



Hereford & Worcester
Fire Authority

Community Risk Management Plan 2021 - 2025

Supporting Documents

CRMP 2021-25 Risk Review
People and Places

CRMP 2021-25 Risk Review – People and Places¹

Population and Households

The Service area is home to around 784,200 residents. At the 2018 mid-year estimates², there were 192,100 residents in Herefordshire (24.5 per cent of the total) and 592,100 residents in Worcestershire (75.5 per cent of the total). The male/female split showed slightly more females in the two counties than males, but, at 50.5 per cent of the total, this was similar to the national average of 50.6 per cent females.

The Service area covers about 3,920 square kilometres (1,514 square miles), much of which is largely rural in nature. In particular, Herefordshire covers an area of 2,180 square kilometres (56 per cent of the total area), of which around 95 per cent is classified as predominantly rural. This makes it one of the least densely populated counties in England with just 90 people per square kilometre. By contrast, Worcestershire's population density at 2018 was 340 people per square kilometre, while for England as a whole it was 430 people per square kilometre.³

Around 75 per cent of residents live in the urban areas of the two counties, though 53 per cent of Herefordshire's residents live in rural areas, especially in the most rural villages and dispersed areas. Just under a third of Herefordshire's residents live in Hereford city (61,400 people), which has a younger profile than the county as a whole. The three main market towns of Leominster (12,200), Ross-on-Wye (11,400) and Ledbury (10,100) account for a further fifth of the total population. The most rural areas of Herefordshire have relatively more people of older working and early retirement age (50-70 year olds).

Worcestershire is made up of six local authority areas or districts – Bromsgrove, Malvern Hills, Redditch, Worcester, Wychavon and Wyre Forest. Just under one fifth of Worcestershire's population lives in city of Worcester (around 103,600 residents at 2019 estimates), which together with Redditch has a relatively younger population profile than the rest of the county.

In terms of age, both counties have a relatively low proportion of residents of normal working age (446,900 people aged 16-64 years or 59.6 per cent of the total population), compared to 62 per cent in the West Midlands and 62.7 per cent in the country as a whole. By contrast, both counties have a relatively high proportion of residents aged 65 years and over, with 183,200 people representing almost one in four residents (23.4 per cent at 2019 estimates). This compares to 18.7 per cent for the West Midlands and 22.0 per cent for England in 2019.

At 2019 there were approximately 349,300 households in the two counties (85,400 in Herefordshire and 263,900 in Worcestershire).⁴ Most homes were owner-occupied (69 per cent), 17 per cent were private-rented and 14 per cent were social-rented. The private-rented sector is expected to become

¹ Most local data in this section comes from [Understanding Herefordshire](#) (Herefordshire Council 2020) and from the [Worcestershire Joint Strategic Needs Assessment Annual Summary 2019](#).

² Population data is taken from the Office for National Statistics and can be found on the [nomis](#) website.

³ from [Mid-2018: 2019 LA boundaries - population density \(table MYE5\)](#), Office for National Statistics.

⁴ Household estimates are taken from data extracts provided by Experian's [Mosaic Public Sector, 2019](#)

an increasing proportion of the housing market, though these properties also tend to have a higher prevalence of potential risks to health (e.g. cold, damp, mould).

Using information drawn from Mosaic Public Sector⁵, an estimate of household composition and householder age groups can be made. It shows that some 126,000 households are single-person households (36 per cent of the total households) and, of these, around 52,400 are elderly single-person households (aged 65 years and above). In addition, around 22,500 households are estimated to be young or very young single-person households (aged 18-30 years).

Table 1 below provides a summary of population and housing characteristics across the two counties at 2019.

Table 1 - Herefordshire and Worcestershire Population and Households 2019

| 2019 | Herefordshire | Worcestershire | H&W | % |
|---|----------------|----------------|----------------|-------------|
| Population | 192,100 | 592,100 | 784,200 | |
| <i>total aged 65+</i> | <i>47,400</i> | <i>135,800</i> | <i>183,200</i> | <i>23.4</i> |
| Households | 85,400 | 263,900 | 349,300 | |
| <i>Estimated single-person households</i> | <i>n/a</i> | <i>n/a</i> | <i>126,000</i> | <i>36.0</i> |
| <i>Estimated elderly single-person households</i> | <i>n/a</i> | <i>n/a</i> | <i>52,400</i> | <i>15.0</i> |

Ethnicity

Ethnicity data is taken from the 2011 Census⁶ (the latest figures available). ‘White’ includes all persons identifying as White British plus White Irish, Gypsy and Irish Traveller and Other White. BaME stands for Black and Minority Ethnic groups and includes all persons identifying as Black, Asian, Mixed and other non-White.

Table 2 - Herefordshire and Worcestershire population by ethnicity 2011

| Ethnicity (2011 Census) | | | |
|--------------------------------|--------------|-------------|---------------|
| Local Authority area | White | BaME | % BaME |
| Herefordshire | 180,169 | 3,308 | 1.8% |
| Bromsgrove | 89,696 | 3,941 | 4.4% |
| Malvern Hills | 72,841 | 1,790 | 2.5% |
| Redditch | 77,497 | 6,717 | 8.7% |

⁵ [Mosaic Public Sector](#) is a sophisticated consumer classification model developed by the credit and market research company Experian as a way of categorizing lifestyles and behaviours.

