

OFFICIAL



Community Risk Register

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Thames Valley Local Resilience Forum

thamesvalleyprepared.org.uk

TVLRF COMMUNITY RISK REGISTER 2022

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TVLRF COMMUNITY RISK REGISTER 2022 – Risk Assessment Thames Valley

What is the Community Risk Register?

The Community Risk Register is a document held by all Local Resilience Forums (LRFs). It describes risks for the community and assesses how likely they are to lead to an emergency and the potential impact they would have. The register is created through a risk assessment, and the information is used by the LRF to plan and prepare for emergencies that may occur.

Why assess risk?

Understanding risks in our area helps us to plan and prepare for them. Risks can come from lots of factors – from natural events such as weather and disease to transport and goods supply issues. This risk assessment can help identify new issues or highlight situations where risk may be changing.

How is risk assessed?

The potential for national emergencies is determined by Government in its National Risk Register. We use this to consider national issues alongside the local risk context and identify risks in the Thames Valley. Within our LRF, there are experts from organisations across the Thames Valley who work together on the assessment.

Each identified risk is analysed and given a rating according to how likely the risk is to lead to an emergency, and its potential impact on criteria such as safety and security, health, economy, environment and society. The LRF uses the likelihood and impact to determine whether to include it in the Community Risk Register, and continues to regularly monitor the risks. This is to check whether they are still relevant and that there are no newly emerging issues to consider.

Risk types

This document assesses the risks that are most likely to happen and the impact these would have across the Thames Valley area. The risk assessments included in the register only cover non-malicious events (i.e. hazards) rather than threats (i.e. terrorist incidents). It focuses on serious risks that could result in an emergency, defined as:

- an event or situation which threatens serious damage to human welfare in a place in the United Kingdom
- an event or situation which threatens serious damage to the environment of a place in the United Kingdom

Risks are broken down into the below categories:

- Cyber Attack
- Accidents and System Failures
- Natural Hazards

- Animal and Human Diseases
- Societal
- Geopolitical and Diplomatic

If a risk is included it doesn't mean it will happen. It means we know it is a possibility, and organisations have made arrangements to reduce its impact.

Risk impacts

All risks have a wide range of impacts, whether on individuals, businesses, regions or the whole country. This risk register uses the same assessment criteria as those used in the National Security Risk Assessment:

- Human Welfare: including fatalities directly attributable to the incident, casualties resulting from the incident (including illness, injury and psychological impacts), and evacuation and shelter requirements
- Behavioural: The two sub categories or elements that are assessed are Public Outrage and Public Perception. Public Outrage: Public outrage aims to capture the sense of public outrage after an event has occurred. Public Perception: assesses the sense of personal vulnerability/fear resulting from indirect or direct exposure to an event.
- Economic: Measure of total net cost to the economy, including both direct and indirect costs and losses as well as other costs such as lost tourism and reduced working hours
- Essential Services: Disruption to normal patterns of the daily lives of the public. The twelve sub-categories or elements that are assessed are: Transport, Fuel, Gas and Electricity, Food, Water, Health, Social Care, Finance, Communications, Emergency Services (Ambulance, Police, Fire and Rescue and access to 999 services), Criminal Justice, and Education.
- Environmental: impact on the environment including rubble and debris. The impact for each category is measured on a score from 0 (no impact) to 5 (catastrophic impact). The score for each category is given a numerical value and the total score from the 5 categories, including a weighting for the highest impacts then becomes the overall impact score for each individual risk.

The impact for each category is measured on a score from 1 (little or no impact) to 5 (catastrophic impact). The score for each category is given a numerical value and the total score from the five categories, including a weighting for the highest impacts then becomes the overall impact score for each individual risk.

Along with the assessment of impact, the likelihood of the risks occurrence in Thames Valley are then assessed using the following scale: Likelihood scoring scale: Likelihood of event (annual probability assessed over a two-year period) 1 – less than 0.2% 2 – between 0.2% and 1% 3 – between 1% and 5% 4 – between 5% and 25% 5 – more than 25%

Risks in the Thames Valley

Once the Impact and Likelihood scores have been assessed, they are plotted onto a matrix (*See Table on the left*), which gives the overall risk rating:

