Kent Community Risk Register 2026

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What is the Kent Community Risk Register (CRR)?

The Kent CRR is the public facing document prepared by the Kent and Medway Resilience Forum (KMRF) outlining the key risks within Kent and Medway which require organisations, communities and the public to prepare for, so as to help mitigate against the impacts of an emergency relating to those risks identified.

This document should be read in conjunction with the Kent Prepared website 'what if' and Kent community risk register pages where preparedness guidance and supporting agency links for emergency response can be found.

National risks

The National Risk Register intendeds to capture a range of emergencies that might have a major impact on all aspects of the UK. The document is updated by government and assesses the likelihood and potential impact of a range of different civil emergency risks, including naturally and accidentally occurring hazards and malicious threats that may directly affect the UK over the next five years.

The National Risk Register also signposts advice and guidance on what members of the public can do to prepare for these events.

KMRF planning cycle

Under the Civil Contingencies Act 2004 KMRF partners are required to assess the risks in their area. KRF partners achieve this by working together to develop the KRF community risk register.

The Kent risk CRR is informed by national guidance and developed locally with multi-agency partners and subject matter experts through the KMRF risk assessment group. The final register is endorsed by the KMRF Strategic Board.

The KMRF plan for a wide range of risks which are co-ordinated through the emergency planning cycle. The risk assessment group examines the likelihood of a risk occurring within Kent and Medway along with what impact it may have on life, health, environment and economy.

The KMRF emergency plans and capabilities group will develop county plans so a multi-agency approach to responding to an emergency is adopted by all within the local resilience forum.

The KMRF training and exercise team ensures that key risks and plans are tested through multi-agency sessions.

How do we assess risks?

The register places risks into five categories. These categories are determined by assessing the 'likelihood' of a risk occurring and the various 'impacts' that the risk would cause. The categories are below:

- Accident and system failure
- Cyber
- Human and animal disease
- Natural hazards
- Societal

The likelihood of a risk occurring is based on historical evidence, subject matter expert opinion and local expertise. The KMRF constantly carries out a process called 'horizon

scanning', in which we monitor various channels to forecast what may occur in the short, medium and long term (e.g. weather forecasting).

How is impact determined? The impact is again based on subject matter expert opinion, historical evidence and local expertise. The impact is measured across six areas:

- Human welfare including behaviours,
- Essential service deliver including health and social care,
- Infrastructure,
- Security,
- Environmental,
- Economic

Preparing for an emergency advice for the public

Advice for the public on preparing for risks can be found on the Kent Prepared website here: What if? | Kent Prepared

An information booklet, 'Preparing for an emergency' is also available here: Booklet | Kent Prepared

Further preparedness agvice is available on the Uk government website here: Prepare - Prepare

KMRF Public Community Risk Register

Very High Risks

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 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. Consideration should be given to planning being specific to the risk rather than generic.

Failure of the National Electricity Transmission System (NETS)

This scenario involves a total failure of the national electricity transmission network lasting up to five days, with potential for some areas to remain without power for up to 14 days. Power stations require an amount of power to conduct the generation process. In the event of a full loss of power, it would be necessary to manually restart many power stations using an external input of power. This is a well-rehearsed process; however, it would take some time to implement and restore full power generation to the UK.

Failure of gas supply infrastructure

During winter, a technical failure or accident causes significant loss of UK gas supplies. This is likely to result in fatalities and casualties from a lack of heating,

access to necessary medical treatment, exacerbation of an existing condition, limited ability to use gas-fired cookers, or deaths that are otherwise brought forward.

Natural hazards

Low temperatures and snow

Planning for this risk is based upon the reasonable worst-case scenario of snow falling and lying over most of the county for at least seven days, with most lowland areas experiencing cover more than thirty centimetres with daily mean temperatures below 3°C.

Such a scenario may result in 'excess deaths' and cold weather-related illness and injury (predominantly in vulnerable groups such as older people and those with chronic health problems). There is also likely to be substantial disruption to transport networks, schools, and businesses.

This hazard would also be accompanied by icy conditions including the risk of road traffic collisions and hospital admissions due to slips, trips, and falls.

The ‘Big Freeze’ in 2018 had significant impacts on all residence within Kent and Medway, where frozen pipes resulted in the loss of drinking water. Heating water outlet pipes froze resulting is houses being with our heating whilst temperatures remained below freezing for days on end.

Major coastal and tidal flooding

This risk is based on the reasonable worst-case scenario of a tidal flood affecting multiple counties along the East Coast. National resources would need to be shared across counties. It is anticipated that there would be up to four days advanced warning of a potential event, with confidence in forecasts becoming greater closer to the event. Confirmation of anticipated flooding would be between twenty-four to eight hours before the event occurring.

This assessment considers a 'regional' event in which water flows create a danger to life. The depth and velocity of water flows can be variable depending on location and weather.

