



# Community Risk Profile

2022 - 2025



County Durham and Darlington  
**Fire and Rescue Service**



An accessible version of this document is available on request, please contact [ServiceHQ@ddfir.gov.uk](mailto:ServiceHQ@ddfir.gov.uk) or call 0345 305 8383

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## Foreword

The Fire and Rescue National Framework for England 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 and/or national in nature, from fires to terrorist attacks<sup>1</sup>.

Risk is constantly evolving within our communities. Climate change, developments in technology, changes in human behaviours and many other factors can all influence the impact on our communities of hazardous events and the consequences of such hazards. There are elements of national, regional and local risks throughout the Service area, with a broad range of consequences for the people who live, work and visit County Durham and Darlington. It is therefore essential that an effective methodology is used to assess the risks and inform the plans to mitigate them.

As a fire and rescue service (FRS) we have had to adapt how we work to respond to the significant funding cuts during this period of austerity. It is essential that we understand both the people and the risks to enable us to respond to the challenges we face and that we continue to be flexible in the way we deliver our services to the communities; understanding risk and responding to the challenges we face is at the heart of this flexibility.

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 impact of the pandemic significantly influenced risk throughout our communities. The future impact on the economy and employment, and the potential change to the landscape in the use of industrial and residential buildings will all be assessed in future iterations of our Community Risk Profile. Although the future will undoubtedly be challenging, we are committed to the delivery of a professional, innovative and effective FRS, as we work towards our vision of 'Safest People, Safest Places'.



**John Shuttleworth**  
**Chair, Combined Fire Authority**



**Stuart Errington,**  
**Chief Fire Officer**

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<sup>1</sup> The legal responsibilities and primary legislation governing the Fire and Rescue Service is described within the County Durham and Darlington Fire and Rescue Service Statement of Assurance, which is available through the Service website: <https://www.ddfire.gov.uk>. Other statutory duties are also described here: <https://www.ddfire.gov.uk/our-statutory-duties>

## Introduction

Our vision is to have the Safest People in the Safest Places, and to help us achieve this goal it is essential that we understand both the demography of our communities and the risks to the people who live, work and visit County Durham and Darlington. Our 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. The CRP then informs our Community Risk Management Plan, our strategies and local station plans which describe how the range of prevention, protection and response activities are then used to reduce both the demand from fires and other incidents and the impact of risk on our firefighters and communities.

The relative position of the CRP within the Service risk management planning cycle is illustrated below<sup>2</sup>:



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

<sup>2</sup> The National Security Risk Assessment (NSRA) is a classified cross-government and scientifically rigorous assessment of the most serious risks facing the UK or its interests overseas. The National Risk Register of Civil Emergencies: [CCS's National Risk Register 2020 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk). The County Durham and Darlington Local Resilience Forum Community Risk Register is available from: [Home \(durham.police.uk\)](https://durham.police.uk). The County Durham and Darlington Fire and Rescue Service Community Risk Management Plan is available from [www.ddfire.gov.uk](https://www.ddfire.gov.uk)

## 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 640,000 people. Within the Service area there are approximately 300,000 households and around 18,500 business premises. 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. Although there is approximately 91% of the population of the Service area that live within urban areas, 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 the areas rich cultural heritage where buildings have special architectural and historical interest.

The area has a good range of transport links, with the A1(M) and A19 motorways 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 harbour which receives a significant gross annual cargo.

Our rural communities cover a significant geographical proportion of the Service area, with some individuals being hard to reach by living in isolated areas which increases their risk of being vulnerable.

There are widespread and persistent health inequalities throughout the 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.

County Durham and Darlington Fire and Rescue Service (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.

# Community Intelligence

## Population and gender

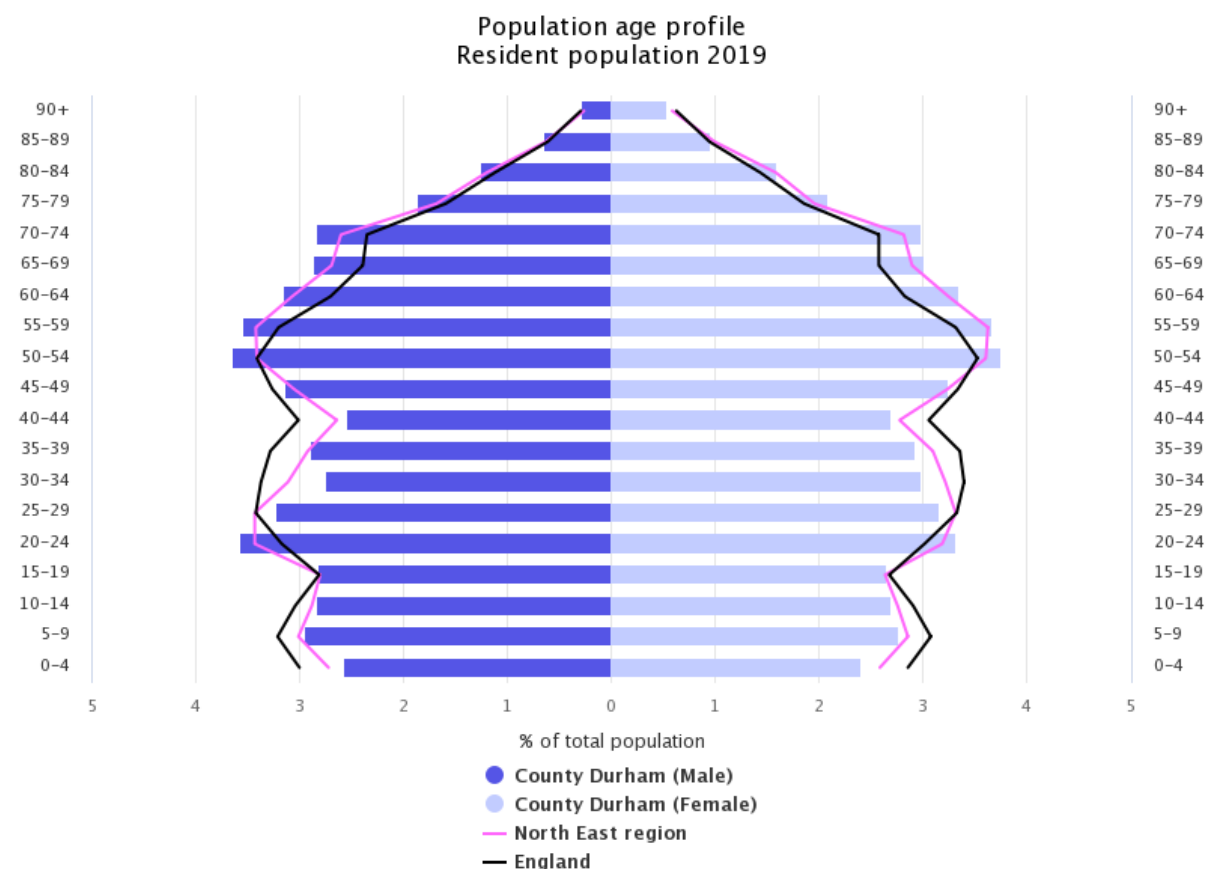
2020 mid-year population estimates are shown below:<sup>3</sup>

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

*2020 mid-year population estimates for County Durham and Darlington*

A population pyramid is a graphical illustration of the distribution of a population by age groups and sex and they typically form the shape of a pyramid when the population is growing. The population pyramids below illustrate the distribution of both County Durham and Darlington by five-year age groups and gender:

County Durham population profile<sup>4</sup>:

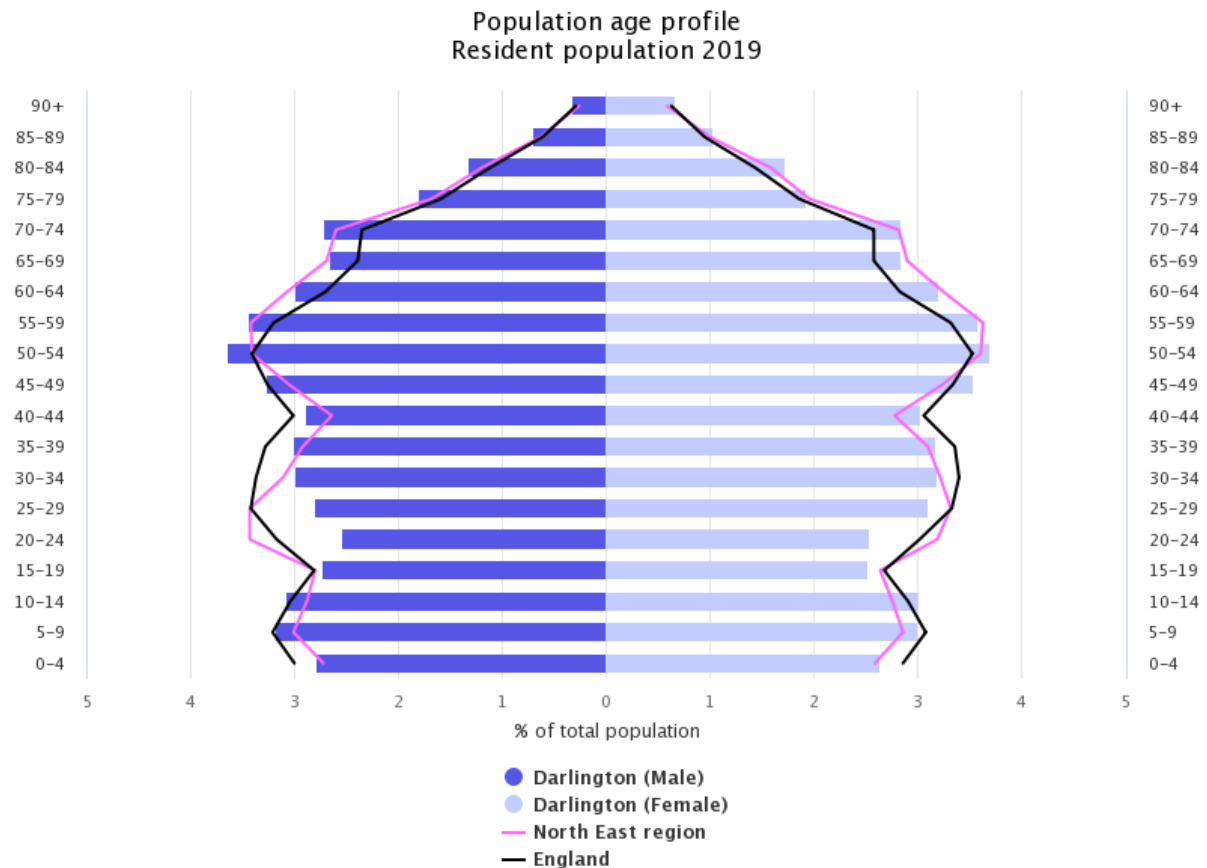


*County Durham population age profile 2019*

<sup>3</sup> Source of data: [Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland](#) (Mid-2020 edition of this dataset 2021 local authority boundaries).

<sup>4</sup> [County Durham population age profile - resident population 2019](#)

Darlington population age profile<sup>5</sup>:



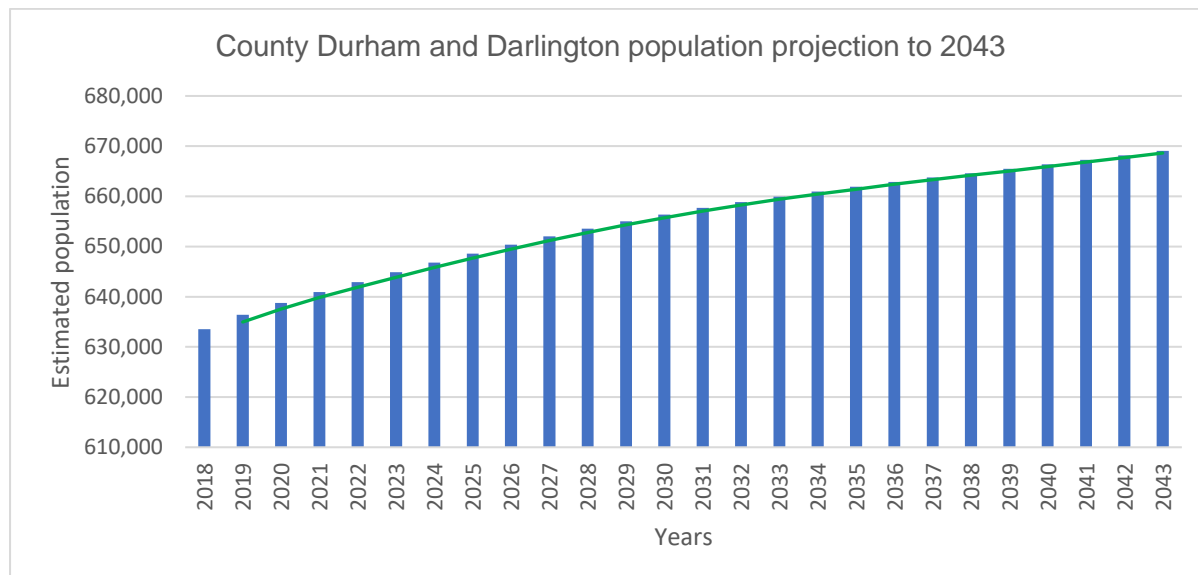
*Darlington population age profile 2019*

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.

<sup>5</sup> [Darlington population age profile - resident population 2019](#)

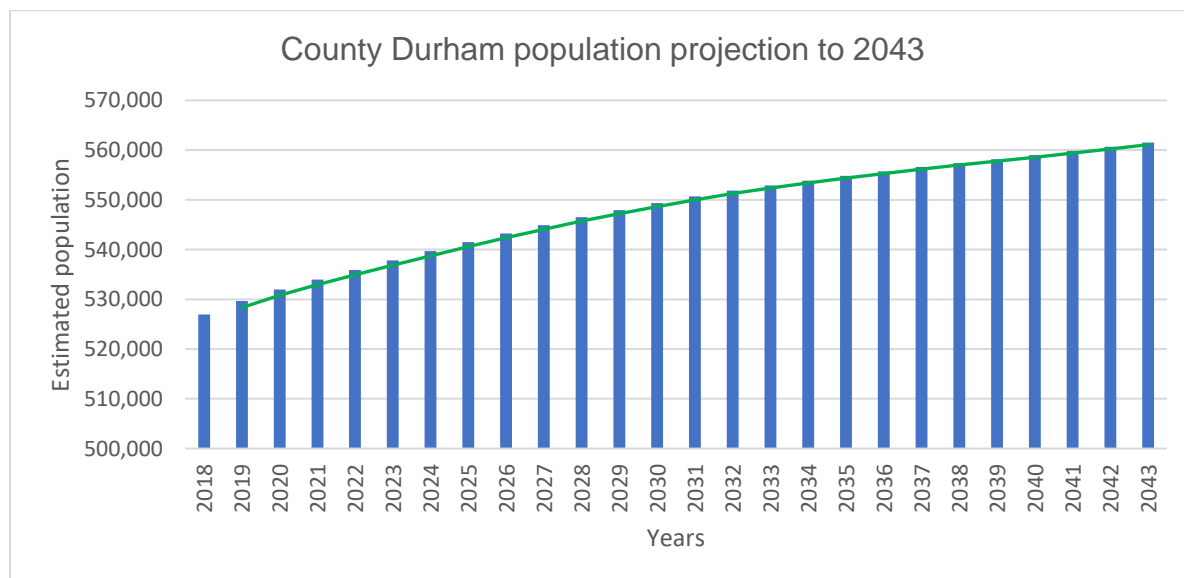
## Current population and future projections

The population within the County Durham and Darlington Service area for 2021 is currently estimated to be 640,905 people.<sup>6</sup> The projection up to 2043 estimates that the population of the Service area will be 669,079, an increase of 28,174 (4.40%), as shown below:



*County Durham and Darlington population projection from 2019 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:

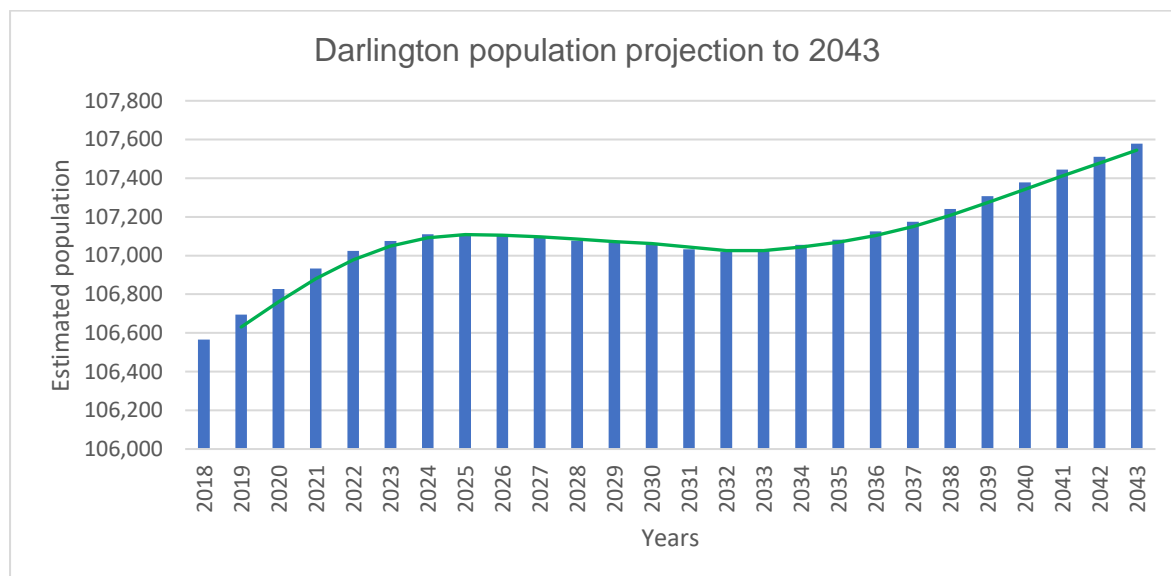


*County Durham population projection from 2019 to 2043*

<sup>6</sup> [Population projections for local authorities: Table 2 - Office for National Statistics](#)



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 from 2019 to 2043*

### 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

*Population density for County Durham and Darlington Local Authorities<sup>7</sup>*

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

*Projected population density to 2043 for County Durham and Darlington Local Authorities*

<sup>7</sup> [Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland](#)

## Age groups

The population of both County Durham and Darlington<sup>8</sup> 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%

*Distribution of age groups throughout County Durham and Darlington*

<sup>8</sup> [Mid-2020 edition of this dataset 2021 local authority boundaries](#): MYE1: Population estimates: Summary for the UK, mid-2020

## Personal well-being index

The Office for National Statistics Personal well-being (PWB) aims to provide accepted and trusted measures of our communities' well-being. The PWB illustrates how individuals, communities and the wider society feel on key aspects of their lives and how sustainable this is for the future. The measures include both standard objective measures, such as income and health, and people's own views about their lives.

Personal wellbeing<sup>9</sup> is assessed using four measures to capture different types of wellbeing which ask people to evaluate how satisfied they are with their life overall, asking whether they feel they have meaning and purpose in their life, and asks about their emotions during a particular period. Personal well-being asks people to assess each of these aspects of their lives. One of the main benefits of collecting information on personal well-being is that it is based on people's views of their own individual well-being.

The Personal Wellbeing<sup>10</sup> scale ranges from 0 to 10, where 0 signifies an individual not experiencing anxiety or life satisfaction at all and 10 means they are experiencing it to the highest level. Monitoring personal well-being throughout our communities year-on-year will help to show how people feel their quality-of-life changes in relation to changes in circumstances and wider events in society.

Personal well-being is assessed through four measures:

1. Life satisfaction;
2. Feeling the things done in life are Worthwhile;
3. Happiness;
4. Anxiety.

Office for National Statistics uses four survey questions to measure personal well-being. People are asked to respond to the questions on a scale from 0 to 10 where 0 is 'not at all' and 10 is 'completely'.

Measure	Question
Life Satisfaction	Overall, how satisfied are you with your life nowadays?
Worthwhile	Overall, to what extent do you feel that the things you do in your life are worthwhile?
Happiness	Overall, how happy did you feel yesterday?
Anxiety	On a scale where 0 is "not at all anxious" and 10 is "completely anxious", overall, how anxious did you feel yesterday?

*Office for National Statistics personal wellbeing index survey questions*

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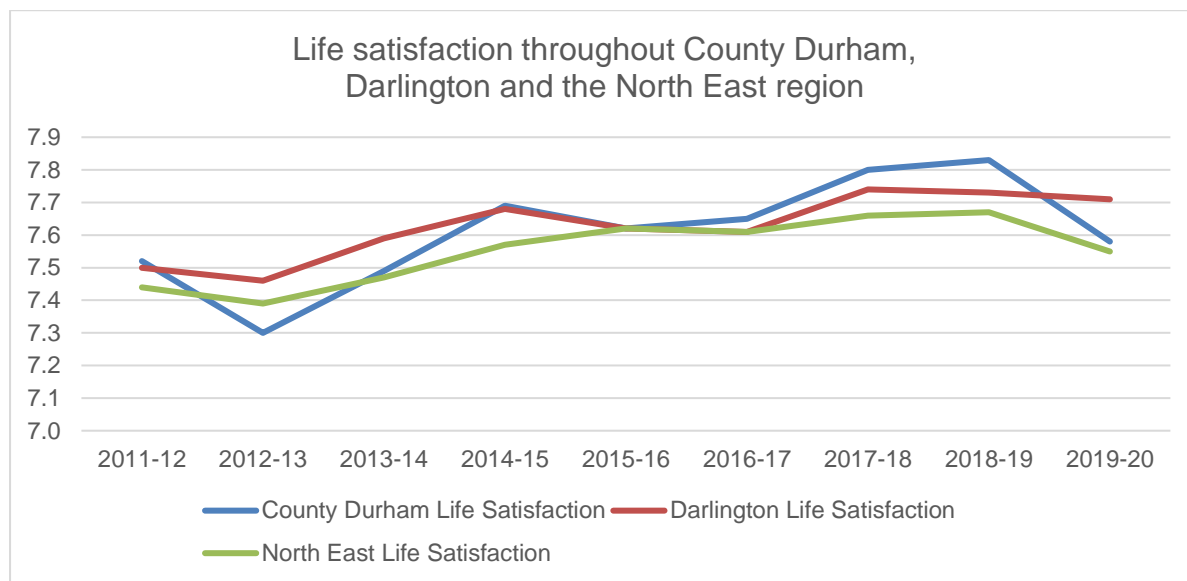
<sup>9</sup>

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/personalwellbeingurveyuserguide>

<sup>10</sup> Data for the Personal Wellbeing Index is located from [Annual Personal Well-Being estimates](#)

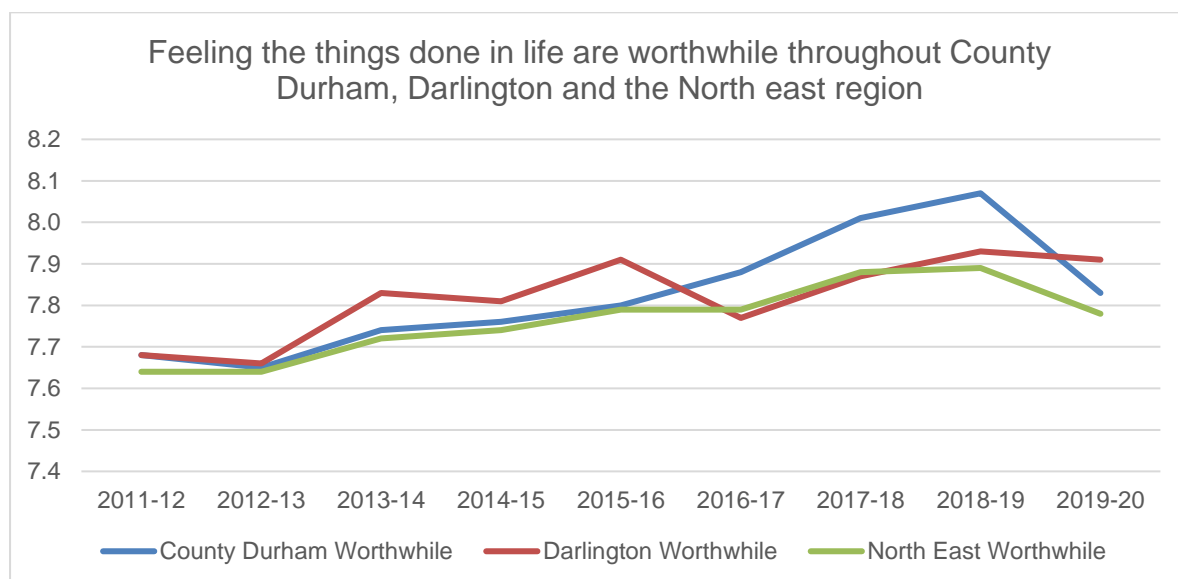
The average value of each of the four indicators that comprise the personal wellbeing index for County Durham, Darlington and the North East<sup>11</sup> is shown below.