IMPACT	Catastrophic (5)			<ul style="list-style-type: none"> Failure of National Electricity Transmission System Fluvial Flooding Influenza Type Disease Groundwater Flooding 	<ul style="list-style-type: none"> Low Temperatures and Heavy Snow 		
	Significant (4)	<ul style="list-style-type: none"> Reservoir or Dam Collapse Aviation Accident 	<ul style="list-style-type: none"> Disruption or Loss of Telecommunication Systems Drought Outbreak of Exotic Notifiable Disease in Animals (including birds) Industrial Explosions and Major Fires 	<ul style="list-style-type: none"> Emerging Infectious Disease 	<ul style="list-style-type: none"> Cyber attacks Heatwave 	<ul style="list-style-type: none"> Major Pollution of Surface Waters and Groundwater 	
	Moderate (3)	<ul style="list-style-type: none"> Localised industrial accident involving small toxic release 	<ul style="list-style-type: none"> Major Fire Large Toxic Chemical Release 	<ul style="list-style-type: none"> Surface Water Flooding 	<ul style="list-style-type: none"> Storms Local Accident on Motorways and Major Trunk Roads Fire or Pollution at a Waste Site 		
	Minor (2)	<ul style="list-style-type: none"> Failure of Gas Supply Infrastructure 	<ul style="list-style-type: none"> Failure of Water Infrastructure or Loss of Drinking Water 				
	Limited (1)						
		Low (1)	Medium-Low (2)	Medium (3)	Medium-High (4)	High (5)	
		LIKELIHOOD					

Key	
Very-High	These are classed as primary or critical risks requiring immediate attention. They may have a high or low likelihood of occurrence, but their potential consequences are such that they must be treated as a high priority. This may mean that strategies should be developed to reduce or eliminate the risks, but also that mitigation in the form of (multi-agency) planning, exercising & training for these hazards should be put in place & the risk monitored on a regular frequency. Consideration should be given to planning being specific to the risk rather than generic.
High	These risks are classed as significant. They may have a high or low likelihood of occurrence, but their potential consequences are sufficiently serious to warrant appropriate consideration after those risks classed as 'very high'. Consideration should be given to the development of strategies to reduce or eliminate the risks, but also mitigation in the form of at least (multi-agency) generic planning, exercising & training should be put in place & the risk monitored on a regular frequency.
Medium	These risks are less significant but may cause upset & inconvenience in the short term. These risks should be monitored to ensure that they are being appropriately managed & consideration given to their being managed under generic emergency planning arrangements.
Low	These risks are both unlikely to occur & not significant in their impact. They should be managed using normal or generic planning arrangements & require minimal monitoring & control unless subsequent risk assessments show a substantial change, prompting a move to another risk category.

Risk Prioritisation: Once all the risks have been rated they are then numerically prioritised by the level of their rating, so the focus of resilience work and planning is undertaken based on order of priority. The highest rated risks will be addressed before the lower rated risks.

See **Appendix A for the 'Very High' and 'High' Risks** according to the Thames Valley LRF CRR.

Top 11 Risks in the Thames Valley

We have specific pages dedicated to the top risks in the Thames Valley with more detailed information to help you plan, prepare and respond. These risks may not be the highest risks by impact but are the most likely risks that people in the Thames Valley may have to deal with and prepare for.

1. [Flooding](#)
2. [Severe weather](#)
3. [Fuel Loss](#)
4. [Loss of utilities, Essential Goods and Services](#)
5. [Pandemic](#)
6. [Animal Disease](#)
7. [Environmental pollution and Industrial Accidents](#)
8. [Transport Accidents](#)
9. [Major Fire](#)
10. [Cyber crime](#)
11. [Chemical and Nuclear](#)

01: Flooding

Flooding can have a devastating and long term impact on people's lives. There are three main types of flooding seen in the Thames Valley:

- Fluvial Flooding; rivers and streams, where waterways overflow their banks into surrounding areas
- Pluvial Flooding; surface water (where rainfall overwhelms drainage systems)
- Groundwater flooding; when the water table rises and reaches ground level, water starts to emerge on the surface and can cause flooding.

The Environment Agency is the lead agency for flooding from main rivers and the sea. Lead Local Flood Authorities (LLFA) are lead agency with regards to the flood risk from surface water and groundwater. Water companies work with LLFAs to help manage surface water flooding.

Risk in the Thames Valley:

The winter flooding of 2013/14 impacted the whole of the Thames Valley, directly impacting many individuals and businesses and causing traffic and rail disruption. Over the coming years, climate change is likely to increase the frequency and severity of extreme weather events and this is likely to raise the risk of flooding in the UK.

Impacts	Consequences
<ul style="list-style-type: none"> • Risk to life (people and animals) • Damage to property, businesses, agricultural land, roads, structures and infrastructure • Pollution and contamination of local environments • Long-term damage to tourism, businesses and agriculture • Damage to critical national infrastructure 	<ul style="list-style-type: none"> • Disruption to essential services, particularly transport, water supply, energy and communications • Flooding of properties • Evacuation and shelter of residents or employees of homes and businesses • Provision of accommodation for those whose homes are flooded • Unrecoverable damage to businesses • Long-term psychological and health impacts • Long-term restoration and recovery issues for homes and businesses

What Are We Doing In The Thames Valley?

