

Community Risk Analysis

This report provides an analysis of risks which are faced by communities and dealt with by Leicestershire Fire and Rescue Service, along with risk mitigation activities. The data used in the analysis covers a five-year period from January 2018 through to December 2022.

Introduction

The Community Risk Management Plan (CRMP) planning process enables Fire and Rescue Services to assess foreseeable fire and rescue related risks in their local area. The result of this analysis is then used to decide how best to use its resources to mitigate risk through education, enforcement, and emergency response.

Identifying and Assessing Risk

To perform this task, we have reviewed the nature, frequency and severity of incidents attended over the past five years (2018-2022). Below is a table of the main hazardous events affecting communities, some of these are considered in more detail, whereas others are covered in the Local Resilience Plan.

Hazards	Hazardous events	
Structures	Dwelling fires incl. high rise building fires Other building fires	
Transport	Road traffic collisions (RTC's)	
Industrial	Hazardous materials leaks	
Environment	Wildfires	

	Water rescue	
Terrorism	Marauding Terrorist Attack Chemical, Biological, Radiological or Nuclear Attack	
Other	Bariatric rescue Gaining entry Rescue from height and confined spaces	

In addition, we have updated our Community Risk Model which takes, into account deprivation and reviewed this alongside the locations and crewing of our fire and rescue stations.

Risk Mitigation Activities

Risk is mitigated by delivering activities which prevent hazardous events from occurring or limit their impact when they do. This includes Home Safety Checks and Fire Safety Audits which are covered below and developing operational capability such as expanding water rescue.

Hazardous event	Risk Mitigation
Dwelling fires	Home Safety Checks
Other building fires	Fire Safety Audits
Environment	Expanded water rescue capability
RTC's	Hazard Express, Road Safety Partnership activities

HAZARDOUS EVENTS

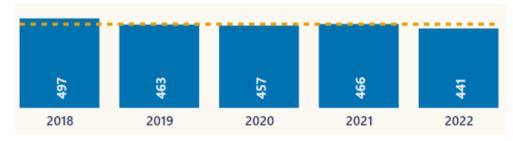
Dwelling Fires

These are typically fires which affect domestic property, such as flats, single occupancy homes, mobile homes, and houses of multiple occupation.

What is the risk?

Over the five-year period, there were 2,324 fire incidents in dwellings, and this declined by 11%. It represents 5.5% of all incidents and is the second largest property category for fires.

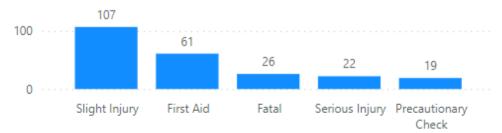
Chart 1. No. of dwelling fire incidents per year



Overall, **13%** of primary dwelling fires (the most serious type), result in victims. This is 5% points higher than for primary fires as a whole. A victim can include someone requiring a precautionary health check at the least serious level up to a fatality.

There were 26 fire related deaths in the home which accounts for 60% of all fire related deaths. For fire related injuries this number was 209 and 68% of all fire related injuries.

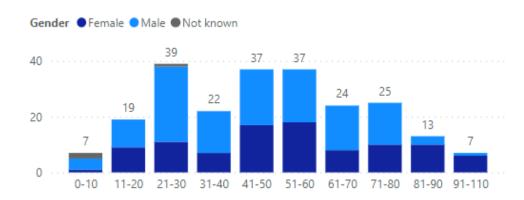
Chart 2. No. of casualties in dwelling fire incidents by severity of injury



Who is at risk?

Overall, more than half of victims are male (57%) and this increases to 65% for fire fatalities in the home. The age profile also changes with 15 (58%) of fire fatalities aged over 60, whereas for fire casualties only 29% are aged 60 or over.

Chart 3. No. of casualties in dwelling fire incidents by age and gender



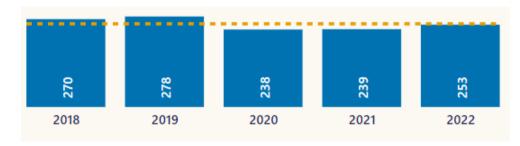
Other Building Fires

These are typically fires in non-domestic properties and includes shops, factories, offices, public buildings and residential buildings like care homes, prisons, and student halls of residential, amongst others.

What is the risk?

Over the five-year period, there were 1,278 fire incidents in other buildings and has declined by 6%. It represents 3% of all incidents and 91% occur in non-residential buildings. The top four properties: are garden sheds, industrial premises, food and drink premises and prisons.

