



Planning for Emergencies

MERSEYSIDE RESILIENCE FORUM

Merseyside Community Risk Register
2017

INTRODUCTION

What is the Community Risk Register?

The Community Risk Register (CRR) has been compiled by the Merseyside Resilience Forum (MRF), to identify potential risks that may affect the communities of Merseyside. The MRF is a collaboration of multi-agency services / partners working together to prepare for emergencies on Merseyside, including:

| | |
|--|---|
| British Transport Police (BTP) | Clinical Commissioning Groups |
| Environment Agency (EA) | Health & Safety Executive (HSE) |
| Highways England | Knowsley Metropolitan Borough Council |
| Liverpool City Council | Liverpool John Lennon Airport |
| Maritime and Coastguard Agency (MCA) | Merseyside Fire & Rescue Service (MFRS) |
| Merseyside Police | Merseytravel |
| Mersey Tunnels Police | NHS England |
| National Grid (Gas) | North West Ambulance Service (NWAS) |
| Port of Liverpool Police | Public Health England |
| Sefton Metropolitan Borough Council | SP Energy Networks |
| St Helens Metropolitan Borough Council | Wirral Metropolitan Borough Council |
| United Utilities | |

The CRR provides the basis for the responder agencies to develop emergency plans and provides a guide for the preparedness work carried out by the MRF. The CRR is also intended to inform the public - individuals, families and businesses - of the range of potential disruptive events that these agencies have considered when making their plans, and to provide assurance that they are ready to deal with these emergencies to provide resilience for the communities that they serve.

How has the Community Risk Register Been Compiled?

The Government assesses hazards and threats that could affect the United Kingdom. These are published in the National Risk Register. It explains the likelihood of a risk occurring and, if it happens, the effects it may have.

Under the Civil Contingencies Act 2004 (CCA) all areas of the United Kingdom are required to establish a local resilience forum within the local Police Force area. The CCA places a legal duty on local emergency responders to carry out assessments on the risks to their area and publish them

The register contains the areas of potential risk to the population and infrastructure of Merseyside and the nature of that risk. The likelihood of an event occurring has been assessed using historical evidence and projected occurrence data relating to the risk occurring over a five year period at the magnitude reflected within the outcome description. The potential impact of such an emergency has been assessed with regard to health, social, economic and environmental effects in accordance with national guidance.

The inclusion of these hazards, or the particular scenario (i.e. outcome description) does not mean that the Merseyside Resilience Forum (MRF) believes the risk will materialise, or that if it were to do so, it would be at that scale. The risk scenarios are considered to be reasonable worse case assumptions upon which our risk assessment is based. The likelihood and impact assessments have been used to develop a Risk Rating of Low, Medium, High or Very High by using the Risk Matrix within this document.

The attached risk assessments cover non-malicious and certain malicious events. This does not mean that we are not considering all malicious threats within our risk assessment work, but given the sensitivity of the information supporting these risk assessments and the potential for use by adversaries, specific details will not be made available via this document. Threat scenarios that are being considered include, for example Conventional attacks using explosives, Chemical/Biological/Radiological attacks, Electronic attacks i.e. affecting utilities and communications.

Lead Responsibility

For the purpose of clarity, the Lead Responsibility refers to the organisation responsible for compiling the specific entry into the CRR. This does not necessarily denote responsibility for enacting risk treatment or for lead response in case of an incident.

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To view the National Risk Register of Civil Emergencies please visit the Government website via the link below:

[National Risk Register for Civil Emergencies](#)

To view the Cabinet Office Guidance for Emergency Preparedness and Emergency Response & Recovery please visit the Government website via the links below:

[Emergency Preparedness](#)

[Emergency Response &
Recovery](#)

Further information is also available on the Merseyside Prepared website via the links below:

www.merseysideprepared.org.uk

If you have any further queries please contact:

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HOW TO USE THE RISK REGISTER

Explanation of the Columns

H requires national and local response. HL local picture of a national H risk. L specific risk to an area

The likelihood of a risk occurring over a five year period, where 1=Low and 5=High

The impact if the risk should occur, where 1=Limited and 5=Catastrophic

Combination of the scores for likelihood and impact, provides 4 possible outcomes from Low to Very High

| Risk Ref | Hazard or Threat Sub Category | Outcome Descriptor | Likelihood | Impact | Risk Rating | Controls Currently in Place | Lead Responsibility |
|----------|-------------------------------|--------------------|------------|--------|-------------|-----------------------------|---------------------|
| | | | | | | | |

Definition of the hazard or threat

Consequences or significance of the event e.g. what facilities are affected or extent of contamination

Plans, procedures and guidance in place to minimise likelihood and impact of risk

Local lead responsibility for completing the risk assessment

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| RISK INDEX | |
|--|--|
| MAJOR INDUSTRIAL ACCIDENTS & INDUSTRIAL ACCIDENTS | |
| Risk Ref | Hazard |
| H1 | Fire or explosion at a gas LPG (Liquefied Petroleum Gas) flammable gas storage site |
| HL26 | Localised fire or explosion at an onshore ethylene gas pipeline |
| HL27 | Localised fire or explosion at an oil refinery |
| HL7 | Industrial explosions and major fires |
| H4 | Fire or explosion at a fuel distribution site or a site storing flammable and/or toxic liquids in atmospheric pressure storage tanks |
| H5 | Fire or explosion at an onshore fuel pipeline |
| H6 | Fire or explosion on an offshore oil / gas installation |
| H7 | Explosion at a high pressure gas pipeline |
| H9 | Large toxic chemical release |
| H11 | Accidental exposure to radioactive material from incorrectly handled stolen sources |
| H12 | Biological substance release from facility where pathogens are handled deliberately (e.g. pathogen release from containment laboratory) |
| H14 | Major contamination incident with widespread implications for the food chain arising from: an industrial accident affecting food production areas contamination of animal feed incidents arising from production processes |
| H15 | Maritime Pollution |
| HL4 | Major pollution of surface waters and groundwater |
| H38 | 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 |
| H39 | Failure of water infrastructure or loss of drinking water |
| H40 | Disruption or loss of telecommunication systems |
| H41 | Total failure of GB's National Electricity Transmission Network as a result of severe weather conditions and technical failure |
| H45 | Disruption to Regional Electricity Distribution or Transmission Network / System |
| H46 | Biological substance release during an unrelated work activity or industrial process (e.g. Legionella release due to improperly maintained building environmental control systems) |
| H61 | Industrial accident during remedial work on a legacy pond or silo facility at a civil nuclear installation holding large quantities of fissile material and radioactive waste |

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| MAJOR TRANSPORT ACCIDENTS & TRANSPORT ACCIDENTS | |
|--|--|
| Risk Ref | Hazard |
| 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 |
| 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. |
| HL37 | Release of significant quantities of hazardous chemicals/materials as a result of major shipping accident |
| H16 | Aviation accident over a semi-urban area |
| HL9 | Aviation accident |
| HL10 | Local accident on motorways and major trunk roads |
| HL11 | Railway Accident |
| H60 | Road or rail tanker containing dangerous goods and / or 'high consequence' dangerous goods - accident involving fire and explosion |
| HL13 | Maritime accident or deliberate blockade resulting in blockage of access to key port, estuary, maritime route |
| HL14 | Local (road) accident involving transport of fuel/explosives |
| NATURAL HAZARDS | |
| Risk Ref | Hazard |
| H17 | Storms and Gales |
| H18 | Low Temperatures and Heavy Snow |
| H48 | Heat Wave |
| H50 | Drought |
| H19 | Coastal Flooding |
| HL16 | Local coastal / tidal flooding (affecting more than one Region) |
| HL17 | Local coastal / tidal flooding (in one Region) |
| H21 | Fluvial Flooding |
| HL18 | Local / Urban flooding (fluvial or surface run-off) |
| HL19 | Local fluvial flooding |
| HL33 | Forest or moorland fire |
| H54 | Disruption to aviation as a consequence of volcanic ash |
| H55 | Severe effusive (gas rich) volcanic eruption overseas |
| H56 | Severe space weather |