⁶ [Census 2011 Table QS201EW](#) available from the Office for National Statistics nomis website.

| | | | |
|--------------|----------------|---------------|-------------|
| Worcester | 92,294 | 6,474 | 7.0% |
| Wychavon | 114,457 | 2,487 | 2.2% |
| Wyre Forest | 95,273 | 2,702 | 2.8% |
| Total | 722,227 | 27,419 | 3.8% |

The 'Other White' category is sometimes included as a minority ethnic group as it represents the largest single minority group, 21,666 people or 3 per cent of the total population at 2011. This group has had the most rapid growth as a result of the eastward expansion of the European Union in 2004. It should also be noted that the figures represent the resident population, meaning that people who come into the two counties for less than a year are not included. This will include the several thousand seasonal workers from overseas who come to work on the two counties' farms over the spring and summer months.

Population Growth⁷

Population projections for the two counties are drawn from the 2016-based dataset published by the Office for National Statistics. This uses natural changes based on the rates of births and deaths combined with inward and outward migration. The projections for the two counties suggest that the population will continue to grow at a similar rate to the West Midlands and England as a whole. By 2031, the population of the two counties is estimated to grow to 824,000, an increase of 5.1 per cent over 2019. Over the same period, the West Midlands population is projected to grow by 5.8 per cent and England by 6.1 per cent. The largest population growth rate is expected to be among residents aged 65 and over. By 2031, the two counties are projected to see a 24.3 per cent increase in the number of residents aged 65 and over (rising from 183,200 to 227,700 people).

Table 3 below shows the projected increase in population size in the two counties between 2019 and 2031 based on the natural rates of births, deaths and migration.

Table 3 - Herefordshire and Worcestershire population projections 2019 - 2031

| Population | 2019 | 2031 | Increase | % increase |
|---|----------------|----------------|----------------|--------------|
| Herefordshire | 192,100 | 201,200 | +9,100 | 4.7% |
| Worcestershire | 592,100 | 622,800 | +30,700 | 5.2% |
| H&W | 784,200 | 824,000 | +39,800 | 5.1% |
| <i>H&W Aged 65+</i> | <i>183,200</i> | <i>227,700</i> | <i>+44,500</i> | <i>24.3%</i> |
| <i>Aged 65+ as a proportion of total population</i> | <i>23.4%</i> | <i>27.6%</i> | | |

⁷ Statistics are taken from [2016-based subnational population projections for local authorities: Table 2](#), from the Office for National Statistics.

For completeness, Table 4 below provides a breakdown of the population growth projections for the six districts making up Worcestershire.

Table 4 - Worcestershire population projections by local authority district - 2019 - 2031

| Local Authority Population | 2019 | 2031 | % increase |
|----------------------------|----------------|----------------|-------------|
| Bromsgrove | 98,500 | 105,800 | 7.4 |
| <i>Aged 65+</i> | <i>22,700</i> | <i>27,700</i> | <i>22.0</i> |
| Malvern Hills | 77,500 | 82,100 | 5.9 |
| <i>Aged 65+</i> | <i>22,200</i> | <i>27,900</i> | <i>25.7</i> |
| Redditch | 85,300 | 85,400 | 0.1 |
| <i>Aged 65+</i> | <i>15,900</i> | <i>19,300</i> | <i>21.4</i> |
| Worcester | 103,600 | 108,500 | 4.7 |
| <i>Aged 65+</i> | <i>17,700</i> | <i>22,000</i> | <i>24.3</i> |
| Wychavon | 126,200 | 136,700 | 8.3 |
| <i>Aged 65+</i> | <i>32,100</i> | <i>41,500</i> | <i>29.3</i> |
| Wyre Forest | 101,000 | 104,300 | 3.3 |
| <i>Aged 65+</i> | <i>25,200</i> | <i>29,800</i> | <i>18.3</i> |

It should be noted that the population projections may be influenced by other factors such as housing development requirements and changes in economic circumstances. Housing projections suggest an increase of 54,000 new homes will be required by 2031 taking the total number of households to 399,000. If the average household size of 2.2 persons is applied, this would suggest the total population could rise to 878,000 by 2031.

Housing Development

As noted in the previous section, development plans suggest that a further 54,000 new homes will be required between 2018 and 2031. This equates to around 4,150 new homes each year. Of these, 14,000 new homes are planned for Herefordshire and 40,000 for Worcestershire. Much of the new development is planned for small expansion sites in and around the main towns and villages, but there are several large housing development sites⁸ – these are listed in Table 5 below.