Pandemic

Infectious diseases can have a significant health impact, particularly on those with existing health conditions and can cause a strain on the health sector.

New pandemic viruses spread rapidly causing worldwide impacts. It generally occurs when a new strain emerges for which there is no current vaccination.

It is unlikely that a pandemic would originate in the UK, however due to the nature of international travel the UK will be at risk. The World Health Organisation maintains constant international surveillance to monitor and track any emerging outbreaks.

Loss of the strategic road network

The reasonable worst-case scenario will see all major, minor, and local roads becoming congested with traffic diverting to alternative routes. The ability for essential services, including blue light operations, health and social care provisions will be significantly impacted. Kent's strategic roads are M20 and M2, providing access to the ports.

KMRF work together with National Highways and local highways to ensure plans for managing traffic flow through the ports are tested and the infrastructure is suitable for ensuring that the county keeps moving during times of disruption and local community disruption is kept to a minimum.

Loss of Port - border closure/counterterrorism/infrastructure

The loss of a port in Kent and Medway could be due to an infrastructure or transport failure, severe weather, a counter-terrorism incident, or a no-notice border closure.

This risk is the primary impact of the loss of the strategic road network, and the KRF has extensive plans in place to manage this risk.

High Risks

These risks are classed as significant. They may have a high or low likelihood of occurrence, but their potential consequences are sufficiently serious to warrant appropriate consideration after those risks classed as ‘very high’. Consideration should be given to the development of strategies to reduce or eliminate the risks, but also 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.

Simultaneous loss of all fixed and mobile forms of communication

As a result of a hazard, such as a severe storm or flooding, all mobile and fixed line (landline & internet) connections are lost immediately. Most fixed-line connections may be offline for seven days due to a lack of power and damage to overhead cables.

All mobile connections may be disabled temporarily until mobile network operators deploy back-up generators providing limited 2G coverage.

Regional failure of the electricity network

A significant failure of the electricity network across the region leading to the loss of electricity power for up to 24 hours. A large number of people will have no power for 48 hours and some may have no power for up to two weeks. There will be cascading failures across utilities causing disruption to public services as well as domestic households and businesses.

Telecommunications systems are expected to be disrupted. Transport services will be disrupted (rail, road, and aviation) due to the failure of electronic systems.

If caused by storms, forecasting will allow government, industry, and local authorities to prepare.

Food supply contamination

A major contamination incident involving a microbiological pathogen in the food chain causing illness, hospitalisation, and possible fatalities in a moderate to large number of people. It will take a period of a few days to weeks to identify the contaminant and months for the response.

Natural hazards - severe weather

Severe weather encompasses events including high winds, extreme high temperatures, and heavy rain. These events can cause significant disruption as well as very serious health impacts.

The nature of the UK as an island, and Kent as a coastal region, mean that the weather can be very changeable and difficult to forecast.

Flooding - fluvial and surface water

Inland flooding can occur because of rivers overflowing their banks, groundwater becoming saturated, or surface water being unable to drain.

Consequences of flooding include:

Risk to life and health.

- Damage to homes, businesses, communities, agricultural land, and infrastructure.
- Evacuation of residents in short, medium, and long-term phases.
- Disruption to utilities (electricity and water supply).
- Pollution and contamination of the environment.
- Impact on the local economy and businesses.

Localised, extremely hazardous, flash flooding

The assessment considers an incident in which rivers respond rapidly to rainfall and cause flooding. The Bourne and the Pent are examples of areas where flash flooding has occurred. The rivers are monitored constantly to alert residents of any potential for flooding, however due to the nature of the rainfall and rapid response it is possible that a flooding event could occur with no warning.

Outbreak of an emerging infectious disease

The scenario is based on a novel respiratory transmitted virus that emerges in another country and causes a regional epidemic in that country. The pathogen if

previously unknown or not normally found within the UK, could result in an outbreak with an increased fatality rate.

Industrial action by workers providing critical services

This risk covers industrial action by emergency services personnel, social care staff, and NHS medical, nursing and healthcare professionals. However, it must be recognised that industrial action by ancillary staff in those sectors and in unrelated sectors such as education are likely to lead to difficulties in delivering the normal standard of service by statutory agencies.

Prolonged disruption to border control location(s)

This assessment focusses on prolonged disruption at a border control location within the UK and specifically to Kent. A border control location is identified as a site that processes inbound and outbound freight checks. i.e. Sevington.

Medium Risks

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.

Major adult social care provider failure

This risk relates to the failure of a major provider of adult social care and whose services are difficult to replace.

Local authorities (LAs) would roll out their contingency plans but - due to the scale and speed of the failure or the complexity of the services – might face challenges in discharging their temporary duty to secure continuity of care and may put the welfare of people with care and support needs at risk.

