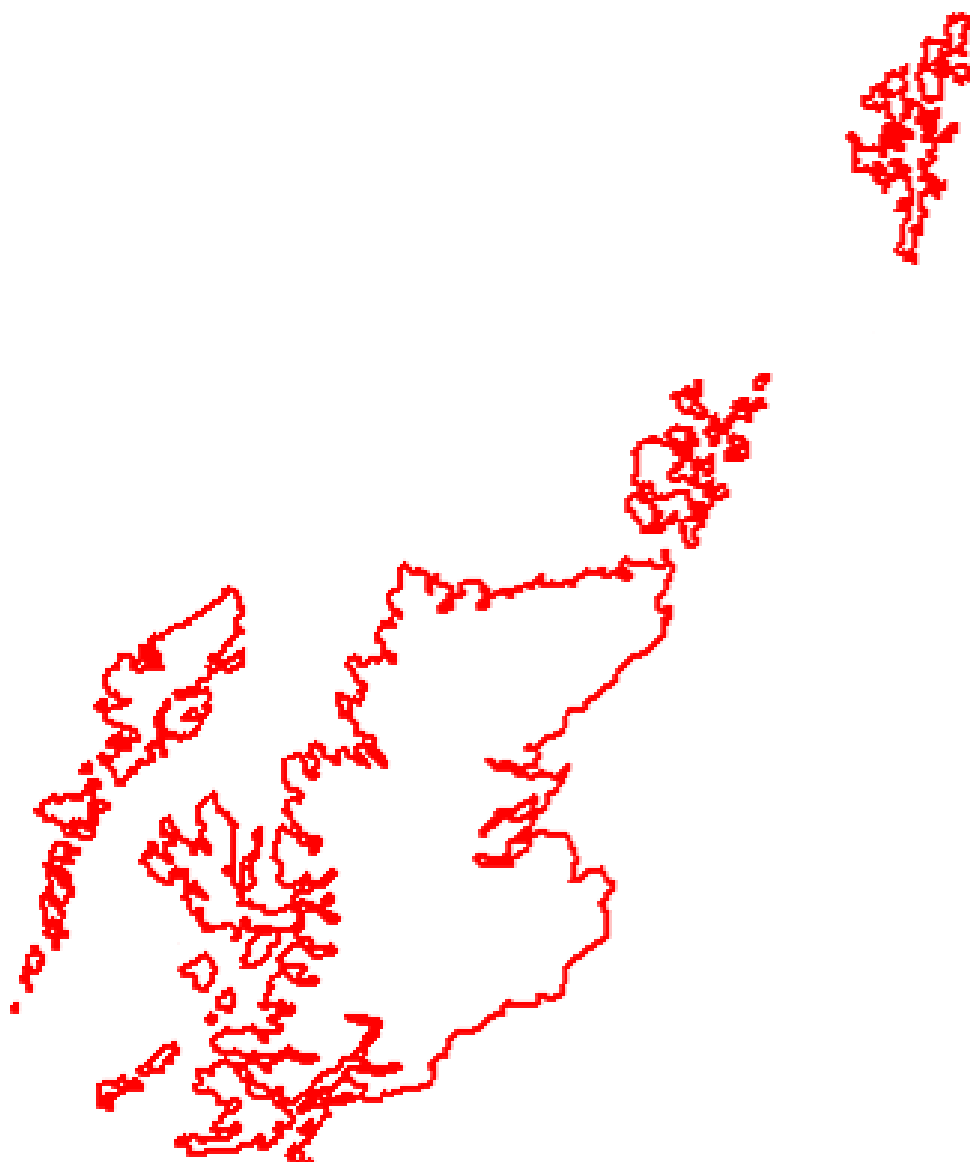


**HIGHLANDS & ISLANDS
STRATEGIC CO-ORDINATING GROUP**



COMMUNITY RISK REGISTER

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INTRODUCTION

What is the Community Risk Register (CRR)?