Chart 4. No. of other building fire incidents per year



Overall, **7%** of primary other building fire incidents (the most serious type), result in victims and this is 1% point lower than primary fires as a whole. A victim can include someone requiring a precautionary health check at the least serious level up to a fatality.

There were **44 victims** resulting from other building fires, of which five were fire deaths. The two largest property types were single shop (7) and prison (5). Tragically one incident accounted for the five fatalities.

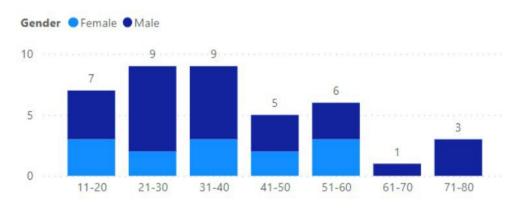
Chart 5. No. of casualties in other building fire incidents by severity of injury



Who is at risk?

More than half, 70% of victims are male and the age profile is younger with people aged 21-40 representing 41% of victims. The age profile of victims who were employees is younger, peaking at 31-40, compared to victims who were residents in the building, for example in the case of sheltered housing.

Chart 6. No. of casualties in other building fire incidents by age and gender



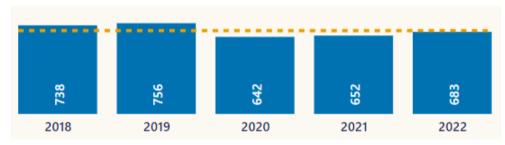
Road Traffic Collisions

These are typically collisions between road users such as car users, motorcyclists, pedal cyclists, and pedestrians, amonast others

What is the risk?

Over the five-year period, there were 3,471 road traffic collisions incidents and this declined by 7.5%. It represents 8% of all incidents and is the second largest category for rescue related incidents.

Chart 7. No. of road traffic collision incidents per year



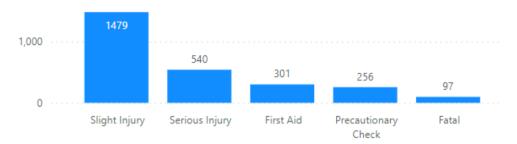
Overall, 49% of road traffic collisions result in victims, compared to 41% of all non-fire incidents. A victim can include anythina from a precautionary health check to a fatality.

There were **2,673 victims** resulting from road traffic collisions, the largest of any non-fire incident. There were 97 (28%) fatalities which is one of the highest ratios of fatalities to incidents. 71 (73%) of these were drivers and 15 (15%) were passengers.

The ward with the highest number of casualties is Leicester City Centre however the highest ward with fatalities is the more rural area of Misterton ward which covers M1 In 19 and In 20

Indeed with a few exceptions, fatal casualties are more frequent in incidents occurring in outlying areas. The chart below shows that only about 5% of victims do not suffer an injury after an incident

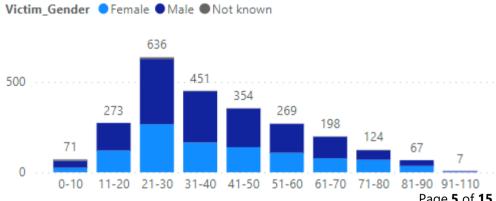
Chart 8. No. of road traffic collision victims severity of injury



Who is at risk?

More than half (59%) of victims are male and this increases to 75% with fatalities. The majority of victims are from a White British background 1,677 (62%) and a further 221 (8%) are from British/ Asian Indian background. Victims tend to be younger.

Chart 9. No. of road traffic collision victims by age and gender



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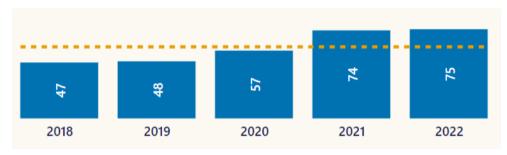
Hazardous Materials Incidents

These incidents typically involve making safe a property due to leaks of gases, flammable liquids and other toxic or explosive materials.

What is the risk?

Over the five-year period, there were 301 incidents involving hazardous materials and this has increased by 59.5%. The volume of incidents is small with less than 1% of incidents belonging to this category.