Life satisfaction throughout County Durham, Darlington and the North East region.



*Life satisfaction throughout County Durham, Darlington and the North East region from 2011/12 to 2019/20*

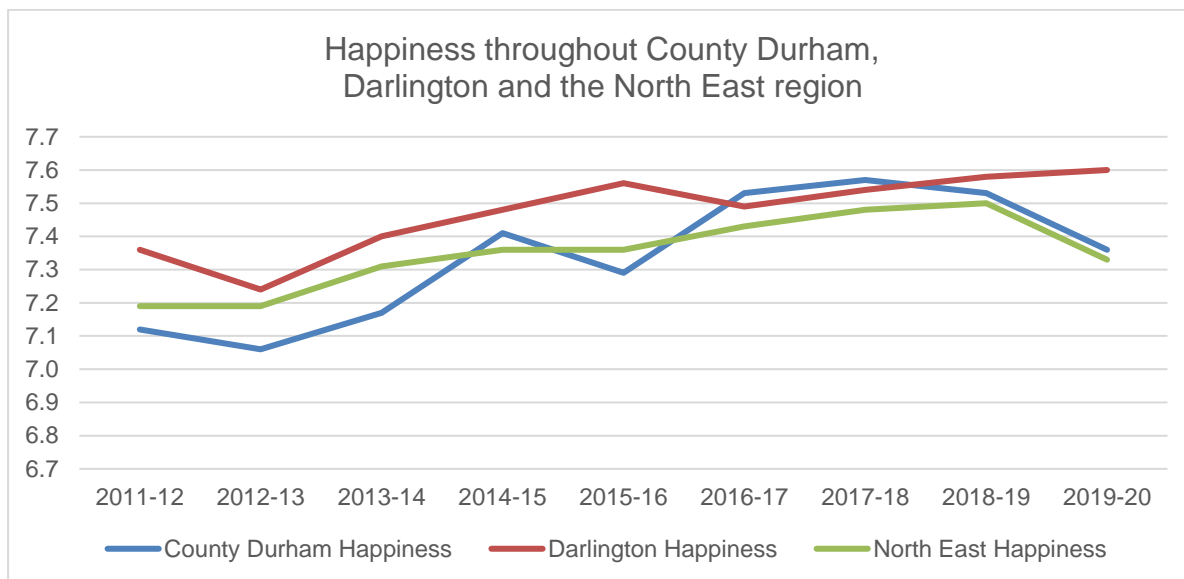
Feeling the things done in life are worthwhile throughout County Durham, Darlington and the North East region.



*Feeling the things done in life are worthwhile throughout County Durham, Darlington and the North East region from 2011/12 to 2019/20*

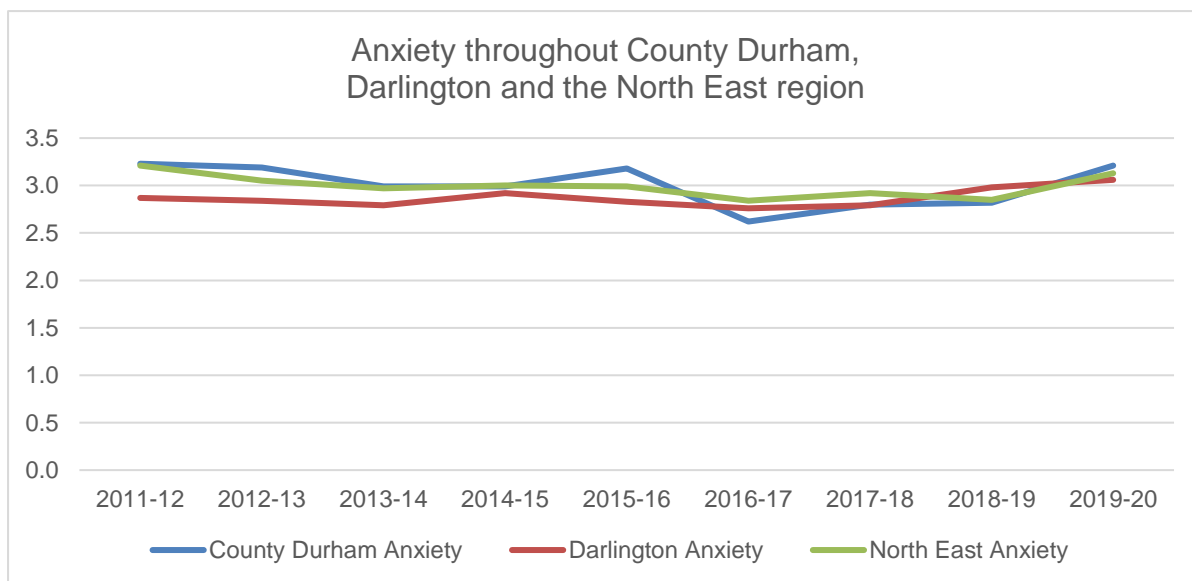
<sup>11</sup> The North East regional value comprises of an average of the Local Authorities of County Durham, Darlington, Hartlepool, Middlesbrough, Northumberland, Redcar and Cleveland, Stockton-on-Tees, Gateshead, Newcastle upon Tyne, North Tyneside, South Tyneside, and Sunderland.

Happiness throughout County Durham, Darlington and the North East region.



*Happiness throughout County Durham, Darlington and the North East region from 2011/12 to 2019/20*

Anxiety throughout County Durham, Darlington and the North East region.



*Anxiety throughout County Durham, Darlington and the North East region from 2011/12 to 2019/20*

The personal wellbeing index shows a decrease in the levels of life satisfaction, feelings that the things done in life are worthwhile and happiness in both County Durham and Darlington since 2018/19 while the level of anxiety in both Local Authorities increased over the same reporting period.

## Crime<sup>12</sup>

Criminal damage and arson are 38.1% higher in County Durham and Darlington than the national England rates during the three-year reporting period. There is also 12.1% more total recorded crime in County Durham and Darlington.

The total level of recorded crime (excluding fraud) throughout the communities of County Durham and Darlington at 87.8 crimes per 100,000 population is less than the North East<sup>13</sup> regional crime rate of 91.6, but greater than the national England<sup>14</sup> crime rate of 77.2, however, as shown below:

Type of crime	Durham <sup>15</sup>	North East	England
Violence against the person	38.9	35.5	29.8
Sexual offences	2.8	2.9	2.5
Robbery	0.2	0.5	1.0
Theft offences	19.4	22.4	22.1
Criminal damage and arson	12.6	13.1	7.8
Drug offences	2.3	2.8	3.4
Possession of weapons offences	0.4	0.7	0.7
Public order offences	8.5	11.0	7.9
Miscellaneous crimes against society	2.7	2.8	1.9
Total recorded crime (excluding fraud)	87.8	91.7	77.2

*Types of crimes in Durham compared to North East and national England rates*

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 reported 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.

<sup>12</sup> [Crime in England and Wales: Police Force Area data tables](#) (to year ending March 2021)

<sup>13</sup> To determine the North East regional crime rate, a population of 2,699,900 was used based on the ONS mid 2019 population figures, rounded to the nearest 100

<sup>14</sup> To determine the North East regional crime rate, a population of 56,287,000 was used based on the ONS mid 2019 population figures, rounded to the nearest 100

<sup>15</sup> Crime figures reported for Durham Police are reported for the Local Authorities of both County Durham and Darlington

## Dementia and Alzheimer's disease<sup>16</sup>

Dementia describes a set of 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. A person with dementia may also experience changes in their mood or behaviour.

There are many causes of dementia, with Alzheimer's disease the most common. Dementia is caused by diseases that damage the brain and affect a person's ability to think, remember and go about their day-to-day life.

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. Within the Service area, the prevalence and impact on our communities from people living with dementia is shown below<sup>17</sup>:

- Projected number of older people aged 65 and over with dementia (persons)

Local authority	2019	2020	2025	2030	% Growth
Darlington	1570	1610	1880	2170	38.2%
Durham	7860	7920	9230	10620	35.1%
Total	11449	11550	13135	14820	29.4%

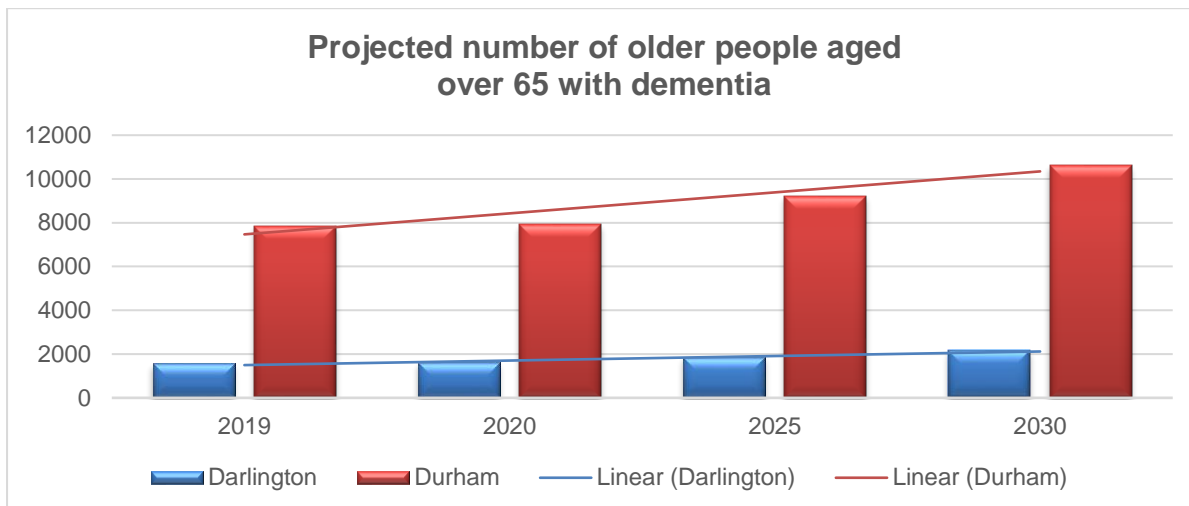
*Projected number of older people aged 65 and over with dementia (persons)*

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<sup>16</sup> <https://www.alzheimers.org.uk/>

<sup>17</sup> Data used in these predictions is based on the Projections of older people with dementia and costs of dementia care in the United Kingdom, 2019–2040. Data used within these projections is drawn from the following three sources:

1. The projected number of people 65 and over in each local authority, disaggregated by age groups and gender, for the years 2019, 2020, 2025 and 2030 from the Office for National Statistics 2014-based subnational population projections (ONS 2016).
2. Proportions of different levels of educational qualification of older people by gender in each local authority reported in the 2011 Census (ONS 2013).
3. The costs of care home fees in different regions (East of England, East Midlands, London, North East, North West, South East, South West and Yorkshire and Humber) reported by Wittenberg and colleagues (2016).

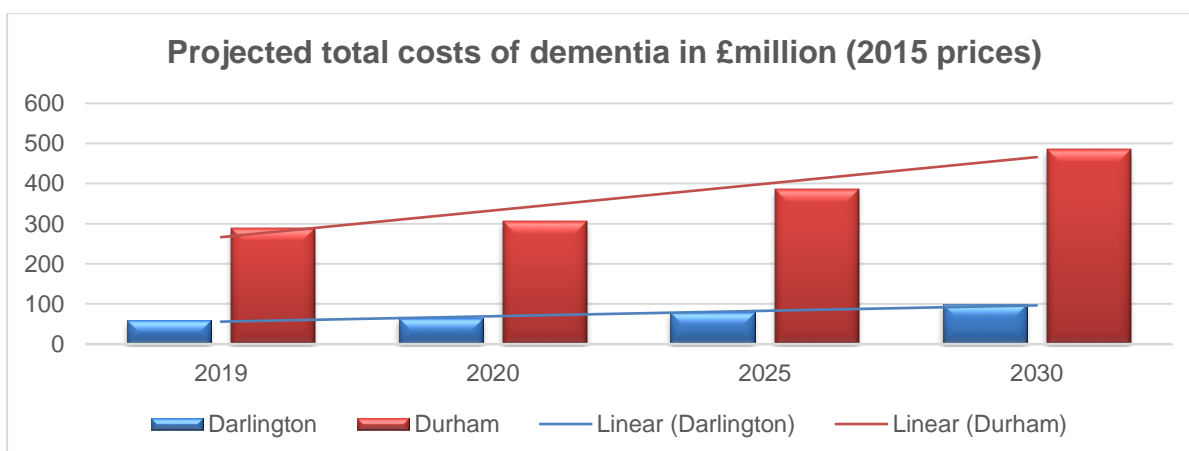


*Projected number of older people aged over 65 with dementia showing a growth of 38.2% in Darlington and 35.1% in County Durham local authorities up to 2030*

- Projected total costs of dementia (in £million, 2015 prices)

Local authority	2019	2020	2025	2030	% Growth
Darlington	60	65	80	100	66.7%
Durham	290	305	385	485	67.2%
Total	350	370	465	585	67.1%

*Projected total costs of dementia (in £ million at 2015 prices)*



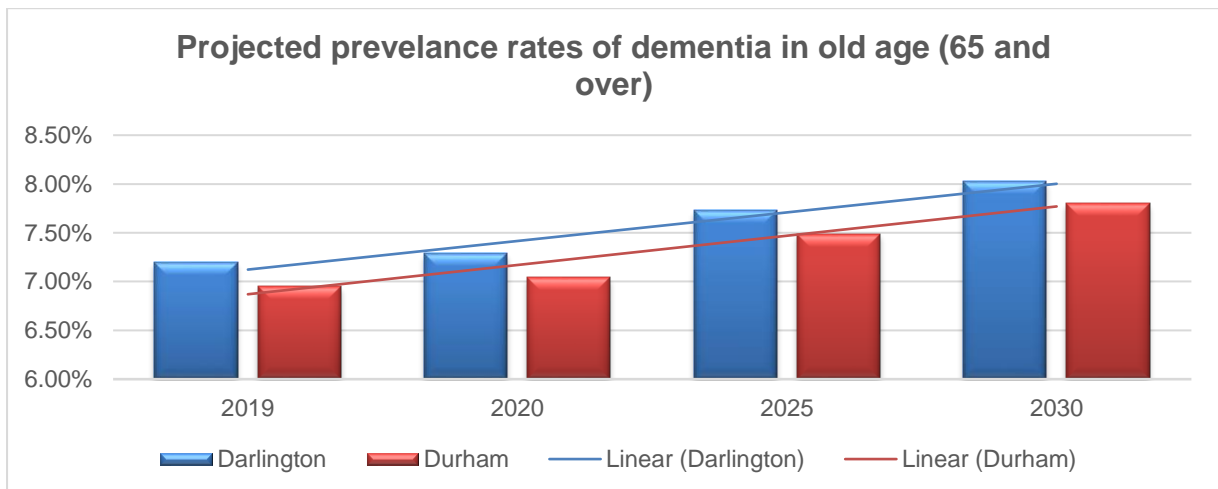
*Projected total costs of dementia in £million at 2015 prices showing a growth of 66.7% increase in Darlington and 67.2% in Durham local authorities up to 2030.*

- Projected prevalence rates of dementia in old age (65 and over)

Local authority	2019	2020	2025	2030	% Growth
Darlington	7.20%	7.29%	7.73%	8.03%	11.5%
Durham	6.95%	7.04%	7.49%	7.80%	12.2%

*Projected prevalence rates of dementia in old age (65 and over)*



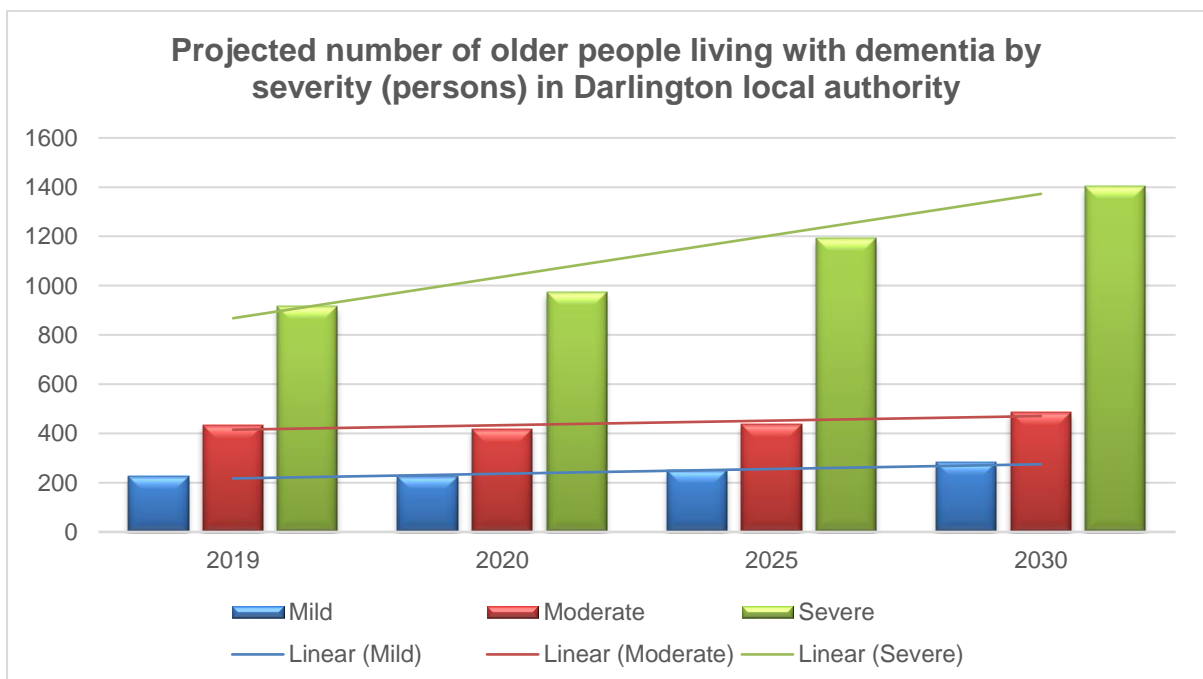


*Projected prevalence rates of dementia in old age (65 and over) showing a growth of 11.5% in Darlington and 12.2% in Durham local authorities.*

- Projected number of older people living with dementia by severity (persons) in the Darlington local authority

Darlington	2019	2020	2025	2030	% Growth
Mild	225	228	249	282	25.3
Moderate	432	415	438	486	12.5%
Severe	915	971	1193	1402	53.2%
Total	1572	1614	1880	2170	38.0%

*Projected number of older people living with dementia by severity (persons) in the Darlington local authority*

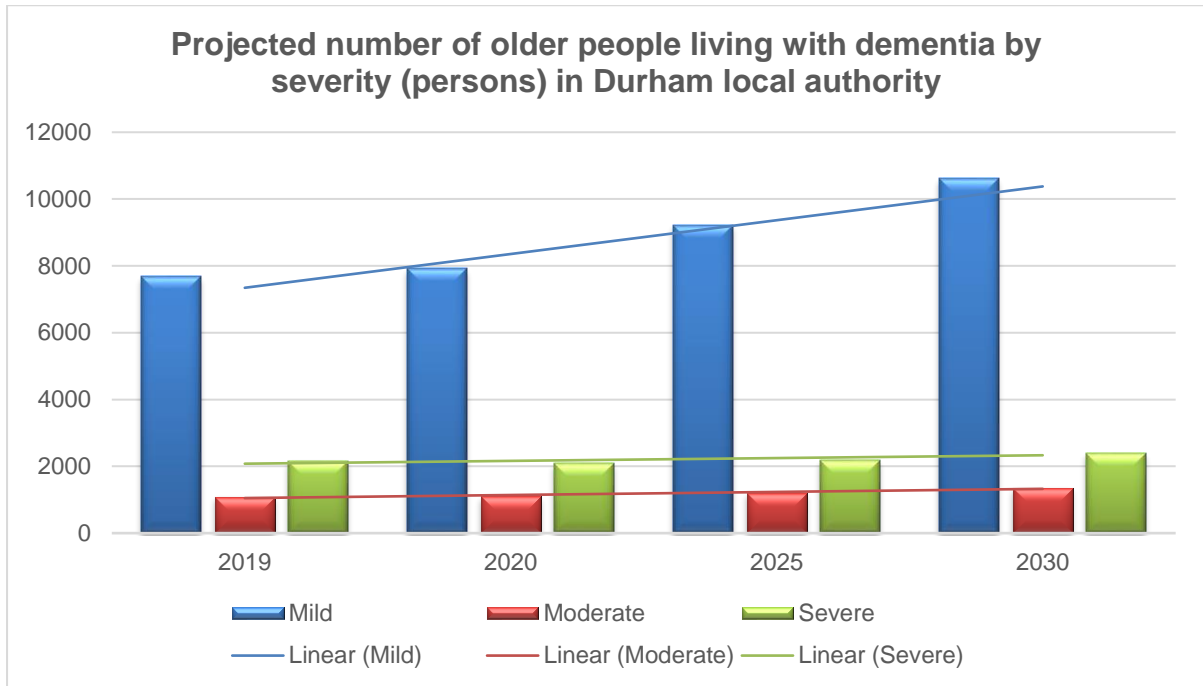


*Projected number of older persons living with dementia by severity (persons) in Darlington local authority*

- Projected number of older people living with dementia by severity (persons) in the Durham local authority

Durham	2019	2020	2025	2030	% Growth
Mild	7683	7919	9227	10618	38.2%
Moderate	1087	1100	1202	1360	25.1%
Severe	2154	2083	2178	2403	11.6%
Total	4442	4736	5847	6855	54.3%

*Projected number of older people living with dementia by severity (persons) in the Durham local authority*



*Projected number of older people living with dementia by severity (persons) in the Durham local authority*

## Local Authority Health Profiles

The Local Authority Health Profiles<sup>18</sup> 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:

### County Durham

#### Life expectancy and causes of death

**In County Durham, males are expected to live 18 months shorter, and females more than two years shorter, than the national average rates. Suicide rates are also higher in County Durham than the national average.**

- The life expectancy at birth (for males) is 78.3 years. This is better than the North East regional value of 78.0 years and worse than the national England value of 79.8 years (2017 – 19 data).
- The life expectancy at birth (for females) is 81.8. This is similar to the North East regional value of 81.8 years and worse than the national England value of 83.4 years (2017 – 19 data).
- There were 5,821 under 75 deaths from all causes, representing a value of 380, which is better than the North East regional value of 392, but worse than the national England value of 326.
- There were 1,220 under 75 deaths from all cardiovascular diseases, representing a value of 78.9, 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, which is similar to the North East regional value of 149, and worse than the national England rate of 129.2 (2017 – 19 data).
- There were 185 suicides, representing a value of 13.6, which is similar to the North East regional value of 11.6, and worse than the national England rate of 10.1 (2017 – 19 data).

#### Injuries and ill health

- There were 543 people killed and seriously injured casualties, representing a value of 34.6, which is similar to the North East regional value of 35.3 and better than the national England value of 42.6 (2016 – 18 data).
- There were 1,005 emergency hospital admissions for intentional self-harm, representing a value of 197.0, which is better than the North East regional value of 276.5, and similar to the national England value of 192.6 (2019/20 data).
- There were 630 hip fractures in people aged 65 and over, representing a value of 604, which is similar to the North East regional value of 635, and similar to the national England value of 572 (2019/20 data).

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<sup>18</sup> Local Authority Health Profiles are part of a series of outputs produced by Public Health England summarising the health of the population. The Health Profile for England focuses on national health trends. Local Health provides health information for small areas within local authorities. All data used within the Local Authority Health Profiles for both County Durham and Darlington Local Authorities is available from [Local Authority Health Profiles 2021](#).

- 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%.
- The estimated dementia diagnosis rate (aged 65 and over) of 4,394 represents a value of 64.7% is similar to the North East value of 66.2% and the national England rate of 61.6% (2021 data).

### Behavioural risk factors

**In County Durham, there are more people who smoke and who are classified as overweight than the national rate.**

- There were 160 admission episodes for alcohol specific conditions for the under 18s, representing a value of 52.8, which is similar to the North East regional value of 55.4 and worse than the national England value of 30.7 (2017/18 – 19/20 data).
- There were 72,875 current adult smokers, representing a value of 17.0%, which is similar to both the North East regional value of 15.3%, and worse than the national England rate of 13.9% (2019 data).
- The physical activity value of 65.5% is similar to both the North East regional value of 64.7% and the national England value of 66.4% (2019/20 data).
- The adults (aged 18+) classified as overweight or obese value of 64.8% is similar to the North East regional value of 67.6% and the national England value of 62.8% (2019/20 data).

