

Croydon Resilience Forum

PREPARING FOR EMERGENCIES



CROYDON RESLIENCE FORUM RISK REGISTER

V2.0 October 2020

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Place Department

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1.3	Updates and alignment to London Risk Register v7.0				Resilience Officer	October 2018
2.0	Full review to align with updated London Register v8.3, and review of local risks at CRF	Annual review			Resilience Officer	October 2020

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Acronyms

BRF	Borough Resilience Forum
CRF	Croydon Resilience Forum
LRAG	London Risk Advisory Group
LRF	London Resilience Forum
LRT	London Resilience Team

Introduction

The Civil Contingencies Act places a duty on all Category 1 responders to carry out risk assessment so that planning is proportionate to risk, facilitating integrated planning and providing a rational basis for prioritisation of resilience activities. The source of assessed risks should include both hazards and threats (non-malicious and malicious events respectively).

Category 1 responders must also cooperate with each other in maintaining a register which is aligned to the annually updated London Risk Register which is available publically on the [London Prepared](#) website, and the interim updates by the London Risk Advisory Group.

Borough Resilience Forums are primarily to facilitate cooperation and information sharing at the operational level between local authorities and the emergency services, and should not duplicate the work of the London Resilience Forum. For this reason, our approach has been to focus greater on the demographics, topography, and infrastructure of the London Borough of Croydon to identify the specific areas of the borough which have the potential to cause harm to the people, environment and security.

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 that we think it will happen nor that the impact would be as serious as the description provided. Each risk is scored for impact and likelihood. Impact is ranked from Limited (1) to Catastrophic (5) and likelihood by how likely a risk is to happen over the next 5 years. These scores are combined to give an overall risk rating.

Please note, discussion at the February 2016 meeting of the London Resilience Forum (on the incidents in Paris and Brussels in November 2015) lead to an agreement to explore the option of a risk register not in the public domain. A number of proposals have been put forward, which may change the way risk is assessed and presented. It is recommended that Croydon Resilience Forum should stay abreast of these changes to inform how risk is assessed and presented locally.

Review Schedule

This risk register should be reviewed in line with the process in use by the London Risk Advisory Group (LRAG). By maintaining a standing agenda item at the Croydon Resilience Forum meetings every four months, the Category 1, Category 2 and Voluntary Sector members will be more involved in the process and it will take a more prominent role in the Croydon Resilience Forum business.

As Croydon Resilience Forum is taking a more local approach to the risk register, LRAG changes may not directly affect our local register and so more emphasis needs to be placed on information gathering of potential new or developing risks within the borough. These will then be evaluated by the nominated Lead assessor and included as necessary.