⁸ Details can be found in [Herefordshire Housing Delivery Test Action Plan, Herefordshire Council 2019](#) and [Worcestershire Local Transport Plan 4 \(2018-2030\), Worcestershire County Council 2017](#)

Table 5 - Significant housing development sites up to 2030/31

| Herefordshire | | No. of new homes planned between 2011 and 2031 |
|--|-----------------------------------|---|
| Hereford - City Centre | | 800 |
| Hereford - Northern urban expansion area | | 500 |
| Hereford - Western urban expansion area | | 1,000 |
| Hereford - Southern urban expansion area | | 1,000 |
| Bromyard - land at Hardwick Bank | | 250 |
| Ledbury - North of the Viaduct | | 625 |
| Leominster - Leominster urban expansion | | 1,500 |
| Ross-on-Wye – Land at Hildersley | | 200 |
| Worcestershire | | No. of new homes planned between 2018 and 2030 |
| Bromsgrove | Perryfields Road | 1,000 - 2,000 |
| | Whitford Road | c.500 |
| Redditch | Brockhill | 500 – 1,000 |
| | Brockhill East | 1,000 – 2,000 |
| | Foxlydiate | 2,000 + |
| | Webheath | 500 – 1,000 |
| South Worcestershire | Cheltenham Road, Evesham | c.500 |
| | Copcut | 500 – 1,000 |
| | North East Malvern (Newlands) | 500 – 1,000 |
| | Shrub Hill Opportunity Zone | 500 – 1,000 |
| | South Worcester urban extension | 2,000 + |
| | Station Road | 500 – 1,000 |
| | West of Worcester urban extension | 2,000 + |
| | Yew Tree Village | 500 – 1,000 |

Housing Quality

The condition of the housing stock is seen as an important determinant of residents' health and wellbeing.⁹ While most people's homes in the two counties are generally of good quality, there are a significant number of homes in need of improvement. In Herefordshire, a survey in 2016 found 11,000 households (13.5 per cent) in fuel poverty¹⁰, while assessments in Worcestershire found 29,000 households (11.5 per cent) affected by fuel poverty and 1 in 5 homes presenting a risk to health. Key factors affecting the condition of homes include the age and size of the property, inefficient heating systems, poor insulation, low income and the cost of fuel/energy. Nationally, a fifth of households affected by fuel poverty have household members that are all aged over 60 years.

In both counties, there are higher concentrations of private sector households in fuel poverty, especially in rural areas with a lack of access to mains gas. A survey in 2011, found that 31 per cent of households in Herefordshire did not have access to mains gas.

Poor housing conditions associated with financial hardship is known to adversely affect health with an increased risk of respiratory illness, high blood pressure and hypothermia. Cold, damp conditions are also a factor in excess winter deaths.

Risk Factors

One of the primary aims of the CRMP is to identify those people and households at greatest risk from fire in the home. Who people are, where they live and how they live are important factors affecting fire risk. From national studies¹¹ and fire incident data, it is known that some people are more at risk than others. The studies show that rate of dwelling fires has a strong link to:

- the percentage of lone parents with children
- the level of crime
- the number of people permanently sick or disabled
- the percentage of people with long-term limiting illness
- the level of unemployment
- the level of deprivation

The studies also highlight certain characteristics about people, which can increase their risk of harm from fire in the home. These have been summarized in Table 6 below, and it is clear that some

⁹ See [Understanding Herefordshire – fuel poverty, Worcestershire Joint Strategic Needs Assessment 2019 Annual Summary](#) and [Worcestershire Housing Partnership Plan 2017](#)

¹⁰ Fuel poverty is where a low income household is struggling to pay heating and energy costs. See also [Annual Fuel Poverty Statistics in England, Department for Business, Energy & Industrial Strategy 2019](#) for a more in-depth description.

¹¹ See [Learning Lessons from Real Fires – DCLG 2006](#) and [Fire and Rescue Service partnerships working toolkit for Local Area Agreements - DCLG 2008](#)

people will have a combination of these characteristics as their personal circumstances change from time to time.¹² The research also shows that these factors not only contribute to the cause of a fire, but can also impair a person’s ability to respond to a fire once it has started.

Table 6 - Fire Risk Characteristics

| Category | Fire risk characteristics | Other factors |
|-----------------------------------|---|--|
| Life-Stage and Lifestyle | <ul style="list-style-type: none"> ▪ Age, especially older people ▪ Alcohol and substance (drugs) misuse ▪ Smoking ▪ Hoarding tendency ▪ Unemployed | <ul style="list-style-type: none"> ▪ Social isolation ▪ Poverty ▪ Poor education |
| Household Type | <ul style="list-style-type: none"> ▪ Single people living alone ▪ Lone pensioners ▪ Single parent families ▪ Living in one room ▪ Social and private renters | <ul style="list-style-type: none"> ▪ Poor living conditions ▪ Level of deprivation |
| Vulnerability¹³ | <ul style="list-style-type: none"> ▪ Impaired mental capacity, including temporary caused by medication, alcohol, drugs ▪ Taking medication, particularly if more than one and if sedative ▪ Sensory impairment ▪ Learning disabilities ▪ Lack of physical mobility ▪ Poor mental or physical health ▪ Age-related impairment (e.g. dementia) ▪ Inability to look after oneself | <ul style="list-style-type: none"> ▪ Having poor or dangerous appliances ▪ Having had previous fire-related incidents ▪ Being known to other agencies |
| Attitude and Behaviour | <ul style="list-style-type: none"> ▪ Improper use of appliance (e.g. cooker, heating, electrical items) ▪ Poor fire safety awareness ▪ Negligent or lack of concern for own or others’ safety | <ul style="list-style-type: none"> ▪ Not having a working smoke alarm |