- Identification of what areas could be affected by flood water and who is at risk, including damage to local and critical national infrastructure
- Strategic planning and production of multi-agency plans to manage flooding and assist with a co-ordinated response by emergency responders to flooding
- Development of ways and means of alerting the public as early as possible when there is a significant flood risk.
- Developing flood rescue and assistance for those who become isolated by flooding

For further advice and help, see;

- Sign up to receive free Flood Warnings by registering with [Floodline Warnings Direct](#)
- Local authority website and social media
- Visiting the Environment Agency pages on www.gov.uk

02: Severe Weather

The United Kingdom does experience severe weather and due to climate change, we are likely to see an increase in the frequency and severity of extreme weather events in the UK. Severe weather events we plan for in the Thames Valley include;

- Storms and gales with damaging wind speeds, heavy rain and possible lightning
- Low (sub-zero) temperatures and heavy snow for prolonged periods
- Heatwaves with high temperatures lasting several days, harming peoples' health
- Drought as a result of a lack of rainfall over several years, leading to water shortages

Risk in the Thames Valley:

The impacts and consequences of severe weather are varied, some common issues include road and travel disruptions, damage and disruption to basic utilities, and damage to property. These have a knock-on consequence to individuals, businesses and the ability for organisations to deliver essential functions to the community. It may take several days for business and services to resume normal supply.

Impacts	Consequences
<ul style="list-style-type: none"> • Fatalities and casualties (physical and psychological), particularly among vulnerable groups (such as older adults) • Evacuation and shelter of residents or employees of homes and businesses • Widespread damage to property and infrastructure • Disruption to essential services, particularly transport, water supply, energy and communications 	<ul style="list-style-type: none"> • Increased hospital admissions and additional pressures on healthcare services • Disruption to transport network, communications, critical services and supply chains • Unrecoverable damage to businesses • Environmental damage and clean up • Long-term psychological and physical health consequences • Long-term restoration and recovery issues for homes and businesses

What Are We Doing In The Thames Valley?

- Production of multi-agency plans to manage severe weather events
- Consideration of weather forecasts prior to any large events in the Thames Valley area
- Receiving and distributing early notifications of severe weather

Further advice and help;

- Sign up to [warnings and alerts from](#) the met office
- Visit the Environment Agency pages on www.gov.uk
- Also see the [Heatwave Plan for England](#) and the [Cold Weather Plan for England](#)

03: Fuel Loss

All organisations rely to some extent on fuel, whether it is for getting staff to work, distributing products or providing services. The availability of fuel within the UK is generally very good, however there have been examples within recent years of brief disruptions to supply on both a regional and national basis. A disruption could be caused by a number of factors, including scarcity of supply, a technical problem with part of the fuel supply infrastructure, industrial action or public protest. In the event of such a disruption to supply, it is also possible that stocks could be further depleted through increased consumer demand (panic buying).

Risk in the Thames Valley:

The Thames Valley covers a huge geographical area, is heavily dependent on roads and has a large amount of mass transit infrastructure. There is a large take up of public transport and people and products travel many miles on a daily basis. Many essential services including the daily care of vulnerable people, are reliant on adequate fuel supplies. Where there is disruption to supply, there are subsequent impacts through delayed deliveries, higher prices, and sporadic goods shortages at supermarkets.

Impacts	Consequences
<ul style="list-style-type: none"> • Long delays and queues • Fuel station closures • Panic buying • Increased fuel prices • Public outrage • Local and national economic impact • Many small businesses, health workers and drivers unable to do their jobs 	<ul style="list-style-type: none"> • Commuters unable to travel to and from work • Disruption to critical public services and supply chains • Knock-on consequence to individuals, businesses and the ability for organisations to deliver essential functions to the community and essential services to vulnerable individuals • It may take several days for business and services to resume normal supply. • Loss of income and earnings and higher costs of goods and services

What Are We Doing In The Thames Valley?