Lead Assessors

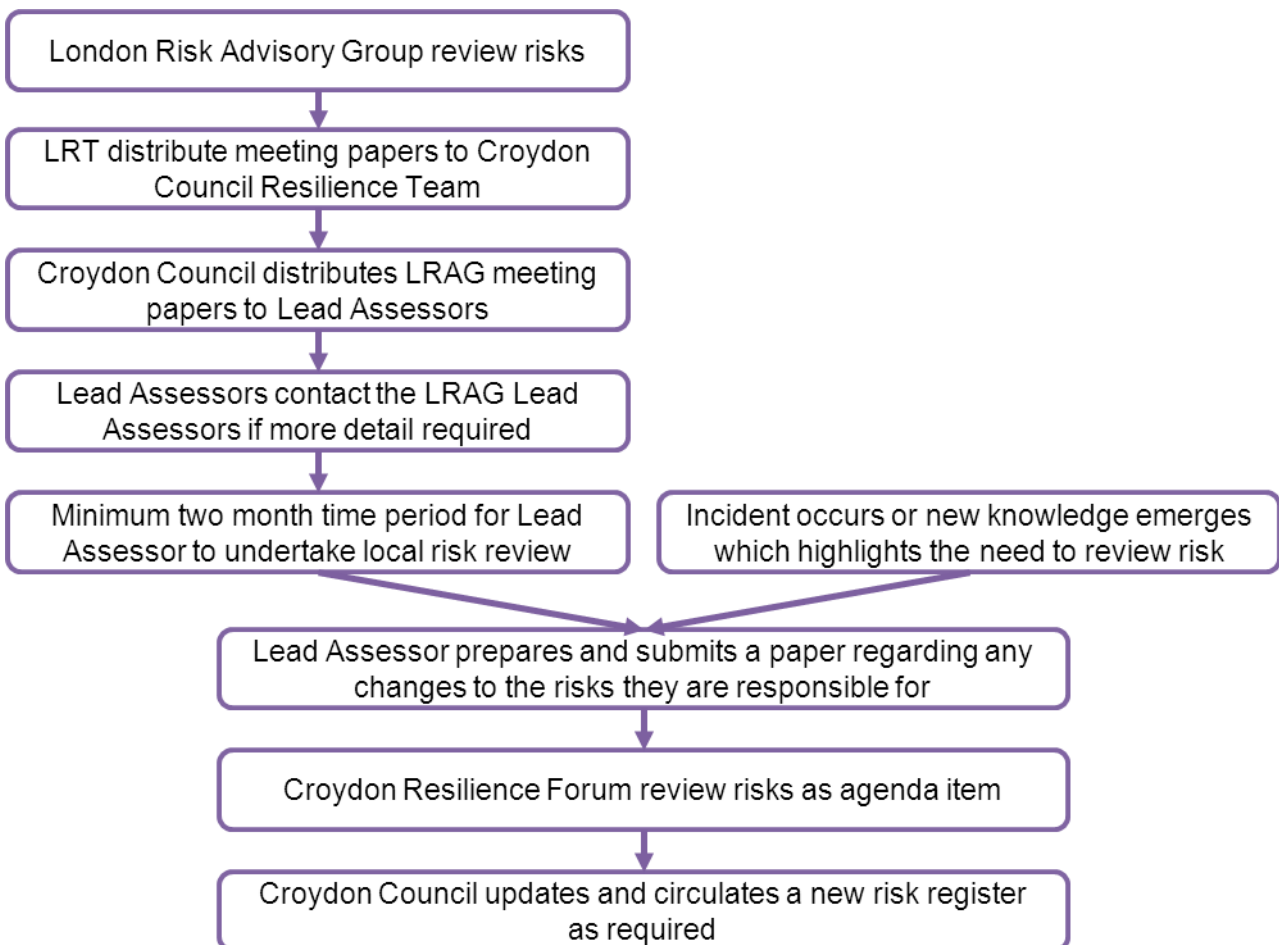
Lead Assessors are representatives of the organisations within the borough (Croydon Metropolitan Police, Croydon Fire, etc.) that have been identified as responsible for the reviewing of locally-identified risks that their organisation is most responsible for. The Lead Assessor will be from the same organisation as that identified in the LLAG ToR (unless not represented at a borough level, whereby the most suitable organisation will undertake the role).

Following LLAG meetings, Croydon Council Resilience Team will circulate the papers to the relevant Lead Assessor/s for review against Croydon's Risk Register. If the Lead Assessor proposes a change to a risk rating within Croydon, they will be asked to submit a short paper (see Error! Reference source not found.) to the CRF outlining the change and the reasoning and including any information regarding changes by the LLAG or within the borough.

The above same process should also be used following any incident within, or external to, the borough or new awareness of a potential risk within the borough which highlights a need for a review of an existing risk, or the addition of a new risk to the register.