¹² Categories and characteristics are drawn from [Understanding people’s attitudes towards fire risk, DCLG 2008](#). Further details can be found in the [CRMP Risk Review 2018](#), available on the Service website.

¹³ For a more detailed discussion of vulnerability and the risk factors for service providers see [What do we mean by ‘vulnerable people’ in Herefordshire?](#), available from Understanding Herefordshire.

a) Life-Stage and Lifestyle

Both counties have an ageing population, and the number of older age groups is growing at a disproportionately high rate. People aged 65 and over account for a quarter of the population across the two counties, and the numbers are expected to continue growing at a high rate, with the numbers of those aged 85 and over rising even more rapidly.

The number of people who smoke continues to decline across England, though smoking remains the biggest single cause of preventable deaths and illness accounting for 1 in 6 of all deaths. In Herefordshire in 2018 there were an estimated 19,700 smokers aged 18 and over. In Worcestershire, it is estimated that around 12 per cent of adults smoke – however, this is lower than the national rate.

b) Household Type

Living alone

The 2011 Census found that 29 per cent of Herefordshire and Worcestershire households comprised one person and, of these, half were aged over 65. Using Mosaic Public Sector data, that proportion is likely to have now increased to one in three of all households. As people are living longer, the number of people living alone is expected to continue increasing. Living alone is seen as a risk factor associated with loneliness and social isolation and is also linked to increased rates of falls, functional impairment, longstanding medical conditions and smoking.

Children and young people

The two counties are home to around 169,000 children and young people aged up to 19 years, and this is projected to increase to 174,000 by 2031, representing one in five of the total population. While changes in society, new ways of working and technological advances are creating more opportunities for young people, there are challenges ahead including inheriting the implications of climate change. With demands and expectations increasing, NHS England estimates that one in ten children and young people experience mental health problems.¹⁴

Knife crime and gang culture among young people is relatively low in the two counties compared to major urban centres, but in a largely rural area there are other issues including the lack of facilities, poor transport, hidden poverty and a growing concern of ‘county lines’¹⁵ exploitation.

While children in both counties do relatively well at school compared to England as a whole, pupils from a disadvantaged background do less well. Disadvantages are usually associated with their personal and family circumstances, their neighbourhood and their schools.

¹⁴ [Future In mind](#), NHS England, Department of Health, 2015

¹⁵ County lines is when gangs and organised crime networks exploit children and vulnerable people to sell drugs. They use dedicated mobile phone ‘lines’ to carry out the deals and those affected are often expected to travel across counties to move drugs and money. See [Criminal Exploitation of children and vulnerable adults: County Lines guidance](#), Home Office, 2018 for more information.

The rates of children who are looked after by the local authority and those subject to a child protection plan (CPP) are relatively high in Herefordshire. In March 2018, 300 children were 'looked after' and 200 were subject to CPPs. Poor parental mental health and domestic violence along with parental substance misuse (drug or alcohol dependence) are the three common reasons for social care involvement. Around 8,900 young people under 18 years old in Herefordshire in 2018 were estimated to be affected by at least one of these reasons, with 300 affected by all three.

c) Vulnerability

While an ageing population indicates that people are living longer, there are also likely to be more people living with poor health. A 2016 Government report concluded that "without significant improvements in health, UK population ageing will increase the amount of ill-health and disability."¹⁶ It predicted that there will be more people living with multiple, chronic and long-term health conditions; a higher number of older people will be living with cognitive impairments; and families will face increasing pressure to balance care with other responsibilities.

With both counties already having an older age structure than the UK as a whole, it is likely that these effects will be more pronounced. For example, nearly half of older people in Worcestershire have an illness that affects their daily activities. This represents 63,000 people currently, and numbers are projected to increase by more than a third (38 per cent) in the next 15 years.

Frailty, falls and fractures

As people grow older, many become frail and more prone to falls and bone fractures. Frailty is estimated to affect 4,600 older people living in the community in Herefordshire and this is predicted to increase to around 5,900 by 2025. In 2017, over 12,000 older people in Herefordshire experienced a fall, and this number is expected to increase to over 16,000 by 2030. In Worcestershire, there are over 2,300 falls per year in the over 65 years-olds.

Mental Health and Dementia

Mental health is an issue of national and local concern. It is estimated that one in four adults in the UK will experience a mental health problem each year. The rates of mental health disorders across the two counties are similar to, or slightly lower than, those for England as whole.

