convention) Regulations 1998 On-site & off-site COMAH plans for TDG European Chemicals, Dagenham. IMO HNS Convention – has not been ratified in the UK. 	
HL105	Accident Hazards	<p>Complex built environments</p> <p>The following outcomes are possible as a consequence of a major incident affecting large buildings / complex-built environments. Incidents in these facilities have the potential to trigger a complex chain of events that lead to serious consequences for public safety. <i>(Local Authority)</i></p>	2	3	<ul style="list-style-type: none"> Health and Safety at Work Act 1974. Management of Health & Safety at Work Regulations 1999. Fire and Rescue Services Act 2004 & guidance pursuant to the Regulatory Reform (Fire Safety) Order 2005. Safety at Sports Grounds Act 1975 and Fire Safety and Safety of Places of Sport Act 1987. Local building safety systems and practices. Safety Advisory Groups in place at major sports grounds. Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 Local Authority
R47	Accident Hazards	<p>Disruption of space-based services</p> <p>Collision of debris with a satellite in Low Earth Orbit (LEO) leads to a debris field that collides with and disrupts other satellites. This causes a cascade of debris impacting other satellites and creating further debris.</p>	2	3	<ul style="list-style-type: none"> Monitoring by the International Space Station 	Sep 2024 Sep 2026 LAS
Disease Hazards						
R78	Disease Hazards	<p>Pandemic</p> <p>An unmitigated respiratory pandemic with an unassumed transmission route and high attack rate, with 4% of symptomatic infections requiring hospital care and a case of fatality ratio of 2.5%. From start to finish the emergency stage of the pandemic in the UK will last at least 9 months and potentially longer. Approximately 1.34 million people requiring hospital treatment, possibly resulting in up to 840,000 deaths)</p>	4	5	<ul style="list-style-type: none"> Public Health (Infectious Disease regulation) UKHSA Communicable Disease Outbreak Management Guidance (2023) Health and Social Care Act 2012 Health and Care Act 2022 Specific NHS Capacity and response planning Comprehensive surveillance systems London Pandemic Response Framework Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 UKHSA

R79	Disease Hazards	<p>Outbreak of an Emerging infectious diseases Based upon the experience of the outbreak of SARS and more recently, MERS and Ebola, the worst case likely impact of such an outbreak originating outside the UK would be cases occurring amongst returning travelers and their families and close contacts, with spread to health care workers within a hospital setting. However, it is unlikely to present a wider threat to the UK through sustained spread. <i>(Public Health England)</i></p>	4	4	<ul style="list-style-type: none"> NHS Vaccination Program. Specialist capability and capacity planning in NHS trusts. Comprehensive surveillance systems and response arrangements. Local Outbreak Control Plans Planning 	<p>Sep 2024 Sep 2026</p> <p>UKHSA</p>
R80	Disease Hazards	<p>Major Outbreak of Animal Disease Disease introduced into a predominantly sheep area and infected animals sold at market or moved to other premises before disease is detected resulting in widely dispersed multiple outbreaks. Assessment based on the need to cull and dispose up to 4 million animals with up to 900 infected premises across UK. Movement of all susceptible livestock prohibited unless licensed. Economic and reputational losses to the agriculture and food chain industry. Loss of disease-free status resulting in EU and third country import bans on livestock and livestock products from susceptible animals.</p>	2	2	<ul style="list-style-type: none"> Animal Health Act 1981. Animal Health Act 2002. Other secondary legislation and EU directives. National disease control strategies. 	<p>Sep 2024 Sep 2026</p> <p>Local Authorities</p>
Hazardous Materials (HAZMAT)						
R57	HAZMAT	<p>Accidental Large Toxic Chemical Release from a COMAH site A large release of toxic chemical gas occurs from an onshore major hazard site manufacturing, using or storing dangerous substances . <i>(London Fire Brigade)</i></p>	1	4	<ul style="list-style-type: none"> Control of Major Accident Hazards Regulations 2005 (COMAH). Regulatory Reform (Fire Safety) Order 2005. Emergency Services and other responder specialist resources. Planning for emergencies in the capital London City Hall Hazmat response from within the borough and specialist response from RRT (LFB) team. Visits by local LFB teams to log where radiation sources are stored 	<p>Sep 2024 Sep 2026</p> <p>LFB</p>

