Community Risk Profile
2023 – 2026

County Durham and Darlington
Fire and Rescue Service

Foreword

Welcome to the Community Risk Profile for County Durham and Darlington Fire and Rescue Service.

Our Service, governed by the County Durham and Darlington Combined Fire Authority is responsible for making sure that all our communities are protected as far as possible from the risks we face. As well as fire emergencies we are here to respond to many types of incidents such as water and animal rescues, flooding and road traffic collisions. Our protection and prevention work forms the foundation of what we do to minimise risk and together with our essential emergency response function we maintain services which are effective and resilient.

Our vision is to have the safest people and safest places and we will always strive to achieve this by delivering a professional, innovative and effective fire and rescue service, and by placing our communities at the heart of everything we do.

To ensure we are accountable to you, we produce a series of documents which set out our plans for the future. The Community Risk Profile together with our Station Plans sets out the risks we face. Our Community Risk Management Plan shows how we allocate our resources to tackle those risks and our Service Strategies show you the detail of how we will manage the challenges that our departments face.

You can find all our Service Plan documents on our website using the link below:

https://www.ddfire.gov.uk/service-plans

Every year we ensure that our services can be delivered within the budget we are set. Funding challenges and rising costs mean that we expect to face a very difficult financial climate in light of the current economic conditions, Covid-19 pandemic recovery and restrictions on the amount of income we can raise through Council Tax. The next three years are therefore likely to require further innovation and changes to the way we operate, and this Community Risk Profile will help us to achieve this.

Our core strength is our people who are proud to work for an organisation connected closely with its communities and who are genuinely committed to changing and saving people's lives. We cannot provide our services without support from our excellent staff, and we thank them for their continued hard work and dedication. Our partner organisations and neighbouring FRSs also deserve great credit for supporting and collaborating with us in the work that we do.

We are proud that our communities are safer than ever from the risks of fires within the home and collisions on our roads and we recognise the vital part that the people of County Durham and Darlington play in making their own areas great places to live, work, study and visit. We thank all our communities for their engagement with us and for their contribution to having the safest people and the safest places.

Contents

Introduction

The <u>Fire and Rescue National Framework for England</u> requires that every fire and rescue authority must assess all foreseeable fire and rescue related risks that could affect their communities, whether they are local, cross border, multiauthority or national in nature. These risks can be anything from large and small fires to flooding or terrorist attacks.

Risk is constantly evolving within our communities. Climate change, developments in technology, changes in human behaviour and many other factors can all influence the impact of hazardous events on our communities. There are elements of national, regional and local risks throughout the County Durham and Darlington Fire and Rescue Service (CDDFRS) area, with a broad range of consequences for the people who live, work, study and visit here .It is therefore essential that our risks are identified using robust data and analysed using an effective methodology. This Community Risk Profile (CRP) draws on data and business intelligence from a range of sources, including the National and Community Risk Registers, information from our partners and our own operational incident data to create the risk profile. Our approach ensures that the plans we put in place to mitigate our risks are fully informed.

As a fire and rescue service (FRS) we have had to adapt how we work to respond to the budget pressures that we face. It is essential that we understand both the people and the risks to enable us to direct our resources correctly.

Where necessary, we will adjust our existing provision or build new capacity to ensure we have the right resources in place to provide the best possible services to our communities. As we strive to become more efficient and effective, we will examine opportunities for effective collaboration and partnership working, as some of the risks to our communities are complex and require mitigating action from a range of key stakeholders. The relative position of the CRP within the Service risk management planning cycle is illustrated below:

The risk scenarios described within our CRP may apply to all members of our communities; those who live, work and study within County Durham and Darlington, those who visit and travel through the Service area, and depending on the nature of emergency incidents the risks faced by our firefighters and other emergency responders.

About our area

The Service area covers the two Unitary Authorities of County Durham and Darlington and a geographic area of 939 square miles with a population of approximately 630,000 people (Office for national statistics, 2022). Within the Service area there are approximately 302,500 households (Valuation Office Agency, 2022) and around 19,700 business premises (Valuation Office Agency, 2022). The area contains a cathedral City, a range of large and medium industrial towns, along with large rural areas and is categorised by the Department for Environment, Food & Rural Affairs (DEFRA) as being predominantly rural. The majority of people live in the urban areas but a significant percentage (approximately 9% live in the widespread rural villages and hamlets.

The county has a mixture of mining, farming and heavy railway heritage, with the latter especially noteworthy in the southeast of the county, in Darlington and Shildon. In the centre of the city of Durham, Durham Castle and Cathedral are UNESCO designated World Heritage Sites and throughout the service area there are many Grade 1 and 2 listed buildings reflecting our rich cultural heritage.

The area has a good range of transport links, with the A1(M) and A19 corridors providing effective road transport and the East Coast Main Line enabling rail travel through the county. Teesside International Airport provides air travel to domestic and overseas destinations and the coastline to the east of the service area includes a port which receives a significant gross annual cargo.

Due to our rural communities covering a significant geographical proportion of the Service area, isolation can be an issue which increases the risk of being vulnerable.

There are persistent income and health inequalities throughout our communities within the Service area, with levels of deprivation being significantly higher, and life expectancy lower, than national averages. Loneliness and isolation may also have a significant impact on both physical and mental health, and both the County Durham Joint Strategic Needs Assessment and Darlington Borough Profile describe that hoarding and excessive alcohol/substance misuse increase can have a negative impact on the wellbeing of individuals.

CDDFRS delivers its core prevention, protection and response functions within the Service area from 15 strategically placed fire stations within two divisions, with 26 fire appliances during the day, and 24 through the night. The Service borders five other fire and rescue services (North Yorkshire, Cumbria, Northumberland, Tyne & Wear and Cleveland), providing mutual cross-border support to one another if, and when, required.

About our Communities

Population and gender

2020 mid-year population estimates are shown below

Unitary Authority	Male population	Female population	Population
County Durham	262,253	270,896	533,149
Darlington	52,257	55,145	107,402
Total	314,510	326,041	640,551

The population of our Service area can be seen in the graphs below where it is also broken down by age and gender.
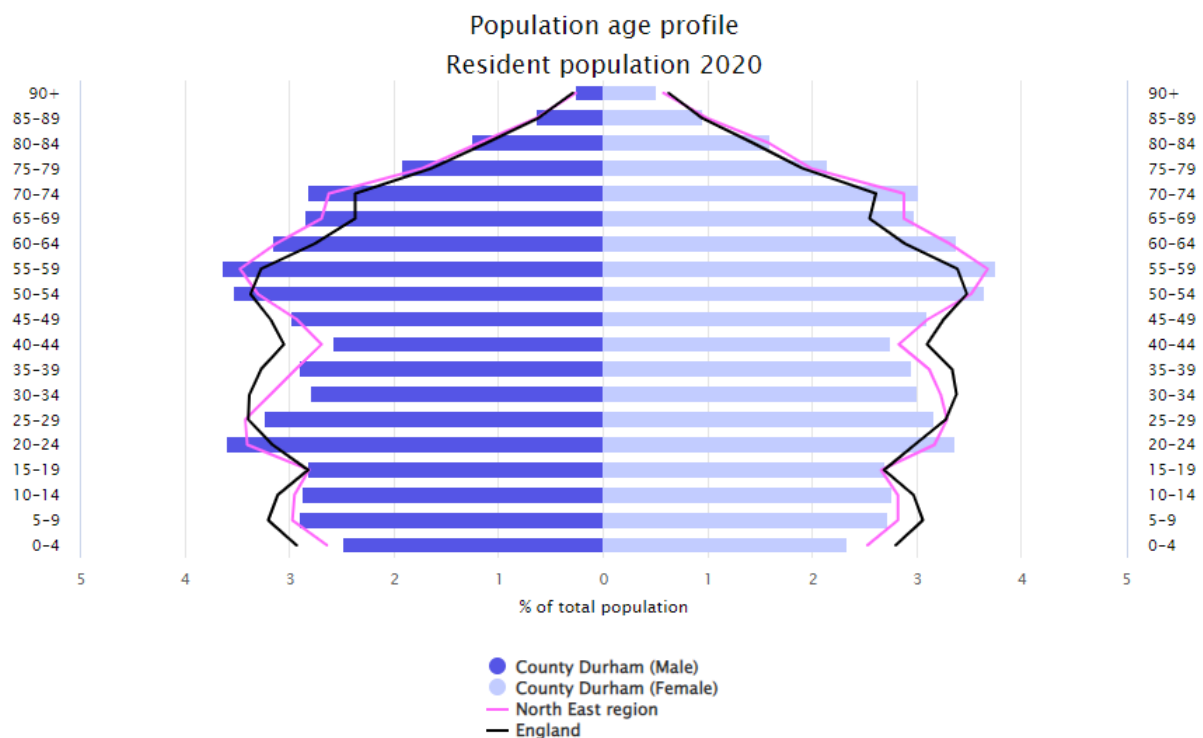
Population age profile
Resident population 2020

An interactive version of the above graph can be found at the following link: Local Authority Health Profiles Durham - Data - OHID (phe.org.uk)

Darlington population age profile
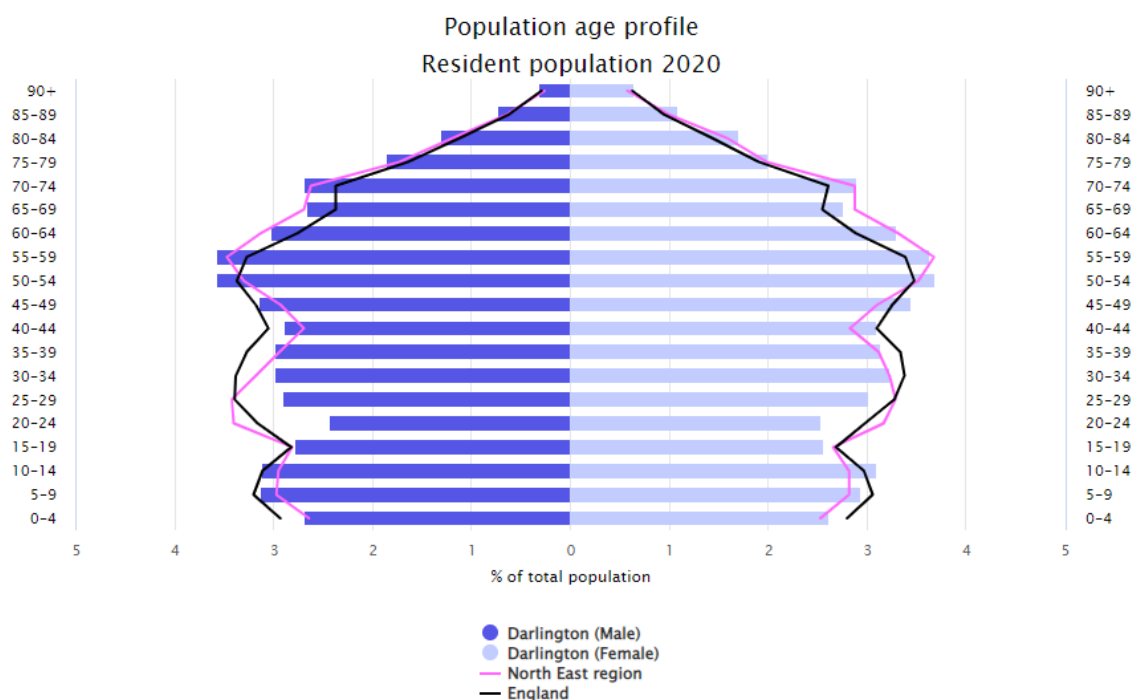
Population age profile
Resident population 2020

- Darlington (Male)
- Darlington (Female)
- North East region
- England

An interactive version of the above graph can be found at the following link: Local Authority Health Profiles Darlington - Data - OHID (phe.org.uk)

The population pyramid for both County Durham and Darlington illustrates how many dependents there are within each Local Authority. There are generally two groups of dependents; young dependents (aged below 15) and elderly dependents (aged over 65). The shape of each population pyramid indicates the growing number of dependents within each local authority.

Age Groups

Age Range	County Durham	County Durham	Darlington	Darlington	England	England
	Male	Female	Male	Female	Male	Female
0-4	13,223	12,435	2,877	2,815	1,662,294	1,577,153
05-Sep	15,474	14,475	3,361	3,148	1,814,361	1,725,097
Oct-14	15,304	14,720	3,342	3,332	1,761,874	1,673,705
15-19	14,970	14,378	2,980	2,749	1,601,452	1,514,419
20-24	19,148	17,918	2,607	2,715	1,791,701	1,680,821
25-29	17,231	16,870	3,111	3,230	1,924,416	1,847,077
30-34	14,878	15,978	3,203	3,466	1,916,412	1,908,240
35-39	15,451	15,744	3,187	3,375	1,852,969	1,885,240
40-44	13,762	14,688	3,091	3,321	1,730,268	1,746,035
45-49	15,893	16,546	3,376	3,693	1,803,208	1,835,431
50-54	18,813	19,453	3,819	3,957	1,911,318	1,964,033
55-59	19,376	19,994	3,831	3,900	1,852,593	1,909,189
60-64	16,801	18,044	3,244	3,541	1,568,489	1,628,324

65-69	15,149	15,903	2,858	2,960	1,347,714	1,436,586
70-74	15,058	16,086	2,878	3,114	1,343,927	1,470,201
75-79	10,255	11,414	1,989	2,143	934,074	1,075,918
80-84	6,689	8,462	1,399	1,827	640,018	809,171
85-89	3,374	5,072	774	1,158	356,182	529,161
90+	1,404	2,716	330	701	169,548	351,519
All ages	**262,253**	**270,896**	**52,257**	**55,145**	**27,982,818**	**28,567,320**

The population of both County Durham and Darlington is broadly consistent with the distribution of age groups throughout England and Wales, as shown below:

Age Group	County Durham	Darlington	England and Wales
0-4	4.81%	5.12%	5.61%
5-9	5.54%	6.02%	6.21%
10-14	5.75%	6.21%	6.16%
15-19	5.59%	5.43%	5.58%
20-24	6.69%	4.69%	5.99%
25-29	6.06%	5.76%	6.56%
30-34	5.90%	6.19%	6.80%
35-39	5.84%	6.12%	6.61%
40-44	5.47%	6.10%	6.25%
45-49	5.75%	6.23%	6.22%
50-54	7.13%	7.06%	6.79%
55-59	7.49%	7.39%	6.72%
60-64	6.68%	6.46%	5.79%
65-69	5.86%	5.54%	4.95%
70-74	5.91%	5.59%	4.97%
75-79	4.25%	4.14%	3.72%
80-84	2.84%	3.07%	2.55%
85-89	1.62%	1.87%	1.60%
90+	0.82%	1.02%	0.94%
Total	100.00%	100.00%	100.00%

The data regarding Age groups can be found at the link below:

[Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)](#)

Current population and future projections

The population within the County Durham and Darlington Service area for 2023 is currently estimated to be 644,881 people. The projection up to 2043 estimates that the population of the Service area will be 669,079, as shown below:

County Durham and Darlington population projection to 2043
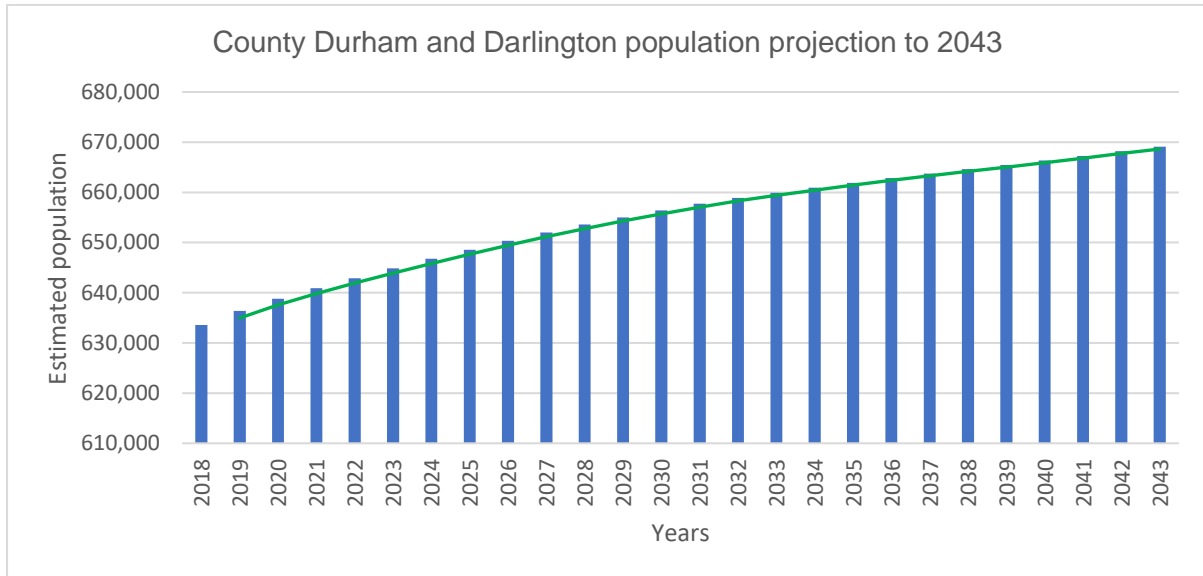
County Durham is projected to experience an increase in population from 533,972 in 2021 to 561,500 in 2043, an increase of 27,528 (5.16%), as shown below:

County Durham population projection to 2043
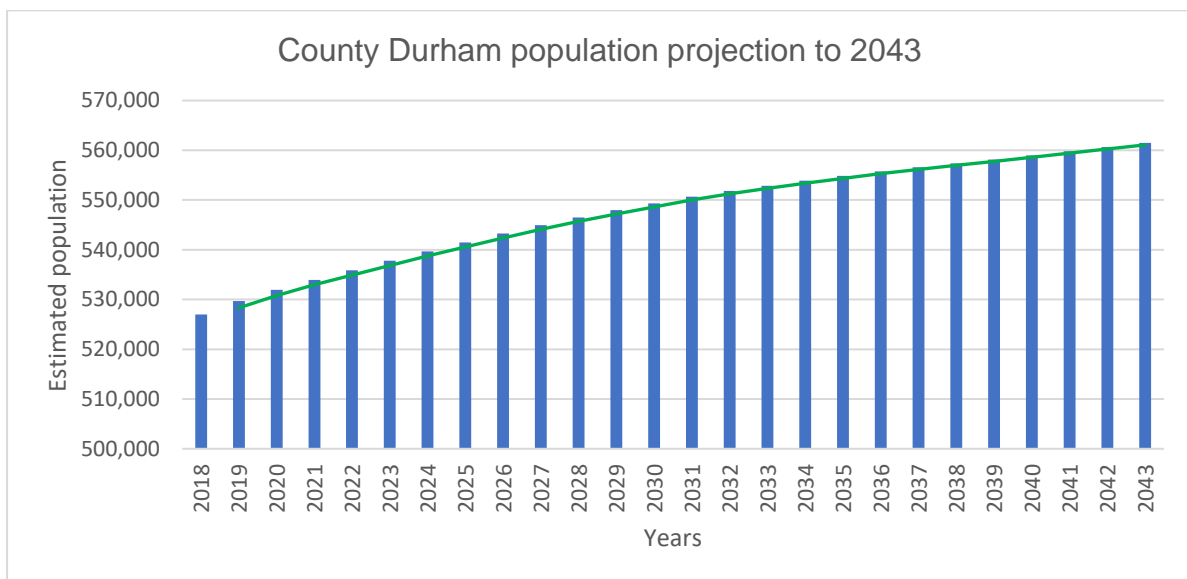
Darlington is projected to experience an increase in population from 106,933 in 2021 to 107,579 in 2043, an increase of 646 (0.60%), as shown below:

Darlington population projection to 2043

(chart: Estimated population vs Years, 2018–2043)
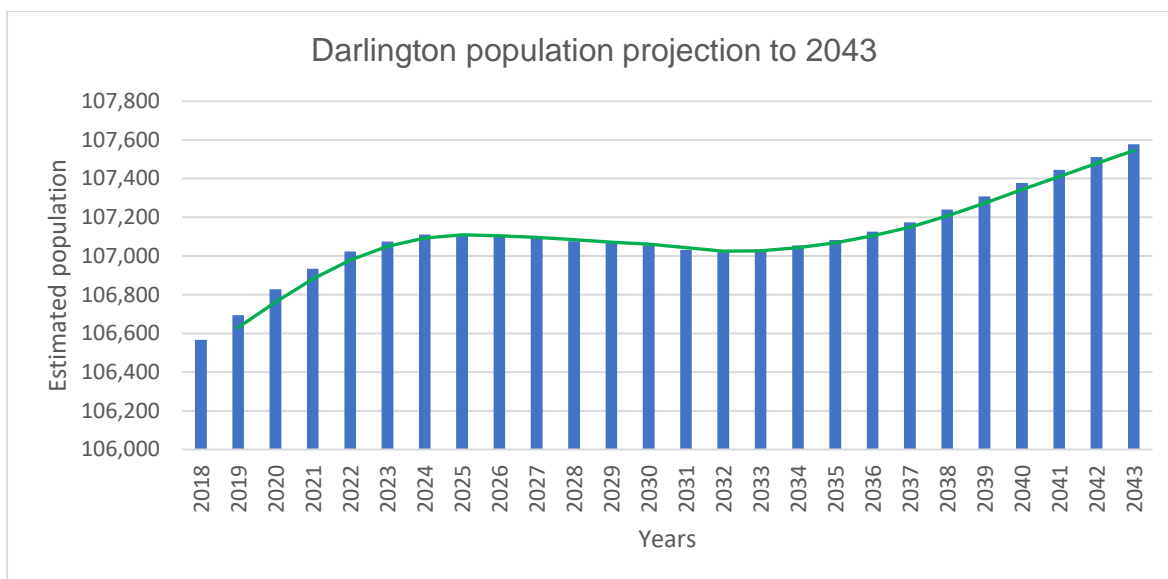
You can find this data by using the link below:

[Population projections for local authorities: Table 2 - Office for National Statistics](#)

Current and projected population density

Population density is the concentration of individuals within a species in a specific geographic locale. Population density data can be used to quantify demographic information and to assess relationships with ecosystems, human health, and infrastructure.

Unitary Authority	Area (square km)	Population *(Using 2020 mid-year estimates)*	Current population density (per square km)
County Durham	2,226	533,149	240
Darlington	197	107,402	544
Total	2,423	640,551	264

Based on the population projections to 2043, the projected population for both County Durham and Darlington is shown below:

| Unitary Authority	Area (square km)	Projected 2043 population	Projected population density (per square km)
County Durham	2,226	561,500	252
Darlington	197	107,579	546
Total	2,423	669,079	276

Population density data can be viewed at this link: [Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)](#)

Crime

Crime rates can be an indicator of risk within communities, as it may be linked to deprivation and is certainly linked to arson.

The total level of recorded crime throughout the communities of County Durham and Darlington stands at 88.98 crimes per 100,000 population is less than the North East regional crime rate of 96.48, but greater than the national England crime rate of 84.96, however.

The reported rates of violence against a person (which includes homicide, violence both with and without injury, stalking and harassment and death or serious injury caused by unlawful driving) are at a higher rate in County Durham and Darlington than both the North East and England rates. Both robbery and theft offences are less than the North East and England rates, while criminal damage and arson is significantly higher across the North East compared to the national England rate.

Public order offences are higher across the North East in comparison to the national England rate while drug offences in County Durham and Darlington are lower than the North East and national England rates.

Rates of offence per 1,000 population are shown in this table below:

Type of crime	Durham	North East	England
Violence against the person	39.0	39.4	35.0
Sexual offences	3.3	3.7	3.2
Robbery	0.3	0.6	1.1
Theft offences	20.6	25.3	25.3
Criminal damage and arson	14.7	13.1	8.7
Drug offences	2.2	2.4	2.9
Possession of weapons offences	0.5	0.8	0.8
Public order offences	9.3	11.9	10.0
Miscellaneous crimes against society	2.5	2.6	1.9
Total recorded crime (excluding fraud)	92.3	100.0	88.7

You can read the datasets using this link:
[Crime in England and Wales: Police Force Area data tables - Office for National Statistics (ons.gov.uk)](#)

Health

Health outcomes are a powerful factor in helping us to determine risk within our communities. We know that if people are vulnerable then they are more at risk of being involved in an incident. We use data from the NHS Fingertips Profiles Public health profiles - OHID (phe.org.uk) to help us determine the health profile of our Service area and this in turn helps us with targeting our prevention work and knowing who to provide more in depth support to.

The following health indicators help us to build this picture:

Dementia and Alzheimer's disease

People diagnosed with Dementia and Alzheimer's disease often have symptoms that may include memory loss and difficulties with thinking, problem-solving or language. These changes are often small to start with, but for someone with dementia they have become severe enough to affect daily life, including behaviour and mood changes.

Dementia mainly affects people over the age of 65 (one in 14 people in this age group have dementia), and the likelihood of developing dementia increases significantly with age. As population ageing continues to accelerate within all our communities, the number of people living with dementia is set to rise sharply in the decades to come.

Durham

➢ The number of people diagnosed with dementia (aged 65 and over) of 4,575 represents an estimated dementia diagnosis rate value of 65.7% which is similar to the North East value of 66.6% and better than the national England rate of 62.0% (2022 data).

Local Authority Health Profiles - Data - OHID (phe.org.uk)

Darlington

➢ The number of people diagnosed with dementia (aged 65 and over) of 915 represents an estimated dementia diagnosis rate value of 65.1% which is similar to the North East value of 66.6% and better than the national England rate of 62.0% (2022 data).

Local Authority Health Profiles - Data - OHID (phe.org.uk)

Local Authority Health Profiles

The Local Authority Health Profiles provide an overview of health for each local authority in England. They pull together existing information in one place and contain data on a range of indicators for local populations, highlighting issues that can affect health in each locality. The Local Authority Health Profiles with their key indicators for both County Durham and Darlington are shown below:

Durham Profiles

Life expectancy and causes of death

- ➢ The life expectancy at birth (for males) is 77.7 years. This is slightly better than the North East regional value of 77.6 years and worse than the national England value of 79.4 years (2018 – 20 data).
- ➢ The life expectancy at birth (for females) is 81.2. This is slightly worse than the North East regional value of 81.5. years and worse than the national England value of 83.1 years (2018 – 2020 data).
- ➢ There were 6,194 under 75 deaths from all causes, representing a value of 401.2 per 100,000 population, which is better than the North East regional value of 403.5, but worse than the national England value of 336.5. (2018-2020 data)
- ➢ There were 1,220 under 75 deaths from all cardiovascular diseases, representing a value of 78.9 per 100,000 population, which is similar to the North East regional value of 82.1, and worse than the national England rate of 70.4 (2017 – 19 data).
- ➢ There were 2,226 under 75 deaths from cancer, representing a value of 145.5 per 100,000 population, which is similar to the North East regional value of 149, and worse than the national England rate of 129.2 (2017 – 2019 data).
- ➢ There were 217 suicides, representing a value of 15.8 per 100,000 population, which is higher than the North East regional value of 13.0, and worse than the national England rate of 10.4 (2019 – 2021 data).