- There is a National Emergency Plan for Fuel (NEP-F) produced by BEIS ([Department for Business, Energy and Industrial Strategy](#)) in co-ordination with industry and other government departments states that the majority of potential fuel supply disruptions can be addressed by measures to help industry maintain fuel supply; these would be deployed by BEIS, see the [Summary of response tools in the National Emergency Plan for Fuel](#)
- Identification of filling stations for essential fuel users, such as emergency service vehicles
- Production of multi-agency plan to manage fuel distribution to keep key services to the public running

Further advice and help;

- Read the Government Guidance on [planning for and managing the consequences of a disruption to fuel supplies](#).
- Sign up to the [BEIS Business Bulletin](#)

04: Loss of Utilities, Essential Goods and Services

'Critical Infrastructure' is the name given to all of the different essential services which we rely on as part of modern society and the economy. The UK's critical infrastructure is made up of electricity, water, gas, oil/fuel, transport, telecoms, food, health and financial services. We are increasingly vulnerable to the effects of climate change and its impact on food and water supply. Geographically Britain is an island, but economically and politically it is a vital link in the global network. That openness brings great opportunities, but also vulnerabilities particularly when the delivery of essential goods and services is linked to global supply chains.

Risk in the Thames Valley:

Many parts of the infrastructure network are dependent on one another e.g. electricity powers water pumping stations, and telecoms and electricity are required to allow cash machines and cash registers to function correctly. In the event of a major supply emergency, both industry and government will have significant roles to play in managing the incident and its consequences. The utility and service companies would be responsible for the practical and operational management of the incident. These companies have well established plans and procedures in place to respond to incidents, which can range from the management of a local incident to a national level disruption.

Impacts	Consequences
<ul style="list-style-type: none"> • Utilities failures (including gas, localised electricity failure, fuel, water and sewerage) • Financial failures (such as a loss of banking systems or other technical difficulties) • Telecommunications failures (fixed and mobile telephone services, and broadband) • Risk to health and safety and immediate risk to life • Endangerment of vulnerable people • Physical and psychological casualties or fatalities due to the loss of essential services, such as gas for heating 	<ul style="list-style-type: none"> • Risk to health and safety • Disruption, delays and shortages to critical public services, and supply chains for food, goods and essential supplies leading to panic buying, stockpiling and price rises. • Knock-on consequence to individuals, businesses and the ability for organisations to deliver essential functions to the community and essential services to vulnerable individuals • Loss of income and earnings and higher costs of goods and services

What Are We Doing In the Thames Valley?

- Identification of vulnerable people who will need special support in the event of a utilities outage.
- Work with the utility companies to manage supply interruptions to reduce local impacts to public health and safety.
- Production of multi-agency plans to manage long-term utilities outages and recovery.

Further advice and help, see;

- Know the contact details for your local electricity network operator, You can find out who that is here - [Find my network operator](#)
- If your medical or personal circumstances mean you might need extra help, the energy networks can support you. Becoming a Priority Services member is free. Find out more and sign up to the [Priority Services Register](#)
- Guidance from the Care Provider Alliance: [Guidance for Essential Service Operators: Making Your Service More Resilient to Power Outages](#)

05: Pandemic

Infectious diseases in humans take a variety of forms. Some have the potential to cause significant public health impacts, due to the number of people they might affect in a short space of time, and the severity of their symptoms. Possible scenarios range from significant outbreaks of 'containable' infectious diseases, which spread slowly and / or can be more easily delayed or stopped but may have a high fatality rate, through to pandemics such as COVID-19, where the whole population is at risk from a highly infectious virus, which can cause large numbers of fatalities in certain groups.

A pandemic can occur at any time and can occur in waves. This was seen during the COVID-19 pandemic, when waves occurred months apart and lasted a number of weeks. Up to half the population could be directly affected and there will be pressures on the workforce due to staff absence due to illness, isolation or caring responsibilities, as well as potential restrictions.

Risk in the Thames Valley:

As a result of rapid spread from person to person, pandemics have significant global consequences on communities and economies, as well as on human health.

Impacts	Consequences
<p>It is difficult to forecast the spread and impact of a new disease until it arrives in the UK and starts circulating. However, possible impacts may include:</p> <ul style="list-style-type: none"> • Up to half of the population may fall ill during a pandemic • Significant numbers of deaths, potentially across multiple waves, during a pandemic caused by a virus • Significant disruption to all sectors of society (e.g. Education and businesses) 	<ul style="list-style-type: none"> • The wearing of face masks and PPE (Personal Protective Equipment) • Social distancing • Additional hygiene measures, such as more frequent handwashing and the use of sanitisers • Lockdowns being imposed • Restrictions on activities and social gatherings • Ongoing service and supply disruptions due to high staff absences • Working and learning from home • Antiviral medicines when available and clinically appropriate

What Are We Doing In The Thames Valley?

- Management of the demand on the NHS and social care
- Distribution of anti-viral medication and vaccinations to the public if required
- Public awareness
- Individual LRF organisations have their own business continuity plans in place to cope in times of staff shortage.
- Continually learning the lessons from previous pandemics, including COVID-19, to inform preparation for future pandemics.