Around 12,760 older people in the two counties (3,200 in Herefordshire, 9,560 in Worcestershire) are estimated to be living with dementia, and this is predicted to increase by about 60 per cent to around 20,400 by 2035.¹⁷

Limiting long-term illness

The most common long-term health conditions affecting people in the two counties include heart disease, hypertension, stroke, cancer, asthma and rheumatoid arthritis. The 2011 Census showed that around 135,000 people in the two counties (approximately 18 per cent) said they had some form of limiting long-term health problem or disability. This was similar to both the West Midlands and England as a whole.

¹⁶ [Future of an Ageing Population](#), Government Office for Science, 2016

¹⁷ [Projecting Older People Population Information System](#), 2017

d) Attitude and Behaviour

Smoke alarms

Of the 2,376 accidental dwelling fires attended in the five years to 31 March 2020, 1,471 households (62 per cent) were recorded as having smoke alarms present. It is not clear how many of the other households didn't have smoke alarms as this information is not always specified. Of the smoke alarms present, 888 (60 per cent) were mains or mains and battery operated, while 511 were battery-only operated. Of the 1,471 households with smoke alarms present, the alarm was recorded as activating in 822 incidents and helped to raise the alarm in 56 per cent of the fires. The other 649 households had smoke alarms present, but they did not activate and raise the alarm. In 50 of these incidents, the alarm battery was missing or defective and in 23 incidents the detector had been removed, was faulty or switched off. National analysis¹⁸ has calculated that you are eight times more likely to die in a fire if you do not have a working smoke alarm in the home.

Inequalities

In England, people living in the most deprived areas have a shorter life expectancy at birth than those living in the least deprived areas. They are also more likely to spend more of their lives in poorer health. For example, smoking related mortality rates are higher among those residents who live in the most deprived areas. Herefordshire has relatively low levels of overall, multiple deprivation and a relatively low proportion of children living in income deprived households (14 per cent compared to 20 per cent for England as a whole). However, this still means there are 4,300 children living in poverty across Herefordshire. Around 1,900 Herefordshire school children are eligible for free school meals. In Worcestershire, the latest figures suggest there are 16,250 children living in poverty related to low income.

To measure deprivation across the country, the Office for National Statistics has divided England up into over 30,000 small areas called Lower Super Output Areas (LSOAs). These areas typically have about 1,500 residents or 650 households. Each LSOA is assessed and ranked against a number of factors affecting deprivation including the relative levels of income and employment; education, training and skills; health and disability; crime; barriers to housing and services; and the living environment. All these factors are then combined into the Index of Multiple Deprivation (IMD) and a ranking is applied to each LSOA according to the levels of relative deprivation. In the latest IMD publication in 2019¹⁹, the most deprived 10 per cent of neighbourhoods in England comprised 3,284 LSOAs. Of these, one LSOA was in Herefordshire and 18 were in Worcestershire as shown in Table 7 following.

¹⁸ IRS and English Housing Survey data quoted in [Detailed analysis of fires attended by fire and rescue services, England, April 2018 to March 2019](#), published by the Home Office and Office for National Statistics

¹⁹ [The English Indices of Deprivation 2019](#), Ministry of Housing, Communities & Local Government, 2019

Table 7 - Herefordshire & Worcestershire LSOAs in 10% most deprived LSOAs in England, 2019

| Local Authority area | LSOA name | Ward |
|-------------------------------------|---|--------------------------|
| Herefordshire, County of | Golden Post – Newton Farm | Belmont |
| | Malvern Hills | Sherrard’s Green |
| Redditch | Abbeydale | Abbey |
| | Church Hill (YMCA surrounding area) | Church Hill |
| | St Thomas More First School area | Greenlands |
| | Winyates housing estate (area around Ipsley C.E. Middle School) | Winyates |
| | Woodrow (area between Woodrow North and Woodrow South Roads) | Greenlands |
| | Worcester | Brickfields |
| Worcester | Cranham Primary School area | Warndon |
| | Dines Green | St John |
| | King George’s Field area, Tolladine | Rainbow Hill |
| | Old Warndon, east of Cranham Drive | Warndon |
| | South-west Gorse Hill | Gorse Hill |
| | Tolladine | Rainbow Hill |
| | Warndon, Windermere Drive | Gorse Hill |
| Wyre Forest | Birchen Coppice | Oldington and Foley Park |
| | Horsefair area | Broadwaters |
| | Rifle Range area (Jubilee Drive, Avon Road, Shrawley Avenue area) | Oldington and Foley Park |
| | The Walshes | Areley Kings |

Deprivation and fire

National analysis²⁰ carried out in 2008 showed that there was a link between deprivation and the rate of dwelling fires in an area – where the rate of dwelling fires is high, the rate of deprivation is also likely to be high. Using national fire data from 2002-2004, the analysis found a correlation of 0.77, which means the link was strong. When a similar analysis was applied to local fire incident data

