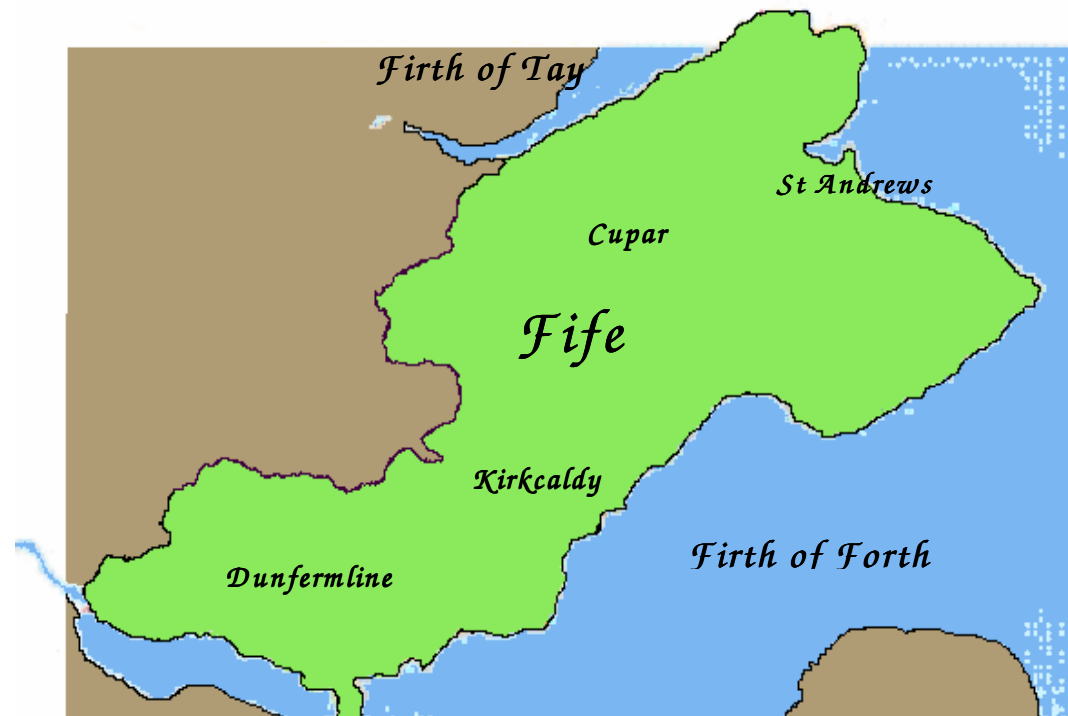


Fife Emergency Planning Strategic Co-ordinating Group



Community Risk Register

Foreword by Chair of Fife Emergency Planning Strategic Group

FOREWORD

Fife Emergency Planning Strategic Coordinating Group is a partnership comprising of Fife Council, the emergency services and other relevant agencies and is jointly chaired by the Chief Constable of Fife Constabulary and the Chief Executive of Fife Council.

The Civil Contingencies Act 2004 places a statutory obligation on the Group to undertake risk assessments and maintain them in a Community Risk Register.

Risk Assessment is the first step in the emergency planning process and aims to identify those risks, which could result in a major emergency in Fife. Risk Assessment is not a static process and is subject to constant review. The information contained in this Register will, as a result, be regularly updated.

Norma Graham
Chief Constable,
Fife Constabulary

Ronnie Hinds
Chief Executive,
Fife Council

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Fife Area

Fife is a unitary authority area. It encompasses an area of approximately 1,320 km² with a total population of approximately 354,600. Overall there is a diverse local economy, with key sectors including petro-chemical, tourism, engineering, technology, distribution, and financial and business services. Situated at the heart of Scotland it has major road and rail network as well as having links to air and sea transport systems.

Fife Emergency Planning Strategic/Working Groups

For many years a number of agencies with a role to play in Integrated Emergency Management (IEM) have worked closely together to plan for and respond to serious emergencies within the Fife Council area. The groups are known as the Fife Emergency Planning Strategic/Working Groups (EPSG/EPWG).

Recently the structure, role and remit of the EPSG/EPWG has undergone a comprehensive review to meet the requirements of the Civil Contingencies Act 2004 (CCA) and its' associated Scottish Regulations and Guidance. This legislation will enable the EPSG to build upon existing informal arrangements that have been in place for many years. Membership of the EPSG and EPWG is drawn from Category 1 and 2 responders as defined by the CCA.

The Purpose of the Community Risk Register

The Fife Community Risk Register has been compiled by the EPWG in accordance with the Civil Contingencies Act 2004 (CCA) and its associated Regulations and Guidance as outlined in the Scottish Executive document Preparing Scotland www.scotland.gov.uk/publications/2006/02/27140215 and as detailed in the UK Resilience website on www.ukresilience.info.

