Haringey Resilience Forum

BOROUGH RISK REGISTER

Version 5

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Document History

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Contents

Haringey Resilience Forum - Borough Risk Register

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 London Borough of Haringey.

Haringey Resilience Forum Membership

Agency
Category 1 Responders
Haringey Council
Metropolitan Police Service
British Transport Police
London Fire Brigade
London Ambulance Service
NHS Commissioning Board London
Whittington Health Trust
North Middlesex Teaching Hospital Trust
Public Health England
Environment Agency
Homes for Haringey

1 INTRODUCTION

1.1 COMMUNITY RISK REGISTERS

The Community Risk Register has been created to provide public information about hazards identified which could potentially have an impact upon London. The register has been published in response to the Civil Contingencies Act 2004 The London Community Risk Register and further background information is available to download from the London Prepared website.

1.2 BOROUGH RISK REGISTER

The Borough Risk Register is designed to provide information about hazards identified which could possibly have an impact upon the local area.

The hazards described in both the Community and Borough Risk Registers are worst case scenarios. This document doesn't set out to suggest that the borough is a risky place to live, or predict that any of the hazards covered will definitely occur, but risks are identified so that the emergency services and those who respond to incidents of this nature can prepare for similar events.

1.3 MAINTAINING AND UPDATING THE RISK REGISTERS

Risk assessment is not a static process and is subject to constant review. All of risks identified within the Community Risk Registers are reviewed in a 3 year rolling programme, in addition to this they are reviewed and updated as and when appropriate. As a result of this process the information contained within both the community risk registers and the borough risk register are updated as required.

2 SUMMARY OF RISK RATINGS

Impact						
	Catastrophic (5)		Electricity network failure Catastrophic Unconventional Attack			
	Significant (4)	Major dam failure Transport accident - hazardous chemicals. Accidental release of radioactive material Loss of drinking water infrastructure. Mid-air aircraft collision	Drought Gas supply disruption.	River Flooding Technical failure of regional electricity network	Pandemic Influenza	
	Moderate (3)	Land movement Large chemical release. Fire/explosion at a petrol station. Transport accident - fuel/ explosives. Localised explosion at a natural gas main. Bridge Collapse	Industrial accident - small toxic release Fire in large tower block Large Building Collapse Complex Built Environments Railway Accident Single aircraft accident Cyber attack - infrastructure	New infectious disease Biological agent release Storms and gales Heavy snow Major pollution of controlled waters Water supply disruption Attacks on infrastructure. Small Unconventional Attacks Severe space weather	Surface water flooding Heatwave Industrial action by emergency service workers Public disorder Attacks on crowded places	Fire and rescue industrial action Attacks on the transport system
	Minor (2)	Woodland fire Biological substance release from laboratory. Industrial explosions and major fires.	Industrial action by key rail or London Underground workers.	Tidal / coastal flooding Effusive gas eruption Zoonotic Notifiable animal diseases Fuel Supply Disruption.	No notice loss of telecommunications infrastructure	Fire involving acetylene cylinders Building Collapse Major water main burst.
	Limited (1)			Non-zoonotic Notifiable animal diseases Local accident on a major trunk road.	Volcanic ash Food contamination incident International security incident	Cyber attack – data confidentiality
		Low (1)	Medium-Low (2)	Medium (3)	Medium-High (4)	High (5)
		Likelihood				

3 CONTEXTUALISATION STATEMENT

The London borough of Haringey is a north London borough, and has boundaries with the London Boroughs of Barnet, Camden, Enfield, Hackney, Islington, and Waltham Forest.

3.1 SOCIAL FACTORS

Haringey has approximately 250,000 residents. Haringey's population is constantly changing; 197,200 people moved either into or out of the borough between 2005 and 2009, equivalent to more than three quarters of the current population.

Haringey is one of the most diverse boroughs in London. The proportion of children from black and minority ethnic (BME) communities varies from 30% in Muswell Hill to 78% in Northumberland Park. Over 190 different languages are now spoken in our schools. 2001, half of Haringey's residents were Christian, compared with 58.2% of London's and 71.7% of the residents of England Wales. 11.3% of Haringey residents stated their religion as Muslim, compared with 8.5% of London and 3.0% of England and Wales. Haringey has a lower

percentage of residents who stated their religion as Hindu (2.1%) and Sikh (0.3%) than has London (4.1% and 1.5%, respectively). A fifth of Haringey residents stated that they did not have a religion, which was higher than for London (15.8%) and for England and Wales (14.8%).

Haringey is the 13th most deprived borough in England. Over 57,000 children live in Haringey. Haringey has the 8th highest proportion of children living in poverty in the UK with 22,600 (39.2%) in poverty. The highest rates of children eligible for free school meals are in White Hart Lane (897), Northumberland Park (863) and Tottenham Hale (840). The highest residential densities in Haringey tend to be in the east of the borough, particularly Bruce Grove, Tottenham Hale, St Ann's and Seven Sisters wards.

Haringey has an ageing population with 4.0% of residents 75+ in 2011. The proportion of males (65+) or females (60+) in Haringey claiming pension credits is 40%, the 10th highest proportion in UK.

3.2 ENVIRONMENTAL FACTORS

Haringey is a wholly urban borough, but it does have parks and open spaces. Despite its urban environment Haringey is blessed with a variety of valuable habitats for wildlife such as the ancient woodlands of Bluebell, Coldfall, Highgate and Queen's Woods in the west of the borough and Tottenham Marshes in the east, as well as large and historic public parks including Finsbury and Alexandra Palace.

There are 59 sites of importance for nature conservation (SINC) in the Borough. There are currently 3 Local Nature Reserves (LNR) in Haringey;

- The Parkland Walk
- Railway Fields
- Queen's Wood

Haringey is at risk from fluvial flooding from the River Lee and its tributaries (the Moselle Brook and Pymmes Brook). The danger of fluvial flooding is as a result of an excess of freshwater flows in the River Lee and its tributaries causing the capacity to be exceeded usually caused by prolonged or intense rainfall. The potentially affected flood risk area has 5,000 properties. It is also substantially at risk from surface water flooding.

As a major urban conurbation, London is an Urban Heat Island, making it more prone to summer heat wave conditions.

3.3 LOCAL ECONOMY

Haringey is a largely residential borough, but with significant numbers of businesses, predominantly Small and Medium Sized Enterprises. Within this, a large proportion are sole-traders or micro-businesses. Amongst those large enough to be VAT registered, the largest sectors are real estate, renting and business activities, and wholesale, retail and repairs.

The major retail centres in the borough include:

- Wood Green, including Shopping City
- Tottenham High Road
- Tottenham Hale Retail Park
- Crouch End
- Muswell Hill

3.4 PUBLIC SERVICES

Haringey Council, and the NHS are the two largest employers in the borough. The Council and Haringey Clinical Commissioning Group (local NHS leadership) have their head office functions in Wood Green. There is one hospital in the borough – St Ann's hospital which houses many community and primary care services, and other outpatient services, as well as many of the services provided by Barnet, Enfield and Haringey mental health trust. There are two fire stations, and a number of police stations in the borough.

A substantial proportion of housing in the borough is social housing. The largest provider is Homes For Haringey, which is an "Arms Length Management Organisation" owned by the council. There are several other providers of social housing.

In general, public service provision within the borough is weighted more towards the east of the borough. This reflects the higher levels of deprivation and need in this area.

3.5 TRANSPORT INFRASTRUCTURE

The borough has three underground lines (Northern, Piccadilly and Victoria lines), and four overground lines. It is crossed by major routes from central London northwards, namely the A1 and A10. Both these roads, and the railway lines are strategic national links.