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| STRUCTURAL | |
|---|---|
| Risk Ref | Hazard |
| HL21 | Land movement (i.e. caused by tremors or landslides) |
| HL22 | Building Collapse |
| HL23 | Bridge Closure or Collapse |
| H44 | Reservoir Dam Collapse |
| | |
| HUMAN HEALTH | |
| Risk Ref | Hazard |
| H23 | Influenza type disease (pandemic) |
| H24 | Emerging infectious diseases |
| HL24 | Localised legionella / meningitis outbreak |
| H62 | Health impacts of poor air quality either from high ground level ozone or fine particulate matter |
| | |
| ANIMAL & PLANT HEALTH | |
| Risk Ref | Hazard |
| H25 | Outbreak of Exotic Notifiable Disease in Animals including birds |
| HL43 | Outbreak of plant disease (Chalara Dieback of Ash) |
| | |
| DISRUPTIVE INDUSTRIAL ACTION & INDUSTRIAL ACTION | |
| Risk Ref | Hazard |
| HL42 | Loss of cover due to industrial action by workers providing a service critical to the preservation of life (such as emergency service workers). |
| H31 | Actual or threatened significant disruption to the distribution of fuel by road, including as a result of industrial action by fuel tanker drivers. |
| H33 | National strike action by prison officers |
| H35 | Industrial action by key Rail workers |

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| PUBLIC DISORDER | |
|-----------------------------|--|
| Risk Ref | Hazard |
| H57 | Large scale public disorder in sites in a single city or in multiple cities occurring concurrently over several days |
| INTERNATIONAL EVENTS | |
| Risk Ref | Hazard |
| H37 | Influx of British Nationals who are not normally resident in the UK |
| LOCAL RISKS | |
| Risk Ref | Hazard |
| L1 | Localised Maritime Pollution - Toxic or hazardous materials washed ashore |
| L2 | Unexploded Ordnance |
| L3 | Fire in Occupied Place of Entertainment /Sports Stadium |
| L4 | Major Fire in Mersey Tunnel |
| L5 | Serious RTC in Mersey Tunnel |
| L6 | Failure of infrastructure in Mersey Tunnel (including collapse and flooding) |
| L7 | Release of Hazardous Materials in Mersey Tunnel |
| L8 | Local Accident Involving An Aircraft Crash Offshore |
| L9 | Transport Incident Involving Radiological or Nuclear Materials |
| L10 | Damage to Motorway Infrastructure |
| L11 | Major Outbreak of Food Poisoning |
| L12 | Sport Stadium Disorder |
| L13 | Public Events Disorder |
| L14 | Prison Riots |
| L15 | Secure Hospitals |
| L16 | Fire / Explosion / Contamination at a waste management or recycling centre |
| L17 | Temporary Risks - Festivals / Sporting / Leisure Events |
| L18 | Fires in Buildings with Cladding |
| L19 | Shellfish Harvesting |
| | |
| | |
| | |