The Community Risk Register (CRR) is intended to inform communities within the Highlands and Islands of a range of potential emergency incidents and it provides the basis for emergency planning, response and recovery.

The Community Risk Register has been compiled in accordance with “Preparing Scotland” the Scottish guidance on preparing for emergencies.

An ‘Emergency’ is defined as ‘**an event or situation which threatens serious damage to human welfare in a place in the UK, the environment of a place in the UK**’.

The inclusion of a particular risk in this Community Risk Register does not necessarily indicate that the risk will lead to an actual event or occurrence, or occur at the scale described. Risk Assessments are made on credible worst case scenarios and applied to hazards that local and national organisations have identified within Highlands and Islands.

At its simplest risk assessment asks the following questions:

<i>What if?</i>	Seeks to identify risks, both hazards and threats.
<i>What then?</i>	The likelihood and the impact (the consequences) of events are assessed.
<i>So what?</i>	Evaluates the significance of the risks and their relevance to the local area.
<i>Then what?</i>	Take steps to manage the risks.

The purpose of risk assessment is to:

- ensure that those who have to respond to an emergency incident have an accurate understanding of the risks that they face so that their planning has a sound foundation and is proportionate to the risks.
- enable local responders to assess the adequacy of their planning and capabilities, and allow any shortcomings to be addressed.
- facilitate co-ordinated local preparation based on consistency planning assumptions.
- enable local responders to describe the emergency planning context for the public and officials.
- inform and reflect Scottish and UK risk assessments that support emergency planning and capability development.
- provide a rational basis for the prioritisation of objectives, work programmes and the allocation of resources.

Risk assessment contributes to a process that is cyclical and subject to regular review which will lead to a continuous improvement in local risk management. It is essential that the risk management process responds quickly to changes in the risk environment. This means that the process should be iterative, monitor risks and be kept up to date.

The Risk Management Process

Risk assessment is one component of the general risk management process set out below.

Figure 4 The Risk Management Process

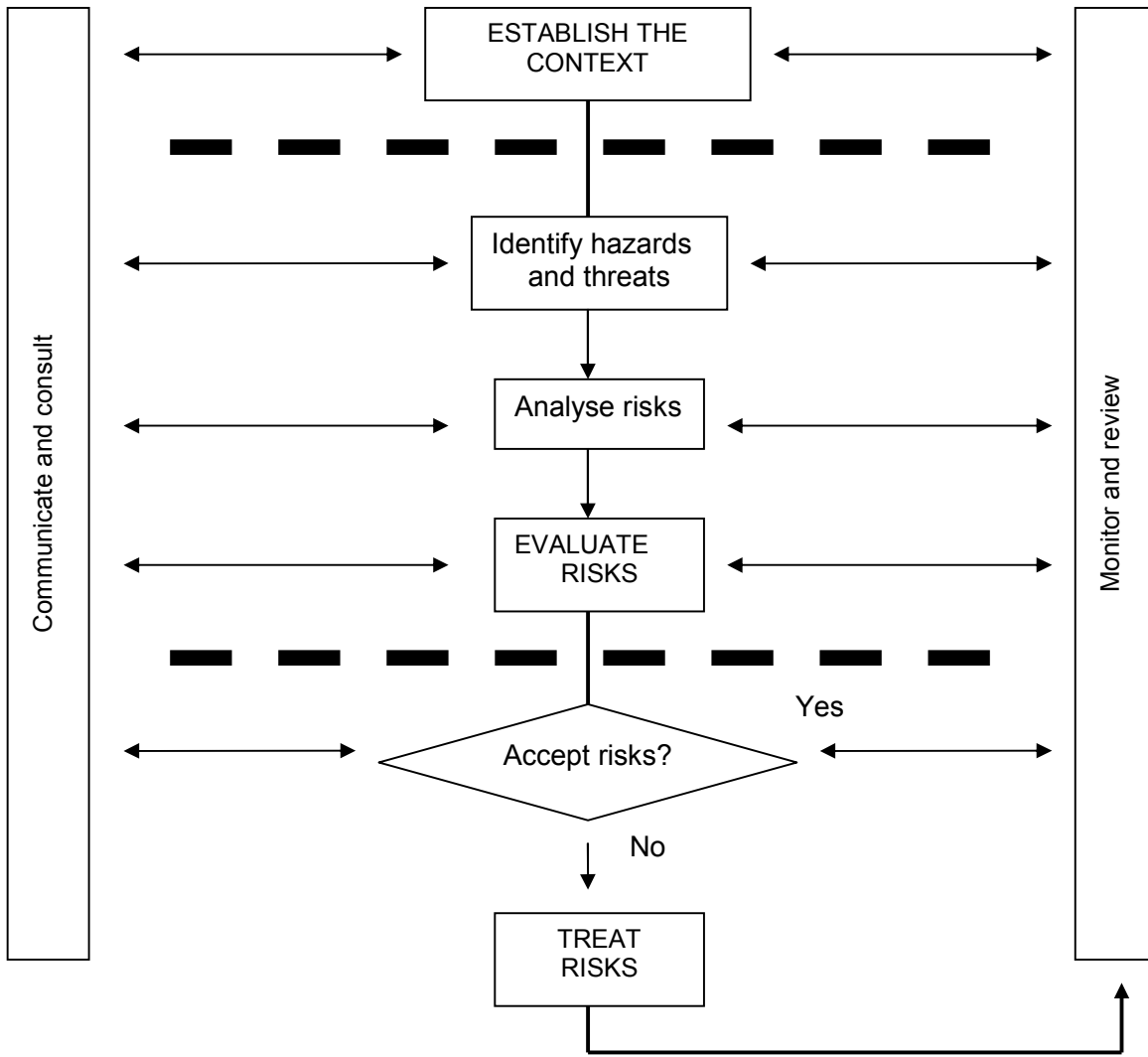
The dashed lines in Figure 1 represent the different aspects of the process:

Establishing the context – involves defining the nature and scope of the risk problem and agreeing how the risk management process will be undertaken.

Evaluating Risk – covers the identification of those threats and hazards that present significant risks, analysis of their likelihood and their impacts which are combined to assist in prioritising risks.

Treating the risk – involves deciding which risks are unacceptably high and developing strategies to mitigate them.

Risks vary with changes in the environment in which they are set and changes in the hazards and threats. These changes will affect emergency preparedness and capabilities. Periodic reviews are required to ensure that changes are captured then reflected in the risk assessment and emergency planning processes.



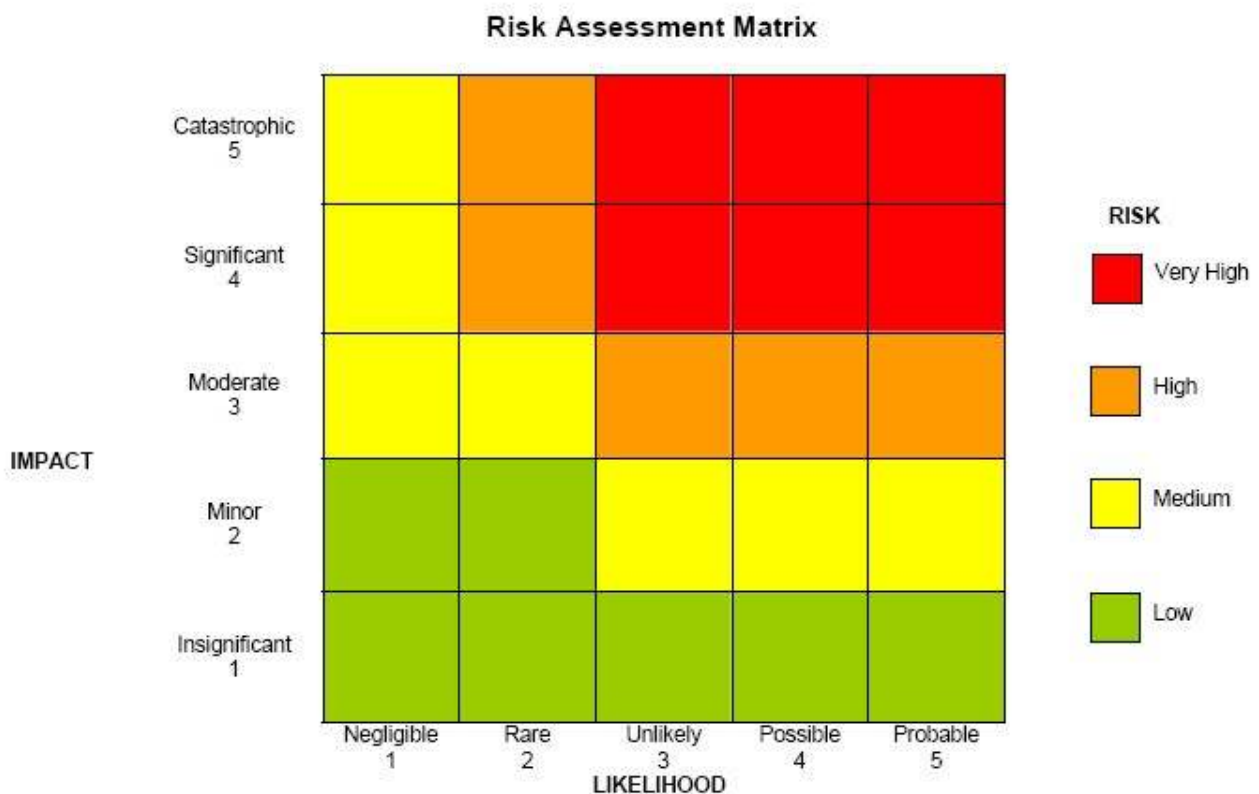
How has this Risk Register been compiled?

The CRR identifies the areas of potential risk within the Highlands and Islands using the hazard categories and sub-categories outlined by the Scottish Executive guidance.

An assessment has been made of the **Likelihood** and **Impact** of an event occurring, to give a **Risk Rating**.

- The **Likelihood** has been assessed following consideration of data of local, regional and nationally occurring events.
- The potential **Impact** has been considered against each event and its likely impact on the **Health, Social, Economic and Environmental** aspects of our community.
- The likelihood and impact assessments have been used to develop a **Risk Rating** of Low, Medium, High or Very High by use of the **Risk Assessment Matrix** (see below) as defined in the guidance.