3.6 HAZARDOUS SITES

The relatively small number of industrial sites in the borough means there is little in the way of hazardous sites. There is an upper tier COMAH (Control of Major Accident Hazards) Site close to the borough boundary – the Thames Water Coppermills site. The Gas Holder sites in Hornsey, and Edmonton are now no longer in use. Beyond these, there are many small workshops and factories, some of whom use materials that could cause a localized hazard.

4 HARINGEY RISK REGISTER – HAZARDS

(Note: **Outcome description codes:** 'H' – hazard which will require a national as well as a local response (nationally defined); 'HL' – hazards which would not ordinarily prompt a national response and would usually be dealt with locally (nationally defined); 'B' – hazards which are local to the borough and to which borough teams respond. All outcome description codes are followed by a sequential numerical suffix (either nationally defined for 'H' and 'HL' codes or locally defined for 'B' codes.)

4.1 Human Health

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of Review
H23	**Influenza Type Disease (Pandemic).** Each pandemic is different and the nature of the virus and its impacts cannot be known in advance. Previous pandemics have led to markedly different outcomes. Based on understanding of previous pandemics, a pandemic is likely to occur in one or more waves, possibly weeks or months apart. Each wave may last around 12-15 weeks. A quarter to one half the population could be affected. All ages may be affected, but until the virus emerges we cannot know which groups will be most at risk. In the most severe pandemic, 2.5% of cases may be fatal, but the fatality rate may well be much lower. High number of cases and consultations with healthcare providers may threaten to overwhelm health and other services. F	This is a national risk which does not vary significantly across London.	4	4	Very High	Dec 2015
H24	**Emerging infectious diseases.** An emergency caused by a previously unknown disease, with the outbreak probably originating outside the UK with cases occurring among travellers returning to the UK. Based on a SARS outbreak resulting in up to 100 fatalities and up to 2000	This is a national risk which does not vary significantly across London.	3	3	High	Dec 2015

	casualties nationally. This would cause short term disruption to local hospital intensive care facilities. Possible disruption for several weeks to elective procedures. Possible international travel restrictions, any event of this nature is likely to cause widespread public concern. Impact also dependent on effectiveness of pharmaceuticals in fighting infection.					

Notes on Emergency Response arrangements
Small outbreaks of infectious diseases such as measles occur quite frequently. For more serious outbreaks, a larger scale response is required. Public Health England and Environment Health Officers will deal with an initial outbreak, in conjunction with Local Authority Public Health. The following plans/protocols are in place for these circumstances: - Public Health England Communicable Disease Outbreak Management: Operational Guidance 12 August 2014. - London Resilience Forum Pandemic Influenza Framework V6 - London Working Arrangements for Health Protection Incidents and Outbreaks Rev 02 June 2014 Specialist capability and capacity planning in NHS trusts. NHS resources (doctors, community nurses etc) are made available to undertake key activities such as administering vaccines, treating patients and undertaking testing of potential cases. Comprehensive surveillance systems and response arrangements.

4.2 Flooding

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date review
H19	**Tidal / coastal flooding** Tidal surge, gale force winds and potentially heavy rainfall resulting in overtopping or breach of defences causing widespread structural damage. As little as 1 hour to evacuate up to 300,000 properties (homes & businesses) for up to 14 days. People stranded over a large area. Up to 150 fatalities, 2000 'missing' persons and 2000 casualties. Up to 40,000 people in need of rescue or assistance in-situ over a 36 hour period. 142,000 (22%) of people flooded need assisted sheltering for up to 5 days and 25% of displaced households need temporary accommodation for up to 12 months.	Haringey is not susceptible to coastal or tidal flooding. The River Lee is not tidal north of Hackney. Therefore, the impacts of the above risks are primarily the economic and social effects of a catastrophic incident affecting the London area as a whole, and the impact of providing aid and assistance to affected areas. Potential impacts on Haringey would include: - Impacts on the transport network across London - Economic impacts, particularly for people who work in flooded area - Diversion of emergency services to the directly affected areas.	2	3	High	June 2017
H21	**River Flooding** A massive river flood event, series of cumulative local events or series of concurrent events across multiple geographic regions following a sustained period of heavy rainfall extending over two weeks possibly combined with snowmelt and surface water flooding.	In Haringey, fluvial flood risk comes from three main sources: ▪ Pymmes Brook ▪ Moselle Brook ▪ River Lee A total of 6,034 properties lie within Flood Zone 2 (1 in 1000 year chance). Three flood warning areas serve	3	4	Very High	June 2017

		Haringey: ▪ 062FWF53PymmesC, ▪ 062FWF53Enfield, ▪ 062FWF53Hackney There has been no significant flooding from the River Lee since the completion of the River Lee Relief Channel in 1972.				
H22	**Surface water flooding** Surface water flooding caused by a warm unstable atmosphere, most likely to occur in summer due to the warmer atmosphere having a greater water holding capacity, causing a pattern of convective rainfall events. These events result in pockets of high intensity rainfall in the south east of England and includes rain gauges (in and just outside of London) recording exceptional levels of rainfall over a short duration.	The highly urbanised nature of catchments in the borough means that flash flooding is a possibility if the capacity of drainage systems is exceeded. The number of properties at risk of surface water flooding is as follows: ▪ 721 properties (1 in 100 year chance) ▪ 5,157 properties (1 in 1000 year chance). The worst recent surface water flooding occurred in the summer of 2007. The number of properties affected was relatively low.	3	3	High	June 2017
H44	**Major reservoir dam failure / collapse** Collapse 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	There are four large reservoirs which hold more than 25,000 cubic meters of water in Haringey. These are maintained by the statutory undertaker (Thames Water) and there	1	5	High	June 2017

	of up to 500 properties. Several thousand other properties could be flooded. Up to 200 fatalities, up to 1000 casualties. Up to 50 missing persons and people stranded. Hazardous recovery amongst collapsed infrastructure and debris. Water supply to homes and businesses is lost. Up to 200 people need temporary accommodation for 2 – 18 months. Significant damage to gas, electricity supplies, telecommunications, road and rail links.	are no known concerns about the maintenance regime. There are 15 reservoirs (inc. those in neighbouring boroughs) which could affect Haringey in the event of a dam failure/collapse. Though the most significant risk derives from King George V Reservoir in Enfield. Local risk assessment reflects national risk register. Reservoir flood maps can be found on the Environment Agency website. Reservoir flood inundation maps that identify flood extents, flood velocity and flood depths are available on Resilience Direct.				
L19	**Non fluvial flooding** A rapid increase in volume of water in a localised area due to either; heavy rainfall, groundwater emergence or a burst water main which overwhelms the local drainage or river system, collects in low lying areas resulting in flooding of property or infrastructure. This could be from an intense period of heavy rainfall over an urban area resulting in surface water flooding of low lying locations and quickly raising river levels. Groundwater emergence occurs following extended periods of heavy rain, raising the water table until it breaks out on a spring	The risk of non-fluvial flooding in Haringey derives mainly from burst water mains. The borough has experience several major water main bursts which caused flooding to properties. The most severe were: ▪ Wood Green (2004) ▪ Alexandra Park (2007) ▪ New River Village ▪ Hornsey (2007) ▪ Turnpike Lane (2007).	4	3	Medium	June 2017

	line where it then flows along dry river beds or roads. A burst water main can be sudden burst or gradual leak which overwhelms local drainage. Localised flooding of up to 100 properties for 1-2 days. Up to 3 fatalities and 30 casualties.					