[Local Authority Health Profiles – Life Expectancy Durham - OHID (phe.org.uk)](phe.org.uk)

Injuries and ill health

- ➢ There were 170 people killed and seriously injured casualties (2020 data).
- ➢ There were 1,200 emergency hospital admissions for intentional self-harm, representing a value of 232.3 per 100,000 population which is better than the North East regional value of 273.9, and similar to the national England value of 181.2 (2020 - 2021 data).
- ➢ There were 610 hip fractures in people aged 65 and over, representing a value of 585 per 100,000, which is similar to the North East regional value of 596, and similar to the national England value of 529 (2020-2021 data).
- ➢ The estimated diabetes diagnosis rate of 86.1% is similar to the North East regional value of 82.5% and better than the national England value of 78% (2018 data)

[Local Authority Health Profiles – Injuries and Ill Health Durham Data - OHID (phe.org.uk)](phe.org.uk)

Behavioural risk factors

These include alcohol consumption, smoking, being classified as overweight or obese and being physically active. In all of these factors the area demonstrated worse outcomes than for the England average.

- There were 160 admission episodes for alcohol specific conditions for the under 18s, representing a value of 52.5 per 100,000, which is similar to the North East regional value of 52.0 and worse than the national England value of 29.3 (2018/19 – 2020/21 data).
- The physical activity value of 63.5% is the same as the North East regional value of 63.5% and slightly worse than the national England value of 66.9% (2020 - 2021 data).
- The percentage of adults (aged 18+) classified as overweight or obese value is 70.8%, similar to the North East regional value of 69.7% and worse than the national England value of 63.5% (2020-2021 data).

Local Authority Health Profiles – Behavioural Risk Factors Durham Data - OHID (phe.org.uk)

Child health

- There were 132 under 18s conceptions per 1,000 population, representing a value of 16.5 per 1,000 population, which is better than the North East regional value of 18.6 and worse than the national England value of 13.0, although the rate is improving (2020 data).
- There were 568 individuals who smoked at their time of delivery, representing a value of 14.6%, which is higher than the North East regional value of 12.6% and worse than the national England value of 9.1% (2021 - 2022 data).
- There were 46 infant deaths, representing a value of 3.2 per 1,000, which is similar to both the North East regional value of 3.5 and the national England value of 3.9 (2018 - 2020 data).
- The prevalence of obesity (including severe obesity) of 1,465 individuals represents a value of 25.5%, which is similar to the North East regional value of 26.6% and worse than the national England value of 23.4% (2021-2022 data).

Local Authority Health Profiles – Child Health Durham Data - OHID (phe.org.uk)

Health inequalities

- The Index of Mass Deprivation (IMD 2019) score is 26.8, while the England value is 21.7.
- The smoking prevalence in adults in routine and manual occupations (aged 18 to 64) is 29.2%, which is higher than the North East regional value of 26.1% and the national England value of 24.5% (2020 data).
- Inequality in life expectancy at birth (for males) has a value of 10.3 years compared to 12.5 for the North East and 9.7 for England (2018-2020 data).
- Inequality in life expectancy at birth (for females) has a value of 8.2 years compared to 10.0 for the North East and 13.9 for England (2018-2020 data).

Local Authority Health Profiles – Inequalities Durham Data - OHID (phe.org.uk)

Wider determinants of health

➢ There were 26,322 children in relative low-income families (under 16s), representing a value of 28.8%, which is better than the North East regional value of 29.6%, but significantly worse than the national England value of 15.1% (2020-2021 data).

➢ The percentage of people in employment is 70.1%, which is similar to than the North East regional value of 70.0%, and worse than the national England value of 75.4%.(2021-2022 data)

➢ The number of households owed a duty under the Homelessness Reduction Act was 2,643 representing a value of 11.2 per 1,000 compared to 12.5 for the North East and 11.3 for England (2020-2021 data)

➢ There were 870 hospital admissions for violence (including sexual violence), representing a value of 57.3 per 100,000, which is slightly better than the North East regional value of 60.0, and worse than the national England value of 41.9 (2018/19 – 2020/21 data).

[Local Authority Health Profiles – Wider Determinants of Health Durham Data - OHID (phe.org.uk)](#)

Health protection

➢ There were 130 excess winter deaths, representing a value of 6.7%, which is lower to both the North East regional value of 14.1% and the national England value of 17.4% (Data available from August 2019 to July 2020).

[Local Authority Health Profiles Health Protection Durham Data - OHID (phe.org.uk)](#)

Supporting information

➢ There were 101,979 of the population aged under 18, representing a value of 19.1%. In the North East the regional value is 19.9% and in England the value is 21.4% (2020 data).

➢ There were 111,582 of the population aged 65+, representing a value of 20.9%. In North East the regional value is 20.1%, and in England the value is 18.5% (2020 data).

➢ There were 6,200 of the population who were from ethnic minorities, representing a value of 1.5%, which is in the second lowest quintile for the North East region where the value is 4.2% and the lowest quintile for England where the value is 13.6% (2016 data).

[Local Authority Health Profiles – Supporting Information Durham Data - OHID (phe.org.uk)](#)

Darlington Profiles

Life expectancy and causes of death

- The life expectancy at birth (for males) is 78.1 years. This is slightly better than the North East regional value of 77.6 years and worse than the national England value of 79.4 years (2018 – 20 data).
- The life expectancy at birth (for females) is 81.2. This is similar to the North East regional value of 81.5. years and worse than the national England value of 83.1 years (2018 – 2020 data).
- There were 1,212 under 75 deaths from all causes, representing a value of 401.0 per 100,000 population, which is better than the North East regional value of 403.5, but worse than the national England value of 336.5. (2018-2020 data).
- There were 223 under 75 deaths from all cardiovascular diseases, representing a value of 74.3 per 100,000 population, which is lower than the North East regional value of 82.1, but worse than the national England rate of 70.4 (2017 – 19 data).
- There were 413 under 75 deaths from cancer, representing a value of 137.4 per 100,000 population, which is lower than the North East regional value of 149, and worse than the national England rate of 129.2 (2017 – 2019 data).
- There were 47 suicides, representing a value of 16.6 per 100,000 population, which is higher than the North East regional value of 13.0, and worse than the national England rate of 10.4 (2019 – 2021 data).

[Local Authority Health Profiles Life Expectancy Data Darlington - OHID (phe.org.uk)](phe.org.uk)

Injuries and ill health

- There were 30 people killed and seriously injured casualties (2020 data).
- There were 305 emergency hospital admissions for intentional self-harm, representing a value of 300.5 per 100,000 population, which is higher than the North East regional value of 273.9, and the national England value of 181.2 (2020 - 2021 data).
- There were 145 hip fractures in people aged 65 and over, representing a value of 643 per 100,000, which is higher than the North East regional value of 596, and lower than the national England value of 529 (2020-2021 data).
- The estimated diabetes diagnosis rate of 85.9% is higher than the North East regional value of 82.5% and better than the national England value of 78% (2018 data)

[Local Authority Health Profiles Injuries and Ill Health Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Behavioural risk factors

These include alcohol consumption, smoking, being classified as overweight or obese and being physically active.

- There were 30 admission episodes for alcohol specific conditions for the under 18s, representing a value of 44.4 per 100,000, which is lower than the North

East regional value of 52.0 but worse than the national England value of 29.3 (2018/19 – 2020/21 data).

➢ The physical activity value of 61.0% is lower than the North East regional value of 63.5% and the national England value of 66.9% (2020 - 2021 data).

➢ The percentage of adults (aged 18+) classified as overweight or obese value is 72.5%, higher than the North East regional value of 69.7% and worse than the national England value of 63.5% (2020-2021 data).

[Local Authority Health Profiles Behavioural risk factors Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Child health

➢ There were 30 under 18s conceptions per 1,000 population, representing a value of 16.8 per 1,000 population, which is better than the North East regional value of 18.6 and worse than the national England value of 13.0, although the rate is improving (2020 data).

➢ There were 139 individuals who smoked at their time of delivery, representing a value of 14.0%, which is higher than the North East regional value of 12.6% and worse than the national England value of 9.1% (2021 - 2022 data).

➢ There were 16 infant deaths, representing a value of 5.0 per 1,000, which is higher than both the North East regional value of 3.5 and the national England value of 3.9 (2018 - 2020 data).

➢ The prevalence of obesity (including severe obesity) of 305 individuals represents a value of 25.1%, which is similar to the North East regional value of 26.6% and worse than the national England value of 23.4% (2021-2022 data).

[Local Authority Health Profiles Child Health Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Health inequalities

➢ The Index of Mass Deprivation (IMD 2019) score is 25.7, while the England value is 21.7.

➢ The smoking prevalence in adults in routine and manual occupations (aged 18 to 64) is 26.6%, which is similar to the North East regional value of 26.1% and higher than the national England value of 24.5% (2020 data).

➢ Inequality in life expectancy at birth (for males) has a value of 13.0 years compared to 12.5 for the North East and 9.7 for England (2018-2020 data).

➢ Inequality in life expectancy at birth (for females) has a value of 10.6 years compared to 10.0 for the North East and 13.9 for England (2018-2020 data).

[Local Authority Health Profiles Health Inequalities Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Wider determinants of health

➢ There were 5,732 children in relative low-income families (under 16s), representing a value of 28.5%, which is better than the North East regional value of 29.6%, but significantly worse than the national England value of 15.1% (2020-2021 data).

➢ The percentage of people in employment is 76.8%, which is similar to than the North East regional value of 70.0%, and the national England value of 75.4%.(2021-2022 data).

➢ The number of households owed a duty under the Homelessness Reduction Act was 711 representing a value of 14.7 per 1,000 compared to 12.5 for the North East and 11.3 for England (2020-2021 data)

➢ There were 150 hospital admissions for violence (including sexual violence), representing a value of 52.2 per 100,000, which is better than the North East regional value of 60.0, and worse than the national England value of 41.9 (2018/19 – 2020/21 data).

[Local Authority Health Profiles Wider Health Inequalities Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Health protection

➢ There were 80 excess winter deaths, representing a value of 21.8%, which is higher than both the North East regional value of 14.1% and the national England value of 17.4% (Data available from August 2019 to July 2020).

[Local Authority Health Profiles Health Inequalities Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Supporting information

➢ There were 22,633 of the population aged under 18, representing a value of 21.1%. In the North East the regional value is 19.9% and in England the value is 21.4% (2020 data).

➢ There were 22,131 of the population aged 65+, representing a value of 20.6%. In North East the regional value is 20.1%, and in England the value is 18.5% (2020 data).

➢ There were 3,100 of the population who were from ethnic minorities, representing a value of 3.5%, which is in the second lowest quintile for the North East region where the value is 4.2% and the lowest quintile for England where the value is 13.6% (2016 data).

[Local Authority Health Profiles Supporting Information Darlington Data - OHID (phe.org.uk)](phe.org.uk)

Smoking

Smoking is a significant contributary factor in the health of people in County Durham and Darlington, and can be a risk factor that we need to take into account as it can contribute to fire deaths

Durham Profile

Key Indicators

- ➢ County Durham has 16.2% of adults who smoke compared to the North East rate of 14.8% and the England rate of 13.0% (2021 data).
- ➢ 2,683 people died from smoking attributable causes, which is 277.8 people per 100,000 which is worse than the North East value of 270.5 and the England value of 202.2 (2017-2019 data).
- ➢ 6,034 people were admitted to hospital for smoking attributable causes, a rate of 1,800 per 100,000 which is lower than the North East value of 2,050 but higher than the England value of 1,398 (2019-2020 data).
- ➢ The number of years of potential life lost due to smoking related illness is 13,071 representing a value of 1,556 per 100,000 people, which is lower than the North East value of 1,703 and higher than the England value of 1,313. (2016-2018 data).

Local Tobacco Control Profiles Key Indicators Durham Data - OHID (phe.org.uk)

Darlington Profile

Key Indicators

- ➢ Darlington has 10.6% of adults who smoke compared to the North East rate of 14.8% and the England rate of 13.0%.
- ➢ 491 people died from smoking attributable causes, which is 243.5 people per 100,000 which is better than the North East value of 270.5 and worse than the England value of 202.2 (2017-2019 data).
- ➢ 1,008 people were admitted to hospital for smoking attributable causes, a rate of 1,507 per 100,000 which is lower than the North East value of 2,050 and the England value of 1,398 (2019-2020 data).
- ➢ The number of years of potential life lost due to smoking related illness is 2,288 representing a value of 1,387 per 100,000 people, which is lower than the North East value of 1,703 and similar to the England value of 1,313. (2016-2018 data).

Local Tobacco Control Profiles Key Indicators Darlington Data - OHID (phe.org.uk)

Council tax base

Council Tax is a charge, decided locally, which contributes towards the provision of local services. It applies to all non-business properties although some may be exempt depending on the circumstances. Band D council tax is the tax payable on a Band D dwelling occupied as a main residence by two adults, before any changes due to discounts, premiums, exemptions or council tax benefit. This definition is widely regarded as a benchmark when comparing council tax levels in different areas or over time.

The Council Tax base is the number of B and D equivalent dwellings in a local authority area. To calculate the tax base for an area, the number of dwellings in each council tax band is adjusted to take account of any discounts, premiums, and exemptions. The resulting figure for each band is then multiplied by its proportion relative to B and D (from 6/9 for Band A to 18/9 for Band H) and the total across all eight bands is calculated. An authority's tax base is taken into account when it calculates its council tax.

The tables below show that the CDDFRS area has a high percentage of Band A properties compared to the England average.

County Durham Council Tax

Council Tax Band[1]	Number of dwellings on the valuation list	County Durham Council tax base	Average England Council Tax Base
Band A	143,891	59.32%	24.10%
Band B	34,746	12.76%	19.56%
Band C	31,031	12.08%	21.86%
Band D	21,983	8.75%	15.55%
Band E	10,601	4.60%	9.68%
Band F	4,142	1.64%	5.13%
Band G	2,197	0.76%	3.52%
Band H	277	0.09%	0.59%
Total	256750	100.00%	100.00%

Darlington Council Tax

Council Tax Band	Number of dwellings on the valuation list	Darlington Council tax Base	Average England Council Tax Base
Band A	22160	49.24%	24.10%
Band B	9890	21.98%	19.56%
Band C	6200	13.78%	21.86%
Band D	3920	8.71%	15.55%
Band E	1780	3.96%	9.68%
Band F	690	1.53%	5.13%

Band G	330	0.73%	3.52%
Band H	30	0.07%	0.59%
Total	45000	100.00%	100.00%

Council Tax: stock of properties, 2022 - GOV.UK (www.gov.uk)

Languages spoken and proficiency

Language is an important defining characteristic of people's identity, and the main language and proficiency in English questions were asked for the first time in the 2011 Census. The understanding of the main languages used throughout the communities of County Durham and Darlington enables the Service to target and deliver prevention and protection related communications to meet the needs of local communities.

Languages spoken

The main languages spoken throughout the communities of County Durham and Darlington are shown below:

	Darlington	County Durham	Darlington	County Durham
Language Spoken	**Number**	**Number**	**%**	**%**
English (English or Welsh in Wales)	100,200	498,104	95.79	98.12
Welsh or Cymraeg (in England only)	0	37	0.00	0.01
Other UK language: Gaelic (Irish)	0	5	0.00	0.00
Other UK language: Gaelic (Scottish)	1	0	0.00	0.00
Other UK language: Manx Gaelic	0	0	0.00	0.00
Other UK language: Gaelic (Not otherwise specified)	0	2	0.00	0.00
Other UK language: Cornish	0	0	0.00	0.00
Other UK language: Scots	1	8	0.00	0.00
Other UK language: Ulster Scots	0	0	0.00	0.00
Other UK language: Romany English	0	0	0.00	0.00
Other UK language: Irish Traveller Cant	0	0	0.00	0.00
French	27	203	0.03	0.04
Portuguese	85	170	0.08	0.03
Spanish	80	407	0.08	0.08
Other European language (EU): Italian	90	304	0.09	0.06

Other European language (EU): German	21	212	0.02	0.04
Other European language (EU): Polish	1,341	1,787	1.28	0.35
Other European language (EU): Slovak	16	94	0.02	0.02
Other European language (EU): Czech	21	65	0.02	0.01
Other European language (EU): Romanian	624	517	0.60	0.10
Other European language (EU): Lithuanian	133	128	0.13	0.03
Other European language (EU): Latvian	41	43	0.04	0.01
Other European language (EU): Hungarian	78	164	0.07	0.03
Other European language (EU): Bulgarian	41	84	0.04	0.02
Other European language (EU): Greek	28	179	0.03	0.04
Other European language (EU): Dutch	15	80	0.01	0.02
Other European language (EU): Swedish	3	42	0.00	0.01
Other European language (EU): Danish	3	15	0.00	0.00
Other European language (EU): Finnish	3	25	0.00	0.00
Other European language (EU): Estonian	1	7	0.00	0.00
Other European language (EU): Slovenian	4	12	0.00	0.00
Other European language (EU): Maltese	3	12	0.00	0.00
Other European language (EU): Any other European language (EU)	1	11	0.00	0.00
Other European language (non EU): Albanian	12	52	0.01	0.01
Other European language (non EU): Ukrainian	4	13	0.00	0.00
Other European language (non EU): Any other Eastern European language (non EU)	0	2	0.00	0.00

Other European language (non EU): Northern European language (non EU)	0	38	0.00	0.01
Other European language (EU and non-EU): Bosnian, Croatian, Serbian, and Montenegrin	5	27	0.00	0.01
Other European language (non-national): Any Romani language	0	0	0.00	0.00
Other European language (non-national): Yiddish	0	0	0.00	0.00
Russian	77	154	0.07	0.03
Turkish	46	177	0.04	0.03
Arabic	188	596	0.18	0.12
West or Central Asian language: Hebrew	1	3	0.00	0.00
West or Central Asian language: Kurdish	161	89	0.15	0.02
West or Central Asian language: Persian or Farsi	49	141	0.05	0.03
West or Central Asian language: Pashto	3	6	0.00	0.00
West or Central Asian language: Any other West or Central Asian language	8	13	0.01	0.00
South Asian language: Urdu	52	115	0.05	0.02
South Asian language: Hindi	28	74	0.03	0.01
South Asian language: Panjabi	174	312	0.17	0.06
South Asian language: Pakistani Pahari (with Mirpuri and Potwari)	1	0	0.00	0.00
South Asian language: Bengali (with Sylheti and Chatgaya)	250	86	0.24	0.02
South Asian language: Gujarati	17	26	0.02	0.01
South Asian language: Marathi	22	22	0.02	0.00
South Asian language: Telugu	16	49	0.02	0.01
South Asian language: Tamil	89	148	0.09	0.03
South Asian language: Malayalam	126	105	0.12	0.02
South Asian language: Sinhala	7	15	0.01	0.00

South Asian language: Nepalese	72	25	0.07	0.00
South Asian language: Any other South Asian language	11	27	0.01	0.01
East Asian language: Mandarin Chinese	12	297	0.01	0.06
East Asian language: Cantonese Chinese	30	292	0.03	0.06
East Asian language: All other Chinese	79	1,208	0.08	0.24
East Asian language: Japanese	12	63	0.01	0.01
East Asian language: Korean	3	39	0.00	0.01
East Asian language: Vietnamese	11	49	0.01	0.01
East Asian language: Thai	34	178	0.03	0.04
East Asian language: Malay	1	49	0.00	0.01
East Asian language: Tagalog or Filipino	44	90	0.04	0.02
East Asian language: Any other East Asian language	2	39	0.00	0.01
Oceanic or Australian language	7	7	0.01	0.00
North or South American language	0	0	0.00	0.00
Caribbean Creole: English-based Caribbean Creole	0	0	0.00	0.00
Caribbean Creole: Any other Caribbean Creole	0	4	0.00	0.00
African language: Amharic	0	6	0.00	0.00
African language: Tigrinya	4	1	0.00	0.00
African language: Somali	0	1	0.00	0.00
African language: Krio	0	0	0.00	0.00
African language: Akan	0	6	0.00	0.00
African language: Yoruba	6	14	0.01	0.00
African language: Igbo	17	9	0.02	0.00
African language: Swahili or Kiswahili	3	12	0.00	0.00
African language: Luganda	0	0	0.00	0.00
African language: Lingala	0	0	0.00	0.00
African language: Shona	3	31	0.00	0.01
African language: Afrikaans	7	26	0.01	0.01
African language: Any other Nigerian language	1	2	0.00	0.00
African language: Any other West African language	1	9	0.00	0.00

African language: Any other African language	7	27	0.01	0.01
Sign language: British Sign Language	30	139	0.03	0.03
Sign language: Any other sign language	1	6	0.00	0.00
Sign language: Any sign communication system	5	23	0.00	0.00
Other language	3	10	0.00	0.00

Language proficiency

The English language proficiency of the residents of County Durham and Darlington is shown below:

Language Proficiency	Darlington	County Durham	Darlington	County Durham
	Number	Number	%	%
Can speak English very well	1,807	4,760	41.0	49.8
Can speak English well	1,690	3,296	38.4	34.5
Cannot speak English well	785	1,243	17.8	13.0
Cannot speak English	120	264	2.7	2.8

Language, England and Wales - Office for National Statistics (ons.gov.uk)

Ethnicity

There are 18 ethnic groups recommended for use by the government when asking for someone's ethnicity. These are grouped into five ethnic groups, each with an option where people can write in their ethnicity using their own words. These groups were used in the 2011 Census of England and Wales.

The recommended ethnic groups are:

Recommended ethnic groups	
White	English, Welsh, Scottish, Northern Irish or British
	Irish
	Gypsy or Irish Traveller
	Roma
	Any other White background

Mixed or Multiple ethnic groups White	White and Black Caribbean
	White and Black African
	White and Asian
	Any other Mixed or Multiple ethnic background
Asian or Asian British	Indian
	Pakistani
	Bangladeshi
	Chinese
	Any other Asian background
Black, African, Caribbean or Black British	African
	Caribbean
	Any other Black, African or Caribbean background
Other ethnic group	Arab
	Any other ethnic group

The composition of County Durham and Darlington by ethnic group is shown in the table below:

Ethnic Group	Durham (Number)	%	Darlington (Number)	%
Asian, Asian British or Asian Welsh: Bangladeshi	300	0.1	759	0.7
Asian, Asian British or Asian Welsh: Chinese	2,838	0.5	308	0.3
Asian, Asian British or Asian Welsh: Indian	2,148	0.4	1,086	1.0
Asian, Asian British or Asian Welsh: Pakistani	730	0.1	195	0.2
Asian, Asian British or Asian Welsh: Other Asian	1,818	0.3	618	0.6
Black, Black British, Black Welsh, Caribbean or African: African	1,202	0.2	456	0.4
Black, Black British, Black Welsh, Caribbean or African: Caribbean	284	0.1	135	0.1
Black, Black British, Black Welsh, Caribbean or African: Other Black	254	-	110	0.1
Mixed or Multiple ethnic groups: White and Asian	1,962	0.4	516	0.5
Mixed or Multiple ethnic groups: White and Black African	914	0.2	198	0.2
Mixed or Multiple ethnic groups: White and Black Caribbean	906	0.2	384	0.4

Mixed or Multiple ethnic groups: Other Mixed or Multiple ethnic groups	1,167	0.2	374	0.3
White: English, Welsh, Scottish, Northern Irish or British	494,638	94.7	97,320	90.3
White: Irish	1,384	0.3	342	0.3
White: Gypsy or Irish Traveller	798	0.2	434	0.4
White: Roma	157	-	104	0.1
White: Other White	8,494	1.6	3,525	3.3
Other ethnic group: Arab	825	0.2	329	0.3
Other ethnic group: Any other ethnic group	1,248	0.2	603	0.6

[Ethnic group, England and Wales - Office for National Statistics (ons.gov.uk)](https://www.ons.gov.uk)

Religion or belief

The religion or belief of the combined population of both County Durham and Darlington is shown below:

Religion or Belief	Darlington	County Durham	Darlington	County Durham
	Number	**Number**	**%**	**%**
No religion	42,780	201,688	39.7	38.6
Christian	56,194	285,167	52.1	54.6
Buddhist	344	1,290	0.3	0.2
Hindu	453	990	0.4	0.2
Jewish	36	286	0.0	0.1
Muslim	1,849	2,922	1.7	0.6
Sikh	443	839	0.4	0.2
Other religion	404	2,198	0.4	0.4
Not answered	5,296	26,687	4.9	5.1

Deprivation

The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England and is part of a suite of outputs that form the Indices of Deprivation (IoD). It follows an established framework in broadly defining deprivation to encompass a wide range of an individual's living conditions.

There are 32,844 Lower Layer Super Output Areas (LSOAs) in England with an average population of 1,500 people per area. These LSOAs are ranked from the most deprived area to the least.

The Index of Multiple Deprivation is based on 39 separate indicators, organised across seven distinct domains of deprivation which are combined and weighted to calculate the Index of Multiple Deprivation. of deprivation relative to that of other areas.

Indices of deprivation 2019

The Index of Multiple Deprivation 2019 is the most up to date dataset and combines information from the seven domains to produce an overall relative measure of deprivation. The domains are combined using the following weights:

1. Income Deprivation (22.5%);
2. Employment Deprivation (22.5%);
3. Education, Skills and Training Deprivation (13.5%);
4. Health Deprivation and Disability (13.5%);
5. Crime (9.3%);
6. Barriers to Housing and Services (9.3%);
7. Living Environment Deprivation (9.3%).

The weights have been derived from consideration of the academic literature on poverty and deprivation, as well as consideration of the levels of robustness of the indicators. The Indices of Deprivation are used to:

- Compare small areas across different local authorities;
- Identify the most deprived small areas;
- Explore the domains (or types) or deprivation;
- Illustrate changes in relative deprivation between consecutive iterations of the IMD;
- Quantify how deprived a small area is and identify deprived communities.

Out of the 317 Local Authorities in England Durham ranks 70th in the league table of the most deprived and Darlington is 49th where 1 is the worst and 317 is the least.

The service area has 51 Lower Layer Super Output Areas in the 10% most deprived decile. 39 are in County Durham and 12 in Darlington.

[The English Indices of Deprivation 2019 (publishing.service.gov.uk)](#)
[Exploring local income deprivation (ons.gov.uk)](#)

Local authority plans

Local plans are the frameworks for development and future regeneration for locations to improve the lives of existing and future residents and are developed Local Authorities to meet the differing needs of communities. Local Plans, which are reviewed every five years, are developed to promote the quality of life, provide jobs for a flexible and skilled workforce, protect and enhance the environment, and support the towns and villages of County Durham and Darlington.

County Durham Local Plan

The County Durham Plan provides the policy framework for the county up to 2035 to support the development of a thriving economy and sets out how many new homes and jobs need to be created and where they will go. Future travel and infrastructure needs are also described with measures to protect the heritage of the built and natural environment, landscapes and habitats.

The Plan plays a key role in shaping the physical environment which can have a significant impact on health and well-being by making it possible for people to make healthier lifestyle choices. Many people in County Durham today live in different social circumstances and experience avoidable differences in health, well-being and length of life. Creating a fairer society is fundamental to improving the health of the whole population and ensuring a fairer distribution of good health.