Chart 10. No. of hazardous material incidents per year



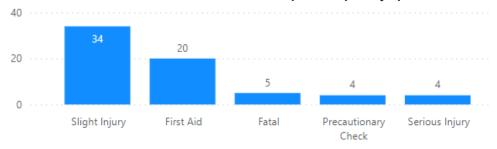
Overall, **10%** of hazardous material incidents result in victims, compared to 41% of all non-fire incidents. A victim can include anything from a precautionary health check to a fatality.

There were **67 victims** resulting from hazardous material incidents, which makes it the ninth highest category for victims. Employees in a workplace along with residents or occupants were joint highest categories for victims with 27 (40%) each respectively.

The top two categories for types of hazardous material resulting in injury or death are a combination of substances (24) and gas release (22). Five (7%) of the victims were fatalities

and these all occurred in a domestic setting as a result of a gas leak. The chart below shows that 24 (35%) of incidents did not result in injury.

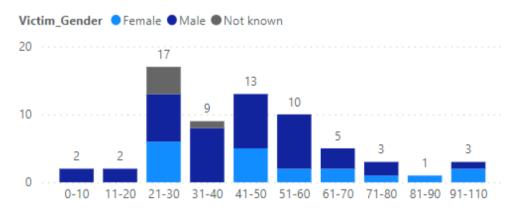
Chart 11. No. of hazardous material victims by severity of injury



Who is at risk?

More than half (68%) of victims are male. 31 (60%) of victims are from a White British background. The age profile is younger with 21–50-year-olds forming the bulk of victims, however for incidents within a domestic setting the age profile is older.

Chart 12. No. of hazardous material victims by age and gender



Wildfires

These are defined as fires affecting at least 10,000 sqm of outdoor land and tie up more than four fire engines for six hours or more. They can pose a serious threat to life, environment, and property.

What is the risk?

With increasing global temperatures, there has been an increase in the frequency and severity of extreme weather events. It is expected that there will be a continuing pattern of warmer drier summers and warmer wetter winters with more periods of intense heat and rainfall, which we need to prepare for.

Over the five-year period incidents meeting this definition have occurred during the heatwave experience in July and August 2022. In this period there were eight incidents. These all occurred in villages and towns outside of Leicester City and range from four to seven fire engines being tied up for between six to 28 hours.

Exceptionally one incident at Bradgate Hill involved 649 Firefighters, 182 vehicles and lasted for over 525 hours or 22 days.

National Picture

Separately the Forestry Commission carried out its own analysis using fire and rescue service data at a national level over 12 years to March 2021. It found that the greatest areas of land burnt by wildfire incidents was over 26,000 hectares in 2018-19. This is likely to have been surpassed by incidents in 2022, which is

not covered here.

Interestingly, in August 2018 there were four more large scale outdoor fire incidents locally (but not large enough to fit the wildfire definition).

This means that in two of the past five years, there have been weather conditions suitable for more severe wildfires.

The report also noted a small but increasing trend in wildfires that affect woodland from 12% to 19% (over 12 years). As a corollary the exceptional wildfire incident in 2022, did affect woodland.

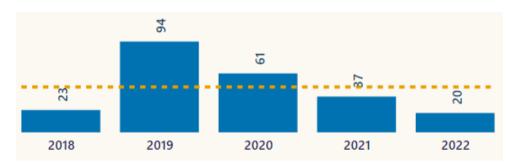
Water Rescues

These typically involve rescues of people in flowing water as a result of widespread flooding or being in canals or rivers. It can also involve assisting people through highways covered in water. To facilitate these rescues, we need specially trained staff with specialist Personal Protective Equipment (PPE).

What is the risk?

Over the five-year period, there were 235 water rescue incidents, and this been declining, after a substantial peak in 2019. About 68% of these incidents were due to vehicles being stranded in vehicles in flood water.

Chart 13. No. of water rescue incidents per year

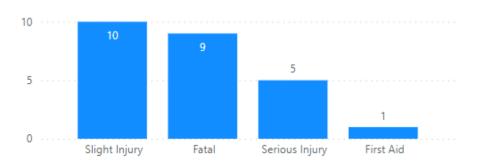


Overall, **53%** of water rescue incidents result in victims, compared to 41% of all non-fire incidents. A victim can include anything from a precautionary health check to a fatality.

There were **25 victims** resulting from water rescue incidents, which makes it the eleventh highest category for non-fire incidents. Of these 12 (48%) victims were rescued from rivers or similar and a further 6 (24%) from lakes or similar.

There were **nine (36%) fatalities** and a further 15 (60%) victims were injured.

