



# COMMUNITY RISK MANAGEMENT

**Building intelligence to support  
Business and community safety and response  
strategies across Surrey**

Surrey Fire and Rescue Community Risk Profile

Date of publication 08/02/2019

Working together, saving lives

## Table of contents

1. Introduction
2. Risks associated with population characteristics
3. Risks associated with the built environment
4. Risks associated with the transport infrastructure
5. Risks associated with rivers and lakes
6. Risks associated with the green environment and climate change
7. National and regional risks

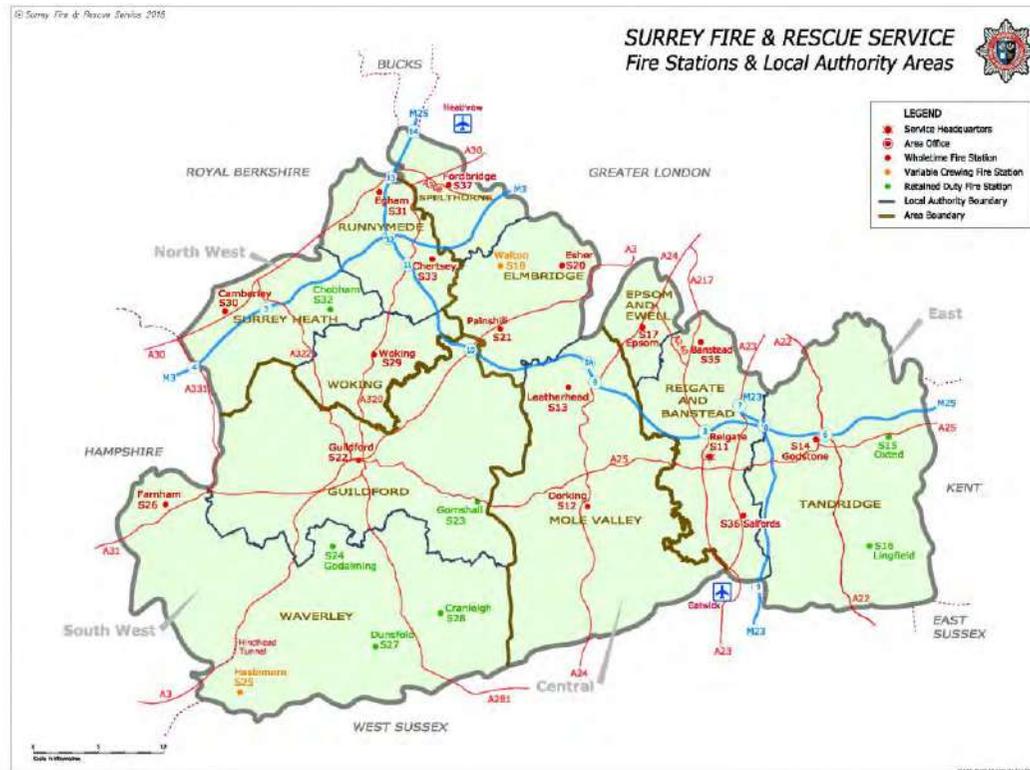
## Introduction

This report provides information about different types of incidents and risks that Surrey Fire and Rescue Service (SFRS) responds to, so that we can better understand how to address these issues. This analysis is based on the most recent data.

This report helps us to identify the biggest risks for our incident types and other factors such as who is the most vulnerable. It also provides information about national threats and risks that could affect Surrey.

This document is a key part of our Integrated Risk Management Plan, and means that the Service can follow an evidence-led approach to managing the resources we have alongside the incidents we encounter.

This map shows the location of our fire stations across Surrey, and shows the counties that border us.



By looking at risk in our communities, we can assess the likelihood of an emergency incident occurring in a given area and what impact that could have on the community. By understanding these risks, we can make better decisions and plan for how to use our resources to reduce the occurrence and impact of incidents across Surrey.

Understanding the risks of incidents happening in Surrey helps us to make the right decisions on our operational response to the emergency, our prevention activities and our planning for major disasters.

## **Risks associated with population characteristics**

A number of factors affect the risks to the population, and impact on the way we try and prevent incidents occurring and the strategies we put into place to respond. We are committed to reducing fire deaths, and between 2016 and 2018 there have been no deaths from fire in Surrey. We have dedicated fire investigation officers working to identify and tackle the causes of fire.

### **Deaths from fire**

Between April 2006 and March 2018, there were 62 deaths as a result from fire, with 44 of those being caused by accidental dwelling fires. The main cause of the accidental dwelling fires were: smoking materials, ignition by naked flame, gas or electrical heaters being too close to combustible materials, candles, electric blankets. Other causes included faulty appliances and cooking. The main causes of fire deaths outside the home include: vehicle fires, common land fires, deliberate fire setting, and fires in gardens. Of the 18 people who died in fires outside the home, nine were suffering from mental health issues.

This analysis has shown us that the most vulnerable and at a greater risk of fire tend to have at least one of the following characteristics: aged over 60, living alone, suffering mobility or hearing loss issues, having mental health issues, having a disability, having alcohol or drug dependency, being a smoker.

### **Age**

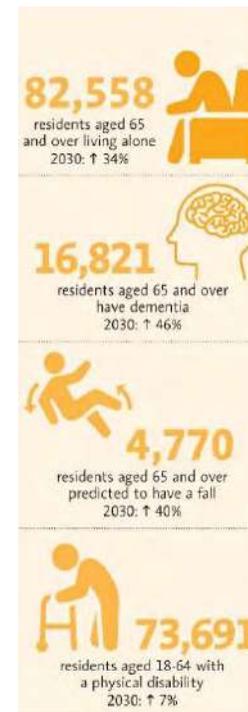
By looking at fire fatalities, we can see that the most vulnerable are older. The proportion of older people (65+) is expected to rise to 22% by 2030, from 19% in 2018.

### **Living alone**

Of the 44 people who died in accidental dwelling fires in Surrey between April 2006 and March 2018, 33 were people who lived alone. The predicted rise in single person households (increasing 34% for those aged 65 and over from 82,558 in 2018 to 110,628 in 2030) presents further challenges, given this evidence that those who live alone are more at risk of fire.

### **Mental health**

As explained above, mental health is a contributory factor to fire deaths. Furthermore, dementia is an increasingly prevalent condition, and one that is expected to rise. The number of people aged 65 and over with [dementia in Surrey is predicted to rise 46% between 2018 and 2030 to 24,559](#). Those with dementia may be





more at risk of accidental fires and may be less able to self-rescue or respond to smoke alarms. It is also estimated that 1 in 3 adults aged 65+ with dementia remain undiagnosed. For younger residents, the number with a common mental disorder is forecast to rise by 4% from 113,848 to 118,402.

### Mobility issues

As more people are supported to live at home for longer, the risks increase for those who are vulnerable. People with mobility issues may find it harder to self-rescue and may suffer from trips, slips and falls. Residents aged 65 and over with a limiting long term illness are predicted to increase from 87,712 in 2018 to 119,288 by 2030 (an increase of 36%). Likewise those unable to manage a self-care task on their own increases by a similar proportion from 76,746 to 104,375, and those vulnerable to having a fall increasing by 40% from 4,770 to 6,678.

For younger residents, those with a physical disability is forecast to increase from 73,691 in 2018 to 78,849 (7%).

### Learning disabilities and Autistic Spectrum Disorders

For those aged 18 to 64, the numbers of people with either learning disabilities (17,139 to 17,996) or an Autistic Spectrum Disorder (7,015 to 7,366) are predicted to increase by 5% between 2018 and 2030.

### Dependencies and smoking

Those who consume high levels of alcohol can be at increased risk of fire, for example if they are cooking or smoking. Consuming alcohol can make people fall asleep and be less aware of dangers such as smoke or fire. The number of people predicted to have an alcohol problem by 2030 increases from 42,205 in 2018 to 43,893 (4%). Similarly those with a drug problem a forecast to have a 4% increase from 23,940 to 24,898.