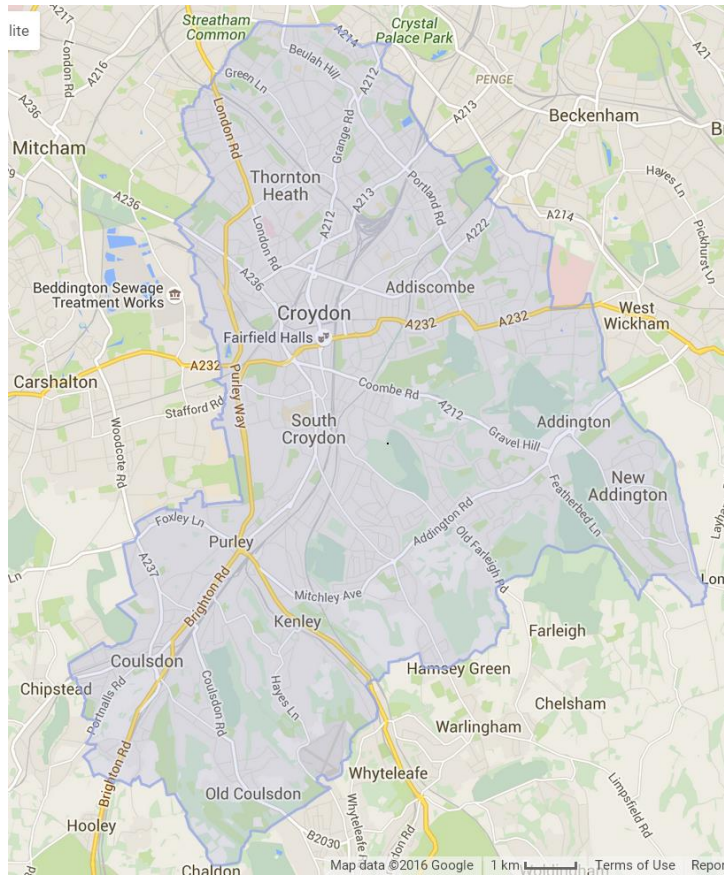
Following any relevant discussions on the subject at the CRF meeting, the risks will be amended as appropriate. Following the meeting, if required, an updated Risk Register will be prepared, with the included amendments and then distributed to all members of the CRF.

Risk Review Process



About Croydon

Croydon is an outer London borough bordering Lambeth to the north, Bromley to the east, Surrey to the south, and Sutton and Merton to the West. Croydon is London's southern-most borough and covers an area of 87 square kilometres.



Social Factors

Croydon has the highest overall population of all London boroughs estimated at 376,000 in 2014; however Croydon's population density of 44 people per hectare is lower than the London average of 55 people per hectare due to also being one of the largest London boroughs by area. Croydon shares similar demographic, economic and social characteristics with both inner and outer London boroughs which presents unique challenges.

Compared to the other London boroughs Croydon has some of the most deprived areas, but also some of the most expensive houses. Population is significantly denser and generally more deprived in wards in the north of the borough, sharing more of the characteristics of inner London boroughs than with southern wards in the borough.

Croydon has one of the largest populations of children and young people in London, with 22% of the population under the age of 16. Conversely, Croydon's over-65 group is the third highest in London at 13% of the population. This extreme creates a populace which could be more vulnerable, and less resilient, to an incident.

Over half of Croydon's population are from Black, Asian and minority ethnic groups; with 30% of Croydon's residents born abroad and 15% whose main language is not English.

Environmental Factors

Croydon is considered one of the greenest boroughs with more than 120 parks and open spaces. The northern wards are heavily urbanised in comparison to the southern wards which feature a landscape dominated by green space.

The River Wandle is a major tributary of the River Thames, from its main source in Waddon. Two seasonal streams, the Coulsdon Bourne and the Caterham Bourne, run in wet winters. Topography in the south of the borough create a basin which increases the tendency for flooding, particularly surface water flooding in the Purley Cross area.

Economic Infrastructure

Croydon is just 10 miles from central London, 15 minutes by train from Victoria or London Bridge, and less than an hour from the South Coast. This makes Croydon an ideal location for those living or working outside of the borough. Many powerful companies based in Europe and worldwide have European or British headquarters in the town making the borough one of London's leading business, financial and cultural centres. The retail centres of Purley Way and Croydon town centre are a major employer of people. Over the next few years, along with wider-borough regeneration, the Croydon Partnership will transform Croydon's two main shopping centres Whitgift and Centrale into a world class retail and leisure destination, helping to transform Croydon into the best place to shop, work and live in South London.

Transport Infrastructure

Croydon the gateway to the South Coast from central London and there are two main interchanges for all public transport modes (national and local rail, tram, and local buses) at West Croydon and East Croydon station. The A23, one of the busiest roads in the borough, and A22 are the major trunk roads both running north-south through Croydon.

The centre of Croydon is very congested, and the urban planning has since become out of date due to the expansion of Croydon's main shopping area and office blocks. Wellesley Road, a dual carriageway that cuts through the centre of the town, makes it hard to interchange between the civic centre's two railway stations. This congestion has led to regeneration works to make the town centre more pedestrian-friendly.

