

Kensington and Chelsea Borough Risk Register

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THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

Ownership and Version Control

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Author	Jack Wills, Resilience Advisor, Royal Borough of Kensington and Chelsea		
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12	03/2022	Full review following the change of national methodology updating of the London Risk Register in 2021 and February 2022 Change of format to match the London Risk Register Change to review timescale	
11	07/2019	Updated and agreed all Risk Ratings A new column added to include RBKC risk rating A new row was added showing risk lead responder	

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Environmental Information Regulations 2004

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1. Introduction and Background

[The Civil Contingencies Act 2004](#) places a legal duty on Category 1 responders to produce a Community Risk Register. Section 2 subsection 1 of the Act requires Category 1 responders 'from time to time assess the risk of an emergency occurring' and 'from time to time assess the risk of an emergency making it necessary or expedient for the person or body to perform any of its functions.

This should be linked to the individual Category 1 responders' processes of adding to (or modifying) their plans. Part 1 of the Civil Contingencies Act 2004 (c.36), "emergency" is defined by s.1 (1) of the Act and means:

- a) An event or situation which threatens serious damage to human welfare in a place in the United Kingdom or;
- b) An event or situation which threatens serious damage to the environment of a place in the United Kingdom or;
- c) War or terrorism, which threatens serious damage to the security of the United Kingdom.

It must also meet either of the following criteria:

- (a) Where the emergency would be likely to seriously obstruct its ability to perform its functions and/or;
- (b) Where the Category 1 responder considers it necessary or desirable to act to prevent, reduce, control, or mitigate the emergency's effects, or otherwise act and would be unable to act without changing the deployment of its resources or acquiring additional resources.

This implies that only serious emergencies need to form part of the risk assessment process. The risk assessment process required need not cover large pre-planned events, as a risk assessment should form part of the event planning stage.

Risk assessment underpins the work of the Kensington and Chelsea Resilience Forum. Assessments within the Borough Risk Register drive the development of capabilities to prevent, mitigate, respond to and recover from incidents.

Publication of the Borough Risk Register is designed to assist residents and businesses develop their emergency arrangements and to inform about the risks in the local area.

Planning is based on 'reasonable worst-case scenarios' informed by historical and scientific data, modelling, and professional expert judgement of both the likelihood and impact of a risk. The inclusion of a risk does not mean it is expected to happen, nor that the impact would be as serious as the description provided.

Each risk is scored for impact and likelihood. The likelihood is expressed as the "annual likelihood of each reasonable worst-case scenario occurring, with the assessment valid for two years". Impacts are rated between "Limited" (1) and "Catastrophic" (5). The likelihood and impact scores are combined to give an overall risk rating.

The Borough Risk Register provides information on specific local risks and response arrangements in addition to the overviews provided on a pan London and national level by the [National](#) and [London Risk Registers](#).

Change in Methodology

In 2019, the Cabinet Office published an updated version of the National Risk Register which assesses threats and non-malicious risks under the same methodology, using the same likelihood and impact scales. To accommodate the new threats and risks in this manner, some changes were made to the risk assessment methodology.

- The likelihood is no longer assessed over five years but is expressed as the annual likelihood of the reasonable worst-case scenarios occurring, with the assessment valid for

two years.

- The impact assessment has been expanded to bring more detail and less ambiguity into the assessments: additional “impact indicators” were introduced, which brings more specificity into the assessments, and the tables used to score each indicator have been updated with numerical examples, which will eliminate some subjectivity from assessments.
- The likelihood and impact are now presented on logarithmic scales; previously, the scales were linear.

Likelihood and impact are still presented on a five-point scale. See Appendix 2 for more detail.

New Risks

The 2019 National Risk Register introduced several new risks which have been included in the 2020 London risk assessment. In addition, some risks previously in the London Risk Register and therefore this document have been amalgamated with others or removed in the assessment process, which has led to some changes to existing risks.

New risks referenced in the National Risk Register that are now considered in the London and local Risk Assessment:

R43 Undermining Democratic Processes – This risk considers the possibility of interference in the UK’s election processes.

R54 Major Fire – There are several fire risks on the national and London risk assessments, but none had previously considered the possibility of a large fire in a building in an urban area. R54 fills this gap.

R66 Radiation Release from Overseas Incidents – This risk considers the possibility of an incident at a nuclear power station overseas. A separate risk from the National Risk Register that considers a nuclear incident on UK soil was discounted because the outcomes of both risks are similar, and so the consequences and impacts will be similar.

R72 Collapse of a Major Government Contractor and **R73 Major Social Care Provider Failure** – These two risks focus on the sudden failure of a government contractor or the failure of a major social care provider. These risks are rated the same for London as they are nationally because an incident of this type is likely to have the greatest impacts in London.

R79 Technological Failure at a Retail Bank – This risk focuses on a scenario where local banking services are suddenly unavailable, leading to short term financial issues for large numbers of people.

R96 Growth and Spread of Antimicrobial Resistance – The reasonable worst-case scenario of this risk describes long term steady increases in anti-microbial resistance and the resulting impacts on the health sector.

R99 Industrial Action (Firefighters) – This risk is a more specific version of the previous risk, “Industrial action - essential workers”, which is now separate.

R118 Deliberate Disruption of Space Based Services – This risk considers the outcome of an international war disrupting the UK’s satellite communications services. The risk was excluded from the London Risk Register because acts of war are out of the scope of this review. (See also excluded risks.)

Further detail on how risks have changed since the last assessment is available in the risk register and section 5.

Regional Changes

Several risks introduced in the 2019 National Risk Register were raised to the attention of the London Fire Brigade (LFB) to lead on. The introduction of these risks prompted an in-depth review of LFB-led risks, including detailed consideration of the national risks and whether these adequately cover London's risk profile.

R54 Major Fire was a new risk on the London and Borough Risk Registers in 2021, the London assessment for this was closely based on the national risk. It was decided that the description of the Reasonable Worst-Case Scenario of this risk was too broad, covering multiple settings which have different risk profiles in London, requiring different responses and therefore different risk assessments.

The London Risk Advisory Group have created four new risks which cover some of the separate scenarios described in R54 in more detail. R54 will remain on the London and Borough Risk Registers, for now, to reflect the risk as seen at a national level. New fire risks in the London and Borough Risk Registers are:

- L54a Fires in purpose-built high-risk flats
- L54b Fires in large public and commercial buildings
- L54c Fires involving landfill and waste processing sites
- L54e Major fire in care homes and hospitals

'HL33 Wildfires' has been renamed 'L54d Wildfires in proximity to urban areas to maintain numbering consistency with other fire risks.

Aviation risks have been restructured and renamed to cover a wider range of scenarios possible in the vicinity of London's airports than previously captured. The national risk 'R71 Aviation Crash' remains on the London and Borough Risk Registers, with HL9 Aviation Crash reintroduced as L71a Large aircraft incident in proximity to airport and L71b small aircraft incident in proximity to an airport.

Finally, a review of radiological risks found that the national risk 'R66 Radiation release from overseas nuclear accident' was too specific in the description of its reasonable worst-case scenarios and too large in scope to cover impacts and response actions from domestic radiation risks. A new risk will be introduced to cover local risks to London of the mishandling of radiological risks while in transport or use:

- L66 Radioactive incident caused by mishandling of radioactive material

Two radiological risks are currently under review:

- R65 Civil Nuclear Accident is currently under review as to whether it should be included on the London and Borough Risk Registers in addition to R66
- R66 Radiation release from overseas nuclear accident appears on the London and Borough Risk Registers using the national summary assessment and is currently under review alongside R65.

The LFB's risk review also found cause to remove the following risks:

- HL25 Fire or explosion at a flammable gas terminal
- HL7 Industrial explosions and major fires

The reasonable worst-case scenarios for these are covered under three national risks; two of which were added to the London and Borough Risk Registers last year (R55 and R57) and R61 Fire and explosion at an onshore fuel pipeline which has been included this year to cover industrial fires and explosion scenarios.

Understanding the Risk Register

Risks are grouped by theme and presented in order of overall rating within that theme, with the highest risks first. Themes are based on common features and consequences, which makes it easier to understand the risk in context and to consider which risks might influence, or be influenced by, others. Risk themes are accidents and system failures, human and animal disease,

societal risks, natural hazards, cyber-attacks, and terrorist threats.