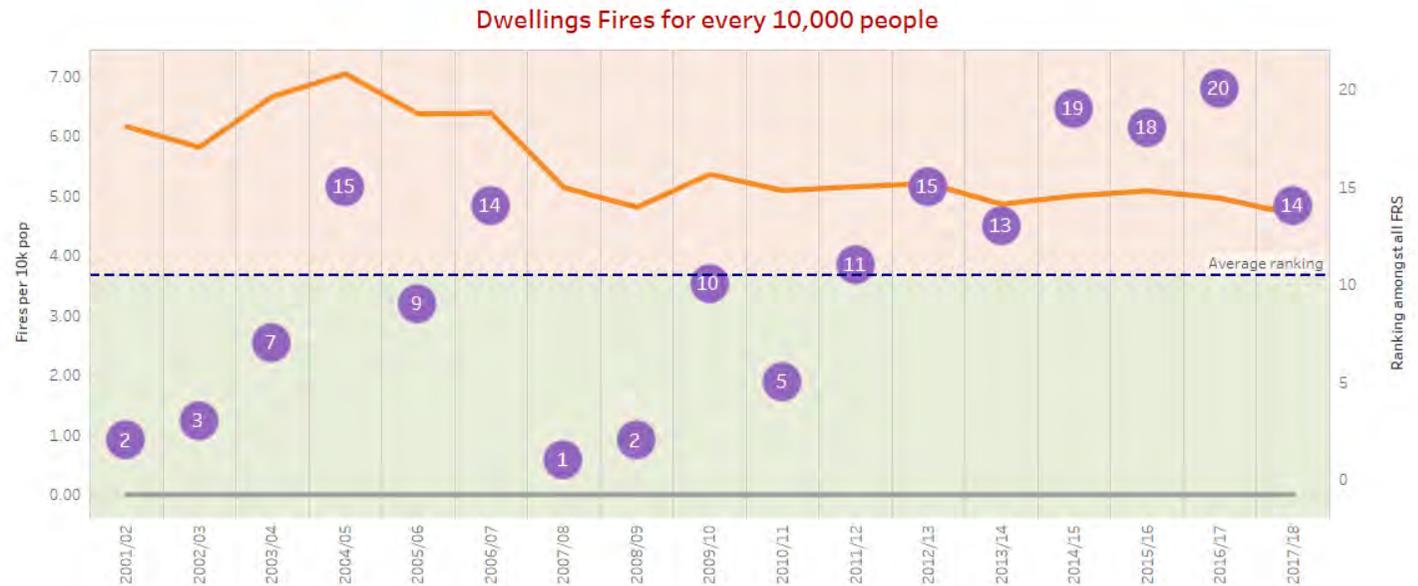
### Residential property

There are also risks to residents due to the type of property they live in. Housing continues to be built across Surrey, both in rural areas and in town centres. High rise dwellings present different risks that we plan for and part of this is running exercises to test the response needed. To ensure we can access high rise buildings, we have a 42m (10 storeys high) Aerial Ladder Platform, among the tallest in the country, along with a Turntable Ladder.

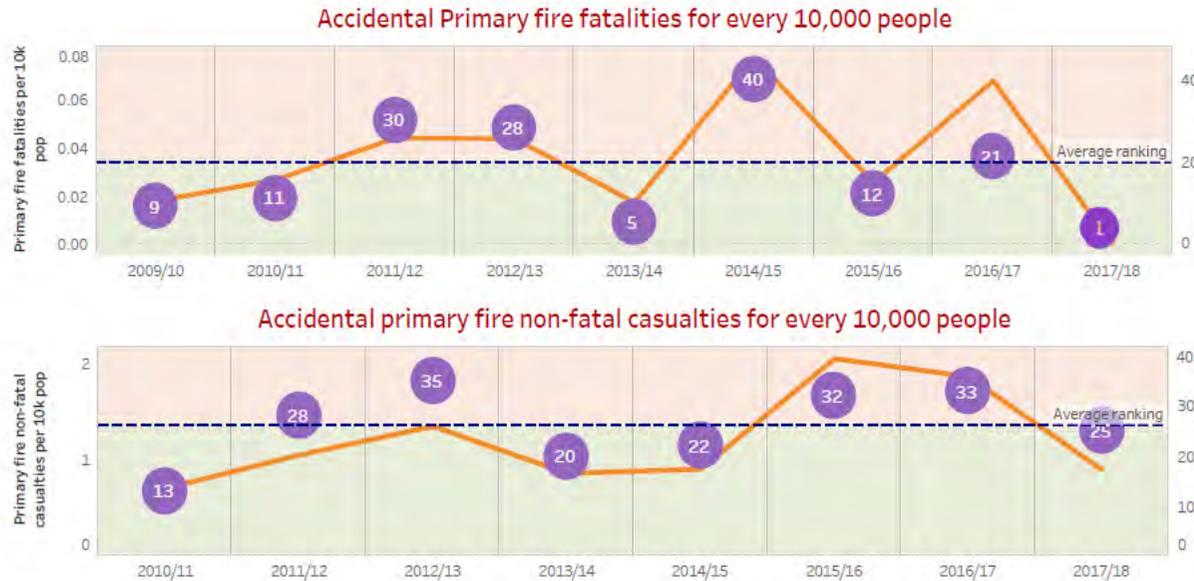
## Comparative incident data – Risks associated with population characteristics

The orange line in this chart shows the number of house fires in Surrey over the last 17 years, when it broken down for every 10,000 people in Surrey. This shows that over that time period it has ranged between 5 and 7 house fires for every 10,000 people each year, and since 2007/08 it has remained at around 5.

The purple circles show Surrey's ranking position against other parts of England for the occurrence of house fires, where '1' represents the place having the lowest occurrence for every 10,000 people. The ranking is out of 45. This shows that Surrey has consistently been in the lower half of rankings for house fires, which suggests a relatively low risk compared to the average for England. Over the last six years the Surrey's ranking position has tended to increase which suggests that the decrease in such incidents over



that period did not keep pace with the decline in the overall England average.

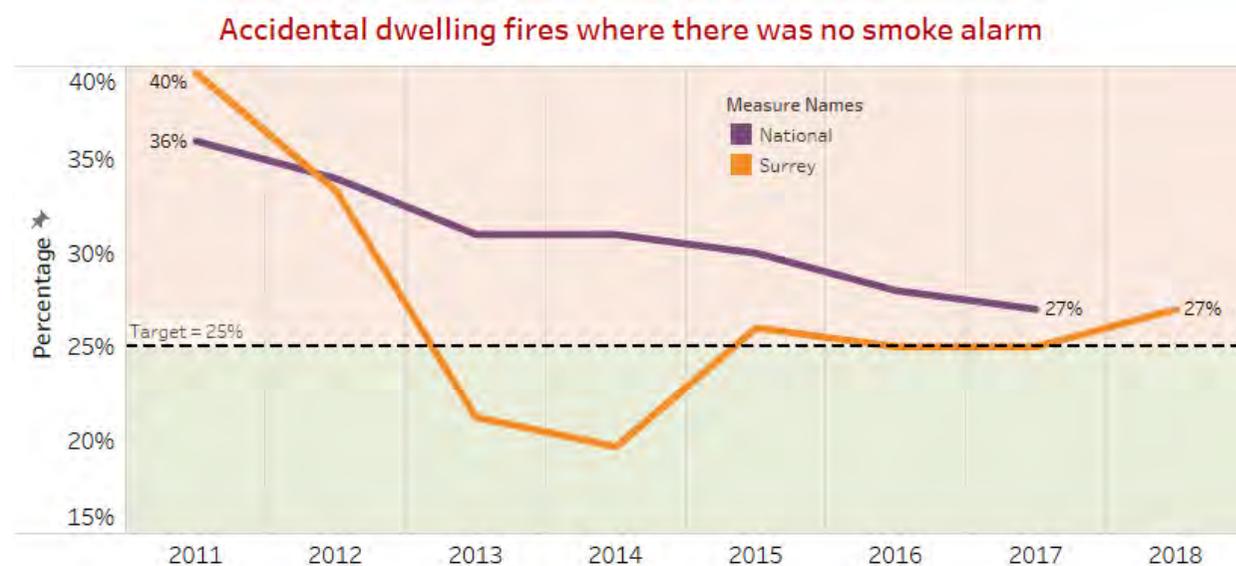


The national data does not allow for direct comparison for casualties from house fires, but we can compare against accidental primary fires, the large proportion of which will be house fires. From the first chart above, we can see that deaths from accidental fires, is extremely low for every 10,000 people. In fact you have to look at the number for every million people before you get a whole figure. For every million people over the last nine years it has ranged between 8 deaths and most recently zero. Because the numbers are small the ranking of Surrey compared to other parts of England tends to be volatile from year to year. So in 2014/15 we had a high ranking as a result of 8 fire deaths, and in 2017/18 we had the lowest ranking in England because of zero fire deaths. The average ranking is 20<sup>th</sup>. Non-fatal accidental fire injuries, have tended to be around 1 to 2 for every 10,000 people over the last nine years. Surrey's average ranking is 26<sup>th</sup>.

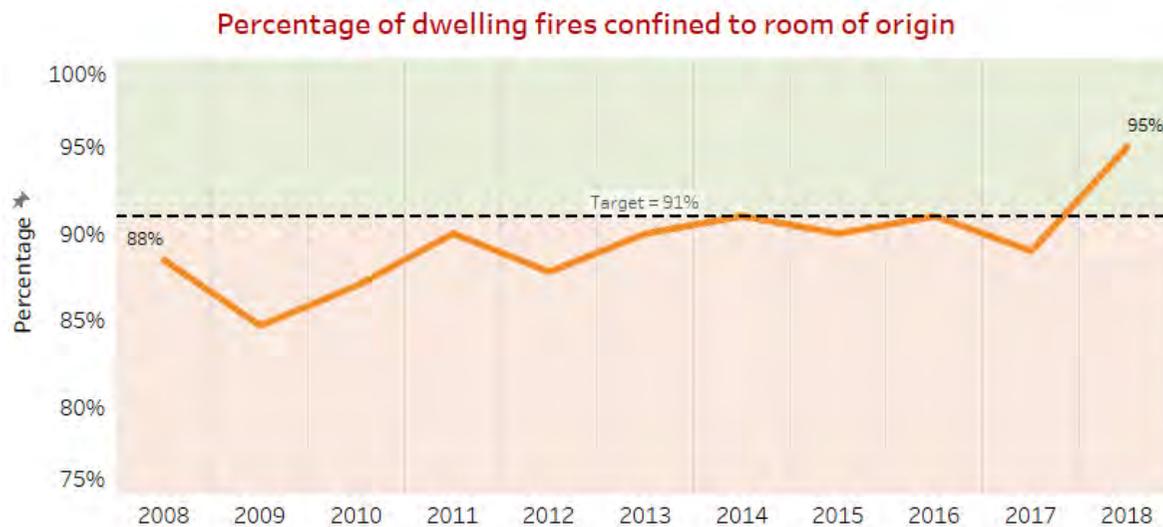
Another way to consider the risk from accidental dwelling fires is to look at those premises experiencing a fire that was found to be without a smoke alarm which otherwise would have given warning, and reduced the risk of casualties.