²⁰ See [Fire and Rescue Service partnerships working toolkit for Local Area Agreements - DCLG 2008](#)

from 2007-2011 during the preparation of the Service's last CRMP, a correlation of 0.66 was found. This also suggests a strong link between deprivation and the rate of dwelling fire. The data informed the preparation of the Service's fire risk map, the latest version of which can be found in the CRMP Risk Review 2018²¹ available on the Service website. The 2018 risk review undertook a similar analysis of local data from 2009-2017 and found a moderate correlation of 0.58, which suggests that the link has weakened. The latest analysis covering the last six years to 31 March 2020 shows that the correlation is still moderate, but has weakened further to 0.40. One of the reasons for this may be related to the targeted prevention and community safety activity carried out by the Service, supported by partner agency referrals. While not conclusive at this stage, analysis carried out in the 2018 Risk Review showed a link between the rate of Home Fire Safety Checks carried out and the rate of decrease of dwelling fires.

Mosaic Public Sector

The fire risk characteristics and deprivation data analysis provide a good indication of the types of people and places that tend to be more at risk of fire than others. A further source to enhance this is the Mosaic Public Sector classification.²²

Mosaic Public Sector draws together a wide range of data and research from numerous sources including demographic, socio-economic and consumer data, financial matters, property characteristics, value and location. The household data is organised into lifestyle groups and types; there are 15 broad lifestyle groups (listed A to O) and 66 more detailed types. Short descriptions of each group's main characteristics are set out in the Mosaic Public Sector document referenced above.

Using the classifications and profiles, all household types can be plotted onto a map of the two counties. These can be applied by location for all 349,300 households in the two counties, which helps to build a profile of all the residents and neighbourhoods. By overlaying the locations of all dwelling fires onto the map, we can gain an understanding of how different factors combine to make some people and some areas more at risk of fire than others. This provides an opportunity to highlight potential high risk areas and other neighbourhoods where fire prevention and fire safety awareness activities can be targeted.

Table 8 below shows that accidental dwelling fires²³ occurred in all 15 Mosaic lifestyle groups between 2014-15 and 2019-20, with Group A having the highest number, a total of 748 or 26 per cent of all accidental dwelling fires. The next highest number was Group N with 319 accidental dwelling fires or 11 per cent of the total. However, this does not identify the relative risk of fire between the two groups. To do this, the rate of fire per household in each group needs to be factored in. In the case of Group A, one in every 84 households had an accidental fire in the last six years, compared to one in every 65 households in Group N. So, while both had high numbers of accidental dwelling fires, households in Group N were more likely to have a fire than households in Group A.

²¹ [CRMP Risk Review 2018](#)

²² See Footnote reference 4 above.

²³ The number of 'accidental dwelling fires' also includes those recorded as 'unknown.'

Table 8 - Accidental Dwelling Fires (ADFs) 2014/15 - 2019/20 by Mosaic Group and households in Herefordshire and Worcestershire

| Mosaic Lifestyle Group | No. of ADFs 1 April 2014 – 31 March 2020 | Households in each Group (Mosaic 2019) | Risk Score (%) |
|------------------------------|--|--|----------------|
| A Country Living | 748 | 63,028 | 143 |
| B Prestige Positions | 138 | 29,577 | 56 |
| C City Prosperity | 3 | 103 | 352 |
| D Domestic Success | 100 | 25,071 | 48 |
| E Suburban Stability | 158 | 27,514 | 69 |
| F Senior Security | 114 | 30,147 | 46 |
| G Rural Reality | 280 | 28,300 | 119 |
| H Aspiring Homemakers | 220 | 37,031 | 72 |
| I Urban Cohesion | 21 | 2,932 | 86 |
| J Rental Hubs | 119 | 13,785 | 104 |
| K Modest Traditions | 121 | 15,203 | 96 |
| L Transient Renters | 174 | 22,474 | 93 |
| M Family Basics | 252 | 27,392 | 111 |
| N Vintage Value | 319 | 20,588 | 187 |
| O Municipal Challenge | 124 | 6,083 | 246 |
| <i>unable to match</i> | 3 | 54 | |
| TOTAL | 2,894 | 349,282 | |