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| MALICIOUS ATTACKS | |
|--------------------------|---------------------------------|
| Risk Ref | Hazard |
| M1 | Attacks on crowded places |
| M2 | Attacks on infrastructure |
| M3 | Attacks on transport systems |
| M4 | Unconventional attacks |
| M5 | Cyber security |
| M6 | Cyber security (infrastructure) |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|---------------------------|----------|---|---|-----------------|------------------|--|-----------------------------------|
| | | | | Risk Rating | | | |
| Natural Hazards | HL16 | Local coastal / tidal flooding (affecting more than one Region) | Sea surge, spring tides, gale force winds and/or heavy rainfall affecting more than one Region, some defences overtopped or failing at multiple locations. Flooding of 1000 to 10,000 properties for up to 14 days. Could cause fatalities and casualties and up to 200 missing persons. Up to 50,000 people (including tourists) in coastal villages and towns evacuated from flooded sites. People stranded over a large area. Up to 10,000 people needing assistance with sheltering for up to 12 months. Possible large scale evacuation required. Suddenness of failure of defences would not be possible to predict. Tidal inundation would be rapid and wave impact would cause structural damage to properties. Impact on infrastructure includes: widespread disruption for 7-14 days, salt damage, road and bridge damage, debris and contaminated water supplies and pollutants from affected businesses. Rural impacts include: widespread livestock carcasses, waterborne disease. Sewage treatment works flooded. Numerous properties destroyed. Many more uninhabitable for 12 months. | Medium (3) | Significant (4) | <ul style="list-style-type: none"> EA Flood Warning Direct service Met Office National Severe Weather Warning Service EA Inspection of flood defences MRF Multi - agency plans National Emergency Plans Met Office Hazard Manager Service Warning & Informing the Public Environment Agency Regional Programme of Flooding Exercises. | Environment Agency (EA) |
| Very High | | | | | | | |
| Natural Hazards | H17 | Storms and Gales | Storm force winds affecting most of a region for at least 6 hours. Most inland, lowland areas experience mean speeds in excess of 55mph with gusts in excess of 85mph. Could cause fatalities and casualties. Disruption to infrastructure including power, transport networks, homes and businesses. | Medium High (4) | Moderate (3) | <ul style="list-style-type: none"> SP Energy Networks System Emergency Plan MRF Multi - agency plans National Emergency Plans Met Office National Severe Weather Warning Service Met Office Hazard Manager Service Warning & Informing the Public. | Local Authorities (St Helens MBC) |
| Very High | | | | | | | |
| Natural Hazards | H19 | Coastal Flooding | High tides and major sea surge, resulting from gale force winds and heavy rainfall. Many coastal regions and tidal reaches of rivers affected by overtopping or failure (breach) of coastal and/or estuary defences. On the West Coast up to 104,000 residential properties impacted. | Medium (3) | Significant (4) | <ul style="list-style-type: none"> EA Flood Warning Direct service Met Office National Severe Weather Warning Service EA Inspection of flood defences MRF Multi - agency plans National Emergency Plans Met Office Hazard Manager Service Warning & Informing the Public Environment Agency Regional Programme of Flooding Exercises. | Environment Agency (EA) |
| Very High | | | | | | | |
| Human Health | H23 | Influenza type disease (pandemic) | Each pandemic is different and the nature of the virus and its impact cannot be known in advance. A pandemic is likely to occur in one or more waves, possibly weeks or months apart. Each wave may last between 12-15 weeks. Up to 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. | Medium High (4) | Catastrophic (5) | <ul style="list-style-type: none"> MRF Multi - agency plans Annual seasonal Flu Vaccination campaign aimed at 75% uptake in people aged 65yrs and over plus people of all ages in key at risk groups such as asthmatics, diabetics and healthcare workers. Antiviral treatments as per national guidance. National Emergency plans, international, national and local surveillance systems. National stockpile of antiviral drugs (Tamiflu), Warning & Informing the Public. | Public Health England (PHE) |
| Very High | | | | | | | |
| Major Industrial Accident | H41 | Total failure of electricity network as a result of severe weather conditions and technical failure | Impact on Health Services, Police, Transport, Water and Telecommunications etc. Backup generators available for limited time for businesses and emergency services in some instances. | Medium (3) | Significant (4) | <ul style="list-style-type: none"> SP Energy Networks System Emergency Plan MRF Multi - agency plans National Emergency plans Local & Regional Exercises (Blackstart) Warning & Informing the Public | SP Energy Networks |
| Very High | | | | | | | |
| Natural Hazard | 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. Could cause fatalities and casualties, mainly due to slips trips and falls. There is likely to be some disruption to transport networks, businesses, power supply and water supply, and also school closures. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Local Authorities Winter Weather Plans, including priority routes for gritting Local Authority highway monitoring systems Local Authority contracts in place for gritting Highways England Winter Service Plan, Highways England Area 10 Severe Weather Plan, VMS Traffic Officer Service at Regional Control Centre & Service Provider, Emergency Network Diversion Routes Warning & Informing the Public Individual responder plans MRF Multi - agency plans Met Office – Severe weather warning, specific Highway forecasts. | Local Authorities (Liverpool CC) |
| High | | | | | | | |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|----------------|----------|---|--|-----------------|--------------|--|-------------------------|
| | | | | Risk Rating | | | |
| Natural Hazard | H21 | Fluvial Flooding | River flood event following a sustained period of heavy rainfall extending over two weeks (perhaps combined with snow melt and surface water flooding). The event would include major fluvial flooding affecting large urban areas. Closure of primary transport routes. Infrastructure failure. Loss of essential services (gas, electricity & telecoms) to 250,000 homes. Disruption to water supplies. Could cause fatalities and casualties. People needing assistance with evacuation, rescue or assistance in-situ. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Flood and Water Management Act 2010 Land Drainage Act 1991 Water Resources Act 1991 EA Flood Warning Direct service Met Office National Severe Weather Warning Service EA Inspection of flood defences Warning & Informing the Public Environment Agency Local Flood Warning Plan for Merseyside. Environment Agency Regional Programme of Flooding Incident Exercises Individual responder plans Associated MRF Multi - agency plans Warning & Informing the Public. | Environment Agency (EA) |
| | | | | High | | | |
| Natural Hazard | H56 | Severe space weather | Coastal electrical sub-stations serving approximately 100,000 customers each are severely damaged and unable to supply electricity for two or more months. Consumers in these areas would experience an initial loss of supply, for up to half this period (i.e. for one month or more), until the local Distribution Network Operators and National Grid could arrange for alternative supplies such as interconnection to other substations, or deployment of mobile electricity generation. It is likely that rota-disconnections would be used in the affected areas for the rest of the period until the substation repairs were completed. Disruptions to satellite services for several days, including interruptions and degradations of GPS. This could result in casualties and fatalities. | Medium High (4) | Moderate (3) | <ul style="list-style-type: none"> Forecasting through Met Office Space Weather Operations Centre National Grid constantly monitors space weather conditions. National Grid modern transformers are designed to withstand geomagnetic currents. National Grid Contingency plans for space weather. Electricity Supply Emergency Code Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | SP Energy Networks |
| | | | | High | | | |
| Natural Hazard | HL17 | Local coastal / tidal flooding (in one Region) | Sea surge, high tides and/or gale force winds affecting the coastline and one Region, a defence system overtopped or failing at a single location. Localised impact with infrastructure affected and up to 1000 properties flooded for up to 14 days. Could cause fatalities and casualties and up to 100 missing persons. Up to 20,000 people (including tourists) in coastal villages and towns evacuated from flooded sites. People stranded over a large area and up to 2,000 people in need of rescue. Up to 3,000 people needing assistance with sheltering for up to 12 months. Some local evacuation and cordoning off of affected areas. Tidal inundation would be rapid and wave impact would cause structural damage to properties. Impact on infrastructure includes: localised disruption for up to 7 days, salt damage, road damage, debris and contaminated local water supplies and pollutants from affected businesses. Rural impacts include: livestock carcasses, waterborne disease. Some properties destroyed and others uninhabitable for 12 months. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Flood and Water Management Act 2010 Land Drainage Act 1991 Water Resources Act 1991 EA Flood Warning Direct service Met Office National Severe Weather Warning Service EA Inspection of flood defences Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public Environment Agency Local Flood Warning Plan for Merseyside. Environment Agency Regional Programme of Flooding Incident Exercises. | Environment Agency (EA) |
| | | | | High | | | |
| Natural Hazard | HL18 | Local / Urban flooding (fluvial or surface run-off) | A sustained period of heavy rainfall extending over two weeks, perhaps combined with snow melt, resulting in flash flooding and steadily rising river levels across entire counties and could threaten a large urban town. Localised flooding of 1000 to 10,000 properties for 2-7 days. Could cause fatalities and casualties. Up to 15,000 people evacuated. Up to 500 people stranded over a large area and in need of rescue. There would be major impact on road and rail links. Impact on infrastructure includes: some buildings collapse, water damage, road and bridge damage. Contamination of water supplies. Loss of essential services (gas, electricity & telecoms) to 20,000 homes for up to 14 days. Widespread disruption for 7-14 days, significant debris and pollutants from affected businesses. Up to 1,000 people needing assistance with sheltering for up to 12 months. Rural impacts include: widespread livestock carcasses, waterborne disease. Sewage treatment works flooded. Properties destroyed and many more uninhabitable. People needing assistance with sheltering for up to 12mths. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Environment Agency Local Flood Warning Plan for Merseyside. Environment Agency Regional Programme of Flooding Incident Exercises EA Flood Warning Direct service Met Office National Severe Weather Warning Service EA Inspection of flood defences MRF Multi - agency plans Individual responder plans National Emergency Plans Warning & Informing the Public. | Environment Agency |