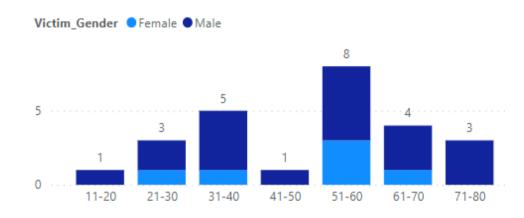
Chart 14. No. of water rescue victims by severity of injury



Who is at risk?

Most 19 (76%) of victims are male and over half 15 (60%) were aged over 51. 17 (81%) of victims are from a White British background.

Chart 15. No. of water rescue victims by age and gender



Bariatric Rescues

These typically involve moving or lifting obese victims who have fallen or are having a life-threatening health episode, with specialist equipment. It often involves working with the Ambulance Service so the victim can get urgent medical treatment

What is the risk?

Over the five-year period, there were 414 bariatric rescue incidents and has been increased over the period by 70%, albeit the number of incidents remain relatively small. Such incidents only account for 1% of all incidents, however crews are often committed for long periods of time.

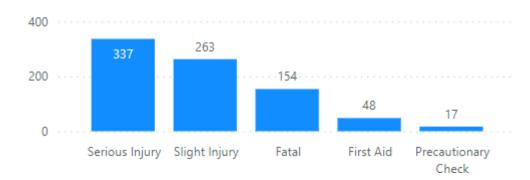
Chart 16. No. of bariatric rescue incidents per year



Overall, **78%** of bariatric incidents result in victims, compared to 41% of all non-fire incidents. A victim can include anything from a precautionary health check to a fatality.

There were **165 victims** from bariatric incidents, many of whom had pre-existing medical conditions. There were **13 (8%) fatalities** and another 142 (86%) suffered injuries. The majority of incidents occur within the home.

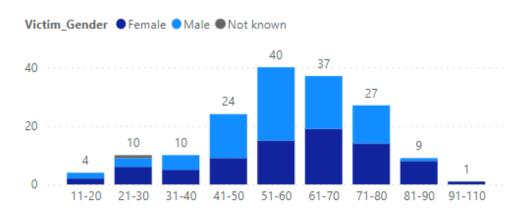
Chart 17. No. of bariatric victims by severity of injury



Who is at risk?

There is a 50/50 split of victims by gender and the vast majority 132 (87%) are from a White British background. The age profile is also older with the bulk of victims aged 51-80 years old (104, 63%).

Chart 18. No. of bariatric victims by age and gender



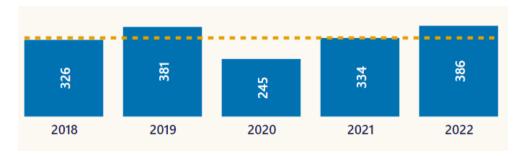
Gaining Entry Incidents

These incidents typically involve gaining access to a property, often because the occupant is locked in, has become unwell, or there is a welfare concern.

What is the risk?

Over the five-year period, there were 1,672 such incidents and it has increased by 18%. It is the third largest category for non-fire incidents of which 639 (38%) involve able bodied persons not in distress. Such incidents represent 4% of all incidents attended.

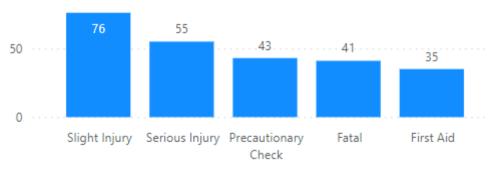
Chart 19. No. of gaining entry incidents per year



Overall, **52%** of gain entry incidents result in victims, compared to 41% of all non-fire incidents. A victim can include anything from a precautionary health check to a fatality.

There were 250 victims from such incidents making it the fifth highest category. Of the victims, 181 (72%) were due to a medical episode and a further 61 (24%) were due to a person in distress. 41 (16%) victims were fatalities and a further 131 (52%) suffered injury.

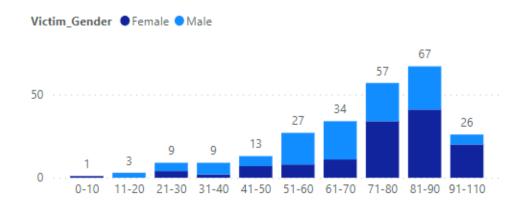
Chart 20. No. of gain entry victims by severity of injury



Who is at risk?