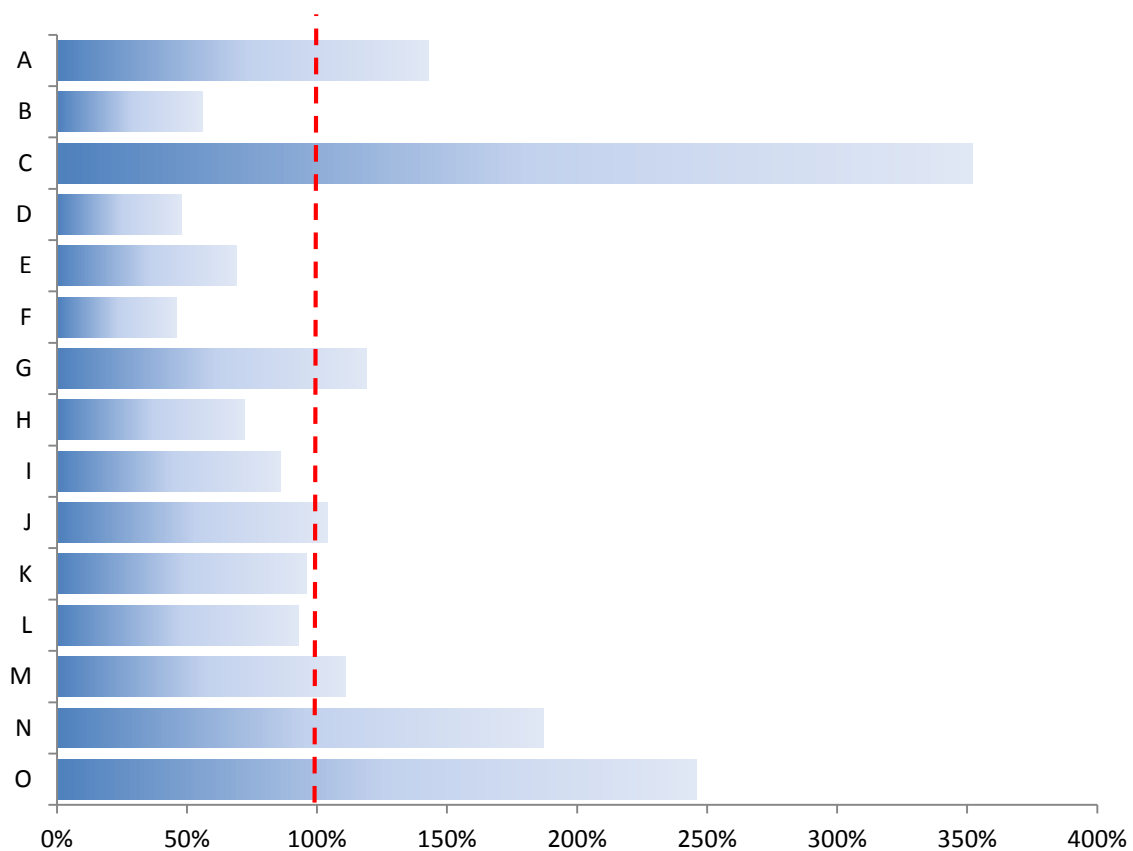
In the table, risk scores above 100 means that those groups have had more fires than expected given the relative number of households in each group – that is, Groups A, C, G, J, M, N and O. When the same analysis was carried out for the 2018 CRMP Risk Review, five of these Groups also had risk scores above 100 – Groups C, J, M, N and O. Groups I and L have been replaced in the new list by Groups A and G. This suggests that there has been a gradual shift in the proportion of accidental dwelling fires away from urban areas towards rural areas. When examining the groups in more detail, it can be seen that those households that share characteristics of higher levels of dependency, disadvantage and vulnerability (Groups, M, N and O) still have the high fire risk scores; while forming just 15 per cent of total households, they accounted for 24 per cent of all accidental dwelling fires over the last six years. They are now being joined by those households in the less populated, rural areas of the two counties (Groups A and G), which represent 26 per cent of all households and had 36 per cent of all accidental dwelling fires.

It should be noted that there are only 103 households in Group C and there were just three accidental dwelling fires over the last six years. This tends to skew the overall risk scores. The main

characteristics of households in this group are that residents tend to be the most prosperous and usually live in the wealthier neighbourhoods, which are not normally typical of those most at risk of fire. Of the three fires in this group, one involved a faulty fuel supply and one was caused by negligent use of an appliance.

Figure 1 below uses the data in Table 8 to provide a visual representation of the relative incidence of accidental dwelling fires across all 15 Mosaic groups for the period 1 April 2014 to 31 March 2020. The 100 per cent line represents the number of accidental dwelling fires that would be expected if all things were equal. Anything to the right of the line means those groups have had more fires than expected given the relative number of households in each group.

Figure 1 - Distribution of Accidental Dwelling Fires by Mosaic Group 2014/15 - 2019/20



