Creating a safer future – together.

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Foreword

Welcome to Kent and Medway Fire and Rescue Authority's consultation on risks in our communities and the resultant strategic challenges we believe we should focus on in the next four years between 2024 - 2028. We are a forward thinking, modern fire and rescue service with a long and proud history. Together with you, our customers, we are creating a safer future for Kent and Medway.

We spend your council tax on delivering a range of services to help keep you and your family safe. We want your views and consent in relation to how we design those services, together. By helping us understand your needs and concerns, it will help us deliver our services to you even more effectively.

This year marks our 75th anniversary. As we reflect on the past 75 years, what is striking is just how much has changed in terms of the variety of ways in which we help our customers, the types of incidents we attend and the risks we plan for.

We cannot predict the future, but we want to be as prepared as we can be to meet the new and changing risks you face.

Please help us to help you by giving your views in this consultation. Thank you.

Nick Chard
Chair of the Kent and Medway Fire and Rescue Authority.
October 2023

Learning from History

This year we celebrate 75 years of public service. We have a proud history that began on 1 April 1948 when 'Kent Fire Brigade' was created, formerly the National Fire Service. The Brigade remained part of Kent County Council until 1988, when we became a stand-alone combined fire authority for Kent and Medway. In 2003, we were renamed Kent Fire and Rescue Service (KFRS) – a reflection of our role and work.

Today, we are a forward thinking, inclusive fire and rescue service with a long and proud history. We are here every hour of every day, helping customers in their homes, places of work or education and on the roads. From working with businesses across Kent and Medway, to providing education programmes to schools, we are here for everyone.

Over the last 75 years, the variety of ways in which we help our customers has been constantly changing – evidence of our adaptability and commitment to those we serve.

75 years ago … emerging from the Second World War, Britain was striving to rebuild its post-war future. Simultaneously, our fire and rescue service was created to serve a society that still chiefly used coal fires for domestic heating and in which smoking was the norm, heightening the risk of fire in the home. Surprisingly, although there were far fewer road vehicles and a smaller population at this time, the number of people killed on the road was more than three times that of today.

50 years ago … the risks had begun to change, solid fuel and electric fires being replaced by central heating systems, reducing one of the main potential sources of domestic fires. Cooking habits changed too – oil-filled chip plans were being replaced by oven chips, reducing the number of chip-pan fires which previously accounted for up to a fifth of all fires in the home. In 1966, road deaths peaked at some 8,000, attributable to the increase in the number of vehicles and lack of safety features such as seat belts, plus limited knowledge, and techniques for rescuing those involved in a crash.

25 years ago … by the late 1990s, society and the risks we were facing and responding to, were very different. The compulsory wearing of front seatbelts from 1983 precipitated a decline in road deaths and fires in the home began to fall rapidly, despite the increase in the population. Changing behaviour also contributed to the reduction in fires in the home, particularly the fall in the number of smokers and traditional chip-pan frying.

Significant safety legislation also improved home fire safety, with the introduction in 1988 of specified fire resistance for furniture upholstery and materials. This was later extended to bedding and second-hand furniture, the increased use of the fire-retardant materials contributing to a decline in fire-related deaths and deaths related to smoke inhalation.

Early in the new millennium, the Fire and Rescue Services Act 2004 was passed. This arguably had the greatest effect in reducing the frequency of fires, by requiring fire and rescue services to focus on fire prevention and community safety work, promoting and distributing smoke alarms.
Prior to the 2004 Act, KFRS had already begun to recognise the need for, and implemented community safety initiatives pre-empting the legal requirement to focus on the promotion of fire safety.

This significant change in our work and outlook – moving from a focus on operational response to equally focusing on fire prevention work through active involvement and interventions with our customers – led to KFRS developing its Customer Safety team.

Our Customer Safety Team are dedicated to providing fire prevention and safety advice through a range of initiatives and public safety campaigns. From school visits to 'Safe and Well' and 'Home Fire Safety Visits' (offering customers fire safety checks, advice and, where appropriate, free smoke alarms), our work in this area has been a key factor in reducing fire-related deaths and injuries in the home.

This focus on preventing fires has had a huge impact. In 2001/02 there were 1,177 house fires in Kent. In 2022/23 there were 656 – a reduction of 44%.

Today … we face a very different environment and set of challenges from those of 75 years ago. To meet those challenges and continue to serve and keep our customers safe in the best possible way, it is essential that we continue to change and innovate. To do that we keep assessing the risks we currently face. That is what this document – 'creating a safer future – together' – is all about.

Risk Management Planning – the planning process we use to turn analysis of risks into plans.

Introduction.

We are mindful of the lessons learnt from the history of fires and the risks we all face. We constantly scan the changes which affect our lives to make sure we design new ways to reduce risk and help you in the most effective ways.

We provide four main services to you and your family:

- **Prevention** – we work with customers in their homes and in places of education to promote safer behaviours and messaging to help prevent fires, road crashes and drownings.

- **Protection** – we are the regulator for fire safety in Kent and Medway. Our specialist teams work with businesses to ensure buildings are designed to be safe and then kept safe for occupants, as well as looking at firefighting facilities for firefighters.

- **Response** – we respond to a wide range of incidents, including fires, road crashes, water rescues and working with other emergency services.

- **Resilience** – we work with partner agencies such as the police, ambulance, and councils to plan for major emergencies and events, such as large fires, flooding, and pandemics, to help keep people safe.

This consultation will look at risks and strategic challenges which will help us improve these four services to you.

The Process

In the 2022 consultation with you, we outlined a ten-year analysis of broad changes affecting our lives. This analysis along with your feedback allowed us to create the following six strategies:

- Response and Resilience.
- Customer Engagement and Safety.
- People.
- Environment and Assets.
- Commercial and Procurement.
- Business Change, Information and Technology.

We are now seeking to refine and deepen our focus from the broader ten-year horizon into the areas for the next four years 2024-2028, and to refine our strategic areas of focus. Once the consultation has been agreed we will form actions under each strategic area which we will consult on next year.

Equality in providing our Services.

One of the important principles when writing this consultation, has been to ensure equality when providing our services. We have therefore used 'impact on people' as one of the main criteria when assessing all the risks identified later in this document.

Once the consultation has been agreed we will form actions which we will consult on next year. Each of those actions will have a thorough analysis of the impact on people as a whole and as individuals and groups who may be more vulnerable.

Reviewing the impact on people and ensuring fair access to all our services.

There are two main ways we try and build equality into our services for you and your family.

1) First, we measure the impact of any policies, procedures and actions we propose on different people and groups. We look at the potential positive, neutral or negative impact on people with protected characteristics such as disability. We also look at the wider impact on others, for example, tourists who are unfamiliar with our area. The results are documented and enable us to work with you, other agencies, and charities to find ways of reducing any negative impact.

2) We are committed to ensuring everyone has equality of access to our services, including people living in temporary residences, or transiting through the county. We have identified a number of groups who are potentially at greater risk of fire, or are potentially not accessing services such as Safe and Well visits.

In this consultation, please help us to understand any issues from your perspective and how these might be addressed. We also want to work with you to re-design services or access help where needed.

What Equality of Access means

We are committed to providing equality of access to all our services. This includes actively seeking to engage people who may be unaware of or choosing not to access services from us and other public sector providers.

Our approach is designed to ensure equality of access irrespective of:
- age
- gender (including gender reassignment and gender identity)
- race (including colour, nationality, ethnic or national origin)
- being married or in a civil partnership
- being pregnant or on maternity leave
- disability
- religion or belief (including no-belief)
- sex or sexual orientation
- caring responsibilities
- socio-economic class
- whether such an identity is actual or perceived or whether this is by association with persons from any of these equality strands.

Our fire investigation and operational assurance processes teach us that some people are more likely to have a fire, including those who are living with dementia, mobility issues, and mental health issues. There are also communities and individuals who may not be accessing our services, such as safe and well visits or reporting fires. Barriers may include language, perceived prejudice, and other societal factors/historical discrimination.

To ensure equality of access, reduce fire risk and other life risk across all our customers, we need to develop different approaches for different communities and people, working with them to understand how our messaging and services need to adapt.

Through our approach to equality of access we:

- identify all the communities and customers that make up the Kent and Medway area
- identify how we can improve access to (a) the provision of the full range of services we provide and (b) employment opportunities for all the individuals and communities we serve
- learn from and enhance good practice, try and reduce any adverse impact of our services, and eliminate any unlawful discrimination through equality monitoring
- promote good community relations
- use appropriate engagement techniques including social marketing to inform and focus on behaviours to help customers adopt safer ways of living.

Data, academic evidence, and case studies have informed our people impact assessments.

Vulnerable/at-risk groups

Kent and Medway are faced with a wide range of risks that could have a disproportionate impact on specific vulnerable and at-risk groups. Individuals within these groups are likely to experience a higher threat to their life or wellbeing in comparison to the general population when an incident happens. They are also more likely to suffer financial hardship either as a direct or indirect consequence of an incident. For example, across the world we have seen individuals affected differently by events, including:

- people with pre-existing mental or physical health conditions or disabilities (whether living in the community or in long-term care facilities)
- older adults
- children
- pregnant women
- informal or self-employed workers
- people in lower socio-economic groups or who are financially insecure
- individuals exposed to abuse or violence
- migrants
- people who are socially isolated
- individuals with less knowledge and experience related to specific risks

This list is not exhaustive but illustrates the wide range of groups who could be considered (or could become) vulnerable. Additionally, individuals who might be considered vulnerable for one type of risk might not be for another, or may even be considered more resilient than the general population. As a result, when planning for and responding to these risks, part of our

role is to support you, helping to reduce any impact.

How we assess the risks to you, our customers

We constantly gather feedback from you, from incidents, our colleagues, fire services across the world and other agencies. This means that we have a thorough understanding of our historic demand, local risk profiles, and how well we are performing. We also want to ensure that we look at how the nature of the risks we face may change and what new risks may present themselves. To do this we adopt a seven-stage process which involves:

Stage 1 – Risk identification
Stage 2 – Risk analysis
Stage 3 – Risk exclusion
Stage 4 – Risk assessment
Stage 5 – Risk prioritisation
Stage 6 – Consultation and engagement
Stage 7 – Control measures.

Stage 1 – Risk identification

To ensure we have as complete and accurate a risk picture as possible, we draw data from several different sources:

1. National risks

The Government monitors the most significant emergencies that the UK could face over the next five years through its National Risk Assessment. The National Risk Register (NRR) is the public version of this assessment. It provides advice on how people, businesses and the emergency services can better prepare for emergencies.

2. Kent and Medway area risks

Kent Local Resilience Forum: this forum brings different types of organisations together to actively work to prepare for, respond to and recover from any major emergency in Kent and Medway.
The Community Risk Register (CRR) sets out the risks facing our communities and how they are being dealt with and include, for example flooding, animal disease, adverse weather and pandemic flu.

Census and other data: we use census data to analyse changes in the makeup of our communities. We have also used the Kent Analytics population data used by Kent County Council (KCC) to plan services. By combining this with information from studies such as those by the National Fire Chiefs Council, we can see where and for who we need to target our activities. (The equality of access documents provides a range of information about different groups of people and ideas, and the actions which services could take to make a positive difference and ensure everyone can and does access our services.)

Growth and infrastructure frameworks: produced by local authorities these frameworks detail what building and development is likely to take place in the medium to long term. They help us to identify possible future changes in the location of demand and the nature of the risks that we respond to.

Other studies: we also draw on other theme-specific studies – for example, KCC's evaluation of the risks and impacts of climate change on Kent and Medway and their strategy 'Framing Kent's future 2022-26'.

3. Continuous learning

We learn from many other sources including:

1. National Operational Learning.
2. Joint Operational Learning.
3. Institution of Fire Engineers.
4. In house debriefing and incident assurance.
5. Professional debates and conferencing.

4. Historic incident data

We collect data about every incident we attend. This is fed into a national database. We use this to identify what incidents we most frequently attend, which have the greatest impact on our customers, and where they most frequently occur. This allows us to align our resources and services to where the demand and risk is most likely to happen and also to spot patterns and trends indicating how these factors may change in the future.

Stage 2 – Risk analysis

In this stage we cross-map the various risk data sources and produce a list of risks that we believe apply to fire and rescue service activities – either directly or indirectly.

In this Community Risk Management Plan (CRMP) we have identified 52 risks which we have assessed our services against. This broad range of risks are not limited to what have traditionally been fire and rescue activities and also consider how we may use the capabilities we have to deliver better outcomes for customers in new areas of risk.

Stage 3 - Risk exclusion

The next step is to list all the risks we have excluded from our analysis. These are risks that are featured in places such as the National Risk Register, but which we feel neither directly or indirectly affect our activities, for example a port blockade. If you think we have missed any risks, you wll be able to tell us as part of this consultation.

Stage 4 – Risk assessment

We use accepted risk assessment methods to scrutinise the list of risks that we have identified. Using historic incident data, national trends and studies, we assess the likelihood of a risk being realised, comparative to another. This likelihood is assessed in relation to Kent and Medway, rather than nationally.

We then assess the impact, should the risk occur. While this is a subjective process, we use the following assessment criteria to improve consistency when looking at the impact on:

- the welfare of our customers
- firefighters and other emergency responders
- the environment
- local, regional, and national economies
- essential community services

To make these impact assessment decisions, we use local data from previous incidents and case studies from other incidents nationally and, where appropriate, internationally. We also consider their impact against our current plans and capabilities, which helps to give a reflection of our current risk profile.

We then plot the outcome of our risk assessment on a '5 x 5 risk matrix' – a graph representing likelihood and consequence scores – enabling us to view risk outcomes relative to one another.

Stage 5 – Risk prioritisation

Some risks will always be classified as high risk – for example pandemic flu. However, this does not necessarily mean that we class them as a higher priority over other risks. It may be that the likelihood of a high risk occurring is difficult for us to reduce, or our current plans and capabilities to respond to the risk are current and robust.

We therefore give our risk assessment score a priority rating from one to five. This is based on our assessment of:

- our current capabilities and whether they need to be improved

- our ability to influence the likelihood of the risk occurring
- how we see the risk evolving over time

Priority	Descriptor
Priority 5	Risks that we don't understand well and have not developed or full capability in
Priority 4	Well understood risks that we know we **need to develop our capability** further to provide the best service but we can evidence the risk likelihood or consequences are **likely to change** over the next 5 years
Priority 3	Well understood risks that we know we **need to develop our capability** further to provide the best service but we can evidence the risk likelihood or consequences are **unlikely to change** over the next 5 years
Priority 2	Well understood risks that we are confident we have the capability to respond to but can evidence the risk likelihood or consequences are **likely to change** over the next 5 years
Priority 1	Well understood risks that we are confident we have the capability to respond to and can evidence the risk likelihood and consequences are **unlikely to change** over the next 5 years

To obtain the final list of risk priorities, we multiply the scores for likelihood, impact and priority.

From this list, we identify themes in the high priority risks and turn them into strategic challenges. These are the areas where we think we can develop our capabilities to have a positive impact.

Stage 6 – Engagement and consultation

Any changes we make to our services are driven by our risk assessment. Because we provide services for our customers, we want to make sure any changes are done with your consent.

It is therefore important that we engage with you as customers, community groups, colleagues, partner agencies and other stakeholders, when building our risk assessment. Accessibility and inclusion lie at the heart of this approach, providing us with the widest possible audience, a greater understanding of the risks, and ensures any proposed changes take your requirements into account.

Following our engagement, we take the results of what people have said and adapt our risk assessments accordingly.

Finally, we present the final version to our Fire Authority for sign off on behalf of the public.

Stage 7 – Control measures

Having a detailed and accurate picture of the risks enables us to put in place plans, or control measures, to improve our services and risk outcomes. In doing so, we identify what change we are trying to deliver and what benefits the change will provide. We take an integrated approach to managing the risk, with our departments working in partnership to achieve our strategic intentions.

Our assessment of the risks – a summary

Using the process outlined above, our assessment of our risk priorities for 2023/24 are set out below. A detailed description of each of the risks can be found later in this document.