### Child health

- There were 198 under 18s conceptions per 1,000 population, representing a value of 26.4, which is similar to the North East regional value of 24.9 and worse than the national England value of 16.7 (2018 data).
- There were 784 individuals who smoked at their time of delivery, representing a value of 16.8%, which is worse than the North East regional value of 15.2% and worse than the national England value of 10.4% (2019/20 data).
- Smoking status (with a value of 16.8%) at the time of delivery was worse than the North East regional value (15.2%) and worse than the national England value (10.4%) (2019/20 data).
- There were 47 infant deaths, representing a value of 3.2, which is similar to both the North East regional value of 3.4 and the national England value of 3.9 (2017 - 19 data).
- The prevalence of obesity (including severe obesity) of 1,050 individuals represents a value of 22.7%, which is similar to the North East regional value of 23.2% and worse than the national England value of 21.0% (2019/20 data).

### Health inequalities

- The Index of Mass Deprivation (IMD 2015) is 25.7, while the England value is 21.8.
- The smoking prevalence in adults in routine and manual occupations (aged 18 to 64) is 27.3%, which is similar to both the North East regional value of 24.3% and the national England value of 23.2% (2019 data).

- Inequality in life expectancy at birth (for males) has a value of 9.8 and is in the best quintile against the North East value of 12.2. County Durham (with a value of 9.8) is in the second worst quintile for England (with a value of 9.4) (2017 - 19 data).
- Inequality in life expectancy at birth (for females) has a value of 7.9 and is in the best quintile against the North East value of 9.7. County Durham (with a value of 7.9) is in the second worst quintile for England (with a value of 7.6) (2017 - 19 data).

### Wider determinants of health

**In County Durham, there are more hospital admissions for violence than the national England value.**

- There were 19,060 children in low-income families (under 16s), representing a value of 21.8%, which is better than the North East regional value of 22.6%, but worse than the national England value of 17.0% (2016 data).
- There were 351,200 people aged 16 – 64 in employment, representing a value of 71.4%, which is similar to than the North East regional value of 71.1%, and worse than the national England value of 76.2%.
- There were 970 hospital admissions for violence (including sexual violence), representing a value of 64.0, which is similar to the North East regional value of 63.4, and worse than the national England value of 45.8 (2017/18 – 19/20).

### Health protection

- There were 229 excess winter deaths, representing a value of 13.3%, which is similar to both the North East regional value of 16.2% and the national England value of 15.1% (Data available from August 2018 to July 2019).

### Supporting information

- There were 101,468 of the population aged under 18, representing a value of 19.1%. County Durham is in the lowest quintile in the North East where the regional value is 19.9% and the lowest quintile for England where the value is 21.4% (2019 data).
- There were 110,452 of the population aged 65+, representing a value of 20.8%. County Durham is in the highest quintile in the North East where the regional value is 19.9%, and in the second highest quintile in England where the value is 18.4% (2019 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).

## Darlington

### Life expectancy and causes of death

- The life expectancy at birth (for males) is 78.8 years. This is better than the North East regional value of 78.0 years and worse than the national England value of 79.8 years (2017 – 19 data).
- The life expectancy at birth (for females) is 81.9. This is better than the North East regional value of 81.8 years and worse than the national England value of 83.4 years (2017 – 19 data).
- There were 1,118 under 75 deaths from all causes, representing a value of 374, which is similar to the North East regional value of 392, but worse than the national England value of 326.
- There were 223 under 75 deaths from all cardiovascular diseases, representing a value of 74.3, which is similar to the North East regional value of 82.1, and the national England rate of 70.4 (2017 – 19 data).
- There were 413 under 75 deaths from cancer, representing a value of 137.4, which is similar to the North East regional value of 149, and the national England rate of 129.2 (2017 – 19 data).
- There were 38 suicides, representing a value of 13.6, which is similar to the North East regional value of 11.6, and the national England rate of 10.1 (2017 – 19 data).

### Injuries and ill health

- There were 136 people killed and seriously injured casualties, representing a value of 42.6, which is worse than the North East regional value of 35.3 and similar to the national England value of 42.6 (2016 – 18 data).
- There were 220 emergency hospital admissions for intentional self-harm, representing a value of 217.8, which is similar to the North East regional value of 276.5, and similar to the national England value of 192.6 (2019/20 data).
- There were 155 hip fractures in people aged 65 and over, representing a value of 694, which is similar to the North East regional value of 635, and worse than the national England value of 572 (2019/20 data).
- The estimated diabetes diagnosis rate of 85.9% is similar to the North east regional value of 82.5% and better than the national England value of 78%.
- The estimated dementia diagnosis rate (aged 65 and over) of 923 represents a value of 66.9% is similar to the North East value of 66.2% and the national England rate of 61.6% (2021 data).

### Behavioural risk factors

- There were 35 admission episodes for alcohol specific conditions for the under 18s, representing a value of 51.9, which is similar to the North East regional value of 55.4 and worse than the national England value of 30.7 (2017/18 – 19/20 data).
- There were 11,552 current adult smokers, representing a value of 13.7%, which is similar to both the North East regional value of 15.3%, and the national England rate of 13.9% (2019 data).
- The physical activity value of 66.9% is similar to both the North East regional value of 64.7% and the national England value of 66.4% (2019/20 data).

- The adults (aged 18+) classified as overweight or obese value of 63.8% is similar to the North East regional value of 67.6% and the national England value of 62.8% (2019/20 data).

### Child health

- There were 33 under 18s conceptions per 1,000 population, representing a value of 19.5, which is similar to both the North East regional value of 24.9 and the national England value of 16.7 (2018 data).
- There were 161 individuals who smoked at their time of delivery, representing a value of 16.4%, which is similar to the North East regional value of 15.2% and worse than the national England value of 10.4% (2019/20 data).
- Smoking status (with a value of 16.4%) at the time of delivery was similar to the North East regional value (15.2%) and worse than the national England value (10.4%) (2019/20 data).
- There were 12 infant deaths, representing a value of 3.7, which is similar to both the North East regional value of 3.4 and the national England value of 3.9 (2017/19 data).
- The prevalence of obesity (including severe obesity) of 280 individuals represents a value of 22.5%, which is similar to both the North East regional value of 23.2% and the national England value of 21.0% (2019/20 data).

### Health inequalities

- The Index of Mass Deprivation (IMD 2015) is 23.6, while the England value is 21.8.
- The smoking prevalence in adults in routine and manual occupations (aged 18 to 64) is 27.1%, which is similar to both the North East regional value of 24.3% and the national England value of 23.2% (2019 data).
- Inequality in life expectancy at birth (for males) has a value of 11.9 and is in the middle quintile against the North East value of 12.2. Darlington (with a value of 11.9) is in the worst quintile for England (with a value of 9.4) (2017 - 19 data).
- Inequality in life expectancy at birth (for females) has a value of 9.7 and is in the middle quintile against the North East value of 9.7. Darlington (with a value of 9.7) is in the worst quintile for England (with a value of 7.6) (2017 - 19 data).

### Wider determinants of health

- There were 3940 children in low-income families (under 16s), representing a value of 20%, which is better than the North East regional value of 22.6%, but worse than the national England value of 17% (2016 data).
- There were 47,200 people aged 16 – 64 in employment, representing a value of 74.9%, which is better than the North East regional value of 71.1%, and similar to the national England value of 76.2%.
- There were 135 hospital admissions for violence (including sexual violence), representing a value of 45.3, which is better than the North East regional value of 63.4, and similar to the national England value of 45.8 (2017/18 – 19/20).

## Health protection

- There were 95 excess winter deaths, representing a value of 26.4%, which is similar to both the North East regional value of 16.2% and the national England value of 15.1% (Data available from August 2018 to July 2019).

## Supporting information

- There were 22,529 of the population aged under 18, representing a value of 21.1%. Darlington is in the second highest quintile in the North East where the regional value is 19.9% and the middle quintile for England where the value is 21.4% (2019 data).
- There were 21,937 of the population aged 65+, representing a value of 20.5%. Darlington is in the second highest quintile both in the North East where the regional value is 19.9%, and in the England where the value is 18.4% (2019 data).
- There were 3,100 of the population who were from ethnic minorities, representing a value of 3.5%, which is in the middle quintile for the North East region where the value is 4.2% and the second lowest quintile for England where the value is 13.6% (2016 data).



## Smoking

Smoking is a significant contributory factor in the health of people in County Durham and Darlington. Although smoking prevalence in adults has reduced nationally since 2011, County Durham has 17.0% of adults who smoke compared to the North East rate of 15.3% and the England rate of 13.9% and has seen an increase since 2017. Darlington has 13.7% of the adult population that smoke and is below the North East (15.3%) and England (13.9%) rates.

The Public Health England Local Tobacco Control Profiles<sup>19</sup> for both County Durham and Darlington are shown below:

County Durham	Value or count	Percentage of population/ value	Regional <sup>20</sup> rate/ or value	England rate/ or value
Smoking prevalence in adults (18+) current smokes (APS <sup>21</sup> survey) (2019 data)	72,875	17.0%	15.3%	13.9%
Smokers that have successfully quit at 4 weeks (2019/20 data)	2,198	2,945	2,457	1,808
Smoking status at time of delivery (2019/20 data)	784	16.8%	15.2%	10.4%
Smoking attributable mortality (2017/19 data)	2,683	277.8	270.5	202.2
Smoking attributable deaths from heart disease (2017/19 data)	386	40.6	36.4	29.3
Smoking attributable deaths from stroke (2017/19 data)	109	11.6	11.5	9.0
Smoking attributable deaths from cancer (2017/19 data)	1,179	119.3	120.9	89.6
Mortality rate from lung cancer (2017/19 data)	1,190	71.9	74.3	53.0
Smoking attributable hospital admissions (2019/20 data)	6,034	1,800	2050	1,398
Potential years of life lost due to smoking related illnesses (2016/18 data)	13,071	1,556	1,703	1,313

*County Durham summary of Public Health England Local Tobacco Control Profile*

<sup>19</sup> [Public Health England Local Tobacco Control Profiles](#)

<sup>20</sup> The North East regional rate comprises of the average of the Local Authority rates of County Durham, Darlington, Hartlepool, Middlesbrough, Northumberland, Redcar and Cleveland, Stockton-on-Tees, Gateshead, Newcastle upon Tyne, North Tyneside, South Tyneside, and Sunderland.

<sup>21</sup> APS: Annual population survey

## Key facts

- Smoking prevalence of adults in County Durham is similar to the North East regional and worse than the national England rate.
- Smokers that have successfully quit at four weeks in County Durham is better than both the North East regional and the national England rate
- Smoking attributable mortality in County Durham is similar to the North East regional value but worse than the national England rate
- Smoking attributable hospital admissions in County Durham are better than the North East regional rate but worse than the national England rate.

Darlington	Value or count	Percentage of population/ value	Regional <sup>22</sup> rate/ or value	England rate/ or value
Smoking prevalence in adults (18+) current smokes (APS <sup>23</sup> survey) (2019 data)	11,552	13.7%	15.3%	13.9%
Smokers that have successfully quit at 4 weeks (2019/20 data)	110	926	2,457	1,808
Smoking status at time of delivery (2019/20 data)	161	16.4%	15.2%	10.4%
Smoking attributable mortality (2017/19 data)	491	243.5	270.5	202.2
Smoking attributable deaths from heart disease (2017/19 data)	67	33.7	36.4	29.3
Smoking attributable deaths from stroke (2017/19 data)	22	11.0	11.5	9.0
Smoking attributable deaths from cancer (2017/19 data)	206	102.6	120.9	89.6
Mortality rate from lung cancer (2017/19 data)	203	60.8	74.3	53.0
Smoking attributable hospital admissions (2019/20 data)	1,008	1,507	2,050	1,398
Potential years of life lost due to smoking related illnesses (2016/18 data)	2,288	1,387	1,703	1,313

*Darlington summary of Public Health England Local Tobacco Control Profile*

<sup>22</sup> The North East regional rate comprises of the average of the Local Authority rates of County Durham, Darlington, Hartlepool, Middlesbrough, Northumberland, Redcar and Cleveland, Stockton-on-Tees, Gateshead, Newcastle upon Tyne, North Tyneside, South Tyneside, and Sunderland.

<sup>23</sup> APS: Annual population survey

Key facts:

- Smoking prevalence of adults in Darlington is similar to both the North East regional and the national England rate.
- Smokers that have successfully quit at four weeks in Darlington is worse than both the North East regional and the national England rate
- Smoking attributable mortality in Darlington is better than the North East regional value but worse than the national England rate
- Smoking attributable hospital admissions in Darlington are better than the North East regional rate but worse than the national England rate.

Further information on the prevalence of smoking throughout the Service area in key age groups, the link to mental health and occupation groups are available in the [Public Health England Local Tobacco Control Profiles](#)

## Council tax base

Council tax<sup>24</sup> 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.

Tax base is the number of Band 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 Band 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.

### County Durham Council Tax<sup>25</sup>

Council Tax Band <sup>26</sup>	Number of dwellings on the valuation list	County Durham Council tax base	Average England Council Tax Base
Band A	143,891	57.82%	24.15%
Band B	34,746	13.96%	19.58%
Band C	31,031	12.47%	21.86%
Band D	21,983	8.83%	15.54%
Band E	10,601	4.26%	9.66%
Band F	4,142	1.66%	5.11%
Band G	2,197	0.88%	3.52%
Band H	277	0.11%	0.59%
Total	248,868	100.00%	100.00%

*County Durham dwellings and council tax base for each council tax band in comparison to the national average*

<sup>24</sup> [MHCLG Local Authority Council Tax base England 2020 \(Revised\) Technical Notes](#)

<sup>25</sup> [Official Statistics Council Tax base 2020 in England Estimate of the number of properties liable for Council Tax as at September 2020.](#)

<sup>26</sup> Council Tax bands in England are based on 1 April 1991 valuations and are located here: <https://www.gov.uk/guidance/understand-how-council-tax-bands-are-assessed#council-tax-bands-and-annexes>

## Darlington Council Tax<sup>27</sup>

Council Tax Band	Number of dwellings on the valuation list	Darlington Council tax Base	Average England Council Tax Base
Band A	22,806	44.27%	24.15%
Band B	10,739	20.85%	19.58%
Band C	7,407	14.38%	21.86%
Band D	5,490	10.66%	15.54%
Band E	3,163	6.14%	9.66%
Band F	1,269	2.46%	5.11%
Band G	582	1.13%	3.52%
Band H	54	0.10%	0.59%
Total	51,510	100.00%	100.00%

*Darlington dwellings and council tax base for each council tax band in comparison to the national average*

## Empty properties County Durham<sup>28</sup>

Council Tax Band	Number of dwellings on the valuation list	Empty properties	Percentage of empty properties for each council tax band	England national average of empty homes for each council tax band
Band A	143,891	3492	2.43%	1.81%
Band B	34,746	462	1.33%	1.10%
Band C	31,031	313	1.01%	0.88%
Band D	21,983	207	0.94%	0.80%
Band E	10,601	100	0.94%	0.76%
Band F	4,142	40	0.97%	0.78%
Band G	2,197	32	1.46%	0.88%
Band H	277	6	2.17%	1.57%
Total	248,868	4652	1.87%	1.12%

*Comparison of empty homes in County Durham to the England national average for each council tax band*

<sup>27</sup> [Official Statistics Council Tax base 2020 in England Estimate of the number of properties liable for Council Tax as at September 2020.](#)

<sup>28</sup> [Official Statistics Council Tax base 2020 in England Estimate of the number of properties liable for Council Tax as at September 2020.](#)

## Empty properties Darlington<sup>29</sup>

Council Tax Band	Number of dwellings on the valuation list	Empty properties	Percentage of empty properties for each council tax band	England national average of empty homes for each council tax band
Band A	22806	417	1.83%	1.81%
Band B	10739	134	1.25%	1.10%
Band C	7407	88	1.19%	0.88%
Band D	5490	32	0.58%	0.80%
Band E	3163	15	0.47%	0.76%
Band F	1269	11	0.87%	0.78%
Band G	582	3	0.52%	0.88%
Band H	54	2	3.70%	1.57%
Total	51510	712	1.38%	1.12%

*Comparison of empty homes in Darlington to the England national average for each council tax band*

<sup>29</sup> [Official Statistics Council Tax base 2020 in England Estimate of the number of properties liable for Council Tax as at September 2020.](#)

## Languages spoken and proficiency

Language is an important defining characteristic of people's identity, and the main language and proficiency in English was asked for the first time in the 2011 Census. The understanding of the main language 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:

Main language	County Durham	Darlington	North East	England
English	98.50%	97.40%	97.20%	92.00%
Polish	0.30%	0.80%	0.30%	1.00%
Bengali	0.00%	0.20%	0.20%	0.40%
Panjabi	0.00%	0.10%	0.10%	0.50%
All other Chinese	0.10%	0.10%	0.30%	0.30%
Lithuanian	0.00%	0.10%	0.00%	0.00%
Romanian	0.00%	0.10%	0.00%	0.00%
Arabic	0.10%	0.10%	0.20%	0.30%
Tagalog/Filipino	0.00%	0.10%	0.00%	0.00%
German	0.10%	0.10%	0.00%	0.00%
French	0.00%	0.00%	0.10%	0.30%
Urdu	0.00%	0.00%	0.20%	0.50%
Persian/Farsi	0.00%	0.00%	0.10%	0.00%
Gujarati	0.00%	0.00%	0.00%	0.40%
Portuguese	0.00%	0.00%	0.00%	0.30%
Other	0.80%	0.90%	1.20%	4.00%

*Main languages spoken in County Durham and Darlington in comparison to the North East regional and National languages spoken.*

## Language proficiency

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

Language proficiency	County Durham		Darlington	
All categories: English as a household language	223,803		46,670	
All people aged 16 and over in household have English as a main language	219,933	98.3%	45,316	97.1%
At least one but not all people aged 16 and over in household have English as a main language	1,949	0.9%	536	1.1%
No people aged 16 and over in household but at least one person aged 3 to 15 has English as a main language	200	0.1%	98	0.2%
No people in household have English as a main language	1,721	0.8%	720	1.5%



## 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<sup>30</sup> are:

Recommended ethnic groups	
White	English, Welsh, Scottish, Northern Irish or British
	Irish
	Gypsy or Irish Traveller
	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

*UK Government list of recommended classification of ethnic groups*

The Office for National Statistics collate data on population estimates by ethnic group for each local authority.

<sup>30</sup> [List of ethnic groups - GOV.UK \(ethnicity-facts-figures.service.gov.uk\)](https://www.service.gov.uk/ethnicity-facts-figures)

The composition of County Durham<sup>31</sup> by ethnic group is shown below:

Ethnic group	Number	Percentage
White	503,769	98.24%
Mixed or Multiple ethnic groups	3,094	0.60%
Asian or Asian British	4,856	0.95%
Black, African, Caribbean or Black British	701	0.14%
Other ethnic group	363	0.07%
Total	512,783	100%

*County Durham by ethnic group (data sourced from the ONS census of 2011)*

The composition of Darlington<sup>32</sup> by ethnic group is shown below:

Ethnic group	Number	Percentage
White	101,595	96.24%
Mixed or Multiple ethnic groups	1,146	1.08%
Asian or Asian British	2,205	2.10%
Black, African, Caribbean or Black British	357	0.34%
Other ethnic group	261	0.25%
Total	105,564	100%

*Darlington by ethnic group (data sourced from the ONS census of 2011)*

The combined composition of the population of County Durham and Darlington is shown below:

Ethnic group	Number	Percentage
White	605,364	97.90%
Mixed or Multiple ethnic groups	4,240	0.69%
Asian or Asian British	7,061	1.14%
Black, African, Caribbean or Black British	1,058	0.17%
Other ethnic group	624	0.10%
Total	618,347	100%

*County Durham and Darlington Local Authorities combined by ethnic group (data sourced from the ONS census of 2011)*

<sup>31</sup> Office for National Statistics (ONS) publishes detailed population estimates by ethnic group for areas in England and Wales following each census. However, there are currently no reliable population estimates by ethnic group available at the local authority level for the years between censuses.

<sup>32</sup> Office for National Statistics (ONS) publishes detailed population estimates by ethnic group for areas in England and Wales following each census. However, there are currently no reliable population estimates by ethnic group available at the local authority level for the years between censuses.

## Religion or belief

The religion or belief of the residents of County Durham<sup>33</sup> is shown below:

Religion or belief	Number of residents	Percentage
Christian	369,715	72.04%
No Religion	107,281	20.90%
Religion not stated	30,362	5.92%
Muslim	1,934	0.38%
Other Religion	1,525	0.30%
Buddhist	1,001	0.20%
Hindu	607	0.12%
Sikh	609	0.12%
Jewish	208	0.04%
Total	513,242	100%

*Religions or beliefs of the residents of County Durham (data available from: [County Durham Census Demographics United Kingdom \(localstats.co.uk\)](http://localstats.co.uk)).*

The religion of belief of the residents of Darlington<sup>34</sup> is shown below:

Region or belief	Number of residents	Percentage
Christian	71,122	67.37%
No religion	25,415	24.08%
Religion not stated	6,716	6.36%
Muslim	971	0.92%
Sikh	361	0.34%
Hindu	317	0.30%
Buddhist	307	0.29%
Other religion	310	0.29%
Jewish	45	0.04%
Total	105,564	100%

*Religions or beliefs of the residents of Darlington (data available from: [Darlington Census Demographics United Kingdom \(localstats.co.uk\)](http://localstats.co.uk)).*

<sup>33</sup> Data available from: [County Durham Census Demographics United Kingdom \(localstats.co.uk\)](http://localstats.co.uk)

<sup>34</sup> Data available from: [Darlington Census Demographics United Kingdom \(localstats.co.uk\)](http://localstats.co.uk)

The religion or belief of the combined population of both County Durham and Darlington<sup>35</sup> is shown below:

Religion or belief	Number of residents	Percentage
Christian	440,837	71.24%
No Religion	132,696	21.44%
Religion not stated	37,078	5.99%
Muslim	2,905	0.47%
Other Religion	1,835	0.30%
Buddhist	1,308	0.21%
Hindu	924	0.15%
Sikh	970	0.16%
Jewish	253	0.04%
Total	618,806	100%

*Religions or beliefs of the residents within the combined Local Authority areas of County Durham and Darlington (data available from: Census Demographics United Kingdom)*

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<sup>35</sup> [Census Demographics United Kingdom](#)

## Deprivation

The Index of Multiple Deprivation (IMD)<sup>36</sup> 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 methodological 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. These LSOAs are ranked relatively from the first (most deprived area) to the 32,844<sup>th</sup> (least deprived area).

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 2019. This is an overall measure of multiple deprivation experienced by people living in an area and is calculated for every Lower Layer Super Output Area (LSOA), or neighbourhood, in England. All neighbourhoods in England are then ranked according to their level of deprivation relative to that of other areas. High ranking LSOAs or neighbourhoods can be referred to as the 'most deprived' or as being 'highly deprived' to aid interpretation.

### Indices of deprivation 2019

The Index of Multiple Deprivation 2019<sup>37</sup> 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) of deprivation;
- Illustrate changes in relative deprivation between consecutive iterations of the IMD;
- Quantify how deprived a small area is and identify deprived communities.