The headings used on the London and Borough Risk Registers are as follows, this is done to enable easy comparison between the two documents:

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
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Risk ID: Unique reference number for each risk. R denotes risk is also a national risk.

Rating: Overall risk rating based on likelihood and overall impact.

Sub-Category: In some cases, risks are sub-categorised for ease of comparison with similar risks

Lead: The Organisation responsible for the assessment of the risk in London.

Outcome Description: A summary of the reasonable worst-case scenario used to inform the assessment

Likelihood: Assessed from 1-5 where 1 is the least likely and 5 more likely. (A table with probabilities associated with each score is available at the end of this document.)

Impact: Assessed from 1-5 where 1 is the lowest impact and 5 more impactful.

Controls in place: Plans and procedures in place to mitigate this risk

Last review / next review: Dates of the last review of that risk, and planned date for the next review

Risk Review Schedule

All risks with an overall rating of “Very high” and “High” will be reviewed yearly, other risks will be reviewed every two years; review dates are in the right-hand column of the register

Controls

Controls specific to the type of incident referred to are listed in the register below. In addition, there are many generic plans, procedures and principles that aid multi-agency working in incident response and national initiatives that are used to aid responders in complex situations. These include:

- [London Emergency Services Liaison Panel](#) (LESLP)
- [Joint Emergency Services Interoperability Principles](#) (JESIP)
- Pan-London emergency response plans and frameworks are available on london.gov.uk covering generic response procedures, consequence-based planning for use in various incidents, and incident-specific plans.

Risk Registers

National Risk Register

The National Risk Register sets out the assessment of the likelihood and potential impact of a range of risks that may directly affect the UK'. The publication of information on these risks is intended to encourage public debate on security and help organisations, individuals, families, and communities to prepare for emergencies.

The Register provides an assessment of the most significant emergencies which the United Kingdom

and its citizens could face. These risks are summarised into three categories: accidents, natural events (collectively known as hazards) and malicious attacks (known as threats).

The different risks are compared on a like for like basis, which helps in making decisions about which to plan for and what their consequences are likely to be. The National Risk Register is intended to capture the range of emergencies that might have a major impact on all or significant parts of the UK.

It provides a national picture of the risks we face, and is designed to complement Community Risk Registers, already produced and published locally by emergency planners. The driver for this work is the Civil Contingencies Act 2004, which also defines what we mean by emergencies and what responsibilities are placed on emergency responders to prepare for them.

Community Risk Registers

Community Risk Registers consider the likelihood and potential impact on a range of hazards occurring in specific areas of England and Wales. The London specific risk register is approved and published by London Resilience Forum, which has been established under the Civil Contingencies Act. They include representatives from the local emergency services and public, private, and voluntary organisations. To produce the Community Risk Registers, Local Resilience Forums use a combination of their judgement about each risk, as well as guidance provided by Central Government.

The Royal Borough of Kensington and Chelsea is part of the London Resilience Forum with all other London Boroughs. All boroughs across London feed into the [London Risk Register](#) through the sub-regional resilience forums.

Borough Risk Registers

Borough Risk Registers consider the main risks specific to the Borough. These are taken from the London Risk Register and adapted for local use. The Borough Risk Register is designed to be a living document that will be revised and updated as and when required. The Borough Risk Register will include other site-specific risks when relevant.

2. Borough Contextualization Statement

The Royal Borough of Kensington and Chelsea forms one end of the Central Sub Region of the London Resilience Forum area, which also comprises the London Boroughs of Tower Hamlets, Southwark, and Lambeth, along with the Cities of Westminster and London. The Royal Borough is also bordered by the London Boroughs of Brent in the North, Hammersmith and Fulham in the West and Wandsworth in the South the other side of the River Thames

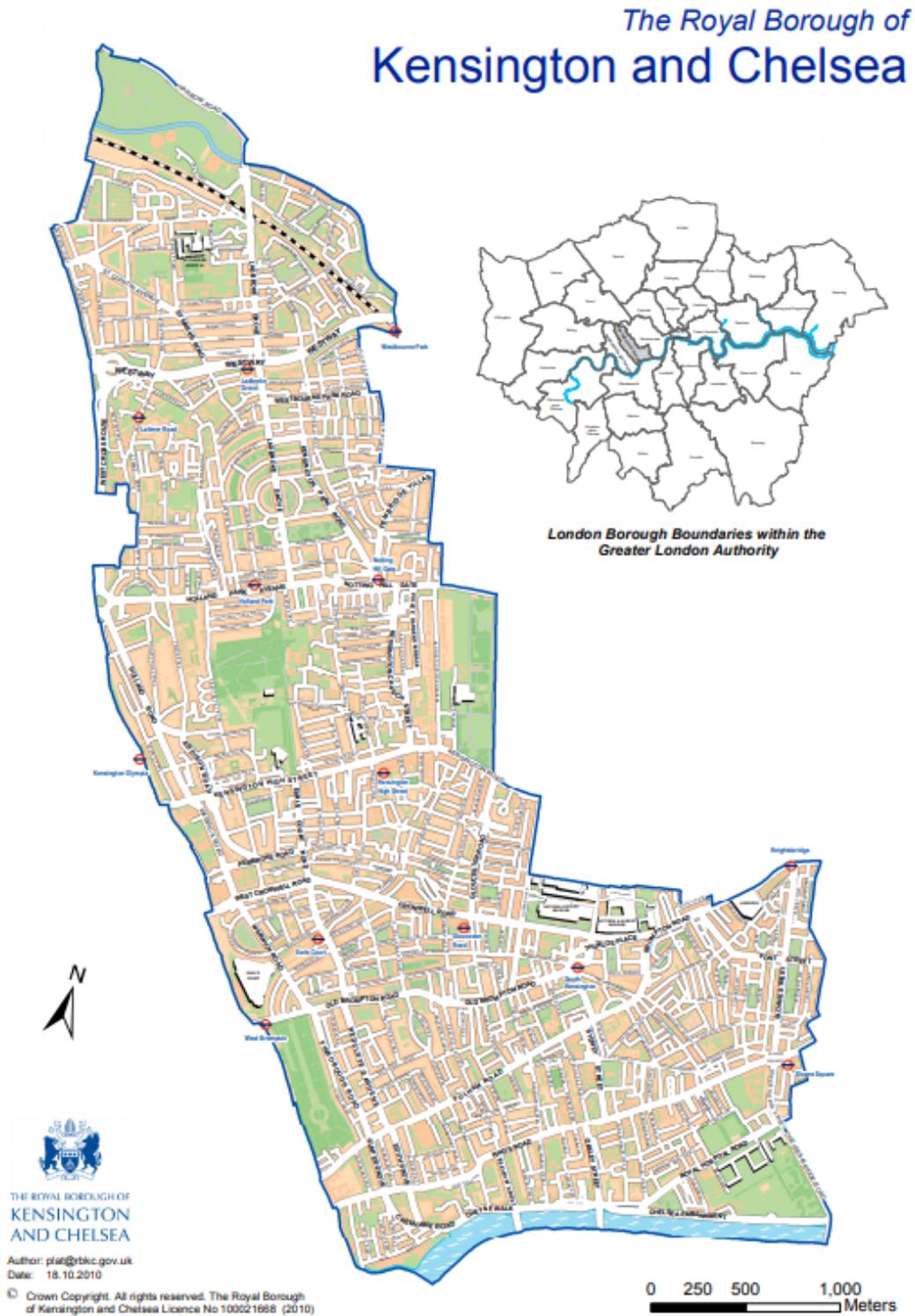


Figure 1:Map of the Borough of Kensington and Chelsea.

The Borough

The Royal Borough of Kensington and Chelsea is the smallest borough in London, covering just 4.68 square miles and is also one of the most densely populated local authority areas in the country having built on 82% of its landmass. The Borough is made up of complex-built environments with several large buildings up to 30 floors high. There are also complex underground structures beneath the Borough including the Circle, District, Central, Piccadilly and Hammersmith and City Lines stopping at 13 stations.