High priority risks

- wildfires
- fires in the home
- road traffic collisions
- extremes of temperature
- fires caused by alternative fuels in buildings
- mental health and safeguarding
- water rescues
- life threatening medical emergencies
- waste sites
- residential buildings within the scope of the Building Safety Act
- conversion of commercial and retail premises to residential
- care homes
- alternative fuel vehicle fires

Medium priority risks

- pandemics
- flooding
- storms
- unoccupied large retail and commercial property
- assistance to ambulance
- humanitarian crisis overseas
- vehicle fires

- ports and ships
- railways and trams
- pollution
- hospitals
- construction sites
- heritage buildings
- prisons and secure accommodation
- energy storage and renewables
- loss of public water supplies

Low priority risks

- commercial buildings
- tunnels
- fuel storage
- rescues from depth
- rescues of trapped persons
- rescues from height
- hazardous materials
- agricultural buildings
- collapsed buildings
- utility networks and infrastructure
- public disorder
- airports and aircraft
- bridge collapse
- power stations
- animal rescue
- major fires at industrial sites
- industrial accidents
- earthquake

Not rated

Whilst we undertake an assessment of the impact of malicious attacks and our ability to respond to them, we do not publish a priority risk rating for these. The National Security Risk Assessment provides the overall risk rating for these types of attacks, based on restricted information and intelligence. We therefore provide risk information that summarises what these risks are and how we prepare for them, but we do not publish a comparative risk rating or detail on any capability gaps. These risks are:

- attacks on crowded places
- attacks on transport systems
- chemical, biological, radiological and nuclear attacks
- attacks on utilities and critical infrastructure
- cyber attacks

Excluded risks

The following risks appear on other risk registers, but we have excluded them from ours on the basis that the risk:

a) does not apply to, or impact, the fire sector
   or
b) does have impacts on the fire sector, but these risks are covered within related risk categories.

- border closures
- loss of strategic road network
- prolonged disruption to a border control location
- industrial action taken by workers providing critical services
- marine blockade to ports
- loss of gas supply
- outbreak of animal disease
- outbreak of plant disease
- poor air quality
- space weather
- fuel disruption
- loss of telecommunications
- industrial action - public transport
- influx of British nationals
- international terrorist attack
- Northern Ireland related terrorism
- strategic hostage taking
- assassination of a high profile public figure
- cyber attack - gas infrastructure
- cyber attack - electricity infrastructure
- cyber attack - civil nuclear infrastructure
- attack on government
- cyber attack: health and social care system
- cyber attack: transport sector
- malicious attacks - UK financial critical national infrastructure
- cyber attack - UK retail bank
- total loss of transatlantic telecommunications cables
- disruption of Russian gas supplies to Europe
- disruption to global oil trade routes
- major adult social care provider failure
- insolvency of supplier(s) of critical services to the public sector
- insolvency affecting fuel supply
- malicious drone incident
- disruption of space-based services
- loss of positioning, navigation and timing ('pnt') services
- radiation release from overseas nuclear site

- technology failure at a systemically important retail bank
- technology failure at a UK critical financial market infrastructure
- accidental work related (laboratory) release of a hazardous pathogen
- food supply contamination
- volcanic eruption
- severe space weather
- poor air quality
- outbreak of an emerging infectious disease
- animal disease: major outbreak of foot and mouth disease
- animal disease: major outbreak of highly pathogenic avian influenza
- animal disease: major outbreak of African horse sickness
- animal disease: major outbreak of African swine fever
- major outbreak of plant pest: xylella fastidiosa
- major outbreak of plant pest: agrilus planipennis
- industrial action
- reception and integration of British nationals arriving from overseas
- deliberate disruption of UK space systems and space-based activities
- attack on a UK ally or partner outside NATO or a mutual security agreement requiring international assistance
- attack against a NATO ally or UK deployed forces, which meets the Article 5 threshold
- conventional attack on the UK mainland or overseas territories
- nuclear miscalculation not involving the UK

Turning risks into actions

The key issues and themes that emerge from 'high priority' risks are then categorised as follows:

- climate change and the environment
- health and society
- rescues
- major industry
- buildings and places
- transport
- malicious attacks (risk priority rating not published here for security)
- utilities, fuel and power

We then summarise the high priority themes within each category. These will form our strategic challenges – the areas we believe we should focus on in the next four years 2024 - 2028.

These challenge areas act as a focus for change and innovation across the organisation – linking our protection, prevention, operational response, and resilience work together. This

ensures that the investments we make and activities we undertake, directly contribute to risk reduction for you, our customers, and the communities you live in.

Our proposed strategic challenges/areas of focus:

<u>Climate change and environment</u>

- Changes in the climate are resulting in extreme weather events occurring more frequently throughout the year. This is leading to our demand becoming more seasonal. The availability of our resources therefore needs to reflect this changing demand.

- Wildfires are increasing in scale and intensity, leading to them becoming more challenging to control. Our operational approaches and prevention work need to be designed to meet these challenges.

- Extremes of temperature are causing health issues for people and placing demand on our partner agencies. We believe we can have a positive impact on peoples' lives.

<u>Health and society</u>

- We are seeing an increase in the number of people experiencing mental health issues. Our colleagues need to be trained and equipped to support people in need.

- There is a significant number of people in Kent and Medway who have complex medical needs. We are an ageing population and the impact on healthcare services is increasing. We see the direct effect of this as we are now being requested to attend more calls to assist the ambulance service. We believe we can help by providing support within our communities.

<u>Rescues</u>

- Fires in the home – while the number of fires in the home are reducing, they remain a key area of focus. We are concerned with the increased use of e-bikes/scooters as when stored and charged in the home they can be a cause of serious fires. We also remain focused on other sources of fires such as white goods like tumble dryers.

- We are a county that has a high number of inland water drownings, which are often located in a small number of hotspot areas. We want a future where no one drowns or is injured. This requires us to look at our prevention work and campaigns, as well as ensuring our teams have the right specialist skills and are in the right locations to undertake rescues.

<u>Major industry</u>

- Fires in waste sites are becoming more common. Incorrect disposal of battery products, such as disposable vapes, are leading to fires in the recycling process. These fires can burn for a long time and significantly impact local communities. Because of their scale and complexity, they can require us to commit large numbers of firefighters for long periods of time.

<u>Buildings and places</u>

- Fires involving alternative fuels leads to faster fire development in buildings. This can result in an increased likelihood of people being seriously injured or killed. This also increases the risk to firefighters.

- The demand for housing is resulting in an increase in the number of commercial buildings being converted to residential use. This transformation often requires substantial changes to the internal layout and structure of these buildings, that can impact both the safety of occupants and how we respond to emergencies.

- An ageing population is creating increased demand for care homes and sheltered accommodation. Fires in care homes involve some of our most vulnerable customers and occur in buildings which can have a complex layout.

- We have a very diverse geography of large urban areas, isolated rural communities, and a long coastline. It can be challenging to deliver the same standard of service across these areas.

<u>Transport</u>

- Vehicle technology has evolved significantly in the last 10 years. We are seeing vehicles that are stronger, leading to a reduced need to cut people from crashes. We are seeing an increase in the number of vehicles which use alternative fuels (particularly lithium-ion batteries), along with a growing trend toward more advanced safety features and automation. This presents new hazards to the public and firefighters.

<u>Utilities, fuel and power</u>

- How we use energy in our homes and vehicles is changing, moving from fossil fuel to renewable energy. As this happens the way energy is produced will change and we will see new infrastructure that we will need help ensure is safe and if things go wrong, we will need to know how to respond.

- New housing and commercial buildings will need water supplies, including water for firefighting. This will put additional pressure on our water supplies, and we will need to work with water companies to ensure that the water infrastructure provides enough water and is resilient and available to us in emergencies.

Seeking your views

We want to get your views and consent to start creating detailed plans in each of these areas. We would also like to know if you think we have missed something in our analysis.

Please take our survey. By giving your views, you are helping us design the services we provide to you.

Assessment of community risks

- Do you agree with the risks outlined in our assessment? (LINK)

- Yes/No

- If No, which risks do you disagree with? (tick box giving customers option to tick any of the risks).

- Free flow text box: Please provide additional detail as to why you selected 'No', including any other risks you feel should be included.

Areas of focus

- If you think we have identified the right risks – Do you agree that we have chosen the right strategic challenges/areas of focus?

- Yes/No

- If No, which areas do you disagree with? (Tick box giving customers option to tick any of the areas).

- Free flow text box: Please provide additional details you would like to see us focus on, including any areas you would like to see included.

Setting the Council Tax

Central Government set the maximum amount by which we can increase Council Tax each year and we can then set council tax at any percentage up to that level, without a public referendum.

The maximum level of council tax increases has not yet been set by the government. We would like your views on the level of increase that you would be prepared to pay for your Fire and Rescue Service.

The average Band D household pays just over £1.67 per week in council tax (£87.30 per year in 23/24) to help run Kent Fire and Rescue Service.

Please give us your views on the following council tax options for 2024/25 and tell us which one you would prefer by selecting one of the following options:

- **Option 1**: Freeze council tax for a year

- **Option 2**: Increase council tax by an amount just under a previously proposed referendum limit of 3%, which is an increase of just over 5p a week for an average band D household;

  Option 3: If there is flexibility to do so, would you agree to an increase of up to £5 (5.6% increase) a year on an average band D household, which is a weekly increase of just over 9p.

- **Option 4**: Alternatively, having read about the significant challenges we face over the medium term, what increase in council tax would you be prepared to pay in 2024/25? (Each 1% increase in a Council Tax Band D household is just under 2p per week.)

If you have any comments on the council tax options for 2024/25 please enter them here.

Thank you for completing our survey. The responses to this survey will be analysed and presented at the February meeting of Kent and Medway Fire Authority. We will be consulting with our customers in Summer 2024 on our detailed management plan to meet risks within our communities.

Risk summaries

We have examined risks across a range of sources and then categorised them accordingly. These sources include:

- National Risk Register (2023) : Cabinet Office
- Kent Community Risk Register (2022) : Kent Resilience Forum
- National Operational Guidance (2023) : National Fire Chiefs Council
- Incident Reporting System – incident type codes (2023)
- Framing Kent's Future (2022) : Kent County Council
- A 2050 Picture of Kent and Medway (2018) : Kent County Council
- Climate Change Risk and Impact Assessment for Kent and Medway (part 2: people and the built environment sector summary) (2020) : Kent County Council
- Making Kent Safer 2022-25 (2023) : Office of the Kent Police and Crime Commissioner
- Sustainable SECAMB (2020) : South East Coast Ambulance Service NHS Foundation Trust
- PHE Strategy 2020-25 (2019) : Public Health England
- The NHS Long Term Plan (2019) : National Health Service
- Climate Change Risk Assessment (2022) : Department for Environment, Food and Rural Affairs
- Operational debriefing
- Professional debate and focus groups with operational colleagues

We cross-mapped the categories and risks in each of these documents and data sources to develop a comprehensive register of risks that we face.

These national and local risk registers listed above are broad in their focus and include assessments of risks that do not impact fire and rescue activity. We have identified these risks and placed them on an 'exclusion register'. We are not undertaking risk assessments of these. We have included our exclusion register in this document for completeness.

As well as summarising the nature of the risk, we have also outlined what we currently do to reduce and respond to the impact. This also allows us to assess our current capabilities against the risk and determine a risk-based priority rating. This is our assessment of where we need to focus our efforts in the coming years.

Climate change and environment

1. Wildfires

Our Risk Based Priority Rating	High

What's the risk?

Wildfires are a natural occurrence in many parts of the world, particularly in areas with hot and dry climates. In the UK, we experience extremely hot summers with increasing regularity which is increasing the frequency and impact of wildfires.

The risk of wildfires is influenced, and can be increased, by:

(a) weather conditions − high temperatures, low humidity and strong winds, can increase the risk.
(b) vegetation − drought conditions make vegetation more prone to catching fire.
(c) human activities − items such as campfires, cigarettes, fireworks, and other sources of open flames can easily ignite dry vegetation, while certain land use practices, such as logging and clearing, can remove natural barriers that prevent fires from spreading.

Wildfires can cause direct harm to people as follows:
- injuries and loss of life
- property damage
- causing destruction in their path when spreading out of control, forcing people to evacuate their homes
- respiratory problems caused by smoke, particularly in relation to vulnerable populations such as children, elderly, and those with pre-existing respiratory conditions

Wildfires can also have indirect impacts on people through their effects on the environment and economy.

Social and psychological costs from wildfires include:
- significant disruption to communities
- evacuations
- displacement
- loss of personal property.
- fear and uncertainty caused by wildfires can have lasting impacts on people's mental health and well-being.

In the summer of 2022, we experienced an intense period of wildfires, occasioned by very high temperatures and a long period without rain. Responding to wildfires placed significant demand on our resources. For example, attending one wildfire on Dartford Heath required one third of our operational fleet (30 fire engines) impacting our ability to respond elsewhere.

As a result, we have invested in new firefighting equipment and improvements to welfare arrangements for crews, who suffer intense physical strain when fighting wildfires.

With the changing climate, wildfires are going to become more frequent. We therefore need to further develop our procedures and capabilities to help keep people and places safe.

What we do to reduce the impact:

- work with landowners, partner agencies and communities to better manage green spaces, reducing the risk of fires spreading to homes and other buildings
- provide additional wildfire training and equipment to our operational colleagues
- continue to invest in specialist vehicles designed to help with firefighting in locations that are difficult to access
- maintain specialist wildfire response teams at strategic locations
- continue to develop our national wildfire tactical advisors through local, national and international support
- continue to develop our internal provision of wildfire tactical advisors
- engage with partners and land and property owners to inform, educate, and subsequently mitigate the impact wildfire has on communities through the national Firewise initiative
- continue to use intelligence to inform campaign activity

How we respond to the impact:

- deploy specialist wildfire resources to assist in the management of wildfire incidents
- deploy wildfire tactical advisors to assist in the co-ordination of wildfire incidents
- utilise drone assets for reconnaissance and situational awareness during wildfire incidents
- use assurance monitoring system to gather service-wide and multi-agency learning post incident
- report areas of notable practice or learning via national or collaborative bodies (national operational learning and joint organisational learning)
- work with partner agencies during the emergency and recovery phase
- effective investigatory work into the cause of fire which subsequently feeds into national wildfire databases
- targeted prevention activities post incident
- utilise or support existing mutual aid arrangements
- provide business support to ensure safe re-opening of businesses during and post wildfire events

2. Flooding

Our Risk Based Priority Rating	Medium

What's the risk?

Flooding can have a devastating and long- term impact on people's lives. Everywhere in the

UK is at risk from at least one form of flooding. There are three main types of flooding considered within this document:

- coastal (where high tides and storm surges combine to cause the sea to flood inland)
- rivers and streams, known as 'fluvial flooding' (where waterways overflow their banks into surrounding areas)
- surface water (where rainfall overwhelms drainage systems)

When flooding occurs, infrastructure (such as bridges) and flood defenses can sometimes be overwhelmed with little, if any, notice, leading to additional disruption. It is also possible for all three forms of flooding to occur in different locations around Kent at the same time.

Consequences of flooding may include:

- fatalities and casualties
- long term mental health impacts
- people displaced from homes and businesses for long periods of time
- widespread damage to property and infrastructure
- disruption to essential services, particularly transport and energy
- environmental damage or contamination (particularly by sewage)

The UK's Climate Change Risk Assessment, last published in 2022, highlighted that more intense rainfall, more extreme weather and wetter winters are projected to increase the threat of damage and disruption as a result of all types of flooding.

What we do to reduce the impact:

- maintain wading response capability, equipment, and Personal Protective Equipment (PPE) across all operational stations
- maintain swift water rescue, flood rescue technicians and boat capability at strategic locations
- maintain DEFRA boat capability
- provide flood water incident managers (FWIMs)
- maintain our high-volume pump and hose layer capability
- continue working with partners to develop multi-agency flood plans and rapid catchment flood area response plans
- continue to work collaboratively with key partners for training and equipment provision
- water safety boards (information, advice and guidance) positioned at prominent water risk sites
- education packages offered to all secondary schools
- targeted and intelligence led water safety campaigns delivered
- continue to engage with local businesses within high-risk flood areas to provide guidance and ensure fire safety measures are considered in business continuity planning

How we respond to the impact:

- deploy specialist water rescue resources to assist in the rescue and evacuation of those affected by flooding
- deploy high-volume pumps and hose layer to mitigate the impact of flooding
- utilise drone assets for reconnaissance and situational awareness during wide area flooding
- provide flood water incident managers (FWIMs)
- report areas of notable practice or learning via national or collaborative bodies (national operational learning and joint organisational learning)
- work with partner agencies during the emergency and recovery phase
- targeted prevention activities post incident
- work with partner agencies during the emergency and recovery phase

3. Storms

Our Risk Based Priority Rating	Medium

What's the risk?