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<sup>36</sup> [The English Indices of Deprivation 2019 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

<sup>37</sup> [The English Indices of Deprivation 2019 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

## **Deprivation in County Durham and Darlington**

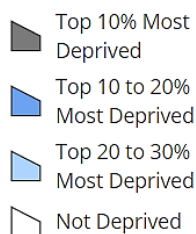
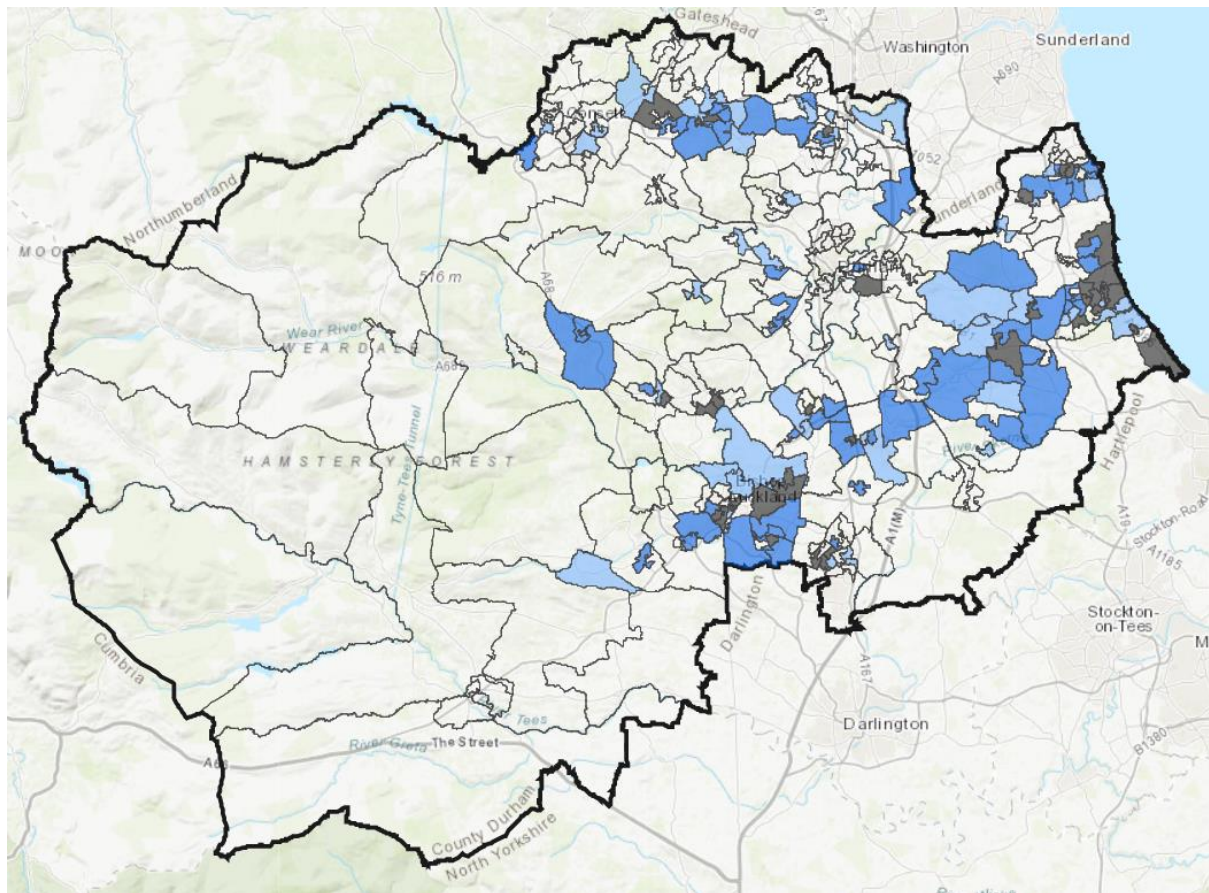
Both County Durham and Darlington experienced an increase in relative deprivation (i.e., by rank) between the 2015 and 2019 Indices. County Durham is in the top 40% most deprived upper-tier local authorities in England and is ranked as the 48th most deprived upper-tier local authority out of 151 nationally, (up from the ID2015 ranking of 59th). Darlington is ranked as the 59th most deprived upper tier local authority (from the previous ranking of 72 in the ID2015).

### **County Durham**

County Durham displays relatively high levels of deprivation (top 30% nationally) in the Income, Employment, and Health domains, counter-balanced by lower levels of deprivation in the Education, Crime, Barriers to Housing and the Living Environment domains. Trends overall indicate a reversal of the previous continuation of the steady improvements in relative deprivation in previous indices. However, this masks opposite trends for specific aspects of deprivation: the health domain and housing have demonstrated improvement in relative deprivation.

County Durham has 39 LSOAs (12%) ranked in the top 10 percent most deprived areas in England, an increase of 3 on the 36 LSOAs seen in 2015. These 39 County Durham LSOAs cover an area representing 10.8% of the county's population with 47.3% of the county's population living in areas in the top 30% most deprived nationally, however, not everyone living in these areas will be experiencing deprivation.

The distribution of the county's population by decile is shown below<sup>38</sup>.



*Percentage of LSOAs in County Durham by deprivation score in the overall index by decile*

Within County Durham, Woodhouse Close Central is the only area to have shown persistent deprivation and has seen its rank fall from 190 in the ID2015 to 150 in the ID2019, indicating an increase in its relative deprivation level.

However, there are now three LSOAs in the county in the top 1% most deprived:

- Woodhouse Close Central, ranked 150th (190th in 2015);
- Easington Colliery North, ranked 221st (510th in 2015);
- Horden Central, ranked 291st (396th in 2015).

<sup>38</sup>

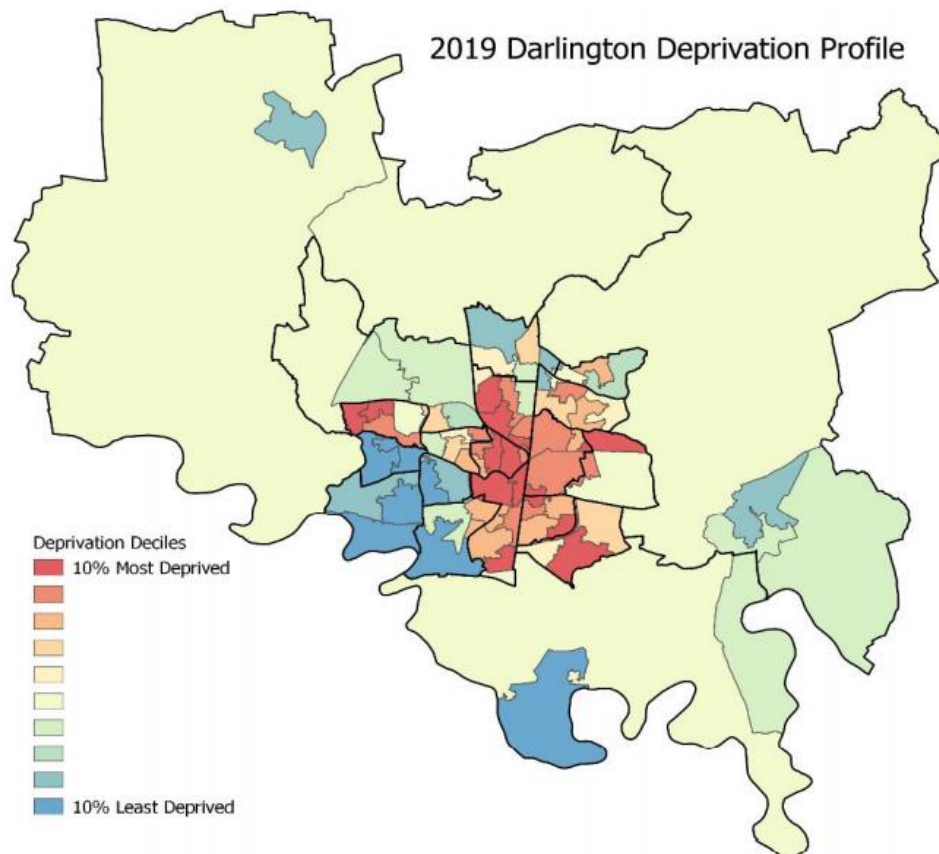
<https://durhamcounty.maps.arcgis.com/apps/MapSeries/index.html?appid=a3eb37ca4ef144a3b63f94468e2dc>

Many localities continue to experience multiple and intense forms of deprivation but the picture changes from area to area. Of the 39 LSOAs in the top 10% most deprived, four are in the top 10% for all seven subdomains in the index:

- Eden Hill;
- Shotton Colliery;
- Shildon East;
- Coundon North.

## Darlington

Darlington remains the least deprived LA area within the Tees Valley and of the 65 LSOAs in Darlington, 24 have moved into a more deprived decile, 35 have remained in the same decile and only 6 have moved into a less deprived decile. Darlington now has 21 LSOAs (previously 16) within the 20% most deprived in England. Compared with IMD2015, 50 out of 65 LSOAs (76.9%) have a worse deprivation score and rank in the IMD2019.



*Profile of the 2019 deprivation deciles for Darlington*



## 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 by 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<sup>39</sup>

The County Durham Plan provides the policy framework for the county up to 2036 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

### Darlington local plan<sup>40</sup>

The Darlington Local Plan 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<sup>41</sup>

## Housing

Within County Durham there are plans in place to develop 1,308 new homes each year of mixed type, size and tenure over the period 2016 to 2036. This will result in an additional 24,852 new houses by 2036. Significant housing developments in Durham include Sniperley Park and Sherburn Road with more information on the future.

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<sup>39</sup> County Durham Local Plan: [CDP Adopted Version 2020 \(durham.gov.uk\)](https://www.durham.gov.uk/cdp-adopted-version-2020)

<sup>40</sup> Darlington local plan: [local-plan-portal.pdf \(darlington.gov.uk\)](https://www.darlington.gov.uk/local-plan-portal.pdf)

Further information on future housing developments within County Durham and each station area can be located in the County Durham Plan.

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 Skertingham 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 (updated 2020).

### **Future business allocation**

The employment land availability describes the total amount of land reserved for industrial and business use awaiting development with up to 300 hectares planned Community Risk Profile 2020/21 – 2022/23 for future businesses in County Durham and up to 172 hectares of land allocations for employment land within Darlington in the period up to 2036.

The most significant business developments throughout the Service area will occur at Forrest Park (Newton Aycliffe), Jade Park (East Durham), Meadowfield Industrial Estate, Integra 61 (land south of Bowburn Road), Ingenium Park and Greater Faverdale in Darlington.

### **Health inequalities**

Population growth and an ageing population are placing pressure on primary healthcare facilities in Darlington. Population projections indicate an overall population increase of around 12,000 people between 2016 and 2036, which is around 3,000 extra patients in every five-year period. However, the over 65 population, which places a higher demand on services, is projected to increase from 21,000 in 2016 to 31,000 by 2026.

Health inequalities in Darlington are apparent with the most deprived areas tending to experience the poorest health. Across County Durham there are major differences in the health that people experience and there remains differences between the health of local people and those across England. The County Durham Joint Health and Wellbeing Strategy describes the strategy and initiatives to improve healthy life expectancy and reduce the gap within County Durham and between County Durham and England, have a smoke free environment with over 95% of residents not smoking.

## 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 both documents. 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 and the Civil Contingencies Secretariat is responsible for co-ordinating the production of both documents. 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 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.

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, as shown below:

Instead of plotting each individual risk onto the matrix, a number of risks have been thematically grouped, bringing together risks that share similar risk exposure and require similar capabilities to prepare, mitigate and respond. This is partly to bring similar risks together in a more usable way but is also due to the sensitivity of some of the risks assessed in the NSRA. The position of each risk category on the matrix below is an average based on the positions of all the different risks that belong to that category.

## National Risk Register: Risk Matrix

<b>Impact of the reasonable worst-case scenario</b>	<b>E</b>			<b>7 25</b>		
	<b>D</b>	<b>34</b>		<b>12 13 29</b>		
	<b>C</b>		<b>18 28 33 36</b>	<b>14 19 21 26 27 38</b>	<b>2 3 6 15 16 17 20</b>	
	<b>B</b>	<b>30</b>	<b>24</b>	<b>35</b>	<b>4 5 9 10 11 23 32 37</b>	<b>1</b>
	<b>A</b>			<b>8 22</b>	<b>31</b>	
		<b>&lt;1 in 500</b>	<b>1 to 5 in 500</b>	<b>5 to 25 in 500</b>	<b>25 to 125 in 500</b>	<b>&gt;125 in 500</b>
<b>Likelihood of the reasonable worst-case scenario of the risk occurring in the next year.</b>						

*Risk rating matrix from the National Risk Register 2020*

## **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

*Index of risks from the National Risk Register (2020 edition)*

## **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 of 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.

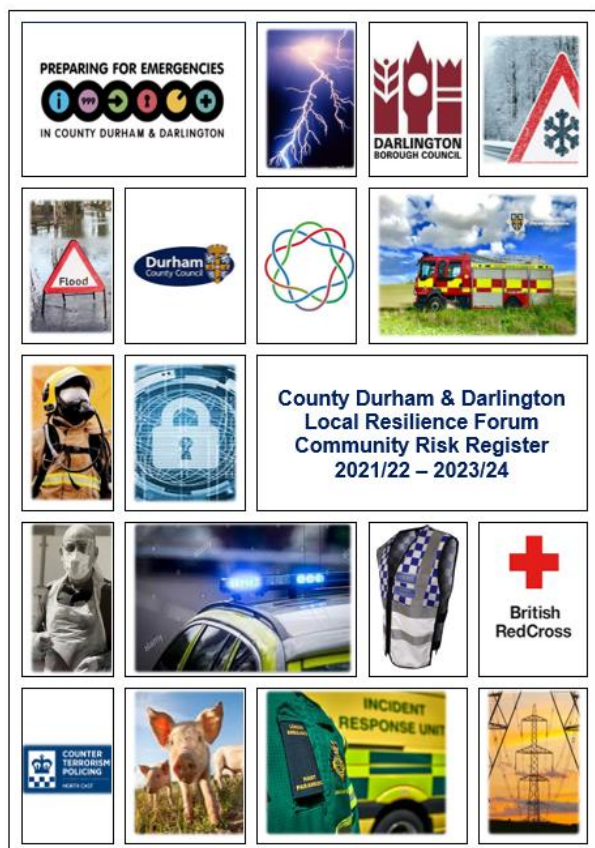
### **Health and demographics**

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 and 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).

## 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 2018 to 31 March 2021, 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<sup>42</sup>, 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.

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<sup>42</sup> Fire statistics definitions: [Fire statistics definitions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/fire-statistics-definitions)

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<sup>43</sup> 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.

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<sup>43</sup> [Fire Statistics definitions](#)

## 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.

Dwelling fires may be accidental or deliberate (or not known) in their cause. In the three-year reporting period from 1 April 2018 to 31 March 2021, the Service attended 855 dwelling fires, with their causes shown below:

Causes of dwelling fires	Number of dwelling fires	Percentage of activity
Accidental	676	79%
Deliberate (other property)	98	11%
Deliberate (unknown owner)	32	4%
Deliberate (own property)	30	4%
Not known	19	2%
Total	855	100%

*Cause of dwelling fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

The distribution of dwelling fires throughout the Service area (of all accidental, deliberate, and unknown causes) is shown below:

Station area	Number of dwelling fires	Percentage of total dwelling fires
Darlington	143	16.7%
Peterlee	130	15.2%
High Handenhold	91	10.6%
Bishop Auckland	86	10.1%
Consett	83	9.7%
Durham	70	8.2%
Spennymoor	64	7.5%
Newton Aycliffe	61	7.1%
Seaham	42	4.9%
Wheatley Hill	27	3.2%
Crook	27	3.2%
Stanhope	13	1.5%
Barnard Castle	10	1.2%
Sedgefield	5	0.6%
Middleton-in-Teesdale	3	0.4%
Total	855	100%

*Distribution of dwelling fires in the Service area from 1 April 2018 to 31 March 2021*

Further assessment of this risk shows the building types and locations within buildings where dwelling fires have started. The dwelling fires in the three-year reporting period occurred in the following range of premises:

Type of dwelling	Number of dwelling fires	Percentage
<b>House - single occupancy</b>	647	75.7%
<b>Bungalow - single occupancy</b>	81	9.5%
<b>Purpose Built Flat / Maisonette-multiple occupancy</b>	62	7.3%
<b>Self-contained Sheltered Housing</b>	26	3.0%
<b>Converted Flat/Maisonette - multiple occupancy</b>	24	2.8%
<b>caravan/mobile home (permanent dwelling)</b>	8	0.9%
<b>House in multiple occupation (HMO)</b>	5	0.6%
<b>Stately Home</b>	2	0.2%
<b>Total</b>	<b>855</b>	<b>100%</b>

*Types of premises where dwelling fires occurred*

Fires can start within a number of different locations within each dwelling, with the most frequent locations being kitchens (46%), bedrooms (11.1%) and living rooms (10.9%), as shown below:

Locations of where fires start within dwellings	Number of dwelling fires	Percentage of activity
Kitchen	393	46.0%
Bedroom	95	11.1%
Living room	93	10.9%
External fittings	60	7.0%
Corridor/Hall	28	3.3%
External Structures	25	2.9%
Bathroom/Toilet	21	2.5%
Garage	20	2.3%
Dining room	15	1.8%
Roof space	15	1.8%
Utility room	15	1.8%
Other locations (garages, conservatories, stairs etc)	75	8.8%
<b>Total</b>	<b>855</b>	<b>100%</b>

*Locations of where fires start in dwellings during the reporting period*

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 (9.8%) and September (9.5%), in comparison to May (7.4%) and July (6.8%). The variation of the monthly frequency of dwelling fires is shown below:

Month of the year	Number of dwelling fires	Percentage of activity
April	84	9.8%
September	81	9.5%
November	80	9.4%
August	77	9.0%
October	73	8.5%
December	71	8.3%
March	71	8.3%
February	66	7.7%
June	66	7.7%
January	65	7.6%
May	63	7.4%
July	58	6.8%
Total	855	100%

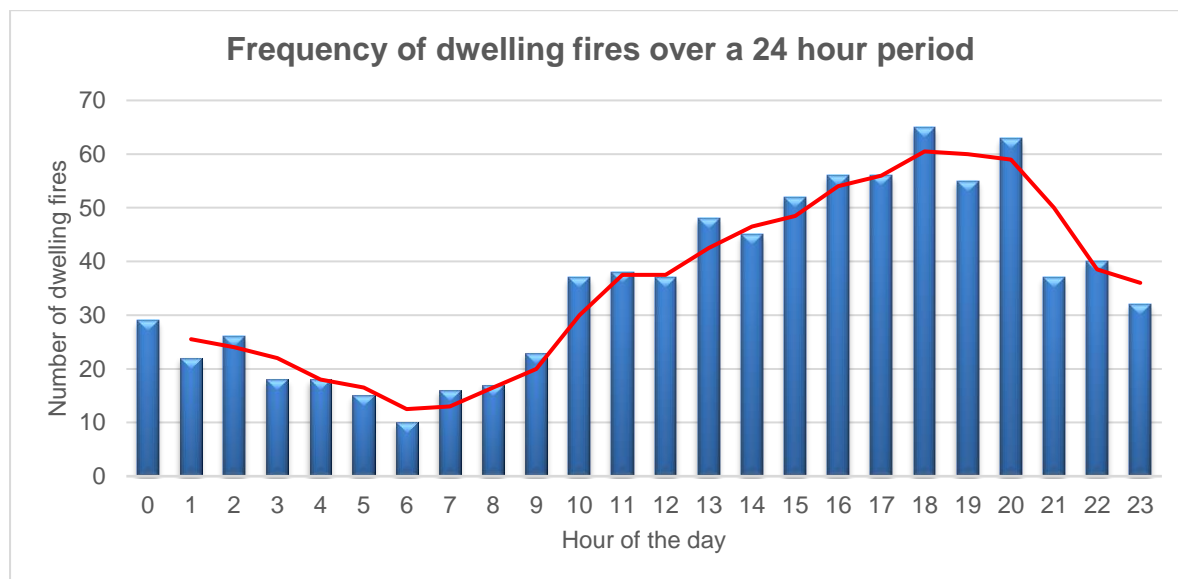
*Monthly variation of dwelling fires during the reporting period*

Furthermore, the frequency of dwelling fires is not consistent throughout each week, with the variation of when dwelling fires occur on which days of the week being shown below:

Day of the week	Number of dwelling fires	Percentage of activity
Wednesday	138	16.1%
Tuesday	133	15.6%
Thursday	128	15.0%
Sunday	127	14.9%
Saturday	115	13.5%
Friday	113	13.2%
Monday	101	11.8%
Total	855	100%

*Weekly variation of dwelling fires during the reporting period*

Over a 24-hour period, most dwelling fires occur between the afternoon (1 pm) and evening (8 pm), with a decline in the frequency of dwelling fires between 1 am and 6 am, as shown below:



*Frequency of dwelling fires throughout a 24-hour period during the three-year reporting period*

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 (12.5%), with people cooking food using oil or fat (9.8%) 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)	107	12.5%
Food (cooking oil or fat)	84	9.8%
Structural fixtures and fittings (internal wiring insulation)	80	9.4%
Structural fixtures and fittings (external fittings)	65	7.6%
Foam, rubber, plastic material	63	7.4%
Food - other	61	7.1%
Clothing and textiles	40	4.7%
Broad range of all other items first ignited	355	41.5%
<b>Total</b>	<b>855</b>	<b>100%</b>

*Items first ignited in dwelling fires during the reporting period*



The most frequent sources of ignition of dwelling fires are cooking appliances (34.8%), electrical wiring, cables and plugs (10.9%), and fire spread from a secondary fire (6.9%). Dwelling fires where smoking related materials are the source of ignition account for only 8.9% of the total number of incidents.

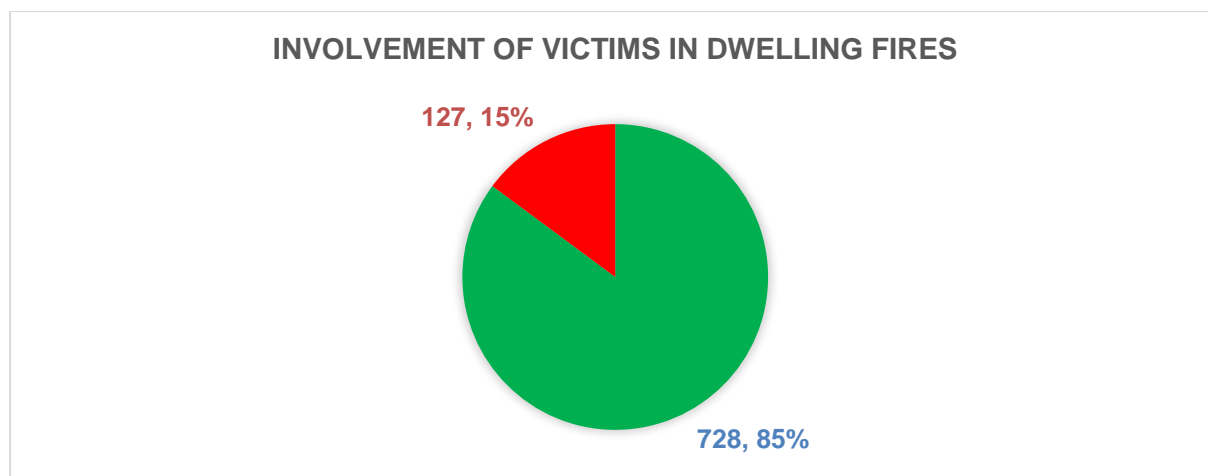
Source of ignition	Number of incidents	Percentage of activity
Cooking appliance	298	34.85%
Electricity supply	94	10.99%
Smoking related	76	8.89%
Other domestic style appliance	72	8.42%
Spread from secondary fire	59	6.90%
Naked flame	56	6.55%
Matches and candles	44	5.15%
All other sources of ignition	156	18.25%
Total	855	100%

*Various sources of ignition reported for dwelling fires during the reporting period*

#### Dwelling fire fatalities and casualties<sup>44</sup>

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.