The County Durham Plan is seeking to achieve a successful and sustainable future in which all of our residents have the opportunity to access good housing and employment in an environment which delivers a healthy and fulfilled lifestyle.

Within County Durham there are plans in place to develop 24,852 new homes of mixed type, size and tenure over the period 2016 to 2035. Significant housing developments in Durham include Sniperley Park and Sherburn Road with more information on the future. Further information on future housing developments within County Durham and each station area can be located in the County Durham Plan.

The employment land availability describes the total amount of land reserved for industrial and business use awaiting development with up to 300 hectares planned for future businesses. The most significant business developments will occur at Forrest Park (Newton Aycliffe), Jade Park (East Durham), Meadowfield Industrial Estate, Integra 61 (land south of Bowburn Road), and Ingenium Park.

[You can read the full County Durham Local Plan by clicking here.](#)

Darlington local plan

The Darlington Local Plan was adopted in February 2022 and is a framework for growth and aims to ensure that Darlington becomes an even more sustainable location in which people increasingly choose to live, work and visit. Not only does it help to deliver the economic strategy through providing new housing to meet local needs; it supports the needs of our current and future workforce; and delivers other new developments with provision of key infrastructure.

The Darlington Local Plan aims to help deliver an economic strategy through providing new housing to meet local needs; and supports the needs of our current and future workforce

The Darlington Borough Local Plan describes a housing requirement of 422 net additional dwellings each year over the period of the plan to 2036. This will result in a significant growth to the population of Darlington with a total net minimum requirement in excess of 8,400 dwellings, with strategic expansion in the Skerningham area to the north east of Darlington, and other significant developments in Lingfield Point, Faverdale, Hurworth, Great Burden, Coniscliffe Park and Branksome. Further information on the proposed housing requirements and development of Darlington up to 2036 can be found in the Darlington Borough Local Plan 2016-2036 (adopted in 2022).

It is proposed that there will be up to 172 hectares of land allocations for employment land within Darlington in the period up to 2036. The most significant business development will occur and Greater Faverdale.

[You can read the full Darlington Local Plan by clicking here](#).

National, regional and local risks

The National Security Risk Assessment

The National Security Risk Assessment (NSRA) is a classified cross-government and scientific assessment of the most serious risks facing the UK or its interests overseas. The Civil Contingencies Secretariat, which is part of the Cabinet Office, is responsible for co-ordinating the production of the document. This involves working closely with a wide range of stakeholders including other UK government departments, devolved administrations, the government scientific community, intelligence and security agencies, and a range of independent experts such as industry partners and academics.

The NSRA is updated every two years and each risk is evaluated using a reasonable worst-case scenario (RWCS) approach and assessed in terms of likelihood and impact. Although some scenarios may be location specific, they could generally occur anywhere in the UK, although the likelihood and/or impact may be different and dependent on the location. The NSRA describes a brief descriptive overview of the risk, the overall level of the risk in terms of likelihood and impact displayed on a matrix, the range of likely impacts, and information about response capabilities, recovery and uncertainties.

Although there are elements of these national level risks and threats that influence the level of risk within the North East region and the communities of County Durham and Darlington, these high-level scenarios do not present an exhaustive assessment of all national security risks, but instead focusses on those which are likely to require the biggest national level response.

The National Risk Register (NRR)

The NRR is the public facing version of the NSRA.

The NRR provides information on the most significant risks that could occur in the next two years, and which could have a wide range of impacts on the UK. The NRR also sets out what the UK government, devolved administrations and other partners are doing about them. This document is particularly useful to local emergency planners, resilience professionals and businesses, helping them to make decisions about which risks to plan for and what the consequences of these risks are likely to be.

It also contains information and advice for the public. It is important that individuals and households are aware of the risks that could affect them, and what actions they can take to prepare for and respond to these risks.

The NRR describes that no risk assessment will ever be able to identify and assess every possible risk – unforeseeable risks can emerge, or previously identified risks can materialise in novel or surprising ways. The NRR is not a prediction of the risks that will materialise in the next two years, but it does help to ensure that the UK has the right systems and resilience practices in place to manage risks both proactively and when they arise.

Below is the Index of risks from the National Risk Register:

Malicious Attacks

1. Attacks on publicly accessible locations
   2. Attacks on infrastructure
   3. Attacks on transport
   4. Cyber attacks
   5. Smaller scale CBRN attacks
   6. Medium scale CBRN attacks
   7. Larger scale CBRN attacks
   8. Undermining the democratic process

Serious and Organised Crime

9. Serious and organised crime – vulnerabilities
  10. Serious and organised crime – prosperity
  11. Serious and organised crime – commodities

Environmental Hazards

12. Coastal flooding
  13. River flooding
  14. Surface water flooding
  15. Storms
  16. Low temperatures
  17. Heatwaves
  18. Droughts
  19. Severe space weather
  20. Volcanic eruptions
  21. Poor air quality
  22. Earthquakes
  23. Environmental disasters overseas
  24. Wildfires

Human and Animal Health

25. Pandemics	
26. High consequence infectious disease outbreaks	
27. Antimicrobial resistance	
28. Animal diseases	
Major Accidents	
29. Widespread electricity failures	
30. Major transport accidents	
31. System failures	
32. Commercial failures	
33. Systematic financial crisis	
34. Industrial accidents – nuclear	
35. Industrial accidents - nonnuclear	
36. Major fires	
Societal Risks	
37. Industrial action	
38. Widespread public disorder	

Risks in the NSRA and the NRR are represented as 'reasonable worst-case scenarios'. This means that they represent the worst plausible manifestation of that particular risk (once highly unlikely variations have been discounted). They are assessed in terms of likelihood and impact and then plotted onto a matrix.

[National Risk Register 2020 - GOV.UK (www.gov.uk)](https://www.gov.uk)

National Risk Register: Risk Matrix

Impact (of the reasonable worst case scenario using the impact indicators below)	< 1 in 500	1 to 5 in 500	5 to 25 in 500	25 to 125 in 500	> 125 in 500
Level E			7 25†		
Level D	34*		12 13 29		
Level C		18 28 33* 36*	14 19 21 26† 27* 38	2 3 6* 15 16 17 20	
Level B	30	24	35*	4 5 9* 10* 11* 23 32* 37	1
Level A			8* 22	31	

Likelihood
(of the reasonable worst case scenario of the risk occurring in the next year)

*Risk not plotted in the 2017 NRR | †COVID-19 is not included in the risk matrix and is therefore not included in these risks

National long-term trends

The Government's assessment of risks is based on a continuous cycle of learning lessons from real events, drawing on new scientific or technical evidence and improving the way in which the likelihood and potential impacts of risks are calculated.

Climate change

Climate change is a significant crisis facing the global community, with warmer winters and hotter summers, plus more variable rainfall and more severe storms.

Sea levels are rising by 3 millimetres a year around the UK coastline, increasing the risk to buildings close to the shoreline. Extreme weather – flooding, storms, heatwaves – already causes significant disruption throughout the UK every year, so it should not be underestimated that a more extreme climate will have a greater impact on the lives on individuals, the economy and the local environment.

Geopolitics

Conflict and instability around the world is likely to continue, driven by resource shortages and regional tensions, plus the displacement of large groups of people due to issues such as climate change. Regional warfare can enable terrorist activity and an increasing number of non-state actors will likely exert power in arenas such as cyber space.

Technology

Technological advancements, combined with major changes in how communities live and work, will be a key factor in the risk landscape in the coming years. Technology can bring people closer together, foster a globalised economy and reduce unequal access to information around the world. However, it can also create and enhance vulnerabilities and offer opportunities for malicious actors to do harm throughout our communities.

Cyber security is fundamental to individual and business resilience and will help protect everyone from issues including malware, viruses, ransomware, fraud, and intellectual property theft. Other technological advances, such as the development of artificial intelligence and quantum technologies, will see shifts in how the economy functions and the nature of how individuals work in the future.

Health and demographics

Health can be influenced by numerous factors such as age, socio-economic status and lifestyle. Chronic health problems (such as obesity – which can increase an individual's vulnerability to other diseases – or poor mental health) are likely to become increasingly pervasive in the UK due to social or economic structural changes that might arise from COVID-19, lifestyle changes, and population ageing. Substance abuse or homelessness might also arise concurrently alongside the economic impacts of COVID-19. There will be an increasing vulnerability to dementia and cancer in the

UK as the population continues to age, and this in turn will put increasing pressure on our health and social care systems.

The process where drugs are no longer effective at treating infections caused by bacteria, viruses and parasites (antimicrobial resistance) is one such trend with a growing impact. The World Health Organisation lists antimicrobial resistance as one of the most significant risks facing the world and estimates that it could cause a 3.5% global drop in GDP by 2050 through lost productivity, stemming from a workforce that is sicker with more challenging ailments for longer periods of time.

Community Risk Register

Community Risk Registers (CRRs) consider the likelihood and potential impact of a range of hazards occurring in specific areas of England and Wales. They are approved and published by Local Resilience Forums (LRFs) which have been established under the Civil Contingencies Act. They include representatives from local emergency services, and public, private and voluntary organisations. In order to produce the Community Risk Registers, LRFs use a combination of their own judgement about each risk, as well as guidance provided by central government drawn from the National Risk Assessment (NRA).

The County Durham and Darlington Community Risk Register provides information on emergencies that could happen within the Service area, together with an assessment of how likely they are to happen and the impacts if they do. The CRR also provides information for the communities of County Durham and Darlington on what to do in an emergency and guidance on recovery.

The CRR is based on the NSRA NRR and is centred around a range of data including historic, scientific and expert analysis to assess the risks to the UK as a whole. Using this information, relevant local risks are identified, and additional risks are incorporated. This process involves looking at a range of data, including incidents that have occurred, local knowledge and expert guidance.

The risks described in the CRR are as follows:

- **Human disease (pandemic influenza)**

An influenza type pandemic remains the highest assessed natural hazard which could have a significant impact on our communities. The emergence of new infectious diseases – such as SARS and COVID 19 - is unpredictable as they can spread quickly and erratically between geographic areas. Each pandemic is different and the nature of the virus, where and the time of year it will emerge, and its impacts cannot be known in advance.

- **Flooding**

Severe weather and flooding can occur at any time of the year and can be a risk to national security, human welfare and critical infrastructure. Damage to essential services, particularly to critical infrastructure could make our communities more vulnerable to other risks, and some flooding may have significant impacts on industry, agriculture and our local economy.

- **Failure of the electricity network**

The failure of the electricity network can affect a wide range of essential services with disruption to telecommunications, transport services, healthcare provision, water supplies, the internet and schools. A national blackout has never happened, but in recent years severe weather and storms have caused significant damage to the electricity distribution overhead line network, resulting in the long duration loss of power to many communities

- **Cyber**

Cyber space has become central to our economy and our society. Increasing our reliance on cyber space brings new opportunities but also new threats. While cyber space fosters open markets and open societies, this very openness can also make us more vulnerable to criminals, hackers, foreign intelligence services who want to harm us by compromising or damaging our critical data and systems. Worldwide interconnectivity and digitalisation are transforming how individuals, businesses and local authorities live an operate with a wide scale shift of services and capabilities online.

- **Malicious incidents.**

The Government's counter terrorism strategy, CONTEST is an integrated approach based on four main work streams, each with a clear objective to try and stop terrorist attacks occurring or, when they do, to mitigate their impact.

- **Adverse weather**

The weather in County Durham and Darlington is varied and dynamic. Weather patterns around the Pennines in West Durham can bring torrential rain and extremely severe snow and ice (the highest road in the County is the A66 trans-Pennine route at Bowes Moor)

Community Risk Register 2021/22 – 2023/24 (ddfire.gov.uk)
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Risk scenarios

To assess the foreseeable fire and rescue related risks within the Service area, the Community Risk Profile identifies and describes the risks within our communities, and the consequences that could arise from the hazards and cause harm to individuals. Risks are assessed and prioritised accordingly through their position on the Service community risk profile rating matrix.

The risk scenarios within the Community Risk Profile are based on the range of incidents attended over the three-year reporting period, from 1 April 2019 to 31 March 2022, and are based on the following risk themes:

- Fires;
- Rescues;
- Transport;
- Weather;
- Societal.

The categories of different types of fires are aligned to the Home Office Fire Statistics Definitions and rescue related risks are based on the historical range of incidents attended by the Service over the three-year reporting period. Transport risks are focussed on the modes of transport throughout the Service area, and while there are many weather related risks that could impact on the communities of County Durham and Darlington, the risk with the greatest likelihood is that of flooding. Other societal risks are based on miscellaneous scenarios that the Service has attended within the reporting period or has the potential to attend.

Further information on the methodology is described within appendix one, with an example of how the likelihood and impact of the risk scenarios are scored. Likelihood is based on the assessment of how many times an incident occurred within the previous three years (1095 days) to provide a percentage prediction of future probability within the next year, while the impact of each scenario is assessed against five dimensions of community harm (Human Welfare, Behavioural, Community Economic Impact, Essential Social Services and the Environmental impact). Where appropriate, national level impact scales which are based on the population of the United Kingdom), such as population, economic impact and environmental impact are used proportionately to reflect the demographic and geographic size of the Service area.

Where appropriate, the degree of confidence in each risk assessment is described. High frequency scenarios are usually assessed with a high degree of confidence as their impact can be assessed with a significant level of data and intelligence, while the risk scenarios that occur rarely are assessed with low to moderate confidence due to the limited understanding of the full range of impacts within the assessment.

Although all the risks described within the National and LRF Community Risk Registers, and the CDDFRS Community Risk Profile are generally distinct and time limited events, there is the possibility of some risks occurring simultaneously. Some

risks can be linked together in their causes and impacts, while some others are compounded where the impact of one risk magnifies the impact of another.

Linked risks are simultaneous or near simultaneous risks that share a common cause or are caused by another risk. At the national level an example of linked risks are severe storms and gales that would increase the likelihood of fluvial flooding, while drought and heatwave can happen together. Within the CDDFRS Community Risk Profile an example of linked risks would be a non-residential building fire causing both an industrial fire and a hazardous materials incident.

Compound risks are those where the occurrence of one risk makes another significantly more impactful, however, they do not share a common cause. At the national level an example of compound risks would be low temperatures and heavy snow increasing the impact of fuel shortage. Within the CDDFRS Community Risk Profile an example of compound risks would be the chronic nature of scenarios such as road vehicle or secondary fires impacting on the disruption to resources to attend other emergency incidents.

Primary fires are a category of fire that are generally more serious fires that harm people or cause damage to property. Primary fires are defined as fires that cause damage by fire, heat and/or smoke and meet at least one of the following conditions:

- Any fire that occurred in a (non-derelict) building, vehicle or (some) outdoor structures;
- Any fires involving fatalities, casualties or rescues;
- Any fire attended by five or more pumping appliances.

Primary fires are split into four sub-categories:

- Dwelling fires;
- Other building fires;
- Road vehicle fires;
- Other outdoor fires.

For a detailed description of our methodology please see the appendices to this document.

R1 Dwelling fires

Dwelling fires are a category of primary fires and are fires in properties that are a place of residence, i.e., places occupied by households such as houses and flats, excluding hotels/hostels and residential institutions. Dwellings also include non-permanent structures used solely as a dwelling, such as houseboats and caravans.

The following tables show information regarding dwelling fires in the three-year reporting period from 1 April 2019 to 31 March 2022.

Causes of dwelling fires in the three-year reporting period from 1 April 2019 to 31 March 2022 is shown below:

Causes of dwelling fires	Number of dwelling fires	Percentage of activity
Accidental	642	78.77%
Deliberate (other property)	98	12.02%
Deliberate (unknown owner)	32	3.93%
Deliberate (own property)	30	3.68%
Not known	13	1.60%
Total	**815**	**100.00%**

The distribution of dwelling fires throughout the Service area (of all accidental, deliberate, and unknown causes, 1 April 2019 to 31 March 2022 as shown below:

Station Area	Number of dwelling Fires	Percentage of total dwelling fires
Peterlee	130	15.95%
Darlington	122	14.97%
High Handenhold	96	11.78%
Bishop Auckland	90	11.04%
Consett	78	9.57%
Durham	74	9.08%
Spennymoor	58	7.12%
Newton Aycliffe	50	6.13%
Seaham	44	5.40%
Wheatley Hill	24	2.94%
Crook	20	2.45%
Stanhope	11	1.35%
Barnard Castle	11	1.35%
Sedgefield	4	0.49%
Middleton-in-Teesdale	3	0.37%
Total	**815**	**100.00%**

Further assessment of this risk shows the building types and locations within buildings where dwelling fires have started:

Type of dwelling	Number of dwelling fires	Percentage
House - single occupancy	619	75.95%
Bungalow - single occupancy	68	8.34%
Purpose Built Flat / Maisonette-multiple occupancy	56	6.87%
Self-contained Sheltered Housing	28	3.44%
Converted Flat/Maisonette - multiple occupancy	26	3.19%
caravan/mobile home (permanent dwelling)	12	1.47%
House in multiple occupation (HMO)	5	0.61%
Other	1	0.12%
Total	**815**	**100.00%**

Fires can start within a number of different locations within each dwelling, with the most frequent locations being kitchens, bedrooms and living rooms, as shown below:

Locations of where fires start within dwellings	Number of dwelling fires	Percentage of activity
Kitchen	372	45.64%
Living Room	101	12.39%
Bedroom	91	11.17%
External fittings	66	8.10%
Bathroom/Toilet	23	2.82%
Corridor/Hall	22	2.70%
External Structures	19	2.33%
Garage	17	2.09%
Roof space	15	1.84%
Dining room	13	1.60%
Under stairs (enclosed storage area)	12	1.47%
Utility room	12	1.47%
Other locations (conservatories, stairs ,chimney etc)	52	6.38%
Total	**815**	**100%**

Assessment of how fires have started during the reporting period shows that dwelling fires primarily start with structural internal fixtures and fittings, such as curtains, carpets, free standing items of furniture or lampshades), with people cooking food using oil or fat being the second most frequent item first ignited. The other broad range of items first ignited includes bedding, upholstered furniture, external roof material, mattresses etc.

Item first ignited in dwelling fires	Number of fires	Percentage of activity
Structural fixtures and fittings (internal fittings)	119	14.60%
Food (cooking oil or fat)	74	9.08%
Structural fixtures and fittings (internal wiring insulation)	71	8.71%
Structural fixtures and fittings (external fittings)	69	8.47%
Foam, rubber, plastic material	66	8.10%
Food - other	44	5.40%
Clothing and textiles	73	8.96%
Broad range of all other items first ignited	299	36.68%
Total	**815**	**100%**

The most frequent sources of ignition of dwelling fires are cooking appliances, electrical wiring, cables and plugs, and fire spread from a secondary fire. Dwelling fires where smoking related materials are the source of ignition account for only of the total number of incidents. See details below:

Source of ignition	Number of incidents	Percentage of activity
Cooking appliance	277	33.99%
Electricity supply	101	12.39%
Smoking related	75	9.20%
Spread from secondary fire	61	7.48%
Naked flame	57	6.99%
Other domestic style appliance	54	6.63%
Matches and candles	45	5.52%
Fuel/Chemical related	39	4.79%
Heating Equipment	29	3.56%
All other sources of ignition	77	9.45%
Total	**815**	**100.00%**

Analysis of operational incident data shows that there is a variation in the frequency of dwelling fires throughout the year, with more occurring during the months of April (10.67%) and March (10.06%), in comparison to May (6.75%) The variation of the monthly frequency of dwelling fires is shown below:

| Month of the year	Number of dwelling fires	Percentage of activity
April	87	10.67%
March	82	10.06%
November	79	9.69%
September	72	8.83%
October	67	8.22%
August	65	7.98%
January	64	7.85%
February	64	7.85%
July	61	7.48%
June	60	7.36%
December	59	7.24%
May	55	6.75%
Total	**815**	**100%**

Furthermore, the frequency of dwelling fires, with the variation of when dwelling fires occur on which days of the week is shown below:

Day of the week	Number of dwelling fires	Percentage of activity
Sunday	127	15.58%
Wednesday	125	15.34%
Saturday	125	15.34%
Tuesday	119	14.60%
Monday	107	13.13%
Thursday	107	13.13%
Friday	105	12.88%
Total	**815**	**100%**

Times of day

The graph below shows the number of dwelling fires in the reporting period of 2019-2022 and the times of day in which they occurred. This illustrates that most fires occur between the hours of 2pm and 9pm, with a decline in the number of fires between 1am and 9am.

Frequency of dwelling fires over a 24 hour period
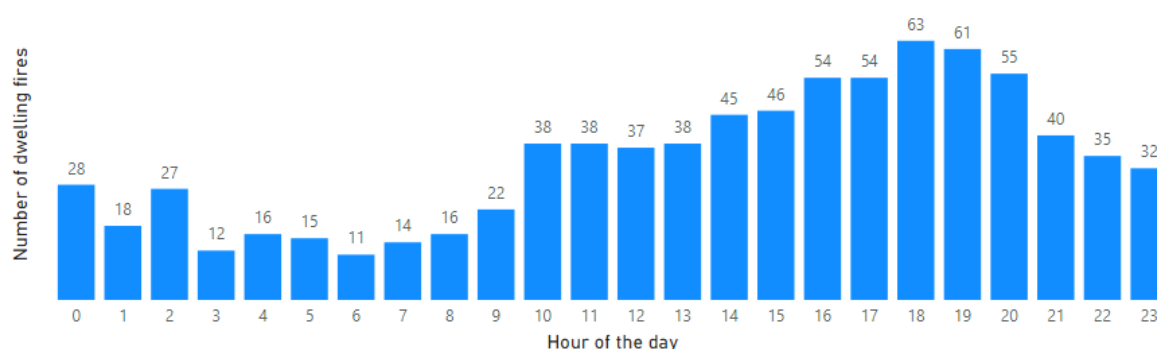
Dwelling fire fatalities and casualties

Fire related fatalities are, in general, those that would not have otherwise occurred had there not been a fire (i.e., 'no fire = no death'). This includes any fire casualty which is the direct result of injuries caused by a fire incident. Even if the fatal casualty dies subsequently, any fatality whose cause is attributed to a fire is included.

Of the dwelling fires that occurred during the reporting period, 85% did not involve any victims (690 people), while the remaining 15% (125 people) resulted in an occupier of the dwelling experiencing injuries.

Further analysis of dwelling fire data for the reporting period indicates that 79% of the persons involved did not need to be evacuated from the dwelling, while the remaining 21% needed to be evacuated by Service personnel.

The distribution of dwelling fires (of all causes) is broadly consistent with previous years. Over the previous three-year reporting period (2018/19 – 2020/21) to the current three-year reporting period (2019/20 – 2021/22), there has been an overall reduction of dwelling fires from 855 to 815 (a reduction of 4.7%). The station ranking of the frequency of dwelling fires has changed with Peterlee now the busiest station, followed by Darlington and High Handenhold.

This specific risk is not described in the National Risk Register (2020) or the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A significant fire on all floors of a dwelling, with extensive fire and smoke damage. The structural integrity of staircases and ceilings within the dwelling may become compromised due to the increased temperatures, and the provision of domestic utilities (gas, electric, water and telecommunications) would also become compromised. The internal fire loading and the ventilation could influence the development of flashover or backdraft conditions within the dwelling, presenting an increased level of risk to residents and firefighters.

This scenario could result in residents sustaining injuries (smoke inhalation, major burns or musculoskeletal) from their intended escape from their property, or during their rescue by fire service personnel. It could also lead to the loss of life to one or more of the occupants present in the dwelling at the time of the fire. There may be additional hazards to firefighters, and the injuries sustained by operational crews could range from minor burns or musculoskeletal injuries to more serious injuries from falling masonry or other structural elements.

This scenario could also lead to the involvement of partner agencies and the local authority or third sector to provide temporary accommodation. The injuries sustained at a dwelling fire could lead to a longer-term significant impact on the health and social care provision and the time involved to support subsequent investigations, or inquests, would be significant. The impact on the environment would result from the burnt products of combustion being released into the atmosphere.

Risk assessment for dwelling fires

2019/20	287
2020/21	271
2021/22	257
Three-year total	815
Three-year average	272
Risk Assessment Likelihood Score	5
Risk Assessment Impact Score	5

Risk Matrix

Confidence

Due to the number of dwelling fires during the reporting period, the dwelling fire risk is assessed with a high degree of confidence, where very few areas of the assessment are significantly affected by uncertainty.

Changes in the risk landscape of dwelling fires.

Operational incident data reported through the Incident Reporting System illustrates a decline throughout County Durham and Darlington in the number of dwelling fires over the previous ten years. There were 257 dwelling fires during 2021/22 in comparison to 351 dwelling fires in 2011/12, representing a reduction of 27% in the ten-year period.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R2 Other residential building fires

Other residential building fires are a classification of primary fires and include institutional properties such as hostels for homeless people, hotels and B&Bs, nursing/care homes, student halls of residence, children's homes, towing caravans on site and other holiday residence (cottage or flat etc).

Other residential building fires can be accidental or deliberate in their cause (none were recorded as being of an unknown cause). In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 32 other residential building fires, with their causes shown below:

Other residential building fire causes	Number of other residential building fires	Percentage of activity
Accidental	30	93.75%
Deliberate - others property	1	3.13%
Deliberate - own property	1	3.13%
Total	**32**	**100%**

The other residential building fires are not widespread throughout the Service area, with the station areas where these fires occurred is shown below:

Station area	Number of other residential building fires	Percentage of activity
Durham	7	21.88%
High Handenhold	6	18.75%
Consett	4	12.50%
Bishop Auckland	4	12.50%
Darlington	4	12.50%
Newton Aycliffe	3	9.38%
Peterlee	2	6.25%
Seaham	1	3.13%
Sedgefield	1	3.13%
Total	**32**	**100%**

Further assessment of the types of properties involved in other residential building fires indicate the following distribution of premises fires:

Types of properties	Number of other residential building fires	Percentage of activity
Nursing/care home	14	43.75%
Hotel/motel	6	18.75%
Student hall of residence	3	9.38%
Retirement/elderly	3	9.38%
Other residential home	2	6.25%
Other holiday residence (cottage, flat, chalet)	2	6.25%

Children's	1	3.13%
Towing caravan on site (not on tow)	1	3.13%
Total	**32**	**100%**

The majority of the fires in other residential buildings start in kitchens (40.63%), corridors/hallways (15.63%), bedrooms (12.50%) and laundry rooms (9.38%).

Fire start location	Distribution of locations where fires started	Percentage of activity
Kitchen	13	40.63%
Corridor/hall	5	15.63%
Bedroom	4	12.50%
Laundry room	3	9.38%
Dormitory	2	6.25%
Airing/Drying cupboard	1	3.13%
Utility Room	1	3.13%
Office	1	3.13%
External structures	1	3.13%
Power house/Plant/Generator	1	3.13%
Total	**32**	**100.0%**

Although some fires in other residential buildings have resulted in a loss of life, incidents that result in the loss of life are rare. Examples of fires in other residential buildings include small fires in care home laundry rooms, such as fires that have started in driers, fires that have started in other defective kitchen appliances such as cookers or microwaves and small electrical fires in wiring or lift motor rooms.