Notes on Emergency Response arrangements
Flooding can vary from localised flooding confined to roads and open spaces, to widespread flooding of property. Haringey Resilience Forum maintains a multi-agency flood response plan, that enables the emergency services, the Council, the Environment Agency and others to work together to deal with flood events. This combined response starts from the point at which flooding looks likely to happen: - The Environment Agency provides flood warnings, and also operates flood defences. For example, the River Lee is protected by a flood relief channel, which is controlled using sluice gates maintained by the EA. - The Council leads the work to locally assess what flooding may happen, or has happened. The Council also maintains a small supply of flood defence equipment. - The London Fire Brigade have specialist equipment and staff for water rescue, and pumping flood water.

4.3 Volcanic Hazards

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
H54	**Disruption to aviation as a consequence of volcanic ash.** Volcanic ash incursions for up to 25 days resulting in sporadic and temporary closures of significant parts of UK airspace for up to a total of 15 days during a 3 month eruption period. The entire UK mainland and potentially other parts of Europe could be affected for up to 10 of these days. A single period of closure within the 3 month eruptive episode may last for up to 12 consecutive days, depending on meteorological conditions.	There is potential for some limited impact on the economy of the borough from this kind of incident, if supply chains are disrupted. However these effects are expected to be comparatively minor, based on the experience in 2010.	4	1	Low	March 2015
H55	**Effusive gas eruption.** A severe volcanic eruption, generating large amounts of gas, aerosol and ash over a 5 month period affecting the UK and Northern Europe.	The numbers of excess deaths in the borough are estimated at 25 over a 5 month period, with a similar level of hospital admissions.	3	2	Medium	March 2015

Notes on Emergency Response arrangements
Generic emergency response arrangements would be used. Local response actions would primarily be to ensure local cascade of public health information, and implementation of any business continuity arrangements required.

4.4 Severe Weather

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
H17	**Storms & Gales.** Storm force winds affecting most of the South East England region for at least 6 hours. Most inland, lowland areas experience mean speeds in excess of 55 mph with gusts in excess of 85 mph. Up to 50 fatalities and 500 casualties with short term disruption to infrastructure including power, transport networks, homes and businesses.	There is no cause to vary from the London-wide assessment of the likelihood of this risk. The casualty and fatality figures provided above are across the whole south east region. The local impact will be lower in some respects (perhaps up to 5 fatalities, and 50 casualties), but the effects in terms of disruption to everyday life could be similar.	3	3	High	June 2016
H18	**Low temperatures and heavy snow.** Snow falling and lying over most of the area for at least one week. After an initial fall of snow there is further snow fall on and off for at least 7 days. Most lowland areas experience some falls in excess of 10cm, a depth of snow in excess of 30cm and a period of at least 7 consecutive days with daily mean temperature below -3°C. Up to 1000 fatalities (excess deaths) and thousands of casualties, mainly amongst the elderly and there is likely to be some disruption to transport networks, businesses, power supply and water supply, and also school closures.	There is no cause to vary from the London-wide assessment of the likelihood of this risk. The casualty and fatality figures provided above are national. The local impact will be much lower. Overall, there are quite low numbers of seasonal 'excess winter deaths' in Haringey. The disruptive effects of heavy snow on this scale would undoubtedly be significant.	3	3	High	June 2016
H48	**Heat Wave.** Daily maximum temperatures in excess of 32°C and	London is particularly susceptible to heat waves owing to the "Urban Heat Island" effect. Within London, central	4	3	High	June 2016

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
	minimum temperatures in excess of 15°C over most of the UK for at least 5 consecutive days and nights. Up to 1000 fatalities and 5000 casualties mainly amongst the elderly. There could be disruption to power supply and transport infrastructure. The heatwave event definition is based on and August 2003 type event, but more severe. There will be subsequent impact on electricity generation and cooling systems. Currently in the London area the summer peak demand is higher than winter due to building air conditioning systems.	London is more likely to reach very high temperatures than outer London areas: Haringey is midway within this range. Heat waves affect the very old and frail particularly, as well as those with health vulnerabilities. Haringey benefits from substantial green spaces that help to provide some cooling during extreme temperatures.				
H50	**Drought.** Periodic water supply interruptions affecting 385 000 businesses in London for up to 10 months. Emergency Drought Orders in place authorising rota cuts in supply according to needs of priority users as directed by Secretary of State. The 2.24 million households in London would not be subjected to supply interruptions.	There is no cause to vary from the London-wide assessment of this risk.	2	4	High	June 2016
HL33	**Forest or moorland fire.** Forest or moorland fire across up to 50 hectares. Evacuation of up to 100 residential homes required. Up to 5 fatalities and 20 casualties.	This risk is extremely unlikely to affect Haringey. There are areas of woodland (Highgate Wood, Queens Wood, and Coldfall Wood) but there is no reason to believe a fire is likely to occur on this scale in these locations. Given the urban nature of the borough, the risk of a fire getting out of control before the Fire Brigade can attend is much lower than in rural areas.	1	2	Low	June 2016

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review

Notes on Emergency Response arrangements
Severe weather emergencies appear to be affecting us with increasing frequency. Because the effects of severe weather are very different, it is difficult to generalise about the response. - The Met Office are responsible for issuing weather warnings to the public, and provide more detailed advice on weather conditions to the emergency services and other public bodies. - During the winter, the Council has a winter service plan, which covers how roads and pavements will be gritted. - Local authorities work with care providers to ensure vulnerable people are able to cope with extremes of temperature.

4.5 Structural Incidents

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
HL21	**Land movement (i.e. caused by tremors or landslides).** Caused by landslides or tremors. 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	There is no cause to vary from the London-wide assessment.	1	3	Medium	Oct 2015

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
	collapsed structures. Up to 5 fatalities depending on the size and location of land movement. Such Incidents are rare within the UK with some areas being more prone to Landslides than others.					

Notes on Emergency Response arrangements
Standard emergency response arrangements would be used for an incident of this kind. The Council has contractors who can undertake clearance of rubble and debris, emergency shoring of structures and similar activities.

4.6 Severe Space Weather

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
H56	**Severe space weather (Coronial mass ejection)** Disruption to two coastal electrical substations serving approximately 100,000 customers each for two or more months. In London power cuts would be restored relatively quickly but rota disconnections may be used during the following four weeks. Disruption to satellite services for several days including interruptions and degradations to GPS, potentially resulting in casualties and fatalities.	There is no cause to vary from the London-wide assessment.	3	3	High	June 2016

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
	Up to 2 weeks disruption to aviation (including increased error rates in flight control and air traffic systems) and temporary loss of wireless systems including mobile phones and internet. Increase in error rate in ground based unprotected digital control systems which are ubiquitous in modern technology, for the duration of the storm.					

Notes on Emergency Response arrangements
Standard emergency response arrangements would be used for an incident of this kind. Power companies, the Council, NHS and other partners have agreed processes for identifying and responding to the needs of vulnerable people.

4.7 Animal Diseases

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
H25	**Non-zoonotic Notifiable animal diseases** (e.g. foot and mouth disease (FMD), classical swine fever, blue tongue and Newcastle disease of birds). The most serious disease in this category is FMD which drives the impact assessments. Assessment based on the need to cull and dispose up to 4 million animals across GB with up to 900 infected premises.	This is a national risk, which has a very minor impact on the borough, due to its urban nature.	3	1	Low	March 2015
H26	**Zoonotic Notifiable animal diseases** (e.g. Highly Pathogenic Avian Influenza (HPAI), rabies and West Nile virus). Culling of up to 30 million poultry (HPAI) plus the possibility of wildlife being affected (Rabies). For West Nile Virus spread by viable vectors in the UK the slaughter of 20-1000 horses is a possibility.	The main risks in Haringey are rabies, or HPAI affecting wild fowl. The overall risk is relatively low due to the urban nature of the borough, although there are some small scale owners of poultry in the borough. A rabies outbreak could affect dog owners.	3	2	Medium	March 2015

Notes on Emergency Response arrangements
Animal Diseases are serious concern in rural areas with farming communities, are of much less concern in cities. - The response to an animal disease outbreak is led by the Department of the Environment, Food and Rural Affairs - The Council is legally required to maintain a contingency plan for dealing with animal disease outbreaks. This enables Council officers to enter and disinfect contaminated premises if needed, as well as maintaining surveillance zones to monitor movement of animals by road.