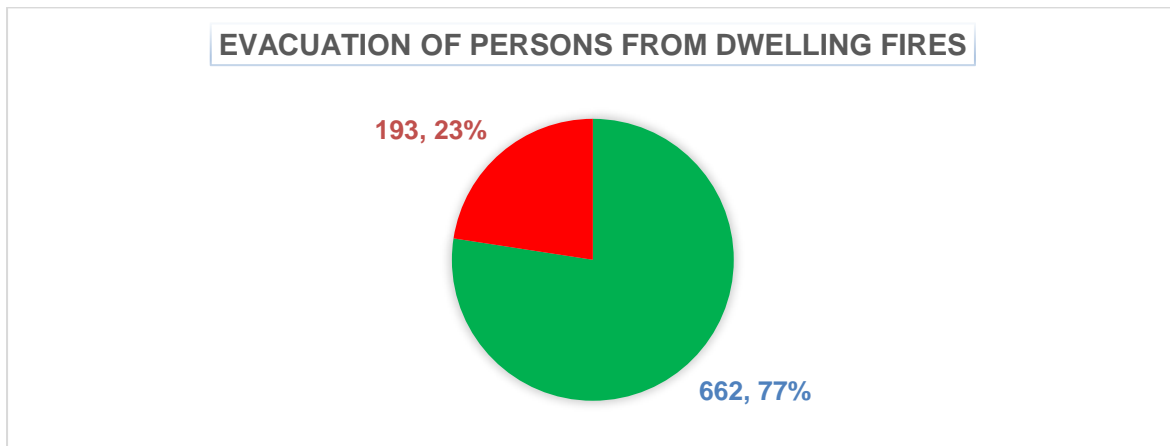
Of the dwelling fires that occurred during the reporting period, 85.1% did not involve any victims, while the remaining 14.9% resulted in an occupier of the dwelling experiencing injuries, as shown below:



*Involvement of victims in dwelling fires during the reporting period*

<sup>44</sup> [Fire Statistics definitions](#)

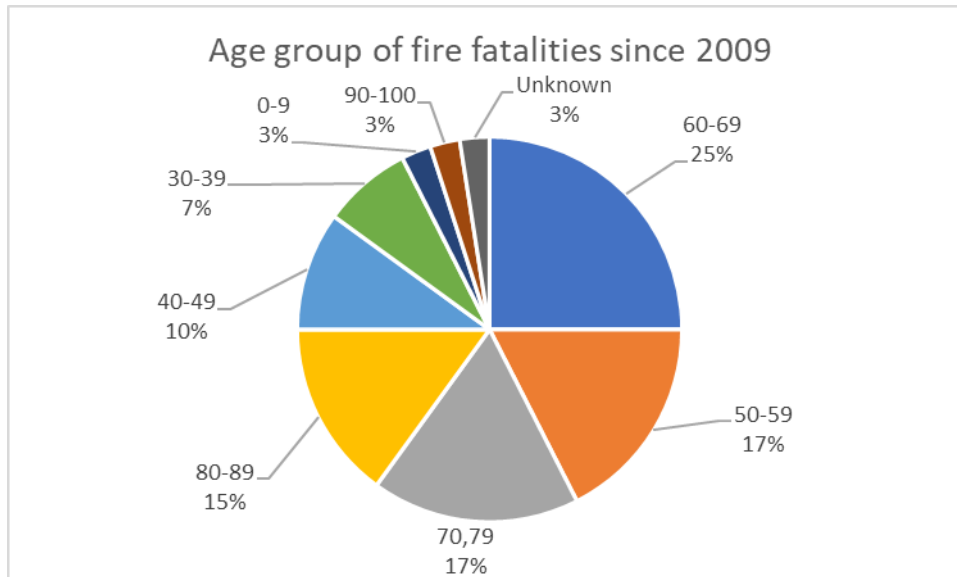
Further analysis of dwelling fire data for the reporting period indicates that 77% of the persons involved did not need to be evacuated from the dwelling, while the remaining 23% needed to be evacuated by Service personnel, as shown below:



*Evacuation of persons from dwelling fires during the reporting period*

Although there is insufficient data from fatal dwelling fire incidents within in the reporting period to fully understand the factors associated to, and that contribute towards, the loss of life, assessment of factors associated with the fire fatalities for incidents since 2009, shows the following key themes:

Almost two thirds (61%) of the fatal incidents involved males, while only 39% involved females. Over three quarters (77%) of fire fatalities are over 50 years old, with 35% of the fatalities being over 70 years old as shown below:



*Age group of fire fatalities since 2009*

The distribution of dwelling fires (of all causes) is broadly consistent with previous years. Over the previous three-year reporting period (2017/18 – 2019/20) to the current three-year reporting period (2018/19 – 2020/21), there has been an overall reduction of dwelling fires from 894 to 855 (a reduction of 4.4%). The station ranking of the frequency of dwelling fires is also consistent with previous reporting periods, with significant reductions at Darlington (a reduction of 13.5%), Peterlee (a reduction of 6.4%) and High Handenhold (an increase of 11%).

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario of a dwelling fire would be 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 with residents sustaining injuries (smoke inhalation, major burns or musculoskeletal) from their intended escape from their property, or during their rescue by fire service personnel. The reasonable worst-case scenario of a dwelling fire 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. The nature of this reasonable worst-case scenario presents 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.

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

Risk assessment for dwelling fires

2018/19	297
2019/20	287
2020/21	271
Three-year total	855
Three-year average	285
Risk assessment	Likelihood 5
	Impact 4

Impact	5					
	4					Y
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

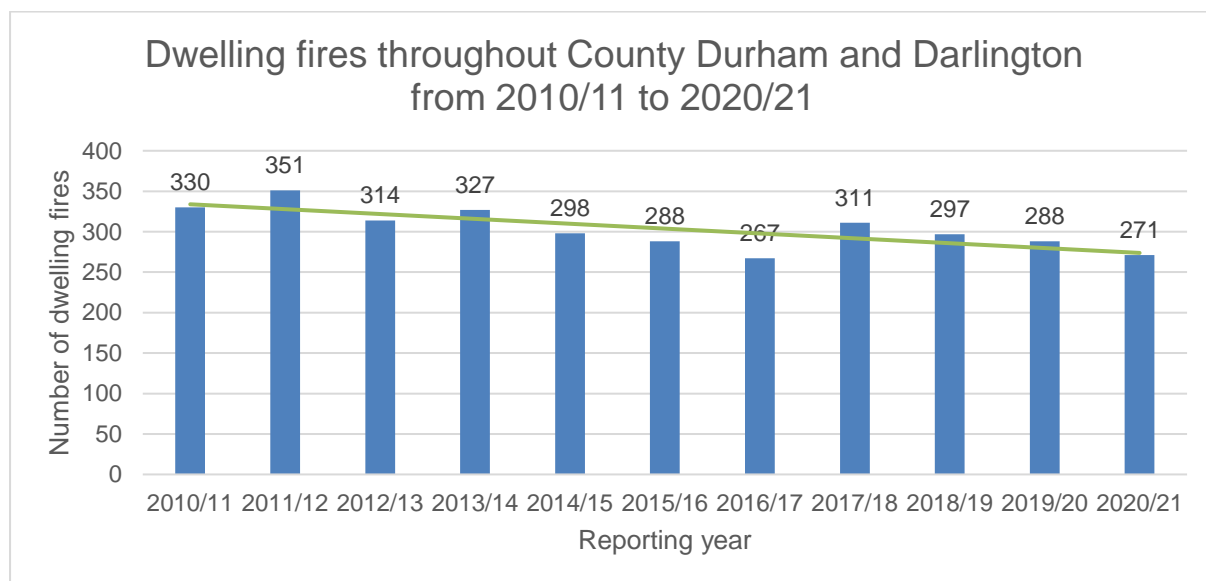
*Risk assessment for dwelling fires*

## 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 271 dwelling fires during 2020/21 in comparison to 330 dwelling fires in 2010/11, representing a reduction of 17.9% in the ten-year period<sup>45</sup>.



*Dwelling fires throughout County Durham and Darlington from 2010/11 to 2020/21*

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.

<sup>45</sup> Home Office dwelling fires dataset: <https://www.gov.uk/government/statistics/fire-statistics-incident-level-datasets> (Last updated 12 August 2021)

## R2 Other residential building fires

Other residential building fires<sup>46</sup> 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 2018 to 31 March 2021, 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	29	90.6%
Deliberate - others property	3	9.4%
Total	32	100%

*Causes of other residential building fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

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
High Handenhold	6	18.8%
Durham	6	18.8%
Bishop Auckland	5	15.6%
Darlington	4	12.5%
Newton Aycliffe	4	12.5%
Consett	4	12.5%
Peterlee	2	6.3%
Seaham	1	3.1%
Total	32	100%

*Distribution of other residential building fires in the Service area from 1 April 2018 to 31 March 2021*

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<sup>46</sup> [Fire Statistics definitions](#)

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	16	50.0%
Hotel/motel	6	18.8%
Student hall of residence	2	6.3%
Retirement/elderly	2	6.3%
Other residential home	2	6.3%
Other holiday residence (cottage, flat, chalet)	2	6.3%
Children's	1	3.1%
Hostel (e.g. for homeless people)	1	3.1%
Total	32	100%

*Distribution of property types of other residential building fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

The majority of the fires in other residential buildings start in kitchens (31.3%), laundry rooms (18.8%), bedrooms (12.5%) and corridors/hallways (12.5%).

Fire start location	Distribution of locations where fires started	Percentage of activity
Kitchen	10	31.3%
Laundry room	6	18.8%
Bedroom	4	12.5%
Corridor/hall	4	12.5%
Utility room	2	6.3%
Lift/lift shaft/motor room	1	3.1%
Meeting room	1	3.1%
Office	1	3.1%
External structures	1	3.1%
Bathroom/toilet	1	3.1%
Airing/drying cupboard	1	3.1%
Total	32	100.0%

*Distribution of fire start locations in other residential building fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

Although some fires in other residential buildings have resulted in a loss of life, such as the 14 residents of the fire at the Rosepark Care Home<sup>47</sup> in Uddingston, South Lanarkshire, on 31 January 2004, 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 Sedgfield. 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 require the evacuation of multiple residents, some of whom may suffer minor 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.

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<sup>47</sup> [Rosepark Care Home: An examination of the Facts \(Strathclyde Fire and Rescue\)](#)

Risk assessment for other residential building fires

2018/19	11	
2019/20	15	
2020/21	6	
Three-year total	32	
Three-year average	11	
Risk assessment	Likelihood	2
	Impact	3

Impact	5					
	4					
	3		Y			
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for other residential building fires*

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 services 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). Other non-residential building fires can be either accidental or deliberate in their cause. In the three-year reporting period from 1 April 2018 to 31 March 2021, the Service attended 562 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	279	51.7%
Deliberate - others property	161	29.8%
Deliberate - unknown owner	62	11.5%
Not known	22	4.1%
Deliberate - own property	16	3.0%
Total	540	100%

*Causes of other non-residential building fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

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	93	17.2%
Darlington	75	13.9%
Durham	70	13.0%
Bishop Auckland	51	9.5%
Consett	45	8.3%
High Handenhold	42	7.8%
Newton Aycliffe	32	5.9%
Spennymoor	31	5.7%
Barnard Castle	29	5.4%
Seaham	25	4.6%
Wheatley Hill	20	3.7%
Sedgefield	11	2.0%
Crook	10	1.8%
Middleton-in-Tees	3	0.6%
Stanhope	3	0.6%
Total	540	100%

*Distribution of other non-residential building fires in the Service area from 1 April 2018 to 31 March 2021*

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 other non-residential buildings would be 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 public.

Risk assessment for other non-residential building fires

2018/19	208	
2019/20	185	
2020/21	147	
Three-year total	540	
Three-year average	180	
Risk assessment	Likelihood	5
	Impact	3

Impact	5					
	4					
	3					Y
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for other non-residential building fires*

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 2018 to 31 March 2021, the Service attended 1,319 road vehicle fires, with their causes shown below:

Cause of road vehicle fires	Number of road vehicle fires	Percentage of activity
Deliberate - others property	528	40.0%
Deliberate - unknown owner	365	27.7%
Accidental	360	27.3%
Not known	44	3.3%
Deliberate - own property	22	1.7%
Total	1,319	100%

*Cause of road vehicle fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

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	397	30.1%
Consett	120	9.1%
Wheatley Hill	111	8.4%
Durham	104	7.9%
Bishop Auckland	100	7.6%
Darlington	99	7.5%
High Handenhold	98	7.4%
Spennymoor	69	5.2%
Seaham	67	5.1%
Newton Aycliffe	64	4.9%
Crook	45	3.4%
Sedgefield	23	1.7%
Barnard Castle	11	0.8%
Stanhope	9	0.7%
Middleton-in-Tees	2	0.2%
Total	1,319	100%

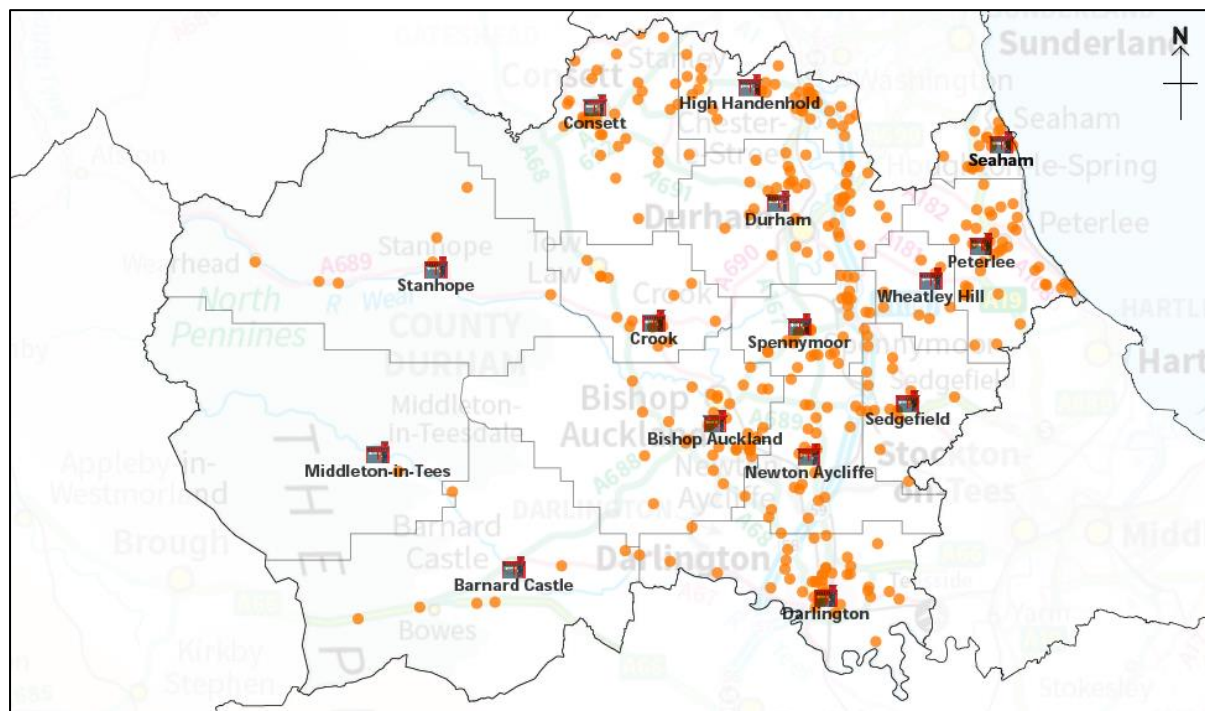
*Distribution of road vehicle fires throughout the Service are in the three-year reporting period*

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	44	12.2%
Darlington	43	11.9%
Durham	39	10.8%
High Handenhold	38	10.6%
Bishop Auckland	35	9.7%
Consett	33	9.2%
Spennymoor	32	8.9%
Newton Aycliffe	25	6.9%
Seaham	17	4.7%
Crook	15	4.2%
Sedgefield	15	4.2%
Wheatley Hill	8	2.2%
Barnard Castle	8	2.2%
Stanhope	7	1.9%
Middleton-in-Teesdale	1	0.3%
Total	360	100%

*Distribution of accidental road vehicle fires throughout the Service area in the three-year reporting period*

The locations of accidental road vehicle fires are shown below:



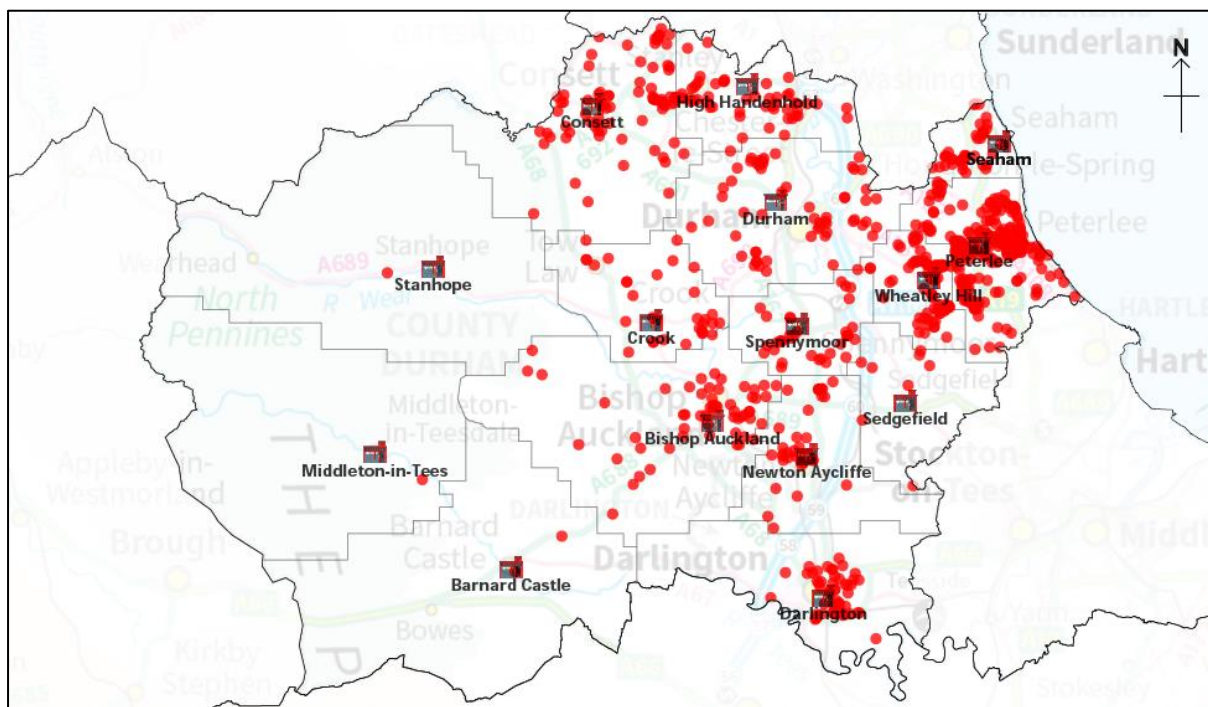
*Location of accidental road vehicle fires*

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	347	37.9%
Wheatley Hill	99	10.8%
Consett	86	9.4%
Bishop Auckland	60	6.6%
Durham	59	6.4%
Darlington	55	6.0%
High Handenhold	55	6.0%
Seaham	42	4.6%
Newton Aycliffe	36	3.9%
Spennymoor	34	3.7%
Crook	30	3.3%
Sedgefield	8	0.9%
Barnard Castle	2	0.2%
Stanhope	1	0.1%
Middleton-in-Tees	1	0.1%
Total	915	100%

*Distribution of deliberate road vehicle fires throughout the Service are in the three-year reporting period*

The locations of deliberate road vehicle fires are shown below:



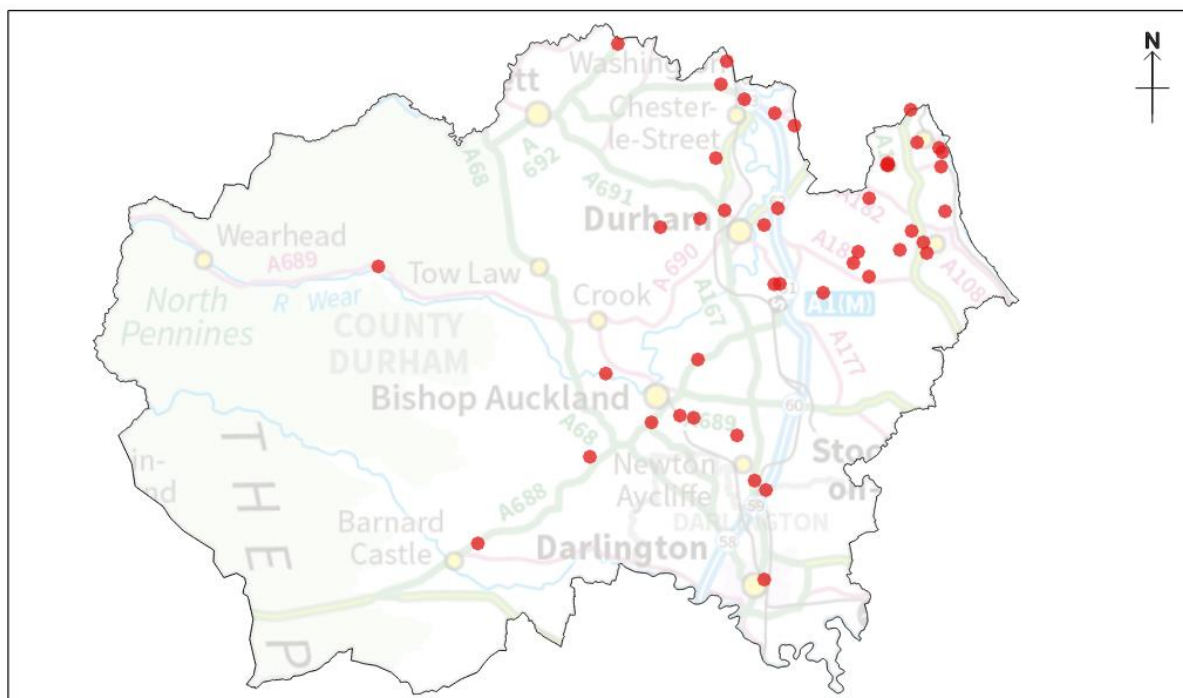
*Location of deliberate road vehicle fires*

Unknown cause road vehicle fires account for 3.3% of the Service total for all road vehicle fires; and their distribution throughout the Service area is shown below:

Station area	Number of unknown cause road vehicle fires	Percentage of activity
Seaham	8	18.2%
Durham	6	13.6%
Peterlee	6	13.6%
Bishop Auckland	5	11.4%
High Handenhold	5	11.4%
Wheatley Hill	4	9.1%
Spennymoor	3	6.8%
Newton Aycliffe	3	6.8%
Barnard Castle	1	2.3%
Stanhope	1	2.3%
Darlington	1	2.3%
Consett	1	2.3%
Total	44	100%

*Distribution of unknown cause road vehicle fires throughout the Service area in the three-year reporting period*

The locations of unknown causes 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	884	67.0%
Van	148	11.2%
Motorcycle	80	6.1%
Multiple vehicles	45	3.4%
Caravan (not on tow)	33	2.5%
Lorry/HGV	32	2.4%
Other	27	2.0%
Agricultural	24	1.8%
Caravan unspecified	15	1.1%
Motor home	12	0.9%
Bus/coach	8	0.6%
Minibus	5	0.4%
Trailer unit (not attached to tractor)	4	0.3%
Bicycle	1	0.1%
Caravan on tow	1	0.1%
Total	1,319	100%

*Different types of road vehicle fires in the three-year reporting period*

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	468	35.5%
Driver/passenger area	444	33.7%
Not known	173	13.1%
Other	72	5.5%
Other inside/cargo area	49	3.7%
Wheels/brakes	48	3.6%
Boot	34	2.6%
Fuel tank	31	2.4%
Total	1,319	100%

*Origins of road vehicle fires throughout the three-year reporting period*



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	734	55.6%
Engine compartment	316	24.0%
Driver/passenger compartment	180	13.6%
Separate luggage compartment	39	3.0%
Wheels/tyres/brakes/axles/bearings	35	2.7%
Roof/roof rack (exterior to vehicle)	9	0.7%
Fuel tank	6	0.5%
Total	1,319	100%

*Extent of fire damage to road vehicle fires throughout the three-year reporting period*

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.

#### 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 the fire. 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. A variation of this scenario would be the chronic nature of repetitive attendance at single vehicle fires that have a negative impact on Service resources and the availability of crews to deliver proactive prevention and protection activities.

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

#### Risk assessment for road vehicle fires

2018/19	416
2019/20	433
2020/21	470
Three-year total	1,319
Three-year average	440
Risk assessment	Likelihood 5
	Impact 4

Impact	5					
	4					Y
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for road vehicle fires*

#### 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 statutory 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 Other outdoor fires

Other outdoors fires are fires in either primary outdoor locations (that is, aircraft, boats, trains and outdoor structures such as post or telephone boxes, bridges, tunnels etc.), or fires in non-primary outdoor locations that have casualties or five or more pumping appliances attending.