The risk register only covers **hazards** (accidental in nature) rather than **threats** (of malicious intent). This does not mean that threats have not been considered as part of the risk assessment process, but given that some of the information in threat assessments may be of a sensitive nature or have the potential for misuse, such details are not publicly available. Threat scenarios that are considered include criminal or terrorist activity.



Definition of Risk Rating

Very High – 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 Risk – these risks are classed as significant. They may have 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 the risk monitored on a regular frequency.

Medium Risk – these risks are less significant, but may cause upset and inconvenience in the short-term. These risks should be monitored to ensure that they are being appropriately managed and consideration given to their being managed under generic emergency planning arrangements.

Low Risk – these risks are both unlikely to occur and not significant in their impact. They should be managed using normal or generic planning arrangements and require minimal monitoring and control unless subsequent risk assessments show a substantial change, prompting a move to another risk category.

LIKELIHOOD AND IMPACT SCORING SCALES

Likelihood Scoring Scale – Quantitative and Qualitative Measures

The likelihood scale above changes exponentially – by an order of magnitude (times 10) – per level of the scale – a logarithmic scale. This is because many of the events covered in any risk assessment will tend to be unlikely and the majority will then cluster at the lower end of a linear scale of likelihood, which would make it difficult to discriminate between event types. In addition, for many types of event it is only possible to differentiate likelihood by orders of magnitude because no accurate statistical or historical data is available to support a more definitive analysis. The “>” symbol in the table means “greater than”.