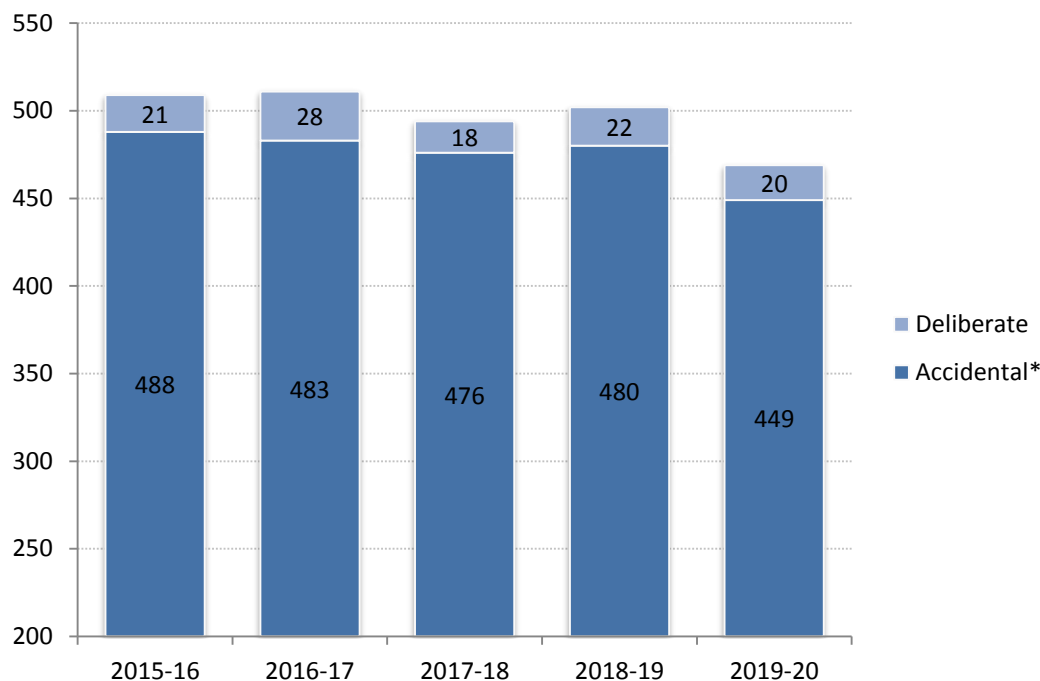
Note:

The current analysis uses the Mosaic classification databases for 2018 and 2019. Matching incidents over six years may not give 100 per cent accuracy as there may be some variations over time. For instance, people’s lifestyle characteristics may have changed, some people are likely to have moved house, house names may have changed or buildings may no longer exist following the fire incident. Therefore, the Mosaic matched information for some households will provide a close approximation, rather than a definitive match. With over 2,800 matched incidents examined, however, the analysis is able to provide a high level of confidence. More detail and further analysis of fire risk will be set out in the next Fire Risk Review following the publication of a new Mosaic Public Sector database later in 2020.

Fire incident data

Between April 2015 and March 2020, the Service attended 2,485 dwelling fires. Of these, 2,376 (95 per cent) were accidental and 109 were caused deliberately. Figures for each year are shown in Figure 2 below. Overall, the downward trend of previous years has continued, with accidental dwelling fires falling from an average of 576 fires per year between 2010/11 and 2014/15 to an average of 475 fires per year over the last five years.

Figure 2 - Herefordshire and Worcestershire Dwelling Fires 1/4/2015 - 31/3/2020



*Accidental includes incidents where a cause was unknown

Accidental dwelling fires and casualties

In relation to the two counties over the last five years (2015/16 – 2019/20), Herefordshire had 705 accidental dwelling fires while Worcestershire had 1,671. Over the same period, there were 269 casualties in total, 73 in Herefordshire and 196 in Worcestershire. Of these, there were 12 fatalities (4 per cent of the total number of casualties) and 13 people went to hospital with serious injuries. The majority of casualties (91 per cent) were either given first aid at the scene, advised to have a precautionary check or went to hospital with slight injuries.

Of the 12 people who died in accidental dwelling fires, the average age was 65 years; the youngest was 18 years old and the oldest was 94 years old. Six of the fatalities were recorded as a 'lone person over pensionable age' and six were recorded as being asleep or having fallen asleep. Most of the fires started in the living room (7 incidents) and the most common source of the fire starting was recorded as 'smoking related – smoking materials' (4 incidents) and 'electricity supply – wiring, cabling, plugs' (3 incidents).

Most of the 2,376 accidental dwelling fires started in the kitchen (1,064 incidents or 45 per cent) and the most common cause was cooking (572 incidents or 24 per cent). Living rooms, bedrooms and utility rooms (329 incidents in total) made up a further 14 per cent of locations where the fire started. Faults in equipment or an appliance and combustible articles too close to the heat source accounted for 510 incidents, with kitchen appliances accounting for 42 per cent of the sources of ignition. Matches, candles and smoking materials were responsible for 151 (6 per cent) accidental dwelling fires.

Incident records available for accidental dwelling fires in households with persons aged 65 years and over show that four out of every five incidents started in the kitchen (276 out of 345 incidents). Records also show that 109 of the 345 incidents involved the person being distracted, with almost all of these happening in the kitchen (95 per cent or 103 incidents). Of the other 236 incidents, 50 were recorded as due to the person's medical condition or illness, and 27 involved the person being asleep or falling asleep.

Deliberate dwelling fires

Dwelling fires caused deliberately remain very low in the two counties with 109 incidents over the last five years, representing 4 per cent of all dwelling fires. One person was seriously injured in a deliberate dwelling fire, but there were no fatalities. Deliberate fires tend to start in a wide variety of locations, with kitchen, living room and bedroom accounting for 34 per cent of all locations. In terms of the sources of ignition, matches, candles, smoking materials and smoking related (such as a cigarette lighter) accounted for 46 fires or 42 per cent of the deliberate dwelling fires. Of the 109 deliberate dwelling fires, 60 (55 per cent) involved setting fire to someone else's property.