R54	HAZMAT	<p>Radiation exposure from transported, stolen or lost goods Incorrect handling of a stolen radioactive source leads to accidental exposure to radioactive material. Three deaths after a month and eight people requiring long term medical supervision. Up to 500 'worried well'.</p>	1	1	<ul style="list-style-type: none"> Radioactive Substances Act 1993. High Activity Sealed Source Regulations 2005. Arrangements for safe handling and disposal of radioactive sources. Radiation detectors at high-risk sites. Environment Agency inspections of all major sources. Emergency Services specialist resources. Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 LFB
R61	HAZMAT	<p>Accidental work-related (laboratory) release of a hazardous pathogen Inadvertent release of a biological agent by an unrelated work activity (eg, Legionella release due to improperly maintained building environmental control systems) that causes up to 7 fatalities ad up to 500 people requiring hospital admissions.</p>	1	2	<ul style="list-style-type: none"> Health & Safety at Work Act 1974 Control of Substances Hazardous to Health Regulations 2002 The Notification of Cooling Towers and Evaporative Condenser Regulations 1992 require the notification of wet cooling towers and evaporative condensers to local authorities Management of Health & Safety at Work Regulations 1999 Reporting of Injuries Diseases and Dangerous Occurrences Regulations 	Sep 2024 Sep 2026 UKHSA
R64	HAZMAT	<p>Food Supply Contamination A major contamination incident involving a microbiological pathogen in the food chain. This would cause illness, hospitalization, and possible fatalities over a period of time while the source of the contaminate is identified, and an overall response time of months. . <i>(Local Authorities)</i></p>	2	3	<ul style="list-style-type: none"> Food Safety Act 1990. Imports monitored. Local Authority Environmental Health Sampling. Public Health England monitoring and surveillance. Food Standards Agency plans. 	Sep 2024 Sep 2026 Local Authority
R42	HAZMAT	<p>Major Maritime Pollution Incident A large fully laden oil super tanker sinks in the approach to a port leading to the spillage of 100,000 tons of crude oil into the sea polluting up to 200km of coastline. The scenario assumes no loss of access to Liquefied Natural Gas (LNG) terminals or other</p>	1	2	<ul style="list-style-type: none"> Dangerous Substances in Harbour Areas Regulations 1987. Merchant Shipping (Oil Pollution Preparedness, Response and Cooperation Convention) Regulations 1998. PLA Thames Byelaws 2012 Port of London Oil Spill Contingency Plan 	Sep 2024 Sep 2026 PLA

		major port infrastructure. (<i>Maritime and Coastguard Agency</i>)	Low		<ul style="list-style-type: none"> • Port State Control checks coordinated in European waters. • All vessels navigating on the tidal Thames required PLA license. • PLA Vessel Traffic Service. • National Contingency Plan for Marine Pollution from Shipping and Offshore Installations (2000). • Oil Spill Contingency Plan Guidelines for Ports, Harbours & Oil Handling Facilities. 	
R44	HAZMAT	<p>Accident involving high consequence dangerous goods A road or rail tanker containing dangerous goods and/or “high consequence” dangerous goods is involved in an accident leading to fire and an explosion. Up to 5 fatalities and up to 150 casualties. The explosion will cause varying degrees of damage to property and infrastructure depending on their distance from the incident. This risk would result in a toxic plume/gas cloud which would be harmful to the population, resulting in evacuation of the immediate area.</p>	3	3	<ul style="list-style-type: none"> • Health & Safety at Work etc Act 1974. • Control of Substances Hazardous to Health Regulations 2002. • Management of Health & Safety at Work Regulations 1999. • Reporting of Injuries Diseases and Dangerous Occurrences Regulations. 	<p>Sep 2024 Sep 2026</p> <p>LFB</p>

Humanitarian Hazards						
R87	Humanitarian	<p>Reception and integration of British Nationals arriving from overseas Influx of destitute/vulnerable British Nationals who are not normally resident in the UK and cannot be accommodated by family/friends. Up to 10,000 BNs not normally resident in the UK returning to the UK within roughly a month following conventional war, widespread civil unrest or sustained terrorism campaign against British and other Western nationals. Around 2% of returnees require statutory support including housing, health services and access to welfare.</p>	4	2	<ul style="list-style-type: none"> Local authority: Standard social care and emergency housing arrangements. Existing mutual aid agreements in place across London. Other organizations: Full time officer located at Heathrow (alongside Heathrow Travel Care) to consider the issue of repatriation at ports. Position funded by the Foreign & Commonwealth Office. Heathrow Travel Care – a team of social workers. Red Cross and FCO agreement on repatriation; Meet & greet returning passengers at airport, arrange onward transport, supported by the FCO. 	Sep 2024 Sep 2026 Local Authority
			Medium			
R82	Humanitarian	<p>Public Disorder Large scale public disorder at site(s) in a single city, or in multiple cities, occurring concurrently over several days. (MPS)</p>	4	3	<ul style="list-style-type: none"> Specific riot and public order legislation. Riot Compensation Act 2016. Public Order Act 1986. Police community tension monitoring processes. Police community engagement teams. Advice and guidance from police regarding legitimate protest from event planners. 	Sep 2024 Sep 2026 MPS
			High			