Level	Descriptor	Indicative Chance of Occurrence in <u>5 Year Period</u>	General Description
1	Negligible	0.005% to 0.05% or 1 in 20,000 up to 1 in 2,000 chance	May occur only in very exceptional circumstances. May occur with a chance of between 1 in 100,000 to 1 in 10,000 per year at most.
2	Rare	Greater than 0.05%, up to 0.5% or > 1 in 2,000 and up to 1 in 200 chance	Very few recorded incidents or anecdotal evidence and/or no recent incidents in associated organisations, facilities or communities and/or little opportunity, reason or means to occur. May occur with a chance between one in 10,000 and 1 in 1,000 per year.

3	Unlikely	Greater than 0.5%, up to 5% or > 1 in 200 and up to 1 in 20 chance	Might occur at some time; and/or few, infrequent, random recorded incidents or little anecdotal evidence; and/or few incidents in associated or comparable organisations, facilities or communities; and/or some opportunity, reason or means to occur. May occur with a chance of between 1 in 1,000 and 1 in 100 per year.
4	Possible	Greater than 5%, up to 50% or > 1 in 20 and up to 1 in 2 chance	Regular recorded incidents and strong anecdotal or predictive evidence. May occur/recur with a chance of between 1 in 100 and 1 in 10 per year.
5	Probable	Greater than 50% or 1 in 2 chance	High level of recorded incidents and/or very strong predictive evidence. Likely to occur/recur with a chance of more than 1 in 10 per year.

Impact scoring scale – qualitative measures

The **impact** rating level is the arithmetic mean (total divided by 4) of the rating for each category considered (health / social / economic / environmental), with the mean then rounded up or down on the basis of local judgement and circumstances prevailing.

For example, if the scale of a particular hazard scores Level 3 for Health, Level 3 for Social, Level 2 for Economic and Level 1 for Environment, then the mean score will be 9 divided by 4 = 2.25, rounded down to an impact level of 2 on consideration by the SCG risk assessment working group.

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

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

SUMMARY OF RISK ASSESSMENT PROCESS

NAME OF STEP	ACTIONS	INPUTS	AGENCIES INVOLVED
Establish the Emergency Risk Management Context	<p>Set scope of project (relate to guidance and definition of emergency in the Act).</p> <p>Identify partners.</p> <p>Describe local context.</p> <p>Set out risk evaluation criteria.</p>	<p>Initial discussion at Strategic Co-ordination Group.</p> <p>Internal discussions with partners</p>	Category 1 responders.
Initial Hazard and Threat Identification	Each Category 1 responder identifies and describes hazards and threats which might present significant concerns in next 5 years to which it would be required to respond.	<p>Guidance Annex 2 Hazard categories and separate guidance on threat categories.</p> <p>Research and experience.</p> <p>Category 2 responders contribute as required.</p>	All Cat 1 responders individually.
Multi-agency Collation of Hazards and Threats	Strategic Co-ordinating Group co-ordinates the collation of hazards and threats identified by local responders. Determination of agencies and Category 1 responders that are best qualified to assess, or lead, on the likelihood and impact of the hazards and threats.	Individual responder hazard and threat assessments.	All Cat 1 responders collectively in consultation with Cat 2 responders.
Risk Analysis	<p>Lead assessors consider likelihood of hazards in next 5 years.</p> <p>Lead assessors carry out impact assessment on hazards and threats.</p> <p>Generate risk statements with likelihood and overall risk assessment.</p>	<p>Risk Assessment Guidance.</p> <p>Research, discussion and analysis between key partners.</p> <p>Individual organisations bring likelihood assessments back to Strategic Co-ordinating Group.</p>	<p>Cat 1 responders.</p> <p>UK and/or Scottish national and local area stakeholders.</p>
Risk Evaluation	<p>Incorporate risks into Strategic Co-ordinating Group risk register.</p> <p>Compare assessed risk to risk criteria.</p>	<p>Risk assessments.</p> <p>Risk evaluation criteria.</p>	All Cat 1 responders collectively.