Rail accident

This risk looks at the potential for a collision or incident occurring on the railway network. There are a number of variables that could cause accidents to occur with past incidents coming about from a variety of sources. Such incidents can result in casualties, which will generally be confined to passengers and crew.

Large passenger vessel accident

This risk assessment considers the sinking of a passenger vessel in, or close to UK waters (including inland waterways), leading to the ships full or partial evacuation or abandonment at sea.

Major maritime pollution

This risk assessment considers incidents occurring from ships at sea, at anchor, or alongside discharging any form of heavy oil, fuel or petroleum that will potentially have a significant impact on the aquatic ecosystem, marine life, coastline, agricultural produce, commerce, tourism, and potentially displacement of local communities (due to risk of explosion or fire from fumes). The effects of such a discharge could be long term.

Incident (grounding/sinking) of a vessel blocking a major port.

Kent has significant ports with the seaports of Dover, Ramsgate, Thamesport, Sheerness, Dartford, and the unique Channel Tunnel. These ports handle exclusively, or combinations, of freight and passengers.

Accident involving high consequence dangerous goods.

A single road tanker containing high consequence dangerous goods is involved in an accident causing a fire and explosion in an urban area, resulting in fatalities and casualties. In an urban area, an incident would likely lead to road closures of several days, significant local infrastructure damage (road, buildings, and bridges), and therefore, alternative routing and evacuation of surrounding areas.

Aviation collision

The risk considers a worst-case scenario of the collision of two commercial planes in Kent airspace. Such an incident is likely to lead to fatalities of crew and passengers, with complex casualties on the ground. Such incidents are most likely to occur during take-off and landing, with damage likely to occur within the airport or airfield complex.

Civil Nuclear Accident

An accident occurs at a UK civil nuclear site resulting in a large release of radiological material.

Dungeness is the only site in Kent which is the subject of comprehensive and regular monitoring arrangements, however the risk from release of any radiological material is assessed as low outside of the perimeter of the facility.

Radiation release from overseas nuclear site

An accident occurs at an overseas nuclear site, resulting in a release of radiological material which directly impacts the UK and its interests overseas.

Impact to Chemical, fuel, gas, or electricity infrastructure

This threat includes a fire or explosion at a site near to a populated area where either fuel, flammable liquids, or toxic liquids are stored in bulk. Toxic chemicals are stored

in bulk form throughout the county, and the larger facilities are covered by COMAH (Control of Major Accident Hazards) Regulations and therefore have bespoke plans in place.

Reservoir/dam collapse

The planning for this risk is based upon a reasonable worst-case scenario of a no-notice failure of a reservoir or dam. Due to the nature of the event, there would be no time to evacuate, and emergency services would have no pre-warning. Flooding would last less than 24 hours, however water would be flowing and cause significant risk to life and damage to infrastructure. Substantial controls are in place to ensure that the likelihood of this risk occurring is very low.

Water infrastructure failure or loss of drinking water

This assessment relates to a complete loss of water supplies. This would mean domestic, industrial, and agricultural premises would have no piped water and fire tenders would not be able to use fire hydrants within the affected area.

Water companies have an obligation to provide domestic customers with at least ten litres of drinking water per person per day until supply is restored. This is done by a variety of means such as water bowsers or bottled water.

Priority is given to vulnerable customers and those with special needs. Water companies are also required to give priority to hospitals and schools and have due regard for livestock and essential food industries.

Major fire

A major fire resulting in a significant loss of life or injury - for example, in a high-rise residential building, a care home, assisted living complex or a hospital.

Wildfire

Kent has a number of areas of forest and moorland which could result in large fires, particularly during hot and dry conditions.

Volcanic eruption

An ash-rich volcanic eruption into UK airspace results in variable disruption to flights in parts of UK airspace or international airspace. The duration of severe disruption is heavily influenced by eruption characteristics, meteorological conditions, concentration of ash and level of aviation activity.

Drought

The planning for this risk is based on an unprecedented scenario of three consecutive dry winters. In general terms water supplies fall during the summer and are replenished over the winter. If there is insufficient rainfall during the winter, then there may be shortages during the following summer. UK water stocks are sufficient to manage one dry winter with minimal intervention.

Poor air quality

Light winds under a high-pressure system leads to the pollution being trapped in place for days at a time before stronger winds or a weather front clears it. For Kent, poor air quality is most likely when we have easterly winds (bringing pollution off the continent), a north-westerly wind (bringing pollution off London), southerly winds (very occasionally bringing Sahara Dust from Africa).

Major outbreak of foot and mouth disease

Foot and mouth disease (FMD) is a severe, highly infectious viral disease with significant economic impact, affecting several types of animals including cattle, pigs, sheep, deer, and goats.