The changing climate is resulting in storms that are becoming more frequent and more intense. Particular impacts that affect our fire and rescue response include:

- More intense rainfall: the UK has experienced more frequent and intense rainfall events in recent years, which has caused flooding and damage to infrastructure. This means we receive a large number of emergency calls in a very short space of time (known as 'spate' conditions). We have to deploy fire engines and specialist vehicles to rescue people from their homes or vehicles.
- Increased risk of coastal flooding: sea levels around the UK are rising, and this is increasing the risk of coastal flooding during storms. This is a particular concern for low-lying areas and coastal communities. In Kent, one of the highest risks we face is a 'tidal surge' event. In this scenario large areas of the county would be cut off and there would be a need to assist with rescuing large numbers of people. This would be made worse by the fact that large coastal areas elsewhere in the UK would likely be impacted at the same time – leading to difficulty in drawing on support from other services.
- More frequent and severe winter storms: the UK has experienced more frequent and severe winter storms in recent years which can cause widespread damage to buildings, roads, and infrastructure. High winds mean we are often called to make safe buildings or structures that may collapse. Like flooding, we receive high levels of demand over a relatively short period of time.
- More lightning strikes: climate change is also affecting the frequency and intensity of lightning strikes in the UK, causing serious building fires.

What we do to reduce the impact:

- working with partners to plan for major incidents because of storms including providing aid to isolated communities and shelter for people whose homes become uninhabitable
- improving the way we use data sources to predict when demand will be highest, to ensure we increase the number of resources we have available to respond
- ensuring we have the right range of skills and equipment to be able to rescue people from collapsed buildings and make buildings safe, for example, shoring up
- maintain wading response capability, equipment, and Personal Protective Equipment (PPE) across all operational stations
- maintain swift water rescue, flood rescue technicians and boat capability at strategic locations
- maintain DEFRA boat capability
- provide flood water incident managers (FWIMs)
- maintain our high-volume pump and hose layer capability
- continue working with partners to develop multi-agency flood plans and rapid catchment flood area response plans

How we respond to the impact:

- receive and respond to Met Office and Environment Agency storm warnings in place to ensure our resources are at maximum readiness for predicted storms
- train Fire Control colleagues to receive 999 calls from the public, triage incidents, give safety advice and deploy appropriate resources.
- during surges in storm related activity, we may have to deploy resources exclusively to life risk incidents
- deploy response resources as required to incidents generated by storms, for example fire appliances and crews for lightning strikes, boats and pumps for flooding, Technical Rescue team for structural damage and fallen trees that threaten public safety
- provide support to partner agencies through Strategic and Tactical Coordinating Groups to assist in mitigating community impact
- post storm, co-ordinate with partners to deploy our resources to non-life risk incidents to help support customer and community recovery from the storm impacts.

4. Extremes of Temperature

Our Risk Based Priority Rating	High

What's the risk?

Extreme temperatures can pose several risks to human health, infrastructure, and the environment.

During heatwaves there is an increased risk of heat exhaustion, heatstroke, and dehydration, particularly among vulnerable groups such as the elderly, young children, and those with

underlying health conditions. Extreme heat can also worsen existing health conditions, such as respiratory and cardiovascular diseases.

During extreme cold temperatures, there is a risk of hypothermia and other cold-related illnesses. This risk is made worse by fuel poverty (when people cannot afford to heat their homes). Cold weather can also exacerbate respiratory conditions such as asthma and increase the risk of heart attacks and strokes.

Extreme temperatures can also damage infrastructure and the environment. For example, high temperatures can cause roads and train tracks to buckle, and prolonged droughts can lead to water shortages and damage crops.

Periods of intense and prolonged heat also lead to more frequent wildfires – see section 1 'Wildfires'.

We also see more frequent road traffic collisions occurring during periods of extreme cold, as roads become icy and driving conditions become more difficult. Our response is also impacted by road conditions meaning our attendance time to incidents increases.

What we do to reduce the impact:

- work with partners through the Kent Resilience Forum to assess the risks associated with extremes of temperature and determine how best to respond as a partnership
- maintain our commitment to co-responding and support to the health sector as extremes of temperature results in increased demand in these areas
- maintain our range of 4x4 capabilities to ensure we can move resources in the event of snow and ice
- provide additional wildfire training and equipment to our operational colleagues
- continue to invest in specialist vehicles designed to help with firefighting in locations that are difficult to access
- maintain specialist wildfire response teams at strategic locations
- continue to develop our national wildfire tactical advisors through local, national and international support
- continue to develop our internal provision of wildfire tactical advisors

How we respond to the impact:

- have arrangements to receive and respond to the Meterological Office (Met Office) and Environment Agency extreme weather communications to ensure our resources are at maximum readiness for predicted adverse weather.
- our Fire Control colleagues are trained to receive 999 calls from the public, triage incidents, give safety advice and deploy appropriate resources.
- prioritise life risk incidents during periods of extreme demand
- deploy specialist wildfire resources to be able to respond as effectively as possible.
- use our strategic reserve arrangements to meet the extra demand
- increase the number of resources available to support the health sector
- deploy our 4x4 vehicles and snow chains and snow tyres across our response fleet of fire and specialist appliances ahead of forecast snow and ice
- provide support to partner agencies through Strategic and Tactical Coordinating Groups

to assist in mitigating community impact
- post the peak of adverse weather demand work with other partner agencies to deploy resources to support customer and community recovery.

5. Pollution

Our Risk Based Priority Rating	Medium

What's the risk?

Parts of Kent sit on rock that forms part of an 'aquifer' – an area of land that holds water below the surface. This water can be used to provide drinking water supplies and is vulnerable to pollutants that can soak through the rock into this water.

Much of the county is coastal. Pollution in these waters be harmful to marine animals and habitats and impact on the many beaches in the county, frequently used by locals and tourists.

Kent also hosts significant industries, which can pose a risk to the environment in the event of accidents.

As a result, we need to be well prepared to respond to threats to the environment. This includes working with partners to contain pollution from hazardous materials spillages.

We also need to be careful not to become a polluter. When we fight fires, the water that we use can mix with what is on fire and create polluted fire water run-off. We have a legal obligation to reduce this pollution as far as possible. To do this we align our procedures to national best practice, and provide our crews with equipment to contain spills, and monitor smoke plumes.

What we do to reduce the impact:

- training our firefighters to ensure that they understand the environmental implications of the tactics that they adopt
- work with the environment agency to introduce new techniques that help us to reduce damage to the environment from incidents and firefighting activities
- working with partners in the Kent Resilience Forum to develop joint response plans to incidents involving pollution
- work with businesses and landowners to identify high risk environmental activities and develop response plans should an incident occur

How we respond to the impact:

- conduct thorough Environmental Risk Assessments of our activities to ensure that our tactics take account of environmental vulnerabilities
- respond with specialist equipment to help prevent pollution entering vulnerable areas such as the water course
- liaise closely with the Environment Agency to agree joint response plans

6. Earthquake

Our Risk Based Priority Rating	Low

What's the risk?

The risk of earthquakes in Kent is very low. Minor earthquakes have occurred in the past, but the UK does not sit near a tectonic plate boundary. Building stock in Kent is generally of a high standard.

The most recent earthquake of note in Kent occurred on 28th April 2007. Measuring 4.3 on the Richter scale, it impacted the Southeast of the county, damaging over 450 properties. A quarter of these were badly damaged and required structural assessments and remedial work before people could occupy them again. Kent Fire and Rescue Service responded to numerous calls to make buildings safe. Fortunately, no one was seriously injured or killed.

Whilst the likelihood of a serious earthquake is very low, we do have the capability to respond to rescues from collapsed buildings. Specifically, we have an Urban Search and Rescue team who are trained and experienced in responding to these types of incidents both in the UK and internationally.

What we do to reduce the impact:

- continue to invest in our Urban Search and Rescue team to ensure they maintain specialist skill sets for dealing with incidents such as collapsed buildings
- continue to maintain our ability to work safely at height to be able to make buildings safe
- maintain our mutual aid relationships with other fire and rescue services

How we respond to the impact:

- we can scale up our resources, with regional and national resources if incident demand peaks following an event such as an earthquake
- respond with specialist teams, such as our Urban Search and Rescue team, to be able to conduct search and rescue operations in collapsed buildings

Health and society

7. Pandemics

Our Risk Based Priority Rating	Medium

Pandemic

What's the risk?

COVID 19 starkly illustrated the impact that pandemics can have. In terms of risks associated with Fire and Rescue Service activity we are most concerned about:

- Strain on Healthcare Systems: during a pandemic, healthcare systems can become overwhelmed, leading to longer ambulance response times, overcrowded hospitals, and suboptimal patient outcomes.
- Long-term Public Health Impacts: prolonged health effects can significantly affect people's ability to lead safe lives.
- Global Economic Disruptions: pandemics can disrupt supply chains, impacting our ability to procure essential resources. They also have broader economic implications, including increased unemployment and the rising cost of living, which can jeopardize community well-being.
- Impact on Workforce: increased illness among our colleagues and enduring health issues can reduce our resource availability.
- Mental Health and Well-being: pandemics can have adverse effects on both our customers and colleagues, necessitating sustained support.

How we respond to the impact

To mitigate these risks, we've implemented the following strategies:

- we have incorporated lessons from the COVID-19 pandemic into our emergency plans and policies. These updates ensure that we can maintain essential services and support partner agencies during future pandemics
- we collaborate closely with health organizations through the Kent Resilience Forum, maintaining effective response plans and continuously evaluating emerging threats to public health that could evolve into pandemics
- we remain committed to providing vital services including co-responding and assisting ambulance services to help manage increased demand

What we do to reduce the impact

In response to the challenges posed by a pandemic, we have a proactive approach that includes:

- we make every effort to maximise the availability of resources to maintain and deliver our services. This may involve responding to medical emergencies and supporting other

community pandemic efforts, such as delivering meals to individuals unable to leave their homes
- we actively participate in multi-agency command and control structures to enhance coordinated response efforts
- when necessary, we provide support to the health sector. For example, during COVID-19, we coordinated the procurement and distribution of critical medical PPE
- we strive to maintain a balanced range of services, taking into account both customer needs and pandemic-related risks
- we ensure that our colleagues have appropriate levels of personal protective equipment (PPE)
- we conduct specialized refresher training to ensure our teams are well-prepared to respond to emergencies during a pandemic

8. Mental health and Safeguarding

Our Risk Based Priority Rating	High

What's the risk?

Fire and Rescue Services play a critical role in protecting vulnerable members of our communities. We take our legal responsibilities seriously, and our safeguarding efforts involve all our staff.

In the past five years, we've identified a substantial increase in safeguarding cases, often involving complex issues. We're now referring more customers to partner agencies to prevent and minimize harm.

Our safeguarding initiatives address various concerns such as domestic abuse, modern-day slavery, financial exploitation, and more. Safeguarding continues to influence our approach to customer needs.

This equally applies to safeguarding the needs of our own employees, who at times work in a high pressure environment and are often exposed to traumatic events.

The incidents we respond to, including mental health issues, significantly impact both customers and our colleagues. Maintaining high-quality, tailored training for our colleagues is essential to meet diverse needs. We also strengthen our partnerships with other organisations so that we work together to keep people safe from harm.

We play a crucial role in mitigating harm among vulnerable community members, with the person-centred approach of our firefighters and prevention officers, making a significant positive impact on many customers' lives.

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What we do to reduce the impact:

- all our colleagues undergo comprehensive safeguarding training to equip them with the skills to identify safeguarding concerns and make necessary referrals
- we collaborate closely with partner agencies to coordinate interventions in relevant safeguarding cases, enhancing outcomes for individuals and communities

- we provide access to mental health first aid courses, empowering our colleagues to respond effectively to mental health crises
- our range of wellbeing services ensures that our colleagues receive the necessary support to manage their mental health, including addressing work-related trauma
- we actively engage with organizations such as Dementia Friends to gain insight into our customers' needs and tailor our services accordingly

How we respond to the impact:

- our colleagues are adept at identifying and managing issues related to safeguarding and mental health crises, thanks to their robust training
- we have 24/7 reporting mechanisms in place, allowing us to swiftly refer individuals in crisis or requiring safeguarding interventions

9. Medical emergencies

Our Risk Based Priority Rating	High

What's the risk?

Life threatening medical emergencies

The faster the response time to a life threatening medical emergency, such as cardiac arrests, the higher the chances of survival. There is also a direct link to a better quality of life thereafter.

Demand on healthcare and ambulance services is very high which means resources are often stretched and can affect speed of response. The fire service does not have such a high level of continual demand, while maintaining readiness to always respond to fires. As a result, we have capacity to complement the work of the health sector, by providing an initial lifesaving medical response to those who need it.

At each of our fire stations across the county we have firefighters who are trained to a high standard of first aid − Immediate Emergency Care (IECR). Our firefighters are equipped with defibrillators, oxygen, and other lifesaving equipment. This has enabled us to respond to life threatening medical emergencies, where needed, over the last two decades, working alongside the ambulance service.

Over the last 5 years our crews have responded to 21,000 medical emergencies, restarting the hearts of 82 people, saving their lives. We are committed to continuing to provide this vital service.

Falls

People falling and being unable to get up are a frequent occurrence. Falls often involve those who are elderly or have pre-existing medical conditions.

Often this is not a life-threatening emergency. As a result, those experiencing falls can wait many hours for help to arrive. This can be painful and uncomfortable, with long term impacts on health.

Where we have an available crew close by, we assist those suffering a fall, helping to improve health outcomes and people's overall health.

We have worked closely with our partners in the ambulance service, providing our firefighters with specific training and specialist equipment to be able to safely lift people that have suffered a fall. This helps to either make the person more comfortable until an ambulance arrives or, if medical advice allows, stand down the need for an ambulance,

We are committed to continuing to refine this response to deliver better lives for our customers.

Complex rescues

Some patients have complex needs when moving them. This can require additional skills and includes:
- moving in a horizontal position,
- additional capabilities to move some patients
- specialist equipment and training when lifting, moving and working at height
- windows and doorways may need to be removed to transfer a patient from their home to an ambulance

We work closely with the ambulance service to refine our capabilities. With the increase in the provision of care to people in their own homes, we anticipate an increase in the demand for complex rescues. We are committed to improving our support at these incidents, and focusing on making this a specialist capability,

What we do to reduce the impact:

- work with partners agencies to identify those at risk of falls, or other medical vulnerabilities, through our safe and well visits
- ensure we have firefighters trained to an advanced first aid standard (IECR)
- give our firefighters the right training and equipment, recognising that treating, lifting, and moving patients is a specialist skill
- evaluating which of our resources are best placed to deal with this additional demand so that it does not adversely affect our ability to respond to fires and other emergencies
- continue to work with colleagues in the ambulance service to further improve our response

How we respond to the impact:

- further integrate medical response into 'normal' fire and rescue operations
- respond with equipment that is designed for the task, improves patient outcomes, and reduces risk to our colleagues
- allocate the right resources to the incident depending on need – this may mean that in non-life-threatening circumstances we send a resource that is slightly further away or not on an immediate response.

10. Assistance to Ambulance

Our Risk Based Priority Rating	Medium

What's the risk?

The fire service holds a range of skills and equipment that can be beneficial to other agencies. In additional to direct patient care, we are able to provide frequent assistance to the ambulance service in other ways. Examples include:

- making entry into properties
- providing screening at the scene of incidents in public places
- providing safe systems of work, such as working at height or in confined spaces

If we did not provide these services, patient interventions could take longer, or have to be conducted at greater risk to the patient and ambulance colleagues.