	<p>Set risk priorities.</p> <p>Determine acceptability of risk based on level of risk.</p> <p>Identify and evaluate options for treatment (accept/transfer/avoid/reduce/prevention/mitigation).</p>		
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NAME OF STEP	ACTIONS	INPUTS	AGENCIES INVOLVED
Risk Treatment	<p>Assess the challenges presented by the risks.</p> <p>Identify current capabilities and arrangements.</p> <p>Assess any gaps in response capabilities.</p> <p>Identify additional treatment measures.</p> <p>Prioritise treatment measures on basis of risks and gaps.</p> <p>Identify person or organisation to be responsible for implementing measure.</p> <p>Complete the CRR.</p> <p>Establish risk treatment programme.</p>	<p>Discussion and analysis between key partners.</p>	<p>All Cat 1 responders collectively.</p>
Monitoring and Reviewing	<p>Monitor risk treatment programme.</p> <p>Formal review of all risks on 4 year cycle.</p> <p><i>Ad hoc</i> review as and when new information or updated guidance suggests the need.</p>	<p>Reports on progress.</p> <p>Ongoing review of changes to context and hazards within responding organisations.</p> <p>Ongoing and regular reviews of risks by Strategic Co-ordinating Group between responders.</p>	<p>All Cat 1 responders individually and collectively.</p>
Publishing Risk Assessments	<p>Publish appropriate parts of the Community Risk Register.</p> <p>Publish individual assessments.</p> <p>Publish plans containing assessments.</p>	<p>Agreement to publication of CRR by SCG.</p> <p>Consider sensitivity of all information.</p>	<p>All Category 1 responders.</p>

Hazard Descriptions

Industrial Accidents & Environmental Pollution

H1	Fire or explosion at LPG Depot
H3	Fire or explosion at Oil Refinery
HL1	Fire or explosion at a gas terminal
H4	Fire or explosion at a fuel depot
H5	Fire or explosion at an onshore fuel pipeline
H6	Fire or explosion on oil platform
H7	Fire or explosion at a natural gas pipeline
H8	Toxic chemical release
HL3	Industrial accident involving toxic release
H10	Radioactive substance release from a nuclear reactor accident
H14	Major contamination incident, widespread implications for the food chain
H15	Maritime pollution
HL4	Major pollution of controlled waters
HL5	Major land contamination incident
HL6	Major air quality incident
HL7	Industrial explosions and major fires

Transport Hazards

HL8	Rapid accidental sinking of passenger vessel
H16	Aviation accident over major conurbation
H42	Sinking of passenger or cargo vessel
HL9	Aviation accident
HL10	Local accident on motorways and major trunk roads
HL11	Railway accident
HL12	Local accident involving transport of hazardous chemicals
HL13	Maritime accident or deliberate blockade of access to key port, estuary, maritime route
HL14	Local accident involving transport of fuel / explosives
SH1	Local accident on single track lifeline route

Severe Weather

H17	Storms and Gales
H18	Low temperatures and heavy snow
HL15	Heat wave
H19	Flooding – Major coastal / tidal
H21	Flooding – Major fluvial
HL16	Flooding – Major local coastal / tidal
HL17	Flooding – Localised coastal / tidal
HL18	Flooding – Major local fluvial
HL19	Flooding – Local fluvial
HL20	Flooding – Local flash fluvial

Structural Hazards

HL21	Land movement (tremors / landslides)
HL22	Building collapse
HL23	Bridge collapse
H44	Major reservoir dam failure

Human Health

H22	Influenza type disease (epidemic)
H23	Influenza type disease (pandemic)
H24	SARS type disease
HL24	Legionella / meningitis outbreak

Animal Health

H25	Non-zoonotic notifiable animal disease
H26	Zoonotic notifiable animal disease

Public Protest

H28	Large Scale Public Protest
H29	Targeted disruptive protest

Industrial Technical Failure

H39	Failure of water supply
H40	No notice failure of a public telephony provider
H41	Failure of electricity network (UK)
H43	Failure of telecommunication infrastructure
H45	Failure of electricity network (Scotland)