Major outbreak of highly pathogenic avian influenza

Highly pathogenic avian influenza (HPAI) is a severe, highly infectious influenza causing significant morbidity and mortality in susceptible avian species. Avian influenza is primarily a disease of birds but can be transmissible to mammals and humans.

Public disorder

This relates to an event that would see criminal damage to public or private property, increase increased crime or arson, rioting, looting and reduced community cohesion.

Industrial action – fuel supply

This risk is based on a scenario that filling stations, depending on their locations, start to 'run dry' within a period of 24-48 hours. Panic buying would exacerbate the situation, and replenishment of sites could take between 3-10 days (depending on location).

Incident in Road Tunnel

There are five significant road tunnels within the Kent Strategic Road Network which are covered by European Tunnel Regulations. Incidents in these tunnels have the potential to cause fatalities and casualties, as well as significant disruption to the strategic road network.

Local accident on motorways and major trunk roads

A sudden impact incident on the road network could see road closures for 12-72 hours plus due to subsequence investigations and clean-up.

Kent is the gateway to Europe with the main routes to cross channel ports for both tourist and freight traffic.

Major pollution of inland freshwater and ground water

The pollution of controlled waters, including surface and groundwater, is a significant threat to the numerous and extensive river systems and underground aquifers in Kent. The supply and demand of water is a crucial resource to the day-to-day activities of the county. All drinking water in Kent is supplied from either a river or groundwater source and it is therefore important to safeguard these.

Land based marine coastal and estuary pollution

This risk relates to pollution by sewage, oil or agricultural run-off, fly-tipping, or algae.

A system failure creating an unconsented discharge of raw sewage being discharged.

Significant oil spills that travel downstream from large domestic/commercial on land oil tanks impacting the coastline.

Agriculture run off of chemicals from farmland into the river system (Medway and Swale Estuary).

Flying tipping or waste management sites that are situated near rivers could see localised pollution dependant on the items disposed of leaking harmful chemicals into nearby rivers.

Building collapse

This risk includes the collapse of buildings (domestic and commercial) and may be realised for a variety of reasons. People may be trapped by the building collapse, as well as damage to local road networks and utilities.

Bridge closure or collapse

Kent has many bridges used for road, rail, and pedestrian access. Of note are the QEII Bridge linking Kent and Essex and the Sheppey Crossing and the bridge crossing the river Medway at Strood, which carries motorway traffic and the CTRL high speed rail link.

The collapse of any bridge is likely to impact heavily on the infrastructure of Kent and will lead to transport problems and restrictions.

Large toxic chemical release

A large toxic chemical release caused by the accidental release of chlorine or another chemical (e.g. refrigerated ammonia, sulphur di-oxide, hydrofluoric acid). This incident arises from possible mechanical equipment/process failure or corrosion and does not necessarily involve a fire or explosion.

Low Risks

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.

Malicious contamination of the food chain

This risk involves the deliberate contamination of the food chain with a chemical agent (e.g. cyanide salts) up to and including the point of sale or consumption.

This risk would be localised unlike the ‘high risk’ food supply contamination scenario.

Cyber-attack – transport sector

A cyber-attack against critical network and information systems in the transport sector causing severe disruption. The attack would cause unavailability of systems, with a disruptive impact on freight and passengers, leading to significant economic and reputational impacts.

Cyber-attack – telecommunications systems

This assessment considers a disruptive cyber-attack against the UK’s biggest telecoms network provider BT. This would affect a significant number of customers, including those on other networks that route traffic through BT.

Impacts to broadband, landline and mobile would mean that customers are unable to access the internet or make voice calls. All customers without fixed line and mobile connections would be unable to access the Public Emergency Call Service (999/112), among other critical services.

Insolvency affecting fuel supply

A fuel refinery, importation, storage, or distribution company becomes insolvent. There will be major regional disruption to the production and supply of refined fuels, impacting road transport, aviation, and domestic heating fuel. Panic buying of fuel would exacerbate the supply disruption due to limited stocks at retail forecourts.

Government and local plans are in place to manage the risk which is anticipated to be short term as industry adapts its supply chain.

Radiation exposure from transported, stolen or lost goods

Accidental exposure to radioactive sources which may have been stolen, lost, or transported by a legal owner without proper regard to radiation safety regulations.

Accidental work-related (laboratory) release of a hazardous pathogen

An infectious influenza-type biological pathogen is accidentally released from a containment laboratory in an urban area. The pathogen causes an infection which takes several days to emerge and spreads via close contact.

Earthquake

This risk refers to land movements caused by earth tremors and landslides. The geological nature of the KMRF area means that events of this kind are extremely rare, however minor earth tremors have been known to occur.

Reception and integration of British Nationals arriving from overseas

This risk relates to a substantial number of British Nationals arriving in Kent and Medway from abroad because of civil unrest or a sustained terrorism campaign in the country in which they usually reside.