What we do to reduce the impact:

- working in partnership with South East Coast Ambulance Service to develop collaborative agreements on how we support them at these incidents
- working in partnership with other fire and rescue services in our region to standardise what we respond to, and how we respond. This helps to ensure that the South East Coast Ambulance Service, which works across the region, gets a reliable and understood level of support

How we respond to the impact:

- communicate with ambulance colleagues to understand the urgency of the need and send our resources in a timely manner, whilst recognising the need to also maintain a response to other incidents
- use the range of resources available to us to be able to support ambulance colleagues to deliver the best customer outcomes possible

11.   Animal rescue

Our Risk Based Priority Rating	Low

What's the risk?

Kent Fire and Rescue Service have a specialist animal rescue capability. Kent has many rural areas with a regular need to rescue large animals such as sheep, cows and horses. We also regularly assist vets with lifting horses that have fallen and are unable to get up and respond to and rescue smaller animals and pets. On average, we attend around 200 animal rescue incidents every year.

Why we do this: animal owners can put themselves in danger in order to rescue their pets or livestock. By providing a safe and effective form of rescue, we help to reduce the number of occasions when this happens.

What we do to reduce the impact:

- we have a specialist animal rescue unit and a team of firefighters and officers trained to respond to large animal rescues
- We have trained our Urban Search and Rescue team to also be able to respond to large animal rescue incidents. This gives resilience if our specialist animal rescue crew is deployed at another incident
- we have a strong working relationship with partner organisations such as the British Equine Veterinary Association, the National Farmers Union and Kent Wildlife Trust to support best practice when responding to incidents involving large animals

How we respond to the impact:

- for large animals (sheep or larger) we mobilise our specialist animal rescue unit at Faversham
- for smaller animals we typically send a local fire crew.
- we provide specialist training to officers to be able to assess what is required at an incident and develop plans centred around the welfare of the animal
- we work with Veterinary surgeons and animal owners to ensure the welfare of the animal at the centre of the incident
- for domestic animals involved in a fire we have 'smokie paws' resuscitation equipment available on all our fire appliances

12.   Public Disorder

Our Risk Based Priority Rating	Low

What's the risk?

Whilst public disorder is not the responsibility of the fire and rescue service, we do play a role in the response to incidents created because of public disorder. This can include the need to extinguish fires that have been set by individuals involved in rioting. For example, fires set during the riots that occurred in London and other parts of the UK in 2011. The response to such fires requires us to balance the benefit from extinguishing fires against the risk to responders.

Rioting on a significant scale is more often associated with larger metropolitan areas and we have not seen significant instances of rioting in Kent. However, there have been instances of organised protest, which could have resulted in public disorder, for example several protests in Dover relating to UK immigration policy. On these occasions we have worked with Kent Police to ensure that we have response capabilities in place to be able to manage any fires that my occur.

What we do to reduce the impact:

- we train our Firefighters in responding to incidents (usually fires) during periods of heightened community tension which might lead to fire related incidents
- we share Control Room facilities with Kent Police and have robust intelligence sharing arrangements in place
- we periodically train alongside colleagues in Kent Police and South East Coast Ambulance Service around public order scenarios involving fire

How we respond to the impact:

- we use our security cleared National Inter-agency Liaison Officers to liaise with the Police to establish the scale and risk associated with the disorder
- in situations where tensions are building in communities, we remind crews of our operational policy, deploy enhanced command and control resources, and consider a reduction in our non-emergency activity in the potentially affected area
- we pre-deploy resources to holding areas close to where tensions are expected so that we can respond quickly and safely
- we undertake joint decision making on the deployment of resources, in conjunction with the Police

13.   Humanitarian Crisis Overseas

Our Risk Based Priority Rating	Medium

What's the risk?

Whilst large scale natural disasters are fortunately rare in the UK, they are a frequent occurrence in other parts of the globe. The impact of climate change is seeing more frequent examples of disasters such as widespread flooding, wildfires, landslides, and storms.

Kent Fire and Rescue Service contributes toward the UK's ability to respond overseas to these incidents, with members of our Urban Search and Rescue team forming part of the UK's International Search and Rescue (ISAR) capability.

This government funded capability provides much needed support to disaster-affected countries, particularly those with limited response capabilities. Most recently our team has:

- supported those affected by the earthquake in Morocco in September 2023
- responded to the earthquake in Turkey in February 2023
- went to Romania and Moldova to support a UK assessment mission providing aid to Ukrainian refugees following the invasion of Ukraine by Russian forces.

As well as saving lives overseas, this work ensures members of our Urban Search and Rescue team develop the knowledge and experience to respond to humanitarian crisis in Kent and Medway should they occur.

What we do to reduce the impact:

- ensure that we continue to maintain our specialist Urban Search and Rescue team's contribution to the UK ISAR capability

How we respond to the impact:

- when a call for assistance is received via the Foreign, Commonwealth and Development Office (FCDO) we ensure that are team can respond within the timescales set by the government
- we put in place mechanisms for monitoring the health and wellbeing of our colleagues whilst they are deployed
- we continue to invest in our Urban Search and Rescue team, so we have enough resources to support overseas without any impact on the resources still available in Kent and Medway

Rescues

14. Water Rescues

Our Risk Based Priority Rating	High

What's the risk?

The Fire Service are the lead agency for rescue from inland water.

Kent has one of the highest frequencies of drowning anywhere in the country. We have many inland lakes and waterways, ranging from major rivers to former quarries.

We often see more drownings during periods of warmer weather. Our key rivers in Kent (Medway, Stour, Thames) have fast flowing currents and underwater obstructions. Some of the factors that increase the chance of drowning include:

- Alcohol consumption: some of our major waterways, such as the River Medway and River Stour, flow through the centre of our biggest towns. They often have pubs and bars close by and riverside paths with no barriers. People may fall or enter into the water because of impaired coordination or judgement. Alcohol reduces the body's ability to respond effectively to cold water, further increasing the danger.
- Open water swimming: this has gained popularity in recent years. In places where people swim alone and unsupervised, open water is often cold, has strong currents, and hidden dangers like sharp objects and fallen trees under the water. People can underestimate the problems this create,s including rapid exhaustion and hypothermia and the effects of cold-water shock.
- Summer crowds: Kent has several major coastal towns that benefit from an influx of tourists in the summer season. This can mean that people who are not normally familiar with coastal waters and their dangers, can get into difficulty, for example being caught in strong rip currents.
- Unsupervised children: sadly, in recent years, we have attended incidents where children have drowned after playing in rivers and lakes.
- Lack of swimming skills: there has been a decrease in the number of public swimming pools. As a result there is a backlog of swimming lessons following the estimated 5 million lessons lost because of the COVID pandemic.

What we do to reduce the impact:

- working with partner agencies, including the Coastguard and RNLI, to conduct joint public safety campaigns particularly focusing on locations where we see high numbers of drownings
- proactively promote water safety messages in schools and via our social media channels
- work with local businesses near waterways to promote educational materials
- support the work of the volunteers in the Kent Search and Rescue (KSAR) team who have the ability to search for missing persons in water and who also undertake proactive patrolling of high-risk areas during periods such as Christmas and New Year

- realigning our resources to the areas of greatest need. For example, we have located a new dock and rescue boat in the River Medway near Rochester bridge
- ensure our crews who are located closest to areas of open water have the right skills and equipment to be able to respond to conduct rescues
- maintain our group of specially trained Water Incident Managers
- increase the skills and training of crews in our busiest areas to give them more ability to be able to enter the water safely

How we respond to the impact:

- deploy the closest crew to an incident with the ability to at least be able to attempt rescue from the water's edge
- additionally, send more specialist crews that can enter the water to conduct rescues, including sending rescue boats
- deploy our drones to be able to search for missing persons in the water
- coordinate with other rescue organisations including the RNLI, KSAR, and the Coastguard

15. Rescues From Depth

Our Risk Based Priority Rating	Low

What's the Risk?

Rescues from depth include accessing spaces such as sewers, quarries, and tunnels. They typically involve accessing areas classed as confined spaces. As such they require specialist training and procedures in accordance with Health and Safety Legislation.

Hazards include limited access and egress, potential build-up of toxic gasses and irrespirable atmospheres, flammable gasses, extremes of temperature, and sudden and rapid ingress of water or other liquids such as sewage.

Kent has a vast network of underground tunnels and structures, including wartime bunkers and disused mines. We have attended incidents involving persons entering these tunnels and becoming lost, partial tunnel collapses, and persons suffering medical episodes in them.

What we do to reduce the impact:

- we are proactive in promoting safety messages and working with partner agencies to reduce the likelihood of these incidents occurring
- we maintain a specialist line rescue and technical rescue capability to be able to gain access to these locations
- our technical rescue team can put in place arrangements to allow our crews to work in confined space environments
- we ensure that crews have a range of surveying equipment available to them to be able to determine if an environment is safe

How we respond to the impact:

- we send the range of resources required to be able to put in place safe systems of work and ensure that we can access casualties quickly
- our rescue plans are designed around the needs of the casualty and crews can select from a range of specialist equipment

16. Rescue of trapped person

Our Risk Based Priority Rating	Low

What's the Risk?

People can become trapped by a variety of circumstances. Most commonly we deal with persons who are trapped as a result of being involved in a road traffic collision (risk number 36). Other 'trapped person' scenarios include persons trapped in machinery, stuck in unstable ground such as mud or sand, or in lifts.

Incidents most commonly involve the entrapment of a single person, although less frequently we can attend incidents where multiple persons are trapped.

The major hazards of such incidents are

- the risk of further entrapment (for example because of moving machinery)
  or
- entrapment of our colleagues involved in making a rescue attempt.

These incidents require close cooperation between our firefighters and colleagues from other agencies such as the ambulance service. We also provide specialist equipment and training to ensure that these incidents can be resolved as quickly and as safely as possible.

What we do to reduce the impact:

- we are proactive in promoting safety messages and working with partner agencies to reduce the likelihood of these incidents occurring
- we locate specialist rescue capabilities across the county. These include mud rescue teams, line rescue, and our technical rescue team
- these teams receive regular training in these specialist roles and have access to a variety of specialist equipment
- we maintain a team of Urban Search and Rescue tactical advisors who can assess what is required at an incident and call on specialist resources accordingly

How we respond to the impact:

- all our crews have the ability to respond to any rescue scenario and put in place arrangements to ensure an overall level of safety and to begin to provide casualty care
- the needs of a trapped person vary depending on the circumstances. We send specially trained crews and officers capable of assessing the needs of the casualty and what equipment and procedures are required

17. Rescue from height

Our Risk Based Priority Rating	Low

What's the Risk?

Rescues from height are complicated as they often require extensive safety systems to be put in place to conduct the rescue. Kent has miles of high cliffs along its coast and we are often called to perform rescues of people or animals who have gone over the edge and become trapped. At these incidents we work closely with Coastguard rescue teams. From time to time, we also conduct rescues of people from roofs, scaffolding, cranes, and trees.

In the last 5 years we have undertaken over 200 rescues from height.

We maintain a specialist rope (line) rescue team in Deal and have rope rescue capability within our Urban Search and Rescue team. We also provide equipment for safe working at height on our wholetime fire engines. We are able to utilise these crews to also set up work restraint systems for our on-call colleagues.

What we do to reduce the impact:

- train our colleagues in safe working at height
- provide working at height equipment, including equipment capable of being used in a variety of ways to accommodate physical differences such as disabilities.
- maintain a specialist line rescue team who can climb and abseil.
- coordinate closely with coastguard rescue teams.

How we respond to the impact:

- our response is designed around the needs of the casualty and to ensure compliance with the Working at Height Regulations
- we send specialist teams to ensure casualties can be rescued as safely as possible almost regardless of their location

Major Industry

18. Major Fires at Industrial Sites

Our Risk Based Priority Rating	Low

What's the risk?

Most of the industrial fires that we attend can be dealt with quickly and with a limited number of resources, for example, two or three fire engines. However, from time to time, we experience larger fires in industry that require a much bigger response.

3,140 enterprises in Kent are manufacturing enterprises, ranging from food and drink to advanced engineering, with Swale having one of the highest concentrations of manufacturing industry in the UK.

Kent is home to major industrial sites of national importance. These include 20 'Control of Major Accident Hazard (COMAH) sites, six of which are upper tier, as well as Dungeness nuclear power station. Major risk sites such as these often fall within the scope of specific regulations. This means that likelihood of fires in these sites is low. Whilst there are many sites that sit outside the scope of specific regulations, the Health and Safety at Work regulations and other associated regulations and guidance means that most industrial sites are usually well run.

Major fires can start for many reasons, including:

- accidents such as electrical faults, or human activity which combines ignition sources and fuel
- malicious activity such as arson
- infrastructure incidents such as sparks from electricity lines or rail transport
- natural phenomena such as lightning

Consequences of major fires may include:

- potential fatalities and physical and / or psychological casualties
- potential evacuation and shelter of affected people
- damage to property and infrastructure
- disruption to essential services (particularly the availability of fire and rescue services)
- economic costs, environmental damage, air pollution and potential water contamination

What we do to reduce the impact:

- undertake a risk-based inspection programme of fire safety audits, ensuring that businesses have in place appropriate fire precautions relative to the risks involved in their processes
- where required we carry out enforcement action, requiring businesses to make changes to their safety arrangements, or in the most serious cases, prohibiting the business from operating
- support businesses to understand how they can improve the safety arrangements they put in place through a supportive programme of education and engagement

- develop response plans for the higher risk sites in our county. This includes working with partners to develop multi-agency response plans in accordance with relevant legislation
- undertake a programme of exercises to ensure that crews understand response and can implement them
- maintain specialist equipment, such as our foam unit, to be able to respond to serious fires involving things like hazardous materials

How we respond to the impact:

- ensure that we send the correct 'pre-determined attendance' to industrial risk sites, which can include specialist vehicles and equipment in additional to our normal response
- quickly implement additional command and control arrangements for serious fires at these sites
- work with partner agencies to implement additional control measures such as air quality monitoring, and environmental protection arrangements

19. Hazardous materials

Our Risk Based Priority Rating	Low

What's the risk?

The term 'hazardous materials' (also referred to as a HazMat or as dangerous/hazardous substances or goods) means solids, liquids, vapours or gases that can harm people, animals, other living organisms, property or the environment.

In Kent there are a large range of industries using hazardous materials which are normally controlled and contained and therefore do not pose a high risk to the public. This includes chemicals involved in the petrochemical industries, farming, scientific industries, and education. We also have a large amount of transported hazardous materials travelling through our county every day. However, if these hazardous materials are released or mishandled, they can pose a risk including:

1. Fire and explosion: some hazardous materials are flammable, combustible, or reactive. If these substances catch fire or react with other chemicals, they can cause fires, explosions, and the release of heat, flames, and smoke, posing direct danger to people or property in the vicinity.

2. Toxic exposure: hazardous materials may emit toxic fumes, gases, or liquids that can lead to health problems if inhaled, ingested, or come into contact with the skin or eyes. This exposure can result in symptoms ranging from irritation to poisoning.

3. Environmental contamination: release of hazardous materials into the environment, such as soil, water, or air, can lead to pollution that affects ecosystems and natural resources. This can disrupt ecosystems, harm wildlife, and impact the quality of air and water resources.

4. Evacuation and disruption: hazardous material incidents may necessitate evacuations of nearby areas, causing disruption to daily lives, businesses, and infrastructure.

What we do to reduce the impact:

- maintain a team of specially trained and qualified officers who can provide advice and guidance to crews specific to the type of hazardous material involved
- we have a contract with a specialist scientific advice company who can assist with further analysis of hazardous substances at more complicated or unusual incidents
- we have a range of high-tech monitoring equipment that can identify the presence of hazardous materials allowing us to identify them and put suitable control measures in place
- all firefighters have training to ensure that have an awareness of the hazards and risks associated with hazardous materials incidents

How we respond to the impact:

- we use hazardous materials information from our appliance on board computers to guide the initial actions of our first crews in attendance
- all firefighters in Kent are trained to deal with incidents involving hazardous materials. Fire engines have capabilities that will assist in managing these incidents including: firefighting capability, PPE/RPE, environmental grab packs, gas and temperature monitoring equipment and hazardous materials data stored on their on board computers. Additionally, Kent has 12 specially trained Hazardous Materials Advisors (HMAs) who can provide further guidance and information if needed and liaise with other agencies to ensure a safe and effective outcome
- we train and equip our crews in the techniques and tactics required to contain chemical spills and undertake emergency decontamination of affected members of the public
- gather relevant information on the hazardous materials involved in an incident and pass these on to all attending agencies to ensure responder safety
- our pre-determined attendance includes specialist hazardous materials advisors and supporting vehicles and equipment
- we assess the risk to our customers and communicate safety messages, accordingly, advising them to either avoid an area, stay in their homes, or evacuate depending on the situation
- we work with partner agencies to put in place arrangements for rehousing people if required.
- we can draw on a network of specialist resources including decontamination units.