This chart shows that over the last eight years, between 3 out of 10 and 4 out of 10 accidental house fires have been found to be without a smoke alarm. This compares with a similar trend at national level.

For 2018/19 the Service has set itself a target of no more than 25% of accidental house fires having no smoke alarm. By the end of September 2018 the actual rate was 26%.



We can also look at house fires confined to the room of origin, as an indication of how quickly a fire has been effectively tackled by the Service.



There is no comparative information available for this, but we can see a trend for Surrey over the last eleven years. On average nine out of ten house fires are tackled in such a way that it is confined to the room of origin.

At the end of September 2018 it was a similar picture with 88% of fires since April 2018 being confined to the room of origin. This is against a target of no more than 91%.

### **How we use risk in our service plans and strategies: Risks associated with population characteristics**

Population characteristics associated with the risk of a house fire, can be broken down into two main parts:

- The characteristics associated with a house fire occurring in the first place.
- The characteristics associated with the safe escape from a house fire.

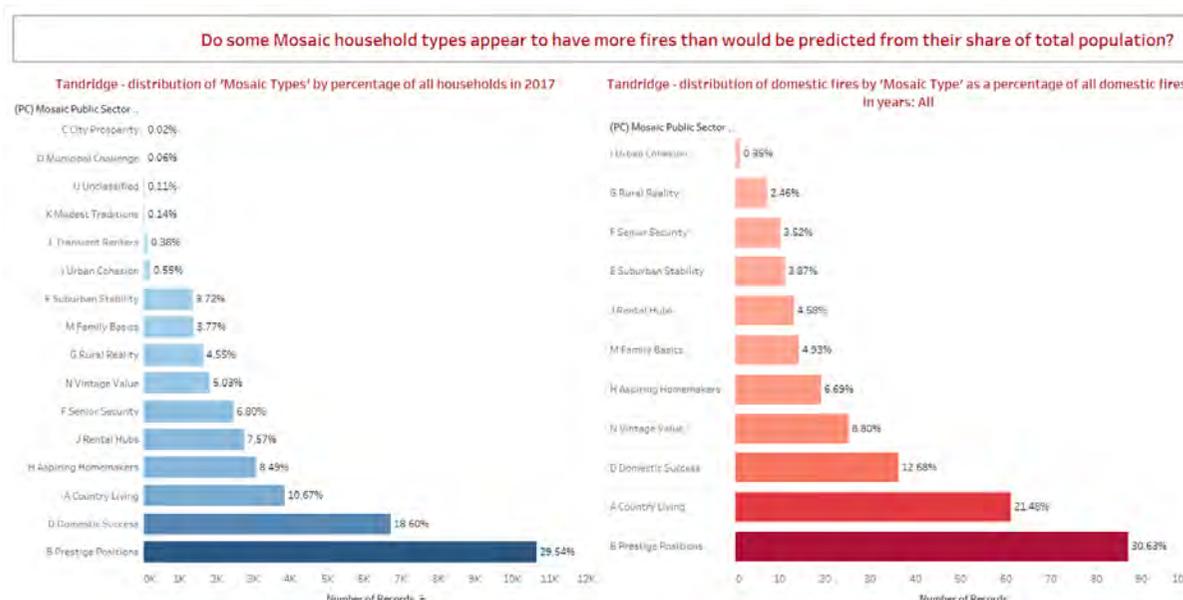
In terms of targeting those people who may be less able to safely escape uninjured should a house fire occur, it is the elderly and/or those with some form of mobility impairment who might be classified as the most vulnerable. The Service offers to visit people's homes as part of a "Safe and Well Visit" to assess what general hazards their might be in the living space and within that there will be advice about minimising the risk of a fire occurring, or if it does occur the practices that will help to slow its spread (such as closing doors at night) or facilitate a safe exit. To this end the Service regularly gathers information about some characteristics of the local population, such as the addresses of those who are 65 and older, and those who are known to be users of oxygen for health purposes. Firefighters will then give a priority to approaching those householders to see if they would like to receive a Safe and Well Visit.

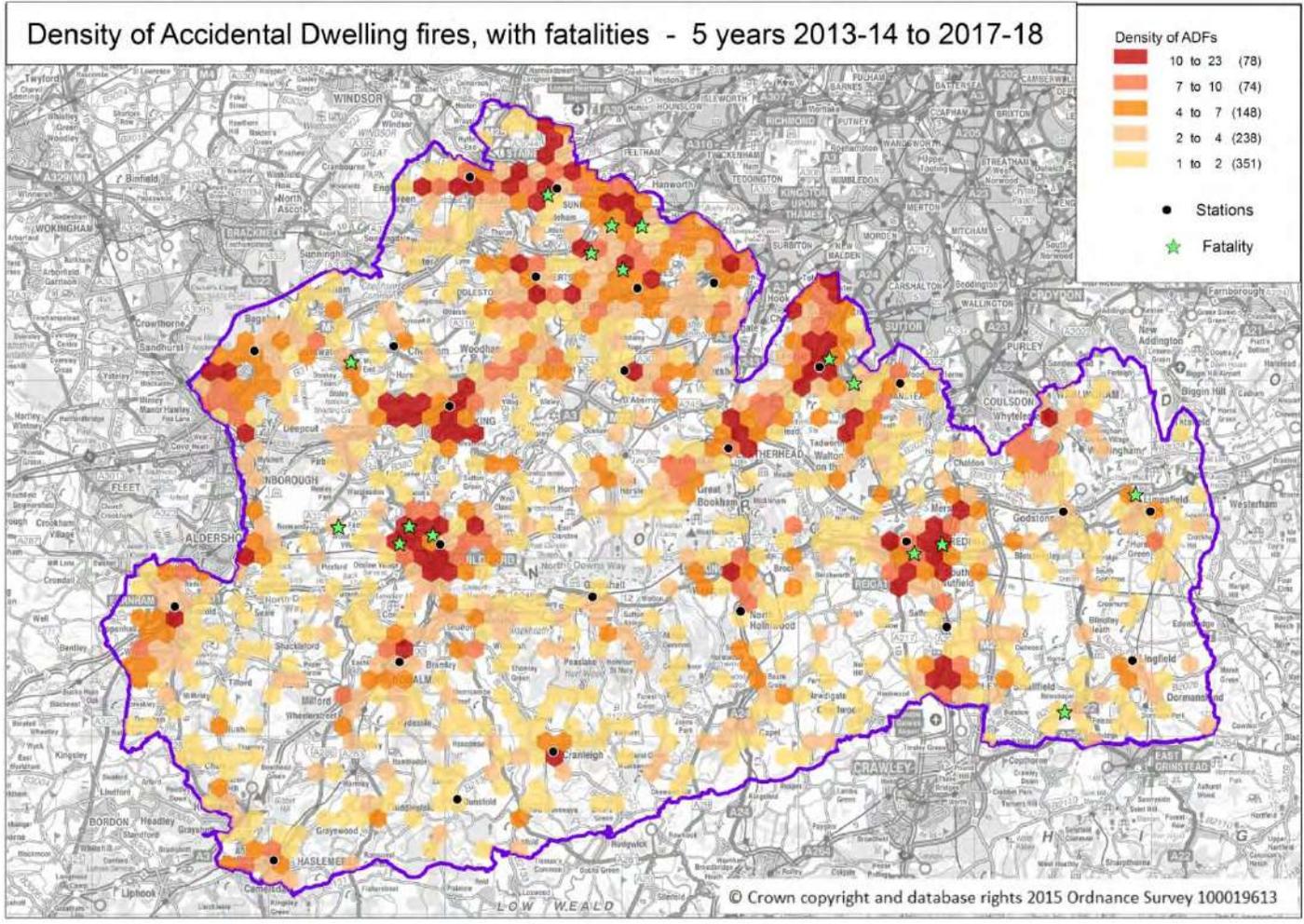
In relation to those in the population who may be more at risk of a fire occurring in the first place, the Service routinely offers a Safe and Well Visit to those who have just experienced some form of house fire.

In addition to this the Service also has access to a set of commercially available data that has classified each household in the UK as one of 15 groups, and within that it is broken down to a further level that make up 66 detailed types in all. These classifications are based on demographic data and behavioural trends. Taking the 15 main groups we can see what share of the population they make up in Surrey as a whole, and also district by district. We can then compare these against the shares of home fires that each of the 15 groups has experienced.