| | | | | High | | | |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|---------------------------|----------|---|---|-----------------|------------------|---|---|
| | | | | Risk Rating | | | |
| Natural Hazard | HL19 | Local fluvial flooding | A sustained period of heavy rainfall extending over two weeks, perhaps combined with snow melt, resulting in flash flooding and steadily rising river levels within a region. Localised flooding of 100 to 1,000 properties for 2-7 days. Could cause fatalities and casualties. Up to 5,000 people evacuated. Up to 200 people stranded over a large area and in need of rescue. There would be some impact on minor roads and some A roads and truck roads impassable for a time. Some main rail lines may need to be closed for a week (for repairs etc.). Most water ways would be closed to traffic because of strong currents and high water levels. Impact on infrastructure includes, water damage, road and bridge damage. Sediment movement and contamination of local water supplies. Localised loss of essential services (gas, electricity & telecoms) to 5,000 for up to 14 days. People needing assistance with sheltering for up to 12 months. Substantial disruption within a county for 7-14 days. Significant debris and pollutants clear-up needed. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Environment Agency Local Flood Warning Plan for Merseyside. Environment Agency Regional Programme of Flooding Incident Exercises EA Flood Warning Direct service Met Office National Severe Weather Warning Service EA Inspection of flood defences Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Environment Agency |
| | | | | High | | | |
| Human Health | H24 | Emerging infectious diseases | The worst case likely impact of such an outbreak originating outside the UK would be cases occurring amongst returning travellers and their families and close contacts, with spread to health care workers within hospital setting. Short term disruption to local hospital intensive care facilities Possible delays to non-urgent procedures. Public concern about travel, within and beyond the UK and possible international travel restriction advice. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> MRF Pandemic Influenza Plan PHE Cheshire and Merseyside Outbreak of Infectious Diseases Plan Associated MRF Multi - agency plans Individual responder plans National Emergency Plans Warning & Informing the Public International, national and local surveillance systems, Infection Control Plans, Business Continuity Plans. | Public Health England (PHE) |
| | | | | High | | | |
| Human Health | H62 | Health impacts of poor air quality either from high ground level ozone or fine particulate matter | Prolonged episode of up to 20 days mainly affecting the elderly and people with existing illnesses. Could cause fatalities and increased hospital admissions. | Medium High (4) | Moderate (3) | <ul style="list-style-type: none"> Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public Protocol for Obtaining Health Advice by Emergency Responders. | Public Health England (PHE) |
| | | | | High | | | |
| Major Industrial Accident | H9 | Large toxic chemical release | Up to 3km from site, could cause fatalities and casualties. This risk could result in environmental contamination. There could be impacts on air, land water, animal welfare, agriculture and waste management. Could impact on demands on healthcare services. Contamination of land and certain foodstuffs. | Medium Low (3) | Moderate (3) | <ul style="list-style-type: none"> Control of Major Accident Hazards Regulations 2015 (COMAH) MFRS Individual Site Specific Plans, MFRS SOPs Major Incident, Mass Decontamination, Hazardous Materials, COMAH, MFRS COMAH Off-Site Emergency Plans & Exercise schedule, MFRS contract with Bureau Veritas Protocol for Obtaining Health Advice by Emergency Responders Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| | | | | High | | | |
| Major Industrial Accident | H45 | Disruption to Regional Electricity Distribution or Transmission Network / System | Total failure of the electricity network over an entire region of GB occurring during the working week and lasting for 24 hours. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Distribution Network Operators System Emergency Plan, Emergency Communication Plan, System Faults & Emergency Plan, Electricity Supply Emergency Code. Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | SP Energy Networks |
| | | | | High | | | |
| Major Transport Accident | H16 | Aviation accident over a semi-urban area | Loss of a number of aircraft causing fatalities and casualties including people in the area of the incident, with debris over a semi-urban area. | Low (1) | Catastrophic (5) | <ul style="list-style-type: none"> Liverpool John Lennon Airport Emergency Procedures, Airport Emergency Liaison Committee, Airport Testing/Exercising regime in place CAA, MOD and NATO flying regulations, MOD Post Crash Management Organisation MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Liverpool John Lennon Airport (Fire) |
| | | | | High | | | |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|--------------------|----------|----------------------------------|---|-----------------|--------------|---|---|
| | | | | Risk Rating | | | |
| Transport Accident | HL11 | Railway accident | Could cause fatalities and casualties. Possible loss of freight. Major disruption to rail line including possible closure of rail tunnel. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> BTP Emergency Response Plans Merseyrail Electrics Emergency Response Guide Network Rail Emergency Plans All TOC/FOCs/Network Rail are required to have a Safety Certificate agreed with the Office of Rail Regulation (ORR) before a licence to operate is granted. The Safety Certificate is renewed every 5 years ensuring that all TOC/FOCs and Network Rail have analysed and assessed the risks of their operation, determining how those risks will be controlled and where necessary improvements put into place. Each organisation has a Safety Management System to ensure that the controls are effectively and consistently applied Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | British Transport Police |
| | | | | High | | | |
| Local Risks | L18 | Fires in Buildings with Cladding | Up to 500m around the site causing fatalities and casualties. Could result in destruction and evacuation of surrounding residential and commercial properties. Could have impacts on local road and rail infrastructure. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> MFRS SOP Major Incident, MFRS SOP Fires in the Built Environment, High Rise, Rescues and Fire Protection Awareness Campaigns MRF Multi - agency plans Individual responder plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| | | | | High | | | |
| Malicious Attacks | M1 | Attacks on crowded places | Crowded places remain an attractive target for a terrorist attack. Crowded places by their nature are easily assessable and offer the prospect for an impact beyond the loss of life alone. Attacks are often (but not always) carried out without prior warning. | Medium High (4) | Moderate (3) | <ul style="list-style-type: none"> Raising awareness – work of the counter terrorism security advisors Personal Safety Advice Circulated – ‘Run, Hide, Tell’ Emergency Services Specialist Resources Physical security measures where appropriate MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | High | | | |
| Malicious Attacks | M2 | 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. | Medium (3) | Moderate (3) | <ul style="list-style-type: none"> Business continuity plans for loss of essential services helps to minimize disruption Raising awareness – work of the counter terrorism security advisors Programme of work to protect infrastructure Advice available from Centre for the Protection of National Infrastructure MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | High | | | |
| Malicious Attacks | M3 | Attacks on transport systems | Conventional attacks on transport system are judged to be the more likely. This is supported by recent 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. | High (5) | Moderate (3) | <ul style="list-style-type: none"> Raising awareness – work of the counter terrorism security advisors Regulation and security processes of individual public transport sectors Contingency plans developed by operators in conjunction with responders Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | High | | | |
| Malicious Attacks | M4 | Unconventional Attacks | 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, the potential impact on the UK would be severe and significantly greater than a conventional attack. The potential impacts of an incident involving CBR agents will depend on a range of factors including type and quantity of CBRN materials used. This could range from small-scale (assassination or poisoning) to mass-impact (widespread dispersion and contamination) which is reflected in the scores. | Moderate (3) | Moderate (3) | <ul style="list-style-type: none"> Well-developed specialist response capability Access to medical-countermeasures Individual responder plans Associated MRF Multi - agency plans National Emergency Plans & resources Warning & Informing the Public. | Merseyside Police |
| | | | | High | | | |
| Natural Hazard | H48 | Heat wave | Daily maximum temperatures in excess of 28°C and minimum temperatures in excess of 15°C over most of the region for around 2 weeks at least 5 consecutive days where maximum temperatures exceed 32 °C. Could cause fatalities and casualties, mainly amongst the elderly. There could be disruption to power supply and transport infrastructure. | Medium High (4) | Minor (2) | <ul style="list-style-type: none"> Health & Safety at work Act 1974 NHS England & PHE Heat Wave Plan for England Meteorological Warning Systems & Public Information Systems Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Public Health England (PHE) |
| | | | | Medium | | | |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|---------------------------|----------|--|--|-----------------|------------|---|---|
| | | | | Risk Rating | | | |
| Natural Hazard | H50 | Drought | Periodic water supply interruptions affecting businesses in London. Emergency Drought Orders in place which may impact supply in other areas of the country. | Medium (3) | Minor (2) | <ul style="list-style-type: none"> Water Resources Act 191 Environment Agency Area Drought Contingency Plan, EA regular monitoring of reservoirs and rivers, EA orders & permits to control water abstraction, EA computer modelling to predict pressure points, EA and UU Liaison National Emergency Plans Warning & Informing the Public. | Environment Agency (EA) |