Further advice and help;

- [NHS website](#) and the 24/7 NHS non-emergency service <https://111.nhs.uk/> the NHS 111 – British Sign Language (BSL) Service <https://signvideo.co.uk/nhs111/> and Individuals with hearing loss can also call 18001 111 on a text phone.

06: Animal Disease

Animal diseases which present the most concern are those which are highly contagious or cause high fatality rates amongst livestock. Some diseases are zoonotic, which means they can be transmitted between humans and animals, such as Avian Influenza. Good biosecurity can [reduce the risk of disease exposure](#) to your workers and members of the public who visit your farm. Within the planning work the following diseases are considered: Foot and Mouth Disease, Bluetongue, Avian Influenza, Monkey Pox, Rabies, Classical Swine Fever, West Nile Virus and Newcastle Disease. The effective prevention, detection and control of diseases in animal populations can help prevent human infections. The Animal and Plant Health Agency (APHA) is the Lead Authority in animal disease outbreaks and is an executive agency of the Department for Environment, Food and Rural Affairs (Defra)

Risk in the Thames Valley:

Any animal disease within the Thames Valley area would have a significant impact on the farming and rural community as witnessed in the Foot and Mouth outbreak of 2000. Avian flu can have a detrimental effect on your business as all infected birds will have to be killed.

Impacts	Consequences
<ul style="list-style-type: none"> • Danger to public Health and Safety • Human fatalities and physical or psychological casualties • Quarantine • Culling of infected livestock • Vaccination or treatment • Disposal of fallen livestock • Decontamination and additional biosecurity measures • Monitoring and surveillance 	<ul style="list-style-type: none"> • Impact on wildlife, biodiversity and the environment • Loss of livelihoods and unrecoverable business damages • Long-term psychological health impacts experienced by farmers • Increased food costs to consumers • Knock-on effects and disruption to tourism and rural communities and other service industries (e.g. Catering)

What Are We Doing In The Thames Valley?

- Working with The Animal and Plant Health Agency (APHA) whose incident management plan details roles and responsibilities for all responding agencies.
- Production of multi-agency plan for managing animal disease outbreaks.
- Raising disease awareness among farmers and farm workers.

Further advice and help;

- Guidance - [Disease prevention for livestock](#) and the [Animal Health and Welfare Strategy for Great Britain](#)
- If you suspect a notifiable animal disease you must report it immediately by calling the Defra (Department for Environment Food and Rural Affairs) Rural Services Helpline on 03000 200 301. Failure to do so is an offence.
- [APHA animal disease alert subscription service](#)

07: Industrial Accidents and Environmental Pollution

Industrial accidents can take a wide variety of forms and their impacts vary considerably in both scale and nature. In some cases, these accidents will have very limited impacts beyond the immediate area and can be dealt with locally. Risks include;

- Fires and explosions (e.g. affecting power plants)
- Chemical and biological contamination (such as oil spills or food contamination)
- Radiological contamination (from nuclear accidents in the UK or abroad)

Risk in the Thames Valley:

The area has a large number of visitors each year and the River Thames provides a focal point for tourism as it passes through the Thames Valley. A significant pollution incident would require a rapid and co-ordinated clean-up operation to ensure that damage to local wildlife and economy is minimised. The Thames Valley is also home to a large amount of agriculture and horticulture which could become affected by an incident involving inland controlled watercourses. The Environment Agency is the Lead Authority on environmental contamination and clean-up operations.

Impacts	Consequences
<ul style="list-style-type: none"> • Danger to public Health and Safety including; fatalities and physical and / or psychological casualties • Pollution and Environmental contamination • Damage to property and infrastructure • Introduction of exclusion zones 	<ul style="list-style-type: none"> • Impact on wildlife, biodiversity and the environment • Long term clean up, decontamination of affected persons, property and the environment • Evacuation, shelter and potential relocation of affected individuals • Loss of livelihoods and unrecoverable business damages • Long-term psychological and potential physical health impacts

What Are We Doing In The Thames Valley?

- Working directly with site operators who manage particularly hazardous sites. Where there are Upper Tier COMAH (Control of Major Accident Hazards) or REPPPIR (Radiation Emergency. Preparedness and Public Information Regulation) sites, the local authorities have emergency plans and test them regularly
- Identifying ways and means of communicating with the public.