If this comparison shows that a group is experiencing more home fires than would be anticipated from its share of the population, this may be a group to proactively target for Safe and Well Visits. We are still in the early stages of utilising this data. In addition all frontline staff have resources available to them through the fire safety toolbox for example; referral processes for vulnerable people or guidance on understanding and interacting with people with dementia.

In the example to the right, we can see that whilst “A. Country Living” as a household type makes up about 11% of the Tandridge population, in terms of the share of home fires over the last nine years, this household type has experienced 21%, suggesting it may be worth a closer look in terms of Safe and Well Visits.





This map shows where the most and least number of accidental dwelling fires have occurred from 1 April 2013 to 31 March 2018. The most intense activity (darkest red) occurs around the highest concentrations of population.

**Surrey Fire and Rescue Service relevant strategies and plans**

- [Community & Business Strategy](#)
- [Mobilising & Response Strategy](#)
- [Firewise Scheme](#)

## **Risks associated with the built environment**

Our Business Fire Safety Team are responsible for the regulation and enforcement of fire safety legislation in non-domestic premises. We carry out inspections of commercial and industrial premises and prioritise these by risk. We give fire safety advice to local businesses to help them comply with legislation and keep their employees and the public safe.

There are some industrial risks within Surrey, which is mainly from small-scale manufacturing and processes, including: Walton Aviation Terminal, fuel farms near to the border, hospitals and drugs transport, and laboratories for chemical testing, animal health and food research.

### **Heritage**

Surrey has many listed buildings, which require coordinated planning to prevent fires occurring and to mitigate the effects if they do. We do this by inspecting properties and producing maps for heritage buildings and structures. The data and maps that we produce is then made available to our crews, through Mobile Data Terminals on every fire engine. The fire at Clandon Park House in 2015 illustrates our response to heritage incidents. The fire spread very rapidly due to the design of the building. However, there was a well-rehearsed salvage plan and our crews supported the National Trust in saving over 400 items.

[Heritage Strategy](#)



**Risks associated with the built environment – incident and comparative data**

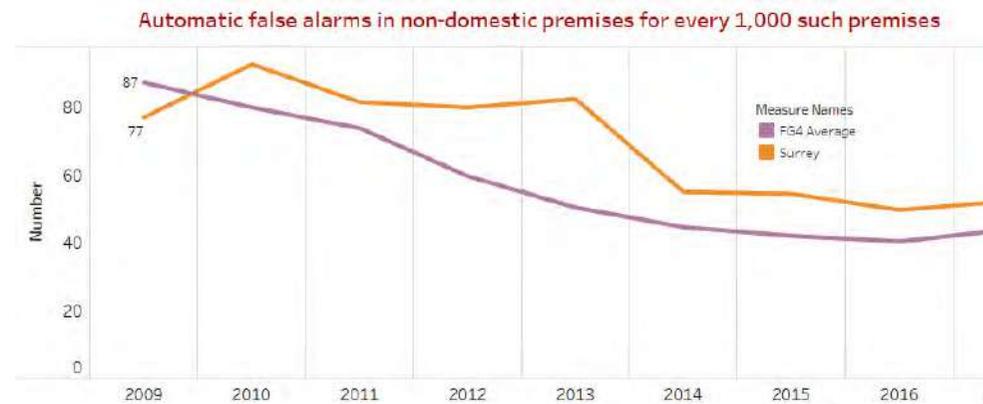


The orange line in this chart shows the number of fires in non-domestic buildings in Surrey over the last 9 years, when it broken down for every 10,000 people in Surrey. This shows that over that time period it has ranged between 2 and 3 such fires for every 10,000 people each year.

The purple circles show Surrey’s ranking position against other parts of England for the occurrence of non-domestic building fires, where ‘1’ represents the place having the lowest occurrence for every 10,000 people. The ranking is out of 45. This shows that Surrey has consistently been in the lower half of rankings for non-domestic building fires, which suggests a relatively low risk compared to the average for England. Over the last six years the Surrey’s ranking position has tended to increase which suggests that the decrease in such incidents over that period

The greater proportion of attendances by the Service to non-domestic buildings is actually in response to an automatically generated false alarm (89%). This chart shows the volume of such false alarms for every 1,000 non-domestic premises – the blue line showing Surrey and the orange showing the average of a group of 20+ other Fire and Rescue Services with similar characteristics. This shows that Surrey is tending to attend slightly above the average number of automatic false alarms. With the aim of helping to improve efficient use of resources in this area the Service is implementing a new policy around how such incidents are handled. When the Service receives an AFA call from a commercial premises, or any other premises categorised as ‘in scope’, the Service does not make an automatic emergency attendance unless there is a confirmed fire or a perceived presence of fire reported from the premises, such as a smell of smoke or burning, etc. This applies any time of day or day of the week. The Service continues to provide an emergency attendance if a person is concerned that there may be a fire cannot investigate the premises or is unable to provide sufficient detail to allow the attendance to be sent in a non-emergency manner.

did not keep pace with the decline in the overall England average.



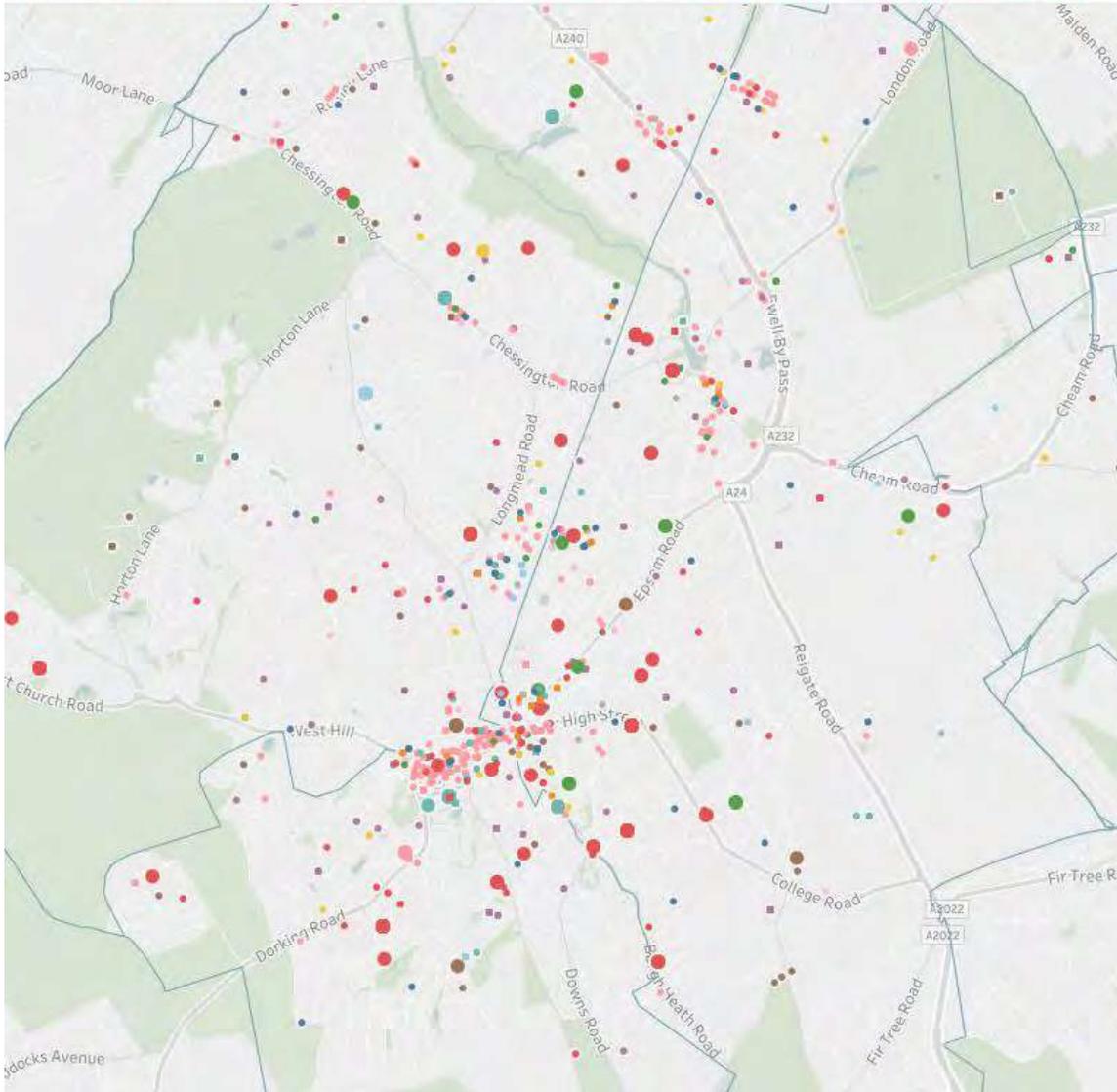
## **Risks associated with the built environment – how we use risk in our service plans and strategies**

The Service maintains a database of information about business premises. This will include a record of the type of business being carried out, any unusual hazards at the site and an assessment of the risk rating posed by the premises. The level of risk of a premises will determine how frequently a premises is re-assessed. Service visits to a premises will generally be for one of two purposes:

- Business Safety Audit – to check on compliance with applicable fire safety regulations. Where a failure to comply is found an enforcement notice will be issued along with a follow up procedure.
- Premises Survey – to assess a premises from the perspective of firefighter safety in the event of an incident occurring. The first visit will be an initial survey and for those premises deemed to have above a certain level of risk, this will be followed by an operational survey.