| Natural Hazard | 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 three 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 up to 12 consecutive days, depending on meteorological conditions. | Medium High (4) | Minor (2) | <ul style="list-style-type: none"> Decisions taken by Civil Aviation Authority CAA Guidance Regarding Flight Operations in the vicinity of Volcanic Activity Airport Procedures Meteorological Office provides guidance on weather patterns and predictions regarding the ash cloud. Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Liverpool John Lennon Airport (Fire) |
| Natural Hazard | H55 | Severe effusive (gas rich) volcanic eruption overseas | A severe volcanic eruption, generating large amounts of gas, aerosol and ash over a 5 month period affecting the UK and Northern Europe. The eruption could generate significant amounts of sulphur dioxide, hydrogen fluoride, sulphate aerosol (sulphuric acid) and lesser amounts of other acid aerosols, as well as very fine ash particles. Gases and aerosols in the atmosphere will be brought down to the surface throughout the UK and Northern Europe via dry deposition (termed dry fog) and wet deposition (e.g. acid rain). This could result in ground level sulphur dioxide peak 24 hour mean concentrations of up to 0.2ppm (parts per million) being sustained for several days in the UK, but hourly means could be as high as 2ppm. Published modelling work suggests that the concentration of particulate matter with diameters smaller than 2.5 microns could double in the UK for the first 3 months of the eruption, exceeding WHO guidelines for 36 days on average. These concentrations of sulphur dioxide will cause asthma attacks and worsening of the clinical condition of patients with other chronic respiratory disease. Could have an impact on health services. | Medium High (3) | Minor (2) | <ul style="list-style-type: none"> Decisions taken by Civil Aviation Authority CAA Guidance Regarding Flight Operations in the vicinity of Volcanic Activity Airport Procedures Meteorological Office provides guidance on weather patterns and predictions regarding the ash cloud. Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Liverpool John Lennon Airport (Fire) |
| Natural Hazard | HL33 | Forest or moorland fire | Forest or moorland fire across up to 50 hectares. Evacuation of residential homes required. Transport may be disrupted due to smoke. Could cause fatalities and casualties. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> MFRS SOP Major Incident, MFRS SOP Rural Fires, MFRS High Volume Pump, Off Road Vehicles equipped with fogging units and Site Specific Operational Plans. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Human Health | HL24 | Localised legionella / meningitis outbreak | Localised outbreak of a disease which could cause approximately 500 identified cases leading to fatalities. | Medium High (4) | Minor (2) | <ul style="list-style-type: none"> MRF Pandemic Influenza Plan PHE Major Outbreak Plan International National and Local surveillance Systems Regional Animal Diseases Group, Water filtration, animal controls, regulations on farm visits, environmental health regulations and control measures. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Public Health England (PHE) |
| Major Industrial Accident | H4 | Fire or explosion at a fuel distribution site or a site storing flammable and/or toxic liquids in atmospheric pressure storage tanks | Up to 3km around site, could cause fatalities and casualties. Might be disruption to air transport in the short-term. Could have impact on health services. Closure of roads in locality for a short period of time. | Medium Low (2) | Medium (3) | <ul style="list-style-type: none"> MFRS SOPs COMAH, Major Incident, Mass Decontamination, Hazardous Materials Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Protocol for Obtaining Health Advice by Emergency Responders. Local Authority Major Emergency Plans MRF Exercise Calendar Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Major Industrial Accident | H6 | Fire or explosion on an offshore oil / gas installation | Fire and explosion, the incident would be local to site. Could cause fatalities and casualties. May impact supply. May cause environmental damage. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> MCA Standard Operating Procedures EPOL Plan ENI Liverpool Bay Asset Incident Management Plan Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Maritime & Coastguard Agency (MCA) |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|---------------------------|----------|--|--|----------------|--------------|--|---|
| | | | | Risk Rating | | | |
| Major Industrial Accident | H11 | Accidental exposure to radioactive material from incorrectly handled stolen sources | Could cause fatalities and casualties. Many worried people may present at hospitals. Radiation may be spread over several kilometres, but concentrated at the site of the incident. Could result in environmental contamination. There could be impacts on air, land, water, animal welfare, agriculture and waste management. Decontamination may be necessary. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> PHE Incident Response Plan PHE CRCE Recovery Handbooks for Radiation Incidents PHE Radiation Monitoring Unit Plan Associated MRF Multi - agency plans Government Decontamination Service RADSAFE Scheme NAIR Scheme Individual responder plans Associated National Emergency Plans Warning & Informing the Public. | Public Health England (PHE) |
| Major Industrial Accident | H12 | Biological substance release from facility where pathogens are handled deliberately (e.g. pathogen release from containment laboratory) | Could cause fatalities and casualties with serious injuries. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> NHS Incident Response Plan NHS Trusts Major Incident Plans NHS Acute Trust Hazmat Self Presenter Decontamination MOU Between MFRS and Acute Trusts and MFRS SOPS and individual site specific plans Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Public Health England (PHE) |
| Major Industrial Accident | H14 | Major contamination incident with widespread implications for the food chain arising from: an industrial accident affecting food production areas contamination of animal feed incidents arising from production processes | There may be direct animal and consumer health effects. Could cause fatalities and casualties. There may be food production/marketing implications, depending on the scale and area affected (e.g. major shellfisheries, dairy, livestock production areas). Consumer confidence may also be affected, leading to lost markets and, where staple products (e.g. bread or milk) are affected, potential panic buying. | High (5) | Minor (2) | <ul style="list-style-type: none"> Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public Regulation system for checking food chain. Food Standards Agency and Environment Agency Public. | Public Health England (PHE) |
| Major Industrial Accident | H15 | Maritime Pollution | Spillage of crude oil into the sea polluting the coastline. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> National Contingency Plan for Marine Pollution from Ships and Offshore Installations International and national regulation of shipping aimed at preventing accidents by the safe construction, equipment and operation of ships by competent crews and shipping operators. Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. International Ship and Port Security Code; security service involvement NW Standing Environment Group Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Maritime & Coastguard Agency (MCA) |
| Major Industrial Accident | H38 | Technical failure of an upstream oil/gas facility, gas import pipeline terminal, or Liquefied Natural Gas (LNG) import reception facility leading to a disruption in gas supplies | Catastrophic accident destroying all parts of a facility and, in the worst case, taking months or more to restore normal levels of service. This could potentially result in a loss of gas supply to UK which could impact on power generation if demand were high. Could impact on economic, health and environmental. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> MFRS Individual Site Specific Plans, MFRS SOPs Major Incident, Mass Decontamination, COMAH, MFRS COMAH External Emergency Plans & Exercise Schedule MRF Multi - agency plans Individual responder plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Major Industrial Accident | H39 | Failure of water infrastructure or loss of drinking water | 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 due to an accident. Impact on domestic, industrial, commercial and agriculture premises. | Medium Low (2) | Moderate (3) | <ul style="list-style-type: none"> United Utilities Asset Management Plan, Security & Emergency Measures Direction 1998, Incident Management Procedure, Demand Monitoring Zone Plan(s), Alternative Water Supplies Procedure, Boil Water Advice Procedure, Chemical Contamination Procedure, Alternative water supply review documents for some hospitals and prisons. United Utilities in-house emergency plant including 15 Water Tankers, 400+ Arlington combo units and bottled water stocks for provision of alternative water supplies. Water Industry mutual aid and support for provision of alternative water supplies Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | United Utilities |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|---------------------------|----------|---|---|----------------|--------------|--|---|
| | | | | Risk Rating | | | |
| Major Industrial Accident | H61 | Industrial accident during remedial work on a legacy pond or silo facility at a civil nuclear installation holding large quantities of fissile material and radioactive waste | Potentially large numbers of people advised to evacuate and / or shelter. Could cause fatalities and casualties. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> PHE Incident Response Plan PHE CRCE Recovery Handbooks for Radiation Incidents PHE Radiation Monitoring Unit Plan MFRS SOPs Major Incident, Hazardous Materials, CBRNE Incidents, Mass Decontamination, MFRS Individual site-specific plans and Mass Decontamination MOU Between MFRS and Acute Trusts. Individual responder plans Associated MRF Multi - agency plans Government Decontamination Service RADSAFE Scheme NAIR Scheme Associated National Emergency Plans Warning & Informing the Public. | Public Health England (PHE) |
| Industrial Accident | H1 | Fire or explosion at a gas LPG (Liquefied Petroleum Gas) flammable gas storage site | Up to 3km around site, could cause fatalities and casualties. Could last for days. Gas shortage not expected but some disconnections of intensive users. Could cause disruption to transport services (road and rail) and health services. | Medium Low (2) | Moderate (3) | <ul style="list-style-type: none"> MFRS SOPs Major Incident, LPG, MFRS Individual Site Specific Plans Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public Protocol for Obtaining Health Advice by Emergency Responders. | Merseyside Fire & Rescue Service (MFRS) |
| Industrial Accident | HL4 | Major pollution of surface waters and groundwater | Pollution incident leading to effect on water quality. Could impact on tourism and have a serious impact on human health. | High (5) | Minor (2) | <ul style="list-style-type: none"> Environment Agency 24 Hour 365 Day Response System in place. Environment Agency Incident Management Process in Place. Environment Agency Local Working Arrangements with Fire Services, Police, Local Authorities, Highways England, Public Health England and Health Authority Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Environment Agency (EA) |