20. Industrial Accidents

Our Risk Based Priority Rating	Low

What's the risk?

The number of industrial accidents recorded in the UK are falling, but they still caused the death of 135 workers and injured 61,713 in the UK last year (RIDDOR).

Some industrial accidents involve fire with 1842 recorded in the UK during 2021/22. As well as the immediate effects on the fire service of attending a large fire, such as road congestion, smoke plumes and evacuation of residents, some of these fires can have lasting impacts on the local or national business communities, infrastructure, and the environment.

We have the facility for our firefighters to identify and record hazards contained within the higher risk industrial buildings in Kent. This allows us to plan our response for that site and work with other agencies and communities to mitigate as far as practicable the impact of a fire. It allows us to develop plans of how and where to obtain water for use in firefighting. We also have the option to use pumps that can pump high volumes of water to help firefighters extinguish the fires more quickly.

What we do to reduce the impact:

- we work with business in Kent and Medway to understand process and safety protocols at larger industrial sites, especially those that involve the use of hazardous materials or high hazard processes such as power generation
- we train our Firefighters to understand industrial processes and the risks that they may face when responding to industrial accidents
- we train with the Southeast Coast Ambulance Service's Hazardous Area Response Team to facilitate joint response to industrial accidents involving casualties trapped in high-risk areas
- we take learning outcomes from national and international events to ensure our Firefighters and Officers are aware of the issues they may face when responding to industrial accidents

How we respond to the impact:

- we respond to incidents with conventional fire appliances and crews. Frequently this is sufficient to resolve most industrial accident incidents
- we have a Specialist Rope Rescue team trained and equipped to rescue people trapped or injured at height and below ground using rope rescue recovery systems. We also have a Technical Rescue team, trained and equipped to respond to incidents involving collapsed structures, shoring and securing buildings and entering confined spaces such as sewers or shafts. They are trained to respond to major transport crashes and in particular rescues that require lifting of extremely heavy items such as railway locomotives, as well as deal with complex entrapments where people may be crushed or entombed. They form part of the UK's national response for unusually large accidents, such as a major building collapse or explosion, and are known as the Urban Search & Rescue Team (USAR). Our USAR response in Kent can be enhanced by calling in teams from around the country if required.
- We are able to work alongside South East Coast Ambulance's specialist Hazardous Areas Response Team to support medical interventions for those trapped in a hazard area by an industrial accident.
- We report industrial accident occurrences to both Kent Police and the Health and Safety Executive as necessary.

21. Agricultural Buildings

Our Risk Based Priority Rating	Low

What's the risk?

There are many farms and agricultural buildings throughout Kent and Medway, including barns for storing crops, buildings for housing animals, and other buildings for equipment and products such as fertilizers. These buildings present a range of risks and hazards, particularly fires involving buildings that store fertilizers which can present a risk of explosion.

Fires in agricultural buildings may be relatively simple to deal with, but often require resources for long periods of time. For example, those storing baled hay can result in our crews being on scene for several days. As farms diversify how they use their buildings, unexpected and unusual risks can be present alongside those presented by traditional farming.

Livestock can also be present in buildings, often in large numbers and ensuring their safety during incidents can be difficult and hazardous for firefighters.

Fires in agricultural buildings can also result in significant financial losses to the businesses concerned and can threaten the ongoing viability of those businesses.

What we do to reduce the impact:

- we work with farms through a register that shows the amount of fertilizers and other chemicals that are stored in agricultural buildings, this information is available to firefighters
- we train all our firefighters to know the risks and actions needed to respond to fires in agricultural buildings
- we have contracts in place with companies that can provide construction equipment and vehicles that allow us to reduce the time we are at incidents

How we respond to the impact:

- we have specialist trained firefighters and equipment to deal with incidents involving chemicals and fertilizers
- our animal rescue resources are training specifically to work with livestock and large animals
- we have equipment that can move water a long way and in large amounts in rural areas where agricultural buildings are more likely to be

22. Waste site fires

Our Risk Based Priority Rating	High

What's the risk?

Fires at waste disposal and recycling sites can have a significant impact on local communities, residents' health, infrastructure, and the environment. Fire injuries and deaths of workers at these sites have occurred. While the public living and working around these sites are unlikely to be injured, exposure to smoke plumes can adversely impact people's health (especially those with existing respiratory conditions) and make day to day living unpleasant.

Fires are often of long duration and require significant numbers of resources. For example, in September 2018 a fire at a waste site near Margate burnt for almost a month putting additional demand on our resources and resulting in significant costs.

Across the UK, the frequency of waste site fires is increasing, largely attributed to the incorrect disposal of lithium-ion batteries in household waste. There are around 300 significant waste site fires in the UK each year.

What we do to reduce the impact:

- continue to collaborate with appropriate partners, particularly the Environment Agency, to mitigate the impact waste fires have on people, property, and the environment
- work directly with high-risk waste sites to ensure they are operating safely
- maintain a waste fire tactical advisor role within the service. This role sits under national resilience and the NFCC waste group
- continue to share intelligence gathered during inspections to assist in operational pre-planning
- collaborate with the Environment Agency providing specialist advice to support them in developing fire prevention plans and issuing permits
- develop the waste fire tactical advisor role through continued professional development (CPD) events and shared learning

How we respond to the impact:

- respond to hazardous materials incidents in a manner that minimises the impact on life the environment and infrastructure
- support the Environment Agency in enforcement where breaches of permits have been identified because of attendance at incidents
- maintain a national resilience role in attending incidents within Kent and other areas to support incident commanders at waste fire incidents
- utilise drone assets for effective situational awareness and to support fire investigation
- use assurance monitoring system to gather service-wide and multi-agency learning post incident
- report areas of notable practice or learning via national or collaborative bodies

Buildings and places

Buildings and places

23. Fires caused by alternative fuels in buildings.

Our Risk Based Priority Rating	High

What's the risk?

We have designated this as a distinct risk alongside conventional building fires. The push for a sustainable energy future has spurred the rapid advancement of alternative fuels, including lithium-ion batteries and hydrogen, which are now extensively used to power various applications.

Of specific concern within the fire sector is the widespread utilisation of lithium-ion batteries, found in electric vehicles (often parked near homes or in car parks), battery energy storage systems, portable devices, and micro-mobility devices such as e-bikes and e-scooters. While properly manufactured and used batteries are safe, there have been instances of improper usage, such as the construction of 'DIY' energy storage systems, leading to battery fires. Additionally, micro-mobility devices, sold online without stringent electric car regulations, often lack vital safety features like effective battery management systems, making them prone to sudden and catastrophic failure.

In cases of device failure, these batteries can release significant volumes of highly flammable vapor rapidly, which, under specific conditions, can become explosive. Consequently, when these devices catch fire in homes, occupants may struggle to escape and fires can escalate swiftly. Tragically, this has resulted in numerous fatalities both in the UK and worldwide. In London, lithium-ion batteries represent the fastest-growing fire risk, and in 2023, they became the leading cause of fire-related deaths in New York City.

Furthermore, firefighting efforts involving lithium-ion batteries, especially in larger applications, are challenging. These batteries burn violently and are prone to re-ignition even after initial extinguishment. This poses a global issue, prompting research organizations to diligently explore new strategies for controlling such fires.

What we do to reduce the impact:

- we actively participate in the National Fire Chiefs Council, focusing on the implications of alternative fuel sources in homes.
- we promote fire safety awareness related to alternative fuel sources and collaborate with partner agencies such as local authority private sector housing and Trading Standards.
- Using our building safety expertise: we enhance the knowledge of building safety inspectors and fire engineers, helping them understand challenges and mitigation measures. This knowledge informs building regulations consultations and regulatory site visits.

- colleague preparedness, by making sure our colleagues in Customer Safety and Operational response receive training to provide fire safety advice when dealing with alternative fuel systems.
- using our risk information feedback loop, where fire crews relay valuable information to our risk information team for assessment and the creation of response plans as needed.
- having accessible risk data, with information concerning alternative fuel risks integrated into our risk management database, ensuring accessibility for fire crews during incidents.
- enhancing fire crew skills by investing in training fire crews to better understand and effectively combat fires involving alternative fuel sources.
- investing in specialized equipment to enhance our capability to respond effectively to fires involving alternative fuel sources.

How we respond to the impact:

- providing incident Information access so that crews can access critical risk information related to alternative fuel sources during incidents.
- ensuring our fire crews are competent, skilled and equipped to comprehend the risks associated with alternative fuel systems and effectively manage fires involving them.

24. Fires in Homes

Our Risk Based Priority Rating	High

What's the risk?

One of our core missions revolves around preventing and responding to fires in people's homes, a central aspect of our work. Kent and Medway boast a rich diversity of housing, ranging from centuries-old timber-framed houses to modern homes constructed with lightweight methods. Each building type presents its unique challenges, with some occupants more vulnerable than others.

Over the past five years, we have responded to 2,700 accidental fires and 350 deliberate fires in residential settings. We recognize the profound and enduring impact that a home fire can have on a person's life. Consequently, our primary focus is on preventing these incidents or minimizing their impact through robust building safety measures. Additionally, we ensure that we are well-prepared to respond effectively should a fire occur.

How we reduce the impact:

- actively engage in National Fire Chiefs Council prevention, protection, and response working groups, both at strategic and tactical levels
- stay updated on fire prevention research, firefighting equipment advancements, and techniques to protect people in their homes
- conduct customer insight research to understand our communities, identify emerging risks, and address potential barriers to accessing our services

- utilise various media channels to promote fire safety based on research and evaluation findings
- collaborate with partners to safeguard individuals at higher risk of fire, including those with mobility issues or hoarding tendencies
- deploy customer safety specialists for home visits, prioritising high-need households, providing advice, installing smoke alarms, and making appropriate referrals.
- direct our home fire safety task force and local crews to conduct visits, offer advice, install smoke alarms, and coordinate with our safe and well or safeguard teams as needed
- consult on fire safety matters under building regulations, ensuring safety in shared areas like purpose-built flats. Consult on emergency access for new housing developments
- work closely with housing associations from prevention and protection perspectives
- collaborate with local authorities, including private sector housing, to enhance home safety by using the most appropriate regulatory powers where applicable
- maintain fire hydrants across Kent and Medway through a dedicated water team
- fire crews report risk information through our mobile reporting system for quick assessment and action
- create site-specific risk information and risk summaries as needed to provide fire crews with up-to-date information

How we respond to the impact:

- ensure well-trained firefighters with appropriate equipment are deployed promptly to respond to emergencies
- deploy volunteer rapid response teams to provide advice and support to homeowners affected by fires at the scene
- prevention, protection, and response colleagues conduct post-incident community work after fires
- collaborate with partners, such as the police, through our fire forensic investigation team to determine the causes of fires and identify emerging trends
- conduct incident debriefs at both local and corporate levels to learn from incidents and continuously improve our response and prevention efforts

25. Residential buildings within the scope of the Building Safety Act 2022

Our Risk Based Priority Rating	High

The Building Safety Act emerged as a direct response to the Grenfell Tower disaster, which exposed severe deficiencies in the regulation, design, construction, and maintenance of high-rise buildings. The Act was conceived to address these systemic failures and prevent future tragedies.

The Building Safety Act applies primarily to 'higher-risk' residential buildings, such as high-rise towers and complex structures with multiple dwellings.

While we are not the regulator, we have a crucial part to play in ensuring fire precautions are what they should be. We also provide fire safety advice to residents and fire crews familiarising themselves with the layout of buildings, so they can respond quickly and effectively if needed.

These types of premises tend to have a 'stay put' evacuation policy, but this is not mandatory with people free to leave at anytime if they wish. If fire precautions are compromised however, our fire crews are trained to recognise such a situation and respond swiftly, implementing evacuation procedures and assisting residents when needed so everybody can safely leave the building.

Please also see 'Fires in your homes' section at page

How we reduce the impact:

- being an effective partner with the Building Safety Regulator by discharging our duties under section 13 , 14 and 15 of the Building Safety Act 2022
- participation in National Fire Chiefs Council, actively engage in National Fire Chiefs Council protection and response working groups relating to buildings that come under the Building Safety Act, both at strategic and tactical levels
- research and innovation into tall residential buildings, ensuring we stay updated and participate in fire protection research, firefighting equipment advancements, and techniques to protect people in tall building.
- utilise various media channels to promote fire safety based on research and evaluation findings
- collaborate with partners to safeguard individuals at higher risk of fire, including those with mobility issues or hoarding tendencies
- deploy customer safety specialists for home visits, prioritising high-need households, providing advice, installing smoke alarms, and making appropriate referrals
- direct our home fire safety task force and local crews to conduct visits, offer advice, install smoke alarms, and coordinate with our safe and well or safeguard teams as needed
- consult on fire safety matters and access under the Building Safety Act 2022
- work closely with housing associations from prevention and protection perspectives
- work as part of a multi-disciplinary team on safety case reviews under the Building Safety Act, as well as conducting our own regulatory inspections at other times, including jointly with our local authority partners
- maintain fire hydrants across Kent and Medway through a dedicated water team
- fire crews report risk information through our mobile reporting system for quick assessment and action
- we have site-specific risk information and risk summaries on all our tall residential buildings
- support exercises at tall buildings across Kent and Medway to integrate with emergency response plans

How we respond to the impact:

- ensure well-trained firefighters with appropriate equipment are deployed promptly to respond to emergencies

- deploy volunteer rapid response teams to provide advice and support to homeowners affected by fires at the scene
- prevention, protection and response colleagues conduct post-incident community work after fires
- collaborate with partners, such as the police, through our fire forensic investigation team to determine the causes of fires and identify emerging trends
- conduct incident debriefs at both local and corporate levels to learn from incidents and continuously improve our response and prevention efforts

26. Commercial buildings

Our Risk Based Priority Rating	Low

What's the risk?

Commercial premises in Kent and Medway vary greatly, from large factories with complex production processes to small independent shops in high streets. Each type of business poses its own set of unique challenges, which is why we've implemented a robust building safety inspection program, complemented by reports from our operational crews who identify and address any concerns.

Larger businesses tend to have more stringent regulations in place, but can present heightened risks to firefighters during emergencies and have a significant societal impact when incidents occur.

Small and medium-sized enterprises − which constitute the majority of businesses in Kent and Medway − may lack awareness of their fire safety responsibilities and operate from premises not originally designed for their current use, such as takeaways or general stores. They often have residential accommodation above them, making escape in case of fire more challenging. Due to their lower level of regulation, our firefighters may not always have comprehensive information about the specific hazards they may encounter in these settings.

We are committed to addressing these challenges and ensuring the safety of all businesses, regardless of size, in our region.

What we do to reduce the impact:

- undertake a risk-based inspection programme of fire safety audits, ensuring that businesses have appropriate fire precautions in place relative to the risks involved in their processes
- where required we carry out enforcement action, requiring businesses to make changes to their safety arrangements, or in the most serious cases, prohibiting the business from operating
- support businesses to understand how they can improve the safety arrangements they put in place through a supportive programme of education and engagement
- develop response plans for the higher risk commercial buildings in our county
- undertake a programme of exercises to ensure that crews understand response

and can implement them

How we respond to the impact:

- ensure that we send the correct 'pre-determined attendance' to commercial buildings, which can include specialist vehicles and equipment in additional to our normal response
- quickly implement additional command and control arrangements for serious fires at these sites
- work with partner agencies to implement additional control measures such as air quality monitoring, and environmental protection arrangements

27. Unoccupied large retail and commercial property

Our Risk Based Priority Rating	Medium

What's the risk?