In addition to this the Service also has access to a set of commercially available data that has classified each premises with a risk score ranging between 1 and 100. The score combines and number of considerations around premises type, the sector the business operates within, number of employees, whether there is a high volume of stock held on site and the use of cooking equipment on site. After analysing ten years of data a strong correlation was found between these factors and the occurrence of accidental fires. In fact 80% of such fires are found to occur within 20% of the riskiest premises.

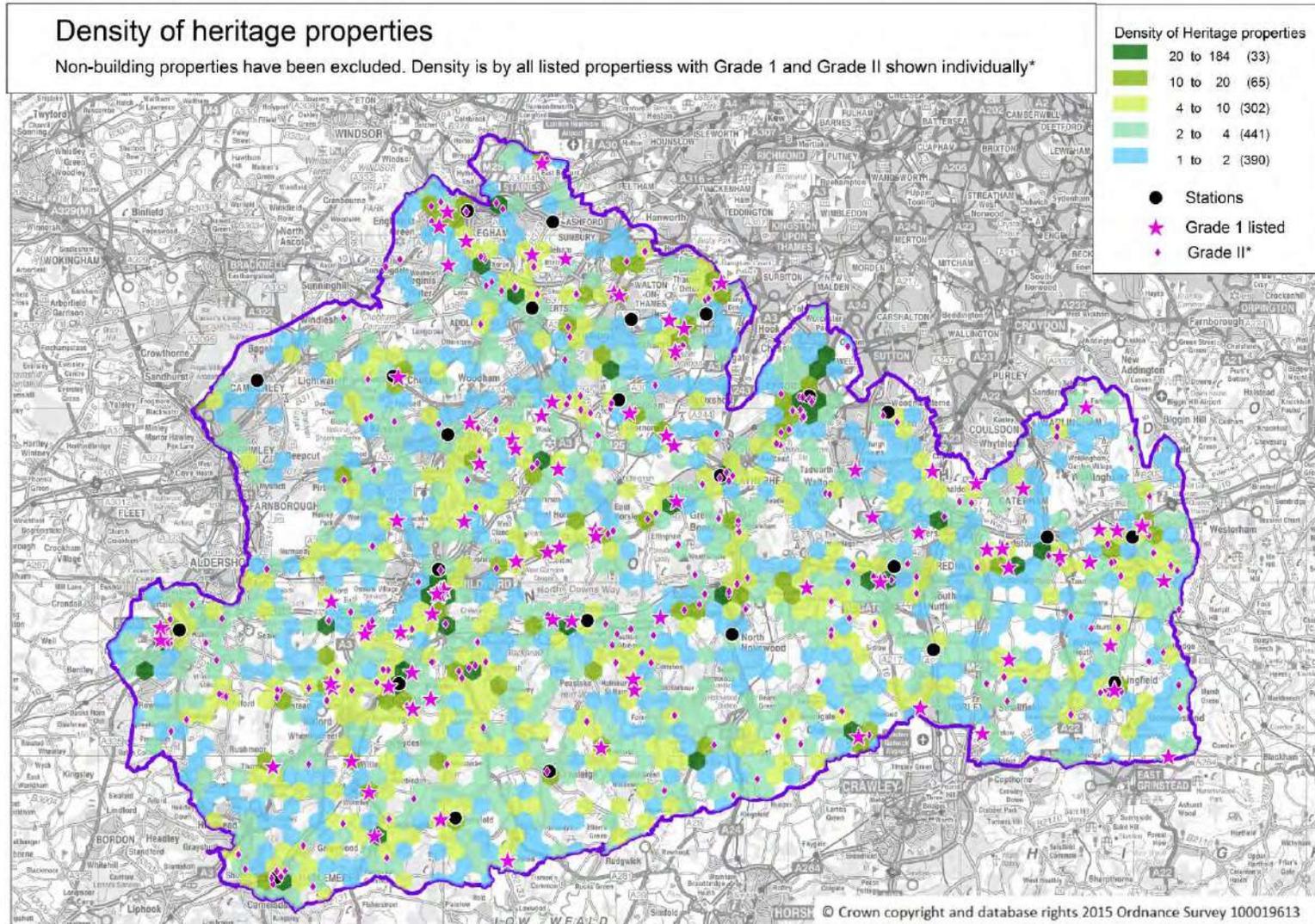
**Commercial premises within Epsom and Ewell with a risk rating between 80 to 99**



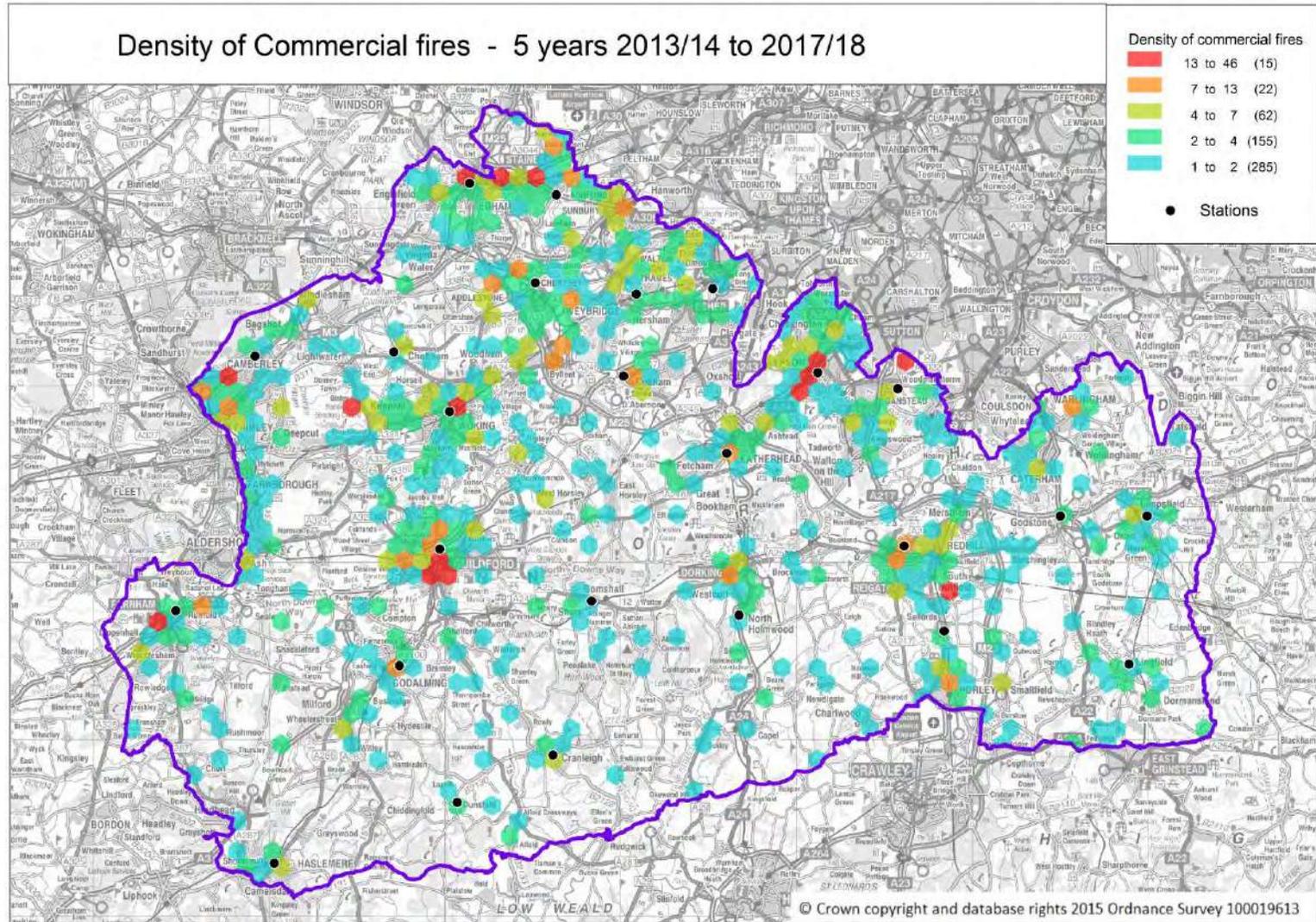
The Service has plotted this data on a map with a view to using this information to help target those business premises most in need of fire safety audits and surveys.

The colours represent different categories of business premises, and the larger circles are those that include a sleeping risk, such as commercial accommodation. This particular map shows those premises that fall within the highest 20% of risk ranking in one particular Borough (for illustrative purposes only).

This map shows the distribution and locations of Grade I and Grade II listed heritage sites. The most noticeable thing is the relatively even spread across all parts of the County.