Below-Surface Infrastructure

The London Borough of Croydon leases tunnel space to National Grid (gas), UK Power Networks (electricity), Thames Water (water) and numerous telecommunications companies.

Hazardous Sites

There are no upper or lower tier Control of Major Accident Hazards (COMAH) sites located in Croydon. Although not falling in to the category of Hazardous Sites, there are additional sites of interest within Croydon; Centronic is one of the world's leading manufacturers of radiation detectors based in New Addington, and there are a number of waste sites and other locations that hold chemicals and gas cylinders.

Surrounding Boroughs

Croydon is part of the South East Sub Regional Resilience Forum area which also comprises the London Boroughs of Bexley, Bromley, Greenwich, and Lewisham.

NOT PROTECTIVELY MARKED

Croydon Resilience Forum Risk Register: High-Level Summary

Impact	H4 Hazardous Liquids Supply Infrastructure, H5 Fuel Supply Infrastructure (Pipelines), H9 Toxic Chemical Release, H44 Reservoir/Dam Failure		H41 National Electricity Transmission	H23 Pandemic Influenza	
	H16 Aviation Crash, C1 Fire in Large Tower Block, C2 Fire involving acetylene cylinders	H38 Gas Supply Infrastructure, HL12 Local Accident Involving The Transport of Fuel/Explosives, C5 Stadium Incident	H22 Surface Water Flooding, H45 Regional Electricity Transmission, H56 Space Weather, L21 Fluvial Flooding, HL50 Severe Drought, C10 Outdoor events spanning the borough, C11 Airfield incident, C12 Traffic infrastructure congestion		
	H7 Gas Supply Infrastructure (High Pressure Pipelines) , HL23 Bridge Collapse, HL22a Large Building Collapse, C3 Major burst water main	H39 Water Supply Infrastructure, HL105 Complex Built Environments, HL14 Local Road Accident Involving the transport of Fuel/Explosives, C8 East Croydon Transport Hub Incident	H17 Storms and Gales, H18 Cold and Snow, H24 Emerging Infectious Diseases, HL11 Railway Accident, C9 Outdoor events with large crowds	L19 Groundwater Flooding, HL48 Heatwave,	HL42 Critical Services Industrial Action
	H15 Maritime Pollution	H40 Telecommunications, H60 High Consequence Dangerous Goods, H11 Radiation Exposure from Stolen Goods, C3 Radiation Incident	H31 Fuel Tanker Driver (Industrial Action), H35 Public Mass Transportation (Industrial Action), HL21 Land Movement, HL3 Localised industrial accident involving small toxic release, HL26a Non-zoonotic Notifiable animal diseases, HL26b Zoonotic Notifiable animal diseases, HL3 Localised industrial accident involving small toxic release, C13 Loss of Kenley Water Treatment Works (WTWs).	H37 Influx of British Nationals, H46 Biological Substance Release, H14 Food Supply Contamination,	HL22 Small Building Collapse
	C6 Tuberculosis	H57 Public Disorder		HL10 Local Accident on Motorways/ Major Trunk Roads	
Likelihood					

Borough Risk Register

The following risks have been extracted from the [London Risk Register](#), version 8.3 September 2019. Those that are greyed out are not applicable to Croydon. Each risk is assigned a Risk ID which is nationally consistent and relates to a more detailed and protectively marked, Individual Risk Assessment.