In recent years, the landscape of our high streets has undergone a significant change with many retailers relocating to retail parks, or closing due to changing shopping trends. Consequently, shops and stores now stand vacant. This often results in the neglect of general fire precautions, heightening the risk of fire incidents, which can have far-reaching societal consequences for the affected area.

We have seen a similar trend in commercial premises such as purpose-built office blocks due to the recent changes in working practices.

There is also a concerning trend of people regularly entering and, at times, even living within these abandoned retail and commercial spaces. This can create additional fire hazards and pose significant challenges for firefighters when responding to incidents. The extinguishing of fires in these settings can be exceptionally demanding, put the lives of firefighters at risk and cause substantial disruptions.

It is imperative that we address these fire safety concerns, safeguarding public safety, the well-being of our firefighters, and preserving the integrity of our communities.

What we do to reduce the impact:

- our operational crews, business safety officers and community safety officers are aware of the issues that can be occur in relation to unoccupied large retail and commercial property
- we share information across the organisation and make it available to firefighters via our mobile data terminals
- our Building Safety Inspectors work with responsible persons for buildings/sites to ensure they discharge their duties under the Regulatory Reform Order (Fire Safety) 2004
- we work with partners in local authorities to identify risk premises and ensure the responsible person secure their site
- we exchange building information and plans with appropriate partners

- if necessary, we deploy specialist personnel to support local authorities in assessing and securing high risk sites ahead of incidents occurring

How we respond to the impact:

- our operational crews are trained to understand the risk presented by fires in large commercial buildings
- we are aware that such buildings can be occupied, often by vulnerable people, and ensure that our response plans consider this possibility
- we can deploy specialist appliances such as our high reach turntable ladders to support our response to incidents in these buildings
- any information, including plans we hold for large commercial buildings are made available to our responding crews via their appliance computer
- we work with local authorities and Kent Police to support our response to incidents involving these premises

28. Conversion of commercial and retail to residential

Our Risk Based Priority Rating	High

What's the risk?

In recent years, we've witnessed significant changes in the way we work, with a growing number of people opting for remote work arrangements. This shift has sparked a trend in the conversion of numerous commercial and retail buildings, particularly office spaces, into residential flats. However, this transformation often requires substantial modifications to the internal layout and structure of these buildings, resulting in intricate configurations that can impact both the safety of occupants and how the fire service responds to emergencies.

The overhaul of these buildings can present notable challenges in terms of fire safety. The adjustments to internal structures, coupled with the use of modern lightweight construction methods, may create concealed voids within the building. These hidden spaces can unintentionally facilitate the unnoticed spread of fires, potentially leading to unforeseen and severe consequences.

It is important to note that firefighting facilities may have been decommissioned or not maintained due to this change of purpose, which could have a detrimental effect on firefighting operations. We are vigilant in addressing these concerns to ensure the safety of residents, protecting our firefighters, and maintaining the integrity of our communities.

What we do to reduce the impact:

- our specialist Fire Engineers work with local building control officers to advise on planning applications relating to the conversion of retail and commercial property to residential sites
- our Building Safety Inspectors work with responsible persons to ensure they discharge their legal duties in terms of fire safety as prescribed by the Regulatory Reform Order (Fire Safety) 2004

- operational crews, Building Safety Inspectors and Customer Safety Officers undertake Risk Assessment Visits to ensure safety advice is given to residents and appropriate information is gathered ahead of incidents, enabling an effective and efficient response should that be required
- we undertake training and exercising with our response crews and fire control colleagues around commercial and residential properties that have been converted to residential occupancy

How we respond to the impact:

- our fire control team responds to 999 calls and mobilises appropriate fire appliances in accordance with our pre-determined attendance for a building type, or the site specific pre-determined attendance for buildings where the Risk Assessment Visit has indicated an enhanced attendance would be required for an incident
- our firefighters use site specific information and apply National Operational Guidance to respond effectively to incidents in converted buildings
- we deploy our volunteer response team to support customers affected by incidents
- we notify local authorities of incidents where customers may need rehousing due to the impact of fires or other occurrences
- we seek specialist advice from local authority building control officers to understand the impact of fires on the structural stability of large buildings

29. Construction Site Fires

Our Risk Based Priority Rating	Medium

What's the risk?

The government target of 300,000 homes to be built per year nationally has already resulted in significant development across Kent. The county is also one of 38 areas earmarked across the country to establish future investment zones to drive and boost the economy. If this scheme is agreed there will be a drive to release more land for both housing and commercial development. This could see a significant increase in construction in key areas across Kent.

Buildings are vulnerable to fire during the construction phase due to the materials used, an increased use of timber, lack of partitioning within the building, and lack of fire detection. This allows a fire to start easily, spread quickly and go undetected for longer.

When fires do occur on construction sites there can also be an increased difficulty in establishing water supplies due to the full infrastructure not being put in place until the finishing stages.

Construction sites are inherently dangerous. Risks in addition to fire can include risk of collapse occasioned by the full or part demolition of an existing building, heavy plant machinery used to create deep excavations, cranes to move equipment, and materials creating a risk of entrapment. These activities, and many others, increase the possibility of a workplace accident and the potential for the Fire Service to involved in an emergency of some sort.

What we do to reduce the impact:

- ensure we train all our firefighters in the risks and response procedures and techniques at construction sites
- we work with planning authorities, so we know when large construction projects start
- we engage with all Nationally Significant Infrastructure planning (NSIP) development consent orders (DCO) for very large construction projects. This will include consultation on the safety management procedures put in place during construction
- we debrief all significant incidents at construction sites to learn how to improve our response and reduce the risks.

How we respond to the impact:

- all our responders are training to respond effectively to incidents at construction sites
- we have specialist responders and equipment to rescue people from height and depth which are likely scenarios at construction sites
- our Urban Search and Rescue team can support with responding building collapse or preventing further collapse of buildings under construction
- we have an agreement with specialist structural engineers that we can access to help deliver our response safely and prevent further collapse

30. Heritage Buildings

Our Risk Based Priority Rating	Medium

What's the risk?

Kent is home to many heritage buildings, including over 400 Grade 1 listed buildings and Canterbury Cathedral − a World Heritage Site.

These properties are important both for their architectural value and significance and their contents, which often include unique, rare, and important items such as artwork and furnishings.

It is important therefore that we ensure we have the appropriate capabilities in place to be able to extinguish fires quickly and limit damage as much as possible. This includes damage caused because of our firefighting activities, such as water runoff.

Fighting fires in heritage buildings can also be difficult as the construction methods used do not provide as many fire-resisting features as are available today. Hidden voids and exposed timbers can increase the risk of rapid fire spread and can make locating fires difficult.

What we do to reduce the impact:

- we work directly with those responsible for many of our heritage buildings. This helps us understand the construction, layout and emergency procedures in place at the sites so we can reduce the spread and impact of fire
- we store specific risk information on our systems around our more important heritage buildings

- we specifically train all firefighters on the risks, procedures and firefighting actions at heritage buildings
- we work with heritage sites to agree plans that prioritise the recovery of highly important items.
- we carry out exercises at our key heritage buildings to test our response
- we learn from incidents in heritage buildings around the world

How we respond to the impact:

- specific risk information on heritage buildings is available to firefighters via mobile data terminals when on the way to incidents
- we have emergency contact details for responsible people and nominated specialists that can support a response to specific heritage buildings
- specialist working at height and Urban Search and Rescue teams are available to us for complex or difficult rescues or the recovery and protection of large historical items

31. Tunnels

Our Risk Based Priority Rating	Low

What's the risk?

Incidents within tunnels can cause a significant risk to the public and emergency responders due to the geographical and topographic nature of the structures. There are limited means of access and egress, a lack of natural ventilation and they can be highly insulated. The curved construction of a tunnel can also result in rapid smoke spread, smoke and heat often spreading in both directions. Incidents in tunnels can also have a significant impact on surrounding infrastructure and business continuity for customers.

The potentially complex nature of a significant incident within a tunnel (particularly transport tunnels) can result in incidents becoming protracted, with the need for a large number of resources deployed to deal with the incident.

What we do to reduce the impact:

- liaise with tunnel operators and partner agencies to identify the location of tunnels within the county and assess the risk, developing plans where necessary
- carry out frequent site visits to ensure local crews are aware of how to access and respond to tunnels in their area
- regularly exercise our response to tunnels, testing the effectiveness of our emergency arrangements
- provide crews with specialist equipment, such as radios capable of operating in a long tunnel complex

How we respond to the impact:

- we pre plan our attendance to tunnels, in many cases sending fire engines to each end of a tunnel to get the best possible access

- at larger and more complicated tunnels we co-locate our commanders with tunnel staff in purpose-built command rooms
- where tunnels cross either local or international borders, we establish communications links with responders on the other side of the border to ensure a seamless and safe joint response

32. Hospitals

Our Risk Based Priority Rating	Medium

What's the risk?

Fire safety in hospitals presents distinctive challenges due to the presence of vulnerable patients, critical life-saving equipment, and the necessity for intricate evacuation procedures.

To ensure hospitals are adequately prepared, they prioritise various measures, including constructing fire-resistant buildings, providing comprehensive staff training, deploying advanced fire detection systems, and adhering to stringent safety protocols. Nevertheless, in emergency situations, relocating patients to safety may not always be feasible, particularly within the context of complex surgeries performed in operating rooms. This underscores the critical role of the fire service.

Hospitals are subject to the requirements of the Regulatory Reform (Fire Safety Order) 2005, of which KFRS is the enforcing authority. Maintaining up-to-date information about the unique layouts and risks associated with each hospital is also essential. Hazards at hospital sites include radiation and strong magnetic sources from MRI scanners, compressed oxygen, back up and alternative power sources, infectious diseases, and biological hazards. Gaining specific risk information enables us to effectively prepare for and respond to fires and other emergencies in a comprehensive manner. This integrated approach ensures the safety of patients, hospital staff, and visitors alike, safeguarding all individuals during both the routine operation of the hospital and in times of crisis.

What we do to reduce the impact:

- actively participate and engage in National Fire Chiefs Council prevention, protection, and response working groups, both at strategic and tactical levels
- research and innovation, staying updated on fire protection research, firefighting equipment advancements, and techniques to protect people in health care premises.
- support exercises at local hospitals to integrate with emergency response plans, testing response around evacuation, mass decontamination, fire and other scenario-based events
- regulatory consultations on fire safety matters ensuring fire safety throughout healthcare establishments regarding new hospitals or significant refurbishments at healthcare premises

- regulatory fire safety, by delivering a pro-active risk-based inspection programme where competent inspectors will audit and assess compliance with the Fire Safety Order (2005) at hospitals
- maintain fire hydrants across Kent and Medway through a dedicated water team
- ensure risk information covers vulnerable patient populations, such as intensive care units, psychiatric or neonatal units due to specific challenges faced.
- risk information feedback with fire crews reporting risk information through our mobile reporting system for quick assessment and action.
- up-to-date risk information, creating site-specific risk information and risk summaries as needed to provide fire crews with up-to-date information

How we respond to the impact:

- ensure well-trained firefighters with appropriate equipment are deployed promptly to respond to emergencies
- ensure a 24/7 provision of fire safety specialist advice and support to support operational emergencies and conduct any enforcement activity required
- provide clear and timely communication with the public during major emergency response at hospitals to reassure public through accurate information.
- prevention, protection and response colleagues conduct post-incident community and business support work after fires
- collaborate with partners, such as the police, through our fire forensic investigation team to determine the causes of fires and identify emerging trends
- conduct incident debriefs at both local and corporate levels to learn from incidents and continuously improve our response and protection efforts

33. Care Homes

Our Risk Based Priority Rating	High

What's the risk?

Care homes house some of our most vulnerable customers. Whilst they are tightly regulated, they can be complicated to deal with when fires do occur. Purpose built care homes generally have good fire precautions that are designed to limit fire spread and aid protection and evacuation of residents. However, some older care homes that have been converted from other building types can have complicated layouts. This can make firefighting challenging. Residents can often have mobility or sensory impairments which can mean that it is either not possible to leave the building quickly, or not possible to leave the building at all without significant levels of assistance and further care.

Over the last few years, we have prioritised and improved our response to care homes. We work closely with care homeowners and bodies such as the Care Quality Commission to ensure that facilities are fit for purpose. Where they are not, we take enforcement action to ensure that improvements are made to reduce risk to residents.

With an ageing population, the demand for care home spaces is on the rise. However, the care sector is struggling to recruit and retain staff. It is thought that around 10% of roles cannot be filled. We have some concerns regarding the effect this is having on the ability of care home staff to take measures necessary to ensure resident safety in the event of a fire. As a result, we have prioritised our inspection of care homes, working with owners and staff to ensure that plans are fit for purpose and can be resourced.

What we do to reduce the impact:

- work with organisations such as the Care Quality Commission to identify, monitor and respond to issues affecting care homes
- conduct site familiarisation visits and, where needed, develop specific response plans
- engage with care homeowners and staff to ensure we can work together effectively
- undertake targeted fire safety audits as part of our risk-based inspection programme
- ensure all our colleagues complete safeguarding training

How we respond to the impact:

- we make sure our response is adapted to the needs of those in care homes – for example, where possible, we try to move people to places of safety in a building rather than evacuating outside to reduce the physical and emotional impact on care home residents
- we can call on partner agencies to provide specialist care and support for any residents that have been displaced
- our pre-determined attendance helps us to send the right number of fire engines to the scene quickly – we need more firefighters to deal with fires in care homes as they can be large buildings and residents may have complex needs
- after an incident we work with partner agencies to ensure there is a suitable recovery plan in place to make sure the needs of residents are met

34. Collapsed Buildings

Our Risk Based Priority Rating	Low

What's the risk?

Building stock in Kent is generally of a high standard. The building regulations in the UK help to ensure that buildings are constructed according to a safe set of standards. Buildings from Georgian, Victorian, and Edwardian periods, which make up many of the houses in the UK, are renowned for being well built.

As a result, we do not tend to see building collapses that occur because of ageing, lack of maintenance, or poor construction techniques. Neither are we vulnerable to natural disasters that lead to building collapse, such as large earthquakes or hurricanes. Consequently, building collapse is a rare occurrence.

When they do occur, they are often the result of external factors, such gas explosions, vehicle impacts, or fire. Rescues from building collapses can be complicated. The need to get access to trapped casualties, whilst at the same time ensuring further collapse does not occur, requires specialist skills, knowledge, and equipment. Kent Fire and Rescue Service has an Urban Search and Rescue team, part of the UK's national capability, who can quickly respond to collapsed buildings.

What we do to reduce the impact:

- continue to maintain and invest in our Urban Search and Rescue team
- maintain a trained dog that specialises in locating people trapped in buildings
- provide all our crews with the knowledge and understanding to recognise signs of building collapse and ensure that can operate safely around collapsed buildings
- maintain regional and national agreements for mutual aid and support to be able to bring on additional specialist teams at short notice
- use our relationships with colleagues in Local Authority building control departments to be able to draw on specialist advice in structural stability

How we respond to the impact:

- we provide a range of monitoring equipment to be able to monitor for signs of structural collapse, locate casualties and gain access
- we send our Urban Search and Rescue team and, where necessary, call on support from other Urban Search and Rescue teams across the country
- we have access to a range of heavy plant equipment to be able to manage and clear debris from sites

35. Prisons and secure accommodation

Our Risk Based Priority Rating	Medium

What's the risk?

Kent is host to several prisons and has one of the largest prison estates in the country. These range from category B to D. There are no category A (High Security) prisons in Kent. The prisons in Kent are:

- East Sutton Park
- Elmley
- Maidstone
- Cookham Wood
- Rochester
- Stanford Hill
- Swaleside

Fires in prisons are a frequent occurrence, although they tend to be localised to individual cells. Prisoners have limited access to large quantities of combustible materials. As a result, fires are

often small and usually extinguished by prison staff. Injuries tend to be minor, although we have had some more serious injuries involving prisoners and, tragically, a fatality. Over time we have worked with His Majesty's Prison (HMP) service to develop procedures to ensure we can access prison facilities in a timely way in the event of a fire.