Industrial Action						
R38		<p>Insolvency Affecting Fuel Supply Significant disruption to fuel supplies because of insolvency at a key refinery or terminals. Primary impacts are disruption to the production and/or supply of refined fuel products. Shortages can cause elevated short-term demand.</p>	1	2	<ul style="list-style-type: none"> Reserve fleet of Road tankers Temporary financial assistance to some orgs to maintain fuel supplies while market responds. Central government arrangements for emergency fuel deliveries from downstream oil industry to maintain deliveries to key sites. 	<p>Sep 2024 Sep 2026</p> <p>Local Authority</p>
R84	Industrial Action	<p>Industrial action (firefighters) A national fire strike in England for a continuous eight-day period with loss of life directly attributable to a weakened response by individual fire and rescue services, and reputational impact on government</p>	2	2	<ul style="list-style-type: none"> Police Act (1996) RCN Code on Industrial Action Alternative emergency cover protocols for the Fire Brigade Organizational Business Continuity Arrangements Recall to active duty 	<p>Sep 2024 Sep 2026</p> <p>LFB</p>
R86	Industrial Action	<p>Industrial Action (Fuel supply) Actual or threatened significant disruption to the distribution of fuel by road, including as a result of industrial action by fuel tanker drivers. Retail filling stations, depending on the extent of the disruption and their locations and assuming no panic-buying, would likely run out of fuel within 4-5 days. <i>(Local Authority)</i></p>	2	2	<ul style="list-style-type: none"> Legal requirements re: conduct of industrial disputes. Stocks of contingency fuel to varying degrees. National Emergency Plan for Fuel. Planning for emergencies in the capital London City Hall 	<p>Sep 2024 Sep 2026</p> <p>Local Authority</p>
R85	Industrial Actions	<p>Industrial action (Prison Staff) Industrial action by operational prison staff, leading to a shortfall of staff available for duty for more than 24 hours</p>	4	2	<ul style="list-style-type: none"> Criminal Justice and Public Order Act (1994) 	<p>Sep 2024 Sep 2026</p> <p>MoJ</p>
R83	Industrial Action	<p>Industrial action (Public Transport)</p>	3	2	<ul style="list-style-type: none"> Health and Safety at Work Act 1974. 	<p>Sep 2024 Sep 2026</p>

		Strike action by key rail or London Underground staff (e.g. signallers) resulting in the total shutdown of very significant amounts of the national rail network or about ¾ of the London Underground network. In both cases severe disruption could last for a week as part of a three-month campaign. <i>(British Transport Police)</i>	Medium		<ul style="list-style-type: none"> • Employment Act 1980. • Employment Act 1988. • Public Order Act 1986. • Trade Union and Labour Relations (Consolidation) Act 1992. • Anti-Social Behavior Act 2003. • Organizational Business Continuity Arrangements. 	TfL	
Infrastructure and Systems Failure							
R51	Systems Failure	Failure of Gas Supply Infrastructure A technical failure or accident in an upstream oil/gas facility, gas import pipeline terminal, or Liquefied Natural Gas (LNG) import reception facility leading to disruption in UK gas supplies. <i>(London Fire Brigade)</i>	2	4	High	<ul style="list-style-type: none"> • National Emergency Plan for Fuel. • Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 LFB
R55 a	System Failure	Technology Failure at a Systemically Important Retail Bank A technological failure which renders a significant portion of a retail bank’s IT inoperable. Immediate effects last for 48-72 hours, with some customers experiencing disruption for several weeks as backlogs are cleared and potentially also, some permanent data loss or data corruption.	4	2	Medium	<ul style="list-style-type: none"> • Financial services sector plans to deal with a surge in demand for consumer facing financial services • Communication plans to encourage consumer awareness which can be coordinated between HM Treasury, the Bank of England, and the Financial Conduct Authority • Collective incident response capability under the Authorities Response Framework • Business Continuity Management plans for financial service sector firms and their regulators. 	Sep 2024 Sep 2026 London Risk Register
R36	System Failure	Major Social Care Provider Failure The failure of a major domiciliary care provider affecting 20,000 vulnerable people and their families	4	2	Medium	<ul style="list-style-type: none"> • Contingency planning for a large-scale incident of this type would remain with central government • Local authority service continuity plans 	Sep 2024 Sep 2026 Local Authority
R37 b	System Failure	Collapse of a major government contractor The collapse of a major provider of integrated facilities and construction services for a range of private and public organizations.	4	2	Medium	<ul style="list-style-type: none"> • Commercial business continuity and contingency plans • Service continuity plans to maintain critical services 	Sep 2024 Sep 2026 Local Authority