The Borough is home to internationally renowned museums and universities, major department stores and shopping areas such as Knightsbridge, which attracts a national and international footfall of an estimated 300,000 people a day. It has 144 sites of Embassies and High Commissions located within 1km of its boundaries and land value is one of the highest in the UK and beyond. This concentration of popular and prestigious institutions contributes significantly to the Borough's hazard profile, both in terms of 'risk' and of 'threat'.

More than one-fifth of all households have a first language other than English; this is the fourth-highest proportion in the country, 48% of residents were born in the United Kingdom, the fourth-lowest proportion of all local authorities in England and Wales this is also accompanied by 38% of residents describing themselves as belonging to a non-British identity.

Indicators such as the borough health gradient reveal considerable variations in the Borough's demographic profile. For example, there is an estimated difference in life expectancy of five years between the lowest ward and the borough average and ten years between the lowest and highest wards. These wards also exhibit high levels of deprivation and social housing and are more likely to be home to higher levels of ethnic minorities within the Borough. Such diversity highlights the importance of community resilience programmes to the Borough.

The Grenfell Fire

On 14 June 2017, a fire broke out in the 24-storey Grenfell Tower block of flats in North Kensington, causing 72 deaths. It was the deadliest UK residential fire since the Second World War.

Consequently, a key element of the Council's longer-term response to the fire has been an extensive and wide-ranging review of its resilience arrangements and community resilience programmes in support of the Borough's communities.

Significant Events

The Borough is home to the Notting Hill Carnival, held every August Bank Holiday on the streets of North Kensington. The event has grown over the past 50 years from a small community-based event into Europe's biggest and most exuberant street-based event, attracting a million-plus visitors. A key event within the Borough and for the Council and its multi-agency partners.

Planning for Carnival is a year-long undertaking, the planning cycle recommencing every year with a multi-agency debrief a few weeks after the event and involving a wide breadth of Council resources. Because of its size and the complexity of its operations, Carnival demands a fully integrated multi-agency approach that must be based in and work closely with, the community of North Kensington and close cross-border working where the event's footprint crosses into the City of Westminster.

The RHS Chelsea Flower Show is held in May over five days and attended by 157,000 people each year. The grounds of the Royal Hospital Chelsea are filled with the largest collections of flowers in the world. There are many show gardens, each one created with attention to detail by some of the world's leading garden designers.

Economic Infrastructure

There are key NHS sites in the Borough including three hospitals The Chelsea and Westminster, The Royal Brompton and The Royal Marsden a Walk-in Centre at St Charles Health and Wellbeing Centre along with several private hospitals. Some of these sites and research facilities throughout the borough study biological substances. All facilities are aware of their security and handling requirements.

The Borough is also home to The Royal Hospital Chelsea along with 3 Fire Stations: North Kensington, Kensington, and Chelsea, a Police stations in Kensington and an Ambulance Station in North Kensington

There are three major shopping destinations in High Street Kensington, the Kings Road Chelsea and Sloane Square and Street, with the Cadogan Estate which encompasses the latter two and some other streets in the area see approximately 1,000,000 visitors a week, there is also the world-renowned Portobello Road Market in North of the Borough which sees approximately 100,000 visitors a week

There is a range of educational institutions in the borough, both independent and state-funded, 72 primary and secondary schools with two colleges and several higher education institutions, including Imperial College London and the Royal College of Art.

Transport Infrastructure

A significant part of the border with Hammersmith and Fulham is a railway track running Clapham up to Willesden with four stations along the boundary at Kensington Olympia, West Brompton, Shepherds Bush, and Imperial Wharf

Major arterial routes through the borough including, the Westway A40 in the North across Ladbroke Grove, Kensington High Street the A315, the A4 which travels along Cromwell Road and The A3212 running along Chelsea embankment in the South. Along with the A3220 running north to south from the embankment to the Westway A40, most of these are managed by Transport for London except for Kensington High Street.

Victoria coach station, although not in the Royal Borough, sits just across the border in the City of Westminster and is a key terminus for both national and international bus and coach services.

Part of the Borough are underneath the flight path into London Heathrow and London City Airports, Police and Air Ambulance Helicopters regularly use the airspace above Kensington and Chelsea, as do Royal flights into and out of Buckingham Palace. Private and commercial Helicopters regularly follow the Thames through London

Hazardous Sites

Though there are no major industrial sites or sites subject to the Control of Major Accident Hazard Regulations within the Borough, there are two council-run swimming pools at Chelsea and Kensington leisure centres and several privately operated pools in local gyms and hotels.

There is a National Grid Distribution Pipeline covered by the Pipeline Safety Regulations, which enters the north of the Brough running the short distance to the Kensal Gas Works, the second pipeline of note runs to the old Fulham Gas Works Site near to the border in the south of the Borough.

3. Kensington and Chelsea Risk Register: High-Level Summary Risk Matrix

Impact	5		R84 Severe Drought	R76 National Electricity Transmission, R95 Influenza-type Pandemic, T7 Larger scale CBRN Attacks,	R54 Major Fire	
	4	R71 Aviation Crash, R55 Fire or Explosion at a fuel distribution site, R57 Explosion at a high pressure gas pipeline, R74 Reservoir/Dam Collapse, R66 Radiation Release from overseas	R77 Gas Supply Infrastructure, R68 High Consequence Dangerous Goods, HL105 Complex Built Environments, L54b Fires in large public and commercial buildings	R83 Surface Water Flooding, R92 Severe Space Weather		
	3	HL23 Bridge Collapse, HL34 Evacuation of passenger ship, HL22 Building Collapse, R75 Water Supply Infrastructure, R61 Fire and Explosion at an onshore fuel pipeline L66 Incident caused by mishandling of radioactive material R64 Large Toxic Chemical Release	R69 Food Supply Contamination, R80 Systemic Financial Crisis L71b Small Aircraft Incident	R91 Low temperatures and heavy Snow, R96 Growth of Anti-Microbial resistance, R97 Emerging Infectious Disease, R85 Poor Air Quality, L19 Groundwater Flooding, HL19 Coastal/Tidal Flooding	R90 Heatwave, R87 Volcanic Eruption, R63 Accidental Release of a Biological Substance, L54a Fires in purpose built high-rise flats, T2 Attacks on Infrastructure, T3 Attacks on Transport, T6 Medium scale CBRN Attacks	R104 Public Disorder
	2	R67 Maritime Pollution, R62 Accidental Release of Biological Pathogen, R103 Insolvency affecting fuel supply	R78 Disruption to telecoms systems, R98 Animal Disease, R102 Industrial Action (fuel), HL10 Local Accident on Motorways/ Major Trunk Roads, R99 Industrial Action (firefighters),	L54e Major fire in care homes and hospitals, R93 Storms and Gales, HL11 Railway Accident, HL21 Land Movement, R101 Industrial action public transport,	R105 Influx of British Nationals, R72 Collapse of major government contractor, R73 Major Social care Provider, R79 Technological failure at a retail bank, R100 Industrial action (prison officers), T4 Cyber attacks, T5 Smaller scale CBRN Attacks	L54c Fires involving landfill and waste processing sites, T1 Attacks on Publicly Accessible Locations
	1	R70 Radiation exposure from stolen goods, R94 Earthquake		R43 Undermining democratic activity		
	1 - Low	2 - Medium/Low	3 - Medium	4 - Medium/High	5 - High	
	Likelihood					

4. Kensington and Chelsea Risk Register

Accidents and system failures

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R76 VERY HIGH	Systems Failure LFB	<p>National Electricity Transmission</p> <p>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.</p>	3	5	<p>Testing and maintenance regime.</p> <p>London Power Supply Disruption Plan</p> <p>EDF Energy System Emergency Plan.</p> <p>EDF Energy Emergency Communication Plan.</p> <p>EDF Energy Black Start Plan.</p> <p>Business Continuity Plans for Category 1 and 2 responders, businesses, and other key organisations</p> <p>London Power Supply Disruption Plan</p> <p>Major Incident/Emergency Plans for Category 1 and 2 Responders.</p>	<p>Nov 2019</p> <p>Sept 2022</p>