An 'Emergency' is defined in the CCA 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, or war or terrorism which threatens serious damage to the security of the UK**'.

The Community Risk Register (CRR) is intended to inform the communities of Fife of a range of potentially disruptive events that the responder agencies have considered and to confirm the state of preparedness to deal with the occurrence of such emergencies ensuring a swift return to normality. The CRR will provide the basis for the responder agencies to develop, implement and confirm emergency plans, to meet the requirements of the EPSG and EPWG.

The inclusion of a particular risk in the Community Risk Register does not necessarily indicate that the EPSG/EPWG expect that the risk will lead to an actual event or occurrence, or occur at the scale described. The Risk Assessments have been made on credible worst case scenarios applied to identified hazards or threats that are present within the Fife area.

How has the CRR been compiled?

The areas of potential risk based on national guidance have been reviewed by the EPWG and are listed in the register. Certain risk categories from the national guidance were not relevant to the Fife area therefore excluded from this risk register. Likewise the EPWG identified additional risks for inclusion therefore the numbering is inconsistent with the national guidance.

An assessment has been made of the **Likelihood** and **Impact** of an event occurring, using historical and empirical evidence and projected occurrence data over a five year period, to give a **Risk Rating**.

- The **Likelihood** has been assessed following consideration of data of local, regional and nationally occurring events, and has been given a score of 1 –5 ; 1 being the lowest (negligible) and 5 being the highest (probable).
- 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 scoring values are 1 – 5; 1 being the lowest, insignificant, and 5 being the highest, catastrophic (the risk assessment matrix can be found on page 10 of this register).
- 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** (p10) as defined in the CCA guidance, which sets the risk level against the likelihood and impact ratings.
- A brief description of the controls currently in place within Fife has been provided.

The risk assessments cover non-malicious events (hazards) and malicious events (threats). Given the sensitivity of the information supporting these risk assessments and the potential for use by adversaries, specific details will not be on the published register on the internet.

Risk assessment is not a static process and is subject to constant review. The information contained within this document will, as a result, be regularly updated.

Enquiries concerning the Community Risk Register should in the first instance be directed in writing to:

Civil Contingencies Advisor, Fife Council, Fife House, North Street, Glenrothes, KY7 5LT

LIKELIHOOD AND IMPACT SCORING SCALES

Likelihood Scoring Scale – Quantitative and Qualitative Measures

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.

Note: 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. This makes it difficult to discriminate between event types and gives a picture of little value to planners. In addition, for many types of event it is only possible to differentiate likelihoods 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”.

Descriptions of hazards such as “a one in one hundred year event” are equivalent to the likelihood for this scale of event expressed as a fractional or percentage probability for each year, i.e. for this example, a “1 in 100 per year” likelihood, or a “1% per year” likelihood of this scale of event happening. This is the format used in the general descriptions column of the above table. This yearly likelihood becomes 5 times greater (more likely) extended over a five year period – i.e. for the above example - a 1 in 100 per year likelihood becomes a 5% or 1 in 20 likelihood over five years.

IMPACT SCORING SCALE – QUALITATIVE MEASURES

Impact scoring scale – Qualitative Measures

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, and 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 and 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.

Level	Descriptor	Categories of Impact	Description of Impact
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 that is confined to a specific location, or to a 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 with some short-term loss of production, with possible additional clean up costs
		Environment	- Limited impact on environment with short-term or long-term-effects.
4	Significant	Health	- Significant number of people in affected area impacted with multiple fatalities, multiple serious or extensive injuries, significant hospitalisation and activation of 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.