Other outdoor fires can be either accidental or deliberate in their cause. In the three-year reporting period from 1 April 2018 to 31 March 2021, the Service attended 112 other outdoor fires, with their causes shown below:

Other fire causes	Number of other fires	Percentage of activity
Deliberate - others property	45	40.2%
Accidental	44	39.3%
Deliberate - unknown owner	13	11.6%
Not known	6	5.4%
Deliberate - own property	4	3.6%
Total	112	100%

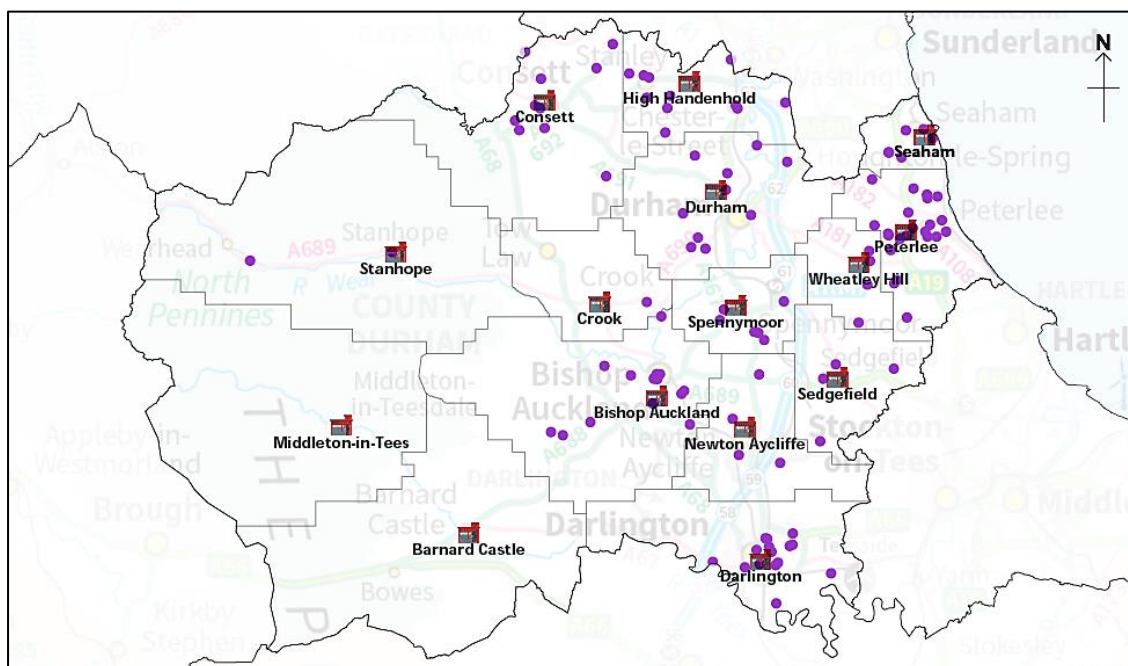
*Causes of other outdoor fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

The distribution of other fires throughout the Service area (of all accidental, deliberate, and unknown causes) is shown below:

Station area	Number of outdoor fires	Percentage of activity
Peterlee	22	19.6%
Bishop Auckland	16	14.3%
Darlington	15	13.4%
High Handenhold	12	10.7%
Consett	10	8.9%
Durham	10	8.9%
Spennymoor	6	5.4%
Seaham	6	5.4%
Wheatley Hill	4	3.6%
Sedgefield	4	3.6%
Newton Aycliffe	4	3.6%
Stanhope	2	1.8%
Crook	1	0.9%
Total	112	100%

*Distribution of other outdoor fires in the Service area from 1 April 2018 to 31 March 2021*

The locations of other fires throughout the Service area (of all accidental, deliberate, and unknown causes) are shown below:



*Locations of all other outdoor fires throughout the Service area (of all accidental, deliberate and unknown causes)*

The classification of other outdoor primary fires is a broad category and contains many possible property types, as shown below

Type of other outdoor property fires	Number of other fires	Percentage of activity
Outdoor storage	53	47.3%
Other outdoor structures	17	15.2%
Other outdoor equipment/machinery	15	13.4%
Garden equipment	7	6.3%
Recycling collection point, bottle bank	5	4.5%
Shelter	4	3.6%
Agricultural equipment	2	1.8%
Tunnel, subway	1	0.9%
Other outdoor location	1	0.9%
Loose refuse (incl in garden)	1	0.9%
Wheelie Bin	1	0.9%
Small refuse/recycle cont. (ex wheelie bin)	1	0.9%
Bridge	1	0.9%
Post box	1	0.9%
Camping tent	1	0.9%
Other tent/marquee	1	0.9%
<b>Total</b>	<b>112</b>	<b>100%</b>

*Types of other outdoor property fires throughout the Service area in the three-year reporting period*

Examples of other outdoor fires that occurred during the reporting period include an electrical fire in a wind turbine that was allowed to burn out under supervision, a water rescue lifebuoy and container at the end of a decked jetty near a small pond and a small fire in a railway ticket machine. In 5.4% of the other outdoor fires there was no damage caused as a result of the fire and in 42.0% of the fires there was up to 5 m<sup>2</sup> of damage caused.

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario of another outdoor fire would be a fire in a scrap yard where flammable materials were illegally stored within containers and their contents were not known to operational crews. Fire spread would impact on the flammable materials to exacerbate the fire, requiring the attendance of several fire appliances and partner agencies to manage the incident effectively. As a result of the fire there would be a negative impact on the environment due to the composition of materials involved and a negative impact on the local economy due to the short-term loss of business/productivity. There could also be minor injuries due to the hostile working environment and rapid fire spread.

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

Risk assessment for other outdoor fires

2018/19	44
2019/20	36
2020/21	32
Three-year total	112
Three-year average	37
Risk assessment	Likelihood 4 Impact 3

Impact	5					
	4					
	3				Y	
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for other outdoor fires*

Confidence

This scenario is assessed with a moderate degree of confidence. Although the likelihood of this classification of fires has remained consistent with the previous year, the scenario covers an unpredictable broad range of incidents.

Changes in the risk landscape of other outdoor fires

CDDFRS continues to work with key partners to reduce the opportunity of other outdoor 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 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 2018 to 31 March 2021, the Service attended 7,651 secondary fires, with their causes shown below:

Secondary fire causes	Number of secondary fires	Percentage of activity
Deliberate - unknown owner	3,727	48.8%
Deliberate - others property	2,230	29.2%
Deliberate - own property	799	10.5%
Not known	462	6.1%
Accidental	418	5.5%
Total	7,636	100%

*Causes of secondary fires during the three-year reporting period*

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 29.9% of the total secondary fires, while the three stations towards the West of the Service area account for only 0.9% 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	1,526	20.0%
Darlington	1,307	17.1%
High Handenhold	884	11.6%
Bishop Auckland	828	10.9%
Durham	681	8.9%
Consett	531	7.0%
Seaham	476	6.2%
Newton Aycliffe	418	5.5%
Spennymoor	342	4.5%
Wheatley Hill	280	3.7%
Crook	238	3.1%
Sedgefield	57	0.8%
Stanhope	30	0.4%
Barnard Castle	28	0.4%
Middleton-in-Tees	5	0.1%
Total	7,631	100%

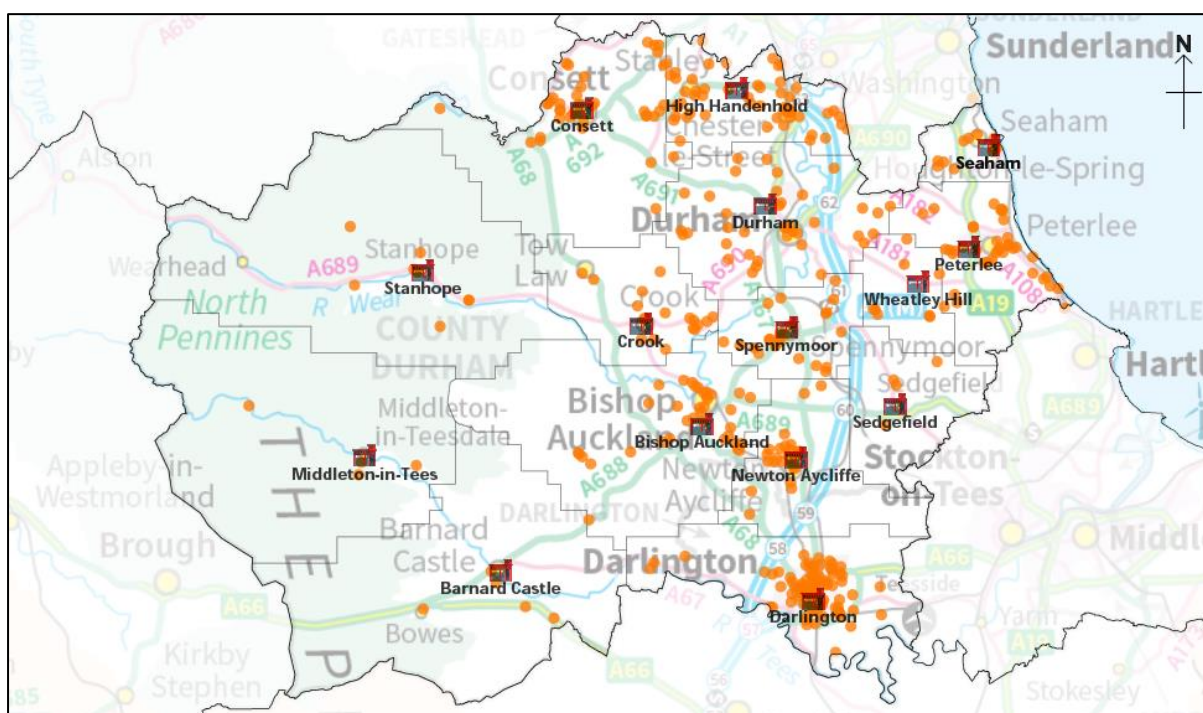
*Distribution of secondary fires throughout the Service area during the three-year reporting period*

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	100	24.0%
High Handenhold	54	12.9%
Consett	42	10.1%
Peterlee	38	9.1%
Durham	37	8.9%
Bishop Auckland	36	8.6%
Newton Aycliffe	27	6.5%
Spennymoor	23	5.5%
Crook	18	4.3%
Seaham	12	2.9%
Stanhope	9	2.1%
Wheatley Hill	8	1.9%
Barnard Castle	5	1.2%
Sedgefield	4	1.0%
Middleton-in-Tees	4	1.0%
Total	417	100%

*Distribution of accidental secondary fires throughout the Service area*

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



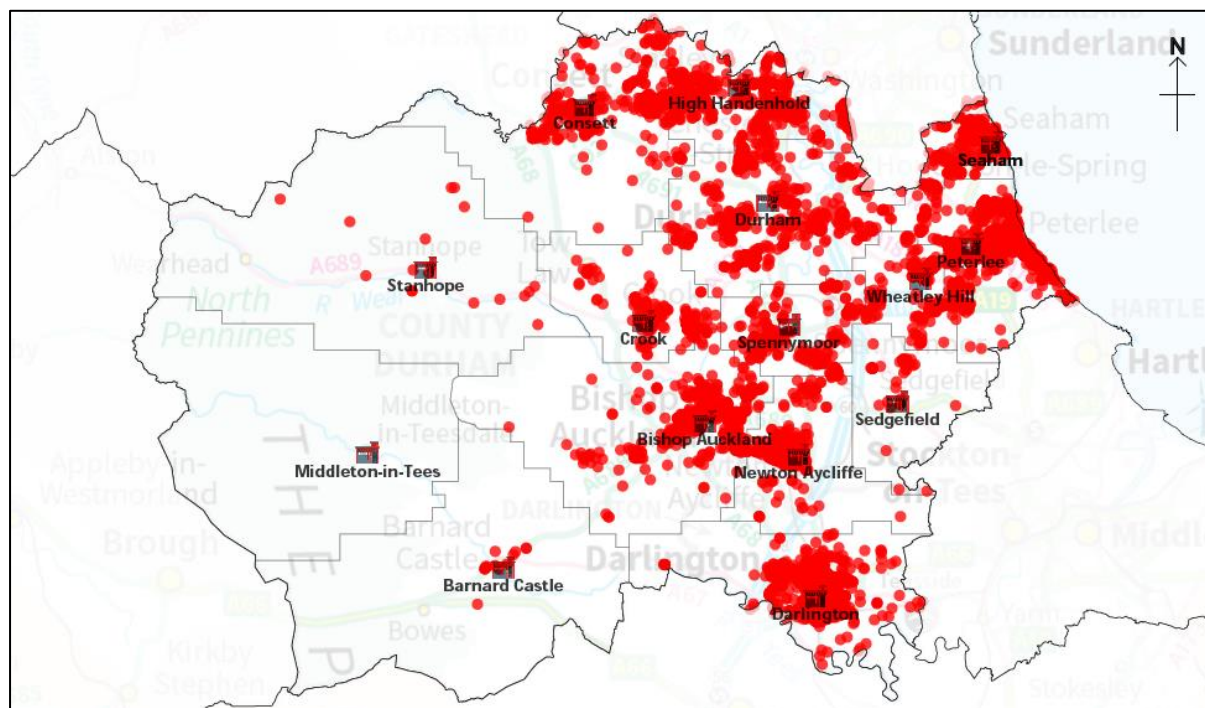
*Location of accidental secondary fires*

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	1,468	21.7%
Darlington	1,124	16.7%
Bishop Auckland	751	11.1%
High Handenhold	740	11.0%
Durham	575	8.5%
Seaham	449	6.7%
Consett	442	6.6%
Newton Aycliffe	363	5.4%
Spennymoor	299	4.4%
Wheatley Hill	256	3.8%
Crook	207	3.1%
Sedgefield	46	0.7%
Stanhope	18	0.3%
Barnard Castle	14	0.2%
Total	6,752	100%

*Distribution of deliberate secondary fires throughout the Service area*

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



*Location of deliberate secondary fires*

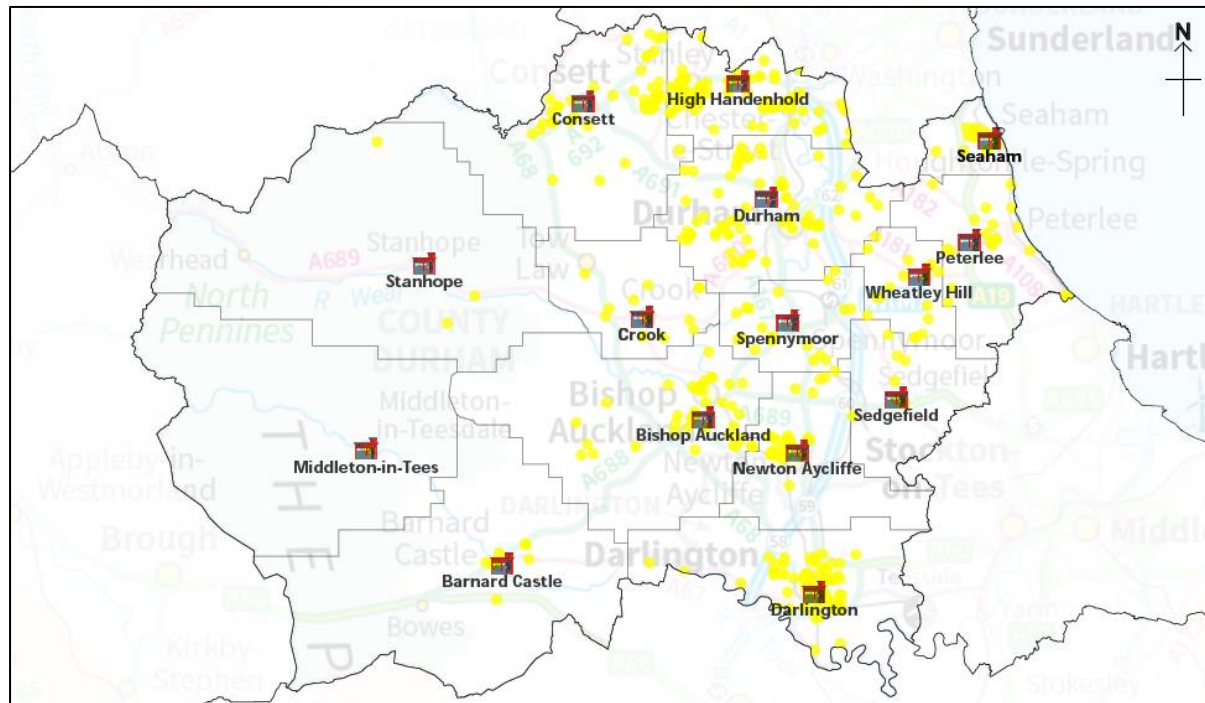


Unknown cause secondary fires account for a total of 6.0% of the Service total for all secondary fires, and their distribution throughout the Service area is shown below:

Station area	Number of unknown cause secondary fires	Percentage of activity
High Handenhold	90	19.5%
Darlington	83	18.0%
Durham	69	14.9%
Consett	47	10.2%
Bishop Auckland	41	8.9%
Newton Aycliffe	28	6.1%
Peterlee	20	4.3%
Spennymoor	20	4.3%
Wheatley Hill	16	3.5%
Seaham	15	3.2%
Crook	13	2.8%
Barnard Castle	9	1.9%
Sedgefield	7	1.5%
Stanhope	3	0.6%
Middleton-in-Tees	1	0.2%
Total	462	100%

*Distribution of unknown cause secondary fires throughout the Service area*

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



*Locations of unknown cause secondary fires*

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)	3729	48.9%
Scrub land	1094	14.3%
Tree scrub <sup>48</sup>	546	7.2%
Small refuse/recycle container <sup>49</sup>	471	6.2%
Wheelie bin	394	5.2%
Grassland, pasture, grazing etc	365	4.8%
Large refuse/rubbish container (skip)	121	1.6%
Private/domestic garden/allotment <sup>50</sup>	118	1.6%
Fence	103	1.4%
Hedge	82	1.1%
Roadside vegetation	79	1.0%
Other outdoor items <sup>51</sup>	67	0.9%
Heathland or moorland	43	0.6%
Straw/stubble burning	41	0.5%
Canal/riverbank vegetation	32	0.4%
Wasteland	29	0.4%
Other outdoor location	28	0.4%
Other private non-residential building	23	0.3%
Railway trackside vegetation	20	0.3%
All other locations	246	3.2%
Total	7,631	100%

*Locations and type of materials involved in secondary fires*

### Reasonable worst-case scenario

The reasonable worst-case scenario for this incident type would be a spate of refuse fires, grassland fires and/or fires in derelict buildings or vehicles which requires the attendance of numerous 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.

<sup>48</sup> Includes single trees not in garden

<sup>49</sup> Excluding a wheelie bin

<sup>50</sup> Vegetation only, not equipment or building

<sup>51</sup> Includes roadside furniture

In this scenario, there would also be a negative reputational impact on the service due to the chronic and persistent nature of these fires and a regional/national perception of societal tolerance.

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

Risk assessment for secondary fires

2018/19	2,915
2019/20	2,381
2020/21	2,335
Three-year total	7,631
Three-year average	2,544
Risk assessment	Likelihood 5
	Impact 4

Impact	5					
	4					Y
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for secondary fires*

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.

## 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<sup>52</sup>.

Within this scenario, a wildfire is defined<sup>53</sup> 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.

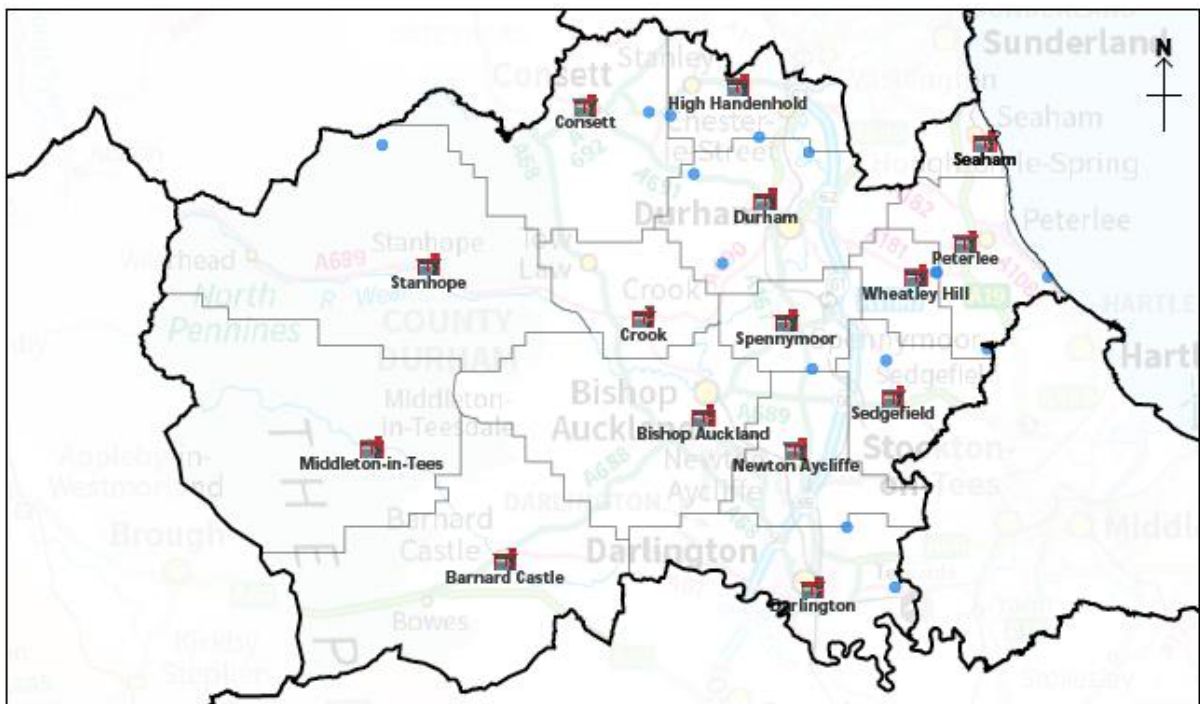
The level of wildfire risk is not evenly spread across the UK; it varies considerably between seasons and between different regions of the UK. The key factors influencing wildfire risk are the prevailing weather conditions, vegetation types and the local topography. The west of the Service area is predominantly 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.

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<sup>52</sup> [NFCC Wildfire position statement](#)

<sup>53</sup> [NFCC National Operational Guidance - Wildfires](#)

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



*Locations of wildfires in the Service area during the reporting period*

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<sup>54</sup>.

<sup>54</sup> [NFCC National Operational Guidance - Wildfires](#)

In the three-year reporting period from 1 April 2018 to 31 March 2021, 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	2018/19	2019/20	2020/21	% of Total	Total
Peterlee	2	-	1	20%	3
High Handenhold	1	-	2	20%	3
Durham	1	-	1	13%	2
Wheatley Hill	-	1	-	6.6%	1
Darlington	-	1	1	13%	2
Stanhope	1	-	-	6.6%	1
Sedgefield	1	-	-	6.6%	1
Consett	1	-	-	6.6%	1
Spennymoor	1	-	-	6.6%	1
Bishop Auckland	-	-	-		-
Newton Aycliffe	-	-	-		-
Seaham	-	-	-		-
Crook	-	-	-		-
Barnard Castle	-	-	-		-
Middleton-in-Teesdale	-	-	-		-
Total	8	2	5		15

*Wildfires within the Service area from 1 April 2018 to 31 March 2021 that specifically met the National Operational Guidance definition for this incident type*

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.

In 2018, fire and rescue services dealt with a number of wildfires across the country. The vast majority of these were considered business as usual, although some larger incidents (including the Saddleworth Moor and Winter Hill fires) involved mutual aid from other services and the use of specialist capabilities such as high-volume pumps.

The Met Office provides a [Fire Severity Index for England and Wales](#), 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.

Reasonable worst-case scenario

The reasonable worst-case scenario for a wildfire incident in the Service area would be a protracted large fire in an urban 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 national 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. In this scenario, it is unlikely that either any members of the public or firefighters would receive significant injuries, and only minor harms would be experienced.

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

Risk assessment for wildfires

2018/19	8
2019/20	2
2020/21	5
Three-year total	15
Three-year average	5
Risk assessment	Likelihood 3
	Impact 2

Impact	5					
	4					
	3					
	2			Y		
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for wildfires*

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 2018 to 31 March 2021, the Service attended 65 rescues from water as shown in the table below:

Station area	Number of rescues from water	Percentage of activity
Durham	17	47.22%
Darlington	7	19.44%
Bishop Auckland	4	11.11%
Peterlee	2	5.56%
Barnard Castle	1	2.78%
Consett	1	2.78%
High Handenhold	1	2.78%
Middleton-in-Tees	1	2.78%
Newton Aycliffe	1	2.78%
Stanhope	1	2.78%
Total	36	100%

*Frequency of rescues from water within the service area during the reporting period*

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.

### Reasonable worst-case scenario

Based on the historical precedents, statistical analysis and professional judgement, the reasonable worst-case scenario for rescues from water would be an incident where an individual (or a small group of people) entered the water for social activities and were 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 members of the public. This scenario would require the attendance of specialist resources to carry out time critical safe and effective rescues.

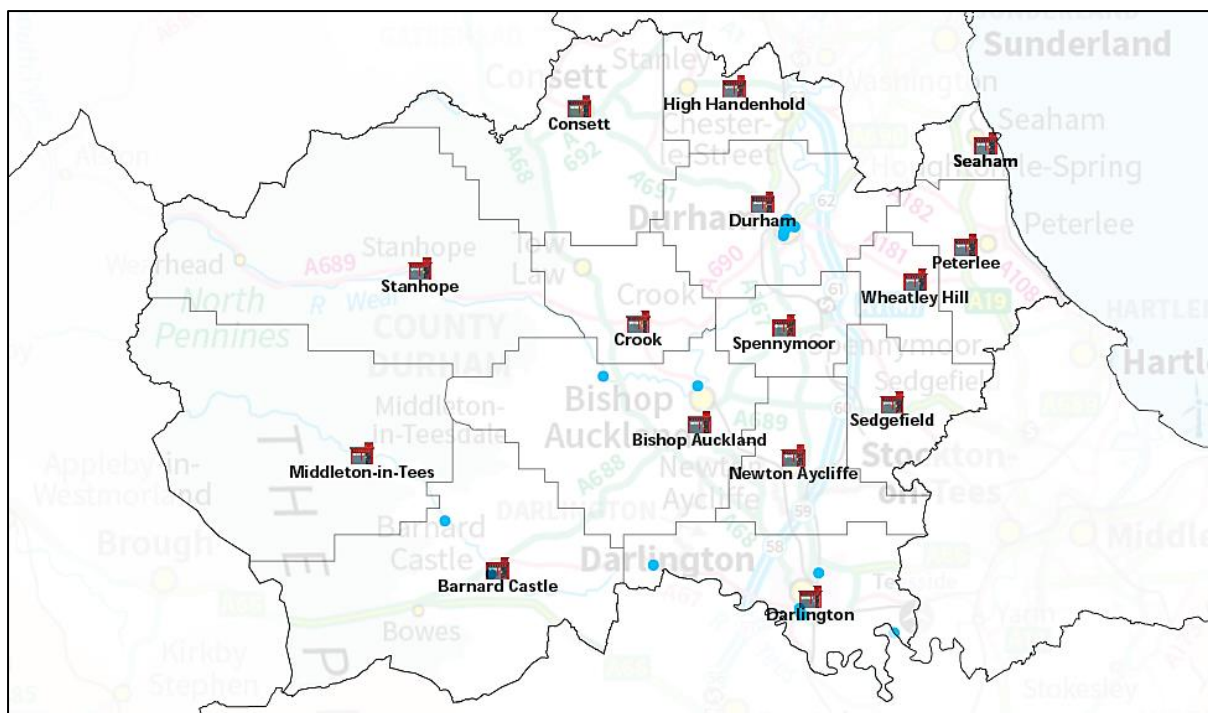
Rescues from water are not included in either the National Security Risk Assessment or the County Durham and Darlington Local Resilience Forum Community Risk Register and due to the frequency and impact of previous incidents in the reporting period, this risk scenario is only considered appropriate for the limited number of stations listed above.