| Industrial Accident | HL27 | Localised fire or explosion at an oil refinery | Up to 1km around site, could cause fatalities and casualties. | Medium Low (2) | Moderate (3) | <ul style="list-style-type: none"> MFRS Individual Site Specific Plans, MFRS SOPs Major Incident, Building fires, Hazardous Materials Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Industrial Accident | HL7 | Industrial explosions and major fires | Up to 1km around site, could cause casualties. Explosions would cause primarily crush / cuts and bruise-type injuries, as well as burns. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> Control of Major Accident Hazards Regulations 2005 (COMAH) MFRS Individual Site Specific Plans, MFRS SOPs Major Incident, Mass Decontamination, COMAH, MFRS COMAH Off-Site Emergency Plans & Exercise Schedule Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Major Transport Accident | H60 | Road or rail tanker containing dangerous goods and / or 'high consequence' dangerous goods - accident involving fire and explosion | Could cause fatalities and casualties. Could cause damage to property and infrastructure depending on their distance from the incident. Impacts to health and environment. Contamination could impact air, land, water, animal welfare, agriculture and waste management. | Medium Low (2) | Moderate (3) | <ul style="list-style-type: none"> MFRS SOPs Major Incident, Mass Decontamination, Hazardous Materials, Road, Rail. MFRS DIM Vehicle Individual responder plans MRF Multi - agency plans National Emergency Plans Warning & Informing the Public Environment Agency Hazard Manager | Merseyside Fire & Rescue Service (MFRS) |
| Transport Accident | HL9 | Aviation accident | Could cause fatalities and casualties. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> MRF Multi - agency plans National Emergency Plans Liverpool John Lennon Airport Emergency Procedures, Airport Emergency Liaison Committee, Airport Testing/Exercising regime in place. MFRS SOP Major Incident, MFRS SOP Air, MFRS SOP CAA, MOD and NATO flying regulations, MOD Post Crash Management Organisation Water, MFRS Marine Rescue Team. Warning & Informing the Public | Liverpool John Lennon Airport (Fire) |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|------------------------------|----------|--|--|-----------------|--------------|---|---|
| | | | | Risk Rating | | | |
| Transport Accident | 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 | Could cause fatalities and casualties. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> MRF Maritime Response Guidance International and national regulation of shipping aimed at preventing accidents by the safe construction, equipment and operation of ships by competent crews and shipping operators. Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. International Ship and Port Security Code; security service involvement NW Standing Environment Group Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public | Maritime & Coastguard Agency (MCA) |
| | | | | Medium | | | |
| Structural | H44 | Reservoir Dam 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 to properties. Several thousand other properties could be flooded. Could cause fatalities and casualties. Missing persons and people stranded. Hazardous recovery amongst collapsed infrastructure and debris. Water supply to homes and business is lost. People need temporary accommodation. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> Reservoirs Act 1975 Water Act 2003 Regular Statutory visits by EA Met Office National Severe Weather Warning Service Environment Agency Local Flood Warning Plan for Merseyside Environment Agency Regional Programme of Flooding Exercises Reservoir Undertakers - Specific On-Site Plans Associated MRF Multi - agency plans Warning & Informing the Public | Environment Agency (EA) |
| | | | | Medium | | | |
| Structural | HL22 | Building collapse | 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. Depending on the size and construction of building, and occupation rates, there will always remain the possibility of fatalities or serious casualties. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> MFRS SOPs Major Incident, Collapsed Structures, MFRS Search & Rescue Team Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| | | | | Medium | | | |
| Animal Health | H25 | Outbreak of exotic notifiable disease in animals including birds | Major outbreak of non-zoonotic or zoonotic disease. Zoonotic can be transmitted to the human population e.g. avian influenza. Non zoonotic is only transmissible between animals / birds. | Medium (3) | Minor (2) | <ul style="list-style-type: none"> Animal Health Act 1981 & 2002 Local Authority Notifiable Exotic Animal Disease Contingency Plan Local Authority (Environmental Health) holds plans for: <ul style="list-style-type: none"> Footpath closure Decontamination Liaison with lead Government Departments Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Local Authorities (Lead - Knowsley MBC) |
| | | | | Medium | | | |
| Disruptive Industrial Action | H31 | Actual or threatened significant disruption to the distribution of fuel by road, including as a result of industrial action by fuel tank drivers | Retail filling stations, depending on the extent of the disruption and their locations, would start to run out of fuel within 4-5 days. Oil depots, for example those supplying emergency services and critical supply chains, would also face reduced deliveries, and it is likely that they would progressively begin to run short of fuel. Panic buying could exacerbate the situation. Replenishment of sites afterwards could take up to 2 weeks, largely depending on the extent of disruption. The extent of disruption would depend on the extent to which normal deliveries of fuel to customers could be maintained. | Medium (3) | Minor (2) | <ul style="list-style-type: none"> MRF Fuel Supply Disruption Plan Associated MRF Multi - agency plans Individual responder plans, including business continuity National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | Medium | | | |
| Industrial Action | 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. | Medium High (4) | Minor (2) | <ul style="list-style-type: none"> NWAS REAP Plan, NWAS Business Continuity Plans, MOU between NWAS and VAS, Mutual Aid, availability of differing response models Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | North West Ambulance Service |
| | | | | Medium | | | |
| International Events | H37 | Influx of British Nationals who are not normally resident in the UK. | British Nationals (BNs) not normally resident in the UK, returning to UK within a 3-4 week period following conventional war, widespread civil unrest or sustained terrorism campaign. | Medium (3) | Minor (2) | <ul style="list-style-type: none"> MRF Humanitarian Assistance CONOPS Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Local Authorities (Lead – Liverpool CC) |
| | | | | Medium | | | |
| Public Disorder | H57 | Large scale public disorder in sites in a single city or in multiple cities occurring concurrently over several days | Large scale outbreaks of disorder in a single city or multiple cities occurring concurrently, over a number of days. Disorder assumes criminal nature in urban centre (looting, rioting and wide scale criminal damage to public and private property) with satellite disorder in suburbs potentially triggered by existing community tensions. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> Police Aide Memoir on Civil Unrest Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | Medium | | | |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|-------------------|----------|---|---|----------------|--------------|---|---|
| | | | | Risk Rating | | | |
| Local Risks | L1 | Localised Maritime Pollution - Toxic or hazardous materials washed ashore | Release of oil into the sea, polluting the coastline. Significant environmental impact and potential for harm to human health. | Medium Low (2) | Moderate (3) | <ul style="list-style-type: none"> Memorandum of Understanding between the Environment Agency, Local Authority and Maritime and Coastguard Agency to react and remediate in case of toxic or hazardous material washed ashore. Environment Agency staff trained on Base Controllers (Silver) and Liaison Officers. Shoreline Pollution Response Contractors - Braemar Howells and Adler & Allan. Trained Beachmasters and Beach Supervisors. Site specific oil pollution plans International and national regulation of shipping aimed at preventing accidents by the safe construction, equipment and operation of ships by competent crews and shipping operators. Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters, International Ship and Port Security Code – security service involvement. Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Local Authorities (Sefton MBC & Wirral MBC) |
| | | | | Medium | | | |
| Local Risks | L4 | Transport hazards Major fire in Mersey Tunnel | Could cause fatalities and casualties and people trapped or missing. Evacuation of motorists. Loss of major cross river transport link. Disruption to transport network and local economy. Possible loss of communications and utilities. Major costs of rebuilding. | Medium Low (2) | Moderate (3) | <ul style="list-style-type: none"> Mersey Tunnels plans for Emergency Closures, Evacuation and Serious Fire Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Mersey Tunnels Police |
| | | | | Medium | | | |
| Local Risks | L5 | Transport hazards Serious RTC in Mersey Tunnel | Could cause fatalities and casualties and people trapped. Evacuation of motorists. Loss of major cross-river transport link. Disruption to transport network. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> Mersey Tunnels plans for Emergency Closure, Evacuation and Serious RTC Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Mersey Tunnels Police |
| | | | | Medium | | | |
| Local Risks | L8 | Transport Hazards Local accident involving an aircraft crash off shore | Medium – Large aircraft causing fatalities/casualties with environmental impact. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> ARCC Plans MFRS SOP Major Incident, MFRS SOP Air, MFRS SOP Water. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | To be confirmed |
| | | | | Medium | | | |
| Local Risks | L10 | Transport hazards Damage to motorway infrastructure | Motorway infrastructure will be damaged resulting in fatalities, injury and damage to transportation links. | Low (1) | Moderate (3) | <ul style="list-style-type: none"> Highways England – Contingency Plans, Traffic Officer Service at Regional Control Centre & Service provider Units, Emergency Network Diversion Route MRF Emergency Humanitarian Assistance & Welfare on the Highway Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Highways England |
| | | | | Medium | | | |
| Local Risks | L11 | Human Health Major outbreak of food poisoning | Water-born - Cryptosporidiosis Outbreak affecting 100 people and could cause fatalities. Food-borne - Salmonella Outbreak affecting 100 people and could cause fatalities | Medium (3) | Minor (2) | <ul style="list-style-type: none"> Water filtration, animal controls, regulations on farm visits Environmental Health Regulations Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Local Health Resilience Partnership (NHS) |