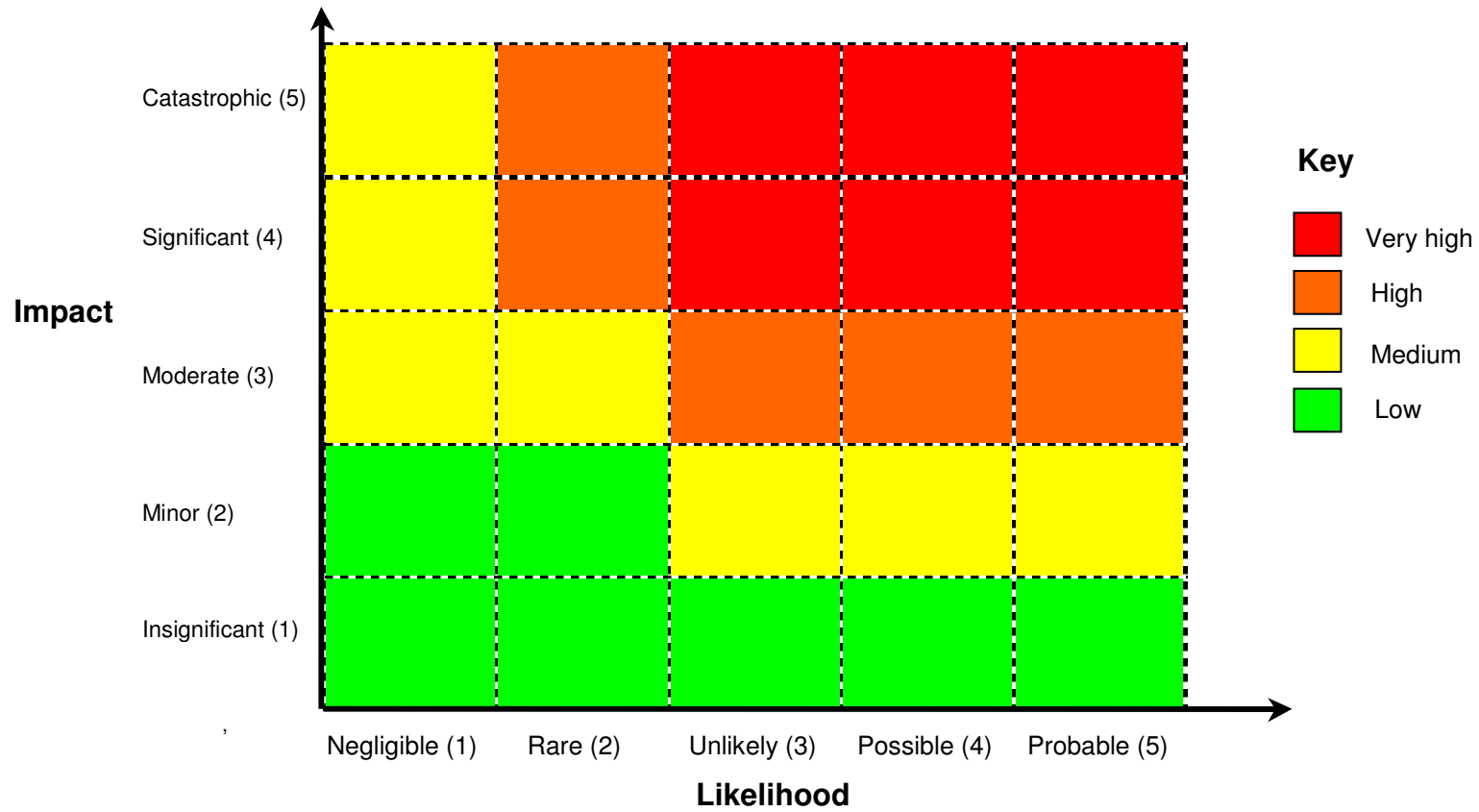
Level	Descriptor	Categories of Impact	Description of Impact
5	Catastrophic	Health	- Very large numbers of people in affected area(s) impacted with significant numbers of fatalities and large number of people requiring hospitalisation with serious injuries with longer-term effects.
		Social	- Extensive 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.

Assessment of Impact. The impact scoring should be based on the estimations of scale provided in Annex 2 or the additional threats guidance - or as determined by the appropriate Category 1 Responder(s) and UK, Scottish or other organisations, using the approach suggested in this guidance.

The impact categories are given equal weighting and the overall impact score for each hazard or threat - for use in the risk rating matrix - is obtained by calculating the arithmetic mean (total divided by 4) of the four levels scored – i.e. one score for each category. The total impact score should be a whole number (no fractions) and the decision to round the mean value up or down will depend on local judgement, informed by the local 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 score of 2 on consideration by the SCG.

RISK RATING MATRIX



DEFINITIONS OF RISK RATINGS

Very High (VH) Risk – these are classed as primary or critical risks requiring immediate attention. They may have a high or low likelihood of occurrence, but their potential consequences are such that they must be treated as a high priority. This may mean that strategies should be developed to reduce or eliminate the risks, but also that mitigation in the form of (multi-agency) planning, exercising and training for these hazards should be put in place and the risk monitored on a regular frequency. Consideration should be given to planning being specific to the risk rather than generic.

High (H) Risk – these risks are classed as significant. They may have 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 (M) Risk – these risks are less significant, but may cause upset and inconvenience in the short-term. These risks should be monitored to ensure that they are being appropriately managed and consideration given to their being managed under generic emergency planning arrangements.