R63	Systems Failure	<p>Water Infrastructure Failure or loss of Drinking Water Failure of water infrastructure or loss of drinking water caused by the complete and relatively sudden loss of piped water supply or the degradation of the piped supply such that it is unfit for human consumption even after boiling. The RWCS assumes up to 350,000 people affected for between 24 hours and two weeks.</p>	2	3	<ul style="list-style-type: none"> Water Industry Act 1991. Security and Emergency Measures Direction 1998. Water companies mutual aid arrangements in place. Due to the high number of tower blocks in Wandsworth, the impact is greater than stated in the London Risk Register. Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 Thames Water
R49	Systems Failure	<p>Simultaneous loss of all fixed and mobile forms of telecommunications Loss of fixed and mobile telecommunications (both voice service and internet access) for up to 100,000 people for up to 72 hours. <i>(Metropolitan Police Service)</i></p>	3	3	<ul style="list-style-type: none"> Civil Contingencies Act 2004. Telephone provider demand and network capacity management strategies. National Emergency Alert for Telecoms. Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 MPS
R50 a	Systems Failure	<p>Failure of the National Electricity Transmission System (NETS) A total national blackout due to the loss of the GB National Electricity Transmission System caused by damage to or technical failure of the transmission network. The technical recovery process (Black Start) could take up to 5 days; however, there is the potential for wide area power disruptions for up to 14 days, potentially affecting millions of consumers. <i>(London Fire Brigade)</i></p>	3	5	<ul style="list-style-type: none"> Testing and maintenance regime. London Power Supply Disruption Plan EDF Energy System Emergency Plan. <ul style="list-style-type: none"> - EDF Energy Emergency Communication Plan. - EDF Energy Black Start Plan. Business Continuity Plans for Category 1 and 2 Responders, businesses and other key organizations London Power Supply Disruption Plan Major Incident/Emergency Plans for Category 1 and 2 Responders. 	Sep 2024 Sep 2026 LFB
R62	Systems Failure	<p>Reservoir/Dam Collapse A reservoir or dam collapses without warning resulting in almost instantaneous flooding. Significant movement of debris (including vehicles) and sediment. Complete destruction of some residential and commercial properties and serious damage of up to 500 properties. Several thousand other properties could be flooded. <i>(Environment Agency)</i></p> <p>Although there are no major reservoir/dams in Richmond, there are numerous large reservoirs in close proximity that could affect the borough, statistically increasing the likelihood. As a result, the likelihood is greater than stated in the London Risk Register.</p>	2	5	<ul style="list-style-type: none"> Reservoirs Act, 1975. Water Act, 2003. Regular statutory inspections. Met Office National Severe Weather Warning Service. Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 EA

R50 b	Systems Failure	Regional Failure of the Electricity Network A significant failure of the electricity network across one or more regions of Great Britain leading to the loss of electricity power of up to 3.5 million customers for up to 24h, up to 350,000 customers still off supply for up to 48h, up to 20,000 customers off supply for a week and 1000 customers off electricity supply for up to 2 weeks.)	2	3	<ul style="list-style-type: none"> • Testing and maintenance regime. • EDF Energy System Emergency Plan. • EDF Energy Emergency Communication Plan. • EDF Energy Black Start Plan. • London Power Supply Disruption Framework 	Sep 2024 Sep 2026 LFB
			Very High			
R39	Systems Failure	Failure of a supplier of CNI Chemicals A supplier of chemicals essential for the operations of one or more UK Critical National Infrastructure (CNI) sectors suffers from operational failure within days or weeks.	4	2	<ul style="list-style-type: none"> • Water Sector running cross-Industry Chemicals Group • Water Sector running cross-Industry Chemicals Group Cross-government emergency response coordinated within Cabinet Office 	Sep 2024 Sep 2026 Utilities Sector Panel
			Medium			
R37 a	Systems Failure	Insolvency of Supplier of Critical Services to public sector Insolvency of a supplier of critical IT services supporting operational systems or back-office processes integral to critical national services.	3	2	<ul style="list-style-type: none"> • National government guidance • FRC and other regulators of financial services 	Sep 2024 Sep 2026 Local Authority
			Medium			
Natural Hazards						
R72	Natural Hazards	Storms and Gales Storm force winds affect multiple regions for at least 6 hours during a working day. Most inland and lowland areas experience mean speeds in excess of 55mph and gusts in excess of 85mph. (Local Authorities)	4	3	<ul style="list-style-type: none"> • Met Office Hazard Manager service. • Warning & informing internally and externally. • Category 1 & 2 responders emergency response plans. • Highways Agency response plans. • TfL adverse weather plans. • LFB USAR and Water Rescue capabilities. • LAS HART. 	Sep 2024 Sep 2026 Met Office
			High			
R74	Natural Hazards	Low Temperatures and Heavy Snow Low temperatures and snow (falling and lying) over substantial areas of low-lying land, (below 300m) for at least one week. After an initial fall of snow, there is further snowfall on and off for at least 7 days. Most lowland areas experience some falls in excess of 10cm at a time, with overall snow depth in excess of 30cm. This would coincide with a period of at least 7 consecutive days with a daily mean temperature below -3°C. (Local Authorities)	3	3	<ul style="list-style-type: none"> • Met Office Hazard Manager service. • Warning & informing. • Category 1 & 2 responders emergency response and BCM plans. • Category 1 & 2 responders severe weather plans. • Highways Agency, TfL and local authorities' winter road maintenance plans. • Met Office forecasts & National Severe Weather Warning Service • TfL snow desk. • Op GRIDLOCK to support motorists stranded on M25. 	Sep 2024 Sep 2026 Met Office
			High			