The risk of fires in other residential buildings such as hostels for homeless people, hotels and B&Bs, nursing/care homes, student halls of residence is influenced by the inclusion of major fires within the National Risk Register (2020). Based on the distribution of fires in other residential buildings at the locations throughout the Service area, this risk is considered to be present in all station areas, to varying degrees, with the exception of Barnard Castle, Middleton-in-Teesdale and Sedgefield. Due to the number of fires in other residential buildings, this risk is assessed with a moderate degree of confidence, where some areas of the assessment are significantly affected by uncertainty creating uncertainty bounds of up to +1 or -1 in the overall impact score. The service has a statutory duty to enforce the Regulatory Reform (Fire Safety) Order 2005 within our area and to reduce the risks of fire causing death, serious injury and property-related loss in the community. The service fulfils this duty through the delivery of fire safety audits in premises where the Fire Safety Order applies, including residential (R2) and non-residential (R3) buildings.

CDDFRS data shows that although the Service delivers a significant number of fire safety audits in relation to other fire and rescue services and is above the five-year reported average for this activity, the proportion of all fire safety audits that result in an unsatisfactory outcome is below both the Service and England five-year average.

Reasonable worst-case scenario

Based on historical data and professional judgement, the reasonable worst-case scenarios for a fire in other residential buildings would be a fire in the laundry or kitchen area of a nursing or care home that would cause significant fire and smoke damage. This scenario would lead to a fatality and would require the evacuation of multiple residents, some of whom may suffer major injuries and may experience smoke inhalation, leading to hospital admission.

Based on the location of the fire, the amount of potential fire loading and the internal conditions for firefighters (which may include the environment for flashover and/or backdraft conditions) operational crews may take a significant amount of time to extinguish the fire and complete the subsequent fire investigation. There could be an impact on local social care if residents needed to be rehomed and the time taken for the return to normal operation of the care/nursing home.

Risk assessment for other residential building fires

2019/20	15
2020/21	6
2021/22	1
Three-year total	32
Three-year average	11
Risk Assessment Likelihood Score	1
Risk Assessment Impact Score	5

Risk Matrix

Confidence

Due to the number of other residential building fires during the reporting period, the risk is assessed with a moderate degree of confidence.

Changes in the risk landscape of other residential building fires.

The Service's risk-based inspection program continues to ensure a high level of fire safety compliance in building covered by the RRO. New legislation is being considered which may further strengthen the fire safety arrangements in certain premises which are defined as high risk residential, this may cover established and future building within County Durham and Darlington, through a joint approach to safety regulation.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R3 Other non-residential building fires

Other non-residential building fires are a broad classification of primary fires and include fires in properties such as offices, shops, factories, warehouses, restaurants, public buildings, religious buildings.

The majority of premises within this scenario are covered by the Regulatory Reform (Fire Safety) Order 2005 which means that a responsible person must take reasonable steps to reduce the risk from fire and make sure that people can safely escape if there is a fire. The Combined Fire Authority has responsibility for enforcing the Fire Safety Order in relation to this and in doing so will offer advice and support to businesses, audit their fire risk assessments and take enforcement action whenever necessary to ensure the safety of the public.

Although the Combined Fire Authority are not responsible for enforcing the Fire Safety Order in Crown premises, the prisons in the Service area have been included in this scenario due to their associated level of risk and demand. In Durham there are three prisons (HM Prison Frankland, HM Prison Durham and HM Prison Low Newton) and at Barnard Castle there is a Young Offenders Institution (HM Prison Deerbolt). her non-residential building fires can be either accidental or deliberate in their cause. In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 508 other non-domestic building fires, with their causes shown below:

Other non-residential building fire causes	Number of other non-residential building fires	Percentage of activity
Accidental	262	51.57%
Deliberate - others property	159	31.30%
Deliberate - unknown owner	62	12.20%
Deliberate - own property	13	2.56%
Not known	12	2.36%
Total	508	100%

The distribution of other non-residential building fires (of all accidental, deliberate, and unknown causes) is shown below:

Station area	Number of other non-residential building fires	Percentage of activity
Peterlee	87	17.13%
Darlington	72	14.17%
Durham	68	13.39%
Bishop Auckland	52	10.24%
High Handenhold	42	8.27%
Consett	41	8.07%
Spennymoor	34	6.69%
Barnard Castle	26	5.12%
Newton Aycliffe	25	4.92%
Seaham	19	3.74%
Wheatley Hill	18	3.54%

Crook	13	2.56%
Sedgefield	6	1.18%
Middleton-in-Tees	3	0.59%
Stanhope	2	0.39%
Total	508	100%

The majority of other non-residential building fires occur in premises such as other private non-residential buildings (18.2%), private garden sheds (15.3%), private garages (11.4%) or factories (4.1%), vehicle repair (2.2%) workshops or barns (3.7%). The majority of fires in other non-residential buildings start in other external structures (40.3%), garages (10.9%), storerooms (8.9%), process or production rooms (4.9%) or kitchens (4.8%) and barns (4.8%).

Examples of fires in other non-residential buildings include a small fire in a charity dispatch centre supplying food, furniture, clothes and help to a national charity, detached garages containing cars completely destroyed by fire, sheds and garages, and fires in storage warehouses. Fires in prisons are usually deliberate, involving small amounts of paper or bedding with the majority of fire and smoke damage being limited to the item first ignited or the room of origin.

The risk of fires in other non-residential buildings such as offices, shops, factories, warehouses, restaurants, public buildings, religious buildings is influenced by the inclusion of major fires within the National Risk Register (2020). Based on the distribution of fires in other non-residential buildings at the locations throughout the Service area, this risk is considered to be present in all station areas, to varying degrees. Due to the number of fires in other non-residential buildings, this risk is assessed with a moderate degree of confidence, where some areas of the assessment are significantly affected by uncertainty creating uncertainty bounds of up to +1 or -1 in the overall impact score.

Reasonable worst-case scenario

Based on historical data and professional judgement, the reasonable worst-case scenarios for a fire in a factory or storage facility/warehouse. The fire would require several appliances and a significant period of time to extinguish and could have an impact on local travel and a harmful impact on the environment due to the composition of material involved. The potential loss of employment would have a negative impact on the local economy in the time taken for the business/warehouse to return to normal operation, and minor injuries may be experienced by employees or the public.

Risk assessment for other non-residential building fires

2019/20	185
2020/21	147
2021/22	176
Three-year total	508
Three-year average	169
Risk Assessment Likelihood Score	1
Risk Assessment Impact Score	4

Risk Matrix

Confidence

Due to the number of other non-residential building fires during the reporting period, the risk is assessed with a high degree of confidence.

Changes in the risk landscape of other non-residential building fires

The services risk-based inspection program continues to ensure a high level of fire safety compliance in building covered by the RRO. Operational crews gather risk information to ensure occupants and crews remain safe and the emergency services can effectively respond to incidents requiring an intervention.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R4 Road vehicle fires

Road vehicle fires are a classification of primary fires and are fires in vehicles used for transportation on public roads, such as cars, vans, buses/coaches, motorcycles, lorries/HGVs etc. This category of fires does not include aircraft, boats or trains, which are categorised as other outdoor fires.

Road vehicle fires can either be accidental or deliberate in their cause. In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 1,353 road vehicle fires, with their causes shown below:

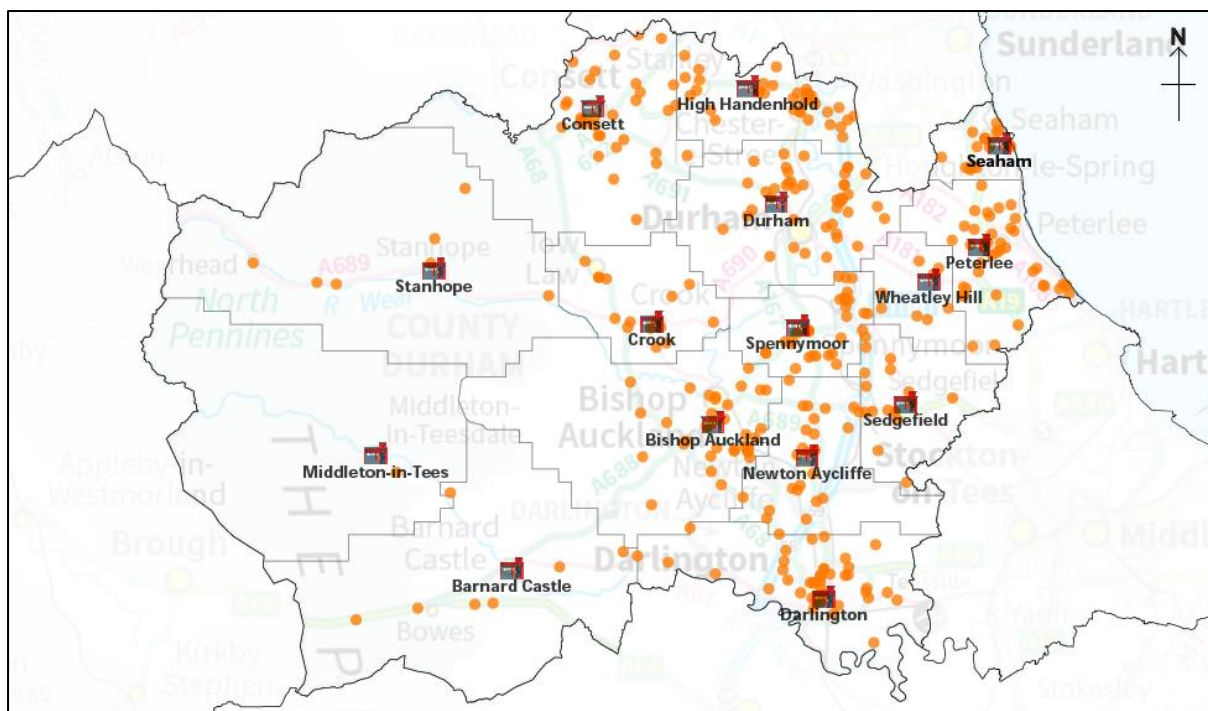| Cause of road vehicle fires	Number of road vehicle fires	Percentage of activity
Deliberate - others property	558	41.24%
Deliberate - unknown owner	383	28.31%
Accidental	372	27.49%
Not known	25	1.85%
Deliberate - own property	15	1.11%
Total	**1,353**	**100%**

The distribution of road vehicle fires throughout the Service area in the three-year reporting period is shown below, with 43.6% of the total road vehicle fires occurring in the three station areas towards the East coast (Peterlee, Seaham and Wheatley Hill). In comparison, only 1.7% of the road vehicle fires occurred in the three station areas towards the West of the Service area (Barnard Castle, Stanhope and Middleton-in-Teesdale), as shown below:

Station area	Number of road vehicle fires	Percentage of activity
Peterlee	449	33.19%
Wheatley Hill	106	7.83%
Consett	105	7.76%
Darlington	105	7.76%
Durham	103	7.61%
Bishop Auckland	98	7.24%
High Handenhold	84	6.21%
Seaham	82	6.06%
Spennymoor	72	5.32%
Newton Aycliffe	60	4.43%
Crook	41	3.03%
Sedgefield	27	2.00%
Barnard Castle	13	0.96%
Stanhope	7	0.52%
Middleton-in-Tees	1	0.07%
Total	**1,353**	**100%**

Accidental road vehicle fires account for a total of 27.3% of the Service total for all road vehicle fires, and their distribution throughout the Service area is shown below:

| Station area	Number of accidental road vehicle fires	Percentage of activity
Peterlee	50	13.44%
Bishop Auckland	40	10.75%
Darlington	39	10.48%
Durham	38	10.22%
Consett	35	9.41%
High Handenhold	34	9.14%
Spennymoor	32	8.60%
Newton Aycliffe	29	7.80%
Crook	19	5.11%
Sedgefield	16	4.30%
Seaham	12	3.23%
Barnard Castle	11	2.96%
Wheatley Hill	11	2.96%
Stanhope	6	1.61%
Total	**372**	**100%**

The locations of accidental road vehicle fires are shown below:

Deliberate road vehicle fires account for a total of 69.4% of the Service total for all road vehicle fires, and their distribution throughout the Service area is shown below:

Station area	Number of deliberate road Vehicle fires	Percentage of activity
Peterlee	397	41.53%
Wheatley Hill	94	9.83%
Consett	69	7.22%
Darlington	65	6.80%
Seaham	63	6.59%
Durham	60	6.28%
Bishop Auckland	55	5.75%
High Handenhold	46	4.81%
Spennymoor	39	4.08%
Newton Aycliffe	31	3.24%
Crook	22	2.30%
Sedgefield	11	1.15%
Barnard Castle	2	0.21%
Stanhope	1	0.10%
Middleton-in-Tees	1	0.10%
Total	**956**	**100%**

The locations of deliberate road vehicle fires are shown below:
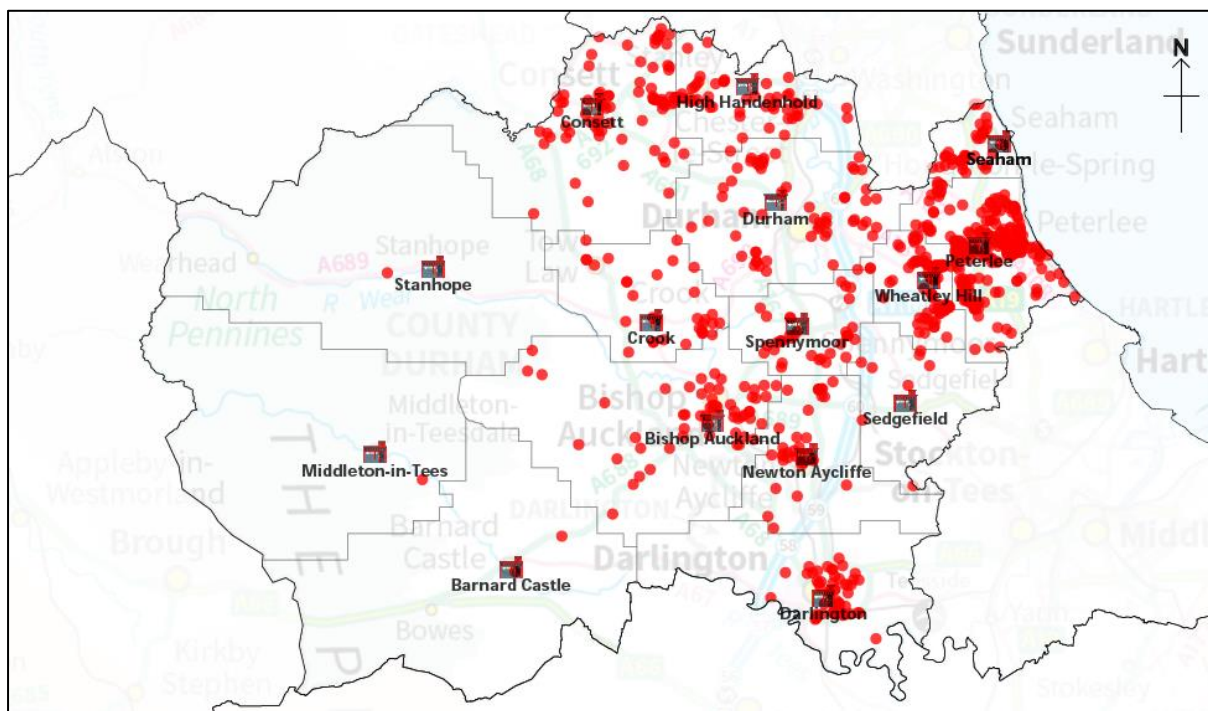
Although the majority of road vehicle fires are single cars, vans or motorcycles, there are many other types of road vehicle fires, as shown below:

Type of road vehicle	Number of road vehicle fires	Percentage of activity
Car	896	66.22%
Van	153	11.31%
Motorcycle	83	6.13%
Multiple vehicles	49	3.62%
Lorry/HGV	37	2.73%
Other	34	2.51%
Towing caravan elsewhere (not on tow)	32	2.37%
Caravan unspecified	20	1.48%
Agricultural	16	1.18%
Motor Home	10	0.74%
Bus/coach	8	0.59%
Minibus	7	0.52%
Trailer unit (not attached to tractor)	5	0.37%
Bicycle	2	0.15%
Caravan on tow	1	0.07%
Total	**1,353**	**100%**

Analysis of the data available through the incident reporting system illustrates that road vehicle fires start in various locations, as shown below:

Origin of fire	Number of road vehicle fires	Percentage of activity
Engine	524	38.73%
Driver/passenger area	443	32.74%
Not known	147	10.86%
Other	64	4.73%
Other inside/cargo area	57	4.21%
Wheels/brakes	48	3.55%
Fuel tank	39	2.88%
Boot	31	2.29%
Total	**1,353**	**100%**

The extent of damage caused by road vehicle fires can range from involving the whole vehicle to minor external damage, as shown below:

Extent of fire damage	Number of times damage occurred	Percentage of activity
Whole vehicle	732	54.10%
Engine compartment	345	25.50%
Driver/passenger compartment	184	13.60%
Separate luggage compartment	43	3.18%
Wheels/tyres/brakes/axles/bearings	34	2.51%
Roof/roof rack (exterior to vehicle)	9	0.67%
Fuel tank	6	0.44%
Total	**1,353**	**100%**

Of the total of 1,319 road vehicle fires in the three-year reporting period, only 45 (3.4%) were reported missing to the police, while 980 (74.3%) were not reported missing to the Police. During the reporting period, it was unknown whether the remaining 294 (22.3%) of the road vehicles were reported missing to the Police.

This specific risk is not described in the National Risk Register (2020) or the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario for road vehicle fires would be a fire that involved multiple vehicles and required the attendance of several appliances to successfully extinguish it. This scenario would occur in a location with difficult access and limited water supplies and could take a significant time to extinguish. The fire could also have an impact on local transport routes due to closed roadways and impact on the local environment and the prosperity of affected locations.

Risk assessment for road vehicle fires

2019/20	433
2020/21	470
2021/22	450
Three-year total	1,353
Three-year average	451
Risk Assessment Likelihood Score	5
Risk Assessment Impact Score	3

Risk Matrix

Impact	5	🟧	🟥	🟥	🟥	🟥
	4	🟨	🟧	🟥	🟥	🟥
	3	🟨	🟨	🟧	🟧	🟧 ●
	2	🟩	🟨	🟨	🟨	🟨
	1	🟩	🟩	🟩	🟩	🟩
		1	2	3	4	5
		Likelihood				

Confidence

Due to the number of road vehicle fires during the reporting period, the road vehicle fire risk is assessed with a high degree of confidence, where very few areas of the assessment are significantly affected by uncertainty.

Changes in the risk landscape of road vehicle fires

CDDFRS continues to monitor the technical advances in road vehicles, the introduction of alternative fuel types and approaches to refuelling along with the construction and materials used in the manufacturing of road vehicle components, continue to have an impact on the required response from the Fire and Rescue Service when an intervention is required. New firefighting techniques, skills and technology is being explored to ensure the Fire and Rescue Service can safely and effectively meet its statuary responsibilities.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R5 Secondary fires

Secondary fires are generally outdoor fires, not involving people or property. These include refuse fires, grassland fires and fires in derelict buildings or vehicles, unless these fires involve casualties or rescues, or five or more pumping appliances attend, in which case they become primary fires.

Secondary fires can be accidental or deliberate (or not known), and in the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 7,826 secondary fires, with their causes shown below:

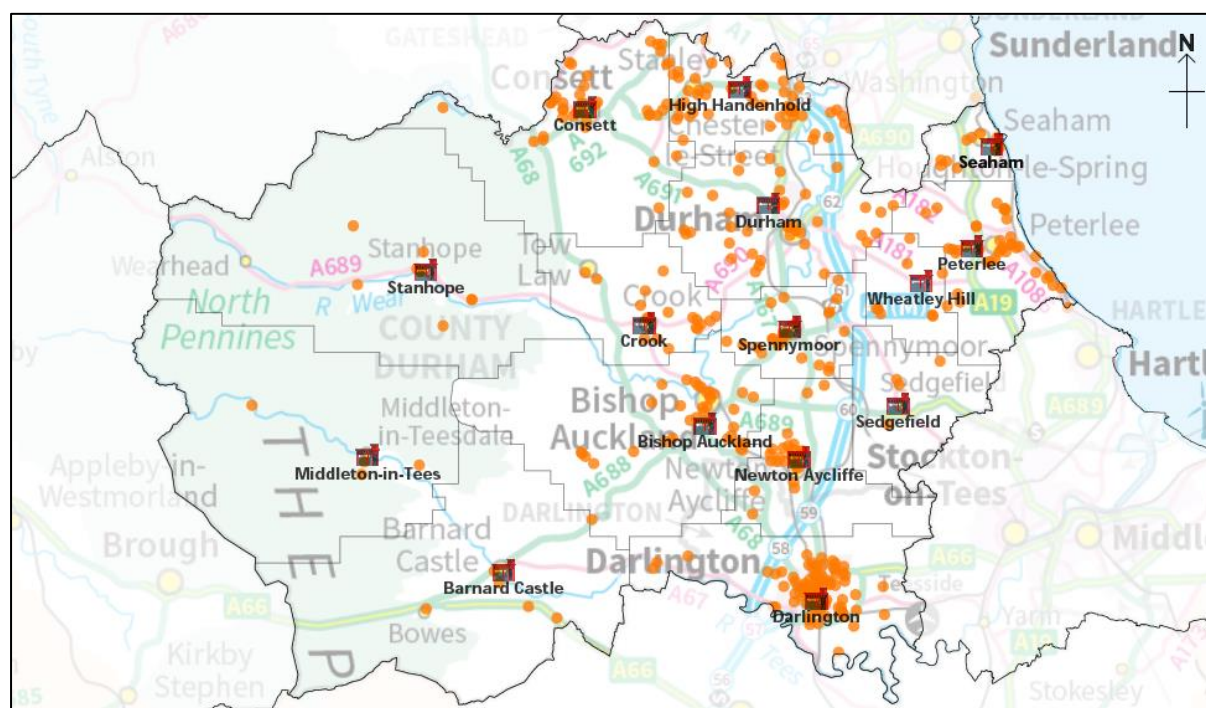| Secondary fire causes	Number of secondary fires	Percentage of activity
Deliberate - unknown owner	3,912	49.99%
Deliberate - others property	2,448	31.28%
Deliberate - own property	728	9.30%
Accidental	435	5.56%
Not known	303	3.87%
Total	**7,826**	**100%**

There is a significant variation in the distribution of secondary fires throughout the Service area. The three stations towards the East coast (Peterlee, Seaham and Wheatley Hill) account for 33.16% of the total secondary fires, while the three stations towards the West of the Service area account for only 0.76% of the activity for this incident type. The distribution of secondary fires throughout the Service area during the three-year reporting period is shown below:

Station area	Number of secondary fires	Percentage of activity
Peterlee	1740	22.23%
Darlington	1257	16.06%
High Handenhold	922	11.78%
Bishop Auckland	811	10.36%
Durham	654	8.36%
Seaham	518	6.62%
Consett	459	5.87%
Spennymoor	389	4.97%
Newton Aycliffe	363	4.64%
Wheatley Hill	337	4.31%
Crook	262	3.35%
Sedgefield	55	0.70%
Stanhope	28	0.36%
Barnard Castle	27	0.35%
Middleton-in-Tees	4	0.05%
Total	**7,826**	**100%**

Accidental secondary fires account for a total of 5.5% of the Service total for all secondary fires, and their distribution throughout the Service area is shown below:

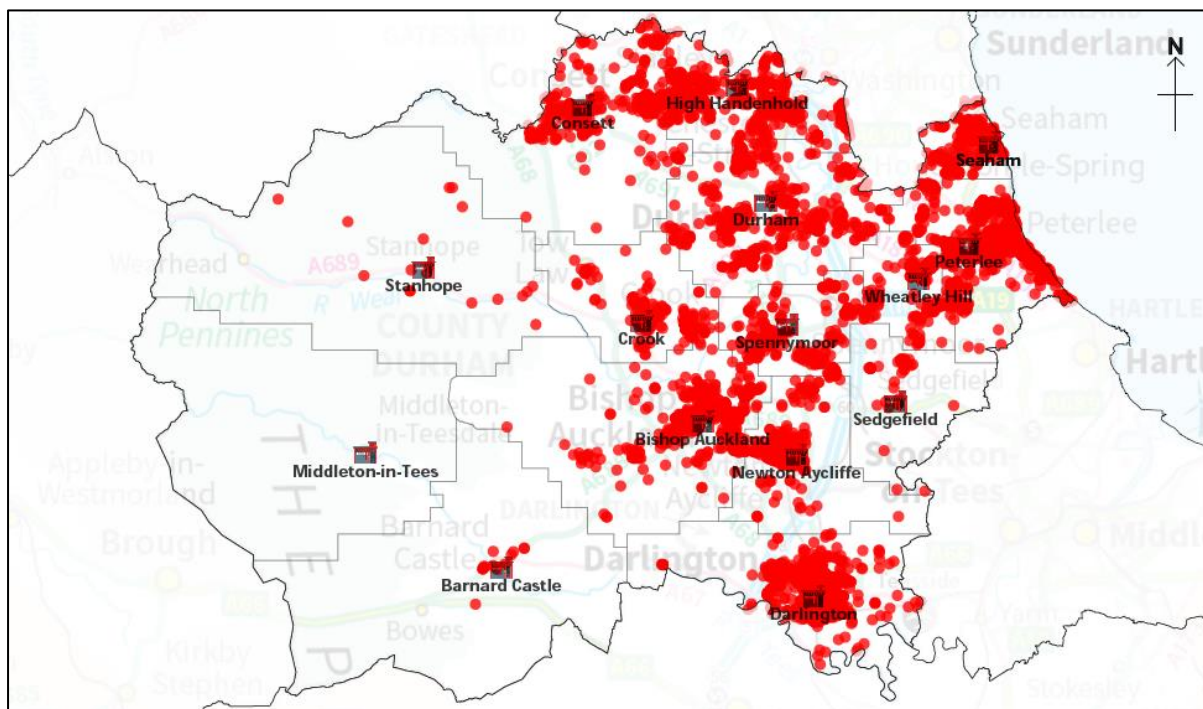| Station area	Number of accidental secondary fires	Percentage of activity
Darlington	102	23.45%
High Handenhold	62	14.25%
Bishop Auckland	45	10.34%
Durham	45	10.34%
Peterlee	44	10.11%
Consett	31	7.13%
Spennymoor	22	5.06%
Crook	21	4.83%
Newton Aycliffe	20	4.60%
Seaham	18	4.14%
Stanhope	7	1.61%
Sedgefield	6	1.38%
Wheatley Hill	5	1.15%
Barnard Castle	4	0.92%
Middleton-in-Tees	3	0.69%
Total	**435**	**100%**

The location of accidental secondary fires throughout the Service area is shown below:

Deliberate secondary fires account for a total of 88.5% of the Service total for all secondary fires, and their distribution throughout the Service area is shown below:

Station area	Number of deliberate secondary fires	Percentage of activity
Peterlee	1681	23.72%
Darlington	1106	15.60%
High Handenhold	794	11.20%
Bishop Auckland	741	10.45%
Durham	576	8.13%
Seaham	491	6.93%
Consett	396	5.59%
Spennymoor	350	4.94%
Newton Aycliffe	328	4.63%
Wheatley Hill	318	4.49%
Crook	231	3.26%
Sedgefield	44	0.62%
Stanhope	19	0.27%
Barnard Castle	12	0.17%
Total	**7,088**	**100%**

The location of deliberate secondary fires throughout the Service area is shown below:

Unknown cause secondary fires account for a total of 6.0% of the Service total for all secondary fires, and their distribution throughout the Service area is shown below:

Station area	Number of unknown cause secondary fires	Percentage of activity
High Handenhold	66	21.78%
Darlington	49	16.17%
Durham	33	10.89%
Consett	32	10.56%
Bishop Auckland	25	8.25%
Spennymoor	17	5.61%
Newton Aycliffe	15	4.95%
Peterlee	15	4.95%
Wheatley Hill	14	4.62%
Barnard Castle	11	3.63%
Crook	10	3.30%
Seaham	9	2.97%
Sedgefield	5	1.65%
Stanhope	2	0.66%
Middleton-in-Tees	0	0.00%
Total	**303**	**100%**

The locations and type of materials involved in secondary fires is wide ranging, however, the most frequent secondary fires involve loose refuse (including garden refuse) (48.9%), scrub land (14.3%), tree scrub (7.2%), small refuse/rubbish/recycling containers (excluding wheelie bins) (6.2% and wheelie bins (5.2%). Other types of material involved in secondary fires are shown below:

Locations of secondary fires	Number of secondary fires	Percentage of activity
Loose refuse (incl in garden)	3791	48.44%
Scrub land	1037	13.25%
Tree scrub (includes single trees not in garden)	576	7.36%
Small refuse/rubbish/recycle container (excluding wheelie bin)	503	6.43%
Grassland, pasture, grazing etc	472	6.03%
Wheelie Bin	419	5.35%
Large refuse/rubbish container (eg skip)	124	1.58%
Fence	114	1.46%
Private/Domestic garden/allotment (vegetation not equipment/building)	112	1.43%
Hedge	80	1.02%
Other outdoor items including roadside furniture	75	0.96%
Roadside vegetation	60	0.77%
Straw/stubble burning	57	0.73%
Heathland or moorland	54	0.69%
Canal/riverbank vegetation	32	0.41%
	25	0.32%
Other private non-residential building	20	0.26%
Other buildings/use not known	18	0.23%
Railway trackside vegetation	18	0.23%
Wasteland	18	0.23%
Other outdoor location	17	0.22%
All other locations	204	2.61%
Total	**7,826**	**100%**

This specific risk is not described in the National Risk Register (2020) or the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A fire in a derelict building which requires the attendance of up to four pumping appliances over an extended period of time. Due to the nature of the material involved in the fire, there may also be an adverse environmental impact from the products of combustion and contamination of the local area and/or equipment. The cumulative duration of time needed to extinguish the fires would also impact on the availability of appliances and require standby appliances to provide fire cover, leading to a wider impact on the resource availability to deliver prevention and protection activities.