5 MAJOR ACCIDENTS/ INCIDENTS

5.1 Industrial And Environmental Pollution Incidents And Fires

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
HL3	**Localised industrial accident involving small toxic release** Up to 1km around site causing up to 10 fatalities and up to 100 casualties.	There are no specific sites in Haringey handling toxic substances and there are no examples of past incidents of industrial accidents involving small toxic release in Haringey. The last major incident involving toxic materials was at Johnson Matthey in Enfield in 2011.	2	3	High	August 2017
H46	**Biological substance release during an unrelated work activity or industrial process** Up to 10 fatalities and serious injuries or offsite impact resulting in up to 1000 casualties. Inadvertent Legionella contaminant of wet cooling systems such as cooling towers and evaporative condensers, and air conditioning systems such as humidifiers and industrial air scrubbers.	There are a number of buildings within the borough that contain cooling systems, which might cause this risk. There has been at least one minor incident in the borough in recent years, without fatalities. The likelihood rating is lower than for London as a whole.	3	3	High	August 2017
HL4	**Major pollution of controlled waters.** Pollution incident impacting upon controlled waters (for example, could be caused by chemical spillage or release of untreated sewage) leading to persistent	Controlled Waters in Haringey include Hornsey reservoirs, the New River and Moselle and Pymmes Brook. There are some industrial sites which could pose a pollution risk in extreme circumstances.	3	3	High	August 2017

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
	and/or extensive effect on water quality, major damage to aquatic ecosystems, closure of potable abstraction point(s), major impact on amenity (i.e. tourism) value, serious impact on human health.	London Fire Brigade informs the Environment Agency where a fire poses risk of pollution to land or water.				
HL12	**Local accident involving transport of hazardous chemicals.** Up to 50 fatalities and up to 500 casualties (direct injuries from the accident would be similar to road or rail accidents; indirect casualties are possible, if substance covers wide area). The extent of the impact would depend on substance involved, quantity, nature and location of accident. The assumption is based on phosgene / chlorine.	There are comparatively few sites in Haringey to which deliveries of hazardous chemicals are delivered, although there are some (e.g. chlorine is delivered to swimming pools). There are no known sites that receive large quantities of hazardous material in single deliveries. Hazardous Materials may be transported on the A406 and A10, but this would be on local MPS permission and there is no specific classified risk. LFB are informed of any transport of explosives or nuclear waste by rail.	1	4	Medium	August 2017

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
H9	**Large toxic chemical release.** Up to 3km from site of toxic chemical release causing up to 50 fatalities and up to 2000 casualties from a large industrial complex or bulk storage of chemicals near to a populated (i.e. urban) area. There are some sites of this nature within the M25. Depending on the nature and extent of the contamination there could be impacts on air, land water, animal welfare, agriculture and waste management. This risk might require decontamination. Excessive demands on health care services locally both short and long term. Risk to water supplies and contamination of farm land could lead to avoidance of foodstuffs.	In October 2015, Thames Water Coppermills Water Treatment Works in Walthamstow was reclassified as a Lower Tier COMAH site (previously Upper Tier). Therefore, an offsite plan is no longer required and the risk of a toxic release affecting Haringey is minimal. The site operator maintains an onsite plan, as required by the HSE.	1	3	Medium	August 2017
HL28	**Localised fire or explosion at a fuel distribution site or tank storage of flammable or toxic liquids at petrol stations.** Damage up to 1 km around the **site, causing up to 15 fatalities and 200 casualties.** **Impact on environment, including widespread impact on air quality.**	Petrol station fires are an extremely rare occurrence; but one that crews are trained and prepared for. There are inherent fire safety protocols for petrol stations, which LFB regulatory petroleum department manage and enforce. There are no petrol stations that cause any more risk than any other in relation to their location to other risks i.e. near centres of sensitive population.	1	3	Medium	August 2017
H12	**Biological substance release from facility where pathogens are handled deliberately (e.g. pathogen release from containment laboratory).**	There are no containment laboratories in Haringey handling pathogens that could cause this risk. Therefore this	1	2	Low	August 2017

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
	Up to 10 fatalities and serious injuries or off-site impact causing up to 1,000 casualties. Biological agent release from containment (e.g. infection of laboratory worker or animal) – example SARS release from lab in China resulted in 2 deaths & several hundred people quarantined. This type of release could be the source of an outbreak that leads to H23-H26 risks.	assessment is based on the possibility of a substance release from elsewhere in London that could have a more modest effect in Haringey. The additional cases of illness would be treated using NHS resources from across London. Containment laboratories are regulated and subject to inspection based on the level of risk posed by the biological agents stored.				
HL14	**Local (road) accident involving transport of fuel/explosives.** Up to 30 fatalities and up to 20 casualties within vicinity of accident / explosion. Area would require evacuating up to 1 km radius depending on substances involved. Potential release of up to 30 tonnes of liquid fuel into local environment, watercourses etc. Large quantities of fire fighting media (foam) would impact on environment. Roads and access routes impassable for a time. Emergency access into / out of large populated areas difficult or impossible.	There are no roads specifically in, or near Haringey used as route for transportation of fuel/explosives. Railway routes through the Borough are passenger only. LFB would be advised through Railway regulatory procedures if transportation of hazardous materials was to take place via rail through the borough.	1	3	Medium	August 2017
HL7	**Industrial explosions and major fires**. Damage up to 1km around site, causing up to 20 casualties some of a serious nature. Explosions would cause primarily crush / cuts and bruise-type injuries, as well as burns.	There are a small number of industrial sites in the borough, though none of these pose a significant risk. Calor Gas Site in Enfield is the largest site in close proximity to the borough.	1	2	Low	August 2017

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
HL30	**Localised explosion at a natural gas main.** Causing up to 100 fatalities and up to 100 casualties. Impact on environment, including persistent/widespread impact on air quality.	No areas are identified to be at significant risk in the borough. Calor Gas Site in Enfield is the largest site in close proximity to the borough, however this is located is largely non-residential area.	1	3	Medium	August 2017
H11	**Accidental release of radioactive material from incorrectly handled or disposed of sources.** Up to 5 fatalities and up to 100 contaminated people requiring medical monitoring. Many worried people may present at hospitals. Radiation may be spread over several kilometres but most concentration where source is opened.	There is no cause to vary from the national assessment of this risk. There are no causes for concern in Haringey in relation to this risk.	1	4	Medium	August 2017
H14	**Major contamination incident with widespread implications for the food chain**, arising from: - Industrial accident affecting food production areas e.g. Chernobyl, *Sea Empress* oil spill, foot and mouth disease. - Contamination of animal feed - Incidents arising from production processes, e.g. adulteration of chilli powder with Sudan I dye. There may be direct animal and consumer health effects arising from this incident. Nationally, a small number of fatalities (5) and casualties (50), is possible although the public health implications of food incidents vary widely.	Food contamination incidents occur nationally with some frequency, but their effects are usually national or regional in scope, and therefore in a single borough the impact would be very minor. Trading Standards would deal with the enforcement aspects, within the normal resources.	4	1	Low	August 2017

Notes on Emergency Response arrangements
Industrial accidents can have very serious consequences for human health and the environment. They require a multi-agency response. - The London Fire Brigade and the London Ambulance Service have specialist teams and equipment for responding in areas of dangerous contamination. - Public Health England would lead on providing advice on hazards to human health, supported by the NHS and Local Authorities. - Where there was serious contamination, the Environment Agency and Local Authorities work together with owners of land and property to ensure the area is restored to safe condition. Hazardous sites are required to maintain the site to a high level of safety, are subject to safety inspections, and in some cases are subject to the "Control of Major Accident Hazards" (COMAH) regulations. This will require them to hold an emergency plan for their site. The majority of industrial accidents and pollution incidents are dealt with using normal major incident procedures. Specialist scientific advice would be accessed through the formation of a Scientific and Technical Advice Cell as needed, lead by Public Health England. However in many cases Standard operating procedures of the Fire Brigade and other emergency responders would be sufficient.