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R54 VERY HIGH	Accident LFB	<p>Major Fire</p> <p>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.</p> <p>The impact of a Major Fire has been increased for the Royal Borough of Kensington and Chelsea because of the impact past events will have on the reaction to any further major fires in the Borough.</p>	4	5	<p>Regulatory Reform (Fire Safety) Order 2005</p> <p>Fire Safety Approved Document B</p> <p>Fire & Rescue Services Act 2004</p> <p>LFB Guidance Note 29</p> <p>LFB Operational tactical and building plans</p> <p>LFB Urban Search & Rescue Teams (USAR)</p> <p>Fire Service National Resilience Assets</p> <p>LAS Hazardous Area Response Team (HART)</p> <p>Local Authority Dangerous Structures Engineer</p> <p>Casualty Bureau</p> <p>London Frameworks including:</p> <ul style="list-style-type: none"> •Strategic Coordination Protocol •Mass Fatalities Framework •Mass Casualties Framework •Humanitarian Assistance Framework •Local Authority Emergency Centre Plan 	Sept 2021 Sept 2022
L54a HIGH	Fire LFB	<p>Fires in purpose-built high-rise flats</p> <p>Major fire in a block of flats containing 80 compartments. Potential for 150-200 fatalities and 200 casualties.</p>	3	4	See R54	Sept 2021 Sept 2022
L54b HIGH	Fire LFB	<p>Fires in large public and commercial buildings</p> <p>Fire in large public building, e.g., nightclub, sports stadium, shopping centre, transport hub or other. Potential for up to 50 fatalities and 50 casualties.</p>	2	4	See R54	Sept 2021 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
HL105 HIGH	Accident Local Authorities	<p>Complex built environments</p> <p>Consequences of a major incident affecting large buildings or complex built environments. Incidents in these facilities/areas have the potential to trigger a complex chain of events that lead to serious consequences for public safety.</p>	2	4	<p>Health and Safety at Work Act 1974.</p> <p>Management of Health & Safety at Work Regulations 1999.</p> <p>Fire and Rescue Services Act 2004 & guidance under the Regulatory Reform (Fire Safety) Order 2005.</p> <p>Safety at Sports Grounds Act 1975 and Fire Safety and Safety of Places of Sport Act 1987</p> <p>Local building safety systems and practices</p> <p>Safety Advisory Groups in place at major sports grounds</p> <p>Working with DLUHC around the Lancaster West Estate</p> <p>Fire Safety Act 2021</p>	Nov 2020 Sept 2022
R68 HIGH	HAZMAT LFB	<p>High consequence dangerous goods</p> <p>A road or rail tanker containing dangerous goods and/or “high consequence” dangerous goods are involved in an accident leading to fire and an explosion. Up to 200 fatalities and up to 500 people require medical treatment. 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 the evacuation of the immediate area.</p>	2	4	<p>Health & Safety at Work etc. Act 1974</p> <p>Control of Substances Hazardous to Health Regulations 2002</p> <p>Management of Health & Safety at Work Regulations 1999</p> <p>Reporting of Injuries Diseases and Dangerous Occurrences Regulations</p> <p>Business Continuity Plans for Category 1 and 2 responders, businesses, and other key organisations</p> <p>Major Incident/Emergency Plans for Category 1 and 2 Responders.</p> <p>London Strategic Coordination Protocol</p>	Sept 2021 Sept 2022
R77 HIGH	Systems Failure LFB	<p>Gas Supply Infrastructure</p> <p>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.</p>	2	4	<p>National Emergency Plan for Fuel</p>	Nov 2020 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R63 HIGH	HAZMAT UKHSA	<p>Accidental Release of a Biological Substance</p> <p>Inadvertent release of a biological agent caused by an unrelated work activity (e.g., Legionella release due to improperly maintained building environmental control systems) that causes up to 7 fatalities and up to 500 people requiring hospital admissions.</p>	4	3	<p>Health & Safety at Work Act etc 1974</p> <p>Control of Substances Hazardous to Health Regulations 2002</p> <p>The Notification of Cooling Towers and Evaporative Condenser Regulations 1992 require the notification of wet cooling towers and evaporative condensers to local authorities</p> <p>Management of Health & Safety at Work Regulations 1999</p> <p>Reporting of Injuries Diseases and Dangerous Occurrences Regulations</p>	Nov 2020 Sept 2022
R61 MEDIUM	Fires & Industrial Accidents LFB	<p>Fire or explosion at an onshore fuel pipeline</p> <p>The 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.</p>	1	3	<p>Control of Major Accident Hazard 1999 (COMAH) Regulations.</p> <p>The Dangerous Substances and Explosive Atmosphere Regulations 2002</p> <p>Petroleum Regulations</p> <p>Regulatory Reform (Fire Safety) Order 2005</p> <p>Site Operators on-site contingency plans</p> <p>Emergency Service specialist resources</p>	Sept 2021 Sept 2023
R64 MEDIUM	HAZMAT LFB	<p>Large Toxic Chemical Release</p> <p>A large toxic chemical release caused by the release of chlorine or a number of other chemicals. This incident arises from possible mechanical equipment/process failure or corrosion and does not necessarily involve fire or explosion.</p>	1	3	<p>Control of Major Accident Hazards Regulations 2005 (COMAH)</p> <p>Regulatory Reform (Fire Safety) Order 2005</p> <p>Emergency Services and other responder specialist resources</p>	Sept 2021 Sept 2023

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
L66 MEDIUM	HAZMAT LFB	<p>Radioactive incident caused by mishandling of radioactive material</p> <p>A radioactive substance released in London because of an accident at a site or during transportation of radioactive material.</p>	1	3	<p>Radiation Monitoring Equipment deployed in affected areas.</p> <p>London Fire Brigade Mass Decontamination</p> <p>Procedures Scientific Technical Advice Cell (STAC)</p> <p>Scientific Advice to Government in Emergencies (SAGE)</p> <p>Radiation Protection Advisors</p>	<p>Sept 2021</p> <p>Sept 2022</p>
R69 MEDIUM	HAZMAT Local Authorities	<p>Food Supply Contamination</p> <p>A major contamination incident involving a microbiological pathogen in the food chain. This would cause illness, hospitalisation, and possible fatalities over a period of time while the source of contamination is identified and an overall response time of months.</p>	2	3	<p>Food Safety Act 1990</p> <p>Imports monitored</p> <p>Local Authority Environmental Health Sampling</p> <p>Public Health England monitoring and surveillance</p> <p>Food Standards Agency plans</p>	<p>Nov 2020</p> <p>Sept 2022</p>
R55 MEDIUM	Accident LFB	<p>Fire or explosion at a fuel distribution site</p> <p>Fire or explosion at a fuel distribution site or a site storing flammable and/or toxic liquids.</p>	1	4	<p>Control of Major Accident Hazard 1999 (COMAH) Regulations.</p> <p>The Dangerous Substances and Explosive Atmosphere Regulations 2002</p> <p>Petroleum Regulations</p> <p>Regulatory Reform (Fire Safety) Order 2005</p> <p>Site Operators on-site contingency plans</p> <p>Emergency Services specialist resources</p>	<p>Sept 2021</p> <p>Sept 2023</p>
R57 MEDIUM	Accident LFB	<p>Explosion at a high pressure gas pipeline</p> <p>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/vapour.</p>	1	4	<p>Pipeline Safety Regulations 1996</p> <p>Regulatory and industry measures, including provision of maps for excavation</p> <p>Emergency Services and other responder specialist resources</p>	<p>Nov 2020</p> <p>Sept 2022</p>

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R71 MEDIUM	Accident LFB	<p>Aviation crash</p> <p>The worst-case scenario involves the collision of two commercial aircraft.</p>	1	4	<p>Stringent controls on aircraft entering UK Airspace including the mandatory use of Aircraft Collision Avoidance systems on heavy aircraft.</p> <p>Access to UK airspace is heavily regulated</p> <p>CAA Maintenance and Flight safety standards exceed ICAO recommendations</p> <p>Airline maintenance regimes are subject to CAA scrutiny and regulation.</p> <p>Strict controls over London Approach.</p>	Nov 2020 Sept 2022
L71a MEDIUM	Accident LFB	<p>Large aircraft incident in proximity to airport</p> <p>An aircraft incident in the proximity of the airport boundary with fatalities or serious injuries resulting. Possibility for local structural collapse, HazMat material contamination.</p>	2	3	See R71	Sept 2021 Sept 2022
L71b MEDIUM	Accident LFB	<p>Small aircraft incident in proximity to airport</p> <p>Small aircraft incident variation of L71a. Under 20 people are directly involved in the incident.</p>	2	3	See R71	Sept 2021 Sept 2022
HL10 MEDIUM	Accident TfL	<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.</p>	2	2	<p>The Road Traffic Act 1988</p> <p>The Road Vehicle (Construction and Use) Regulations 1986</p> <p>The Traffic Management Act 2004</p>	Sept 2021 Sept 2023