R75 C	Natural Hazards	<p>Surface Water Flooding Surface water flooding in a large metropolitan area caused by a warm unstable atmosphere, most likely to occur in summer due to the warmer atmosphere having a greater water holding capacity, causes a pattern of convective rainfall events.</p>	3	4	<ul style="list-style-type: none"> Flood and Water Management Act 2010 The Flood Risk Regulations 2009 Land Drainage Act 1991 Water Resources Act 1991 FFC – Flood Guidance Statements New building developments controlled through planning guidelines Multi Agency Flood Plans London Strategic Flood Framework National Flood Emergency Plan 	Sep 2024 Sep 2026 EA
			Very High			
R67	Natural Hazards	<p>Volcanic Eruption Volcanic ash incursions for up to 25 days (assumed not to be sulfur-rich) resulting in sporadic and temporary closures of significant parts of UK airspace for up to a total of 15 days (possibly non-consecutive) during a three-month eruption period. <i>(Greater London Authority)</i></p>	4	3	<ul style="list-style-type: none"> Met Office Volcanic Ash Advisory Centre forecasting. CAA Volcanic Ash Safety Regime. Airline response plans. 	Sep 2024 Sep 2026 Local Authority
			High			
R71	Natural Hazards	<p>Severe Space Weather Disruption to the electricity grid, resulting in two rural/coastal sub-station disconnections each effecting communities of approx. 100,000 people, with loss of power for 1 month or more and Rota-disconnections for a further 1 month or more. Voltage instability may also result in local blackouts, most likely in urban areas lasting a few hours. <i>(Greater London Authority)</i></p>	4	4	<ul style="list-style-type: none"> Electricity Industry monitoring and analysis of GIC. Space Weather is assessed as part of the Daily Hazards Assessment. National Grid design standards and response arrangements. Alternative positioning, navigation and timing signal systems. Forecasting through Met Office Space Weather Operations Centre. 	Sep 2024 Sep 2026 Met Office
			Very High			
R77	Natural Hazards	<p>Poor Air Quality</p>	3	3	<ul style="list-style-type: none"> Air Quality Standards Regulations 2010 	Sep 2024

		A 30-day period of elevated levels of either ozone or PM2.5 causing increases in death rates among vulnerable populations due to poor air exacerbating respiratory and cardio-vascular conditions.	High		<ul style="list-style-type: none"> • European directive on ambient air quality and cleaner air for Europe (2008/50/EC) • The UK Air Quality Strategy • Environmental Permitting Regulations 2010 • Clean Air Act & Environmental Protection Act • Local authority air quality management areas and action plans- London Mayor’s Air Quality Strategy which encompasses Ultra Low Emissions Zones and Low Emission Neighborhoods • AirTEXT warning system • Local Air Quality Action Plans • Local Air Quality Monitoring Network • GLA Air Quality Action Plan 	Sep 2026 EA
R66	Natural Hazards	<p>Wildfires</p> <p>A major wildfire spreading over an area of over 100 hectares at the urban-rural interface. Significant environmental impacts and risks to residential property and essential services.</p>	4	3	<ul style="list-style-type: none"> • London Fire Brigade borough specific rural strategies. • Specialist firefighting equipment and resources. 	Sep 2024 Sep 2026 LFB
L19	Natural Hazards	<p>Groundwater Flooding</p> <p>Following unprecedented amounts of extended above average rainfall throughout 3 winter months groundwater levels are exceptionally high throughout London. The main areas of concern are in the Southeast of London where the geology is predominately chalk.</p>	3	3	<ul style="list-style-type: none"> • Flood and Water Management Act 2010. • The Flood Risk Regulations 2009. • Land Drainage Act 1991. • Water Resources Act 1991. • The London Plan. • Civil Contingencies Act 2004. • Environment Agency Floodline. • FFC – Flood Guidance Statements. • Multi Agency Flood Plans. • London Strategic Flood Framework. • National flood emergency plan. 	Sep 2024 Sep 2026 EA
R75 a	Natural Hazards	Coastal/Tidal Flooding	3	3	<ul style="list-style-type: none"> • Flood and Water Management Act 2010. 	Sep 2024 Sep 2026