For further advice:

- [Find out if there are any COMAH sites](#) near you. Operators of the biggest sites regularly issue information to the public who live and work close by identifying actions to take in the event of an incident. Familiarise yourself with any advice the local authority and the industrial site provide. This advice should always be followed in an emergency unless emergency responders give additional instructions. The Health and Safety Executive's 'Control of Major Accident Hazard' [COMAH website](#) also has information on nearby major industrial facilities.

08: Transport Accidents

Just like our dependence on basic utilities, almost all of us will rely on a form of transport either to get to and from work, or to receive essential services. The disruptive consequences of a transport emergency are far-reaching and can further endanger life. Transport emergencies can be the result of accidents but also disruption caused by severe weather such as snow and floods. The situation can be further complicated by extremes of temperature if people are trapped in their vehicles for long periods of time. Transport accidents occur across the UK on a daily basis. They happen mainly on public roads and involve private vehicles. There are well-practiced plans in place to deal with major transport accidents at a local level, involving emergency services and local authorities.

Risk in the Thames Valley:

- Air: RAF Brize Norton and RAF Benson are based in the Thames Valley, as well as London - Oxford Airport which has international capability.
- Road: In the Thames Valley area, the majority of roads are managed by local authorities, while the roads which form part of the UK's strategic road network (M1, M40, M4 and A34) are managed by National Highways.
- Rail: Several main lines run from Birmingham and Wales through different parts of the Thames Valley, carrying heavy commuter and goods traffic.

Impacts	Consequences
<ul style="list-style-type: none"> • Danger to public Health and Safety including; fatalities and physical and / or psychological injury • Disruption to essential services, particularly transport • Disruption to business and tourism • Damage to property and infrastructure • Possible environmental contamination (such as with fuels / cargoes) • Possible evacuation and shelter of local residents or employees 	<ul style="list-style-type: none"> • Ongoing transport delays, road closures and diversions • Long term transport infrastructure repairs • Consequences to wildlife, biodiversity and the environment • Long term clean up, decontamination of affected persons, property and the environment • Local Supply chain disruption, delays and shortages in food, goods and essential supplies • Potential relocation of affected individuals • Loss of livelihoods and unrecoverable business damages • Long-term psychological and potential physical health impacts

What Are We Doing In The Thames Valley?

- Working with national transport companies to plan for dealing with accidents.
- The councils' Highways Departments work alongside National Highways to keep all major roads accessible during times of severe weather.
- Oxfordshire County Council MACR Site Plan (Major Accident Control Regulations) for RAF Brize Norton

For further advice;

- Check before you travel sign up to Travel Updates and Breaking News Travel Alerts with the [National Highways Agency](#) and [National Rail](#)

09: Major Fire

Fires can start for many reasons, including:

- Accidents such as electrical faults, human activity which combines ignition sources and fuel such as barbecues or bonfires, or even farmers harvesting crops.
- Malicious activity/arson.
- Infrastructure incidents such as sparks from electricity lines or rail transport.
- Natural phenomena such as lightning or protracted spells of hot, dry weather.

If conditions or circumstances support it, any fire has the potential to develop into a major fire.

Risk in the Thames Valley:

Summer 2022 saw a lengthy, protracted period of very hot, very dry, weather. These extreme conditions resulted in a set of natural circumstances which created an elevated risk of fire across the Thames Valley. The conditions meant fire breaking out was not only more likely, but the speed at which a fire might spread was increased and the impacts of a fire more widespread. It also impacted on the health, welfare and wellbeing arrangements for those responding to the incidents. The 19 July was an especially busy day for firefighters across Thames Valley, with temperatures above 37 degrees, humidity readings less than 30 per cent and a strong prevailing wind. These factors combined to produce the ideal conditions for wildfire. More than 300 calls were received by the Thames Valley fire services that day, and two fires were declared as Major Incidents in Buckinghamshire.

Impacts	Consequences
<ul style="list-style-type: none"> • Danger to public health and safety including physical and/or psychological injury, or death • Damage to property, possessions and infrastructure • Possible evacuation and shelter of local residents or employees • Disruption to essential services, particularly transport around the local area • Possible environmental contamination 	<ul style="list-style-type: none"> • Ongoing transport delays, road closures and diversions • Disruption to local business, communities and services • Impact on business owners, employees and residents of affected properties • Long term response and recovery operations – such as clean up, decontamination of property and the environment • Potential long-term or permanent relocation and resettlement of affected individuals • Loss of livelihoods, property, possessions, stock and unrecoverable business damages • Long-term psychological and physical health impacts

What Are We Doing In The Thames Valley?

- Our fire and rescue services have mutual assistance arrangements in place with neighbouring services to provide additional support in the event of a major incident occurring.