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

Glossary of Abbreviations

EPWG	-	Emergency planning Working Group
EPSCG	-	Emergency Planning Strategic Group
SCG	-	Strategic Coordinating Group
CCA	-	Civil Contingencies Act 2004
CRR	-	Community Risk Register
SEPA	-	Scottish Environment Protection Agency
DfT	-	Department for Transport
MCA	-	Maritime and Coastguard Agency
FSA	-	Food Standards Agency
HSE	-	Health and Safety Executive
SEJD	-	Scottish Executive Justice Department
SEHD	-	Scottish Executive Health Department
SEERAD	-	Scottish Executive Environmental Rural Affairs Department
CSIA	-	Central Sponsor for Information Assurance
DTI	-	Department for Trade and Industry

COMMUNITY RISK REGISTER FOR FIFE (STRATEGIC CO-ORDINATION GROUP AREA)

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
1. HAZARD CATEGORY INDUSTRIAL ACCIDENTS/ENVIRONMENTAL POLLUTION							
H1	Fire or explosion at a gas LPG or LNG terminal (or associated onshore feedstock pipeline) or flammable gas storage sites	Up to 3km around site causing up to 500 fatalities and up to 1500 casualties. Gas terminal event likely to be of short duration once feed lines are isolated; event at a storage site could last for days if the explosion damaged control equipment.	Negligible (1)	Significant(4)	MEDIUM	Fife Council Pipeline Emergency Response Plan; off-site COMAH plan; evacuation and rest centre plans. Fire and Rescue Service Operational Specific Procedures,	Fire
H2	Fire or explosion at an onshore ethylene gas pipeline	Up to 3km around site causing up to 500 fatalities and up to 1500 casualties.	Negligible (1)	Significant(4)	MEDIUM	Fife Council Pipeline Emergency Response Plan; off-site COMAH plan; evacuation and rest centre plans. Fire and Rescue Service Operational Specific Procedures,	Fire/HSE
HL1	Fire or explosion at a gas terminal or involving a gas pipeline	Up to 3km around site causing up to 10 fatalities and 100 casualties.	Negligible (1)	Minor (2)	LOW	Fife Council Pipeline Emergency Response Plan; off-site COMAH plan; evacuation and rest centre plans. Fire and Rescue Service Operational Specific Procedures,	Fire/HSE

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	<u>Likelihood</u>	<u>Impact</u>	<u>Risk Rating</u>	Controls in Place	Lead Agency for Risk Assessment
H4	Fire or explosion at a fuel distribution site or a site storing flammable and/or toxic liquids in atmospheric storage tanks	Up to 3km around site causing up to 150 fatalities and up to 2000 casualties.	Negligible (1)	Significant (4)	MEDIUM	Compliance with the COMAH Regulations 1999; on-site plans for lower-tier sites and on- and off-site plans for upper-tier sites. Fire and Rescue Service Operational Specific Procedures,	Fire/HSE
H5	Fire or explosion at an onshore fuel pipeline	Up to 1km around site causing up to 100 fatalities and up to 500 casualties.	Negligible (1)	Significant (4)	MEDIUM	Fife Council Pipeline Emergency Response Plan; off-site COMAH plan. Provision of isolation valves on pipeline networks	Fire/HSE
H7	Explosion at a high pressure natural gas pipeline	Local to site causing up to 200 fatalities and up to 200 casualties.	Negligible (1)	Minor (2)	LOW	Fife Council Pipeline Emergency Response Plan; off-site COMAH plan; Fire and Rescue Service Operational Procedure	Fire/HSE
H11	Accidental release of radioactive material from incorrectly handled or disposed of sources.	Up to 5 fatalities and up to 100 contaminated people requiring medical monitoring. Many worried people may present at hospitals. Radiation may be spread over a range of several kilometres but most concentration at the point of accidental release.	Negligible (1)	Insignificant (1)	LOW	Adequate on-site accident response capability and liaison with Emergency Services. Main facility for holding radioactive materials is equipped with secondary containment to prevent environmental release.	Fire

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
H46	Biological substance release during unrelated work activity or industrial process(e.g. Legionella release due to improperly maintained building environmental control systems)	Up to 10 fatalities and serious injuries or offsite impact requiring up to 1000 hospital admissions	Rare (2)	Significant (4)	HIGH	The Public Health (Notification of Infectious Disease) Scotland Regulations Guidelines for investigation single cases of legionnaires' disease' Health protection Agency	NHS
H14	Major contamination incident with widespread implications for the food chain, arising from: (a) Industrial accident (chemical, microbiological, nuclear) affecting food production areas e.g. Chernobyl, Sea Empress oil spill, Foot and Mouth Disease.(b)Contamination of animal feed e.g. dioxins, BSE. (c) Incidents arising from production processes, e.g. adulteration of chilli powder with Sudan I dye.	Food production/ marketing implications depending on scale and area affected e.g. major shell fisheries, dairy, livestock production areas. Potential direct animal and consumer health effects. Consumer confidence affected leading to lost markets, and where staple products (e.g. bread or milk) are affected, potential or panic buying.	Possible (4)			National and Local contingency Plans	FSA are seeking Government advice Advised this SCG to await outcomes
H15	Maritime Pollution	Release of up to 100,000 tonnes of crude oil into the sea, polluting up to 200km of coastline.	Negligible(1)	Catastrophic (5)	MEDIUM	Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. Maritime and Coastguard Agency and Fire and Rescue Services' Maritime Incident Response Group.	MCA