Risk ID	Risk sub-category	Outcome description	Croydon Context / Rationale for Not-Applicable Status
H4	Accident	Hazardous liquids supply infrastructure	
H5	Accident	Fuel Supply Infrastructure (Pipelines)	Deemed not applicable to Croydon due to no onshore fuel pipelines
H7	Accident	Gas Supply Infrastructure (High Pressure Pipelines)	Deemed not applicable to Croydon due to no natural gas pipelines
H16	Accident	Aviation Crash	
HL3	Accident	Localised industrial accident involving small toxic release	
HL7	Accident	Industrial explosions and major fires	Deemed not applicable to Croydon due to no LPG/LNG storage sites
HL9	Accident	Aviation Crash	Deemed not applicable to Croydon due to airports
HL10	Accident	Local accident on motorways and major trunk roads	The A22 & A23 are two key trunk roads through Croydon.
HL11	Accident	Railway Accident	Croydon has two main transport hubs (East Croydon & West Croydon), as well as other stations and modes of transport.
HL14	Accident	Local road accident involving the transport of fuel/explosives	
HL22a	Accident	Large Building Collapse	There are a number of sites in Croydon which could contribute to this risk, particularly within and around the town centre.
HL23	Accident	Bridge Collapse	Croydon has a number of small bridges. The Croydon Flyover is a main trunk road and would sever disruption to the borough if it collapsed.
HL30	Accident	Localised explosion at a natural gas main	Deemed not applicable to Croydon due to no natural gas mains
HL34	Accident	Evacuation of passenger ship	Deemed not applicable to Croydon due to no coasts
HL105	Accident	Complex built environments	There is a large amount of building and regeneration work within Croydon. The environment, particularly in the centre and north of the borough is very built-up and includes a Premier League football stadium with a capacity of 26,000.
H23	Disease	Pandemic Influenza	
H24	Disease	Emerging infectious diseases	
HL26a	Disease	Non-zoonotic Notifiable animal diseases	Although there are no known farms in Croydon it has a number of green spaces, and also borders a large county (Surrey) which has a large amount of green space and farmland in close proximity.
HL26b	Disease	Zoonotic Notifiable animal diseases	
H9	HAZMAT	Toxic Chemical Release	
H11	HAZMAT	Radiation exposure from stolen goods	
H12	HAZMAT	Biological Pathogen Release	
H14	HAZMAT	Food Supply Contamination	
H15	HAZMAT	Maritime Pollution	Deemed not applicable to Croydon due to distance from the Thames Estuary
H46	HAZMAT	Biological Substance Release	
H60	HAZMAT	High consequence dangerous goods	
H37	Humanitarian	Influx of British Nationals	Lunar House, in central Croydon, is the headquarters of UK Visas and Immigration, and houses the only Asylum Screening Unit in the UK.
H57	Humanitarian	Public Disorder	Croydon suffered extensive rioting in August 2011.

NOT PROTECTIVELY MARKED

Risk ID	Risk sub-category	Outcome description	Croydon Context / Rationale for Not-Applicable Status
H31	Industrial Action	Fuel Tanker Strike	
H35	Industrial Action	Public Mass Transport	
HL42	Industrial Action	Critical Service Industrial Action	
H38	Systems Failure	Gas Supply Infrastructure	
H39	Systems Failure	Water Supply Infrastructure	A BRF exercise (11.12.2015) highlighted a number of recommendations to improve the borough's response.
H40	Systems Failure	Telecommunications	
H41	Systems Failure	National Electricity Transmission	
H44	Systems Failure	Reservoir/Dam Failure	An old reservoir (now preserved as South Norwood Lake) is located at South Norwood Lake and Grounds.
H45	Systems Failure	Regional Electricity Transmission	
H17	Natural Hazards	Storms and Gales	
H18	Natural Hazards	Cold and Snow	
H22	Natural Hazards	Surface Water Flooding	
H54	<i>Natural Hazards</i>	<i>Volcanic Eruption</i>	<i>Deemed not applicable to Croydon due to no airports.</i>
H56	Natural Hazards	Space Weather	
H58	<i>Natural Hazards</i>	<i>Wildfires</i>	<i>Deemed not applicable to Croydon due to no large forests or moorlands</i>
L19	Natural Hazards	Groundwater Flooding	
HL19	<i>Natural Hazards</i>	<i>Coastal / Tidal Flooding</i>	<i>Deemed not applicable to Croydon due to no coasts or neighbouring borough's with coasts</i>
L21	Natural Hazards	Fluvial Flooding	
HL21	Natural Hazards	Land Movement	
HL48	Natural Hazards	Heatwave	
HL50	Natural Hazards	Severe Drought	

Local Borough-Assessed Risk Register

These assessments are not yet currently supported by the London Risk Advisory Group. They are local assessments based on local knowledge, incidents and exercises.

Ref ID: C = Croydon Risk. The number assigned to each risk/threat is for reference.

Rating: The overall rating based on the likelihood and impact.

Risk Sub Category: The group that the risk or threat has been assigned to.

Outcome Description: Describes the key consequences or the high level summary of the risk.

Likelihood Score: From 1-5, 1 being the lowest likelihood score and 5 being the highest likelihood the risk will occur in the next 5 years.