There is a roughly 50/50 split between male and female victims and 204 (90%) are from a White British background. The age profile is older with the largest age group being 81–90-year-olds.

Chart 21. No. of victims by age and gender



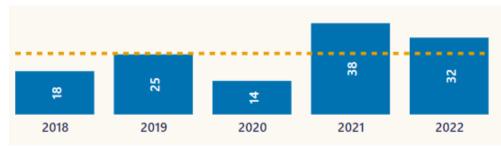
Rescue from Height and Confined Spaces

These are defined as incidents whereby people are rescued from tall structures such as roofs, from below ground, confined spaces and collapsed structures.

What is the risk?

Over the five-year period, there were 127 rescue incidents, and this has increased by 33%, albeit the peak has been 39 incidents in a single year. Less than 1% of all incidents (0.2%), fall into this category and the largest category is rescue from height with 113 (89%) incidents.

Chart 22. No. of incidents per year

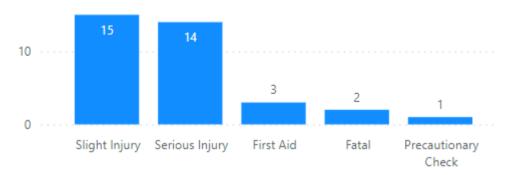


Overall, **83%** of rescue from height or confined spaces incidents result in victims, compared to 41% of all non-fire incidents. A victim can include anything from a precautionary health check to a fatality.

There were **35 victims** rescued from height or confined spaces. Of these 26 (74%) were rescued from height and nine (26%) from below ground or a collapsed structure. Two of the victims were fatalities and 29 (83%) suffered some type of injury.

The largest category of victims 11 (31%) were residents or occupants and a further seven (20%) were employees at a workplace. A sizeable proportion therefore have no relationship with the location in which the incident occurred.

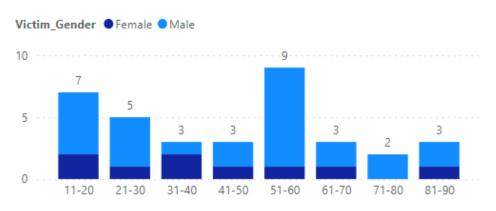
Chart 23. No. of victims by severity of injury



Who is at risk?

26 (74%) of victims were male and the majority (28, 97%) were from a White British background. The age profile shows two peaks.

Chart 24. No. of victims by age and gender.



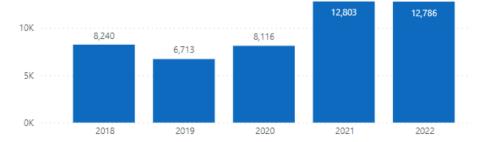
RISK MITIGATION STRATEGIES

This section covers two of the main risk mitigation strategies other than the emergency response service. These are Home Safety Checks (HSCs) and Fire Safety Audits and aim to prevent incidents from occurring and reduce their impact when they do occur. In addition, there is a focus on how emergency response expands its capability to deal with new risks, in this case focusing on water related incidents.

Home Safety Checks (HSCs)

This is an educational intervention designed to prevent fires in the home by encouraging people to adopt safer behaviours. Staff provide advice, fit smoke detectors and signpost people to other agencies. Over the years HSCs have evolved to cover wider risk factors such as hoarding and falls.

Chart 25. Number of successful home safety checks per year



The number of successful HSCs has increased over the five-year period by over 55%. Of these 28,495 (59%) involved carrying out a full HSC within the home and the remainder was giving advice on the doorstep.

There are also two types of HSC, an initial visit, and a follow up visit. The follow up visit was introduced to return to those

vulnerable people who needed more support with being fire safe and are discretionary. As such, the majority of visits (83%) are done as initial visits.

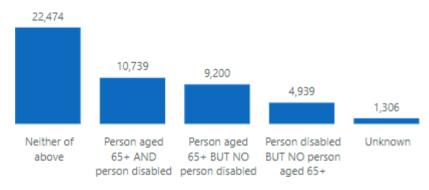
Targeting

There are several risk factors which come together and combine in different ways to increase a person's fire risk. These risk factors are split into three groups: personal factors like poor mobility and health, behavioural factors like smoking and excessive alcohol use and home factors like excessive clutter or overloaded electrical outlets. Some of these factors tend to be more prevalent in people aged 65 or over

The main sources used to identify people vulnerable to fire include through partner referrals (38%), after a fire in the area (23%), from local community engagement (15.5%) and targeting people aged 65 or over (15%).