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	<u>Likelihood</u>	<u>Impact</u>	<u>Risk Rating</u>	Controls in Place	Lead Agency for Risk Assessment
HL 32	Localised Maritime Pollution	Release of up to 10,000 tonnes of oil into the sea polluting up to 100km of coastline	Rare (2)	Significant (4)	HIGH	Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. Maritime and Coastguard Agency and Fire and Rescue Services' Maritime Incident Response Group.	MCA
HL4	Major pollution of controlled waters	Pollution incident impacting upon controlled waters, (for example, could be caused by chemical spillage or release of untreated sewage) leading to persistent and/or extensive effect on water quality, major damage to aquatic ecosystems, closure of potable abstraction point(s), major impact on amenity (i.e. tourism) value, serious impact on human health.	Rare (2)	Significant (4)	HIGH	SEPA 24 hour 365 day response system and reporting line in place. Scottish Water Contingency Plans National Contingency Plan for Marine Pollution from Ships and Offshore Installations	SEPA
HL5	Major land contamination incident	Pollution incident (for example chemical spillage) leading to persistent and/or extensive effect on land quality, major damage to terrestrial ecosystems, property, amenity (i.e. tourism) value and major damage to agriculture/commerce, serious impact on human health.	Rare (2)	Significant (4)	HIGH	Statutory inspections of industrial processes/pollution prevention controls National and local site clearance arrangements	SEPA

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
HL33	Forest or Moorland Fire	Forest or Moorland fire across up to 50 hectares. Evacuation of up to 100 residential homes required. Up to 5 fatalities and 20 casualties	Rare (2)	Moderate (3)	MEDIUM	FRS Operational Procedures LA generic emergency plans Met. Office for monitoring weather forecasts during incidents.	Fire
HL6	Major air quality incident	Pollution incident (for example uncontrolled emission from an industrial facility or uncontrolled release of landfill gas) leading to persistent and/or extensive effect on air quality, major damage to local ecosystem, major effect on amenity (i.e. tourism) value and serious impact on human health	Rare (2)	Significant (4)	HIGH	Statutory inspections of industrial processes/pollution prevention controls National and local site clearance arrangements	SEPA
HL7	Industrial explosions and major fires	Up to 1km around site causing up to 20 casualties. Explosions would cause primarily crush / cuts & bruises type injuries, as well as burns.	Rare (2)	Significant (4)	HIGH	Multi Agency Major Incident Plan Tactical Information Plan for site	Fire/HSE
2. HAZARD CATEGORY TRANSPORT ACCIDENTS							
H42	Rapid accidental sinking of a passenger vessel in, or close to, UK Waters.	Up to 500 fatalities and up to a 1000 casualties	Negligible (1)	Catastrophic (5)	MEDIUM	Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. Maritime and Coastguard Agency's Major Incident Plans, in conjunction with those of other Category 1 Responders.	MCA

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	<u>Likelihood</u>	<u>Impact</u>	<u>Risk Rating</u>	Controls in Place	Lead Agency for Risk Assessment
HL 34	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	Up to 250 fatalities and 500 casualties	Rare (2)	Catastrophic (5)	HIGH	Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. Maritime and Coastguard Agency's Major Incident Plans, in conjunction with those of other Category 1 Responders.	MCA
HL8	Rapid accidental sinking of a passenger vessel in, or close to UK waters or on inland waterways	Up to 50 fatalities and up to 300 casualties.	Negligible (1)	Catastrophic (5)	MEDIUM	Maritime and Coastguard Agency's Major Incident Plans, in conjunction with those of other Category 1 Responders	MCA
HL 37	Release of significant quantities of hazardous chemicals/materials as a result of major shipping accident	Up to 50 fatalities and up to 250 casualties. Significant environmental / ecological damage.	Negligible (1)	Catastrophic (5)	MEDIUM	Regulations enforced by Flag States and subject to rigorous Port State Control checks, co-ordinated in European waters. Maritime and Coastguard Agency's Major Incident Plans, in conjunction with those of other Category 1 Responders. Maritime and Coastguard Agency and Fire and Rescue Services' Maritime Incident Response Group.	MCA
H16	Aviation accident over semi-urban area.	Loss of up to aircraft and passengers, with debris over a semi-urban area. Up to 600 fatalities and up to 300 casualties	Rare (2)	Catastrophic (5)	HIGH	Fife Council Emergency response plans Fife Fire and Rescue Service response plans Scottish Ambulance response plans	Police