Impact Score: From 1-5, 1 being the lowest impact and 5 being the highest.

Controls in Place: Plans and procedures that are in place to mitigate this risk or threat.

Last Review / Next Review: When this risk was last reviewed and when it will next be reviewed.

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Croydon Responders' Commentary
						Next Review	
C1 MED	LFB	Fire in large tower block. Fire in large residential housing block (medium or high rise). Evacuation of up to 100 residential homes required. Up to five fatalities and 20 casualties. E.g. Saffron Square. May lead to fatalities which would lead to huge reputational issues, coroner's courts affecting multi-agencies etc.	1	4	<ul style="list-style-type: none"> Regular LFB fire safety inspections 	29/10/20	<ul style="list-style-type: none"> Risk of fire in tower block that cause this level of impact. Include apartments at the top of buildings and towers such as at Saffron Square. For LFB, anything over six floors is considered high. Exercise <i>Saffron Square</i> (02/04/16) tested arrangements for the highest residential building in Croydon.
						29/10/21	
C2 MED	LFB	Fire involving acetylene cylinders Fire in industrial/commercial unit, with cylinders involved. Evacuation of 200m perimeter for a period of time. Up to 3 fatalities, 20 casualties.	1	4	<ul style="list-style-type: none"> LFB Standard procedures Cylinder Assessment Process now undertaken for Acetylene or unknown cylinders. 	29/10/20	<ul style="list-style-type: none"> This is the risk of a fire involving an acetylene cylinder that either leads to an explosion or affects the business continuity that causes this impact.
						29/10/21	

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Croydon Responders' Commentary
						Next Review	
C3 MED	Thames Water / SES Water	Major burst water main Burst in trunk main. Flooding to up to 30 properties, and evacuation. Major road closures. Localised loss of water supplies for up to 12 hours.	2	3	<ul style="list-style-type: none"> Operation of network in line with standard procedures aimed at minimising risk of bursts. Event procedures regularly tested within SES Water and incorporate to response and recovery from burst mains incidents. Regular 'lessons learnt' from mains bursts fed-back into company procedures to constantly improve mitigation and controls. 	29/10/20	<ul style="list-style-type: none"> Exercise Amanzi (/12/15) tested the multi-agency arrangements for water disruption to 50,000 people.
						29/10/21	
C4 MED	LFB / Croydon University Hospital	Radiation incident Accidental release of radioactive materials (medical equipment; Centronic*). Significant news coverage and requirement to coordinate cleaning and public information. <i>*Centronic is one of the world's leading manufacturers of radiation detectors based in New Addington.</i>	1	3	<ul style="list-style-type: none"> LFB policies and procedures for dealing with incidents involving radiation Centronic is quality approved to ISO 9001 and certified to the most stringent nuclear, military and aerospace standards. Centronic is also approved to ISO14001, and is committed to minimising the environmental impact of our operations and products 	29/10/20	<ul style="list-style-type: none"> Non-LFB statement: Centronic is quality approved to ISO 9001 and certified to the most stringent nuclear, military and aerospace standards. Centronic is also approved to ISO14001, and is committed to minimising the environmental impact of our operations and products Presence of hazard is available to first attending crews through stored risk information. The possibility of an incident effecting the safety of the hazard will be considered as part of the Incident Commander's planning
						29/10/21	
C5 HIGH	MPS	Stadium Incident Incident within Selhurst Park Stadium which could encompass over 26,000 people	2	4	<ul style="list-style-type: none"> The stadium has its own Safety Advisory Group (SAG) meets ahead of any contentious match. 	29/10/20	<ul style="list-style-type: none"> Regular MPS CT awareness delivered to CPFC via Project Griffin, Project Argus and Op Trammel.