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	28	77.8%
Animal assistance incident	8	22.2
Total	36	100%

*Rescue from water incident types*

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

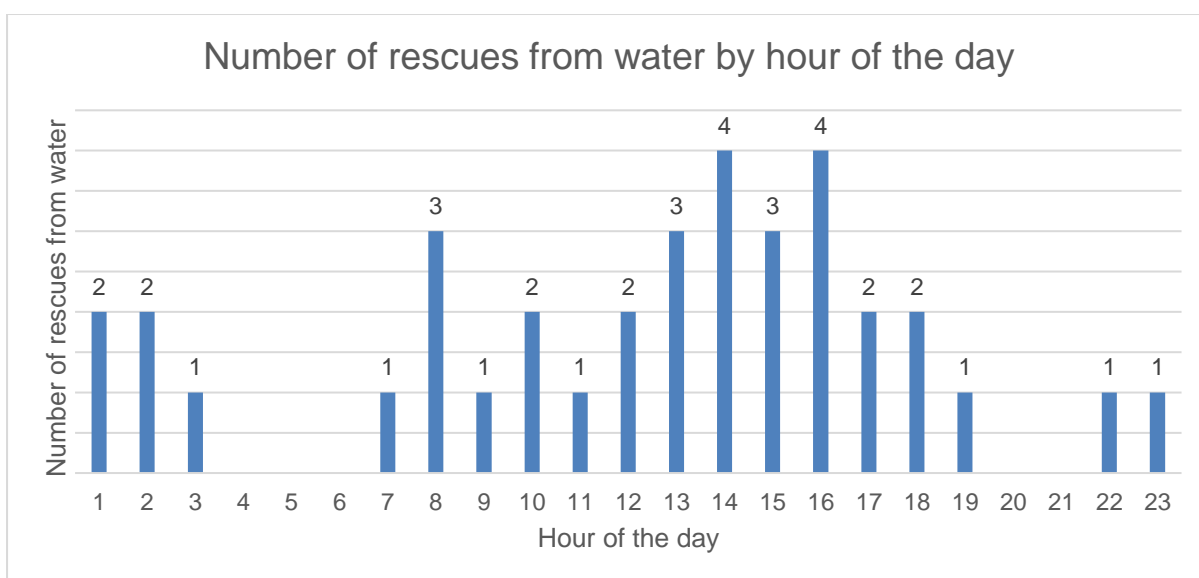


*locations of the rescues from water during the reporting period*

Furthermore, assessment of the days of the week and times of rescues from water show that most water related rescues occur on a weekend (total of 52.7% of water incidents on a Friday, Saturday or Sunday), and the most frequent time of the day for these rescues is mid to late afternoon, as shown below:

Day of the week	Number of rescues from water	Percentage of activity
Friday	7	19.4%
Sunday	7	19.4%
Saturday	5	13.9%
Thursday	5	13.9%
Monday	4	11.1%
Tuesday	4	11.1%
Wednesday	4	11.1%
Total	36	100%

*Days of the week when rescues from water occurred*



*Hours of the day when rescues from water occurred*

Risk assessment for rescues from water

2018/19	10
2019/20	17
2020/21	9
Three-year total	36
Three-year average	12
Risk assessment	Likelihood 3
	Impact 3

Impact	5					
	4					
	3			Y		
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for rescues from water*

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 2018 to 31 March 2021, the Service attended 119 rescues from height. The prevalence of rescues from height in the Service area is shown below:

Station area	Number of rescues from height	Percentage
<b>Darlington</b>	21	17.7%
<b>Durham</b>	20	16.8%
<b>Seaham</b>	17	14.3%
<b>Consett</b>	10	8.4%
<b>Peterlee</b>	9	7.6%
<b>Bishop Auckland</b>	7	5.9%
<b>High Handenhold</b>	7	5.9%
<b>Wheatley Hill</b>	7	5.9%
<b>Crook</b>	6	5.0%
<b>Newton Aycliffe</b>	5	4.2%
<b>Spennymoor</b>	5	4.2%
<b>Barnard Castle</b>	2	1.7%
<b>Stanhope</b>	2	1.7%
<b>Sedgefield</b>	1	0.8%
<b>Total</b>	<b>119</b>	<b>100%</b>

*Frequency of rescues from height within the service area during the reporting period*

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, the rescue of adults who were attempting to commit 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 fell down a ravine.

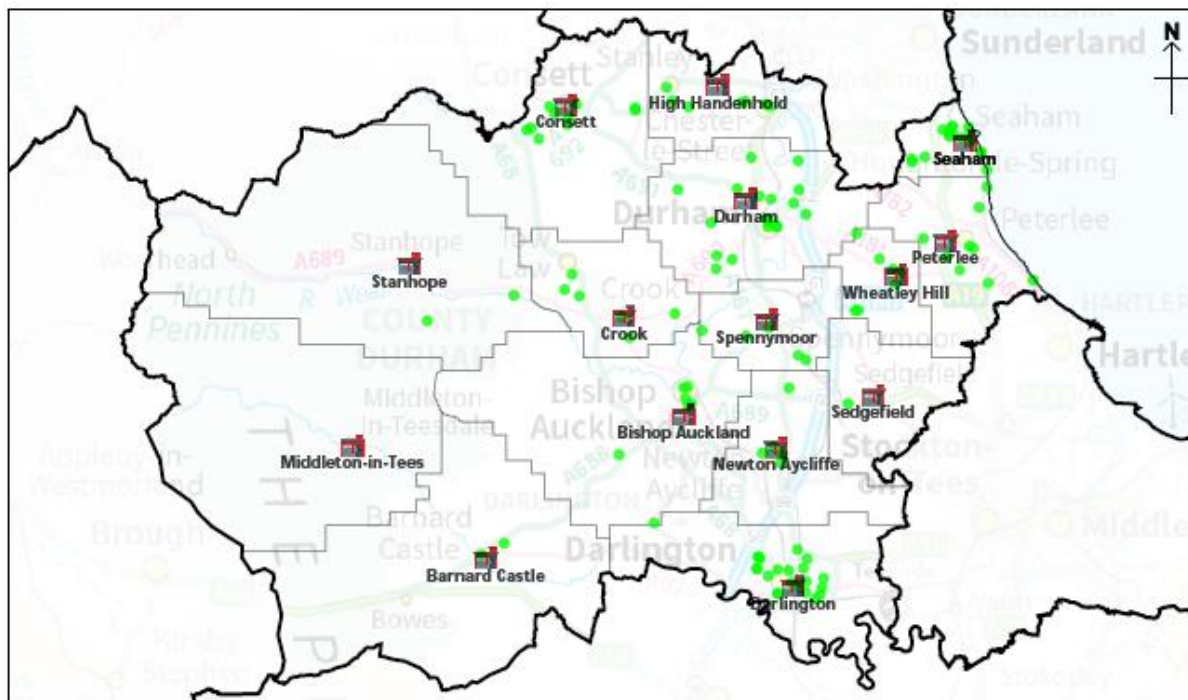
The service has three levels of working at height response. All emergency response staff are trained to the minimum of level one safe working at height techniques using work restraint, fall arrest and life lining. Staff at Durham and Consett are trained to level two to enable personnel to provide a limited 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.	46	38.66%
Domestic Animal	39	32.77%
Wild Animal	15	12.61%
Threat of/attempted suicide	6	5.04%
Assistance to other agencies	4	3.36%
Service not required	4	3.36%
Other	2	1.68%
From below ground	1	0.84%
Livestock	1	0.84%
Other stand by	1	0.84%
Total	119	100%

*Rescue from height incident types*

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.



Locations of rescues from height during the three-year reporting period

### Reasonable worst-case scenario

Based on historical and statistical data, and with professional judgement, the reasonable worst-case scenario for a rescue from height would be 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

2018/19	46
2019/20	36
2020/21	37
Three-year total	119
Three-year average	40
Risk assessment	Likelihood 3
	Impact 2

Impact	5					
	4					
	3					
	2			Y		
	1					
		1	2	3	4	5
		Likelihood				

Figure 1 Risk assessment for rescues from height

## 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 the Fire and Rescue Services Act 2004 (section 8) 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 2018 to 31 March 2021, the Service attended 872 road traffic collisions as detailed in the table below:

Station area	Number of RTCs	Percentage of activity
Darlington	119	13.6%
Durham	113	13.0%
Peterlee	97	11.1%
High Handenhold	89	10.2%
Consett	88	10.1%
Newton Aycliffe	78	8.9%
Bishop Auckland	74	8.5%
Seaham	45	5.2%
Spennymoor	37	4.2%
Sedgefield	32	3.7%
Crook	31	3.6%
Wheatley Hill	26	3.0%
Barnard Castle	21	2.4%
Stanhope	15	1.7%
Middleton-in-Tees	7	0.8%
Total	872	100%

*Frequency of RTCs within each station area during the reporting period*

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 increase over the three-year reporting period.
- Of all road users the greatest number of fatalities were to car occupants (21), pedestrians (16) and motorcyclists (10) and goods vehicle occupants (2);
- The most serious injuries occurred to car occupants (276), pedestrians (160), motorcyclists (128) and pedal cyclists (53);
- Minor injuries occurred to car occupants (1,767), pedestrians (313), pedal cyclists (203), motorcyclists (106) and occupants of heavy good vehicles (104) and bus drivers (97).
- Most fatalities (9) and slight injuries (396) occur in the 26 – 30 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	283	32.5%
Extrication of person/s	204	23.4%
Make scene safe	122	14.0%
Medical assistance only	87	10.0%
Release of person/s	70	8.0%
Wash down road	41	4.7%
Advice only	37	4.2%
Stand by - no action	24	2.8%
Other	4	0.5%
<b>Total</b>	<b>872</b>	<b>100%</b>

*Range of activities by operational crews at RTCs attended*

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	434	49.8%
Car	383	43.9%
Van	14	1.6%
Motorcycle	10	1.1%
Lorry/HGV	9	1.0%
Highway/road surface/pavement	6	0.7%
All other obstructions/vehicles etc	16	1.9%
<b>Total</b>	<b>872</b>	<b>100%</b>

*Types of vehicles involved in RTCs during the reporting period*

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.

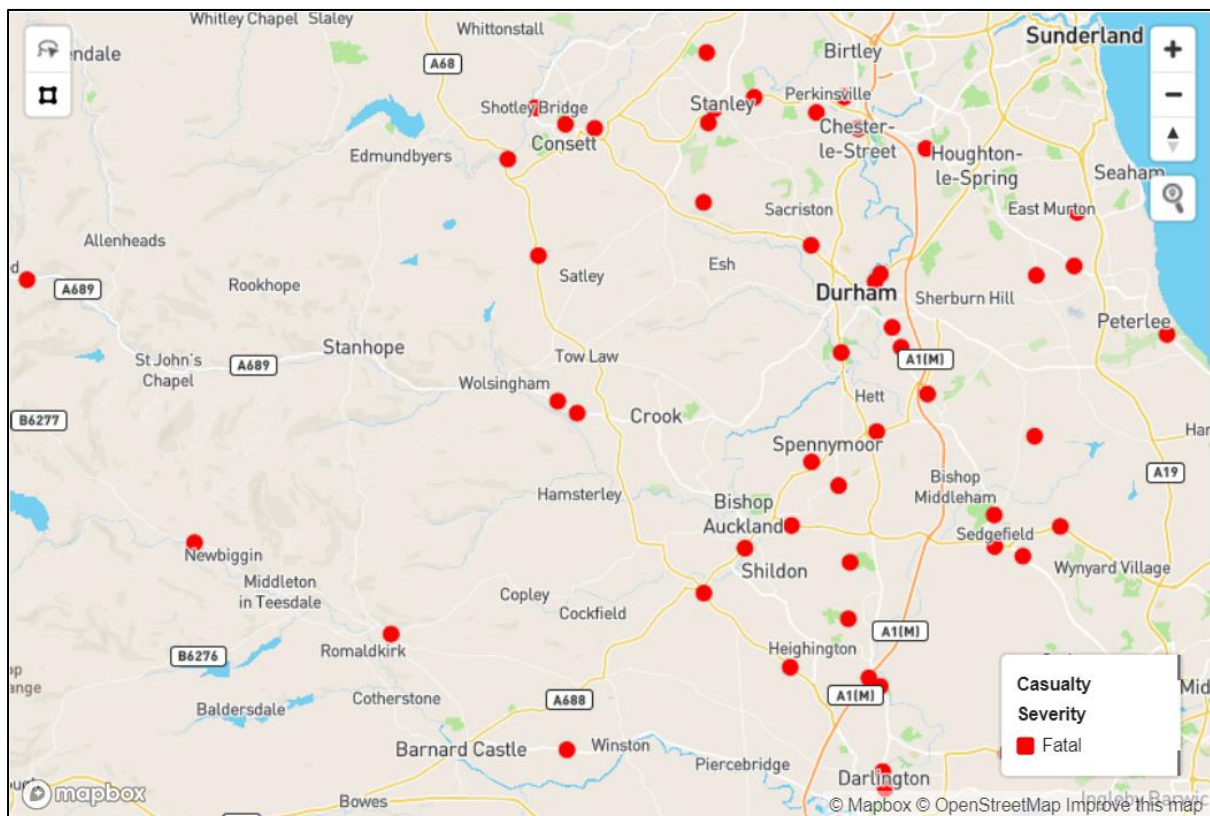
When assessing the locations of the RTCs where fatalities, severe and slight injuries occur, the Fire Statistics Definitions published by the Home Office are used for clarity over the extent of injuries, where:

- 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

Analysis of the data available for the reporting period through the North East England Road User Casualty Dashboard shows that car occupants are the most likely to be killed in an RTC, followed by pedestrians, motorcyclists and cyclists.

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:

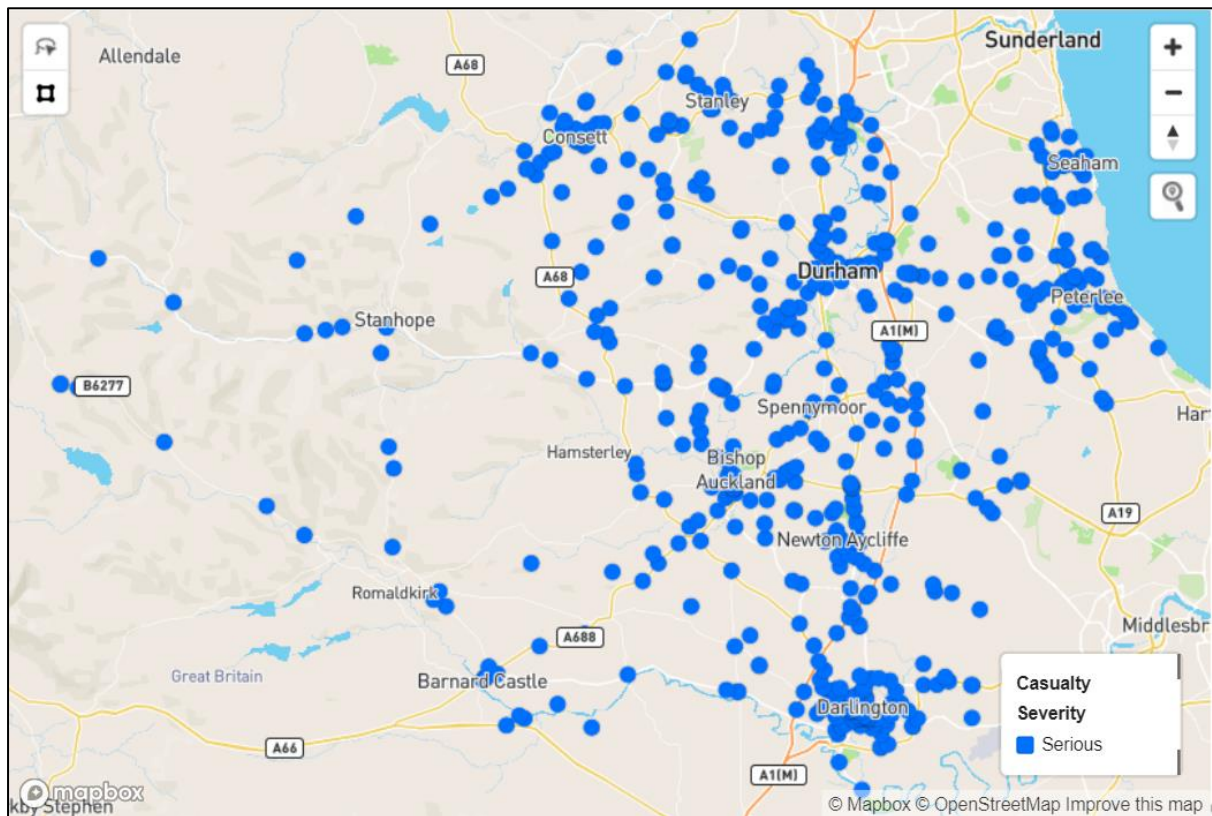


*Locations of RTCs where fatalities occur*

## RTCs with severe injuries

Car occupants, in the age range from 16 to 20, are the most likely group of individuals to sustain severe injuries in an RTC, with other groups being motorcyclists, pedestrians, and pedal cyclists.

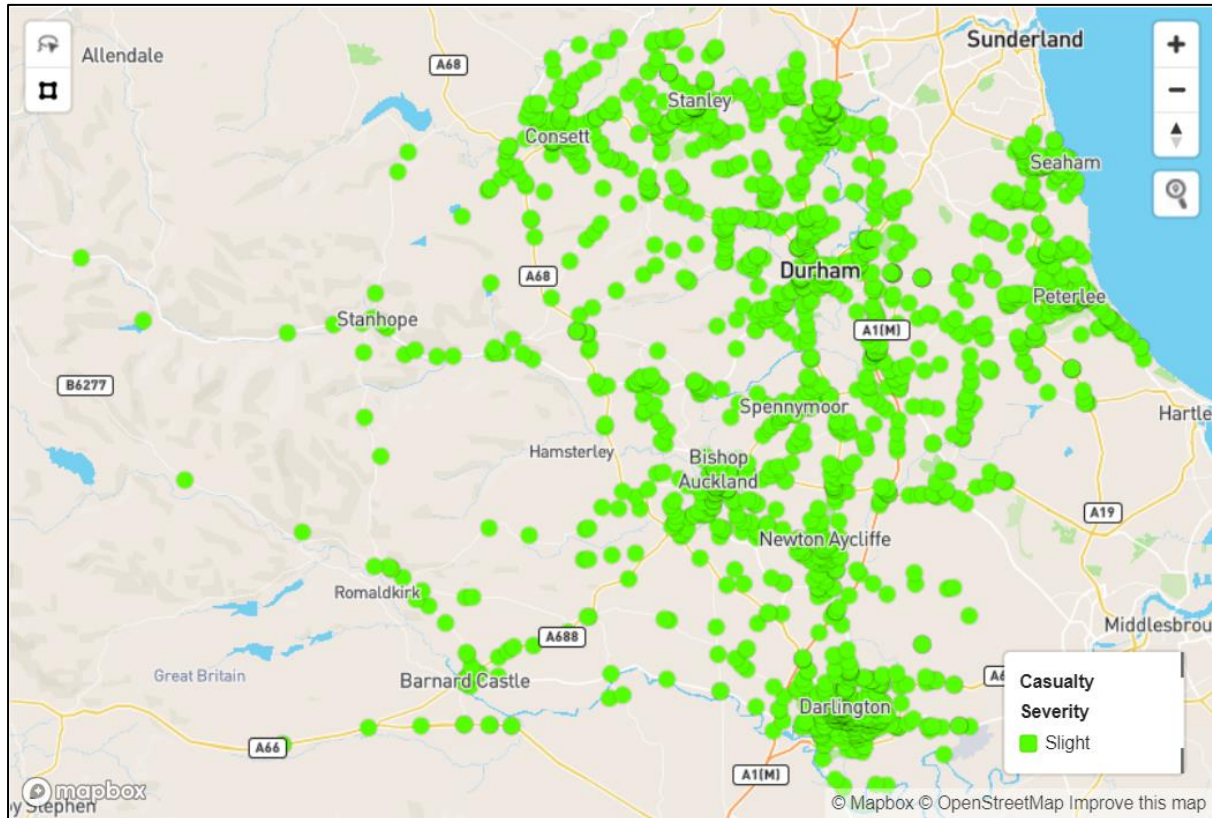
Most RTCs that result in serious injuries occur centrally within the Service area, between the A68 from Darlington to Consett and the A1(M) from Darlington to Chester-Le-Street, with less serious injuries from RTCs in the east and west.



*Locations of RTCs where serious injuries occur*

## 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.



*Locations of RTCs where slight injuries occur*

## Reasonable worst-case scenario

Based on historical and statistical data, and with professional judgement, the reasonable worst-case scenario for an RTC in the Service area would be a collision involving multiple vehicles in one of the busiest locations, which required the extrication of multiple 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.

Further information on the prevalence of road traffic collisions is available from [North East England Road User Casualty Dashboard](#)

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.

### Risk assessment for road traffic collisions

2018/19	354
2019/20	298
2020/21	220
Three-year total	872
Three-year average	291
Risk assessment	Likelihood 5 Impact 3

Impact	5					
	4					
	3					x
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for road traffic collisions*

### 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, with stations at Darlington, Durham, and Chester-Le-Street. 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	Platforms
Durham	<u>Durham</u>	East Coast Main Line	2
Darlington	<u>Darlington</u>	East Coast Main & Tees Valley Lines	4
High Handenhold	<u>Chester-Le-Street</u>	East Coast Main Line	2
Bishop Auckland	<u>Bishop Auckland</u>	Tees Valley Line	1
Seaham	<u>Seaham</u>	Durham Coast Line	2
Newton Aycliffe	<u>Newton Aycliffe</u>	Tees Valley Line	2
Bishop Auckland	<u>Shildon</u>	Tees Valley Line	2
Darlington	<u>Dinsdale</u>	Tees Valley Line	2
Darlington	<u>North Road</u>	Tees Valley Line	1
Newton Aycliffe	<u>Heighington</u>	Tees Valley Line	2
Darlington	<u>Teesside Airport</u>	Tees Valley Line	2
Peterlee	<u>Horden</u>	Durham Coast Line	2

*Train stations, railway lines and platforms within the Service area*

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 from 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.

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario of a rail incident would be a fire in a carriage that spread beyond the items first ignited. 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.

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.

Risk assessment for rail incidents

2018/19	0
2019/20	2
2020/21	1
Three-year total	3
Three-year average	1
Risk assessment	Likelihood 2
	Impact 1

Impact	5					
	4					
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for rail incidents*

There have been 3 incidents where the property type is either of these property types - "Other transport vehicle/Trains/Freight Train" , "Other transport vehicle/Trains/Passenger Train (above ground)"

1 incident in Bishop Auckland, 1 in Darlington and 1 in Spennymoor



## 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 that the volume of passenger air traffic has increased by more than 66 percent since 2004<sup>55</sup>. Air travel is statistically the safest form of transport as it is many thousands of times safer than the most dangerous form of travel (motorcycle riding) 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 and for flying instruction. There are also other smaller category airfields located at Fishburn 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

*Airports / airfields and their runway lengths in the Service area*

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.

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<sup>55</sup> [Number of worldwide air traffic fatalities from 2006 to 2020](#)

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.

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario of an aircraft incident would be a single engine aircraft with up to two souls on board, which, due to mechanical issues or hydraulic failures, was forced to land off the airfield. The incident would require the extrication of pilot and passenger(s) with minor injuries only. This scenario could also cause minor disruption to traffic and local transport routes.