Whilst much rarer, there have been examples in Kent of larger fires. These have been the result of disorder within prisons. In such circumstances we need to balance our intervention with the safety of our colleagues. We have well developed procedures for joint working with HMP colleagues to ensure that we can maximise the safety of both our colleagues and prisoners.

We are not able to take actions that reduce the likelihood of fires occurring in the same way as we do in people's homes. Prevention activity is managed by HMP service and prisons are Crown Estate. The frequency of fires is often closely related to influx of new prisoners, changing conditions, or relationships between inmates.

What we do to reduce the impact:

- we work with Prison Governors and the Crown Premises Inspection Group (the Crown fire safety regulator) to understand the risk in custodial premises
- our response crews and prison staff exercise together periodically
- we support Prison Governors to understand the nature of fire related incidents that happen in their establishments through fire investigations

How we respond to the impact:

- our crews mobilise to the prison when a fire call is received from the prison management team
- a Kent Fire and Rescue Service (KFRS) liaison officer attends the prison control room to liaise with the prison management team
- if fire fighting action is required by KFRS crews, it is closely coordinated with prison staff to ensure suitable access and firefighter safety
- KFRS equipment is compatible with the fixed firefighting installations found in the prison estate and our firefighters are trained to use this equipment which allows firefighting action whilst maintaining site security

Transport

Transport

36. Road traffic collisions

Our Risk Based Priority Rating	High

What's the risk?

Kent is a major gateway to Europe and has road infrastructure to both passenger and freight traffic to the ports and the Channel Tunnel. In addition, there several major trunk roads crossing the county creating a network of roads that also have a high density of traffic.

Sadly, every week we lose lives in road traffic collisions across Kent and Medway.

KFRS continues to promote and support road safety messages with our partner agencies to assist in reducing the risk of unsafe and poorly maintained vehicles, drink and drug driving, distraction and overcrowding in vehicles. We also actively promote campaigns such as those relating to young drivers

KFRS continue to attend road traffic collisions (RTCs) to perform rescues and work with our partner agencies to keep road users safe. Operational crews undergo regular training in using the latest equipment and procedures to enable them to respond efficiently and effectively to the complex and noncomplex road traffic collisions.

To support our Secamb colleagues our crews are qualified to deliver immediate emergency Care (IEC) to road traffic casualties, performing lifesaving actions as part of the medical response during road traffic incidents.

KFRS continues to invest in the research and development of how we respond to incidents, focusing on new vehicle technology and how it performs following involvement in a collision. This research will shape and guide our procedures and the equipment we buy so that we are able to provide the best possible service to the community.

The nature of the response to many RTCs has changed over the last decade. Car safety systems and a greater understanding of the likely mechanisms of injury for casualties have combined to mean that we cut far less people out of cars than we used to. Most frequently we stabilise the vehicle and use one tool to open doors so the casualty can step out of the vehicle. This means that the extensive range of heavy rescue equipment carried on our appliances is used less frequently than it was a decade ago. However this equipment is still required for incidents involving major transport (lorries, trains etc).

What we do to reduce the impact:

- maintain a response capability across all operational stations through ongoing training and the development and provision of equipment and PPE
- maintain our urban search and rescue and heavy rescue capability
- maintain our major rescue unit provision

- continue to deliver externally accredited road traffic collision instructor
- continue to deliver clinically governed trauma training
- continue to be an active member within the Kent Road Safety Partnership and share road safety messaging
- continue to deliver a wide range of prevention packages across educational settings and identified high risk groups
- continue to use intelligence to inform campaign activity

How we respond to the impact:

- respond to RTCs and vehicle fires in a manner that minimises the impact on life, the environment and infrastructure
- respond to RTCs and vehicle fires within the criteria of our key performance indicator
- continue to work effectively and efficiently in a collaborative way with other responding agencies utilising Joint Emergency Services Interoperability Principles (JESIP)
- utilise drone assets for effective situational awareness and to support fire investigation
- use assurance monitoring system to gather service-wide and multi-agency learning post incident
- report areas of notable practice or learning via national or collaborative bodies (national operational learning and joint organisational learning)
- targeted prevention activities post incident

37. Vehicle fires

Our Risk Based Priority Rating	Medium

What's the risk?

There are around 20,000 reported vehicle fires in England each year, with approximately 500 people suffering from vehicle fire-related injuries and deaths as a result. Such incidents may also have a significant impact on the environment and dependant on location, can affect properties and road networks.

Conventionally fuelled vehicles (petrol and diesel) are known as Internal Combustion Engine (ICE) vehicles. Fires involving these can develop quickly. When fuel tanks fail, running fuel fires can create a risk of further fire spread to other vehicles and buildings.

We understand the risks of ICE vehicle fires well and have well tested procedures for dealing with them. As a result, we are often able to extinguish these fires quickly.

ICE vehicle fires produce toxic smoke that is a risk to our firefighters when they are working near them. The water runoff from our firefighting actions can also be harmful to the environment. In both cases we ensure that we put in place control measures to reduce the risk.

There are over 40 million licenced vehicles in the UK. This means there are probably around a million vehicles in Kent. Kent also has major motorway networks serving access to Europe and, as a result, there is also a significant volume of passenger and commercial traffic transiting

through the county. Whilst vehicles have become more reliable in recent years, this number means that we are likely to continue to see vehicle fires being a regular occurrence.

Over the last five years we have attended more than 1,800 accidental vehicle fires. We have not seen a significant trend up or down over this period. During the same period there were 1,379 deliberate vehicle fires.

What we do to reduce the impact:

- maintain a response capability across all operational stations through ongoing training and the development and provision of equipment and PPE
- we have systems for reporting abandoned vehicles that can be set alight
- we work with partners through community safety partnerships to reduce anti-social behaviour and criminal damage
  we hold technical information on specific vehicle types and construction that provides information around access points on vehicles

How we respond to the impact:

- the frequency of these incidents means firefighters are experienced in dealing with them quickly and efficiently
- we have good working relationships with National Highways and local authorities to ensure the rapid removal of damaged vehicles which reduces risks and allows roads to be reopened
- we have specific equipment available to firefighters so they can quickly access vehicles to extinguish fires
- many of our fire engines have specialist foam capability that can be used to rapidly extinguish vehicle fires
- we are also able to make holes and apply water directly through the metal surfaces of vehicles and access the compartments below

38. Alternative Fuelled Vehicle Fires

Our Risk Based Priority Rating	High

What's the risk?

The UKs zero emissions vehicles mandate, as laid out by the government, means a total ban on the production of petrol, diesel and hybrid cars by 2035. As a result, we will see a rise in the number of electric vehicles and other alternative fuelled vehicles across the UK. This will also include the use of electric motorbikes, scooters, bicycles, and other electric vehicles.

The most common forms of alternative fuelled vehicles include:

- hybrid electric vehicle
- plug in hybrid electric vehicle

- battery electric vehicle
- hydrogen
- biodiesel

By far the most common of these are electric vehicles (both hybrid and plug in). Hydrogen vehicles are far less common and tend to be limited to larger vehicle applications such as busses and heavy goods vehicles.

This will change the risk profile relating to vehicle fires. Alternative fuelled vehicles present a different range of hazards to those of petrol or diesel vehicles and often require different tactical actions to extinguish them.

The most prominent hazard relating to an electric vehicle fire is the presence of lithium-ion batteries. These are generally safe, but if they are faulty, damaged, stored or charged inappropriately, they can present a risk of fire and/or explosion, Due to the chemical properties associated with lithium-ion batteries, they cannot be extinguished by water, and can therefore be challenging incidents to respond to, sometimes burning for hours. There have been cases of electric vehicles having been extinguished and re-igniting days after the initial fire has been controlled.

Fires involving ;ithium-Ion batteries also produce large volumes of extremely toxic and flammable gases. These present a significant danger to life with many reports of faulty e-bikes and scooters causing damage, injury and death in recent years.

Fires involving hydrogen fuelled vehicles carry risks such as venting of the gas under pressure, intense directional flames, and the risk of explosion.

Whilst they present their own unique risks, in the case of both electric and hydrogen vehicles, the likelihood of fires occurring seems to be far lower than in petrol and diesel internal combustion engine (ICE) vehicles.

What we do to reduce the impact:

- maintain a response capability across all operational stations through ongoing training and the development and provision of equipment and PPE
- we hold technical information on specific vehicle types and construction that provides information around access points on vehicles
- we are engaged at a national and international level to ensure we have all the latest information around alternative fuels and a member of KFRS senior management is the national fire service lead on alternative fuels
- we work with partners such as National Highways to help with quick recovery and opening of roads
- we learn from incidents and have debrief outcomes for a number of incidents involving alternatively fuelled vehicles

How we respond to the impact:

- we have specific equipment available to firefighters so they can quickly access vehicles to extinguish fires. This includes specific training and information around alternative fuelled vehicles

- we have good working relationships with National Highways and local authorities to ensure the rapid removal of damaged vehicles which reduces risks and allows roads to be reopened
- we can make holes and apply water directly through the metal surfaces of vehicles and access the compartments below

39. Airports and aircraft

Our Risk Based Priority Rating	Low

What's the risk?

Kent currently has one airport in Lydd and two airfields at Rochester and Headcorn, with several private airstrips across the county. There also remains the potential development of Manston airport reopening. Due to Kent's proximity to London and its major airports we have many aircraft occupying our airspace, with significant air traffic over Kent travelling to Gatwick, Heathrow and London City Airport. This air traffic ranges from commercial airlines and military aircraft to smaller private planes, gliders and microlights.

Kent hosts various airshow events which may include low level flyovers, flypasts, multiple aircraft and display teams, as well as vintage aircraft like the Spitfire.

Aircraft incidents are infrequent but have the potential for significant impact, especially if they happen off the airfield away from specialist resources. Airborne aircraft accidents may be due to technical failures, pilot errors or weather conditions. Grounded runway collisions may also lead to fires or spillage of hazardous materials.

Airports and aircraft hold significant storage of aviation fuel with potential for leaks or explosions. Aircrafts also may transport a range dangerous goods, which may further present an environmental risk due to spills. Airport infrastructure may pose risks due to large passenger terminals, hangars and goods storage. The aviation sector has security concerns as a potential target for terrorist attacks. Large numbers of people are also present at busy passenger terminals that may cause additional complications for an operational response.

What we do to reduce the impact:

- actively engage in National Fire Chiefs Council prevention, protection, and response working groups, both at strategic and tactical levels
- Undertake research, staying updated on aircraft equipment advancements, and firefighting techniques to effectively deal with aircraft incidents
- prepare for events, consider upcoming airshow events and consider public safety, working with event organisers to mitigate risk presented by large crowds
- provide relevant training and continuing professional development (CPD) regarding aircraft incidents, focussing on rescue techniques and effective firefighting

- ensure colleagues have the appropriate knowledge through training and exercising to enable an effective operational response
- provision of specialist equipment and teams, to enable complex extrication with technical rescue and provide effective firefighting with a foam unit, to enable effective operational response
- preparation by ensuring airports have detailed site specific risk information containing an effective emergency response plan where required
- maintain fire hydrants across Kent and Medway through a dedicated water team
- risk information feedback from fire crews reporting risk information through our mobile reporting system for quick assessment and action.
- create site-specific risk information and risk summaries as needed to provide fire crews with up-to-date information for airports and airstrips.

How we respond to the impact:

- ensure effective and well-trained firefighters with appropriate equipment are deployed promptly to respond to emergencies
- Ensure emergency response coordination with airport authorities, air traffic control and other relevant agencies during emergency response
- post-incident community work, with prevention, protection and response colleagues conducting post-incident community work after fires
- fire forensic investigation, collaborating with partners, such as the Air Accidents Investigation Branch and Department of Transport, providing support from our fire forensic investigation team to support any post-crash investigations, or support following air infrastructure fires
- conduct incident debriefs at both local and corporate levels to learn from incidents and continuously improve our response efforts

40. Ports and ships

Our Risk Based Priority Rating	Medium

What's the risk?

Ports

Ports deal with a wide variety of cargo, some of which may be hazardous or flammable. The uncertain nature of the cargo and the restricted access can make it difficult to contain and put out fires in storage spaces or cargo containers.

The size and layout of ports can make accessing and controlling fires challenging. Limited access roads, tight spaces, and the need to work around cranes and other moving traffic can hinder firefighting efforts.

Kent is home to a number of ports, including the Port of Dover, one of the world's busiest maritime passenger ports. Situated some 21 miles from France, the Port of Dover handles more

than 11.7 million passengers, over two millions lorries, cars and motorcycles, and 80,000 coaches each year.

Events in the Port can have a considerable impact on the infrastructure of the surrounding towns and roads. This can extend throughout the county, such as for example, the M20 motorway being frequently used as a holding area.

Ships

Fires aboard ships, whether alongside in a port or at sea, can be challenging and it is important to safely remove passengers and crew from the vessel.

There are risks involved in gaining access and safely moving around a ship. This is due to complex layouts, confined spaces and changing stability of the vessel.

Ships often carry fuel, chemicals, and other hazardous materials including cargo that can escalate the severity of the fire. Fires on ships can burn for long periods due to the restricted access, inadequate ventilation, and severity of the fire, resulting in major damage to the vessel and significant impacts on the environment. Depending on the type of fire, considerable resources are likely to be required to extinguish a ship fire.

What we do to reduce the impact:

- collaborate with port authorities and other relevant stakeholders to develop comprehensive emergency response plans
- conduct thorough risk assessments to identify potential hazards and vulnerabilities within the port.
- provide regular training and education on ports and ships to our colleagues
- provide specialised training to firefighters and rescue personnel on dealing with port-specific incidents.
- we have specialised firefighting and rescue equipment designed for port-related incidents
- established mutual aid agreements with neighbouring fire and rescue services to ensure adequate resources and support are available during large-scale incidents
- work closely with partner regulatory bodies
- conduct routine regulatory inspections of port facilities to ensure compliance with safety standards

How we respond to the impact:

- ensure well-trained firefighters with appropriate equipment are deployed promptly to respond to emergencies
- prevention, protection, and response colleagues conduct post-incident community work after fires
- collaborate with partners, such as the police, through our fire forensic investigation team to determine the causes of fires and identify emerging trends

41. Railways and trains

Our Risk Based Priority Rating	Medium

What's the risk?

Incidents involving railways and trains can have a significant impact on the UK infrastructure and economy. Kent has the high-speed rail link to London as well as the Eurostar. Incidents involving railways and trains can vary from trackside fires to major train derailments.

Due to the geographical nature of Kent, railway/train incidents are likely to occur in a remote rural location. This poses additional risks and access issues for attending crews. Due to these, extra resources will be required along with specialist vehicles and the Technical Rescue Team, putting additional demand on our resources.

Over the past five years Kent Fire and Rescue Service has attended over 170 incidents involving the railway or trains.

What we do to reduce the impact:

- maintain well defined and understood safety procedures for working on or near the railway
- work with rail operators to ensure quick access to safe systems of work, control over the railway and specialist advice
- maintain a range of off-road vehicles capable of accessing remote locations on the railway

How we respond to the impact:

- undertake early liaison with the rail operator to ensure, where required, power is isolated, and trains are stopped or run under caution
- appoint safety officers
- provide specialist rescue equipment in the case of incidents involving rescue, such as a person under a train or a derailment
- where necessary, work with the Rail Accident Investigation Branch in support of their investigation

42. Bridge collapse

Our Risk Based Priority Rating	Low

What's the risk?

The likelihood of bridge collapse in Kent is very low. In 2016 there was a bridge collapse on the M20 after a lorry carrying a digger hit the bridge. No one was seriously injured but the motorway remained shut for some time.

Stringent construction standards and well-defined traffic regulations helps to ensure the risk is kept very low. However, Kent does have many bridges both in rural locations and crossing the strategic road network. Additionally, the county is home to large bridges including the Dartford Crossing and Sheppey Crossing. Bridges are also located along the railway network.

Should a bridge collapse, there is not only the risk of traffic disruption but also the risk of persons becoming trapped. We have an Urban Search and Rescue team in Kent that can rescue people from collapsed structures and can also assist with emergency stability and shoring operations.