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
HL11 MEDIUM	Accident TfL	<p>Railway Accident</p> <p>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.</p>	3	2	<p>Railway and Transport Safety Act 2003</p> <p>Railways (Access and Management) Regulations 2005</p> <p>Railways (Accident Investigation and Reporting) Regulations 2005</p> <p>Railways (Licensing of Railway Undertakings) Regulations 2005</p> <p>Railways Act 2005</p> <p>The Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006</p> <p>The Railway Safety Levy Regulations 2006</p> <p>The Railways Act 1993</p> <p>Transport Act 2000</p> <p>Health and Safety at Work etc. Act 1974</p> <p>The Railway (Safety Case) Regulations 2000</p>	Sept 2021 Sept 2023
HL22 MEDIUM	Accident Local Authorities	<p>Building Collapse</p> <p>The collapse of a large building (high-rise block, shopping mall etc.). Up to 100 fatalities depending on the size and construction of the building, occupation rates, and 350 casualties. Potential for a number of persons to be trapped or missing. Localised loss of power and other essential services. Local access routes are affected due to road closures.</p>	1	3	<p>Building Control regulations enforced by Local Authorities</p> <p>Construction, renovation, maintenance and demolition standards and enforcement</p> <p>Emergency Services and other responders' specialist resources</p>	Nov 2020 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
HL23 MEDIUM	Accident Local Authorities	Bridge Collapse Roads, access routes and transport infrastructure are impassable for a considerable length of time. Severe congestion over a wide geographical area. Emergency access into/out of large, populated areas is severely restricted. Potential for a number of persons to be trapped or missing.	1	3	Building Control regulations enforced by Local Authorities Regular inspections under the Highways Act 1980 Height and weight restrictions and signs reduce the likelihood of an incident London structural collapse site management and recovery framework	Nov 2020 Sept 2022
HL34 MEDIUM	Accident MCA	Evacuation of passenger ship An 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.	1	3	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. These regulations are 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	Nov 2020 Sept 2022
R75 MEDIUM	Systems Failure Thames Water	Water Supply Infrastructure 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 reasonable worst-case scenario assumes up to 350,000 people affected for between 24 hours and two weeks.	1	3	Water Industry Act 1991 Security and Emergency Measures Direction 1998 Water companies mutual aid arrangements in place	Nov 2020 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R78 MEDIUM	Systems Failure LFB	<p>Disruption to or failure of telecommunications systems</p> <p>Loss of fixed and mobile telecommunications (both voice service and internet access) for up to 100,000 people for up to 72 hours.</p>	2	2	<p>Civil Contingencies Act 2004</p> <p>Telephone provider demand and network capacity management strategies</p> <p>National Emergency Alert for Telecoms</p>	Nov 2020 Sept 2021
R79 MEDIUM	Systems Failure	<p>Technology Failure at a retail Bank</p> <p>A technological failure 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.</p>	4	2	<p>The financial services sector plans to deal with a surge in demand for consumer-facing financial services</p> <p>Communication plans to encourage consumer awareness which can be coordinated between HM Treasury, the Bank of England, and the Financial Conduct Authority</p> <p>Collective incident response capability under the Authorities Response Framework</p> <p>Business Continuity Management plans for financial service sector firms and their regulators.</p>	Sept 2020 Sept 2022
R74 MEDIUM	Systems Failure EA	<p>Reservoir/Dam Collapse</p> <p>A reservoir or dam collapses without warning resulting in almost instantaneous flooding. Significant movement of debris (including vehicles) and sediment. Destruction of some residential and commercial properties and serious damage of up to 500 properties. Several thousand other properties could be flooded.</p>	1	4	<p>Reservoirs Act, 1975</p> <p>Water Act, 2003</p> <p>Regular statutory inspections</p> <p>Met Office National Severe Weather Warning Service</p>	Nov 2020 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R66 MEDIUM	Accident LFB	<p>Radiation Release from overseas nuclear accident</p> <p>A radioactive substance release that affects the UK as a result 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 the worried well.</p>	1	4	REPPIR	Nov 2020 Sept 2022
R62 LOW	HAZMAT UKHSA	<p>Accidental release of a Biological Pathogen</p> <p>Biological substance release from a facility where pathogens are handled deliberately (e.g., Hazard Group 3 or 4 pathogen release from containment laboratory). A pathogen is accidentally released from a containment laboratory in an urban area that causes up to 5 fatalities, up to 500 hospital admissions, and a further 1500 non-hospital cases.</p>	1	2	<p>Animal Health Act 1981</p> <p>Specified Animal Pathogens Order 1998</p> <p>Health & Safety at Work etc. Act 1974</p> <p>Control of Substances Hazardous to Health Regulations 2000</p> <p>Management of Health & Safety at Work Regulations 1999</p> <p>Reporting of Injuries Diseases and Dangerous Occurrences Regulations</p> <p>Carriage of Dangerous Goods (Classification, Packaging and Labelling Regulations H12</p> <p>Genetically Modified Organisms (Contained Use) Regulations 2000</p>	Nov 2020 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R67 LOW	HAZMAT PLA	<p>Maritime Pollution</p> <p>A large fully laden oil super tanker sinks in the approach to a port leading to the spillage of 100,000 tonnes 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 major port infrastructure.</p>	1	2	<p>Dangerous Substances in Harbour Areas Regulations 1987.</p> <p>Merchant Shipping (Oil Pollution Preparedness, Response and Cooperation Convention) Regulations 1998.</p> <p>Port State Control checks coordinated in European waters</p> <p>All vessels navigating on the tidal Thames required PLA licence</p> <p>PLA Vessel Traffic Service</p> <p>National Contingency Plan for Marine Pollution from Shipping and Offshore Installations (2000)</p> <p>Oil Spill Contingency Plan Guidelines for Ports, Harbours & Oil Handling Facilities</p>	2019 2022
R70 LOW	HAZMAT LFB	<p>Radiation exposure from stolen goods</p> <p>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	<p>Radioactive Substances Act 1993</p> <p>High Activity Sealed Source Regulations 2005</p> <p>Arrangements for safe handling and disposal of radioactive sources</p> <p>Radiation detectors at high-risk sites</p> <p>Environment Agency inspections of all major sources</p> <p>Emergency Services specialist resources</p>	Nov 2020 Sept 2022

Human and Animal Diseases

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R95 VERY HIGH	UKHSA	<p>Influenza-type pandemic</p> <p>A worldwide outbreak of influenza occurs when a novel flu virus emerges with sustained human to human transmission. Up to 50% of the population may experience symptoms, which could lead to up to 750,000 fatalities in total in the UK. Absenteeism would be significant and could reach 20% for 2-3 weeks at the height of the pandemic, either because people are personally ill or caring for someone who is ill, causing a significant impact on business continuity.</p>	3	5	<p>NHS Vaccination Programme (Seasonal and provision for pandemic specific)</p> <p>Specific NHS capacity and response planning</p> <p>Comprehensive surveillance systems</p> <p>London frameworks:</p> <ul style="list-style-type: none"> • Pandemic influenza framework • Excess deaths framework • STAC arrangements 	Sept 2021 Sept 2022
R96 HIGH	UKHSA	<p>The growth and spread of anti-microbial resistance</p> <p>The emergence of a pan-resistance, highly virulent bacterial strain causing a number of different pan-resistant bacterial infections to develop that can spread between people. Existing control measures would be overwhelmed, and transmissions would be sustained between health care settings and communities.</p>	3	3	<p>Health & Safety at Work etc. Act 1974</p> <p>Management of Health & Safety at Work Regulations 1999</p> <p>Health Sector response plans.</p> <p>Regulation and audit by HSE</p> <p>Guidance produced by UKSHA for acute trusts to control the spread of CPE</p> <p>The Advisory Committee on Dangerous Pathogens (ACDP)</p> <p>Carriage of Dangerous Goods (Classification, Packaging and Labelling Regulations</p> <p>Genetically Modified Organisms (Contained Use) Regulations 2014</p>	Sept 2021 Sept 2022