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
HL9	Aviation accident	Causing up to 50 fatalities and up to 250 casualties.	Rare (2)	Significant (4)	HIGH	Fife Constabulary Major Incident Plan.	Police
HL10	Local accident on motorways and major trunk roads	Multiple vehicle incident causing up to 10 fatalities and up to 20 casualties (internal injuries, fractures, possible burns); closure of lanes or carriageways causing major disruption and delays.	Unlikely (3)	Moderate (3)	HIGH	Fife Constabulary Major Incident Plan. Partnership working toward road safety	Police
HL11	Railway accident	Up to 30 fatalities and up to 100 casualties (fractures, internal injuries – burns less likely). Possible loss of freight. Major disruption to rail line including possible closure of rail tunnel.	Negligible (1)	Moderate (3)	MEDIUM	Railway and Transport Safety Act 2003 Railway Group Standard GO/RT 3471 Incident Response Planning	British Transport Police
HL12	Local accident involving transport of hazardous chemicals.	Up to 50 fatalities and up to 500 casualties (direct injuries from the accident would be similar to road or rail accidents; indirect casualties are possible, if substance covers wide area). The extent of the impact would depend on substance involved, quantity, nature and location of accident. The assumption is based on phosgene/ chlorine.	Negligible (1)	Significant (4)	MEDIUM	Multi Agency Major Incident Plan Operational Procedure for Incident type	Police/Fire/DFT

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
HL 14	Local (road) accident involving transport of fuel/explosives	Up to 30 fatalities and up to 20 casualties within vicinity of accident/explosion. Area would require evacuating up to 1 km radius depending on substances involved. Potential release of up to 30 tonnes of liquid fuel into local environment, watercourses etc. Large quantities of fire fighting media (foam) would impact on environment. Roads and access routes impassable for a time. Emergency access into/out of large populated areas difficult or impossible	Rare (2)	Significant (4)	HIGH	Multi Agency Major Incident Plan Operational Procedure for Incident type	Police/Fire/SEJ D
3. HAZARD CATEGORY SEVERE WEATHER							
H17	Storms and Gales	Storm force winds affecting most of the country for at least 6 hours. Most inland, lowland areas experience mean speeds in excess of 55 mph with gusts in excess of 85 mph. Consequent damage to infrastructure (e.g. telecommunications, power, transport)	Possible (4)	Moderate (3)	HIGH	Severe Weather plan	Met Office
H18	Low temperatures and Heavy Snow	Snow lying over most of the country for at least one week. Most lowland areas experience some snow falls in excess of 10 cm, some drifts in excess of 50cm, and a period of at least 7 consecutive days with daily mean temperatures below -3°C.	Possible (4)	Moderate (3)	HIGH	Major snowfalls will also be warned through the NSWWS Severe Weather plan	Met Office

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	<u>Likelihood</u>	<u>Impact</u>	<u>Risk Rating</u>	Controls in Place	Lead Agency for Risk Assessment
HL15	Heat wave	Daily maximum temperatures above 30°C and minimum temperatures in excess of 15°C over most of the UK for at least 5 consecutive days.	Rare (2)	Minor (2)	LOW	Severe Weather plan	Met Office
HL16	Major local coastal/tidal flooding	Sea surge, spring tides, gale force winds, heavy rainfall, some defences overtopped or failing at multiple locations. Flooding of 1000 to 10,000 properties for up to 14 days. Up to 20 fatalities, 300 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 large area and up to 5,000 people in need of rescue. Up to 10,000 people needing assistance with sheltering for up to 12 months. Multi-agency response invoked, 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 disruption to traffic for 7-14 days, salt damage, road and bridge damage, debris and contaminated water supplies and pollutants from affected businesses	Negligible (1)	Catastrophic (5)	MEDIUM	Local flood warning systems SEPA have released second generation flood maps. The published version have a composite 200-year map incorporating the modelled 200-year outline, backwater outlines, detailed model studies and historical outlines; this is to provide an indicative area of flood risk in line with SPP7 and which accounts for areas of actual flooding not shown as at risk by the modelled approach.	SEPA