This map shows where the most and least number of commercial fires have occurred from 1 April 2013 to 31 March 2018. The most intense activity (light red) occurs around the highest concentrations of population.



**Surrey Fire and Rescue Service relevant strategies and plans**

- [Community & Business Strategy](#)
- [Mobilising & Response Strategy](#)

## **Risks associated with the transport infrastructure**

### **Road safety**

Surrey has around 3,452 miles of roads, with the majority being minor or A and B roads, however the county does have 63.3 miles of motorways. Our roads carry almost double the national average amount of traffic.

The number of Road Traffic Collisions (RTCs) that we have been called to has been reducing in the last few years.

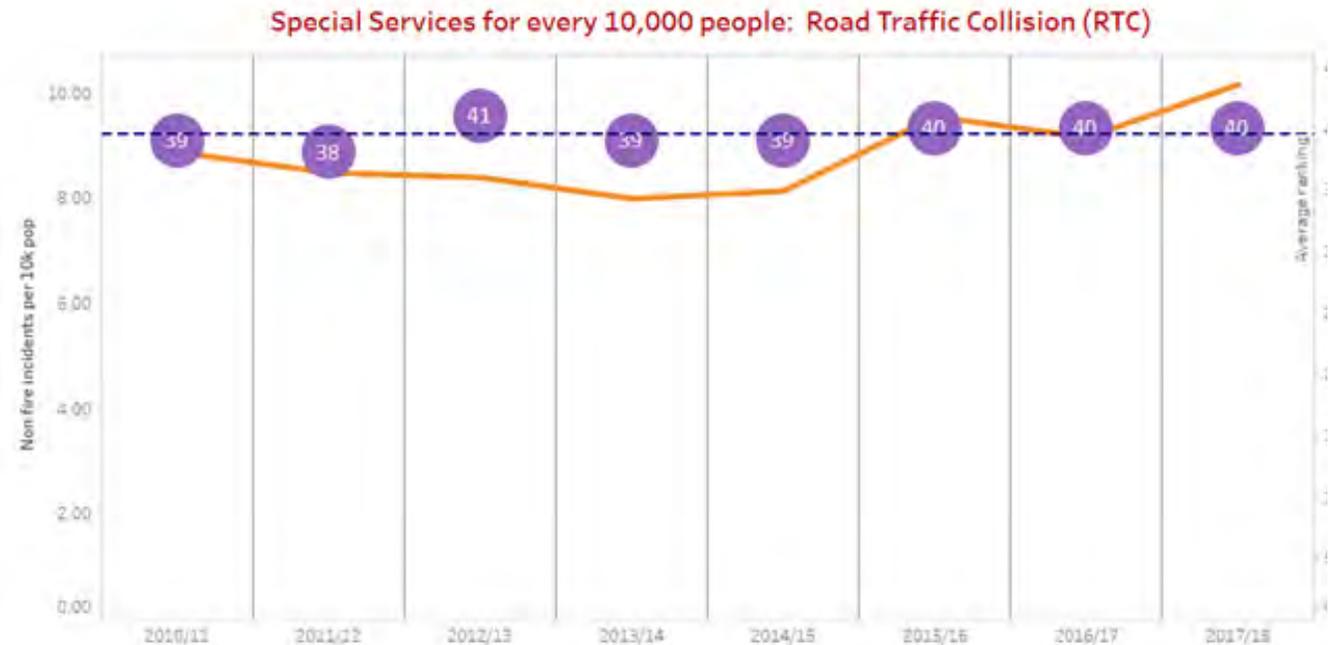
Another area that the Service is keeping under review is the plans for third runway at Heathrow airport. This is likely to increase air traffic movements and also traffic on the road network. A further unique road network risk for Surrey is the Hindhead Tunnel which is the UK's longest underground tunnel. Exercises and plans for evacuation are tested at Hindhead with our emergency service colleagues from Surrey and from over the border.

Rail network incidents are rare, but can have severe effects. To help familiarise crews with this potential risk, we engage in exercises with partner agencies to ensure that we can respond appropriately if required.

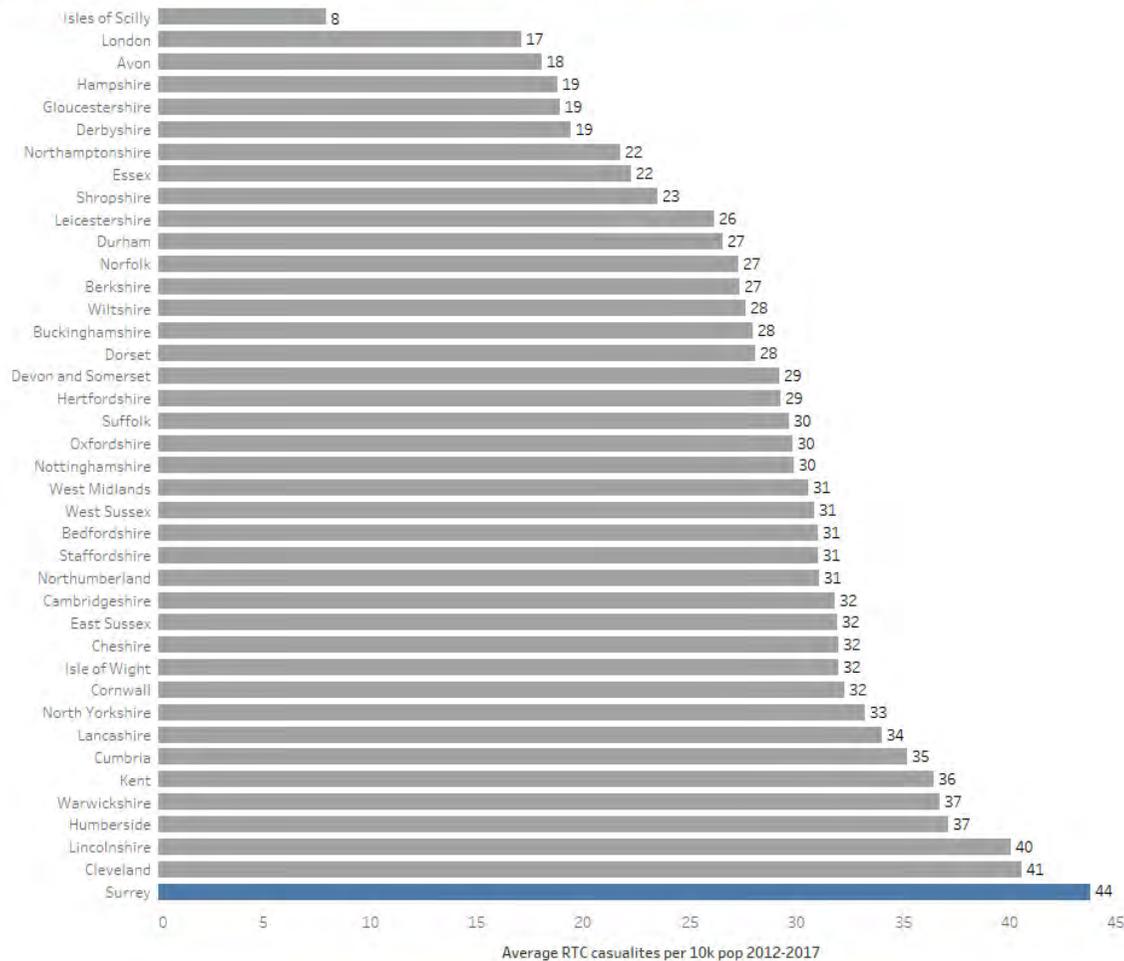
Surrey has a number of small airfields within its borders, and has Heathrow, Gatwick and Farnborough airports sitting just outside. For this reason we prepare for any aircraft-related incidents, such as attending emergencies at airports, and being aware of and trying to control smoke from incidents affecting the flightpaths.

## Risks associated with the transport infrastructure – incident and comparative data

The orange line in this chart shows the number of road traffic collisions (RTCs) attended by the Service over the last eight years, when it broken down for every 10,000 people in Surrey. This shows that over that time period it has ranged between 8 and 10 such collisions for every 10,000 people each year. The purple circles show Surrey's ranking position against other parts of England for the occurrence of attendances at RTCs, where '1' represents the place having the lowest occurrence for every 10,000 people. The ranking is mostly out of 40 Fire and Rescue Services and in some years 41. This shows that Surrey has consistently been near the higher end of RTCs in the rankings, which suggests a relatively high risk compared to the average for England.



**Average road traffic collision casualties each year for every 10,000 people  
2012 to 2017**



The relative risk of Surrey’s roads compared to the rest of England shows even more starkly when looking at the average number of road casualties between 2012 and 2017. The average for Surrey over this period is 44 casualties for every 10,000 people. So in terms of relative risk in Surrey this is significantly higher than casualties from accidental fires. Also as can be seen Surrey has the highest average for all English local authority areas.

In 2017 when comparing millions of motor vehicle miles travelled across county and unitary authorities, Surrey had the fourth highest volume.