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R97 HIGH	UKHSA	<p>Emerging infectious diseases</p> <p>Based upon the experience of the outbreak of SARS and, more recently, MERS and Ebola, the likely worst-case impact of such an outbreak originating outside the UK would be cases occurring amongst returning travellers 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 the sustained spread.</p>	3	3	<p>NHS Vaccination Programme</p> <p>Specialist capability and capacity planning in NHS trusts</p> <p>Comprehensive surveillance systems and response arrangements</p> <p>London pandemic influenza framework</p> <p>London Strategic Coordination Protocol</p>	<p>Sept 2021</p> <p>Sept 2022</p>
R98 MEDIUM	Local Authorities	<p>Outbreak of animal disease</p> <p>A disease is introduced into a predominantly sheep area, and infected animals are sold at market or moved to other premises before the disease is detected, resulting in widely dispersed multiple outbreaks. Assessment based on the need to cull and dispose of up to 4 million animals with up to 900 infected premises across the UK. Movement of all susceptible livestock is 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	<p>Animal Health Act 1981</p> <p>Animal Health Act 2002</p> <p>Other secondary legislation and EU directives</p> <p>National disease control strategies</p> <p>London Strategic Coordination Protocol</p> <p>Local authority notifiable animal disease planning</p>	<p>Nov 2020</p> <p>Sept 2022</p>

Societal Risks

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in place	Last Review Next review
R104 HIGH	Humanitarian MPS	Public Disorder Large scale public disorder at a site(s) in a single city, or in multiple cities, occurring concurrently over several days.	5	3	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	Sept 2021 Sept 2022
R105 MEDIUM	Humanitarian Local Authorities	Influx of British Nationals The influx of destitute/vulnerable British Nationals who are not normally residents in the UK and cannot be accommodated by family/friends. Up to 10,000 BNs not normally resident in the UK return to the UK within a 3-4 week period following a 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.	4	2	Local authority: Standard social care and emergency housing arrangements. Existing mutual aid agreements are in place across London. Heathrow Travel Care – a team of social workers. Other organisations: Full-time officer located at Heathrow (alongside Heathrow Travel Care) to consider the issue of repatriation at ports. Position funded by the Foreign, Commonwealth and Development Office. Red Cross and FCDO agreement on repatriation; Meet & greet returning passengers at the airport, arrange onward transport, supported by the FCDO	Nov 2020 Sept 2022
R102 MEDIUM	Industrial Action Local Authorities	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.	2	2	Legal requirements re: conduct of industrial disputes. Stocks of contingency fuel to varying degrees National Emergency Plan for Fuel	Sept 2021 Sept 2023

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in place	Last Review Next review
R101 MEDIUM	Industrial Action TfL	Industrial action (public transport) 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.	3	2	Health and Safety at Work Act 1974. Employment Act 1980. Employment Act 1988. Public Order Act 1986. Trade Union and Labour Relations (Consolidation) Act 1992. Anti-Social Behaviour Act 2003. Organisational Business Continuity Arrangements	Sept 2021 Sept 2023
R99 MEDIUM	Industrial Action LFB	Industrial action (firefighters) A national fire strike in England for a continuous eight-day period with a loss of life directly attributable to a weakened response by individual fire and rescue services, and reputational impact on government.	2	2	Police Act (1996) RCN Code on Industrial Action Alternative emergency cover protocols for the Fire Brigade Organisational Business Continuity Arrangements Recall to active duty	Sept 2021 Sept 2022
R100 MEDIUM	Industrial Action MoJ	Industrial action (Prison officers) Industrial action by operational prison staff, leading to a shortfall of staff available for duty for more than 24 hours.	4	2	Criminal Justice and Public Order Act (1994)	Sept 2019 Sept 2022
R80 MEDIUM	Failure of governance Business Sector Panel	Systemic Financial Crisis A severe economic downturn and/or crisis of confidence precipitates the failure of one or more UK banks. This would have a major negative impact on the GDP (Gross Domestic Product) by reducing bank lending, consumption, and broader investment. Such a crisis would likely lead to a recession and accompanying pressure on living standards.	2	3	Prudential Regulation Authority, Financial Conduct Authority and Financial Policy Committee regulatory bodies Financial Services and markets Act 2000	Nov 2020 Sept 2022

Risk ID Rating	Sub-category Lead	Outcome Description	Likelihood	Impact	Controls in place	Last Review Next review
R72 MEDIUM	Failure of Governance Local Authorities	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 organisations.	4	2	Commercial business continuity and contingency plans Service continuity plans to maintain critical services	Sept 2021 Sept 2023
R73 MEDIUM	Failure of governance Local Authorities	Major Social Care Provider Failure The failure of a major domiciliary care provider affecting 20,000 vulnerable people and their families.	4	2	Contingency planning for a large scale incident of this type would remain with Central Government Local authority service continuity plans	Sept 2021 Sept 2023
R103 LOW	Failure of governance Local Authorities	Insolvency affecting fuel supply Significant disruption to fuel supplies as a result of insolvency at a key refinery or terminals. Primary impacts are a disruption to the production and/or supply of refined fuel products. Shortages can cause elevated short-term demand.	1	2	Reserve fleet of Road tankers Temporary financial assistance to some organisations to maintain fuel supplies while the market responds. Central government arrangements for emergency fuel deliveries from the downstream oil industry to maintain deliveries to key sites.	Sept 2021 Sept 2023

Natural Hazards

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R83 VERY HIGH	EA	<p>Surface Water Flooding</p> <p>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	<p>Flood and Water Management Act 2010 The Flood Risk Regulations 2009</p> <p>Land Drainage Act 1991 Water Resources Act 1991</p> <p>FFC – Flood Guidance Statements</p> <p>New building developments are controlled through planning guidelines</p> <p>Multi-Agency Flood Plans</p> <p>London Strategic Flood Framework National Flood Emergency Plan</p> <p>Environment Agency Floodline</p> <p>Multi-agency communication</p>	<p>Sept 2021</p> <p>Sept 2022</p>
R92 VERY HIGH	Met Office	<p>Severe Space Weather</p> <p>Disruption to the electricity grid, resulting in two rural/coastal sub-station disconnections each affecting 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.</p>	3	4	<p>Electricity Industry monitoring and analysis of GIC</p> <p>Space Weather is assessed as part of the Daily Hazards Assessment</p> <p>National Grid design standards and response arrangements</p> <p>Alternative positioning, navigation, and timing signal systems</p> <p>Forecasting through Met Office Space</p> <p>Weather Operations Centre</p>	<p>Nov 2020</p> <p>Sept 2022</p>

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R84 VERY HIGH	EA	<p>Severe Drought</p> <p>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.</p>	3	4	<p>Water Resources Act 1991</p> <p>DEFRA: Planning for Major Water and Wastewater Incidents in England and Wales</p> <p>Drought Plan direction document</p>	<p>Sept 2021</p> <p>Sept 2022</p>
R87 HIGH	Department for Transport	<p>Volcanic eruption</p> <p>Volcanic ash incursions for up to 25 days (assumed not to be sulphur-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</p>	4	3	<p>Met Office Volcanic Ash Advisory Centre Forecasting</p> <p>CAA Volcanic Ash Safety Regime</p> <p>Airline response plans</p>	<p>Sept 2019</p> <p>Sept 2022</p>