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
HL17	Localised coastal/tidal flooding	Sea surge, high tides, gale force winds affecting the coastline and one Region, some defences overtopped or failing at a single location. Localised impact with infrastructure affected and up to 1000 properties flooded. Flood warning service would operate effectively. Multi-agency response invoked with some local evacuation and cordoning off of affected areas. Impact on infrastructure includes disruption to traffic for 1-3 days, impact on access to agricultural land and impact to infrastructure e.g. sewage treatment works flooded.	Rare (2)	Significant (4)	HIGH	SEPA have released second generation flood maps. The published version have a composite 200-year map incorporating the modelled 200-year outline, backwater outlines, detailed model studies and historical outlines; this is to provide an indicative area of flood risk in line with SPP7 and which accounts for areas of actual flooding not shown as at risk by the modelled approach.	SEPA
HL 18	Major local fluvial flooding	A sustained period of heavy rainfall extending over two weeks, perhaps combined with snow melt, resulting in steadily rising river across entire local authority area and could threaten a large urban town. Localised flooding of 1000 to 10,000 properties for 2-7 days. Up to 15 fatalities and 150 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, making them impassable for up to 5 days. Impact on infrastructure includes some buildings collapse, water damage, road and bridge damage. Sediment movement and contamination of water supplies. Loss of essential services to 20,000 homes for up to 14 days.	Negligible (1)	Significant (4)	MEDIUM	SEPA have released second generation flood maps. The published version has a composite 200-year map incorporating the modelled 200-year outline, backwater outlines, detailed model studies and historical outlines; this is to provide an indicative area of flood risk in line with SPP7 and which accounts for areas of actual flooding not shown as at risk by the modelled approach.	SEPA

Risk Ref. and Hazard or Threat Category	Hazard or Threat Sub-Category	Hazard or Threat Description and Scale	Likelihood	Impact	Risk Rating	Controls in Place	Lead Agency for Risk Assessment
HL19	Major 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 more than 100 to 1,000 properties for 2-7 days. Up to 5 fatalities and 50 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). Impact on infrastructure includes water damage, road and bridge damage. Sediment movement and contamination of local water supplies. Localised loss of essential services to 5,000 homes for up to 14 days. Up to 250 people needing assistance with sheltering for up to 12 months	Probable (5)	Moderate (3)	HIGH	SEPA have released second generation flood maps. The published version has a composite 200-year map incorporating the modelled 200-year outline, backwater outlines, detailed model studies and historical outlines; this is to provide an indicative area of flood risk in line with SPP7 and which accounts for areas of actual flooding not shown as at risk by the modelled approach.	SEPA
HL20	Localised, extremely hazardous, flash flooding.	Heavy localised rainfall in steep valley catchment leading to flash flooding. Likely that no flood defences in place. Possibly no flood warning service available/ suddenness of event means timely flood warnings not possible. Flooding of up to 200 properties.	Unlikely (3)	Moderate (3)	HIGH	SEPA have released second generation flood maps. The published version has a composite 200-year map incorporating the modelled 200-year outline, backwater outlines, detailed model studies and historical outlines; this is to provide an indicative area of flood risk in line with SPP7 and which accounts for areas of actual flooding not shown as at risk by the modelled approach.	SEPA

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4. HAZARD CATEGORY STRUCTURAL							
HL21	Land movement (i.e. caused by tremors and 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. Up to 5 fatalities depending on the size and location of land movement.					Local Authority (Awaiting Full Assessment)
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. Up to 5 fatalities depending on the size and construction of building, and occupation rates.	Negligible (1)	Significant (4)	MEDIUM	Buildings have varying degrees of security measures in place. Procedures in place for periodic maintenance inspections and for repairs to be carried out. Fire detection systems are in place and operable in most domestic units. Fire Service Community Fire safety Initiatives are carried out periodically.	Fire

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HL23	Bridge 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	Negligible (1)	Catastrophic (5)	MEDIUM	Operational Specific procedures are available for the major Bridges.	Fire
5. HAZARD CATEGORY HUMAN HEALTH							
H22	Influenza type disease (epidemic)	A serious epidemic of much greater severity than the usual seasonal flu. Weekly GP consultations for new episodes of flu-like illness likely to exceed 400 per 100,000 of population at the peak (compared with a peak of around 200 per 100,000 population per week in an average year).	Unlikely (3)	Minor (2)	MEDIUM	Seasonal influenza vaccination campaign at vulnerable groups. Use of Pandemic Influenza arrangement if necessary	SE HD
H23	Influenza type disease (pandemic)	Each pandemic is different and the nature of the virus and its impacts cannot be known in advance. Previous pandemics have led to different outcomes. Based on understanding of previous pandemics, a pandemic is likely to occur in one or more waves, possibly weeks or months apart. Each wave may last around 15 weeks. Up to half the population could be affected. High number of cases could overwhelm health and other critical services and adversely affect business and the economy. Advice is "business as usual wherever practicable" and "stay at home and 'phone the national 'flu line if you feel unwell". All ages may be affected, but until the virus emerges we cannot know which groups will be most at risk.	Possible (4)	Catastrophic (5)	VERY HIGH	Pandemic Influenza plan. Regular Exercise of planning arrangement. Annual review of plan Consultation with partners as part of the preparations	SE HD