What we do to reduce the impact:

- continue to maintain and invest in our Urban Search and Rescue team
- maintain regional and national agreements for mutual aid and support to be able to bring on additional specialist teams at short notice
- utilise our relationships with colleagues in Local Authority building control departments to be able to draw on specialist advice in structural stability

How we respond to the impact:

- we provide a range of monitoring equipment to be able to monitor for signs of structural collapse, locate casualties and gain access
- we send our Urban Search and Rescue team and, where necessary, call on support from other Urban Search and Rescue teams across the country
- we have access to a range of heavy plant equipment to be able to manage and clear debris from sites

Malicious Attacks

43. Attacks on crowded places

Our Risk Based Priority Rating	Not Rated

What's the risk?

Kent's position as the gateway to Europe and the home to major transport hubs, shopping centres and tourist destinations makes it a popular county for both tourists and residents. Sadly, over the last few decades we have seen that places where people may be found in large numbers have sometimes been the target for acts of terror.

The impact of these attacks on the people involved, their community and the wider population can be traumatic both physically and psychologically, but this can be minimised through rapid effective intervention. Many more planned attacks are disrupted through the country's network of Counter Terror Policing, who rely on information from the public and partner agencies.

We are constantly working with our partner agencies to share information that may prevent an attack in the planning stages. We advise the operators of sites and events to ensure they consider security alongside their fire safety responsibilities, and train with our blue light partners to ensure we can react swiftly and appropriately should an attack occur. Teams across Kent are prepared and equipped to respond to an attack, with advanced first aid skills, and protective equipment.

44. Attacks on transport systems

Our Risk Based Priority Rating	Not Rated

What's the risk?

Transport systems have previously been a target for acts of malicious intent, and despite enhanced security measures the threat to these systems remains present. By their very nature each location presents its own challenges in relation to the inherent risk of the system such as high voltage electricity or high-speed moving vehicles. Equally getting access to these systems can be challenging as they are often remote and so responders need the right knowledge and equipment to reach casualties in a timely manner.

These types of incidents will require a multi-agency response, and therefore it is vital that information and expertise is shared quickly and effectively between responding agencies. The difficulty of this has been highlighted in previous events such as the 7th July 2005 London bombings, and from this joint agency ways of working have been developed. Local training and exercising between agencies in Kent is ongoing to ensure the best possible response.

In Kent we have trained all firefighters how to respond to malicious events, plus we have specialist teams that have a higher degree of training and equipment to meet the needs of

the different scenarios we could respond to. This includes protective equipment to deal with firearms incidents, detection equipment that can identify hazardous materials, training and equipment for working in tunnels.

45. Chemical, biological, radiological and nuclear attacks

Our Risk Based Priority Rating	Not Rated

What's the risk?

Chemical, biological, radiological and nuclear (CBRN) attacks are the malicious use of chemicals, biological, radiological or nuclear material. These range in scale from the use of corrosive material (such as an acid) aimed at an individual, through to the larger scale risk of terrorism.

KFRS maintains a capability to support a multi-agency response. All our front-line fire engines are equipped to support the initial response to the incident to protect people in the immediate time after an incident.

We also have Specialist Operational Response capability. We host a team that have specialised training and equipment to support initial crews and partners to assess and reduce risk. We have trained Strategic and Tactical CBRN commanders and a dedicated CBRN Tactical Advisor. We also have the capability to set up mass decontamination on behalf of the National Health Service.

Response to such events is very much a multiagency approach and we work closely with colleagues in Kent Police and South East Coast Ambulance (Secamb) through a network of trained officers known as National Interagency Liaison Officers (NILO). These teams work as much pro-actively to prevent CBRN incident as they do to prepare for the response.

46. Attacks on Utilities and Critical Infrastructure

Our Risk Based Priority Rating	Not Rated

What's the risk?

Malicious attacks on utilities and critical infrastructure can result in severe consequences. It is imperative for KFRS to be able to mitigate, respond to, and recover from such incidents. One significant incident type comprises of cyberattacks targeting power grids, water treatment facilities, and communication networks. These attacks can disrupt essential utility services,

leading to potential outcomes such as widespread power outages, contaminated water supply, or communication breakdowns. This attack methodology could potentially cause fires, explosions, or hazardous material releases, endangering public safety and intensifying the challenges faced by KFRS in responding to emergencies.

The possible outcomes of these attacks are multifaceted and may include harm to health, loss of life, property damage, environmental contamination, and economic disruption, where events may quickly develop into a major incident.

We collaborate with operators of critical infrastructure and Control of Major Accident Hazards (COMAH) sites, gather risk information, engage in exercising and training, and provide specialist equipment to respond to incidents at these sites.

47. Cyber attacks

Our Risk Based Priority Rating	Not Rated

What's the risk?

Telecommunications is a critical national infrastructure vulnerable to cyber-attacks due to its importance in providing essential services. The UK government has introduced the Telecommunications (Security) Act 2021 to establish a robust security framework for the sector.

A major cyber-attack on a telecom network could disrupt services for millions of customers, affecting internet access, voice calls, and emergency services like 999/112. Recovery could take months or even years. The evolving cyber threats in the telecom sector make it a significant concern, and similar disruptions could arise from various causes beyond cyber-attacks, such as misconfigurations and software failures.

This poses a risk to our ability to receive emergency calls and communicate effectively. We have seen telecommunications failures in the past, albeit on a limited scale. We have fallback arrangements in place through our business continuity plans that help us to ensure that we are still able to mobilise fire engines and respond to emergencies.

Utilities and Fuel

48.   Power stations

Our Risk Based Priority Rating	Low

What's the risk?

Power stations carry the potential for accidents, fires, or leaks that may need the involvement of Fire and Rescue Services. Additionally, some power stations handle hazardous materials or chemicals, which could potentially result in chemical fires or toxic releases in the event of accidents.

The critical infrastructure of power stations is also susceptible to damage from fires or unforeseen emergencies, with the potential to disrupt power distribution, endanger public safety, and impact emergency response capabilities and resources. Nuclear power stations also specifically have the added concern of radiation hazards during emergencies, demanding a specialized response to effectively prevent or mitigate potential harm. Power stations in Kent include:

- Grain
- Medway
- Damhead Creek
- Allington
- Sevington
- Dungeness (closed but still defuelling)

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Power stations are highly regulated and have robust plans in place for emergencies. We are involved in developing and testing these response plans.

What we do to reduce the impact:

- conduct thorough risk assessments of power stations to identify potential hazards and vulnerabilities. Based on these assessments, the Risk Information Team develops comprehensive emergency response plans known as Site Specific Risk Information (SSRI) tailored to the unique risks and requirements of each power station
- ongoing regular training and education on these premises is provided to operational crews within KFRS across all command levels within station-based training, followed by physical site visits and exercises focusing on the specialised knowledge and skills required to respond effectively to incidents in power stations.
- KFRS collaborates closely with Kent Police, SECAMB, power station operators, utility companies, environmental agencies, and other relevant stakeholders
- by actively supporting regular emergency response drills at power stations and participating in joint multi-agency exercises encompassing various incident simulation types, KFRS significantly improves the preparedness and proficiency of responders
- we have invested in specialised equipment and officers designed and trained to manage and respond to a range of power station emergencies and incident types. This includes equipment for electrical fires, hazardous material containment, high-temperature incidents, and confined space rescues

- we work closely with the Office for Nuclear Regulation, the Environment Agency, and the Health and Safety Executive, who conduct routine inspections of power stations to ensure compliance with safety regulations and standards

How we respond to the impact:

- KFRS responds swiftly with well-trained firefighters to contain and extinguish fires, mitigate hazardous material spills, and address any immediate threats to life, property, or the environment
- evacuation of personnel and nearby communities is prioritised to ensure their safety, and appropriate safety measures are implemented to reduce exposure to hazards
- firefighters and responders work to contain the incident, prevent further spread, and manage the situation to minimise damage and risks
- KFRS responding personnel will utilise specialised equipment to combat electrical fires, handle hazardous materials, and manage other unique challenges associated with power station emergencies
- after the incident is under control, KFRS efforts are directed towards recovery, rehabilitation, and restoring normal operations in collaboration with relevant stakeholders
- we deploy volunteer rapid response teams to provide advice and support to homeowners affected by fires at the scene
- prevention, protection, and response colleagues conduct post-incident community work after fires
- collaborate with partners, such as the police, through our fire forensic investigation team to determine the causes of fires and identify emerging trends
- conduct incident debriefs at both local and corporate levels to learn from incidents and continuously improve our response and prevention efforts

49. Fuel storage

Our Risk Based Priority Rating	Low

What's the risk?

The term fuel can mean many things, but here we specifically refer to fossil fuels and their derivatives. This type of fuel is stored across Kent in many different locations from small domestic tanks of heating oil to larger fuel collection and distribution hubs, and at some significant Control of Major Accident Hazards (COMAH) sites located in the north of the county.

Kent has a very large importing facility for Liquified Natural Gas (LNG) at LNG Grain. It is the largest terminal in Europe and eighth largest in the world by tank capacity. Another significant fuel storage site is BP Oils, again located on the Isle of Grain. This site imports and holds significant amounts of aircraft fuel. Both these sites transport their product primarily though pipelines which run across the county, or by road and rail.

Kent 's location within the UK also means that we have a significant number of lorries on our roads containing fuel products.

Although the UK's reliance on fossil fuels is likely to reduce over the coming years with a trend towards more renewable and alternative fuel types, fossil fuels will continue to be a risk for which we need to plan for many years to come.

What we do to reduce the impact:

- work closely with operators of fuel storage sites to ensure that we have assessed the risk scenarios for incidents at these sites
- develop joint emergency response plans with site operators and other agencies
- undertake regular training and exercising at fuel storage sites
- provide specialist foam equipment on selected fire engines
- maintain a specialist bulk foam unit and high-volume hose layers to provide large foam strikes on fuel storage tanks and road tankers
- plan ways in which we can best protect the environment, including how we can contain and manage polluted water runoff

How we respond to the impact:

- enact pre-determined emergency plans
- our pre-determined attendance includes a specialist foam unit and environmental protection equipment
- we send specially trained hazardous materials officers to liaise with site operators and give specialist advice on the best response
- communicate with the public through warning and informing messages to reduce the impact of smoke plumes

50. Energy storage and renewables

Our Risk Based Priority Rating	Medium

What's the risk?

The UK government are trying to diversify energy supply and ensure that there is more energy generated from renewable sources as part of the transition to a sustainable and cleaner future. These renewables include wind, solar, hydro, biomass, and wave.

In Kent, the climate and geography mean that there are areas of land that provide ideal conditions for solar farms. However, given the location of Kent and the continued spread of housing and commercial developments, land for these solar projects can often be limited and near buildings and communities. This needs to be considered as part of the planning process.

Kent is bordered by a long coastline and, as a result, is home to some of the largest offshore wind farms in the UK. These do not pose a significant risk or create demand for our services, although there is the potential for secondary issues involving shipping or accidents that may require our attendance.

These types of renewable energy sources generate electricity at specific times – i.e., when the sun is shining, or the wind is blowing. As a result, to achieve balance of supply, this energy is often stored in energy storage sites – typically large battery installations. We have a number of these in Kent. Whilst the likelihood of incidents involving these is low, they do pose a potential

risk to the public and firefighters. When they catch fire they can burn to produce toxic smoke plumes. They also can cause impacts on the local environment. As a result, we work closely with developers to ensure that appropriate risk controls and emergency planning arrangements are in place.

What we do to reduce the impact:

- work with local planning authorities to ensure that fire service requirements are considered when energy storage sites are constructed
- liaise closely with the National Fire Chiefs Council to better understand the risks and responses required at these sites
- ensure that our colleagues are provided with the latest risk information

How we respond to the impact:

- ensure that our plans balance the need to save infrastructure against risks to local communities and the environment
- communicate with the public through warning and informing messages to reduce the impact of smoke plumes
- we send specially trained hazardous materials officers to liaise with site operators and give specialist advice on the best response
- make use of strong global networks we have built in this area to be able to obtain timely specialist advice and guidance

51. Utility networks (Gas, Electricity etc) and infrastructure

Our Risk Based Priority Rating	Low

What's the risk?

Fires or accidents involving utility infrastructure can have both direct risks and indirect risks. Direct risks include injuries and damage arising from events including electrocution, explosion, and hazardous materials release. Indirect risks are those that arise because of the loss of the network or infrastructure. These are often societal in nature but can result in impacts on human health.

Utility networks and infrastructure usually benefit from investment over years and stringent regulation, which helps to drive down the likelihood of incidents occurring. When incidents do occur, response arrangements are typically well planned and resourced.

Where incidents involve significant damage to infrastructure, recovery can take some time – local impacts can be particularly significant.

An example of this was an incident we responded to in 2021. A serious fire in a site key to the management of electricity between the UK and France resulted in a reduction in the amount of electricity available to the national grid for a month.

Whilst these incidents can be impactful and hazardous, we have well defined response arrangements in place with utility companies to ensure that situations can be dealt with effectively and quickly.

What we do to reduce the impact:

- our Emergency Planning team works with utility providers through the Kent Resilience Forum to ensure we understand the issues that the network operators face in the event of fire or other damage
- our Risk Information team collects and manages sensitive information about this critical national infrastructure to ensure that suitable site and risk information is available to incident commanders in the event of a fire or other occurrence
- our firefighters train to National Operational Guidance standards for incidents involving critical national infrastructure to enable an efficient and effective response when required
- we participate in multi-agency exercises through the Kent Resilience Forum simulating incidents in critical national infrastructure that will adversely affect communities in Kent and Medway

How we respond to the impact:

- we deploy fire crews to incidents who are trained to respond to incidents involving critical national infrastructure, and who have access to site specific information via their fire appliance on board computers
- specialist officers are available to respond to these incidents
- we liaise with site operators to bring incidents safely and effectively to a satisfactory conclusion
- we notify local authorities and other partners about incidents involving utilities where the incident has the potential to adversely affect our communities

52. Loss of public water supplies

Our Risk Based Priority Rating	Medium

What's the risk?

The loss of public water supplies can have a variety of impacts for us. There can be a resultant loss of the fire hydrant supplies that we typically use to fight large fires. In such a situation we have to send more fire engines to fires, impacting what is available should other incidents occur elsewhere. We do have arrangements to be able to supply water over large distances, and draw from places like rivers and the sea, but this can take some time to implement.

The risk can also be realised without a total loss of water supplies. When water companies experience significant leaks on their network (for example during periods of extreme weather) they often reduce the pressure in affected parts of the network. This can result in a reduction in the water supplies available for firefighting.

Most significantly for the public, the loss of water supplies can result in a loss of drinking water, which can have a particularly high impact on vulnerable people and those living with pre-existing health conditions. Whilst this is not directly related to fire and rescue service activity, it can result in need for our assistance (for example, assisting the ambulance service when their demand goes up) as well as helping with distribution of bottled water supplies and checking on vulnerable people.

Recent years have seen some examples of the loss of public water supplies in Kent. In the summer of 2022, thousands of homes on the Isle of Sheppey experienced a loss of water for several days following a rupture to two major supply pipes. The incident prompted a multi-agency response and was declared a major incident. We implemented a plan to provide an alternative water supply for firefighting purposes, using our high-volume hose to bring supplies onto the island. We also ensured extra fire engines were available in the local area to try and ensure fires were dealt with quickly before they had an opportunity to spread. We also worked with partner agencies to assist with providing support to affected customers.

What we do to reduce the impact:

- with partner agencies and water suppliers working through the Kent Resilience Forum to plan for and exercise the response to possible water infrastructure failures
- we provide bulk water carriers and high-volume pumps to ensure that we can move water for fire fighting into areas where the public water supply has failed
- our engagement team works with partner agencies and water companies to help spread public messaging in relation to water shortages and/or failures in water supply

How we respond to the impact:

- in the event of water supply issues, we join partners in Strategic and Tactical Coordinating Centres to understand the likely scale and duration of incidents
- we move specialist response resources such as bulk water carriers and hose layers, moving them into the affected areas
- we send more appliances, enhancing the pre-determined attendance, to reported fires in the affected areas to provide more water for the initial fire attack
- we can if required use our community volunteers along with operational and corporate colleagues to support the distribution of water supplies to vulnerable people, along with colleagues from partner agencies