Government research on fatal road injuries has made the following key conclusions:

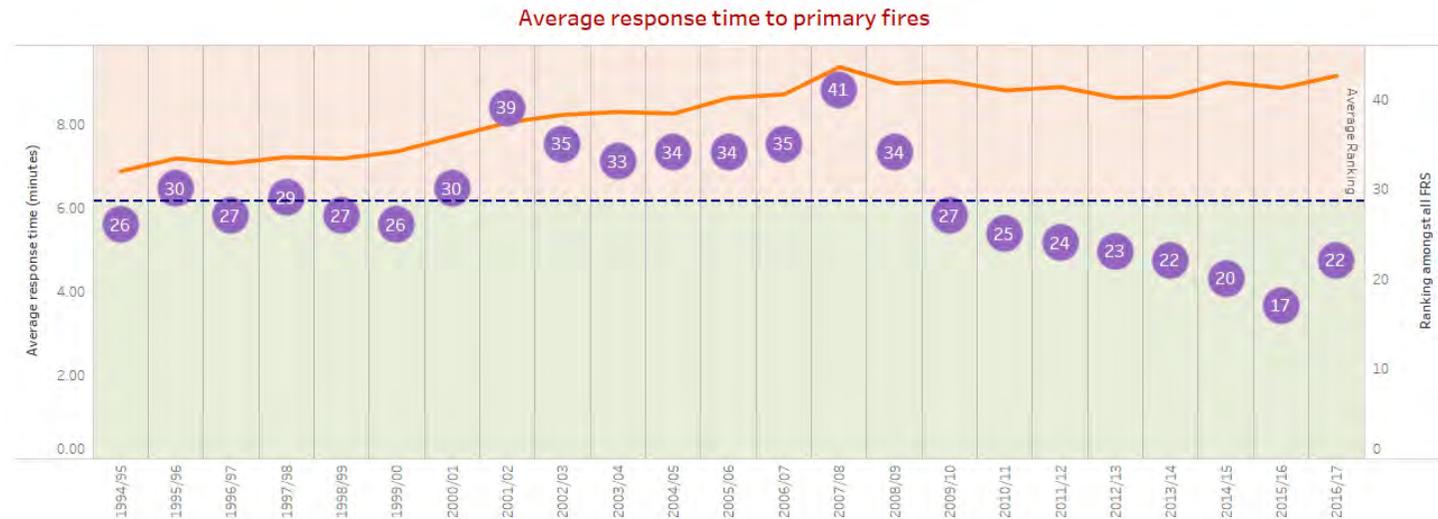
- Over 65 per cent of the accidents examined involved driving at excessive speed, a driver in excess of the legal limit of alcohol intake, the failure to wear a seatbelt or some combination of these
- The majority of accidents involving young drivers occur because of loss of control.
- Alcohol and dangerous driving are major contributory factors
- Older drivers had fewer accidents but fatalities involving them tended to

involve misjudgement and perceptual errors in “right of way” collisions.

The relative volume of traffic on Surrey’s road network is also likely to impact on travel times in general for the Fire & Rescue vehicles travelling to incidents.

This chart shows the average response time in Surrey over the last 23 years to primary fires in particular. In 1994/95 it was 6 minutes and 52 seconds. In 2016/17 it was 9 minutes and 9 seconds. Over that same period of time motor vehicle miles travelled on the road had increased by 17%.

The purple circles show that over the last eight years, Surrey’s ranking has tended to improve and be in the lower two thirds of the table when compared to others in England. So whilst the travel time is tending to increase it is part of a nationwide trend.



## **Risks associated with the transport infrastructure – how we use risk in our service plans and strategies**

All frontline appliances are equipped with state of the art cutting and extraction technology to keep up with new safety systems which are incorporated in modern vehicles to support quick extraction where intervention is required. Furthermore, we ensure that all our staff are aware of the legal obligations when responding to emergency and other incidents on our roads, as there is a risk to the public and to our staff when we have to respond as an emergency.

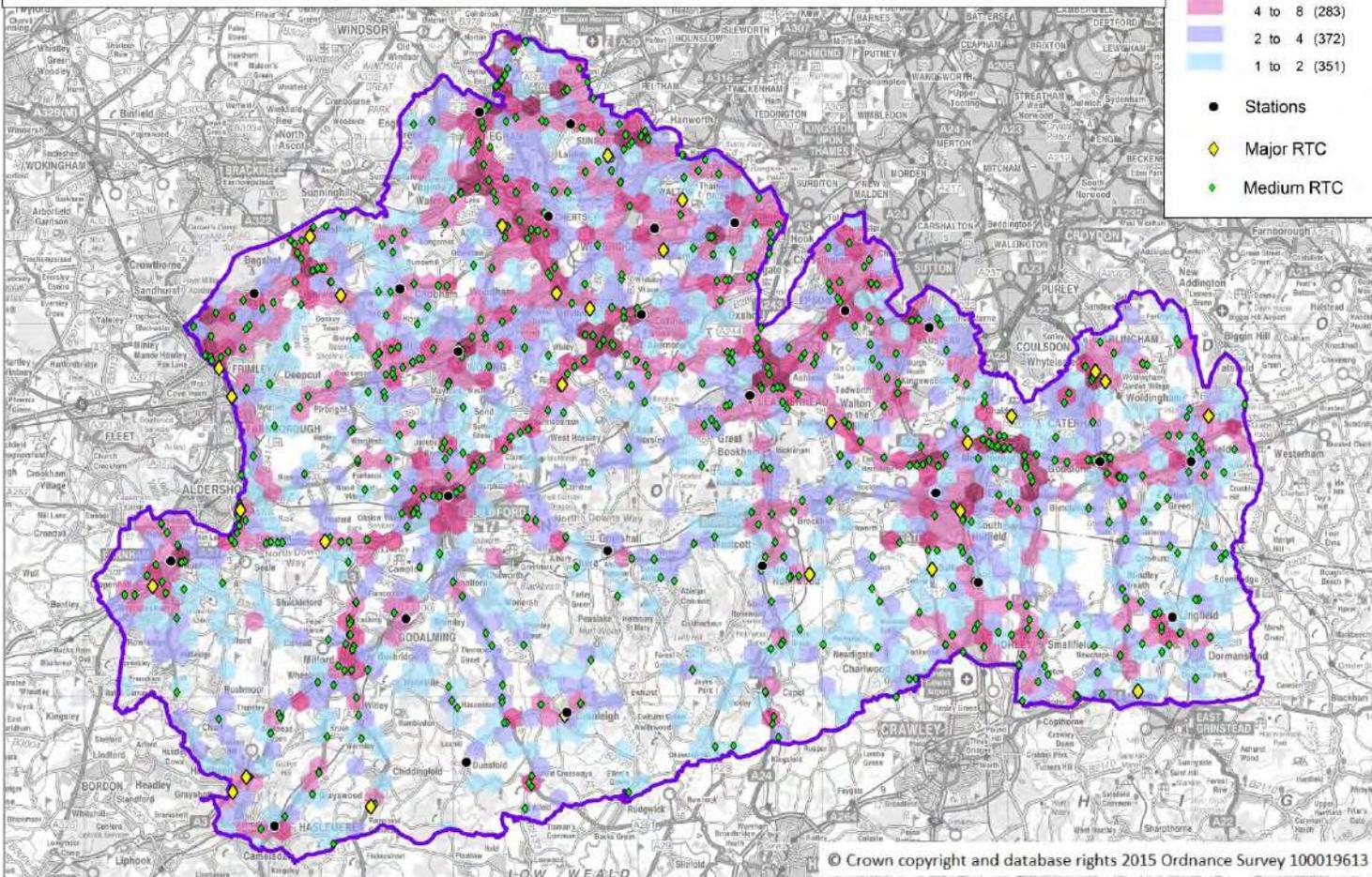
Our aim is to educate and engage with the residents of Surrey to drive down the risk of harm to people. We will look to provide advice through events, one to one contact, literature, and through our external website. As part of our focus we will run appropriate courses or appropriate engagement for specific areas such as road safety, youth engagement, schools education and directly to vulnerable people where required.

### **Safe Drive Stay Alive**

One of the ways that we engage with young people to highlight the risks of dangerous or careless driving is through our 'Safe Drive Stay Alive' performances. This theatre-based education production which the Service has been putting on since 2005, aims to raise road safety awareness among young people, and to positively influence their attitudes to driving. It uses a combination of videos and real-life experiences from people affected by RTCs, to make young people aware of the consequences of not taking responsibility when on the road. In 2018, around 13,500 young people attended a performance of Safe Drive Stay Alive.