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R85 HIGH	EA	<p>Poor Air Quality</p> <p>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 cardiovascular conditions.</p>	3	3	<p>Air Quality Standards Regulations 2010</p> <p>European directive on ambient air quality and cleaner air for Europe (2008/50/EC)</p> <p>The UK Air Quality Strategy</p> <p>Environmental Permitting Regulations 2010</p> <p>Clean Air Act & Environmental Protection Act</p> <p>Local authority air quality management areas and action plans</p> <p>London Mayor's Air Quality Strategy, which encompasses Ultra Low Emissions Zones and Low Emission Neighbourhoods</p> <p>AirTEXT warning system</p> <p>Local Air Quality Action Plans</p> <p>Local Air Quality Monitoring Network</p> <p>GLA Air Quality Action Plan</p>	Nov 2020 Sept 2022
R90 HIGH	NHS	<p>Heatwave</p> <p>Daily maximum temperatures in excess of 32°C and minimum temperatures in excess of 15°C over most of a region for around two weeks at least with five consecutive days where maximum temperatures exceed 32°C. Up to 1,000 fatalities and 5,000 casualties, mainly amongst the elderly.</p> <p>There could be disruption to power supply, telecommunications links, and transport infrastructure within the 2 weeks.</p>	4	3	<p>Health & Safety at Work Act 1974</p> <p>Public Health Act</p> <p>Heatwave Plan for England</p> <p>Long term planning for local authorities, CCGs, and NHS</p> <p>Climate Change Adaption Strategy for London</p> <p>Heat Health Watch</p> <p>Department of Health Heatwave Plan for England</p>	Dec 2020 Sept 2022

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R91 HIGH	Met Office	<p>Low temperatures and heavy snow</p> <p>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 seven days. Most lowland areas experience some falls in excess of 10cm at a time, with an overall snow depth in excess of 30cm. This would coincide with a period of at least seven consecutive days with a daily mean temperature below -3°C.</p>	3	3	<p>Met Office Hazard Manager Service</p> <p>Warning & Informing</p> <p>Category 1 & 2 responders' emergency response, business continuity and severe weather plans.</p> <p>Highways Agency, TFL and local authorities' winter road maintenance plans.</p> <p>Met Office forecasts & National Severe Weather Warning Service</p> <p>TfL snow desk</p> <p>Op GRIDLOCK to support motorists stranded on M25.</p>	Nov 2020 Sept 2022
L19 HIGH	EA	<p>Groundwater Flooding</p> <p>Following unprecedented amounts of extended above-average rainfall throughout three winter months, groundwater levels are exceptionally high throughout London. The main areas of concern are in the South East of London, where the geology is predominately chalk.</p>	3	3	<p>Flood and Water Management Act 2010</p> <p>The Flood Risk Regulations 2009</p> <p>Land Drainage Act 1991</p> <p>Water Resources Act 1991</p> <p>Environment Agency Floodline</p> <p>FFC – Flood Guidance Statements</p> <p>New building developments are controlled through planning guidelines</p> <p>Multi-Agency Flood Plans</p> <p>London Strategic Flood Framework</p> <p>National flood emergency plan</p>	Nov 2021 Sept 2022

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
HL19 HIGH	EA	<p>Coastal/Tidal Flooding</p> <p>Localised 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.</p>	3	3	See L19	Sept 2021 Sept 2022
R93 MEDIUM	Met Office	<p>Storms and Gales</p> <p>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.</p>	3	2	<p>Met Office Hazard Manager Service</p> <p>Warning & Informing</p> <p>Category 1 & 2 responders emergency response plans</p> <p>Highways Agency response plans.</p> <p>TfL adverse weather plans</p> <p>LFB USAR and Water Rescue capabilities.</p> <p>LAS HART</p>	Nov 2020 Sept 2022
HL21 MEDIUM	LFB	<p>Land Movement</p> <p>Roads and access routes are impassable for a time. Emergency access into/out of large, populated areas is difficult or impossible, severe congestion over a wide geographical area. Loss of power and other essential services over a wide geographical area. Potential for a number of persons to be trapped or missing either in landslide itself and/or in collapsed structures.</p>	3	2	<p>Land use planning restrictions</p> <p>Building Control regulations enforced by Local Authorities.</p> <p>Construction, renovation, maintenance, and demolition standards</p>	Nov 2020 Sept 2022

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
L54c MEDIUM	Accident LFB	Fires involving landfill and waste processing sites Major fire lasting several days with significant environmental and local impacts.	5	3	See R54	Sept 2021 Sept 2022
L54e MEDIUM	Accident LFB	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.	3	2	See R54	Sept 2021 Sept 2022
R94 LOW	Local Authorities	Earthquake An earthquake that results in the ground shaking with an intensity of six on the European Macroseismic Scale (EMS), is classed as 'strong'. Many houses and buildings suffer slight non-structural damage like hair-line cracks and the falling of small pieces of plaster.	1	1	London and national generic response plans <ul style="list-style-type: none"> • Site clearance • Evacuation & Shelter • Recovery Mutual aid arrangements Specialist fire and rescue assets	Sept 2021 Sept 2023

Hostile State Activity

Risk ID Rating	Lead	Outcome Description	Likelihood	Impact	Controls in Place	Last Review Next Review
R43 LOW	Local Authorities	<p>Undermining Democratic Activity</p> <p>A cyber attack conducted by a hostile state actor on a UK Electoral system during an election period. The attack could disrupt the electoral processes, resulting in data loss or manipulation and impact the result or public confidence in the result.</p>	3	1	UK Electoral processes are largely not reliant on computer systems vulnerable to this type of attack	Nov 2020 Sept 2022

Threats

In this public version of the Borough Risk Register threats and cyber risks are grouped and summarised by the target. Further detail on the types of threats is available in the [National Risk Register](#).

Threats are assessed nationally, so reassessment dates are not included.

Risk ID Rating	Outcome Description	Likelihood	Impact	Controls in Place
T1 MEDIUM	<p>Attacks on Publicly Accessible Locations</p> <p>There has been an increase in the frequency of terrorist attacks in the UK since 2017. Nearly all attacks have occurred in public ally accessible locations.</p> <p>A defining feature of such attacks is the targeting of people. This may be random or aimed at a specific group. Impacts may include fatalities and physical and/or psychological casualties, significant damage to infrastructure and other property, increased demands on and disruption to essential services.</p>	5	2	<p>Continued warning and informing of crowded places through heightened security alerts and Physical security measures where appropriate</p> <p>Emergency services response plans & specialist resources</p> <p>Work of Counter Terrorism Security Advisors to raise awareness and provide training</p> <p>Op Servator hostile reconnaissance disruption operations Targeted comms from counter-terrorism police to stakeholders</p> <p>Public awareness campaigns provide advice to the public, including digital tools and e-learning</p>
T2 HIGH	<p>Attacks on Infrastructure</p> <p>Critical National Infrastructure is the facilities, systems, sites, information, people, networks, and processes that keep the UK running and provide the essential services we all rely on. This includes electricity and water services and telecommunications.</p> <p>Attacks could be carried out with a variety of methods, including explosives or cyber-attacks.</p> <p>Consequences of attacks of this nature could include disruption to essential services, possible evacuation of residents or employees, economic impacts.</p>	4	3	<p>UK Government's counter-terrorism strategy (CONTEST) (summarised above)</p> <p>Business continuity plans for loss of essential services helps to minimise disruption to users.</p> <p>Well established programme of work to protect infrastructure from terrorism, including protective security advice from the Centre for the Protection of National Infrastructure and local Police services</p> <p>National Cyber Security Centre advises the government and industry on how to secure cyberinfrastructure and respond to incidents.</p> <p>Consequence based planning by the authorities ensures that responses to a variety of emergencies are already planned for.</p>

Risk ID Rating	Outcome Description	Likelihood	Impact	Controls in Place
<p>T3 HIGH</p>	<p>Attacks on Transport</p> <p>In the UK, conventional terrorist attacks on land and air-based transport are more likely than against maritime transport. Physical attacks could take a variety of forms including explosives, noxious substances or attackers wielding blades.</p> <p>Consequences of an attack on a transport system could include fatalities and physical and/or psychological casualties, disruption to the transport system and negative impacts to the national economy.</p>	<p>4</p>	<p>3</p>	<p>Regulation and monitoring of services by the Department for Transport require certain organisations to deliver a range of security measures. Department for Transport also provides advice and best practise to other sectors.</p> <p>“See it. Say it. Sorted.” campaign.</p> <p>British Transport Police work with industry and Department for Transport on security and provide tailored policing of the railway network.</p> <p>Contingency plans developed by operators in conjunction with responders</p> <p>Op Servator hostile reconnaissance disruption operations run by Metropolitan Police Service Protective Security Operations and British Transport Police</p>
<p>T4 MEDIUM</p>	<p>Cyber attacks</p> <p>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 (such as cyber-enabled non-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.</p>	<p>4</p>	<p>2</p>	<p>National Cyber Security Strategy sets out the government response to ensuring that government, Critical National Infrastructure, business, and citizens are as resilient as possible to cyber threats.</p> <p>The National Cyber Security Centre, part of GCHQ, supports the most critical organisations in the UK to improve their cyber resilience. The National Cyber Security Centre also responds to cyber incidents to minimise harm to the UK, help with recovery and learn lessons for the future.</p> <p>Additional outreach to businesses and the public regarding cyber threats and security</p> <p>Centre for Protection of National Infrastructure providing security and cyber security advice</p>