Risk assessment for secondary fires

2019/20	2,381
2020/21	2,335
2021/22	3,110
Three-year total	7,826
Three-year average	2,609
Risk Assessment Likelihood Score	5
Risk Assessment Impact Score	4

Risk Matrix

Confidence

Due to the number of secondary fires during the reporting period, the secondary fire risk is assessed with a high degree of confidence, where very few areas of the assessment are significantly affected by uncertainty.

Changes in the risk landscape of secondary fires

CDDFRS continues to work with key partners to reduce the opportunity of secondary fires, using regulatory powers and education.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R6 Void and Derelict Buildings

Our Service area has a number of empty buildings, known as void buildings, which have become more derelict as the time goes on without action being taken on their future. The reasons to explain why they are empty can be complex but can be as a result of an owner going out of business and not being able to sell it, planning difficulties or neglect.

When a building is standing empty there are various risks associated with it and if a building is left unsecure, unmanaged and accessible this presents a significant challenge. Building collapse becomes more imminent, and the threat of arson also increases. In some situations there can be people going into such buildings or even occupying them and this especially hazardous if the building becomes involved in a fire, and for responding personnel.

Reasonable worst case scenario

The reasonable worst case scenario would be a fire in a building that has been unoccupied and unsecure for a considerable time and is in a state of disrepair. In this scenario there have been reports of persons entering the empty building and a fatality is therefore possible.

Risk Assessment

2019/20	45
2020/21	29
2021/22	26
Three-year total	100
Three-year average	33.33
Risk Assessment Likelihood Score	3
Risk Assessment Impact Score	4

Risk Matrix

Confidence

Due to the low frequency of fires in void or derelict buildings, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty.

Changes in the risk landscape of void and empty buildings

CDDFRS continues to work with key partners to reduce the opportunity of fires in void and derelict buildings.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.
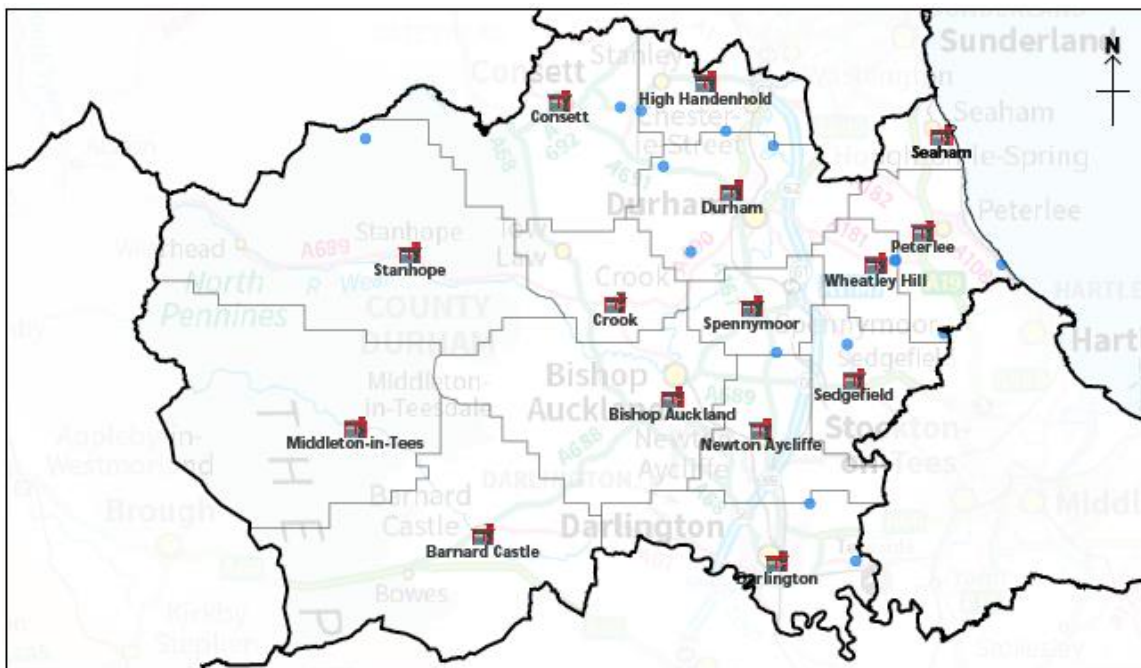
R7 Wildfires

Wildfires, wildland fires or rural fires are unplanned, unwanted, and uncontrolled fires in an area of combustible vegetation starting in rural or urban areas. Wildfires are a specific incident type, which requires specific knowledge and understanding to address the difficulties and dangers inherent in its management.

Within this scenario, a wildfire is defined as any uncontrolled vegetation fire where a decision or action is needed about its suppression. A wildfire will meet one or more of the following criteria:

- Involves a geographical area of at least one hectare (10,000 square metres);
- Has a sustained flame length of more than 1.5 metres;
- Requires a committed resource of at least four fire and rescue service appliances/resources;
- Requires resources to be committed for at least six hours;
- Presents a serious threat to life, environment, property and infrastructure.

The level of wildfire risk is not evenly spread across the UK; it varies considerably between seasons and between different regions of the UK. The key factors influencing wildfire risk are the prevailing weather conditions, vegetation types and the local topography. The west of the Service area is predominantly rural, consisting of open moorland and wooded river valleys, and is sparsely populated. Middle-in-Teesdale, Barnard Castle and Stanhope fire stations cover a large outlying area of small villages and communities. These remote rural areas comprise of the vegetation and environment that could support the development of a wildfire in the appropriate atmospheric conditions.

The locations of wildfires in the Service area during the reporting period are shown below and described in the table below:

Historically the UK has experienced periodic severe wildfire seasons. These seasons have tended to coincide with extended periods of warm and dry weather and have sometimes been accompanied by high winds. The risk of wildfires is also affected by the size, condition, and dryness of the fuel. Increased rainfall before warm, dry periods can cause rapid vegetation growth that can increase the risk of wildfires when the vegetation later dries. These are the conditions that provide the ideal environment for the development and spread of large and destructive wildfires.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 13 wildfires. Although the west of the Service area is predominantly rural, wildfires that meet the Home Office definition described previously can occur within any station area, as shown below:

Station area	2019/20	2020/21	2021/22	% of Total	Total
Peterlee	-	1	-	9.1%	1
High Handenhold	-	2	-	18.2%	2
Durham	-	1	2	27.3%	3
Wheatley Hill	1	-	-	9.1%	1
Darlington	1	1	1	27.3%	3
Stanhope	-	-	-		-
Sedgefield	-	-	-		-
Consett	-	-	1	9.1%	1
Spennymoor	-	-	-		-
Bishop Auckland	-	-	-		-
Newton Aycliffe	-	-	-		-
Seaham	-	-	-		-
Crook	-	-	-		-
Barnard Castle	-	-	-		-
Middleton-in-Teesdale	-	-	-		-
Total	**2**	**5**	**4**		**11**

Major fires, of which wildfires are a risk variation, are included within the National Risk Register (2020 edition), where climate change is described as leading to changes in the rainfall pattern that affects the UK and the increased likelihood of longer and drier summers leading to a risk of drought and more frequent and larger wildfires. The national major fire risk describes a national scenario of a sustained and widespread wildfire close to major infrastructure or at an urban/rural interface with varying degrees of intensity and 'burn back' for a period of up to seven days, potentially impacting tourism and the environment.

Although there have been other significant wildfires in other parts of the UK, where crews from CDDFRS have assisted the operational response to extinguish the fire, the frequency of wildfires within the service area is low.

The Met Office provides a <u>Fire Severity Index for England and Wales</u>, with information on the potential severity of wildfires. The Met Office's Fire Severity Index (FSI) is an assessment of how severe a fire could become if one were to start, however, it is not an assessment of the risk of wildfires occurring. The FSI shows the current day's fire severity and a forecast of likely fire severity over the coming five days.

The index values are from 1 to 5, which represents an increasing degree of fire severity as follows:

- FSI level 1 = low fire severity;
- FSI level 2 = moderate fire severity;
- FSI level 3 = high fire severity;
- FSI level 4 = very high fire severity;
- FSI level 5 = exceptional fire severity.

The risk of wildfires is not included within the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

The reasonable worst-case scenario for a wildfire incident in the Service area would be a protracted large fire over multiple days in a rural area with difficult access and limited water supplies. This scenario would require numerous Service and other resources to extinguish the fire, with the use of tactical advisors and appliances to support the management strategy to extinguish the fire. The wildfire would cause a significant impact on the availability of resources and have a negative impact on the local environment. It is unlikely that either any members of the public or firefighters would receive significant injuries, and only minor harms would be experienced due to the arduous conditions experienced.

Risk assessment for wildfires

2019/20	2
2020/21	5
2021/22	4
Three-year total	11
Three-year average	3.7
Risk Assessment Likelihood Score	2
Risk Assessment Impact Score	4

Risk Matrix

Impact							
	5	🟧	🟥	🟥	🟥	🟥	
	4	🟨	🟧 ●	🟥	🟥	🟥	
	3	🟨	🟨	🟧	🟧	🟧	
	2	🟩	🟨	🟨	🟨	🟨	
	1	🟩	🟩	🟩	🟩	🟩	
		1	2	3	4	5	
		Likelihood					

Confidence

Due to the low frequency of wildfires, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty.

Changes in the risk landscape of wildfires

The comparison of the assessment of this risk during the current and previous reporting periods shows no change in the level of risk, however, nationally, the risk of wildfires is expected to increase due to the warmer winters and hotter summers associated with the climate changes described within the National Risk Register 2020 This risk is only considered present in the station areas that have had a wildfire that has met the specific National Operational Guidance definition for this incident type, as shown above. Although the stations to the west of the Service area have not had fires that have met this specific definition, professional judgement also influences the inclusion of this risk in the Middleton-in-Teesdale and Barnard Castle station areas. Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R8 Rescues from water

The rivers, lakes and other areas of open water throughout the Service area present a risk when members of the public enter flowing or static water, get into difficulty and require to be rescued by fire and rescue service personnel. The River Wear, Gaunless, Browney, Tees and the River Skerne run through many of the station areas with many natural and man-made features creating hazards for individuals entering moving water.

The prevalence of incidents where rescues from water are completed is shown below, with most incidents in Durham, Bishop Auckland and Darlington requiring the rescue of persons in rivers or other moving water, or bankside where they may be partly in or out of the water. Incidents at Durham, Stanhope and Middleton-in-Teesdale have all involved persons on the roof of their vehicle that is surrounded by moving water and who need to be rescued.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 43 rescues from water as shown in the table below:

Station area	Number of rescues from water	Percentage of activity
Durham	20	46.51%
Darlington	8	18.60%
Bishop Auckland	3	6.98%
High Handenhold	2	4.65%
Peterlee	2	4.65%
Spennymoor	2	4.65%
Stanhope	2	4.65%
Consett	1	2.33%
Middleton-in-Tees	1	2.33%
Newton Aycliffe	1	2.33%
Wheatley Hill	1	2.33%
Total	**43**	**100%**

Examples of rescues from water include youths camping on a river island overnight and who became stranded due to rising water levels, people driving their vehicles through becks and fords who need to be rescued, and individuals entering rivers for social or sports activities and then are unable to recover themselves to a place of safety and then need to be rescued.

The types of rescues from water during the reporting period are shown below:

Type of rescues from water	Number of incidents	Percentage of activity
Rescue or evacuation from water	31	72.09%
Animal assistance incident	12	27.91%
Total	**43**	**100%**

The locations of the rescues from water during the reporting period are shown below:
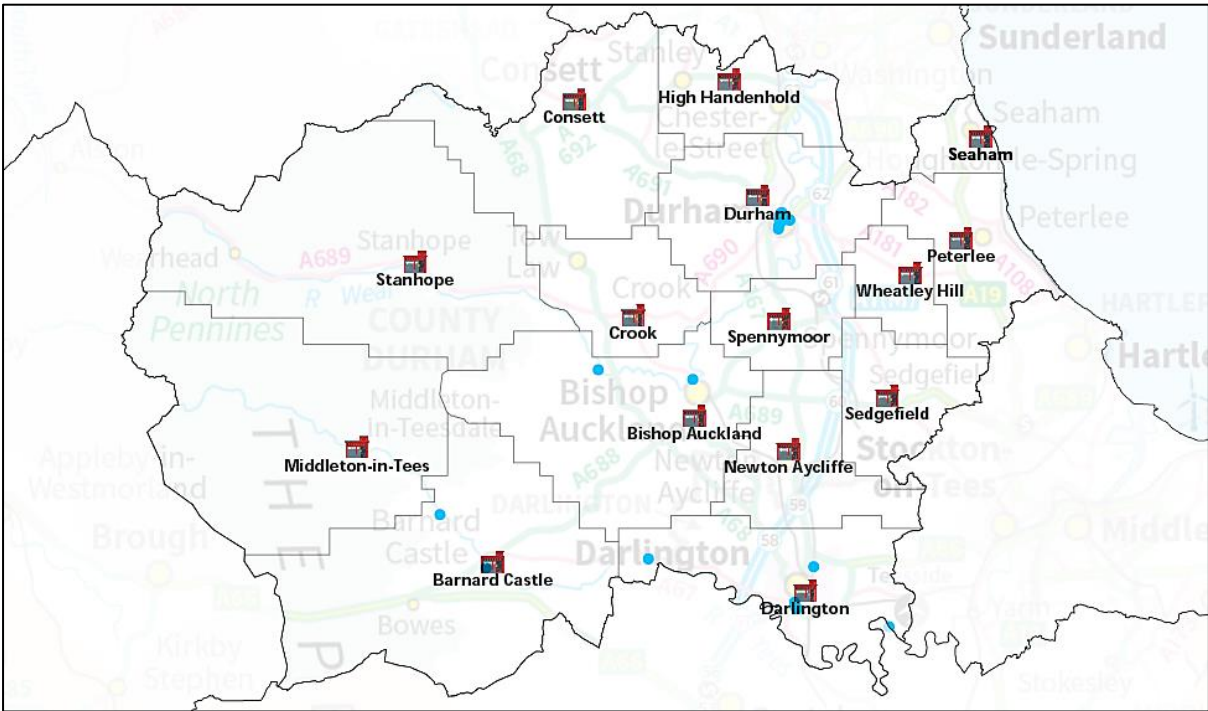
Our data shows that more water rescues take place on a Saturday than on other days of the week. The graph below shows the number of rescues by hour of the day and highlights that most take place at mid afternoon.
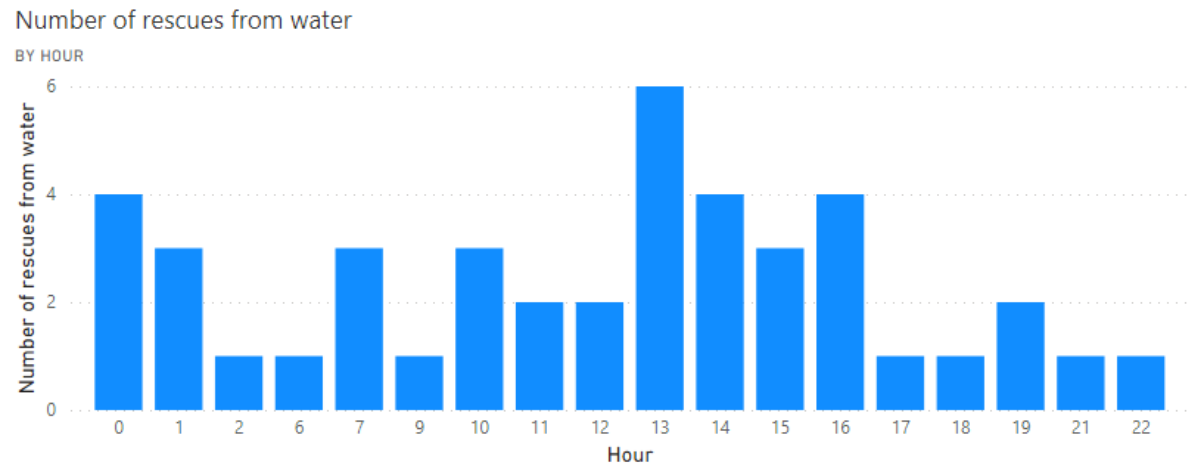
Rescues from water are not included in either the National Security Risk Assessment or the or the County Durham and Darlington Local Resilience Forum Community Risk Register and due to the frequency and impact of previous incidents in the reporting period, the risk scenario below is only considered appropriate for the limited number of stations listed to which it applies.

Reasonable worst-case scenario

An incident where an individual entered the water for social activities and was unable to recover themselves from the water. The incident would occur in a remote location with difficult access and could result in the loss of life to a member of the public. This scenario would require the attendance of specialist resources to carry out time critical safe and effective rescues.

Risk assessment for rescues from water

2019/20	17
2020/21	9
2021/22	17
Three-year total	43
Three-year average	14.3
Risk Assessment Likelihood Score	3
Risk Assessment Impact Score	4

Risk Matrix

Confidence

Due to the low frequency of rescues from water, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty. Rescues from water are infrequent, and their impact is also low across several of the impact indicators.

Changes in the risk landscape of rescues from water.

The comparison of the assessment of this risk during the current and previous reporting periods shows no change in the level of risk.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R9 Rescues from height

Height related scenarios describe any work activity where there is a possibility that a fall from a distance that is liable to cause an injury could occur at any place, either at, or below ground level. This includes work above ground/floor level and areas where falls could occur from an edge or through an opening or fragile surface or falls from ground level into an opening in a floor or a hole in the ground. Height related scenarios can occur in a broad range of environments, including above and below ground level, industrial sites, buildings and dwellings (including buildings under construction), open structures and natural environments (such as steep ground, rock faces, excavations or sink holes).

The geographic area of the Service includes the coastline to the east, and fells and dales in the rural areas to the west, which both present a broad range of scenarios where people may become stranded and require to be rescued from an unsafe height related environment.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 135 rescues from height. The prevalence of rescues from height in the Service area is shown below:

Station area	Number of rescues from height	Percentage
Darlington	26	19.26%
Durham	20	14.81%
Seaham	15	11.11%
High Handenhold	14	10.37%
Bishop Auckland	12	8.89%
Consett	11	8.15%
Peterlee	11	8.15%
Wheatley Hill	6	4.44%
Crook	5	3.70%
Spennymoor	5	3.70%
Stanhope	5	3.70%
Newton Aycliffe	4	2.96%
Sedgefield	1	0.74%
Total	**135**	**100%**

The range of incidents in the three-year reporting period includes the rescue of a youth who was stuck on the roof of a house, a child who had fallen through a suspended ceiling within a supermarket and sustained broken bones, rescues of adults who were attempting suicide by jumping from bridges and the rescue of an adult from the top of a crane. The locations of these incidents include outdoor structures such as bridges, cranes, roofs or ledges. Incidents that have involved the rescue of people from below ground include the rescue of a cyclist who feel down a ravine.

The service has three levels of working at height response. All emergency response staff are trained to the minimum of level one safe working at height techniques using work restraint, fall arrest and life lining. Staff at Durham and Consett are trained to level two to enable personnel to provide a limited first strike capability for the purposes of firefighter and casualty stabilisation and recovery, walking wounded recovery and casualty stabilisation. This equipment can also be used for confined space work. Staff at Newton Aycliffe and Seaham are trained to level three, with more advanced rope access equipment and advanced training to enable personnel to provide a full technical rescue including the capability of self-lowering/raising level three operators and casualty, extra equipment to assist cliff and confined space rescues. Further assistance is also available from Cleveland Fire Brigade, Tyne and Wear Fire and Rescue Service and Tees & Wear Search and Mountain Rescue in the event of the CDDFRS level three team being unavailable or additional support is required for a larger or more complex incident.

The types of rescues from height during the reporting period are shown below:

Type of rescue from height	Number of incidents	Percentage
From height e.g. pylon crane, roof or ledge.	57	42.22%
Domestic e.g. Cat, Dog, Rodents, Horse, Bird, etc	33	24.44%
Wild e.g. Horse, Deer, Wildfowl, Game, Aquatic, Exotic, etc	21	15.56%
Threat of/attempted suicide	7	5.19%
Livestock e.g. Horse, Cow, Sheep, Goat, Pig, Poultry, Fish, Exotic (Llama/Ostrich), Deer etc	4	2.96%
Other	4	2.96%
Service not required	4	2.96%
Assistance to other agencies	2	1.48%
From below ground, e.g shaft, cave, tunnel, sewer,well.	1	0.74%
Other stand by	1	0.74%
Suicide	1	0.74%
Total	**119**	**100%**

As shown below, the locations of the height related incidents are widespread, with some occurring near the coastline and others in the towns and villages across the service area. The stations in the west of the county, Barnard Castle, Middleton-in-Teesdale and Stanhope experience very few height related incidents.
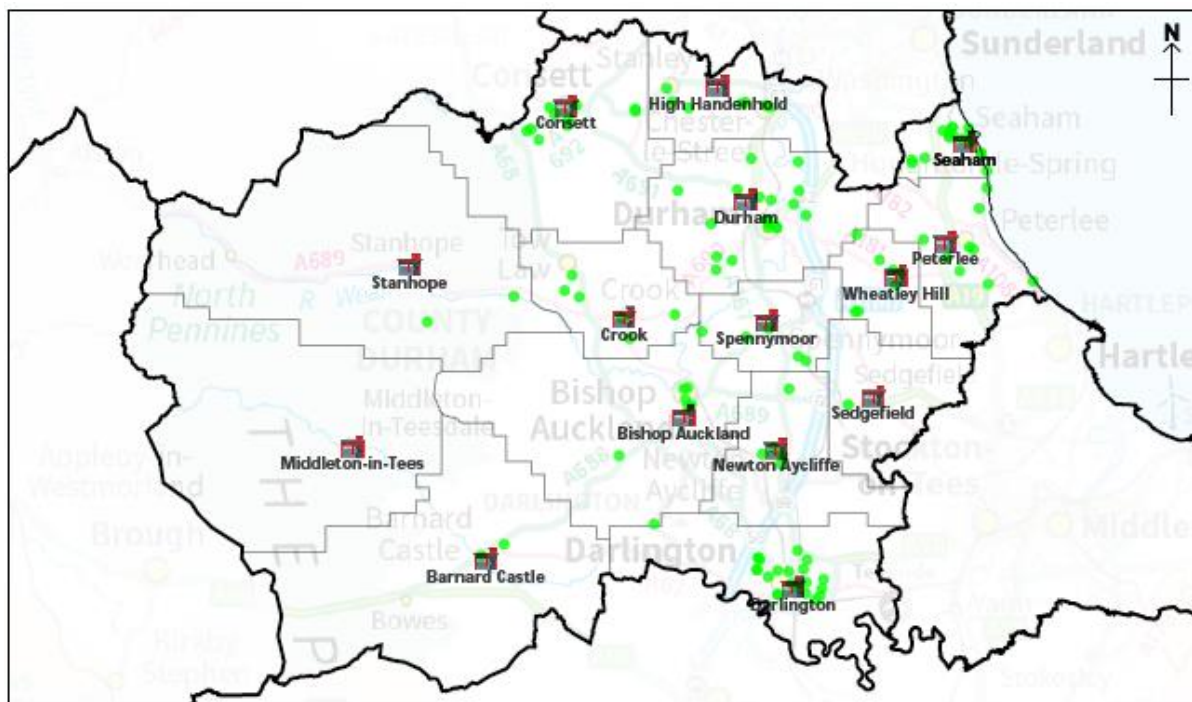
Reasonable worst-case scenario

An incident where a member of the public came into difficulty and required to be rescued from a ledge, embankment, or a crag/cliff. The member of the public may have sustained minor injuries and would require medical assistance at the scene of the rescue which may be time critical due to limited daylight or the nature of any injuries. The incident would be resolved by staff with more advanced rope access equipment and advanced training.