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.

Risk assessment for aircraft incidents

2018/19		2
2019/20		1
2020/21		1
Three-year total		4
Three-year average		1
Risk assessment	Likelihood	2
	Impact	2

*Risk assessment for aircraft incidents*

Impact	5					
	4					
	3					
	2		â			
	1					
		1	2	3	4	5
		Likelihood				

## 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
Barnard Castle	1	25.0%
Darlington	3	75.0%
Total	4	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<sup>56</sup>.

### Reasonable worst-case scenario

Although there have been no maritime related transport incidents within the reporting period, based on historical data and professional judgement, the reasonable worst-case scenario for a fire on board a vessel would be a fire in a container or any other part of the ship that required the operation of the ships 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.

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.

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<sup>56</sup> <https://www.victoriagroup.co.uk/about-us/port-of-seaham/>

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.

Risk assessment for maritime incidents

2018/19	0
2019/20	0
2020/21	0
Three-year total	0
Three-year average	0
Risk assessment	Likelihood 1
	Impact 1

Impact	5					
	4					
	3					
	2					
	1	â				
		1	2	3	4	5
		Likelihood				

*Risk assessment for maritime incidents*

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.

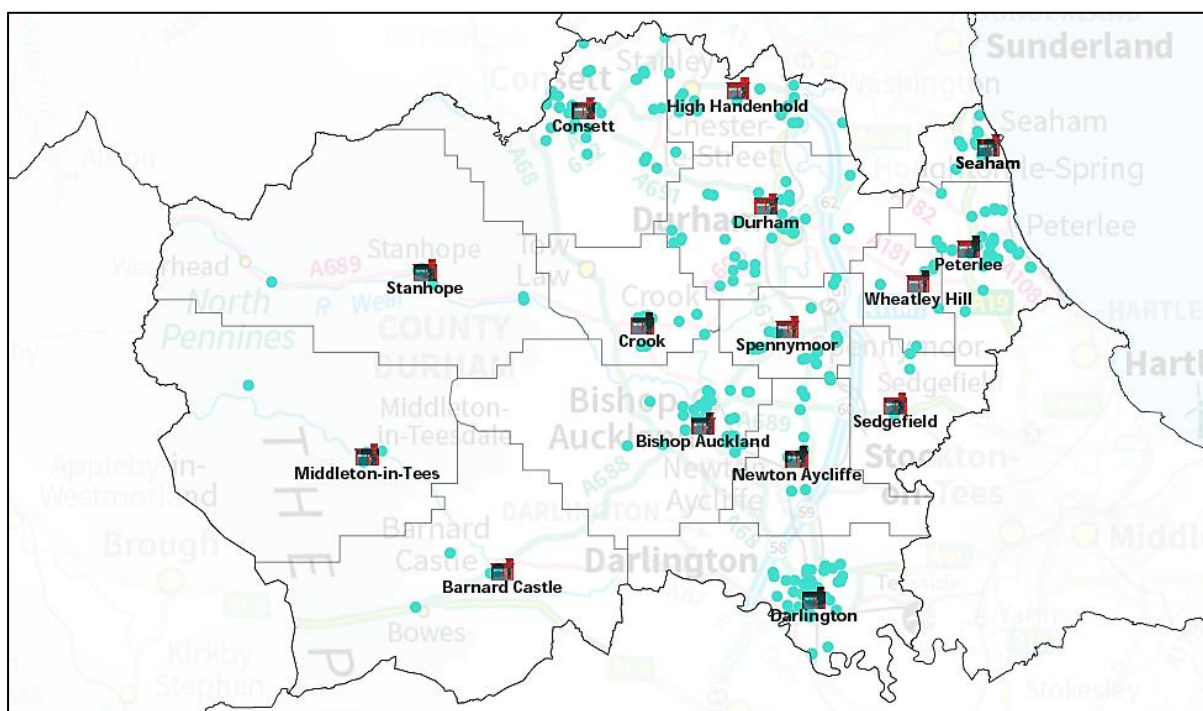
In the three-year reporting period from 1 April 2018 to 31 March 2021, the Service attended 292 flooding incidents. The distribution of flooding incidents throughout the Service area is shown below:

Station area	Number of flooding incidents	Percentage of activity
Darlington	41	14.0%
Peterlee	39	13.4%
Durham	36	12.3%
Consett	36	12.3%
Bishop Auckland	35	12.0%
Spennymoor	19	6.5%
High Handenhold	19	6.5%
Seaham	12	4.1%
Newton Aycliffe	11	3.8%
Crook	10	3.4%
Stanhope	9	3.1%
Wheatley Hill	9	3.1%
Barnard Castle	7	2.4%
Middleton-in-Tees	5	1.7%
Sedgefield	4	1.4%
Total	292	100%

*Distribution of flooding incidents in the service area from 1 April 2018 to 31 March 2021*

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:



*Distribution of flooding incidents in the service area from 1 April 2018 to 31 March 2021*

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	171	58.6%
Up to 3 storeys	21	7.2%
Highway/road surface/pavement	14	4.8%
Bungalow - single occupancy	13	4.5%
Up to 2 storeys	7	2.4%
Car	6	2.1%
Self-contained sheltered housing	5	1.7%
3 or more storeys	5	1.7%
Hospital	4	1.4%
All other property types <sup>57</sup>	46	15.8%
<b>Total</b>	<b>292</b>	<b>100%</b>

*Distribution of flooding property types throughout the Service area in the reporting period*

<sup>57</sup> All other property types include bars, shops, nursing homes, halls of residence, schools, leisure centres, warehouses, and factories etc,



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	182	62.3%
Pumping out	48	16.4%
Advice only	47	16.1%
Other <sup>58</sup>	11	3.8%
Stand by - no action	4	1.4%
Total	292	100%

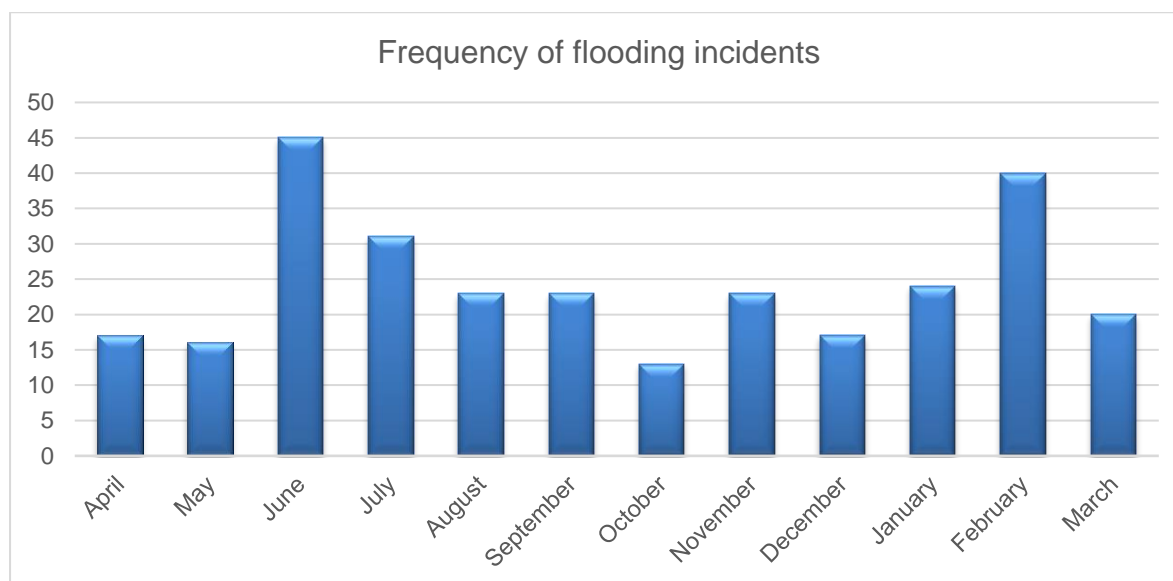
*Distribution of actions carried out at flooding incidents*

Most flooding incident occurred at addressable locations, as shown below:

Locations of flooding incidents	Number of incidents	Percentage of activity
Addressable location	263	90.1%
Non-addressable location	29	9.9%
Total	292	100%

*Distribution of the locations of flooding incidents*

Incident reporting system data illustrates that the frequency of flooding incidents is not uniform throughout a yearly period. The frequency of flooding incidents throughout the reporting year is shown below:



*Frequency of flooding incidents during the three-year reporting period*

<sup>58</sup> Other actions at flooding incidents include digging a trench to avoid water entering a specific location, opening drain covers and clearing debris and pushing a vehicle away from floodwater to prevent damage.

## 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.

Number of persons evacuated	Frequency of occurrence during the reporting period
1	2
2	1
4	1
10 or more	2

*Frequency of the evacuations of persons from flooding incidents during the reporting period*

## Reasonable worst-case scenario

Although wide area flooding incidents are rare, they can occur at key locations throughout the Service area. Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario of a flooding incident within the service area would be 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.

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.

## Risk assessment for flooding incidents

2018/19	110
2019/20	104
2020/21	78
Three-year total	292
Three-year average	97
Risk assessment	Likelihood 4
	Impact 3

*Risk assessment for flooding incidents*

Impact	5					
	4					
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

## 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 <sup>59</sup>, 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.

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<sup>59</sup> More information on climate change can be found in the [2017 UK Climate Change Risk Assessment](#) (with the next iteration due in 2022)

## 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 have 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 2018 to 31 March 2021, 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	45	79.0%
<b>Special Service incident</b>	6	10.5%
Deliberate - others property	5	8.8%
Deliberate - own property	1	1.8%
Total	57	100%

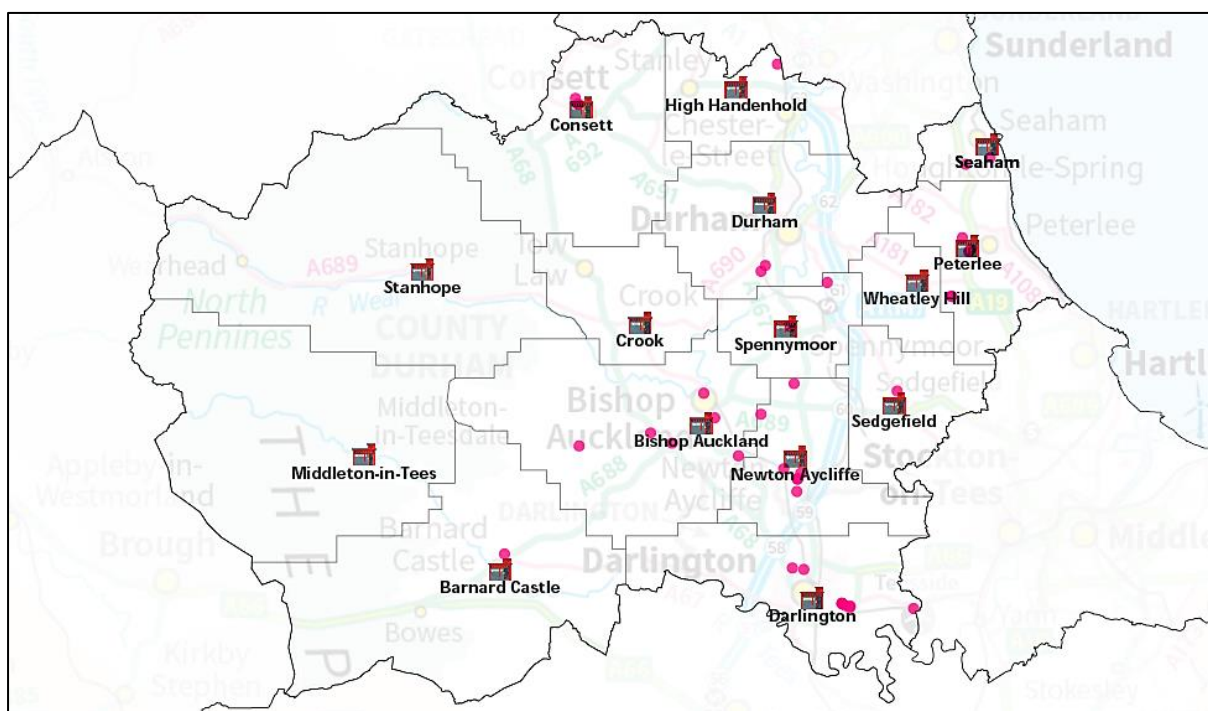
*Causes of industrial accidents and fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

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
<b>Darlington</b>	12	21.05%
<b>Newton Aycliffe</b>	9	15.79%
<b>Bishop Auckland</b>	8	14.04%
<b>Peterlee</b>	7	12.28%
<b>Consett</b>	5	8.77%
<b>Seaham</b>	5	8.77%
<b>Crook</b>	3	5.26%
<b>Spennymoor</b>	3	5.26%
<b>Durham</b>	2	3.51%
<b>Barnard Castle</b>	1	1.75%
<b>High Handenhold</b>	1	1.75%
<b>Sedgefield</b>	1	1.75%
<b>Total</b>	<b>57</b>	<b>100%</b>

*Distribution of industrial fires in the Service area from 1 April 2018 to 31 March 2021*

The locations of the industrial fires throughout the Service area in the reporting period is shown below:



*The locations of the industrial fires throughout the Service area in the reporting period as shown below*

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	14	24.56%
Accumulation of flammable material	11	19.30%
Special Service incidents	6	10.53%
Heat source and combustibles brought together deliberately	6	10.53%
Negligent use of equipment or appliance (heat source)	5	8.77%
Overheating, unknown cause	5	8.77%
Combustible articles too close to heat source (or fire)	3	5.26%
Faulty fuel supply - electricity	2	3.51%
Other intentional burning, going out of control	2	3.51%
Cooking - other cooking	1	1.75%
Faulty fuel supply - petrol product	1	1.75%
Natural occurrence	1	1.75%
<b>Total</b>	<b>57</b>	<b>100%</b>

*Frequency of causes of industrial fires in the three-year reporting period from 1 April 2018 to 31 March 2021*

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.

Industrial accidents have the potential to be resource intensive and impact on appliance availability. Although most industrial accidents are managed by a small number of appliances, some incidents require a significant resource to resolve safely and successfully. The frequency of appliances attending industrial accidents is shown below:

Number of appliances	Frequency of the number of attending appliances	Percentage of activity
2	23	40.4%
1	21	36.8%
3	6	10.5%
4	2	3.5%
8	2	3.5%
7	1	1.8%
11	1	1.8%
13	1	1.8%
<b>Total</b>	<b>39</b>	<b>100%</b>

*Frequency of appliances attending industrial accidents in the Service area from 1 April 2018 to 31 March 2021*

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.

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario of an industrial accident would be 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.

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.

Risk assessment for industrial fires

2018/19	25
2019/20	18
2020/21	14
Three-year total	57
Three-year average	19
Risk assessment	Likelihood 3 Impact 3

Impact	5					
	4					
	3			â		
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for industrial fires*

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 2018 to 31 March 2021, the Service attended 102 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	21.6%
Durham	12	11.8%
Bishop Auckland	11	10.8%
Peterlee	11	10.8%
Newton Aycliffe	9	8.8%
High Handenhold	9	8.8%
Spennymoor	7	6.9%
Consett	6	5.9%
Crook	5	4.9%
Seaham	4	3.9%
Barnard Castle	3	2.9%
Stanhope	1	1.0%
Wheatley Hill	1	1.0%
Middleton-in-Teesdale	1	1.0%
Sedgefield	0	0
Total	102	100%

*Distribution of hazardous materials incidents throughout the Service area*



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%

*Types of hazardous material incidents*

Locations of hazardous materials incidents

Locations of hazardous material incidents	Number of Incidents	Percentage of activity
Dwelling	69	67.7%
Non Residential	23	22.6%
Other outdoors (including land)	4	3.9%
Road Vehicle	3	2.9%
Grassland, woodland and crops	1	1.0%
Outdoor equipment and machinery	1	1.0%
Outdoor structures	1	1.0%
Total	102	100%

*Locations of hazardous material related incidents*

Risk assessment: Hazardous material incidents

2017/18	44
2018/19	35
2019/20	23
Three-year total	102
Three-year average	34
Risk assessment	
Likelihood	4
Impact	3

Impact	5					
	4					
	3				á	
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for hazardous materials related incidents*

Reasonable worst-case scenario

Based on the historical data from the three-year reporting period, and professional judgement, the reasonable worst-case scenario for a hazardous material incident within the Service area relates to either an incident within a domestic premise because of the release and consequences of natural substances such as domestic gas supplies, or the release of man-made substances, which cause consequences to the

local environment be that within a domestic or commercial premise or upon 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.

### 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<sup>60</sup> 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<sup>61</sup> (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.

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<sup>60</sup> [Durham County Council - Household Waste Recycling Centre](#)

<sup>61</sup> [Darlington Borough Council - Household Waste Recycling Centre](#)

Station Area	Number of waste and recycling site Incidents	Percentage of activity
Consett	2	33.3%
Bishop Auckland	1	16.7%
Darlington	1	16.7%
High Handenhold	1	16.7%
Newton Aycliffe	1	16.7%
Total	6	100.0%

### Reasonable worst-case scenario

The reasonable worst-case scenario for a fire in a waste or recycling site in the Service area would be 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.

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.

### Risk assessment for waste and recycling sites

2018/19	1
2019/20	3
2020/21	2
Three-year total	6
Three-year average	2
Risk assessment	Likelihood 2
	Impact 4

Impact	5					
	4	â				
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

### *Risk assessment for waste and recycling sites*

### 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.

### Reasonable worst-case scenario

Based on the historical data available for animal related rescues, the reasonable worst-case scenario would be the rescue of a dog from a river or frozen lake where members of the public could also put themselves at risk in their attempts to rescue the animal and where specialist water rescue resources were required to conduct an effective rescue. An alternative variation to this reasonable worst-case scenario would be the rescue of a dog that had fallen onto a cliff edge where members of the public would also put themselves in danger by attempting to carry out rescue. These scenarios may also include the attendance of partner agencies such as Durham Police or the Royal Society for the Prevention of Cruelty to Animals (RSPCA) to assist in the management of the incident.

In the three-year reporting period from 1 April 2018 to 31 March 2021, 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%

*Types of incidents attended by involving animals*

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%

*Distribution of animal related incidents throughout the service area*

The resources required to deal with animal related incidents are shown below:

Number of appliances attending	Percentage of activity
0	2.7%
1	79.8%
2	11.2%
3	5.3%
4	1.1%
Total	100%

*Resources required to deal with animal related incidents*

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

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%

#### *Locations of animal rescues*

#### Risk assessment for animal related incidents

2018/19	57
2019/20	66
2020/21	65
Three-year total	188
Three-year average	63
Threat assessment	Likelihood 4
	Impact 1

Impact	5					
	4					
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

#### *Risk assessment for animal related incidents*

#### 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 rescue 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 special interest

Throughout the Service area there is 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 particularly important buildings of more than special interest;
- Grade II are of special interest, warranting every effort to preserve them.

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 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

*Allocation of the buildings of heritage and special interest within County Durham and Darlington Service area<sup>62</sup>.*

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.

<sup>62</sup> Specific locations of all the Grade one, Two and Two\* buildings within the Service area are available from <https://britishlistedbuildings.co.uk/england/county-durham#.YRUIGj-SIPa>

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.

### Reasonable worst-case scenario

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.

The reasonable worst-case scenario involving a building of heritage or special interest would be 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

2018/19	0
2019/20	0
2020/21	0
Three-year total	0
Three-year average	0
Risk assessment	Likelihood 1
	Impact 4

Impact	5					
	4	â				
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for fires in buildings of heritage and special interest*

### 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<sup>63</sup> (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
4 February 2021	Substantial
3 November 2020	Severe
4 November 2019	Substantial
23 July 2019	Severe

*History of National threat level changes from 23 July 2019 to present*

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 events, 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).

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<sup>63</sup> Threat levels are designed to give a broad indication of the likelihood of a terrorist attack.

- Low means an attack is highly unlikely
- Moderate means an attack is possible, but not likely
- Substantial means an attack is likely
- Severe means an attack is highly likely
- Critical means an attack is highly likely in the near future

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](#)

### 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.

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. White powder incidents have been assessed in the hazardous materials section of the Community Risk Profile and not included within this scenario.

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.

Risk assessment for marauding terrorist/malicious attacks

2018/19		0
2019/20		0
2020/21		0
Three-year total		0
Three-year average		0
Threat assessment	Likelihood	2
	Impact	5

Impact	5	â				
	4					
	3					
	2					
	1					
		1	2	3	4	5
		Likelihood				

*Risk assessment for marauding terrorist/malicious attacks*

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.

## 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 of the reasonable worst-case scenario	5		R20 Marauding terrorist/ malicious attacks			
	4	R19 Buildings of heritage and special interest	R17 Waste and recycling sites			R1 Dwelling fires  R4 Road vehicle fires  R5 Secondary fires
	3			R2 Other residential building fires R8 Rescues from water R14 Flooding R15 Industrial fires	R6 Other outdoor fires  R16 Incidents involving hazardous materials	R3 Other non- residential building fires  R10 Road Traffic Collisions
	2			R7 Wildfires  R9 Rescues from height		
	1	R13 Maritime incidents	R11 Rail incidents  R12 Aircraft incidents		R18 Animal incidents	
Risk rating matrix	1	2	3	4	5	
	Likelihood of reasonable worst-case scenario of the risk occurring in the next year					

## Community Risk Profile link to station plans

Although there are elements of risk from the National Risk Register, and the County Durham and Darlington Local Resilience Forum Community Risk Register throughout all our all our communities, based on the assessments within the Community Risk Profile, the risks assessed as being most prevalent within each station area is shown below:

CDDFRS North Division			Consett	High Handenhold	Seaham	Peterlee	Wheatley Hill	Durham	Stanhope	Crook
			1	2	3	4	5	6	7	8
Fires	R1	Dwelling fires	ü	ü	ü	ü	ü	ü	ü	ü
	R2	Other residential building fires	ü	ü	ü	ü	ü	ü	ü	ü
	R3	Other non-residential building fires	ü	ü	ü	ü	ü	ü	ü	ü
	R4	Road vehicle fires	ü	ü	ü	ü	ü	ü	ü	ü
	R5	Other outdoor fires	ü	ü	ü	ü	ü	ü	ü	ü
	R6	Secondary fires	ü	ü	ü	ü	ü	ü	ü	ü
	R7	Wildfires	ü						ü	
Rescues	R8	Water		ü	ü			ü	ü	ü
	R9	Height	ü	ü	ü	ü	ü	ü		
Transport	R10	Road	ü	ü	ü	ü	ü	ü	ü	ü
	R11	Rail		ü				ü		
	R12	Air								
	R13	Sea			ü					
Weather	R14	Flooding	ü	ü	ü	ü	ü	ü	ü	ü
Societal	R15	Industrial incidents	ü	ü	ü	ü	ü	ü	ü	ü
	R16	Hazardous materials	ü	ü	ü	ü		ü		ü
	R17	Waste disposal and recycling sites	ü	ü	ü	ü	ü	ü	ü	
	R18	Animal incidents	ü	ü	ü	ü	ü	ü	ü	ü
	R19	Buildings of heritage/special interest	ü	ü	ü	ü	ü	ü	ü	ü
	R20	Marauding terrorist/malicious attacks						ü		

North division station risk profile



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

*South division station risk profile*

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 2021/22**

### **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 incident, 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 than 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

*Impact dimensions and indicators used within the CDDFRS risk assessment methodology*

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 score by the weight;
- 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 scores					
Impact Dimension	Impact indicator	Impact score (0 – 5)	Highest impact dimension score	Weighting	Weighted score
Human welfare	Fatalities	0	1	1	1
	Injuries	0			
	Evacuation to temporary accommodation	1			
Behavioural	Public perception	4	4	2	8
Community economic impact	Economic cost	2	2	1	2
Essential social services	Transport	0	5	3	15
	Gas	0			
	Electric	0			
	Water	0			
	Telecommunications	2			
	Healthcare	4			
Emergency services	5				
Environment	Damage to the environment	3	3	1	3
				8	29
Total impact score $29/8 = 3.625$ (rounded up to 4)					

*Example of an impact assessment using impact dimensions and indicators*

## 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%

*Likelihood scores and the logarithmic likelihood scale*

## 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.

*Confidence scale and description*

## Visualising risk assessment

When the overall impact and likelihood scores have been calculated for each risk, they can be plotted on a five by 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 required to supplement generic planning	
Evidenced based judgement	Specific Generic approach	or é
«	«	
ê	Limited – Moderate impact risks	
Generic planning for common consequences		

*Risk rating matrix*

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.

<b>Impact dimension: human welfare</b>	
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
<b>Impact dimension: behavioural</b>	
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.

<b>Impact dimension: community economic impact</b>	
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
<b>Impact dimension: essential social services</b>	
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
<b>Impact dimension: environmental impact</b>	
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](#).