For further advice on how to keep your family, home or business safe from fire:

- bucksfire.gov.uk/safety-advice-hub/
- oxfordshire.gov.uk/residents/fire-and-public-safety/fire-and-rescue-service
- rbfrs.co.uk/your-safety/

10: Cyber Crime

The integration of the internet into our daily lives has been a continuous trend in the 21st century. Individuals, businesses, charities and government all rely on digital technology and online capability, including in the delivery of essential and public-facing services. The COVID-19 pandemic has emphasised our reliance on digital technologies, both through personal communication and our ability to work remotely. Any sector of our economy and society that uses IT networks and systems is vulnerable to the threat. Cyber crime covers all crimes that:

- take place online
- are committed using computers, or
- are assisted by online technology

Risk in the Thames Valley:

Risks from cyber crime are many and varied, depending on the type of attack. Information, that individuals and businesses hold, can be lost, damaged, or stolen. Data may be held to ransom, which creates reputational and financial risks to both individuals and businesses. cyber-attacks can also affect management of utilities and the internet, impacting availability of these services locally or more widely. For businesses, cyber-attacks are costly and will impact on business productivity, and may take a long time to recover from. Breaches in data releases or financial control can result in legal risks too, exacerbating impacts further.

Impacts	Consequences
<ul style="list-style-type: none"> • Direct loss of funds • Financial exploitation or extortion • Disruption to business services • Psychological distress to the vulnerable 	<ul style="list-style-type: none"> • Recovery costs • Business reputational impacts • Long term stress, anxiety and depression • Loss of public confidence

What Are We Doing In The Thames Valley?

- Providing [public advice to reduce the risk of cyber crime and fraud](#)
- Maintaining multi-agency plans to respond to cyber attacks
- Maintain business continuity plans and individual agency security

For further advice

- Visit [Cyber Aware](#) for step-by-step instructions on keeping your devices up-to-date with the latest security updates, and for more online security advice.
- The [National Cyber Security Centre](#) supports the public sector, industry, Small Medium Enterprise Businesses (SMEs) and the general public to maintain cyber security.
- The NCA's Cyber Crime Unit, Regional Organised Crime Units, and dedicated cybercrime units in every police force in England and Wales provide a local-to-national response in countering cyber threats. They also support individuals and businesses who fall victim to cybercrime See the [Advice and guidance](#) and read the [National Cyber Strategy 2022 - 2030](#)
- [Reporting a cyber security incident](#)
- Fraud and Cyber Crime. If you are reporting fraud or cybercrime, please refer to the [Action Fraud website](#).

11: Chemical and Nuclear

Certain industrial activities involving dangerous substances have the potential to cause accidents. Some of these accidents may cause serious injuries to people or damage to the environment both nearby, and further away from the site of the accident. While accidents of this scale are extremely rare, the impact can be so detrimental that they fall under specific legislation. There are several competent regulators in the Thames Valley including; Health and Safety Executive (HSE), Officer for Nuclear Regulation (ONR) and the Environment Agency (EA).

Control of Major Accident Hazards (COMAH)

Some industrial processes due to the volume and type of chemicals on site are regulated under the Control of Major Accident Hazards Regulations 2015 (COMAH). These regulations aim to prevent major accidents involving dangerous substances and to limit the consequences to people and the environment of any incidents that do occur. The competent authorities are the Health and Safety Executive (HSE) and the Environment Agency (EA). For some sites, the regulations also require the local authority where these sites are to prepare 'Off-Site' Emergency Plans. Types of establishments include chemical warehousing, chemical production facilities and some distributors.

PUBLIC INFORMATION ZONES (PIZ)

Around every COMAH is an area identified by the HSE and EA which is known as the Public Information Zone (PIZ). People within the PIZ will receive information from the site owner about how the potential major hazards, the safety measures that are in place, how they may be affected by a major accident at that establishment, as well as how they will be warned and kept informed in the event of a major accident and the actions that they should take.

REPPIR

There are some sites in the Thames Valley which have radioactive sources on site in high enough quantities that they are Nuclear Licensed sites. These sites are strictly regulated by the Officer for Nuclear Regulation (ONR). The Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR) also require the Local Authority where these sites are to prepare 'Off-Site' Emergency Plans.

Detailed Emergency Planning Zone (DEPZ)

People within the DEPZ will receive information from the site owner about how the potential major hazards, the safety measures that are in place, how they may be affected by a major accident at that establishment, as well as how they will be warned and kept informed in the event of a major accident and the actions that they should take.

Risk in the Thames Valley: There are a number of sites in the Thames Valley and they are legally required to follow specific measures to manage risk.

If you require further information regarding potential high risk sites such as COMAH, REPPIR and MACR Sites in Thames Valley, email your local authority.