Risk assessment for rescues from height

2019/20	36
2020/21	37
2021/22	62
Three-year total	43
Three-year average	135
Risk Assessment Likelihood Score	3
Risk Assessment Impact Score	2

Risk Matrix

Impact		1	2	3	4	5
5		orange	red	red	red	red
4		yellow	orange	red	red	red
3		yellow	yellow	orange	orange	orange
2		green	yellow	yellow ●	yellow	yellow
1		green	green	green	green	green
		1	**2**	**3**	**4**	**5**
				Likelihood		

Confidence

Due to the low frequency of rescues from height, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty. Rescues from height are infrequent, and their impact is also low across several of the impact indicators.

Changes in the risk landscape of rescues from height.

The comparison of the assessment of this risk during the current and previous reporting periods shows no change in the level of risk.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R10 Road traffic collisions

Road Traffic Collisions (RTCs) are the non-fire incidents that require the attendance of the Service for collisions involving large and small vehicles road vehicles, including motorbikes. RTCs are the most frequently attended non-fire incident by fire and rescue services. The Service has a statutory duty from Section 8 of the Fire and Rescue Services Act 2004 to rescue people and protect them from serious harm in the event of road traffic collisions within their area.

The Service covers an area of 939 m2 with a high number of B, C, and unclassified roads towards the west, with A class roads linking the main towns in County Durham and Darlington. The A1(M) motorway runs through the Service area and passes through Darlington, Newton Aycliffe, Sedgefield, Spennymoor, Durham and High Handenhold station areas. The A68 runs from Darlington, west through Bishop Auckland and towards the Consett station area, while the A19 runs between the Seaham and Peterlee station areas, parallel to the east coast.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 835 road traffic collisions as detailed in the table below:

Station area	Number of RTCs	Percentage of activity
Peterlee	111	13.29%
Darlington	106	12.69%
Durham	102	12.22%
Consett	83	9.94%
High Handenhold	83	9.94%
Newton Aycliffe	66	7.90%
Bishop Auckland	60	7.19%
Sedgefield	41	4.91%
Spennymoor	40	4.79%
Seaham	38	4.55%
Crook	31	3.71%
Wheatley Hill	27	3.23%
Stanhope	24	2.87%
Barnard Castle	17	2.04%
Middleton-in-Tees	6	0.72%
Total	835	100%

Data supplied by the Traffic Accident Data Unit and available through the North East England Road User Casualty Dashboard describes the following key themes within the reporting period:

- The number of slight and serious injuries from RTCs are decreasing for all road users, the number of fatalities is showing a slight decrease over the three-year reporting period;
- Of all road users the greatest number of fatalities and were to car occupants, pedestrians and motorcyclists;

- The most serious injuries occurred to car occupants, pedestrians, motorcyclists and pedal cyclists;
- Most fatalities occur in the 26 – 30 age group, slight injuries are in the 21-25 age group, while most serious injuries occur in the 16 – 20 age group.

The range of activities carried out by operational crews can vary depending on the extent of the collision and the nature of the injuries sustained to the driver and passenger(s). The range of activities carried out by crews at RTCs during the reporting period is shown below:

Activity at RTCS attended	Frequency of activities	Percentage of activity
Make vehicle safe	275	32.93%
Extrication of person/s	198	23.71%
Make scene safe	131	15.69%
Medical assistance only	71	8.50%
Release of person/s	61	7.31%
Advice only	48	5.75%
Wash down road	40	4.79%
Stand by no action	10	1.20%
Other	1	0.12%
Total	**835**	**100%**

The types of RTCs attended during the reporting period involved the following obstructions and/or other road vehicles:

Road vehicles involved in RTCs	Number of incidents	Percentage of activity
Multiple Vehicles	408	48.86%
Car	368	44.07%
Van	14	1.68%
Lorry/HGV	13	1.56%
Highway/road surface/pavement	9	1.08%
Motorcycle	6	0.72%
Other	17	2.04%
Total	**835**	**100%**

The majority of 51.6% of RTCs are managed by one appliance only, while 39.2% of the RTCs are managed by two appliances and on only 7.8% of the RTCs during the reporting period are three appliances required to rescue people and protect them following an RTC. On only four occasions (0.4%) were four or five appliances required to deal with an RTC in the reporting period.

When assessing the locations of the RTCs where fatalities, severe and slight injuries occur, the Fire Statistics Definitions published by the Home Office are used for clarity over the extent of injuries, where:

- Fatal can be as a direct or indirect result of an RTC;

- Hospital severe – at least an overnight stay in hospital as an in-patient;
- Hospital slight – attending hospital as an outpatient (not a precautionary check).

Fatal RTCs

The majority of fatal RTCs occur on the A class roads in the north of the Service area, around Consett and High Handenhold stations (A693), with other fatalities occurring on the road connecting Darlington, Bishop Auckland (A68), Spennymoor and Durham (A167). The locations of fatal RTC incidents are shown below:
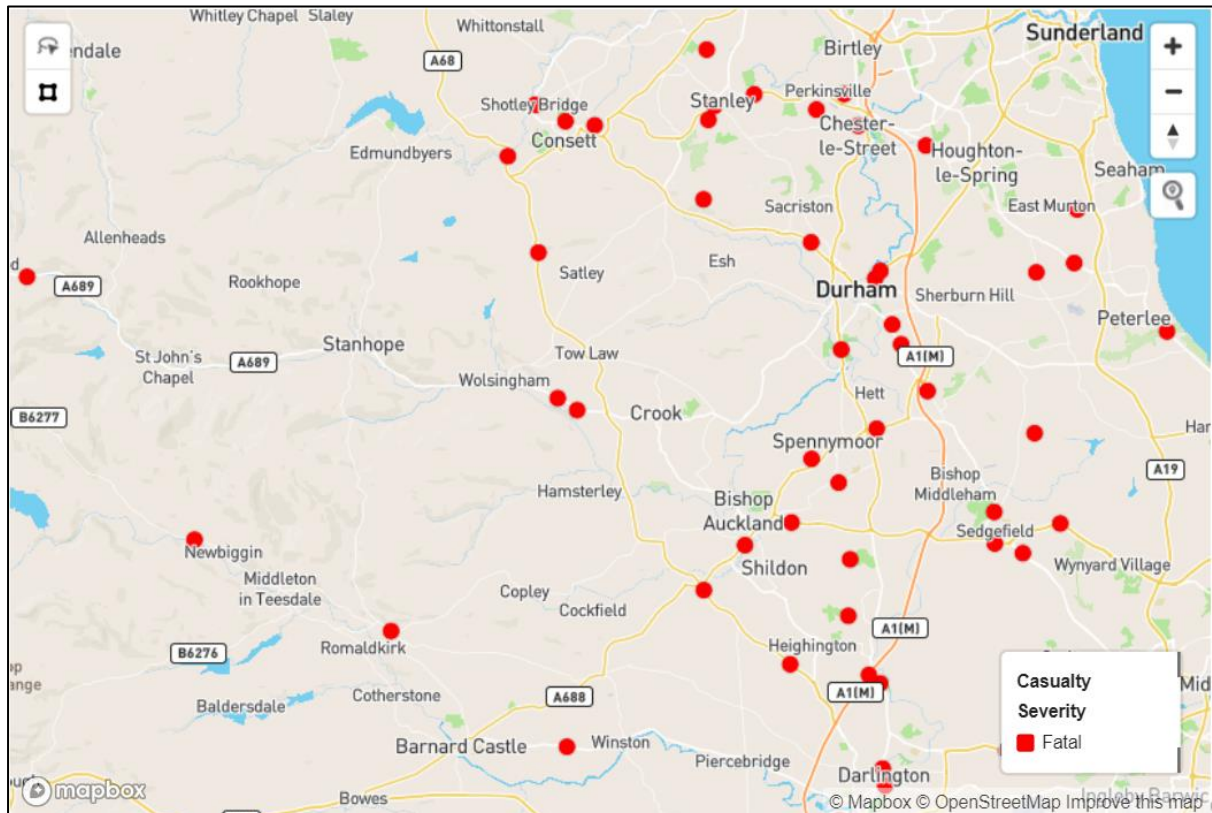
RTCs with severe injuries

Most RTCs that result in serious injuries occur centrally within the Service area, between the A68 from Darlington to Consett and the A1(M) from Darlington to Chester-Le-Street, with less serious injuries from RTCs in the east and west.
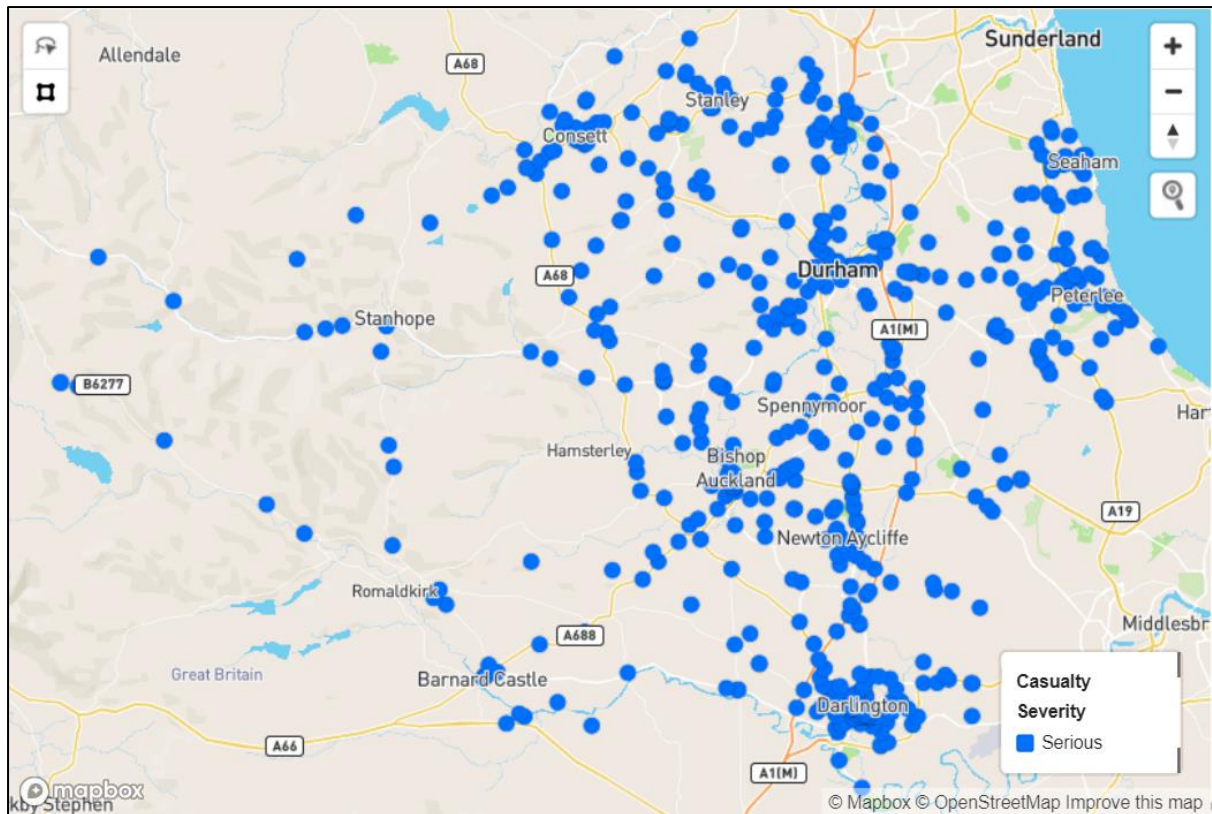
Major transport accidents, including transport by road, is included within the National Risk Register (2020 edition) where a major road traffic accident is described as being unlikely to warrant a co-ordinated national level response and would be managed by local authorities and emergency services. The risk of road traffic accidents is not included within the County Durham and Darlington Local Resilience Forum Community Risk Register. Based on the distribution of RTCs at all the locations throughout the Service area, this risk is considered to be present in all station areas, to varying degrees.

RTCs with minor injuries

RTCs that result in slight injuries are more widespread throughout the Service area, with concentrated locations around the more densely populated station areas of Darlington, Bishop Auckland, Newton Aycliffe, Spennymoor, Durham, Consett, High Handenhold, Peterlee and Seaham.
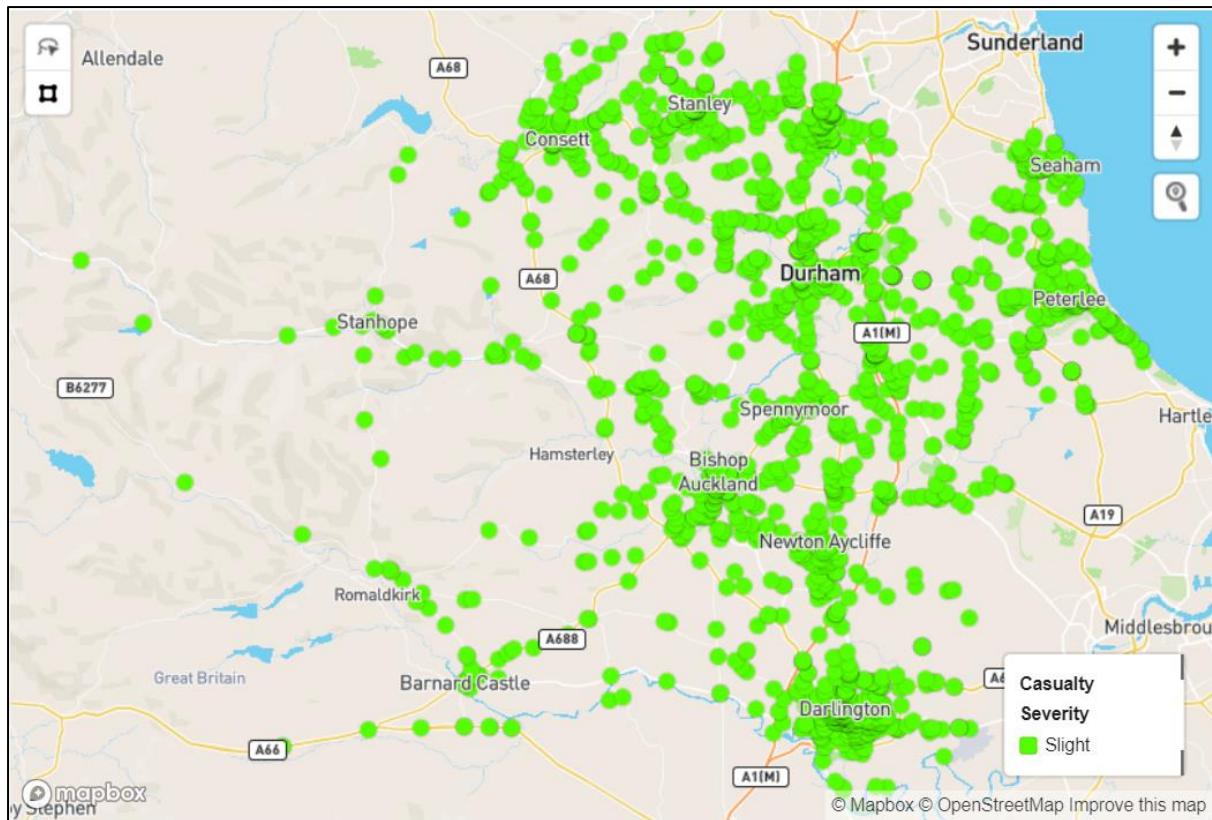
Reasonable worst-case scenario

A collision involving multiple vehicles in one of the busiest locations, which required the extrication of multiple fatalities and casualties, with varying degrees of injury.

The location of the RTC would impact significantly on subsequent movement of traffic around the local area. This scenario could present difficult access for multiple emergency services due to the impact of the RTC on the road network and the time to complete any extrications would be protracted. Due to the potential leakage of vehicle fluids following an RTC in this scenario, there may be a negative impact on the environment and an extended period of time to resolve the incident may also negatively impact on the local economy.

Risk assessment for road traffic collisions

2019/20	298
2020/21	220
2021/22	317
Three-year total	835
Three-year average	278
Risk Assessment Likelihood Score	5
Risk Assessment Impact Score	4

Risk Matrix

Impact		Likelihood				
5		orange	red	red	red	red
4		yellow	orange	red	red	red ●
3		yellow	yellow	orange	orange	orange
2		green	yellow	yellow	yellow	yellow
1		green	green	green	green	green
		1	2	3	4	5

Confidence

Due to the number of road traffic collisions during the reporting period, the RTC risk is assessed with a high degree of confidence, where very few areas of the assessment are significantly affected by uncertainty.

Changes in the risk landscape of road traffic collisions

Advances in the technology of road vehicles, which include fuel types, construction and autonomous vehicles continues to challenge the skills, equipment and operational activities of the Fire and Rescue Service. CDDFRS monitors advancements in road vehicles, to ensure when required the actions of our crews is safe and effective.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R11 Rail incidents

Rail incidents form part of the transport group of risks present within our communities as the East Coast main line runs through the Service area. There are other local railway lines, including the Tees Valley line and the Durham Coast Line, that present a risk of an adverse safety event requiring the attendance of fire and rescue resources.

Train stations are located at the following locations within the Service area:

Station area	Train station	Rail line
Durham	Durham	East Coast Main Line
Darlington	Darlington	East Coast Main & Tees Valley Lines
High Handenhold	Chester-Le-Street	East Coast Main Line
Bishop Auckland	Bishop Auckland	Tees Valley Line
Seaham	Seaham	Durham Coast Line
Newton Aycliffe	Newton Aycliffe	Tees Valley Line
Bishop Auckland	Shildon	Tees Valley Line
Darlington	Dinsdale	Tees Valley Line
Darlington	North Road	Tees Valley Line
Newton Aycliffe	Heighington	Tees Valley Line
Darlington	Teesside Airport	Tees Valley Line
Peterlee	Horden	Durham Coast Line

Although railway fires and accidents that require the attendance of the Service are rare, incidents have occurred in train stations and on the lines of the rail network. Some of the risks associated with railway incidents include moving trains, difficult access and egress, fuel and power systems, hazardous materials and carriage construction and contents.

Examples of rail related incidents that have occurred in the Service area during the reporting period include alternative scenarios such as working at height incidents where individuals require rescue from a railway bridge or extrication form a lift on a station platform. Small fires have occurred on passenger trains that have involved smoke entering rail carriages. These were caused by a mechanical failure and birds flying into a heater unit. These incidents have occurred in the Durham and Darlington station areas.

All railway accidents, including fires and rescues, are investigated by the Railway Accident Investigation Branch with all reports available at: Rail Accident Investigation Branch reports.

Modern safety regimes have made large scale transport accidents very rare. However, there have been some major rail incidents where some of the consequences have included: fatalities with physical and /or psychological casualties, disruption to essential services, particularly transport, damage to property and infrastructure, possible environmental contamination, possible evacuation and shelter of local residents or employees.

Major transport accidents, including transport by rail, is included within the National Risk Register (2020 edition), where they are described as having a low frequency due to substantial infrastructure improvements and the introduction of automatic braking systems for trains, the roll-out of train protection warning systems, improvements in the management of lineside assets, and improvements to safety management systems. National train incidents and derailments have occurred that have resulted in fatalities and injuries to passengers (Aberdeenshire, 2020 three fatalities and six casualties, and Hockham Road in 2016 with six injuries). Some collisions have occurred between vehicles and moving trains at level crossings.

All rail transport sector operators are required to have plans that cover a range of possible incidents, including those most likely to create wider impacts. These plans include introducing diversions where possible, based on safety and operational requirements.

The risk of rail transport incidents is not included within the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A rail incident would be a minor derailment with minor injuries. The accumulation of smoke within a carriage would require the train to be stopped at a station, or another accessible location, to allow for the fire to be extinguished. Limited access, other moving trains, fuel and overhead power lines would all present hazards to fire and rescue personnel and the closure of a local rail line could impact on the local economy if trains were unable to run for any significant period of time.

Risk assessment for rail incidents

2019/20	2
2020/21	1
2021/22	2
Three-year total	5
Three-year average	1.7
Risk Assessment Likelihood Score	2
Risk Assessment Impact Score	3

Risk Matrix

Impact		Likelihood				
5		orange	red	red	red	red
4		yellow	orange	red	red	red
3		yellow	yellow ●	orange	orange	orange
2		green	yellow	yellow	yellow	yellow
1		green	green	green	green	green
		1	2	3	4	5

Confidence

Due to the low frequency of rail related incidents, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty. Rail incidents are infrequent, and their impact is also low across several of the impact indicators.

Changes in the risk landscape of rail incidents.

The comparison of the assessment of this risk during the current and previous reporting periods shows no change in the level of risk.

This risk is only considered present in the station areas where the East Coast Main Line passes through or where other railway stations are located.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R12 Aircraft incidents

Incidents involving aircraft have the potential for catastrophic consequences, however, the number of worldwide air traffic fatalities has diminished significantly given the volume of passenger air traffic (4.5 billion scheduled passengers in 2019 – pre Covid-19 pandemic). Air travel is statistically the safest form of transport and the majority of aircraft incidents relate to smaller aircraft such as microlights and gliders.

Within the service area Teesside International Airport is located on the outskirts of Darlington, near the village of Middleton St George. This airport allows flights for the public transport of passengers, freight and for flying instruction. There are also other smaller category airfields located at Fishburn, Durham (Wheatley Hill) and Peterlee (Shotton). Fishburn airfield is an unlicensed grass flying strip close to the town of Sedgefield, Wheatley Hill is a small microlight club and airfield, and Shotton is primarily a parachuting site.

Teesside International Airport is a firefighting category six airport, with the maximum length of aircraft that can land between 28m and 39m and a maximum fuselage width of 5m. Aircraft incidents that occur within the airport boundary are the responsibility of the airport firefighting crews, while incidents that occur outside the airport boundary are the responsibility of the local authority fire and rescue service. The airport rescue and firefighting services will also respond to off-airport incidents that fall within a 6-degree cone from the end of each runway. If a special request has been made by the local authority, then dependent on circumstances, major foam tenders may be dispatched.

The lengths of the runways at the airfields within the service area is shown below:

Airport/airfield	Station area	Runway length
Teesside International Airport	Darlington	2,291 m
Fishburn	Sedgefield	790m
Shotton	Peterlee	304 m and 237 m (2 runways)
Wheatley Hill	Wheatley Hill	540 m

Aviation accidents have caused the significant loss of life and have been major incidents in other locations, however, aircraft incidents in the service area historically only involve light aircraft, microlights or paragliders, and often only require limited action and result in minor injuries to pilots and/or passenger(s). Most aircraft and aviation related incidents are good intent false alarms, caused by a small of fumes or aviation fuel in the cockpit of the aircraft where a safe landing occurs with no actions by operational crews on arrival at the incident.

The Air Accidents Investigation Branch investigates civil aircraft accidents and serious incidents within the United Kingdom.

Modern safety regimes have made large scale transport accidents very rare. However, there have been some major rail incidents where some of the consequences have included: fatalities with physical and /or psychological casualties, disruption to essential services, particularly transport, damage to property and infrastructure, possible environmental contamination, possible evacuation and shelter of local residents or employees.

Major transport accidents, including transport by rail, is included within the National Risk Register (2020 edition), where they are described as having a low frequency. The last major air accident in the UK was the Kegworth accident in 1989, when a Boeing 737 crashed close to the M1 motorway resulting in 47 fatalities. Commercially operated helicopters have also been involved in accidents and following the crash of a privately-operated jet during an air display at Shoreham, West Sussex in 2015, which resulted in 11 fatalities, the Civil Aviation Authority conducted a Review of UK civil flying display and special event governance, which led to the 2018 independent report on UK civil flying display and special event governance.

All air transport sector operators are required to have plans that cover a range of possible incidents, including those most likely to create wider impacts. These plans include introducing diversions where possible, based on safety and operational requirements.

The risk of aircraft incidents is not included within the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A small aircraft with multiple persons on board which was forced to attempt to land off the airfield.

The incident would require the extrication of pilot and passenger with minor injuries only. This scenario could also cause minor disruption to traffic and local transport routes.

Risk assessment for aircraft incidents

2019/20	1
2020/21	1
2021/22	4
Three-year total	6
Three-year average	2
Risk Assessment Likelihood Score	2
Risk Assessment Impact Score	4

Risk Matrix

Impact			Likelihood				
	5	orange	red	red	red	red
	4	yellow	orange ●	red	red	red
	3	yellow	yellow	orange	orange	orange
	2	green	yellow	yellow	yellow	yellow
	1	green	green	green	green	green
		1	2	3	4	5

Confidence

This risk is only considered present in the station areas where there are airports or airfields. Due to the low frequency of aircraft related incidents, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty. Aircraft incidents are infrequent, and their impact is also low across several of the impact indicators.

Changes in the risk landscape of aircraft incidents

The comparison of the assessment of this risk during the current and previous reporting periods shows no change in the level of risk.

This risk is only considered present in the station areas where there are airports or airfields. Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

Station Area	Number of aircraft incidents	Percentage of activity
Darlington	6	100%
Total	6	100%

R13 Maritime incidents

Incidents involving vessels in the marine and inland waterway environment are not commonplace for fire and rescue personnel; they can be complex to deal with, ranging from incidents involving small vessels to large sea-going vessels, and can include military vessels. The Service area includes 17 km of coastline in the Seaham and Peterlee station areas.

Vessels within Seaham harbour are the statutory responsibility of the Authority, while if a casualty vessel situated outside the area of statutory responsibility (i.e., offshore) it must be recognised, and it may come into the harbour and become a statutory responsibility of the fire authority.

A fire on a vessel is a hazard because of the way vessels are constructed, with difficult access and egress and the possibility of fire spreading beyond the compartment involved through conduction via metal bulkheads and air handling machinery. Some of the hazards associated with a maritime related incident include restricted access and egress, ineffective communications, fire and thermal radiation, flashover, backdraft and uncontrolled ventilation.

The Marine Accident Investigation Branch investigates marine accidents involving UK vessels worldwide and all vessels in UK territorial waters.

Modern safety regimes have made large scale transport accidents very rare. However, there have been some major rail incidents where some of the consequences have included: fatalities with physical and /or psychological casualties, disruption to essential services, particularly transport, damage to property and infrastructure, possible environmental contamination, possible evacuation and shelter of local residents or employees.

Seaham Harbour handles ships of up to 8,000 tonnes, with a maximum beam of 17m, length up to 120m and draft up to 6.7m. With 900m of quay frontage, the port facility can receive, store and distribute a broad range of commodities. It has 30,406 square metres (approximately 7.5 acres) of covered warehousing, and 6,000 square metres of purpose-built segregated open storage.

Major transport accidents, including transport by rail, is included within the National Risk Register (2020 edition), where they are described as having a low frequency. The last major accident on a UK-flagged ship at sea happened in March 1987, when the Herald of Free Enterprise capsized shortly after leaving Zeebrugge en route to Dover. There were 193 fatalities. On inland waterways, the collision between the Marchioness and the Bowbelle in August 1989 resulted in 51 fatalities.

All maritime sector operators are required to have plans that cover a range of possible incidents, including those most likely to create wider impacts. These plans include introducing diversions where possible, based on safety and operational requirements. The risk of maritime incidents is not included within the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A fire on board a vessel either in a container or any other part of the ship that required the operation of the ship's on board firefighting systems. The fire would require crews to access the vessel and carry out firefighting operations to resolve the incident and mitigate further fire and smoke damage.