5.2 Major Structural Accidents

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
HL22 & HL22a	**Building Collapse.** Collapse of low rise building, or part thereof. Potential for a number of persons to be trapped or missing. Localised loss of power and other essential services. Local access routes affected due to road closures. Up to 5 fatalities and 20 casualties depending on the size and construction of building, and occupation rates. A	There is no cause to vary from the London-wide assessment for either of these risks. Small scale structural collapses are relatively frequent occurrences, and typically occur due to poor quality building work not carried out in	5	2	Medium	Oct 2015

	number of such incidents occur annually within London.	conformance with building regulations.				
	Large Building Collapse. Collapse of a 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. Localised loss of power and other essential services. Local access routes affected due to road closures.		2	3	Medium	Oct 2015
HL105	**Complex Built Environments.** 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. Impacts include people become lost or trapped, or suffering from crush injuries due to crowd stampedes, or falling masonry.	This risk applies particularly to Shopping City Wood Green, Tottenham Hotspurs FC stadium and Alexandra Palace. These are all well managed public spaces with good safety regimes in place.	2	3	Medium	Oct 2015
HL23	**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	There is no cause to vary from the London-wide assessment. The most likely cause of a bridge collapse is the bridge being struck by a vehicle.	1	3	Medium	Oct 2015

	trapped or missing.	There are a number of low bridges, particularly in Tottenham, which may be susceptible to a bridge strike.				

Notes on Emergency Response arrangements
Structural collapses happen from time to time with small buildings, but are extremely rare with larger structures which are professionally maintained. - In general, normal Major Incident procedures are used to deal with structural collapses. - The London Fire Brigade have Search and Rescue teams and get advice on the structural safety of buildings from the Council's Building Control team. - After a structural collapse, the Council works with the owner on site clearance.

5.3 Utility (Essential Services) Failure

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
H41	**H41 - Technical failure of national electricity network (Blackstart).** Total blackout for up to 3-5 days due to loss of the National Grid. Three days is best time. If there is damage to the network (i.e. from storms) this timescale could be extended up to 5 days. Possible loss of life support machines, civil unrest, no alarms, street lighting, gas heating, rail transport, water supplies and mobile (PMT) telecommunications etc. Backup generators available for limited time for individual businesses and emergency services in some instances. "Power Islands" created over the first day. Most of the country reconnected within three days, London late on in the process. Peak demand not able to be met after three days.	This is a national risk, with no variation in Haringey.	2	5	Very High	Sept 2016
H45	**H45 - Technical failure of regional electricity network due to operational error or bad weather causing damage.** Total shutdown of the electricity supply over the whole of London occurring during working week and lasting for 24hours. Damage to overhead lines from high winds could also cause a power cut lasting several days.	This is a London risk, with no variation in Haringey	3	4	Very High	Sept 2016

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
	An event of this kind occurred in October 1987 when severe storms led to the electricity transmission network in the south east being shut down.					
H38	**Gas supply disruption**. Technical failure of a critical upstream oil/gas facility, gas import pipeline terminal, or Liquefied Natural Gas (LNG) import reception facility leading to a disruption in upstream oil and gas production. Catastrophic accident destroying all parts of a critical upstream facility and, in the worst case, taking months or more to restore to normal levels of service. This could potentially result in up to 11% loss of gas supply to the UK which could impact on power generation if demand were high. As 40% of power is generated by gas-fired power stations, a reduction in generation might also be felt. Downstream oil would not be immediately so adversely affected given alternative means of supply.	This is a national risk, with no variation in Haringey.	2	4	High	Sept 2016
H39 & H49	**H39 – Non-availability of the piped water supply** Loss of or non-availability for drinking, of the piped water supply, for up to 50,000 people, for more than 24 hours and up to 3 days. **H49 - Loss of drinking water supplies due to a major**	The water supply infrastructure operates across London, and the supply to Haringey comes from multiple sources providing supply resilience. The numbers of people involved in	4	3	High	Sept 2016

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
	incident affecting infrastructure. Loss of or non-availability for drinking, of the piped water supply, for a population of up to 350,000 for more than 24 hours and up to two weeks. Fire tenders cannot be refilled from fire hydrants. Severe logistical difficulties in resupply of bottled water or bowsers. Suspension of local services, including schools and hospitals.	either case could be a substantial proportion of the population of the borough, and would be likely to require London-wide support, and potentially mutual aid between water companies on a national scale.	1	4	Medium	Sept 2016
H40	**No notice loss of significant telecommunications infrastructure** in a localised fire, flood or gas incident. Loss of service to up to 100,000 people for up to 72 hours. Building damage to a large urban telecoms facility. Possible impact on the emergency services control rooms.	This risk is assessed as somewhat less likely in Haringey, than across the whole of London.	4	2	Medium	Sept 2016
B3	**Major water main burst.** Burst in trunk water main. Flooding to up to 30 properties, and local evacuation. Localised road closures. Loss of water supplies for up to 12 hours for up to 5,000 homes.	The borough has experience several major water main bursts in recent years which flooding to property. The most severe were in Wood Green (2004), Alexandra Park (2007), New River Village, Hornsey (2007) and Turnpike Lane (2007).	5	2	Medium	Sept 2016

Notes on Emergency Response arrangements
All the infrastructure providers (gas, electricity, and telecommunications) are required by the Civil Contingencies Act to have emergency plans and to cooperate with the emergency services.

In a major failure of a public utility service, the responsibility for resolving the problem and for keeping the public informed is with the service provider first and foremost. Utility companies have arrangements for supporting vulnerable people, which are designed to deal with typical, lower scale outages and disruptions. It is expected that in the event of a power cut or similar disruptive event on the scale described above, public services such as local authorities and the NHS would focus their efforts on minimising the impact on the most vulnerable people, and keeping their own essential services running wherever possible.

5.4 Transport Accidents/ Incidents

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of Review
HL11	**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.	There are a number of overground and underground lines. The crowded nature of commuter trains means the risk is realistic in the borough, despite the fact that generally trains are travelling at lower speeds in London. There is also a level crossing in the borough (cars becoming stuck on level crossings is a potential source of risk).	2	3	Medium	Dec 2016
HL9	**Aviation accident – single aircraft accident.** Aviation accident causing up to 50 fatalities and up to 250 casualties. Accident involving one commercial aircraft, probably on takeoff or landing	As there are no airports in the immediate vicinity of Haringey there is a low probability of a single aircraft accident.	2	3	Medium	Dec 2016