		Localized tidal flooding resulting from sudden breach of a section of the Thames tidal wall or embankment caused by a vehicle collision or construction incident or a failure of a tidal flood gate coinciding with high tides on the river Thames.	High		<ul style="list-style-type: none"> • The Flood Risk Regulations 2009. • Land Drainage Act 1991. • Water Resources Act 1991. • The London Plan. • Civil Contingencies Act 2004. • Environment Agency Floodline. • FFC – Flood Guidance Statements. • Multi Agency Flood Plans. • London Strategic Flood Framework. • National flood emergency plan. 	EA
R75 b	Natural Hazards	<p>Fluvial Flooding Successive bands of frontal rainfall saturate river catchments (soil moisture deficit is at zero) and fill river channels to full capacity. High intensity heavy rainfall causes fluvial rivers in London (tributaries to the Thames) to exceed channel capacity. Flooding happens very quickly with little warning and time for evacuations. (<i>Environment Agency</i>)</p> <p><i>Note: the Beverley Brook here as the only Thames tributary with potential to impact Richmond</i></p>	3	4	<ul style="list-style-type: none"> • Flood and Water Management Act 2010. • The Flood Risk Regulations 2009. • Land Drainage Act 1991. • Water Resources Act 1991. • The London Plan. • Civil Contingencies Act 2004. • Environment Agency Floodline. • FFC – Flood Guidance Statements. • Multi Agency Flood Plans. • London Strategic Flood Framework. • National flood emergency plan. 	Sep 2024 Sep 2026 EA
HL 21	Natural Hazards	<p>Land Movement Roads and access routes impassable for a time. Emergency access into/out of large, populated areas difficult or impossible; severe congestion over wide geographical area. Loss of power and other essential services over wide geographical area. Potential for a number of persons to be trapped or missing either in landslides itself and/or in collapsed structures. (<i>London Fire Brigade</i>)</p>	3	1	<ul style="list-style-type: none"> • Land use planning restrictions. • Building Control regulations enforced by Local Authorities. Construction, renovation, maintenance and demolition standards. 	Sep 2024 Sep 2026 LFB
R68	Natural Hazards	<p>Earthquake An earthquake that results in the ground shaking with an intensity of six on the European Macro seismic Scale (EMS), this</p>	1	1	London and national generic response plans <ul style="list-style-type: none"> • Site clearance • Evacuation & Shelter • Recovery 	Sep 2024 Sep 2026 Local

		is classed as 'strong'. Many houses and buildings suffer slight non-structural damage like hair-line cracks and falling of small pieces of plaster.	Low		Mutual aid arrangements Specialist fire and rescue assets	Authoritie s
R73	Natural Hazards	High Temperatures and Heatwave Daily maximum temperatures in excess of 32°C and minimum temperatures in excess of 15°C over most of a region for around 2 weeks at least with 5 consecutive days where maximum temperatures exceed 32°C. Up to 1,000 fatalities and 5,000 casualties, mainly amongst the elderly. There could be disruption to power supply, telecommunications links and transport infrastructure within the 2 weeks. <i>(Health)</i>	3	4	<ul style="list-style-type: none"> • Health & Safety at Work Act 1974. • Public Health Act. • Heatwave Plan for England. • Long term planning for local authorities, CCG's and NHS. • Climate Change Adaption Strategy for London. • Heat Health Watch. • Department of Health Heatwave Plan for England. 	Sep 2024 Sep 2026 UKHSA
			Very High			
RR7 6	Natural Hazards	Drought Following three consecutive and unprecedented dry winters London is in a severe drought (level 4) situation. Emergency drought orders are in place with millions of properties with severe water supply restrictions and low water pressure (impacting supply to properties at high levels and tower blocks). Increase of illnesses due to reduced use of water impacting on hygiene levels, increased casualties and potentially fatalities. Mental wellbeing impacts communities and public outrage leads to some disorder issues. <i>(Environment Agency)</i>	2	5	<ul style="list-style-type: none"> • Water Resources Act 1991. • DEFRA: Planning for Major Water and Wastewater Incidents in England and Wales. • Drought Plan direction document. • Individual Water Company Drought Plans • London Drought Framework 	Sep 2024 Sep 2026 EA
			Very High			
Threats						
T1	Threats	Attacks on Publicly Accessible Locations (PALs) PALs remain an attractive target for a terrorist attack. PALs by their nature are easily accessible and offer the prospect for an impact beyond the loss of life alone. Attacks are often (but not always) carried out without prior warning.	5	2	<ul style="list-style-type: none"> • Work of counter terrorism security advisors to raise awareness and provide training. • Physical security measures where appropriate. • Emergency services response plans. • Emergency services specialist resources. • Counter terrorism liaison with relevant organizations. 	Sep 2024 Sep 2026 MPS
			Medium			
T2	Threats	Attacks on infrastructure	4	3		Sep 2024 Sep 2026