Risk assessment for maritime incidents

2019/20	0
2020/21	0
2021/22	0
Three-year total	0
Three-year average	0
Risk Assessment Likelihood Score	1
Risk Assessment Impact Score	2

Risk Matrix

Confidence

This risk is only considered present in the station areas that have a coastline in the East of the Service area (Seaham and Peterlee).
Due to no operational maritime incidents, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty.

Changes in the risk landscape of maritime incidents

The comparison of the assessment of this risk during the current and previous reporting periods shows no change in the level of risk.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R14 Flooding

The risk of flooding within the Service area is described within both the National Risk Register and the County Durham and Darlington Local Resilience Forum Community Risk Register. Wide area flooding may occur from a range of different circumstances and may be fluvial (in close proximity to rivers), surface water (following exceptional heavy periods of rainfall when the local environment can't transport the water away fast enough) and coastal (where high tides, storm surges and offshore waves from low pressure weather systems lead to coastal flooding).

Wide area flooding is rare, and a variation to this risk is the occurrence of relatively minor incidents involving domestic water supplies where advice is given, or where the incident is made safe by isolating water supplies, or where appliance pumps are used to remove water from properties.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 298 flooding incidents. The distribution of flooding incidents throughout the Service area is shown below:

Station area	Number of flooding incidents	Percentage of activity
Peterlee	51	17.11%
Durham	40	13.42%
Darlington	35	11.74%
Bishop Auckland	34	11.41%
Consett	32	10.74%
High Handenhold	22	7.38%
Crook	13	4.36%
Newton Aycliffe	13	4.36%
Spennymoor	13	4.36%
Seaham	11	3.69%
Stanhope	10	3.36%
Wheatley Hill	9	3.02%
Barnard Castle	8	2.68%
Sedgefield	4	1.34%
Middleton-in-Tees	3	1.01%
Total	**298**	**100%**

Examples of flooding incidents that have occurred in the Service area during the reporting period include domestic flooding caused by burst or damaged water pipes, roads being blocked due to heaving rainfall and adverse weather conditions and flash surface water flooding from spate conditions.

The locations of flooding incidents throughout the Service area are shown below:
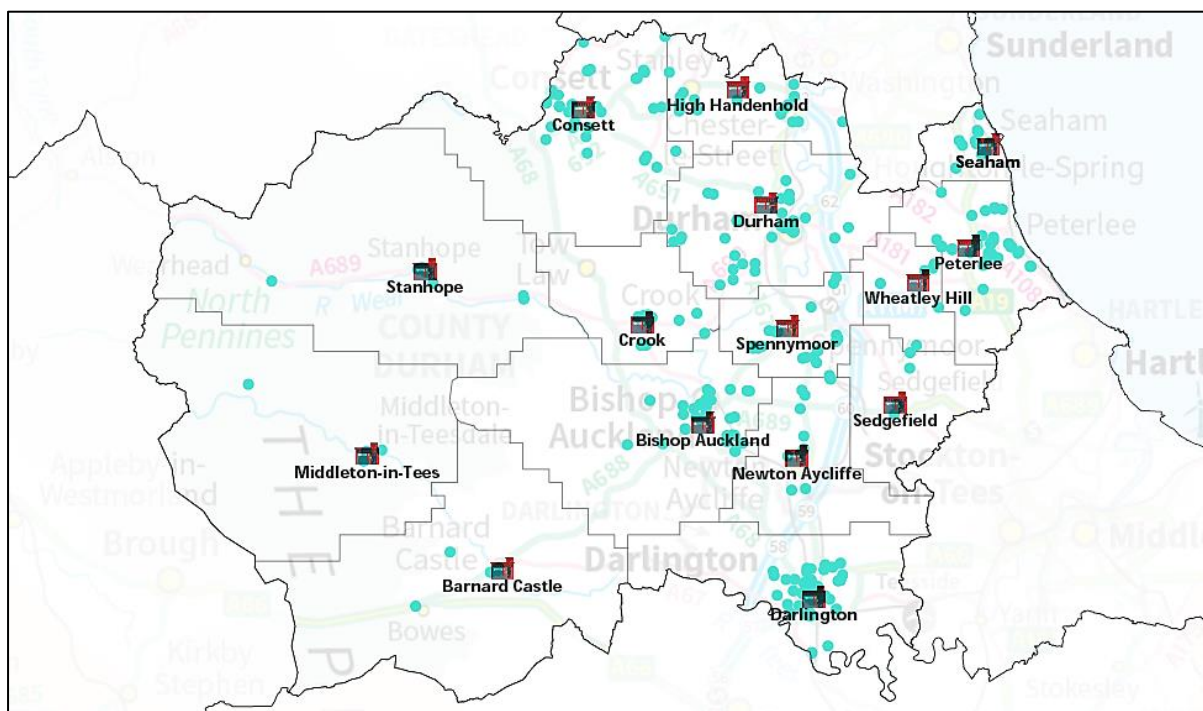
The majority of flooding related incidents involve houses of single occupancy (58.6%%), dwellings up to three storeys (7.2%), highways/road surfaces/pavements (4.8%), single occupancy bungalows (4.5%) and dwellings up to two storeys (2.4%). The distribution of flooding property types is shown below:

Flooding property types	Number of flooding incidents	Percentage of activity
House - single occupancy	179	60.07%
Highway/road surface/pavement	18	6.04%
Bungalow - single occupancy	17	5.70%
Up to 3 storeys	15	5.03%
Up to 2 storeys	7	2.35%
Self-contained Sheltered Housing	6	2.01%
3 or more storeys	5	1.68%
Nursing/Care	4	1.34%
Pub/wine bar/bar	4	1.34%
4 to 9 storeys	3	1.01%
Car	3	1.01%
Hospital	3	1.01%
Other	26	11.41%
Total	**298**	**100%**

Most flooding incidents require minor interventions such as making an incident safe by isolating domestic water supplies (62.3%), pumping water from the incident (16.4%) and providing advice only (16.1%). The actions carried out at flooding incidents throughout the service area are shown below:

Actions	Number of flooding incidents	Percentage of activity
Make safe	185	62.08%
Advice only	53	17.79%
Pumping out	52	17.45%
Other	8	2.68%
Total	**298**	**100%**

Incident reporting system data illustrates that the frequency of flooding incidents is not uniform throughout a yearly period with the highest number of incidents occurring in June and February. The frequency of flooding incidents throughout the reporting year is shown below:

Flooding incidents
BY MONTH
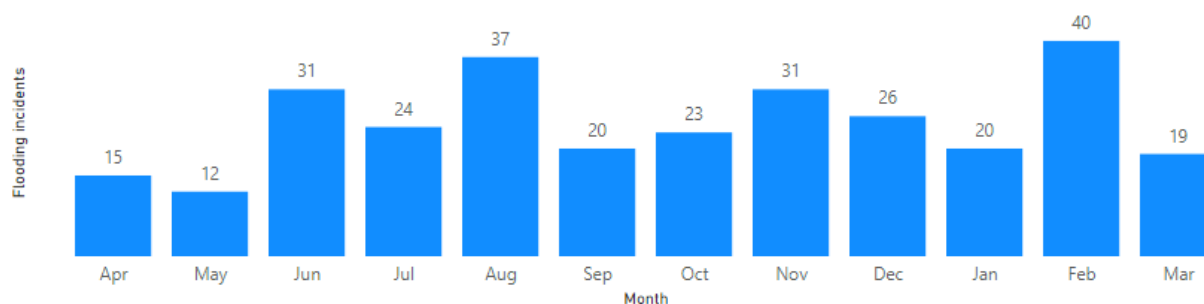
Evacuation of persons

Data over the reporting period shows the frequency that persons are evacuated from premises without the assistance of fire and rescue personnel. On only one occasion during the three-year reporting period was an individual evacuated with the assistance of fire and rescue personnel due to flash flooding and damage to newly built accommodation.

The risks of fluvial, coastal and surface water flooding are all included within the National Risk Register 2020 and the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A number of houses within a local community that became isolated due to flooding from exceptional heavy rainfall, with rivers and drainage systems already at their capacity to remove water. The excessive floodwater would require people to be evacuated from their homes, with local roads being impassable and the short-term loss of power, utilities and communications until the rainfall and floodwater had receded.

Risk assessment for flooding incidents

2019/20	104
2020/21	78
2021/22	116
Three-year total	298
Three-year average	99
Risk Assessment Likelihood Score	5
Risk Assessment Impact Score	5

Risk Matrix

Confidence

Smaller low level domestic flooding incidents occur frequently, and their impacts are well understood. The wide area flooding aspect of this risk occurs much less frequently, however accurate predictions and modelling on areas that are likely to be susceptible to flooding are made by Flood Forecasting Centres. These centres are partnerships between the Met Office and the Environmental Agency, and they bring together expertise on flood monitoring, forecasting and warnings.

Further information on flooding is available:

- County Durham flood risk information
- Darlington flood risk information

Therefore we have a moderate degree of confidence as some areas of the assessment are affected by uncertainty.

Changes in the risk landscape of flooding incidents

The risk of flooding is described within both the National Risk Register 2020 and the County Durham and Darlington Local Resilience Forum Community Risk Register. The UK's Climate Change Risk Assessment, last published in 2017, 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. Climate change, extreme weather and flooding are all detailed in the National Risk Register 2020 long term trends, where sea levels are described as increasing by 3 mm each year around the UK coastline, increasing the flooding risk to buildings close to the shoreline.

Although the national risk around all aspects of wide area flooding (fluvial, surface water and coastal) is predicted to increase in future years, the frequency of local level flooding of domestic properties has shown a decrease of 29.1% since 2018/19, although the impact of domestic flooding is considered to remain constant.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R15 Industrial incidents and fires

Although the County Durham and Darlington rich industrial heritage associated with both lead and coal mining, steelworks and the railways industry has diminished, it has been replaced by many modern and diverse businesses based on manufacturing processes, healthcare and pharmaceuticals, and retail. 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. Others can have cascading effects that will have a wider impact.

This category of risk includes fires and explosions where the consequences may include fatalities with physical and /or psychological casualties, disruption to essential services, particularly transport, damage to property and infrastructure, economic impact, the introduction of exclusion zones, decontamination of affected persons, possible environmental contamination and the possible evacuation and shelter of local residents or employees.

There are many industrial premises and estates amongst the villages and towns in the Service area, with a broad range of scenarios that have the potential to have a negative community impact. Site owners and operators are required to take necessary measures to prevent accidents involving dangerous substances and processes, with the legislation covering activities including the COMAH (Control of Major Accident Hazards) Regs (1999) and the Notification of Accidents and Dangerous Occurrences Regulations (1980).

Industrial accidents and fires may be accidental or deliberate in their cause. In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 39 industrial accidents and fires, with their causes shown below:

Causes of industrial accidents	Number of industrial accidents	Percentage of activity
Accidental	38	77.55%
Special Service incident	6	12.24%
Deliberate - others property	4	8.16%
Deliberate - own property	1	2.04%
Total	**49**	**100%**

Industrial related incidents include those incidents in manufacturing factories and premises where engineering, assembly, and production is the primary activity. All of the industrial accidents attended in the three-year reporting period were covered by the Regulatory Reform Order (2005). The distribution of industrial related fires for the reporting period is shown below:

Station area	Number of industrial fires	Percentage of activity
Bishop Auckland	11	22.45%
Consett	5	10.20%
Crook	2	4.08%
Darlington	11	22.45%
Durham	1	2.04%
High Handenhold	1	2.04%
Newton Aycliffe	6	12.24%
Peterlee	4	8.16%
Seaham	5	10.20%
Spennymoor	3	6.12%
Total	**49**	**100%**

The causes of the industrial fires in the Service area during the reporting period are shown below:

Causes of industrial fires	Number of industrial fires	Percentage of activity
Fault in equipment or appliance	8	16.33%
Accumulation of flammable material	7	14.29%
Overheating, unknown cause	7	14.29%
Special Service incidents	6	12.24%
Heat source and combustibles brought together deliberately	5	10.20%
Combustible articles too close to heat source (or fire)	4	8.16%
Faulty fuel supply - electricity	4	8.16%
Negligent use of equipment or appliance (heat source)	4	8.16%
Other intentional burning, going out of control	2	4.08%
Cooking - other cooking	1	2.04%
Faulty fuel supply - petrol product	1	2.04%
Total	**49**	**100%**

Examples of industrial incidents and fires include a fire in a shredded tyre extraction system, a large quantity of plastic pellets well alight and a large well-developed fires in wood processing sites.

The majority of industrial premises (32, 82.1%) were occupied at the time of an incident occurring, while only a small number of premises (7, 17.9%) were unoccupied. 64.1% of the industrial premises had an alarm system at the time of an incident, while 20.5% didn't have an alarm (on 15.4% of the incidents it was unknown whether an alarm system was present). Hazardous materials weren't present at the majority of the incidents (33, 84.6%), while they were present at a smaller number of incidents (4, 10.3%). At 2 incidents (5.1%) it was unknown whether hazardous materials were present.

The risk of an industrial accident is included within the National Risk Register 2020 and the County Durham and Darlington Local Resilience Forum Community Risk Register.

Reasonable worst-case scenario

A large fire at one of the factories within the Service area which caused significant fire and smoke damage and ceased the production or processes with a resultant impact on employees and the local economy. The fire would require the prolonged attendance of resources to extinguish, would involve partner agencies and would have a detrimental impact on the local environment.

Risk assessment for industrial fires

2019/20	18
2020/21	14
2021/22	17
Three-year total	49
Three-year average	16.3
Risk Assessment Likelihood Score	2
Risk Assessment Impact Score	3

Risk Matrix

Confidence:

Industrial accidents and fires are infrequent in their occurrence and the broad range of processes conducted at a variety of diverse sites informs a moderate level of confidence in the assessment of this risk as some areas of the assessment are significantly affected by uncertainty.

Changes in the risk landscape of industrial fires

The frequency of industrial accidents and fires has shown a significant reduction in comparison to the previous year with 22.2% less incidents. Most of the incidents reported during the last year occurred outside of the periods of lockdown imposed from the C-19 pandemic. Although the frequency of incidents decreased, the impact of the incidents that did occur was similar to previous years and the overall risk rating for industrial incidents and fires is similar to the previous year.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R16 Hazardous materials

The Service must make provision to respond to incidents such as fires, road traffic collisions and other emergencies, including the events or situations that cause serious harm to the environment (including the life and health of plants and animals). The use of hazardous materials in manufacturing and industrial processes throughout the Service area presents the risk of an emergency incident that would have a negative impact on the environment. Hazardous materials are also frequently transported through the Service area by the road and rail networks.

Incidents that may involve hazardous materials occur at chemical or industrial sites, farms in rural locations where pesticides and other chemicals are used, waste sites or water treatment works.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 129 hazardous material incidents. The distribution of hazardous material incidents throughout the Service area is shown below:

Station area	Number of Incidents	Percentage of activity
Darlington	22	17.05%
Peterlee	19	14.73%
Durham	18	13.95%
Bishop Auckland	12	9.30%
Newton Aycliffe	12	9.30%
Consett	10	7.75%
High Handenhold	9	6.98%
Spennymoor	9	6.98%
Crook	5	3.88%
Seaham	5	3.88%
Barnard Castle	4	3.10%
Stanhope	2	1.55%
Middleton-in-Tees	1	0.78%
Wheatley Hill	1	0.78%
Total	**129**	**100%**

The majority of hazardous material incidents relate to domestic related supplies within dwellings. Other hazardous materials incidents include the leakage of chemicals from road vehicles, suspicious/white powder sent to both dwellings and non-residential premises and unlabelled chemical containers left by roadways or in grassland.

Type of hazardous material incident	Number of Incidents	Percentage of activity
Class 2: Gases	74	72.6%
Unknown	10	9.8%
Combination of substances	8	7.8%
Class 1: Explosives	3	2.9%
Class 6: Toxic Materials	2	2.0%
Class 8: Corrosive Materials	2	2.0%
Class 9: Miscellaneous Dangerous Goods	2	2.0%
Class 3: Flammable Liquids	1	1.0%
Total	**102**	**100%**

Locations of hazardous materials incidents

Locations of hazardous material incidents	Number of Incidents	Percentage of activity
Dwelling	87	67.44%
Non Residential	28	21.71%
Other outdoors (including land)	5	3.88%
Road Vehicle	4	3.10%
Grassland, woodland and crops	1	0.78%
Outdoor equipment and machinery	2	1.55%
Outdoor structures	2	1.55%
Total	**129**	**100%**

Reasonable worst-case scenario

An incident within an industrial premises that, because of the release of substances such causes consequences to the local environment such as a domestic or commercial premises or the transportation network. These incident types will require personnel skilled in the detection and management of hazardous materials from within the fire sector and beyond. Small number of people affected unknown release

Risk assessment: Hazardous material incidents

2019/20	35
2020/21	44
2021/22	50
Three-year total	129
Three-year average	43
Risk Assessment Likelihood Score	4
Risk Assessment Impact Score	2

Risk Matrix

Impact		

(Risk matrix grid: Impact on vertical axis (1–5), Likelihood on horizontal axis (1–5). A black dot is plotted at Likelihood 4, Impact 2.)

Confidence

Based on the frequency and locations of previous hazardous materials incidents, this risk is considered as being present at all the station areas with the exception of Wheatley Hill, Stanhope, Sedgefield and Middleton-in-Teesdale, and this risk is assessed with moderate confidence.

Changes in the risk landscape of industrial fires

We continue to observe a decline in the services attendance at hazardous material incidents.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R17 Waste and recycling sites

UK fire and rescue services attend around 300 significant fires in waste sites each year. Fires in waste and recycling sites may occur at waste sites that are permitted or licensed by environmental agencies, that have an exemption from the relevant environmental agency, and at waste sites that operate illegally.

Many waste sites are managed by professional operators, which strictly adhere to regulations and good practice in controlling hazards on site. However, other sites are managed badly or are illegal and have little regard for regulations or health and safety. Hazards at illegal sites may present an even greater risk to the public and firefighters, as there may not be enough information on the content of the waste stored on site, or good operating practices may not be followed.

Fire is an ongoing risk at most sites in the waste and recycling industry due to the readily combustible nature of waste. Aside from the obvious harm that fires can cause to staff and facilities, a fire that involves waste carries additional dangers both to human health and the environment, as it may produce toxic pollutants.

Licensed recycling centres are located throughout the service area at:

- Morrison Busty Industrial Estate Annfield Plain (Consett);
- Coxhoe Quarry Coxhoe (Spennymoor);
- A689 adjacent to Sherburn Stone Quarry, Frosterley (Stanhope);
- Heighington Lane, Heighington (Newton Aycliffe);
- B6313 Chester-Le-Street to Craghead, Hett Hills (High Handenhold);
- B1283 Sunderland Road Horden (Peterlee);
- Highways Depot off B6277 Middleton-in-Teesdale (Middleton-in-Teesdale);
- Potterhouse Lane (Pity Me) (Durham);
- Romanway Industrial Estate, Romanway (Bishop Auckland);
- Strangford Road (Seaham);
- Stainton Grove Industrial Estate Stainton Grove (Barnard Castle);
- Thornley Crossings Industrial Estate Thornley (Wheatley Hill);
- Tudhoe Industrial Estate, Tudhoe (Spennymoor);
- Mewburn Road Darlington (Darlington).

Fires involving the unlicensed transfer of waste material could occur at any location in the Service area, and their frequency may be under-reported by the nature of the material involved and the recording of these incidents as either secondary fires or controlled burning. Some of the hazards associated with fires in waste and recycling sites include:

- Hidden or rapid fire growth;
- Pressurised containers, aerosols and gas cylinders;
- Hazardous materials, including biological hazards;
- Running or pooling fuel fires.

Major fires, covering many variations of this incident type are included in the National Risk Register (2020 edition), however the specific risk of fires in waste and recycling sites is not included within the County Durham and Darlington Local Resilience Forum Community Risk Register.

Station Area	Number of waste and recycling site Incidents	Percentage of activity
Consett	2	28.57%
Bishop Auckland	1	14.29%
Darlington	1	14.29%
Durham	1	14.29%
Newton Aycliffe	1	14.29%
Seaham	1	14.29%
Total	**7**	**100.0%**

Reasonable worst-case scenario

A large deep-seated fire in a recycling centre involving compacted material with difficult access and limited water supplies. The fire may cause environmental pollution into the local water courses and atmosphere for up to two weeks with local unrest and political impact beyond the duration of time to extinguish the fire.

Risk assessment for waste and recycling sites

2019/20	3
2020/21	2
2021/22	2
Three-year total	7
Three-year average	2.3
Risk Assessment Likelihood Score	3
Risk Assessment Impact Score	5

Risk Matrix

Confidence

Due to the low frequency of waste and recycling site incidents, this risk is assessed with only a limited degree of confidence as some areas of the assessment are affected by uncertainty.

Changes in the risk landscape of fires in waste and recycling sites

The comparison of the assessment of this risk during the current and previous reporting periods shows a reduction in the frequency of this incident type, however, based on the data over the three-year reporting period, the overall level of risk remains the same.

This risk is only considered present in the station areas that have licensed waste and recycling centres described above, i.e., all station areas within the Service area with the exception of Crook and Sedgefield.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R18 Animal related incidents

Animal related incidents can present a broad range of risks direct to individuals and members of the public may put themselves at risk in their attempts to rescue animals in distress. Injuries can occur from bites, cuts or scratches from animals, slips and falls associated with rescuing animals from inaccessible locations (such as water or height) or from zoonotic diseases, which are diseases that can be transmitted from animals to humans.

Throughout the rural communities of the Service area, the animal related incidents generally involve farm animals and livestock, whereas the incidents in the urban conurbations involve smaller domesticated animals such as dogs and cats.

Examples of incidents

Examples of the animal related incidents that have occurred in the Service area throughout the reporting period include horses trapped in fencing or barbed wire, birds trapped at height in netting around buildings and dogs trapped in storm drains or a mineshaft. The risks associated with each animal related incident can vary significantly and will depend on the size of the animal, the working environment and the degree of stress and anxiety displayed by either the animal, owners or members of the public attempting to conduct a rescue before the arrival of the service.

In the three-year reporting period from 1 April 2019 to 31 March 2022, the Service attended 188 animal related incidents. The distribution and type of these incidents throughout the Service area is shown in the two tables below:

Type of animal rescue	Number of incidents	Percentage of activity
Domesticated animals (cats, dogs, horses, birds)	118	62.8%
Livestock (hoses, cows, sheep, pigs, poultry)	37	19.7%
Wild animals (horses, deer, wildfowl)	33	17.6%
Total	**188**	**100%**

The distribution of animal related incidents throughout the service area is shown below:

Station area	Total Number of Incidents	Percentage of activity
Durham	24	12.8
Darlington	23	12.2
Bishop Auckland	20	10.6
Seaham	16	8.5
High Handenhold	15	8.0
Spennymoor	14	7.4
Consett	14	7.4
Newton Aycliffe	13	6.9
Peterlee	12	6.4

Wheatley Hill	11	5.9
Crook	9	4.8
Stanhope	7	3.7
Sedgefield	4	2.1
Barnard Castle	3	1.6
Middleton-in-Tees	3	1.6
Total	**188**	**100%**

Most animal related rescues occur from domestic properties and involve domesticated animals, while livestock and other wild animal rescues occur amongst grassland, scrubland or near rivers, as shown below:

Location of animal rescues	**Percentage of activity**
House - single occupancy	27.7%
Fence	8.5%
Grassland, pasture, grazing etc	7.5%
Pipes and drains	6.9%
Tree scrub (includes single trees not in garden)	5.9%
River/canal	5.3%
Mines and quarries - excluding buildings above ground	3.7%
Other outdoor location	3.7%
Other outdoor structures	3.2%
all other locations	27.7%
Total	**100%**

Animal related incidents in the context described within this reasonable worst-case scenario are not included within the National or Community Risk Registers.

Reasonable worst-case scenario

A horse becomes stuck in some mud in a difficult to access location and requires specialist equipment to affect the rescue.

Risk assessment for animal related incidents

2019/20	57
2020/21	66
2021/22	65
Three-year total	188
Three-year average	63
Risk Assessment Likelihood Score	4
Risk Assessment Impact Score	2

Risk Matrix

			1	2	3	4	5
Impact	5		🟧	🟥	🟥	🟥	🟥
	4		🟨	🟧	🟥	🟥	🟥
	3		🟨	🟨	🟧	🟧	🟧
	2		🟩	🟨	🟨	🟨●	🟨
	1		🟩	🟩	🟩	🟩	🟩
			1	2	3	4	5
			Likelihood				

Confidence

Although there is a variation in the frequency and type of animal related incidents throughout the Service area, this risk is present in all station areas. Due to the number of animal related incidents during the reporting period, the risk is assessed with a high degree of confidence, where very few areas of the assessment are significantly affected by uncertainty.

Changes in the risk landscape of animal related incidents

CDDFRS prevention and educational messages consider the risk to livestock and domestic animals. Examples include awareness of walking on frozen water or attempting to recuse dogs which have fell into water or frozen water. In addition to the impact on livestock and domestic pets during festive periods when fireworks are used.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R19 Buildings of heritage and sites of special interest

Throughout the Service area there are many historic buildings which are designated as being of significant importance due to their architecture and presence of artifacts and objects which are valued for reasons beyond their mere utility. These buildings are designated by Historic England and their listing signifies a building's special architecture and historic interest and brings it under the consideration of the planning system so that it can be preserved for future generations.

Buildings with special architectural and historic interest are recommended for listing to the Secretary of State for Digital, Culture, Media and Sport (DCMS) based on the principles of selection for listed buildings principles of selection for listed buildings.

Listed buildings are graded to show their relative importance:

- Grade I buildings are those of exceptional interest;
- Grade II are of special interest, warranting every effort to preserve them.
- Grade II* are particularly important buildings of more than special interest;

The main criteria used in selecting buildings to be listed are:

- Architectural interest: all buildings which are nationally important for the interest of their architectural design, decoration and craftsmanship; also, important examples of particular building types and techniques, and significant plan forms;
- Historic interest: this includes buildings which illustrate important aspects of the nation's social, economic, cultural or military history• close historical association with nationally important buildings or events;
- Group value, especially where buildings comprise an important architectural or historic unity or are a fine example of planning (such as squares, terraces and model villages).

Buildings of heritage and sites of special interest within County Durham and Darlington Fire and Rescue Service

	Grade one	Grade two	Grade two*
County Durham	104	3,113	165
Darlington	7	498	32
Total	111	3,611	197

Durham also has a World Heritage site with Durham Cathedral and Castle, which was inscribed by the United Nations Educational, Scientific and Cultural Scientific and Cultural Organisation (UNESCO) in 1986.

Some of the hazards associated with fires in buildings and special interest may include:

- Lack of compartmentation which can cause fires to spread to additional rooms. Fire spread may also occur between properties where shared roof spaces or voids exist;
- Non-compliant materials used in construction, period furnishings and wall coverings which are more likely to be flammable. Flammable insulation which may allow hidden fire spread;
- Access may be limited with some roadways or entrance restrictions affecting entry to an incident;
- Unconventional layouts of buildings may be complicated, with hidden access points or sections of properties that have been blocked off or obscured.