| | | | | Medium | | | |
| Local Risks | L12 | Public disorder Sport stadium disorder | Public events disorder resulting in injuries. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> Local Authority Licence Conditions. Clubs have individual Emergency Manuals Police Plans are developed based on information/intelligence prior to each scheduled fixture Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | Medium | | | |
| Malicious Attacks | M6 | Cyber security (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 action of hackers, criminals or foreign intelligence services. The two assessments cover risks of cyber-attack against infrastructure and cyber-attacks relating to data confidentiality. Impacts of both types of cyber-attack could include economic and societal disruption. | High (5) | Minor (2) | <ul style="list-style-type: none"> National Cyber Security Programme National Cyber Crime Unit Advice available from Centre for the Protection of National Infrastructure Individual responder plans Warning & Informing the Public. | Merseyside Police |
| | | | | Medium | | | |
| Malicious Attacks | M5 | Cyber security (Data Confidentiality) | Whilst terrorists can be expected to continue to favour high-profile physical attacks, the possibility that they might use cyber space to facilitate or mount an attack is growing. | High (5) | Limited (1) | | |
| | | | | Low | | | |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|---------------------------|----------|--|--|-----------------|-------------|---|---|
| | | | | Risk Rating | | | |
| Major Industrial Accident | H5 | Fire or explosion at an onshore fuel pipeline | Up to 1km around site, could cause fatalities and casualties. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MFRS Merseyside Major Accident Hazard Pipeline Plan, MFRS SOP Major Incident, MFRS SOP Pipeline Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Major Industrial Accident | H7 | Explosion at a high pressure gas pipeline | Local to site, could cause fatalities and casualties. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MFRS SOP Major Incident, MFRS SOP Pipelines, MFRS Merseyside Major Accident Hazard Pipeline Plan National Grid Gas Emergency Response Procedures for Dealing with Gas Escape Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Major Industrial Accident | H40 | Disruption or loss of telecommunication systems | Loss of telecommunications for up to 100,000 people for up to 72 hours. | Medium Low (2) | Limited (1) | <ul style="list-style-type: none"> Police Plan - Loss of British Telecom Exchange MRF Resilient Telecommunications Capabilities & Guidance Regional PECS agreement to ensure 999 calls will be answered National Emergency Alert for Telecoms BT Restoration Plans Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| Major Industrial Accident | H46 | Biological substance release during an unrelated work activity or industrial process (e.g. Legionella release due to improperly maintained building environmental control systems) | Could cause fatalities and casualties with serious injuries. | High (5) | Low (1) | <ul style="list-style-type: none"> NHS Incident Response Plan NHS Trusts Major Incident Plans NHS Acute Trust Hazmat Self Presenter Decontamination MOU Between MFRS and Acute Trusts and MFRS SOPs and individual site specific plans Individual responder plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Public Health England (PHE) |
| Industrial Accident | HL26 | Localised fire or explosion at an onshore ethylene gas pipeline | Up to 1km around site, could causing fatalities and casualties. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MFRS Merseyside Major Accident Hazard Pipeline Plan, MFRS SOP Major Incident, MFRS SOP Pipeline Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Transport Accident | 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. | Could cause fatalities and casualties. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MCA Major Incident Plans International and national regulation of shipping aimed at preventing accidents by the safe construction, equipment and operation of ships by competent crews and shipping operator Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Maritime & Coastguard Agency (MCA) |
| Transport Accident | HL10 | Local accident on motorways and major trunk roads | Multiple vehicle incident causing fatalities and casualties. Closure of lanes or carriageways causing major disruption and delays. | Medium High (4) | Low (1) | <ul style="list-style-type: none"> MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| Transport Accidents | HL13 | Maritime accident or deliberate blockade resulting in blockage of access to key port, estuary, maritime route. | Loss of port is likely to have an initial wider impact, but will quickly reduce as shippers seek alternative ports or methods of shipping. Economic impact on local dependent businesses. | Low (1) | Minor (2) | <ul style="list-style-type: none"> Port/Harbour Authority – Pilotage, marked channels, vessel tracking system, Port/Harbour Authority Maritime Salvage SOP Joint training/enforcement initiative between Police, MF&RS, Trading Standards & Environmental Health Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Port of Liverpool Police |
| Transport Accidents | HL14 | Local (road) accident involving transport of fuel / explosives | Multiple serious casualties with the possibility of multiple fatalities within vicinity of accident/explosion, depending on the average accident rate for the local road networks in that particular area. Area could require evacuating depending on substances involved. Potential release into local environment, watercourses etc. Large quantities of firefighting media (foam) could impact on environment. Roads and access routes impassable for a time. | Medium Low (2) | Limited (1) | <ul style="list-style-type: none"> MFRS SOP Major Incident, MFRS SOP Mass Decontamination, MFRS SOP Hazardous Materials, MFRS SOP Road, MFRS SOP Environment, MFRS range of Fire Fighting Foam for Class A&B Fires Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|------------------------------|----------|---|--|-----------------|-------------|--|---|
| | | | | Risk Rating | | | |
| Transport Accident | HL37 | Release of significant quantities of hazardous chemicals/materials as a result of major shipping accident | Fatalities and casualties unlikely. Significant environmental / ecological damage. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MCA Major Incident Plans National Contingency Plan for Marine Pollution from Ships and Offshore Installations International Ship and Port Security Code- security service involvement International and national regulation of shipping aimed at preventing accidents by the safe construction, equipment and operation of ships by competent crews and shipping operator Regulations enforced by Flag States and subject to rigorous Port State Control checks, coordinated in European waters NW Standing Environment Group Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Maritime & Coastguard Agency (MCA) |
| Structural | HL21 | Land movement (i.e. caused by tremors or landslides) | 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 landslide itself and/or in collapsed structures. A number of fatalities are possible depending on the size and location of land movement, and the limitations of emergency access to injured persons. | Low (1) | Minor (2) | <ul style="list-style-type: none"> Local Authority Major Emergency Plan Local Authority Emergency Rest Centre Plan Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Local Authorities (Lead – Wirral MBC) |
| Structural | HL23 | Bridge closure or collapse | Roads, access routes and transport infrastructure impassable for considerable length of time. Severe congestion over wide geographical area. Emergency access into/out of large populated areas severely restricted. Potential for a number of persons to be trapped or missing | Low (1) | Minor (2) | <ul style="list-style-type: none"> Local Authority Major Emergency Plan Local Authority Emergency Rest Centre Plan BTP, ACPO, Network Rail - Police Bridge Strike Protocol Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public | Local Authorities (Lead – Wirral MBC) |
| Disruptive Industrial Action | H33 | Industrial action by prison officers | A single unofficial strike by prison officers nationally, lasting more than 24 hours. | Medium High (4) | Limited (1) | <ul style="list-style-type: none"> Police Plan - Force Mobilisation / HMP Liverpool / HMP Altcourse / HMP Kennet / Ashworth Hospital Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| Disruptive Industrial Action | H35 | Industrial action by key Rail workers | Strike action resulting in the near-total shut down of the rail network on a national scale severe disruption would last for a week as part of a 3 month campaign. | Low (1) | Minor (2) | <ul style="list-style-type: none"> Rail industry contingency plans in place and regularly monitored. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | British Transport Police |
| Local Risks | L2 | Unexploded ordnance | Unexploded ordnance detonates resulting in a fatality, injury and / or damage to property. | Medium Low (2) | Limited (1) | <ul style="list-style-type: none"> Police Plans for Bomb Threat & Suspect Packages Police Plans for Unexploded Ordnance handed in or reported to the Police Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| Local Risks | L3 | Fire in Occupied Place of Entertainment /Sports Stadium | Major fire could cause fatalities and casualties. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MFRS SOP Major Incidents, MFRS SOP Venues, MFRS Individual Site Specific Plans Police Plans for Merseyside Sports Stadia Individual site specific plans Associated MRF Multi - agency plans National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| Local Risks | L6 | Transport Hazards Failure of infrastructure in Mersey Tunnel (including collapse and flooding) | Could cause fatalities and casualties and people trapped or missing Evacuation of motorists. Loss of major cross river transport link. Disruption to transport network, local economy. Possible loss of communications and utilities. Major costs of rebuilding. | Low (1) | Minor (2) | <ul style="list-style-type: none"> Mersey Tunnels plans for Emergency Closure, Evacuation, Failure of Infrastructure. MFRS SOP Major Incident, MFRS SOP Tunnels, MFRS SOP Collapsed Structure, MFRS Service Instruction Tunnel Gas Main. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Mersey Tunnels Police |
| Local Risks | L7 | Transport Hazards Release of hazardous materials in Mersey Tunnel | Could cause fatalities and casualties. Evacuation of motorists. Loss of major cross river transport link. Disruption to transport network. | Low (1) | Minor (2) | <ul style="list-style-type: none"> Mersey Tunnels plans for Emergency Closure, Planned Closures, Evacuation, Release of Hazardous Material, and Escort of Vehicles Carrying Dangerous Goods. MFRS SOP Major Incident, MFRS SOP Tunnels, MFRS SOP Hazardous Materials, MFRS SOP Mass Decontamination Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Mersey Tunnels Police |