The chart below shows that around half of the people we visited had at least two of the risk factors of being over 65 and/or having a disability.

Chart 26. Number of home safety checks where recipients have at least two risk factors



Outcomes

Since February 2020, feedback is collected from service users where it is feasible to do so. This has resulted in 5,114 responses.

Of these:

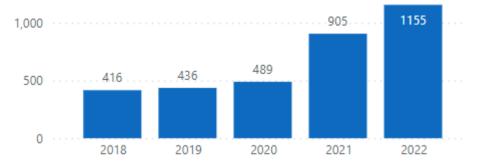
- 98.4% felt safer after the visit.
- 91.7% would change habits.
- 99.8% are satisfied with the visit.

In addition, whilst only 10% were very aware of fire safety before the visit, this increased to 85% after the visit. On follow up, of the 1,104 responses, the top three actions carried out by service users were 673 (61%) tested their smoke alarms, 587 (53%) closed doors at night and 375 (34%) made an escape plan.

Fire Safety Audits (FSAs)

These are inspections of non-residential premises such as factories, schools, and hotels to ensure that they have the correct practices and procedures in place to manage fire risk. It involves checking fire risk assessments, ensuring there is adequate means of escape and checking that fire safety systems like sprinklers and alarms are well maintained, amongst other things.

Chart 27. Number of Fire Safety Audits per year



The number of fire safety audits has increased over time and

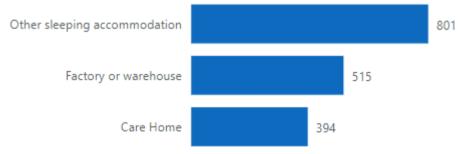
markedly in the past two years with almost three times as many carried out. This is in part due to a renewed focus on this area as a result of the Grenfell tragedy as well as an increase in staffing.

Targeting

There are several factors which make a premises a higher fire risk and this includes premises with sleeping risk, especially those which house vulnerable people, as well as using flammable material and storing combustible items, amongst others. These are all factored in when selecting premises for inspection.

As such the top three premises types were other sleeping accommodation 801 (23.5%), factory or warehouse 515 (15%) and care homes 394 (12%).

Chart 28. Top three premises types for Fire Safety Audits



Outcomes

Of the audits carried out there were 470 action plans and 156 enforcement notices. In some cases, action plans can be escalated into enforcement notices. Separately a further 75 prohibition notices were issued, and this can include some premises being issued with more than one notice.

Feedback data from service users has been collected since Nov 2020 resulting in 364 responses. Key results include:

• 97.8% of users were satisfied with the audit.

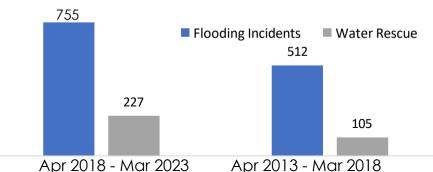
- 98.6% of users felt the audit would make their business safer
- 98.9% of users thought the advice was completely or mostly clear.

Of those service users who needed to carry out remedial works 99% (177) felt it was reasonable and 94.4% (170) thought it would improve the safety of the premises.

Emergency Response - Water Related Incidents

The level of capability for dealing with different incidents is constantly reviewed. Climate change has increased the risk of water related incidents. When taking a longer-term view, both flooding and water rescue incidents have been consistently higher for the last five years compared to the five years before that.

Chart 29. number of water related incidents in the past five fiscal years compared to the previous year.



Indeed, over the past five-year period ending March 2023, there was an average of 196 incidents per year compared to only 123 in the previous five years

National Picture

Over the five-year period to March 2022, incidents averaged 16,481 per year and in the previous five years to March 2017 it was 15,762. An increase of 4.6%.

The number of water related fatalities has increased steadily over the ten- year period, reaching 141 fatalities in 2021-22. Nonfatal casualties have also increased, averaging 363 in the five years to March 2022, compared to 270 in the five years to March 2017.

Expanding Capability

Given the increasing risk of water related incidents, there is a proposal to increase capability from three to five teams, providing enhanced cover in areas especially affected by such incidents. This would give enhanced capability in specialist search and rescue operations, as well as carrying out water rescues, it also provides additional resilience for longer periods of wide area flooding.

See map for the five proposed locations, identified based on risk, previous incidents and for resilience purposes.

Map 1. Water Rescue Incidents with Selected Stations