Buildings of heritage and special interest can be more vulnerable to fire due to their age, construction of contents. Effective liaison with the owners/operators of such buildings can ensure they comply with fire safety legislation to minimise the risk of fire incidents and operational risk information informs tactical plans that aim to quickly extinguish and fires and preserve these important buildings and their valuable contents.

Reasonable worst-case scenario

A large fire that involved the building fabric and contents of a grade one or grade two listed building within the service area. This scenario would include financial loss due to fire and smoke damage to the building and objects of both cultural and social importance. During both the development and closing stages of a fire, a tactical priority would be to ensure the effective salvage of the building contents. Local employment may be impacted due to the detrimental impact on any affected employees and a significant period of time would be needed to restore the building to the original condition. Due to the effective management of fire safety arrangements, it is likely the impact on human welfare would be minimal.

Risk assessment for fires in buildings of heritage and special interest

2019/20	561
2020/21	684
2021/22	805
Three-year total	2050
Three-year average	683
Risk Assessment Likelihood Score	5
Risk Assessment Impact Score	3

Risk Matrix

Confidence

Due to the number and locations of Grade One and Two listed buildings throughout the Service area, this risk is considered to be present in all station areas. Due to no attended fires in buildings of heritage and special interest during the reporting period, the risk is assessed with a low degree of confidence.

Changes in the risk landscape for fires in buildings of heritage and special interest

The Service fire safety audit schedule for high-risk premises, and the maintenance of operational risk information and incident plans ensure the low frequency of fires in buildings of heritage and special interest, however, significant fires may occur. On 15 April 2019, just before 18:20 CEST, a fire broke out beneath the roof of Notre-Dame de Paris cathedral in Paris. By the time the structure fire was extinguished, the building's spire had collapsed and most of its roof had been destroyed and its upper walls were severely damaged. Extensive damage to the interior was prevented by its stone vaulted ceiling, which largely contained the burning roof as it collapsed. Many works of art and religious relics were moved to safety early in the emergency, but others suffered smoke damage, and some of the exterior art was damaged or destroyed.

Further information on the mitigating actions to reduce this risk throughout the Service can be found within each of the corresponding station plans where the risk is present.

R20 Marauding terrorist/malicious attacks

The current threat to the UK (England, Wales, Scotland and Northern Ireland) from terrorism is Substantial (September 2021), indicating that an attack is likely. The threat level for the UK from international terrorism is set by the Joint Terrorism Analysis Centre (JTAC). MI5 is responsible for setting the threat levels from Irish and other domestic terrorism both in Northern Ireland and in Great Britain. In reaching a judgement on the appropriate threat level in any given circumstance, several factors are considered, including available intelligence, terrorist capability, terrorist intentions and timescale.

In July 2019 changes were made to the terrorism threat level system, to reflect the threat posed by all forms of terrorism, irrespective of ideology. There is now a single national threat level describing the threat to the UK, which includes Islamist, Northern Ireland, left-wing and right-wing terrorism.

Date	National Threat Level
9 February 2022	Substantial
15 November 2021	Severe
4 February 2021	Substantial
3 November 2020	Severe
4 November 2019	Substantial
23 July 2019	Severe

Further information on how threat levels are decided, and the history of threat level changes prior to July 2019 to August 2006 (when the threat level was first published) are available from the MI5 Security Service website.

Risk scenarios are natural occurring events and are measured by the product of the likelihood and consequences of hazardous evets, whereas threats are the malicious intent and capacity to cause loss of life or create adverse consequences to human welfare (including property and the supply of essential services and commodities), the environment or security. The inclusion of this threat within the Service Community Risk profile is informed by the presence of this scenario within both the National Risk Register, the Community Risk Register and the content of the County Terrorism Local Profile (CTLP).

Of the terrorist threats facing the UK, Islamist terrorism remains the most significant, however, this is considered to be lower than at its peak in 2017, owing to a suppression of the UK threat. However, this suppression may only be temporary as the threat is volatile and the scale and pace of the threat could change at short notice. While the threat of right wing terrorism is lesser in scale, the CTLP describes this threat as still growing. This threat is predominantly driven by lone actors who adopt a range of right wing extremist ideologies and who believe in the use of violence to further that ideology.

Further information on marauding terrorism/malicious attacks can be found at these links:

- [Guidance on marauding terrorist attacks](#)
- [National Counter Terrorism Security Office](#)
- [Protecting crowded places from terrorism](#)

This threat is also assessed through the analysis of the County Durham and Darlington Counter Terrorism Local Profile (CTLP) which aims to develop a joint understanding of the local threats, vulnerabilities and risks relating to terrorism and extremism. The CTLP is used to identify emerging issues, information gaps and makes recommendations for partnership activity to be actioned through CONTEST (Counter-terrorism strategy) delivery plans.

Although there have been no marauding terrorist or malicious attacks within the Service area, information available from the National Risk Register (2020) and the regional Counter Terrorism team advises that the threat remains plausible, and it would be most likely to occur in the most densely populated areas (Durham and/or Darlington). In the absence of a historical range of incidents to inform the assessment of this scenario, and the broad range of attack methodologies used by threat actors, both the impact and likelihood are assessed with a moderate level of confidence.

These scenarios also cover terrorist activity carried out using explosives, low sophistication devices and chemical, biological, radiological and nuclear (CBRN) weapons by international and domestic groups or individuals. Examples of these incidents would be large scale chemical, biological, radiological, or nuclear attack, attacks on infrastructure, attacks on crowded places or attacks on transport.

Reasonable worst-case scenario

Based on intelligence from the regional Counter Terrorism team and professional judgement, the reasonable worst-case scenario would be a marauding, simultaneous or near simultaneous firearms attacks in a crowded urban area. This would result in a significant number of fatalities and casualties with gunshot, blast and other injuries. Further injuries may occur as an indirect result of people trying to leave the scene. There are also likely to be psychological casualties which either present immediately or at a later date. Other impacts could include disruption to local and regional transport services as a consequence of attacks at transport hubs, or disruption to schooling, short term excessive demands on hospitals and the short-term local evacuation from affected communities.

Risk assessment for marauding terrorist/malicious attacks

2019/20	0
2020/21	0
2021/22	0
Three-year total	0
Three-year average	0
Risk Assessment Likelihood Score	1
Risk Assessment Impact Score	5

Risk Matrix

Confidence
Given CDDFRS has not attended a marauding terrorist/malicious attacks during the reporting period, the risk is assessed with a low degree of confidence.

Changes in the risk landscape of marauding terrorist/malicious attacks

CDDFRS work with key stakeholders and monitor the National Joint Strategic Threat Assessment and implement internal changes in line with service polices to reflect changes in the national threat levels.

Emerging Risks

Adverse Weather

In 2021 the UK experienced some extreme storms which caused loss of life, considerable damage to property and the environment, and loss of power to thousands of homes. In the North East on 26 and 27 November 2021 Storm Arwen resulted in a red warning being issued by the Met Office due to severe winds and snow.

In 2022 the UK also experienced extreme heat events which contributed to an upturn in secondary fires and affected infrastructure such as transport.

We capture the effects of severe weather in some of our existing risks such as flooding and wildfires but the impact of storms with accompanying strong winds or snow can be very disruptive, especially in our rural communities. It can also impact on our response times. Where storms lead to felled trees and power lines our firefighters can be called to assist other agencies in the aftermath.

Power Sources (Lithium Batteries, Solar Panels, Electric Vehicles etc)

We recognise that new and emerging technologies are likely to become more widely used in the future and this creates a new set of challenges for us as a Service. Lithium ion batteries carry a greater risk as a fuel source as they can reignite and emit toxic vapour clouds so the risk to firefighters and our communities will increase as we see an increase in their use.

County Durham and Darlington Fire and Rescue Service Risk Rating Matrix

Based on the risk methodology used for the data over the three-year reporting period, the risk scenarios that have the potential to impact on the communities of county Durham and Darlington are presented in the risk rating matrix below:

Impact	5	R2 Other residential building fires R20 Marauding Terrorist/Malicious Attacks		R17 Waste and recycling sites		R1 Dwelling fires R14 Flooding
	4	R3 Other non-residential building fires	R7 Wildfires	R6 Void and Derelict Buildings R8 Rescues from water		R5 Secondary fires R10 Road Traffic Collisions
	3		R11 Rail incidents R12 Aircraft incidents R15 Industrial Incidents and fires			R4 Road vehicle fires R19 Heritage and SSSI
	2	R13 Maritime incidents		R9 Rescues from height	R16 Hazardous Materials R18 Animal Incidents	
	1					
	Likelihood	1	2	3	4	5

Community Risk Profile Link to Station Plans

North Division			Consett	High Handenhold	Seaham	Peterlee	Wheatley Hill	Durham	Stanhope
			1	2	3	4	5	6	7
Primary fires	R1	Dwelling fires	✓	✓	✓	✓	✓	✓	✓
	R2	Other residential building fires	✓	✓	✓	✓	✓	✓	✓
	R3	Other non-residential building fires	✓	✓	✓	✓	✓	✓	✓
	R4	Road vehicle fires	✓	✓	✓	✓	✓	✓	✓
	R5	Other outdoor fires	✓	✓	✓	✓	✓	✓	✓
Secondary fires	R6	Secondary fires	✓	✓	✓	✓	✓	✓	✓
	R7	Wildfires	✓						✓
Rescues	R8	Water		✓	✓			✓	✓
	R9	Height	✓	✓	✓	✓	✓	✓	
Transport	R10	Road	✓	✓	✓	✓	✓	✓	✓
	R11	Rail		✓				✓	
	R12	Air							
	R13	Sea			✓				
Weather	R14	Flooding	✓	✓	✓	✓	✓	✓	✓
Societal	R15	Industrial incidents	✓	✓	✓	✓	✓	✓	✓
	R16	Hazardous materials	✓	✓	✓	✓		✓	
	R17	Waste disposal and recycling sites	✓	✓	✓	✓	✓	✓	✓
	R18	Animal incidents	✓	✓	✓	✓	✓	✓	✓
	R19	Buildings of heritage and special interest	✓	✓	✓	✓	✓	✓	✓
	R20	Marauding terrorist/malicious attacks						✓	

South Division			Spennymoor	Sedgefield	Newton Aycliffe	Bishop Auckland	Middleton in Teesdale	Barnard Castle	Darlington
			9	10	11	12	13	14	15
Primary fires	R1	Dwelling fires	✓	✓	✓	✓	✓	✓	✓
	R2	Other residential building fires	✓		✓	✓	✓	✓	✓
	R3	Other non-residential building fires	✓	✓	✓	✓	✓	✓	✓
	R4	Road vehicle fires	✓	✓	✓	✓	✓	✓	✓
	R5	Other outdoor fires	✓	✓	✓	✓		✓	✓
Secondary fires	R6	Secondary fires	✓	✓	✓	✓	✓	✓	✓
	R7	Wildfires					✓	✓	
Rescues	R8	Water	✓			✓	✓	✓	✓
	R9	Height		✓	✓	✓		✓	✓
Transport	R10	Road	✓	✓	✓	✓	✓	✓	✓
	R11	Rail	✓		✓				✓
	R12	Air							✓
	R13	Sea			✓				
Weather	R14	Flooding	✓	✓	✓	✓	✓	✓	✓
Societal	R15	Industrial incidents	✓	✓	✓	✓		✓	✓
	R16	Hazardous materials	✓		✓	✓		✓	✓
	R17	Waste disposal and recycling sites	✓		✓	✓	✓	✓	✓
	R18	Animal incidents	✓	✓	✓	✓	✓	✓	✓
	R19	Buildings of heritage and special interest	✓	✓	✓	✓	✓	✓	✓
	R20	Marauding terrorist/malicious attacks							✓

As our methodology explains there are elements from the National Risk Register, and the County Durham and Darlington Local Resilience Forum Community Risk Register to be found throughout all our all our communities, based on the assessments within the Community Risk Profile. We also ensure that the risks we identify and assess are strongly linked to our Stations at a local level and therefore we produce a series of plans outlining these. You can click through to our station plans starting with the links to our north and south divisions below:

[North Division | County Durham and Darlington Fire and Rescue Service (ddfire.gov.uk)](#)

[South Division | County Durham and Darlington Fire and Rescue Service (ddfire.gov.uk)](#)

Further information on the mitigating actions to reduce risks throughout our communities are described within each corresponding station plan.

Appendix one: CDDFRS Community Risk Profile 2022/23 Risk methodology

The assessment of risk within our Community Risk Profile is designed to be a strategic risk assessment tool and is therefore pragmatically selective. It is not intended to capture every risk that the Service could face, but instead focusses on scenarios that are representative of the wider risk landscape and which informs our understanding of the common consequences that the Service could face as a result of the identified scenarios.

The County Durham and Darlington Fire and Rescue Service risk methodology used to assess the risk scenarios within this Community Risk Profile is derived from the methodology used to identify, assess and manage the risks and threats at the national level which inform the National Risk Register.

Risk identification: the Reasonable Worst-Case Scenario

The risk landscape is constantly evolving with emerging scenarios presenting new challenges in addition to long standing scenarios that have been prevalent throughout the communities of County Durham and Darlington for many years.

The scenarios described within our Community Risk Profile represent the current, most frequently attended range of incidents, and new scenarios to inform future iterations of the risk profile may be identified through:

- The inclusion of new risks within the National Risk Register of the County Durham and Darlington Local Resilience Forum Community Risk Register;
- New research, analysis and/or data;
- Lessons learned from National Operational Learning (NOL) or Joint Organisational Learning (JOL).

For the purposes of contingency planning and the assessment of wider consequences, all risks are described as a challenging, yet plausible manifestation of a potential incident and based on appropriate relevant data and intelligence. The use of the reasonable worst-case scenario for each risk ensures that our Community Risk Profile doesn't compare the best-case scenario for some risks and the worst-case scenario for others.

Some risks within our Community Risk Profile are discrete in nature and have clearly defined impacts (such as an accidental dwelling fire or a road traffic collision). Other risks can be 'chronic' in nature, meaning that the impacts of such risks are cumulative rather that occurring in discrete events. An example of a chronic risk would be the prevalence of arson and deliberate fires throughout our communities.

Impact assessment

When a reasonable worst-case scenario has been identified, the likelihood and impacts of the scenario are then assessed. To ensure the consistent assessment and statistical rigour, all scenarios are assessed against the same set of impact criteria. Where appropriate, national level impact scales, such as population, economic impact and environmental impact are used proportionately to reflect the demographic and geographical size of the Service area.

Each impact indicator is allocated an impact score from zero to five based on the scope, scale and duration of the harm that the reasonable worst-case scenario could foreseeably cause. Within our community risk profile methodology, there are five dimensions or 'harm' which contribute to the overall impact score, with some of these factors being comprised of multiple indicators of harm, as shown below:

Impact dimension	Impact indicator
1. Human welfare	Fatalities
	Injuries
	Evacuation to temporary accommodation
2. Behavioural	Public perception
3. Community economic impact	Economic cost
4. Essential social services	Transport
	Gas
	Electric
	Water
	Communications
	Healthcare
	Emergency services
5. Environment	Damage to the environment

Each of the five impact dimensions is considered and assessed to form part of the total impact score, and to ensure that scores that have a more catastrophic impact within a given reasonable worst-case scenario are drawn out, the dimension scores are weighted. Dimension scores between zero and three remain unweighted, however a score of four is doubled (to eight) and a score of five is tripled (to fifteen). To calculate the total impact score, the sum of the weighted scores is divided by the sum of the weights. The resultant value between one and five is rounded up or down to the nearest whole number.

The total impact score is determined using the following process:

- The highest individual indicator score is used to determine each dimension's highest score;
- Weighting is determined by the highest score for each dimension. Scores between zero and three remain unweighted. A score of four is doubled and a score of five is tripled;
- The weighted score is calculated by multiplying the weighted Highest Impact Dimension Score by the weighting figure;

- To calculate the overall impact score for a reasonable worst-case scenario, the sum of the weighted scores is divided by the sum of the weights;
- The overall impact score is rounded to the nearest whole number (between one and five) to enable the impact to be plotted on the risk rating matrix.

Example:

Impact Dimension	Impact Indicator	Impact Score (0-5)	Highest Impact Dimension Score	Weighting	Weighted Score
Human Welfare	Fatalities	3	4	2	8
	Injuries	4			
	Evacuation to temporary accommodation	0			
Behavioural	Public Perception	5	5	3	15
Economic Impact	Economic Cost	5	5	3	15
Essential Social Services	Transport	4	5	3	15
	Gas	0			
	Electric	0			
	Water	0			
	Telecommunications	2			
	Healthcare	2			
	Emergency Services	5			
Environment	Environmental Damage	0	0	0	0
			Totals	11	53
			Total Impact Score (53/11=4.8 rounded to 5)	**5**	

Likelihood assessment

The likelihood timescale is considered to be the annual likelihood of the reasonable worst-case scenario occurring, and it is calculated by drawing from historical precedent, statistical models, forecasts and professional judgement. Similar to impact scoring, overall risk likelihood is scored on a one to five scale.

The precision of likelihood assessments will vary, and for some risk scenarios, historical data lends itself to a high degree of confidence in the overall risk assessment, while for other risks, limited data and knowledge gaps necessitate greater reliance on expert judgement.

The overall risk likelihood is scored on a one to five scale using a numerical estimate. By definition (a challenging, yet plausible manifestation of the risk), the reasonable worst-case scenario has a relatively low likelihood, so in order to enable comparison of risk scenarios, the likelihood scale is logarithmic. The likelihood scale used for the risk scenarios within the CDDFRS Community Risk Profile is shown below:

Likelihood score	All risks: likelihood of an event (annual probability assessed over a three-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%

Confidence

Uncertainty is an inherent part of analysis and should be clearly acknowledged to identify weaknesses in an evidence base and provide a more detailed picture of the risk landscape. The inclusion of a confidence in the risk assessment process helps to avoid making decisions on the basis of false confidence and uncertainty.

Confidence	Description
Low	Several areas of the assessment are significantly affected by uncertainty creating uncertainty bounds of at least +2 or -2 in the overall likelihood or impact score.
Moderate	Some areas of the assessment are significantly affected by uncertainty creating uncertainty bounds of up to +1 or -1 in the overall likelihood or impact score.
High	Very few areas of the assessment are significantly affected by uncertainty. The overall matrix position is considered to be accurate.

Visualising risk assessment

When the overall impact and likelihood scores have been calculated for each risk, they can be plotted on a five any five-risk rating matrix. The matrix can then be used to further subdivide risks into red, amber, yellow and green risks in order to assess whether specific planning is likely to be required (red risks) or whether the consequences can be planned for in a more generic way (amber, yellow and green). Confidence levels can then be added to the matrix to give the upper and lower limits of the boundaries of uncertainty in the manifestation of the RWCS. In the example below, there is a moderate confidence in the impact assessment (shown by the +1/-1 vertical arrow range), and moderate confidence in the likelihood assessment (shown

by the +1/-1 horizontal arrow range). This means that the RWCS could have an impact anywhere between two and four, and a likelihood anywhere between one and three. High levels of uncertainty indicate that further research or analysis should be completed to better inform the understanding of the risk on the communities of County Durham and Darlington. This principle is presented below:

Significant: less likely risks	**High impact risks**	**Specific planning likely to be requested to supplement generic planning**
Evidenced based judgement	**Specific or Generic approach**	
	Limited	**Moderate impact risks**
Generic planning for common consequences		

The risk rating matrix can then be subdivided into red, amber, yellow and green risks in order to assess whether specific planning is likely to be required (red risks) or whether the consequences can be planned for in a more generic way.

Appendix two: Community Risk Profile impact scales

For the assessment of the reasonable worst case risk scenarios described within our community risk profile, the impact scales described below have been used to ensure consistency to the risk assessment process.

Impact Dimension	Human Welfare
Fatalities	Number of fatalities
5	Multiple fatalities (10 or more)
4	More than 5 and less than 10 fatalities
3	Two or more and less than 5 fatalities
2	Single fatality
1	No fatalities
Casualties	Number of casualties
5	Large number of casualties presenting at/transported to hospital with clinical conditions (more than 8)
4	Casualties presenting at/transported to hospital with clinical conditions (more than 2 and less than 8)
3	Slight injuries (more than 4 and less than 6)/small number of casualties presenting at hospital with clinical conditions (1 or 2)
2	Slight injuries (more than 2 and less than 4)
1	Small number of slight injuries (1 or 2)
Evacuation	
5	A significant number of people evacuated for greater than 3 days.
4	More than 50 people evacuated for greater than 3 days.
3	More than 50 people evacuated for up to 3 days.
2	More than 50 people evacuated for up to 1 day
1	Less than 50 people evacuated for up to 1 day
Impact Dimension	Behavioural
Public perception	
5	Social conflict or lack of confidence in public services with longer term consequences
4	High levels of anxiety and concern leading to sustained changes in routine with significant impact
3	Moderate anxiety and concern leading to short term change in routine with varying consequences
2	Local short-term anxiety and change in routine, largely one-off, localised and temporary
1	Minor anxiety but no change in behaviour, insignificant impact on a small group.

Impact Dimension	Community Economic Impact
Economic impact	
5	More than £1,000,000
4	More than £100,000 but less than £1,000,000
3	More than £10,000 but less than £100,000
2	More than £1,000 but less than £10,000
1	Less than or equal to £1000
Impact Dimension	**Essential Social Services**
Transport	Disruption
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour
Gas	Loss of supply
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour
Electric	Loss of supply
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour
Water	Loss of supply
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour
Communication	Loss of supply
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour

Healthcare	Non availability of drugs and medical services
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour
Emergency services	Disruption to emergency services
5	Greater than 2 days
4	1 day to 2 days
3	12 hours to 24 hours
2	1 hour to 12 hours
1	Up to 1 hour
Impact Dimension	**Environmental Impact**
Environment	Environmental damage or contamination
5	Damage to/contamination of a building/location for up to one month
4	Damage to/contamination of a building/location for up to one week
3	Damage to/contamination of a building/location for up to 24 hours
2	Damage to/contamination of a building/location for up to 12 hours
1	Damage to/contamination of a building/location for up to 2 hours

Appendix three: Community Risk Profile definitions and terminology

The definitions used in this Community Risk Profile are derived from various sources, including, The National Security Risk Assessment, HM Government National Risk Register (2020 edition), Lexicon of UK Civil Protection Terminology (version 2.1.1) and the Health and Safety Executive. For the identification of community risk throughout the fire and rescue sector, the Service has adopted the National Fire Chiefs Council definition of risk and other key terms, as described below. Other definitions of risk, such as absolute, relative and comparative are defined by the National review of Community Risk methodology across the UK Fire and Rescue Service.

- Absolute risk: The likelihood of an individual experiencing an incident;
- Benefit: Improvement to something valued, such as health, well-being, wealth, property, or the environment,
- Cause: The reason why an event happens. Includes immediate and underlying causes.
- Community risk: The risk of unwanted events that might occur in the community, which the fire and rescue service aims to reduce. Includes fires, road traffic accidents and other incidents that the fire and rescue service might respond to.
- Community risk register: A register communicating the assessment of risks within a Local Resilience Area which is developed and published as a basis for informing local communities and directing civil protection workstreams.
- Comparative risk: The likelihood of an incident happening in the population;
- Confidence: The degree of uncertainty in the assessment of risk that provides a detailed picture of the risk landscape. Confidence can be expressed as low, moderate or high.
- Consequences: The outcome of an event. Specifically, the severity or extent of harm caused by an event. Outcomes resulting from the occurrence of a particular hazard or threat, measured in terms of the numbers of lives lost, people injured, the scale of damage to property and the disruption to essential services and commodities.
- Demand: The pattern of emergency calls for fire and rescue service assistance.
- Emergency: An event or situation which threatens serious damage to human welfare in the Service area, or the environment.
- Event: An occurrence or a change of a set of circumstances.
- Frequency: The number of events per unit of time.
- Foreseeable: Risks that are foreseeable (but not classed as 'reasonably foreseeable') are those that happen very rarely and may include major disasters such as plane crashes, train collisions or major explosions. It may be foreseeable that such incidents could happen, but historical precedent, statistical analysis and professional judgement indicate these are exceptionally rare events.
- Harm: Unwanted impact (such as loss, damage or injury) on something valued, such as health, well-being, wealth, property or the environment.
- Hazard: A potential source of harm.
- Hazardous event: a potential event that can cause harm.
- Impact: The scale of the consequences of a hazard, threat or emergency expressed in terms of a reduction in human welfare, damage to the environment and loss of security

- Incident: An event requiring fire and rescue service assistance.
- Likelihood: The chance of something happening. Likelihood may be described by the probability, frequency or uncertainty of events. The annual likelihood of the reasonable worst-case scenario occurring, and it is calculated by drawing from historical precedent, statistical models, forecasts and professional judgement. The chance of something happening, whether defined, measured or estimated objectively or subjectively, or in terms of general descriptors (such as rare, unlikely, almost certain), frequencies or mathematical probabilities.
- Opportunity: A potential source of benefit.
- Planning assumptions: Descriptions of the types and scales of consequences for which organisations should be prepared to respond. These will be informed by the risk assessment process.
- Reasonably foreseeable: A reasonably foreseeable risk is one that, if realised, could result in injury or damage, and which could have been predicted by a reasonable person with the necessary skills and knowledge. Reasonably foreseeable fire and rescue related risks are those that happen regularly including primary and secondary fires, rescues, transport related incidents, hazardous materials related incidents and some terrorist related activities. It is also reasonably foreseeable that some emergencies may happen at the same time and that some of them will be protracted in their nature.
- Reasonable worst-case scenario: The challenging, yet plausible manifestation of a potential incident and based on appropriate relevant data and intelligence.
- Relative risk: The likelihood of an incident for different demographics;
- Reporting period: For the assessment of the risk scenarios within the community risk profile, data for the three years from 1 April 2018 to 31 March 2021 is used as the reporting period.
- Risk analysis: The process of characterising risks, including determining the risk level where appropriate.
- Risk: A combination of the likelihood and consequences of hazardous events.
- Risk assessment: A structured and auditable process of identifying potentially significant events, assessing their likelihood and impacts, and then combining these to provide an overall assessment of risk, as a basis for further decisions and action.
- Risk management: All activities and structures directed towards the effective assessment and management of risks and their potential adverse impacts.
- Risk rating matrix: Table showing the likelihood and potential impact of events or situations, in order to ascertain the risk.
- Threat: Intent and capacity to cause loss of life or create adverse consequences to human welfare (including property and the supply of essential services and commodities), the environment or security.
- Uncertainty: Lack of knowledge about an event, its consequence, or likelihood.
- Variation: A variation of a reasonable worst-case scenario describes an alternative, challenging but plausible incident of a similar theme.
- Vulnerability: The susceptibility of a risk group to harm from a hazard.

Further definitions, descriptions of terminology and abbreviations used in risk assessment processes and civil the protection landscape are located in the Lexicon of UK Civil Protection Terminology and the NFCC glossary of risk-related terms .