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H24	Emerging infectious Diseases	Based on SARS outbreak resulting in up to 100 fatalities and 2,000 casualties.	Rare (2)	Moderate (3)	MEDIUM	Planning arrangement in place.	SE HD
HL24	Legionella/ meningitis outbreak	Localised outbreak of a disease which could cause up to 10 fatalities and up to 50 casualties.	Negligible(1)	Significant(4)	MEDIUM	National and local planning docs in place. Various guidance applied to mitigate the effects of these diseases	SE HD
6. HAZARD CATEGORY ANIMAL HEALTH							
H25	Non-zoonotic notifiable animal diseases (e.g. Foot and Mouth Disease (FMD), Classical Swine Fever, Blue Tongue and Newcastle disease of birds).	Slaughter of up to 2 million affected and exposed livestock plus the possibility of a significant number of animals culled for welfare reasons.	Rare (2)	Significant (4)	High	National Contingency Plans. Fife Contingency Plans	Scottish Executive Rural Directorate and Animal Health
H26	Zoonotic notifiable animal diseases (e.g. Highly Pathogenic Avian Influenza (HPAI), rabies and West Nile Virus).	Culling of up to 30 million poultry in HPAI outbreak.	Rare (2)	Significant (4)	High	National Contingency Plans Fife Contingency Plans	Scottish Executive Rural Directorate and Animal Health

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7. HAZARD CATEGORY INDUSTRIAL ACTION							
HL 42	Emergency Services and other workers providing a service critical to the preservation of life (eg doctors and nurses) Loss of cover due to industrial action.	A number of three day strikes with significant support over a two month period affecting a single emergency service	Probable(4)	Moderate (3)	High	Agreements with trade Unions Communication Strategy	FS/NHS/ SAS
H 31	Significant or perceived significant constraint on the supply of fuel e.g. industrial action by contract drivers for fuel.	Filling stations, depending on their locations, would start to run dry between 24-48 hours. Panic buying would exacerbate the situation. Replenishment the situation. Replenishment of sires would take between 3-10 days depending on location.	Possible (4)	Moderate (3)	HIGH	National Emergency Plan for Fuel Services/ Organisations arrangements for fuel shortages and Business Continuity Plans	Police
H 35	Industrial action by key rail workers	Strike action resulting in the total shutdown of the rail network on a UK national scale (e.g. action by signallers for more than 3 days) Greater impact if action occurs in a co-ordinated manner.	Negligible (1)	Minor (2)	LOW	Industry Contingency Plans	BT Police

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8. HAZARD CATEGORY INDUSTRIAL TECHNICAL FAILURE							
H38	Technical failure of upstream (offshore) oil/gas network leading to a disruption of upstream oil and gas production	Catastrophic accident destroying all or parts of an offshore facility and taking months or more to restore normal levels of service. This could potentially result in up to 15 per cent loss of gas supply to UK which could impact on power generation if demand were high. As 40 per cent of power is generated by gas fired stations then a reduction in generation might be felt. Downstream oil would not be so adversely affected given alternative means of supply.	Unlikely (3)	Moderate (3)	HIGH	Distribution Network Operators: • System Emergency Plan • Emergency Communication Plan • Electricity Supply Emergency Code	Energy Networks Association
H39	Failure of water infrastructure or accidental contamination with a non-toxic contaminant	Between 10 - 50,000 people could be without piped water for up to 3 days.	Negligible (1)	Minor (2)	LOW	Trade effluent controls of industrial discharges Sampling regimes to provide early indication of incoming problem effluents or illegal discharges Streaming of waste to maintain the integrity of treatment processes Flood protection at vulnerable sites Emergency Plans to manage restoration, restore services, and mitigate impact.	SW

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H40	No notice loss of significant telecommunications infrastructure in a localised fire, flood or gas incident	Loss of telecommunications for up to 100,000 people for up to 72 hours.	Probable (5)	Moderate (3)	HIGH	SECG Contingency plan Agency Specific Business Continuity plans	Assessment by EPWG
H41	Technical failure of electricity network	Partial or total blackout for up to 3 days. Destabilisation of the National Grid. Possible civil unrest, no alarms, street lighting, loss of life support machines, etc. Back-up generators available for limited time in some instances.	Rare (2)	Moderate (3)	MEDIUM	Distribution Network Operators: • System Emergency Plan • Emergency Communication PlanBlack • Start Plan	Energy Networks Association
H43	Telecommunication infrastructure – human error	Widespread loss of telecommunications (including public land line and mobile networks) at a multi-SCG or Scottish national level for up to 5 days.	Unlikely (3)	Significant (4)	HIGH	Agency Specific Business Continuity Plans	Assessment by EPWG
H45	Technical failure of electricity network	Total shutdown of the electricity supply over Scotland, occurring during working hours and lasting for 24 hours.	Unlikely (3)	Moderate (3)	HIGH	Distribution Network Operators: • System Emergency Plan • Emergency Communication Plan • Electricity Supply Emergency Code	Energy Networks Association