		Many of the impacts which could result from industrial accidents, technical failure or severe weather could also result from a terrorist attack on infrastructure. The risk and impact vary according to the criticality of the infrastructure assets affected.	High		<ul style="list-style-type: none"> Business continuity plans for loss of essential services helps minimize disruption. Well established program of work to protect infrastructure from terrorism including protective security advice from Centre for the Protection of National Infrastructure and local Police services. Counter terrorism liaison with relevant organizations. UK Government Counter Terrorism Strategy Consequence based planning by the authorities ensuring that responses to a variety of emergencies are already planned for 	MPS
T3	Threats	<p>Attacks on transport system</p> <p>Conventional attacks on transport systems are judged to be the more likely (however the likelihood of them affecting any one individual is still extremely low).</p>	4	3	<ul style="list-style-type: none"> Regulation and security processes of individual public transport sectors. Contingency plans developed by operators in conjunction with responders. Counter terrorism liaison with relevant organizations. 	Sep 2024 Sep 2026 MPS/BTP
T5	Threats	<p>Small Scale Unconventional Attacks</p> <p>Mass impact terrorist attacks, whilst unlikely, cannot be ruled out. The likelihood of terrorists successfully undertaking an attack against a nuclear or chemical facility or obtaining chemical, biological, radiological (CBR) or nuclear materials remains low, but not negligible. If such attacks were successful, their potential impact on the UK would be severe and significantly greater than a conventional attack. The potential impacts of an incident involving CBR agents will depend on a range of factors including type and quantity of CBRN materials used. This could range from small-scale (assassination or poisoning) to mass-impact (widespread dispersion and contamination) which is reflected in the scores.</p>	4	2	<ul style="list-style-type: none"> Well-developed specialist response capability. Access to medical-countermeasures. 	Sep 2024 Sep 2026 MPS
R32	Threats	<p>Major interference in UK democratic process</p> <p>A cyber-attack conducted by a hostile state actor on a UK Electoral system during an election period. The attack could cause disruption to the electoral processes, resulting in data loss or manipulation and impact the result, or public confidence in the result.</p>	3	1	<ul style="list-style-type: none"> UK Electoral processes largely not reliant on computer systems vulnerable to this type of attack <p style="color: red;">A 24/7 managed Security Operations Centre is in place monitoring and mitigating against all attacks</p>	Sep 2024 Sep 2026 Local Authority

T4	Threats	Cyber Attacks Cyber criminals engage in criminal activity to exploit weaknesses in online systems, usually for financial gain. As well as using technology to commit a crime (such as hacking to steal data), offenders can also increase the scale and reach of a crime (cyber-enabled fiscal fraud). States and state-sponsored threats tend to be politically motivated and may attempt to access and cause disruption to strategic systems across government and other key sectors	3	2	<ul style="list-style-type: none"> National Cyber Security Strategy sets out the government response to ensuring that government, CNI, business and citizens are as resilient as possible to cyber threats. The National Cyber Security Centre, part of GCHQ, supports the most critical organizations in the UK to improve their cyber resilience. The NCSC also responds to cyber incidents to minimize harm to the UK, help with recovery and learn lessons for the future. Additional outreach to businesses and public regarding cyber threats and security Centre for Protection of National Infrastructure providing security and cyber security advice 	Sep 2024 Sep 2026 MPS
			Medium			
T6	Threats	Medium Scale CBRN Attacks See T5 outcome description	4	3	See T5 controls in place	Sep 2024 Sep 2026 MPS
			High			
T7	Threats	Large Scale CBRN Attacks See T5 outcome description A larger-scale CBRN attack has never happened in the UK but would be more challenging to respond to than other malicious attacks, due to the potential health impacts and widespread environmental contamination. CBRN events can also present responders and those affected with significant levels of uncertainty about what has happened, and the scientific evidence may evolve as the incident unfolds. This leads to widespread psychological impacts including anxiety.	3	5	See T5 controls in place	Sep 2024 Sep 2026 MPS
			Very High			

Hostile State Activity						
R89	HSA	High-Altitude Electromagnetic Pusle (HEMP)	2	5	Contingency planning for a large-scale incident of this type would remain with central government	Sep 2024 Sep 2026 Central Government
			Very High			

5 Local Risks						
RL 1	Local Risks	<p>Fire involving acetylene cylinders Fire in industrial/commercial unit, with oxyacetylene cylinders involved. Evacuation of 200m perimeter for up to 24 hours. Up to 3 fatalities, 20 casualties. <i>(London Fire Brigade)</i></p>	1	3	<ul style="list-style-type: none"> Specialist firefighting equipment and resources. Fire protection systems to prevent or limit the spread of fire. It is highly unlikely that we would have to cool acetylene or any unidentified cylinder for 24hrs this is a national policy change and more likely to be significantly less in terms of time 	Sep 2024 Sep 2026 LFB
			Medium			
RL 2	Local Risks	<p>Misuse and release of toxic or corrosive chemicals Release of toxic or corrosive substances, either intentionally as a means of chemical suicide or acid attack, or through the accidental mixture of noxious chemicals. Potential for substances to spread and harm further persons in the immediate vicinity, possibly resulting in death or serious incapacitation requiring hospital treatment. Victims and premises will require decontamination. <i>(London Fire Brigade)</i></p>	1	1	<ul style="list-style-type: none"> Specialist Emergency Services and other responder equipment and resources. Mass casualty decontamination resource within borough as a response 	Sep 2024 Sep 2026 LFB
			Low			
RL 3	Local Risks	<p>Fire in buildings containing asbestos Air borne asbestos particles present in the smoke plume and ash following a fire at premises known to contain asbestos. <i>(London Fire Brigade)</i></p>	2	3	<ul style="list-style-type: none"> Control of Asbestos Regulations 2012. Specialist firefighting equipment and resources. 	Sep 2024 Sep 2026 LFB
			Medium			
RL 4	Local Risks	<p>Loss of mortuary provision Loss or reduced capacity in public mortuary provision. <i>(WBC)</i></p>	5	4	<ul style="list-style-type: none"> Planning for emergencies in the capital London City Hall 	Sep 2024 Sep 2026 Local Authority
			Very High			