HL9b	**Small Aircraft Incident** A light aircraft is an aircraft that has a maximum gross take off weight of 12,500 lb (5,670 kg) or less. Many light aircraft are used commercially for passenger and freight transport, sightseeing, photography, and other similar roles as well as personal use. This covers an accident involving one commercial aircraft, probably on take off or landing.	As there are no airports in the immediate vicinity of Haringey, there is a low probability of small aircraft incident in the borough. Impact from such an incident would likely be minor with short-term disruption to a small area; however, there is a possibility of damage to buildings or infrastructure, disruption to normal travel capabilities and death or injury to people.	2	2	Medium	Dec 2016
H16	**Aviation accident – mid-air aircraft collision** Collision of two commercial airliners - death of all passengers and crew on aircraft (600 fatalities), 50 fatalities and 300 casualties on the ground. Significant debris but no significant damage to key infrastructure	There is no cause to vary from the London-wide assessment of H16. A catastrophic air accident of this nature is very unlikely.	1	4	Medium	Dec 2016
HL10	**Local accident on a major trunk road**. Multiple vehicle incident causing up to 10 fatalities and up to 20 casualties (internal injuries, fractures, possible burns); closure of lanes or carriageways causing major disruption and delays.	As road traffic speeds are generally low in the borough (ie 30 or 40mph limits), the probability of an accident on this scale is relatively low. However, road accidents are a significant cause of death across the UK. Road traffic accidents can be dealt with, without the use of major incident procedures in most cases.	3	1	Low	Dec 2016

Notes on Emergency Response arrangements
Transport accidents happen from time to time. Road accidents are a routine occurrence, but rarely become major incidents. Rail or air accidents are very rare because operators take and are required to take safety extremely seriously. - Much of the response to a major transport accident is undertaken through normal Major Incident procedures. - Transport operators have their own plans for dealing with damage to infrastructure, and for communicating with and supporting passengers. - If hazardous materials are involved, the roles describe in 3.1 are relevant.

5.5 Disruptive Industrial Action

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
HL42 & H30	HL42 - **Loss of cover due to industrial action by workers providing a service critical to the preservation of life (such as emergency service workers).** A number of three day strikes with significant support over a two month period affecting a single emergency service.	National or London-wide risks without local variation in Haringey.	4	3	High	March 2015
	H30 - **Emergency services: loss of emergency fire and rescue cover because of industrial action.** A series of strikes by fire fighters takes place, spread over a period of two months, perhaps lasting up to 48 hours each.		5	3	High	March 2015
H31	**Fuel Supply Disruption.** Significant or perceived significant constraint on the supply of fuel at filling stations e.g. industrial action by contract drivers for fuel, or effective fuel blockades at	This is a national risk, and therefore its likelihood is the same as the national assessment. The impact in London is possibly somewhat lower than elsewhere due to the extensive public	3	2	Medium	March 2015

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
	key refineries/terminals by protesters, due to the price of fuel. Filling stations, depending on their locations, would start to run dry between 24 - 48 hours. Panic buying would exacerbate the situation. Replenishment of sites would take between 3 - 10 days depending on location. Much would depend on whether operations were able to continue in the presence of picket lines.	transport options available to local people. Nevertheless, many local services, and supply chains for local businesses are dependent on the road network. Therefore this has been assessed in line with the national risk assessment.				
H35	**Industrial action by key rail or London Underground workers.** Strike action resulting in the total shut down of either London Underground or the rail network on a national scale (e.g. action by key rail workers, e.g. infrastructure workers such as signallers) for > 3 days. Greater impact if action occurs in a co-ordinated manner.	Any strike action would affect multiple boroughs, or possibly be national. Strike action is possible on individual train companies, tube lines, rather than affecting every service. Most strikes are of short duration, but the frequency of industrial action means longer strikes cannot be ruled out. Because alternative transport is available to allow most people to make essential journeys the impact is relatively low.	2	2	Medium	March 2015
H57	**Large scale public disorder in multiple sites in a single city occurring concurrently over several days** Disorder assumes criminal nature in urban centre with satellite disorder in suburbs potentially triggered by	Haringey has suffered from large scale public disorder in 1985 and 2011. It remains a significant risk for the borough.	4	3	High	March 2015

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
	existing community tensions. Multi media coverage prevents isolation of disorder in single location, leading to perception of lack of police control.					
H37	**International security incident resulting in an influx of British Nationals who are not normally resident in the UK.** Up to 10,000 British nationals deciding to return to UK to a single region within a 4-6 week period following conventional war, widespread civil unrest or sustained terrorism campaign against British and other western nationals.	There are no ports of entry into the UK in Haringey, and therefore the impact of this risk is spread across the whole country. Its impact is therefore unlikely to be significant in an individual borough such as Haringey.	4	1	Low	March 2015

Notes on Emergency Response arrangements
There are well practiced procedures for dealing with disruptive protests. Generally, preventing widespread disruption is the responsibility of the organisation experiencing industrial action, first and foremost. Often there is a knock-on impact to other public bodies, who may need to use internal business continuity arrangements to avoid disruption occurring. There are more specific arrangements for maintaining fuel supplies to essential services, which rely on the government to invoke national arrangements.

6 MALICIOUS ATTACKS

6.1 Terrorist Attacks

Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	
X1	**Attacks on crowded places** Crowded places remain an attractive target for a terrorist attack. Crowded places 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.	Haringey has a number of venues that can become crowded and therefore might be considered plausible terrorist targets. There is no cause to vary from the London-wide assessment.	4	3	High	March 2015
X2	**Attacks on infrastructure.** 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. Cyber attacks are not incorporated in this risk assessment (see subsequent section).	There is no cause to vary from the London-wide assessment	3	3	High	March 2015
X3	**Attacks on the transport system** Conventional attacks on transport systems are judged to be the more likely (however the likelihood of them	There is no cause to vary from the London-wide assessment	5	3	High	March 2015

	affecting any one individual is still extremely low). This is supported by evidence from around the world. Attacks on transport can take different forms and result in different levels of impact. Stringent security measures are in place at airports. Most rail and underground systems are more open and therefore attractive potential targets. To date no attack against maritime interests in the UK has been mounted by terrorists.					
X4 & X5	**Small Scale Unconventional Attacks.** **Catastrophic Unconventional Attack** 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	There is no cause to vary from the London-wide assessment	3	3	High	March 2015
			2	5	Very High	March 2015

	(assassination or poisoning) to mass-impact (widespread dispersion and contamination) which is reflected in the scores.					