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Croydon Responders' Commentary
	Next Review						
					<ul style="list-style-type: none"> Meets regularly throughout the year, and an additional SAG for contentious match. Multi-agency medical plan in place signed off by LAS. Match day policing plans (Dependent on who is playing) in the surrounding area. MPS central football team RAG rate the match risk, which informs the planning. Safety certificate signed off by the Council. The Green Guide. 	29/10/21	<ul style="list-style-type: none"> Exercise Crystal Palace (Live HVM exercise) took place on 21/03/2018 Potential exercise in 2020.
C6 LOW	Public Health	Tuberculosis	1	1	<ul style="list-style-type: none"> Universal BCG immunisation being implemented pending the resolution of vaccine shortages. Target immunisation of individuals from risk groups by the homeless health team. 	29/10/20	<ul style="list-style-type: none"> Tuberculosis is being discussed by the Croydon Health Protection Forum to clarify roles of partner organisations, patient pathways and funding arrangements.
						29/10/21	
C8 MED	BTP	East Croydon Transport Hub Incident Incident at East Croydon station (e.g. suspicious device / suicide) that causes shutdown of station (incl. tram stop) and wider transport impacts.	3	3	<ul style="list-style-type: none"> Staff security sweeps Regular police presence/liaison meetings Station evacuation plan Yearly table tops Staff training on suicide prevention. Regular BTP engagement & regular patrols for vulnerable people. 	29/10/20	<ul style="list-style-type: none"> Relationships built with station management at Police table-top exercise (04/10/16). Have evacuated the area recently (Feb 20) due to suspicious vehicle.
						29/10/21	
C9 HIGH	BTP / MPS	Events with large crowds Outdoor events which attract large crowds on crowded places (e.g. gang / stabbings, etc)	3	3	<ul style="list-style-type: none"> SAG Event organisers event safety plan, requiring consideration to this type of attack incl. Hostile Vehicle Mitigation 	29/10/20	<ul style="list-style-type: none"> BoxPark took part in Multi-Agency table top exercise East Croydon (24/07/17). MPS CT awareness delivered to BoxPark via Project Griffin and Project Argus
						29/10/21	

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Croydon Responders' Commentary
	Next Review						
		Outdoor events which span the Borough e.g. Cycle Race. Attracts large crowds and causes pressure on traffic infrastructure					<ul style="list-style-type: none"> MPS CT Awareness offered to SAG to offer as open to event companies that host on Croydon borough.
C11 MED	Biggin Hill Airport Fire Service (Extracted from Bromley Risk Register)	Airfield incident. E.g. Aviation accident over a semi urban area from a craft taking off or landing from Biggin Hill Airport. Croydon has a close proximity to Biggin Hill Airport despite the airport being located in LB Bromley.	2	3	<u>LB Bromley:</u> <ul style="list-style-type: none"> Generic and specialist Emergency Plans Emergency Services specialist resources On-site and off-site airport response plans <u>Legislation</u> <ul style="list-style-type: none"> Stringent controls on aircraft entering UK Airspace including the mandatory use of Aircraft Collision Avoidance systems on heavy aircraft UK flight separation rules CAA Maintenance and Flight safety standards Airline maintenance regimes London Resilience Partnership Plans 	29/10/20	<ul style="list-style-type: none"> LFB policies and procedures cover a response to an aircraft incident both on and off an airfield. This response is likely to utilise resources from wider than the local Borough. Command of the incident will be at the scene(s) of the incident and normal interoperability considerations.
						29/10/21	
C13 MED	SES Water	Loss of Kenley Water Treatment Works (WTWs) Extended loss of Kenley WTWs, which supplies water to 86,000 people.	1	3	<ul style="list-style-type: none"> Detailed risk assessment and mitigation if Caterham Bourne culvert floods. Kenley site has a flood protection wall, operational buildings have been fitted with flood protection doors, and work has been completed to enhance the drainage culvert on site, improving the ability to drain the site if it does flood. Back up diesel generators have been commissioned in 2016 and 	29/10/20	<ul style="list-style-type: none"> As planned SESW have undertaken a significant capital scheme which as commissioned in March 2019 forming the latest part of the resilience work at SES Water. The aim of this work is to ultimately ensure that all customers are able to be supplied by two treatment works. We commissioned a new strategic transfer main that allows customers normally
						29/10/21	

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Next Review	Croydon Responders' Commentary
					<p>are available to manage a power outage.</p> <ul style="list-style-type: none"> • Full alternative water contingency plan in place to supply static tanks and bowsers to supply up to 30k customers. 			<p>supplied by Kenley works to receive water from our Woodmansterne site, should the need arise. This provides further protection for Croydon residents supplied by SES Water in the event of an outage at Kenley. However, some remaining works needs to be undertaken which involves the temporary closure of the A22 near the Purley roundabout to allow all customers supplied by Kenley to receive alternative supplies. SESW attempted to undertake this work in May during the first Covid-19 lockdown, but support from all local stakeholders could not be obtained. The feasibility of an alternative approach involving a shorter closure of the A22 is currently being assessed.</p>