Risk ID Rating	Outcome Description	Likelihood	Impact	Controls in Place
<p>T5 MEDIUM</p>	<p>Smaller Scale CBRN Attacks</p> <p>Malicious actors remain interested in chemical, biological, radiological, and nuclear (CBRN) attack methods. In the UK, it is assessed that terrorists are more likely to use knives, vehicles or improvised explosive devices, but the threats of CBRN attacks cannot be ruled out.</p> <p>CBRN attacks have the potential to kill, injure and cause wide-ranging harm. Depending on the method used, there is potential for catastrophic blast damage, widespread infection, or contamination of people, the environment, buildings, water supplies and food.</p> <p>Attacks could range from a small target incident to large catastrophic events at the highest end of the spectrum, such as the widespread dispersal of a biological agent or the detonation of an improvised nuclear device.</p>	4	2	<p>Improving methods to detect and monitor CBRN materials, including through the border.</p> <p>Regulating access to hazardous materials and their precursors</p> <p>Improving and maintaining capabilities to enable emergency responders to respond effectively, rapidly, and safely</p> <p>Provision of guidance in incidents and increasing public access to information on what to do during general and hazardous materials emergencies</p> <p>Local and organisational CBRN response plans</p> <p>Well-developed specialist response capabilities</p> <p>Access to medical countermeasures and adaptability of other consequence-based plans to respond to unconventional attacks</p> <p>Decontamination process of people and place regularly trained and tested.</p> <p>Continuity plans to ensure effective civil government can continue throughout and after an incident.</p>
<p>T6 HIGH</p>	<p>Medium Scale CBRN Attacks</p> <p>See T5 outcome description</p>	4	3	<p>See T5 Controls in Place</p>

Risk ID Rating	Outcome Description	Likelihood	Impact	Controls in Place
<p>T7 VERY HIGH</p>	<p>Larger 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.</p>	<p>3</p>	<p>5</p>	<p>See T5 Controls in place</p>

5. Risks Removed from the Kensington and Chelsea Risk Register

Risk Removed as deemed non-applicable to London

HL4 (Major pollution of inland waters) – Now covered under the assessment for R67 (Maritime Pollution)

HL14 (Local Road Accident Involving the transport of fuel/explosives) – Now covered under assessment of **R68 (High Consequence Dangerous Goods)** as reasonable worst-case scenarios and outcomes of risk assessments are similar.

HL22a (Small Building Collapse) – removed as the outcomes are covered by HL22 Building Collapse.

HL26a (non-zoonotic animal diseases) and HL26b (zoonotic animal diseases) – these risks now amalgamated into new risk R98 (Outbreak of animal disease)

HL28 (Fuel distribution at a natural gas main) – this risk amalgamated into the assessment for R55 (fire or explosion at a fuel distribution site)

HL30 (Localised explosion at a natural gas main) – this risk was amalgamated into the assessment for R57 (Explosion at a high-pressure gas pipeline), along with R61 (Fire and explosion at an onshore fuel pipeline), because the outcomes were similar.

HL25 Fire or explosion at a flammable gas terminal and HL7 Industrial explosions and major fires – The reasonable worst-case scenarios and responses for both these risks are covered under national risks R55 (Fire or explosion at a fuel distribution site), R57 (Explosion at a high-pressure gas pipeline) and R61 (Fire and explosion at an onshore fuel pipeline).

In addition, several risks that appear on the 2019 National Risk Register do not appear on the London Risk Register for a variety of reasons: Some are out of scope of the London Risk Assessment, the Cabinet Office states that Local Resilience Forums should not consider certain risks as the response would be wholly owned by central government (this is the case for most national threats).

Risks removed as not applicable to the Royal Borough

Risk ID	Risk Subcategory	Rationale
L64	Localised industrial accident involving small toxic release	There are no heavily industrial areas within RBKC, small scale chemical incidents have previously been reported, examples including swimming pool chemicals, cleaning products and air conditioning refrigerants
L21	Fluvial Flooding	There are no ordinary watercourses in the borough
L54d	Wildfires in proximity to urban areas	There is no urban-rural interface large enough in the borough as the largest green space is only 54 hectares

Appendix 1 - The 6 Stage Risk Assessment Process

Contextualisation

A range of factors influences the assessment of both likelihood and impact of risks. Demographics, transportation, and environmental factors all exert an influence on how a risk would manifest in a particular area. Each of the 33 Borough Resilience Forums in London uses this local context to develop its own risk assessments.

Hazard identification and allocation for assessment

London Risk Advisory Group identifies the threats and hazards that, in their view, could give rise to an emergency within London in the next two years.

Lead risk assessors agreed by the group then undertake to assess the likelihood of each risk occurring and to make a judgement of how impactful the reasonable worst-case scenarios of that risk would be. Risks included in the London Risk Register are subject to a scheduled review programme to ensure that each risk is revisited and updated periodically.

Risk analysis

Drawing on guidance from Government, other research and local knowledge, lead assessors consider the likelihood of the risk over the next five-year period. Individual Risk Assessments are then provided to the London Risk Advisory Group for discussion and approval.

Risk evaluation

Individual Risk Assessments are confirmed, and summary information is collated into the Borough Risk Register.

Risk treatment

Gaps in capability against the reasonable worst-case scenarios are assessed periodically by the London Resilience Forum, where additional risk management options are agreed upon as necessary.

Monitoring and review

Risk assessment is not a static process and is subject to constant review. At a minimum, each Individual Risk Assessment is formally reviewed on a 2-year cycle. An annual update of the London Risk Register is published in the spring.

Appendix 2 – Likelihood and Impact Scoring Scales

Further detail on the scoring measures is provided in Annex 4D of “Emergency Preparedness” (HM Government, 2005) or Local Risk Management Guidance (available via Resilience Direct).

Likelihood scale

Score	Likelihood Descriptor	Probability of the Reasonable Worst-Case Scenario occurring within a 12 month period
1	Low	Less than 0.2% chance of occurring per year
2	Medium Low	Between 0.2% and 1%
3	Medium	Between 1% and 5%
4	Medium High	Between 5% and 25%
5	High	More than 25%

Impacts Categories

Each impact category is split into several “indicators” which are scored out of five. Indicator scores are amalgamated to reach a score for that category, and the category scores are amalgamated to reach an overall impact score.

Impact Category	Explanation
Human Welfare	Includes numbers of fatalities and casualties resulting from the reasonable worst-case scenarios, needs for mass evacuation, and short- and long-term accommodation.
Behavioural Impacts	Psychological impacts of the risk, including how people’s perceptions and behaviour 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.
Essential Services	How the reasonable worst-case scenarios might impact the emergency services, critical infrastructure, transport, education and other service and infrastructure providers
Environment	Encompassing long-term impact of 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.
Security	Includes impacts to law enforcement and intelligence services and disruptions to criminal justice and border security.

Appendix 3 – Overall Risk Rating Definitions

Definitions of Nationally Approved Risk Ratings	
Very High (VH)	These are classed as primary or critical risks requiring immediate attention. They may have a high or medium 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)	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 are 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)	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 is given to their being managed under generic emergency planning arrangements.
Low (L)	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.
<i>Based on the model risk rating matrix published in Annex 4F of "Emergency Preparedness" (HM Government, 2005)</i>	

Royal Borough of Kensington and Chelsea

For information, please contact:

Resilience Team
Kensington Town Hall
Hornton Street
London
W8 7NX

Resilience@rbkc.gov.uk

www.rbkc.gov.uk



THE ROYAL BOROUGH OF
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AND CHELSEA