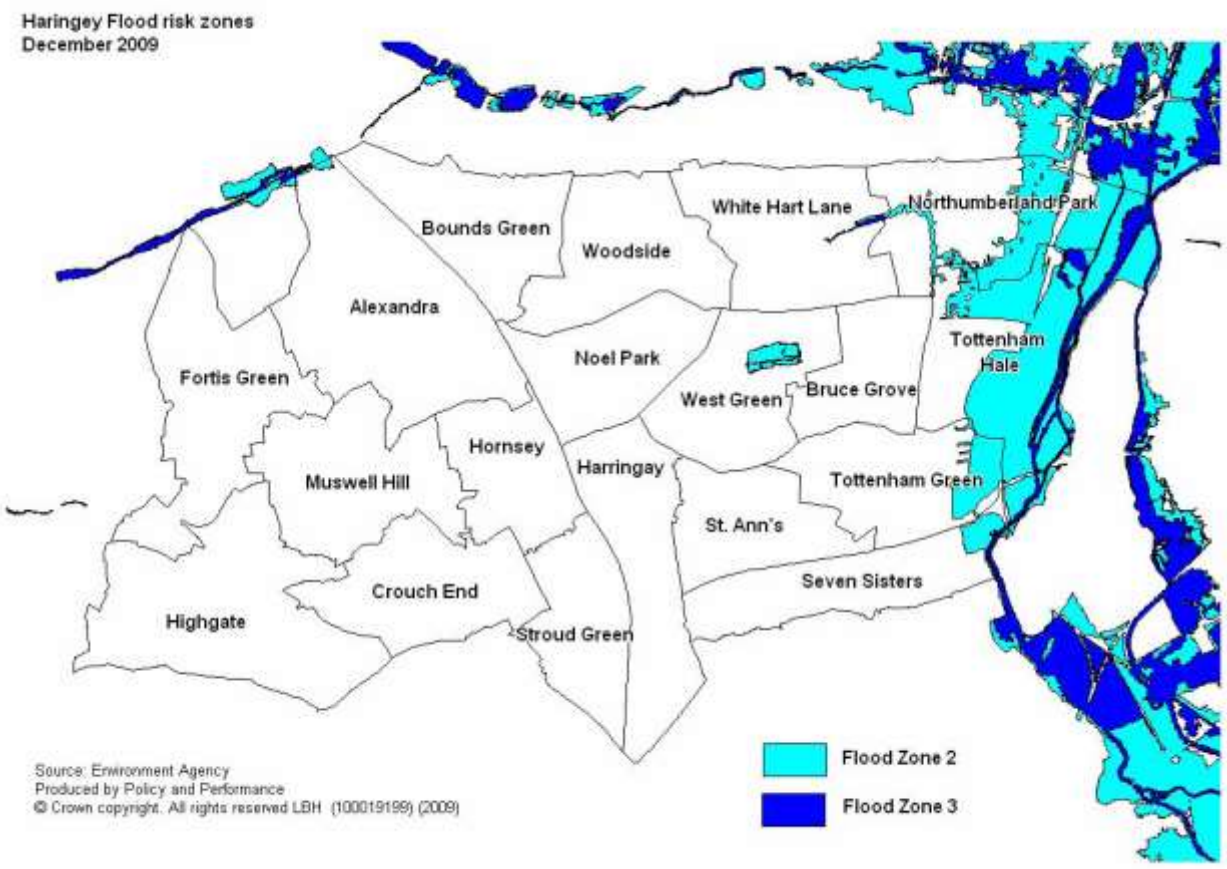
Notes on Emergency Response arrangements
Generic major incident procedures would be used to respond to a terrorist attack, with the lead being taken by the Metropolitan Police Service. Specialist capabilities are in place to deal with mass casualties, mass fatalities and chemical, biological and radiological hazards. There are also local plans for dealing with community tensions and provide information to the public.

6.2 Cyber Security

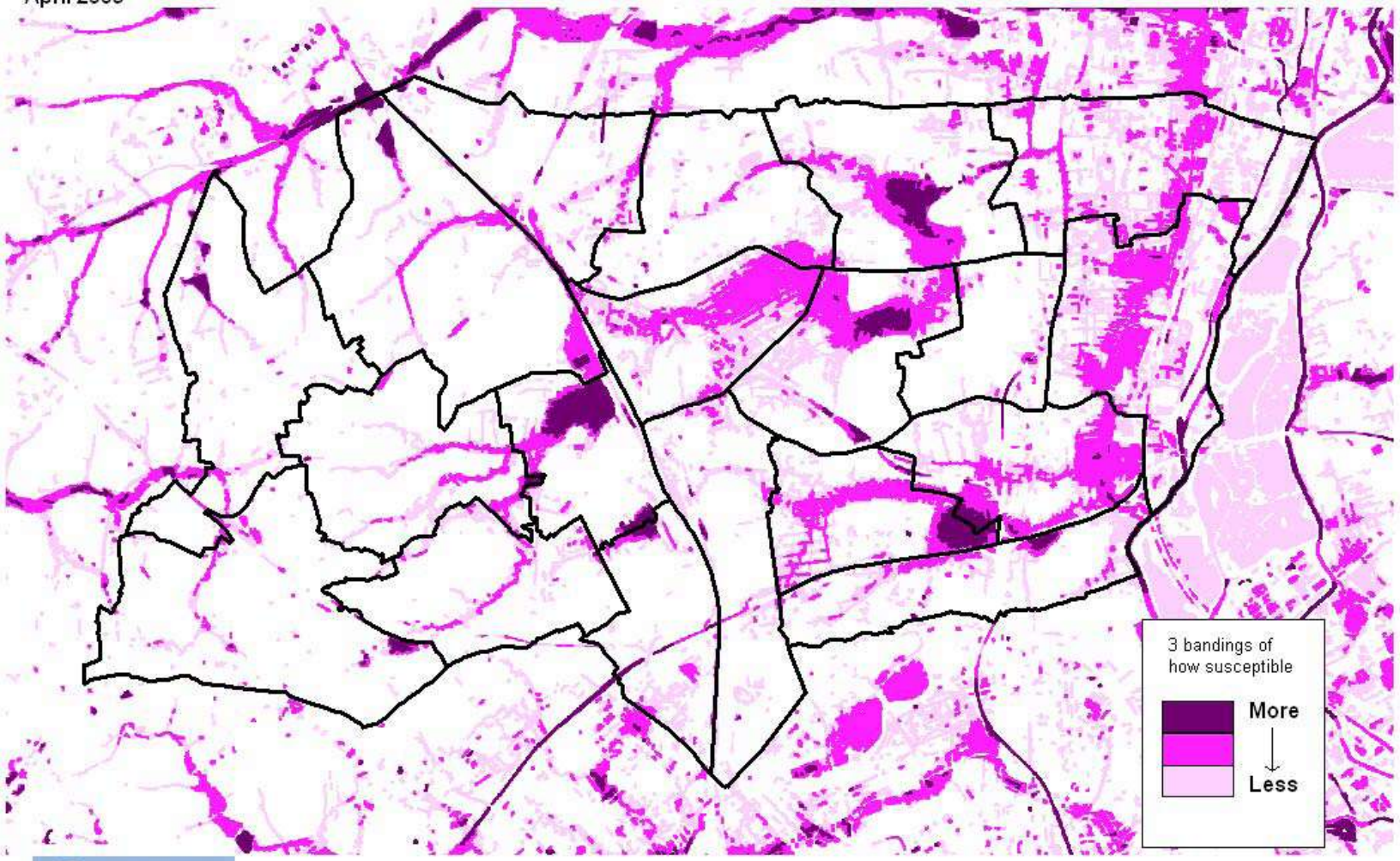
Reference Number	Hazard and Outcome Description	Haringey Commentary	Likelihood	Impact	Risk Rating	Date of review
X6	**Cyber attack - infrastructure** Increasing reliance on cyber space brings new opportunities and new threats. The very openness of the networks presents a vulnerability of compromise or damage to networks from the actions of hackers, criminals or foreign intelligence services.	There is no cause to vary from the London-wide assessment	2	3	Medium	March 2015
X7	**Cyber attack – data confidentiality.** Cyber attacks causing information security breaches and loss of confidentiality are unfortunately relatively frequent. These can cause stress or concern for affected individuals. Wider disruption to services is unlikely to be severe, but might include temporary withdrawal of websites for example.	There is no cause to vary from the London-wide assessment	5	1	Low	March 2015

7 APPENDICES

APPENDIX 1: FLOOD RISK



Areas susceptible to surface water flooding
Haringey
April 2009



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APPENDIX 2: LIKELIHOOD AND IMPACT SCORING SCALES

Impact scoring scale – qualitative measures

Level	7.1.1.1 Descriptor	Categories of Impact	Description of Impact
1	Limited	Health	Limited number of injuries or impact on health.
		Social	Limited number of persons displaced and insignificant personal support required. Limited disruption to community services, including transport services and infrastructure.
		Economic	Limited impact on local economy.
		Environment	Limited impact on environment.
2	Minor	Health	Small number of people affected, no fatalities, and a small number of minor injuries with first aid treatment.
		Social	Minor damage to properties. Minor displacement of a small number of people for < 24 hours and minor personal support required. Minor localised disruption to community services or infrastructure < 24 hours.
		Economic	Negligible impact on local economy and cost easily absorbed.
		Environment	Minor impact on environment with no lasting effects.
3	Moderate	Health	Sufficient number of fatalities with some casualties requiring hospitalisation and medical treatment and activation of MAJAX, the automated intelligent alert notification system, procedures in one or more hospitals.
		Social	Damage that is confined to a specific location, or to a number of locations, but requires additional resources. Localised displacement of > 100 people for 1-3 days.
		Economic	Limited impact on local economy with some short-term loss of production, with possible additional clean-up costs.