Risk omitted from London Risk Register

Ref ID	Risk Sub-Category	Rationale for Not Applicable Status	Risk Sub-Category
R77	Gas Supply Infrastructure (Installations)	No sites in Borough	Accident
L71a	Large aircraft incident in proximity to airport	No sites in Borough	Accident
L71b	Small aircraft incident in proximity to airport	No sites in Borough	Accident
R95	Nuclear Attack by a state on the UK mainland or UK overseas accident	Local Authority would take direction from central government	Hostile State Activity
R56	Accidental Fire or explosion at an onshore major hazard (COMAH) site	No sites in Borough	Accident

Appendix 1 - The 6 Stage Risk Assessment Process

1. Contextualization

This is provided at the beginning of the document and summarizes a range of factors which influence the assessment of both likelihood and impact of risks in Wandsworth.

2. Hazard Identification and allocation for assessment

Using London-risk as their basis, Richmond & Wandsworth Borough Resilience Forum identifies the threats and hazards that could give rise to an emergency within Richmond in the next 5 years.

3. Risk analysis

Drawing on guidance from Government, other research and local knowledge, the lead assessor from the Borough Resilience Forum considers the likelihood of the risk over the next five-year period.

4. Risk evaluation

The analysis is ratified by the Forum and collated in the Borough Risk Register.

5. Risk treatment

Gaps in capability, compared to the Reasonable Worst Case Scenario risks are assessed periodically by the Borough

Resilience Forum. Options for additional risk management are developed.

6. Monitoring and Review

Risk assessment is not a static process and is subject to constant review. At a minimum, each risk should be formally reviewed on a 2-year cycle alongside an annual update and re-publication of the Borough Risk Register.

Appendix 2 – Likelihood and Impact Scoring Scales – qualitative measures as stated in the London Risk Register

Likelihood scoring scale

Level	Descriptor	Likelihood Over 5 Years	Likelihood Over 5 Years
1	Low	> 0.005%	> 1 in 20,000 chance
2	Medium Low	> 0.05%	> 1 in 2,000 chance
3	Medium	> 0.5%	> 1 in 200 chance
4	Medium High	> 5%	> 1 in 20 chance
5	High	> 50%	> 1 in 2 chance

Note:

Strictly, levels 1 and 2 of the impact scale are likely to fall below the threshold for an emergency. Consequently, there may be no statutory requirement to plan for events that score 1 or 2 on the impact scale. This scale recognizes that, to demonstrate a thorough analysis, Category 1 responders will wish to include in their risk assessment certain risks with impacts at these levels.

Further detail on the scoring measures is provided in Annex 4D of “Emergency Preparedness” (HM Government, 2005)

Impact Categories

Category	Explanation
Human Welfare	Includes numbers of fatalities and casualties resulting from the RWCS, needs for mass evacuation, and short- and long-term accommodation.
Behavioral Impacts	Psychological impacts of the risk, including how people’s perception and behavior might change because of the risk.
Economic	An approximate net economic cost, including both direct (e.g. loss of goods, buildings, infrastructure) and indirect (e.g. loss of business, increased demand for public services) costs
Environment	Encompassing contamination or pollution of land, water or air with harmful biological / chemical / radioactive matter or oil, flooding, or disruption or destruction of plant or animal life.
Essential Services	How the RWCs might impact the emergency services, critical infrastructure, transport, education and other service and infrastructure providers
Security	Includes impacts to law enforcement and intelligence services, and disruptions to criminal justice and border security

Appendix 3 – Risk Rating Definitions – qualitative measures as stated in the London Risk Register

Definitions of Nationally Approved Risk Ratings

Very high (VH) risk	These are classed as primary or critical risks requiring immediate attention. They may have a high or low likelihood of occurrence, but their potential consequences are such that they must be treated as a high priority. This may mean that strategies should be developed to reduce or eliminate the risks, but also that mitigation in the form of (multi-agency) planning, exercising and training for these hazards should be put in place and the risk monitored on a regular frequency. Consideration should be given to planning being specific to the risk rather than generic.
High (H) risk	These risks are classed as significant. They may have a high or low likelihood of occurrence, but their potential consequences are sufficiently serious to warrant appropriate consideration after those risks classed as 'very high'. Consideration should be given to the development of strategies to reduce or eliminate the risks, but also that mitigation in the form of at least (multi-agency) generic planning, exercising and training should be put in place and monitored on a regular frequency.
Medium (M) risk	These risks are less significant, but may cause upset and inconvenience in the short term. These risks should be monitored to ensure that they are being appropriately managed and consideration given to their being managed under generic emergency planning arrangements.
Low (L) risk	These risks are both unlikely to occur and not significant in their impact. They should be managed using normal or generic planning arrangements and require minimal monitoring and control unless subsequent risk assessments show a substantial change, prompting a move to another risk category.

Based on the model risk rating matrix published in Annex 4F of "Emergency Preparedness" (HM Government, 2005)