Impacts	Consequences
<ul style="list-style-type: none"> • Immediate threat to public health and safety resulting in fatalities and casualties • Evacuation and shelter of local residents or employees • Damage to property and infrastructure • Disruption to essential local services, transport, health and education 	<ul style="list-style-type: none"> • Decontamination and environmental damage • Long term psychological and physical health impacts • Prolonged disruption to local services • Damage to tourism

What Are We Doing In The Thames Valley?

- Maintain specific site plans and annual training and exercising of specific site plans
- Maintain business continuity plans and individual agency security and specialist training for front line emergency service personnel

For further advice and information

- [The Control of Major Accident Hazards \(COMAH\) Regulations](#)
- [The Radiation \(Emergency Preparedness and Public Information\) Regulations 2019\(REPPIR\)](#)

Appendix A: 'High' and 'Very High' Risks on the Thames Valley LRF CRR

The generic impacts of these risks in the Thames Valley can be found within this document. For further information regarding the risks in the table below you can read the [National Risk Register](#)

Description	Likelihood	Impact	Overall Risk Rating
Malicious cyber incident - transport	4 Medium-High	4 Significant	Very High
Cyber-attack on the health and social care system	4 Medium-High	4 Significant	Very High
Cyber-attack on the financial services	4 Medium-High	4 Significant	Very High
Cyber-attack on the telecommunications systems	4 Medium-High	4 Significant	Very High
Food supply contamination	3 Medium	4 Significant	Very High
Major social care provider business failure	4 Medium-High	4 Significant	Very High
Failure of National Electricity Transmission System	3 Medium	5 Catastrophic	Very High
Financial Services – a Technical Failure at a Critical National infrastructure Retail Bank	4 Medium-High	4 Significant	Very High
Fluvial flooding	3 Medium	5 Catastrophic	Very High
Heatwave	4 Medium-High	4 Significant	Very High
Low Temperatures and Heavy Snow	4 Medium-High	5 Catastrophic	Very High
Server space weather	3 Medium	5 Catastrophic	Very High
Influenza type disease	3 Medium	5 Catastrophic	Very High
Emerging infectious disease	3 Medium	4 Significant	Very High
Actual or Threatened Significant Disruption to the Distribution of Fuel by Road including as a result of Industrial Action by Fuel Tanker Drivers	2 Medium-Low	5 Catastrophic	Very High
Public disorder	3	5	Very High

	Medium	Catastrophic	
Major Pollution of Surface Waters and Groundwater	5 High	4 Significant	Very High
Railway accident	3 Medium	4 Significant	Very High
Local / Urban flooding (fluvial or surface run-off)	3 Medium	5 Catastrophic	Very High
Local fluvial flooding	4 Medium-High	4 Significant	Very High
Localised Fire or Explosion at an Oil Refinery	2 Medium-Low	5 Catastrophic	Very High
Loss of cover due to industrial action by workers providing a service critical to the preservation of life (Such as emergency service workers)	4 Medium-High	4 Significant	Very High
Government critical systems loss	4 Medium-High	3 Moderate	High
Explosion at high pressure pipeline	2 Medium-Low	4 Significant	High
Accidental release of a biological substance	4 Medium-High	3 Moderate	High
Collision of a large commercial airline and business jet	1 Low	5 Catastrophic	High
Collapse of a Major Contractor Integral to the Provision of Key Public Services and Construction of Critical UK Infrastructure	4 Medium-High	3 Moderate	High
Disruption or Loss of Telecommunication Systems	2 Medium-Low	4 Significant	High
Systemic financial failure	2 Medium-Low	4 Significant	High
Surface water flooding	3 Medium	3 Moderate	High
Drought	2 Medium-Low	4 Significant	High
Poor air quality	3 Medium	3 Moderate	High
Volcanic eruption	4 Medium-High	3 Moderate	High
Storms	4 Medium-High	3 Moderate	High
The Growth and Spread of Antimicrobial Resistance (AMR)	3 Medium	3 Moderate	High

Outbreak of Exotic Notifiable Disease in Animals (including birds)	2 Medium-Low	4 Significant	High
Influx of British Nationals	4 Medium-High	3 Moderate	High
Local Accident on Motorways and Major Truck Roads	4 Medium-High	3 Moderate	High
Forest or Moorland Fire	2 Medium-Low	4 Significant	High
Groundwater flooding	3 Medium	4 Significant	High
Removal of Explosive Ordnance (EO)	5 High	3 Moderate	High
Fire or Pollution at a Waste Site	4 Medium-High	3 Moderate	High



Thames Valley Local Resilience Forum

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