		Environment	Limited impact on environment with short-term or long-term effects.
4	Significant	Health	Significant number of people in affected area impacted with multiple fatalities, multiple serious or extensive injuries, significant hospitalisation and activation of MAJAX procedures across a number of hospitals.
		Social	Significant damage that requires support for local responders with external resources. 100 to 500 people in danger and displaced for longer than 1 week. Local responders require external resources to deliver personal support. Significant impact on and possible breakdown of some local community services.
		Economic	Significant impact on local economy with medium-term loss of production. Significant extra clean-up and recovery costs.
		Environment	Significant impact on environment with medium- to long-term effects.
5	Catastrophic	Health	Very large numbers of people in affected area(s) impacted with significant numbers of fatalities, large number of people requiring hospitalisation with serious injuries with longer-term effects.
		Social	Extensive damage to properties and built environment in affected area requiring major demolition. General and widespread displacement of more than 500 people for prolonged duration and extensive personal support required. Serious damage to infrastructure causing significant disruption to, or loss of, key services for prolonged period. Community unable to function without significant support.
		Economic	Serious impact on local and regional economy with some long-term, potentially permanent, loss of production with some structural change. Extensive clean-up and recovery costs.
		Environment	Serious long-term impact on environment and/or permanent damage.

Explanation of categories of impact

Category	Explanation
Health	Encompassing direct health impacts (numbers of people affected, fatalities, injuries, human illness or injury, health damage) and

	indirect health impacts that arise because of strain on the health service.
Social	Encompassing the social consequences of an event, including availability of social welfare provision; disruption of facilities for transport; damage to property; disruption of a supply of money, food, water, energy or fuel; disruption of an electronic or other system of communication; homelessness, evacuation and avoidance behaviour; and public disorder due to anger, fear, and/or lack of trust in the authorities.
Economic	Encompassing the 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.

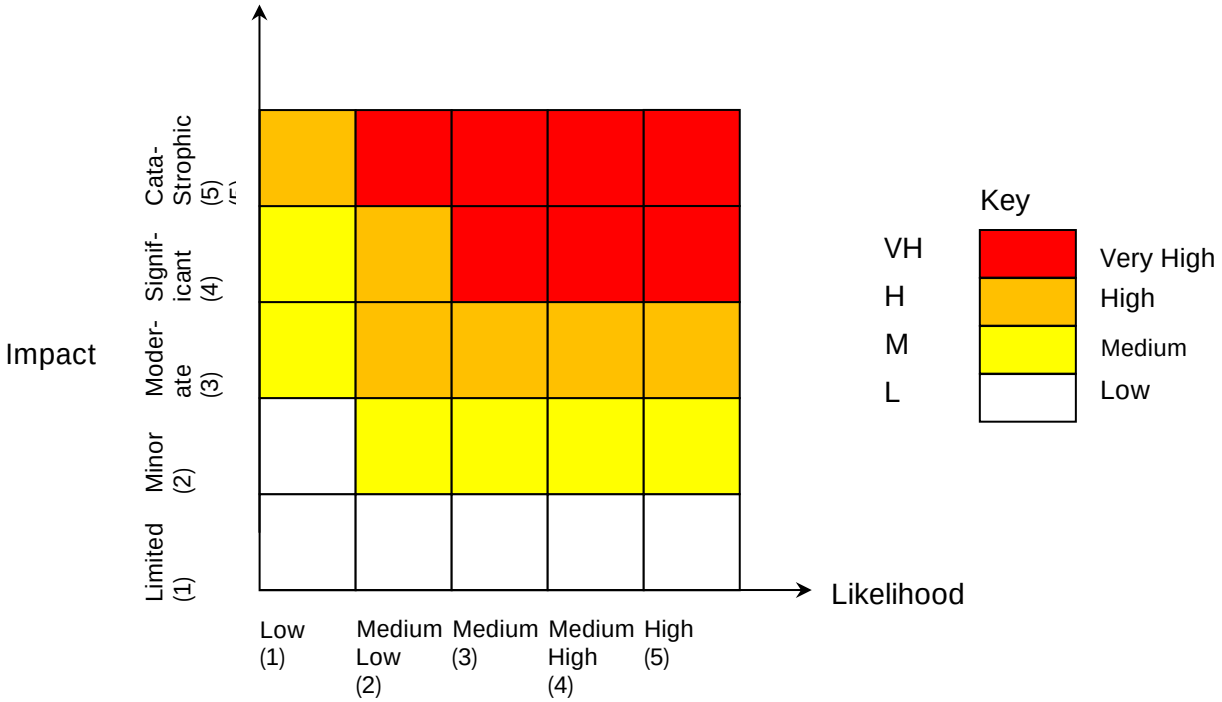
Note:
Strictly, levels 1 and 2 of the impact scale are likely to fall below the threshold for an emergency. Consequently, there may be no statutory requirement to plan for events that score 1 or 2 on the impact scale. This scale recognises that, to demonstrate a thorough analysis, Category 1 responders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

Likelihood scoring scale

Level	Descriptor	Likelihood Over 5 Years	7.1.1.2 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

Based on the model likelihood and impact scoring scales published in Annex 4D of "Emergency Preparedness" (HM Government, 2005)

APPENDIX 3: RISK RATING MATRIX



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)

APPENDIX 4: RISKS NOT APPLICABLE AND REMOVED

The risks below are considered to be 'not applicable' to Haringey at the current time. As risk assessment is a dynamic process the status of these risk is re-assessed on a regular basis.

ID	Risk sub-category	Date removed	Rationale for not Applicable status
HL20	Flash Flooding	2017	To reflect change in LRR: Removed from LRR in 2014: Advice from Environment Agency that London doesn't have the geography for this risk.
HL17	Local coastal / tidal flooding (in one Region)	2017	Not applicable to Haringey – approved by Environment Agency.
HL19	Significant local fluvial flooding	2017	To reflect change in LRR: Local variations of 'H' risks ('HL') have been removed from the LRR.
HL18	Local/ Urban flooding fluvial or surface run-off	2017	To reflect change in LRR: Local variations of 'H' risks ('HL') have been removed from the LRR.
HL25	Fire or explosion at a flammable gas including LPG/LNG storage sites.	March 2012	This risk relates to the gas holder sites. There are no longer any operational gas holders in Haringey.
H5	Fire or explosion at an onshore fuel pipeline	March 2012	There are no onshore fuel pipelines in Haringey.
H7	Explosion at a high pressure gas pipeline.	March 2012	All gas pipelines in Haringey are all medium or low pressure.
H15	Maritime pollution.	March 2012	There are no coastlines in Haringey
HL34	Fire, flooding, stranding or collision involving a passenger vessel in or close to UK waters leading to the ship's evacuation or partial evacuation at sea.	March 2012	There are no coastlines in Haringey
HL8	Fire, flooding, stranding or collision involving a passenger vessel in or close to UK waters or on inland waterways, leading to the ship's evacuation	March 2012	No inland waterways carry traffic of this nature in Haringey
HL37	Release of significant quantities of hazardous chemicals/materials as a result of a major shipping accident.	March 2012	No inland waterways carry traffic of this nature in Haringey

APPENDIX 5: NEW RISKS ADDED

ID	Risk sub-category	Date added	Rationale for adding
H22	Surface Water Flooding	2017	New risk added to LRR.