| Category | Risk Ref | Hazard or Threat | Outcome Description & Further Information | Likelihood | Impact | Controls in Place | Lead Responsibility |
|-------------|----------|---|---|----------------|-------------|--|---|
| | | | | Risk Rating | | | |
| Local Risks | L8 | Transport Hazards Local accident involving an aircraft crash off shore | Light aircraft causing fatalities/casualties. Cargo aircraft causing fatalities/casualties with environmental impact. | Low (1) | Limited (1) | <ul style="list-style-type: none"> ARCC Plans MFRS SOP Major Incident, MFRS SOP Air, MFRS SOP Water. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | To be confirmed |
| | | | | Low | | | |
| Local Risks | L9 | Transport Hazards Transport incident involving radiological or nuclear materials | Could cause fatalities. People and local area may be contaminated. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MFRS SOPs Major Incidents, Hazardous Materials, CBRNE Incidents, Mass Decontamination, MFRS DIM Vehicle. Government Decontamination Service RADSAFE Scheme NAIR Scheme Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| | | | | Low | | | |
| Local Risks | L13 | Public Disorder Public events disorder | Public events disorder resulting in damage to property and injuries. | Low (1) | Minor (2) | <ul style="list-style-type: none"> Police Plans are developed prior to significant public safety events Multi Agency Exercises held prior to large scale events Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public | Merseyside Police |
| | | | | Low | | | |
| Local Risks | L14 | Public Disorder Prison riots | Prison riots taking place which would result in damage to property and/or either fatalities or injuries. | Medium Low (2) | Limited (1) | <ul style="list-style-type: none"> Police Plans - Force Mobilisation / HMP Liverpool / HMP Altcourse / HMP Kennet HM Prison Service Contingency Plans Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Police |
| | | | | Low | | | |
| Local Risks | L15 | Public Disorder Secure Hospitals | Disorder occurring resulting in damage to property and/or either fatalities or injuries. | Low (1) | Limited (1) | <ul style="list-style-type: none"> Police Plans relating to secure establishments Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | NHS England |
| | | | | Low | | | |
| Local Risks | L16 | Fire / Explosion / Contamination at a waste management or recycling centre | Up to 5km around the site, could cause fatalities and casualties. Could affect local transport infrastructure and environmental pollution. | Low (1) | Minor (2) | <ul style="list-style-type: none"> MFRS SOPs Fighting Fires in Refuse, Asbestos, Mass Decontamination, Sewers, Acetylene, LPG WISH Forum Reducing Fire Risk At Waste Management Sites Environment Agency Guidance on Development of Site Specific Multi Agency Contingency Plans with LRFs Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Merseyside Fire & Rescue Service (MFRS) |
| | | | | Low | | | |
| Local Risks | L19 | Shellfish Harvesting | Cockle picking along the north Wirral coastline could give rise to fatalities and casualties. Incoming tides, underfoot conditions could result in individuals and groups on the sands being stranded and / or cut off. | Medium Low (2) | Minor (2) | <ul style="list-style-type: none"> Wirral MBC Shellfish Harvesting Multi Agency Operational Plan MFRS SOP Major Incident, MFRS Operational Plan for Wirral Cockle Bed Harvesting MRF Multi - agency plans Individual responder plans National Emergency Plans Warning & Informing the Public. | Local Authority (Wirral MBC) |
| | | | | Low | | | |
| Local Risks | L17 | Temporary Risks Festivals / Sporting / Leisure Events | Life Risk Property Risk Environmental Risk | N/A | N/A | <ul style="list-style-type: none"> Event Organisers complete the risk assessment and submit them to multi agency safety advisory groups for consideration and approval. Associated MRF Multi - agency plans Associated National Emergency Plans Warning & Informing the Public. | Event Organiser |
| | | | | N/A | | | |