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Croydon Responders' Commentary
	Next Review						
C17 MED	BTP	Tram Incident Up to 30 fatalities and up to 100 casualties (fractures, internal injuries – burns less likely). Potential to cause a major disruption to road transport system.	2	3	<ul style="list-style-type: none"> • Railway and Transport Safety Act 2003 • Railways (Access and Management) Regulations 2005 • Railways (Accident Investigation and Reporting) Regulations 2005 • Railways (Licensing of Railway Undertakings) Regulations 2005 • Railways Act 2005 and 1993 • The Railway Safety Levy Regulations 2006 • Transport Act 2000 • Health and Safety at Work (etc.) Act 1974 • The Railway (Safety Case) Regulations 2000 • Inspection regimes to detect track defects • Specialist Emergency Services and other responder resources • Engineering & Maintenance Standards • Light Rail Safety & Standards Board (LRSSB) • Trams Ways (UK Trams) principals & guidance document • London Trams Safety Risk Model 	29/10/20	<ul style="list-style-type: none"> • To perform exercises to ensure multi-agency awareness and to exercise JESIP principles in conjunction with local boroughs policies and procedures.
						29/10/21	
C18 MED	LBC	Concurrent incidents Two incidents (e.g. COVID-19 and seasonal influenza; severe weather and a major RTC; drought and a heatwave) occurring at the same time, impacting system resilience	2	4	<ul style="list-style-type: none"> • Responding organisations have business continuity arrangements in place • Pre-established command and control arrangements in place to coordinate multiple incidents • JESIP principles applied 	29/10/20	<ul style="list-style-type: none"> • Potential in winter 2020 for concurrent COVID-19 pandemic and seasonal influenza, which will cause significant winter pressures • Throughout 2020, organisations have successfully responded to

Ref ID RATING	Risk Sub Category (Lead Assessor)	Outcome Description	Likelihood	Impact	Controls in Place	Last Review	Croydon Responders' Commentary
	Next Review						
		and the ability of responders to respond to incidents.			<ul style="list-style-type: none"> Local Strategic Coordination Regular inter-service and interagency engagement Established community partnerships and networks Internal HR and wellbeing processes to check up on staff and prevent burnout 	29/10/21	incidents occurring during COVID-19 (incl. fires and flooding)

Local Borough-Assessed Risks No Longer Applicable and Removed

Risk ID	Risk sub-category (Lead Assessor)	Outcome Description	Rationale for Not-Applicable Status
C7	LFB	Factory Lane Gas Holding Station	Updated 05 October 2018 – risk visit by Croydon today indicates site is decommissioned. No further risk.
C10	MPS	Outdoor events spanning the borough	Merged with C9
C12	LAS	Traffic infrastructure congestion	No longer relevant

Appendix A – The 6 Stage Risk Assessment Process

Contextualisation

A range of factors influence 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 their 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 5 years.

Identified lead assessors then undertake Individual Risk Assessments for each risk prior to multi-agency discussion. 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 collated into the London Risk Register.

Risk treatment

Gaps in capability against the Reasonable Worst Case Scenario is assessed periodically by the London Resilience Forum, where additional risk management options are agreed 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 B - Likelihood and Impact Scoring Scales

Likelihood Scoring Scale

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

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

Categories of Impact

Category	Explanation
Casualties	Direct health impacts - casualties
Fatalities	Direct health impacts - fatalities
Social	Encompassing the social consequences of an event, including availability of social welfare provision and indirect health impacts that arise because of strain on the health service; 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.
Psychological impact	Public outrage and public perception of the hazard or threat.
Economic	An approximate net economic cost, including both direct (eg loss of goods, buildings, infrastructure) and indirect (eg 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.

Full qualitative measures for each of these impact areas can be found in the LRAG Individual Risk Assessments.

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.

Appendix C – Risk Rating Definitions

These are the qualitative measures as stated in the London Risk Register.

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 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)	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)	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)	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>	