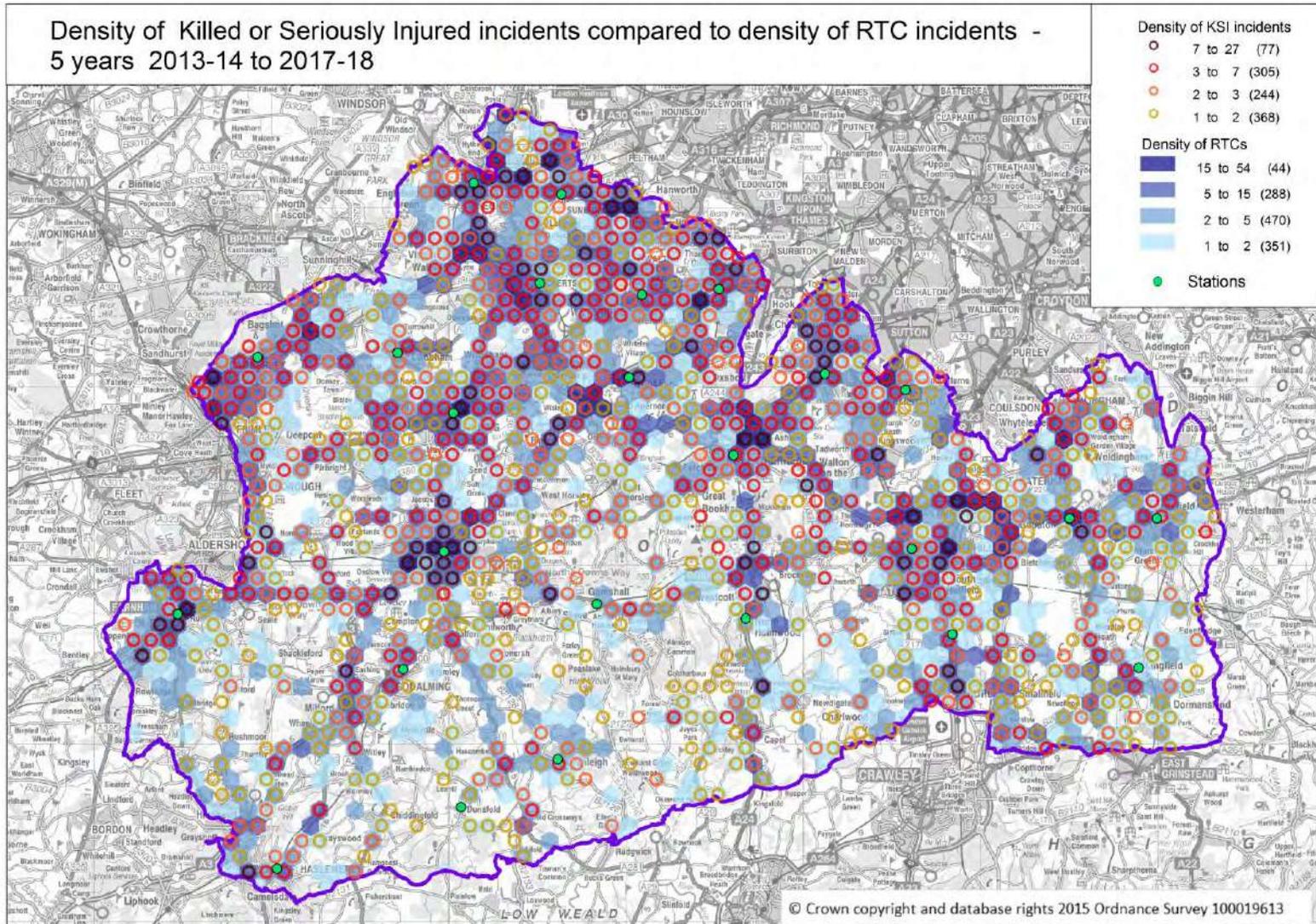
### Density of RTC incidents showing major and medium RTCs - 5 years 2013/14 to 2017-18

Major RTCs are classed as those where more than 1 extrication was performed, medium ones where 1 extrication was performed



This map shows where the most and least number of major and medium road traffic collisions have occurred from 1 April 2013 to 31 March 2018. The most intense activity (dark red) occurs around the M roads and A roads.

This map shows both the occurrence of road traffic collisions where people were killed or seriously injured alongside the occurrence of all road traffic collisions attended by the Service. This is from 1 April 2013 to 31 March 2018.



**Surrey Fire and Rescue Service relevant strategies and plans**

- [Community & Business Strategy](#)
- [Mobilising & Response Strategy](#)
- [Safe Drive Stay Alive](#)

### **Risks associated with rivers and lakes**

There are a number of rivers, lakes and reservoirs within Surrey, and most are used for transport and leisure activities. The River Thames presents additional risks due to the number of dwellings on islands within the Surrey stretch of the river. We have developed our waterborne and flood response capability to support these residents, and the wider community.

Surrey is vulnerable to both inundation of floodplains by river water, and local flooding of the drainage networks when overwhelmed by intense rain storms.



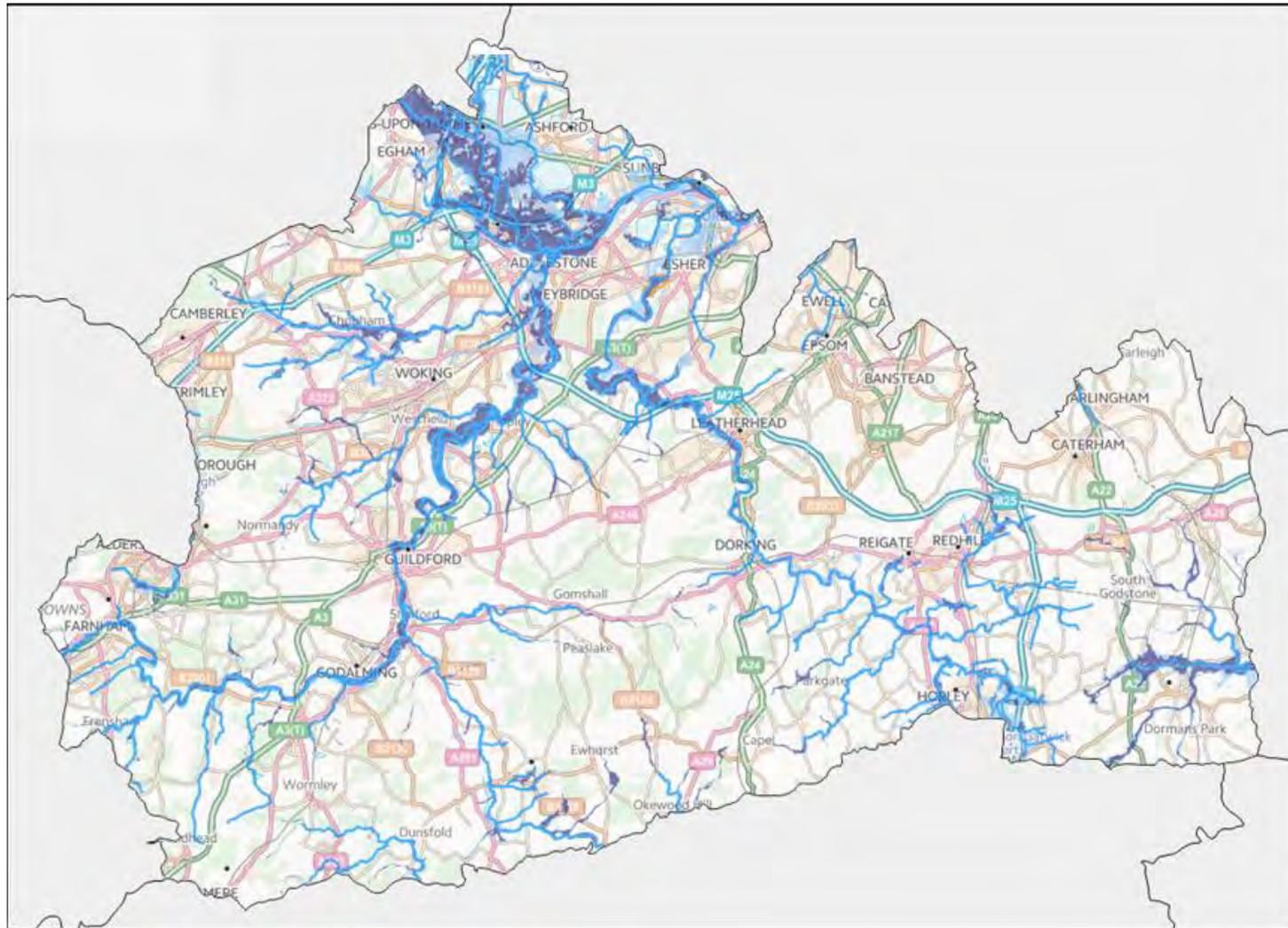
Nearly 64,000 households in Surrey are at risk of flooding, predominantly from the rivers Wey, Mole and Thames. 24,000 of these households are high risk. Previous experience of flooding in the county shows that the worst affected properties tend to be in the north of Surrey. While properties elsewhere may suffer to a lesser degree, there is still a large impact on local communities.

In 2013/14, Surrey experienced sustained flooding, leading to a sharp increase in the call outs for flooding incidents and water rescue. This was particularly felt in Elmbridge, Runnymede, Mole Valley, Spelthorne and Guildford boroughs.

Climate change may increase this risk in the future, and so in conjunction with the Local Resilience Forum, we work with local people in known flood areas, to help them prepare for flooding and make them aware of what they need to do should it occur.

**Risks associated with rivers and lakes – incident and comparative data**

**Environment Agency Flood Map for Surrey as at 2018**



This map shows the likelihood of flooding within Surrey. The highest risks “Flood zone 3” are in the darker blue, middle risks are “Flood zone 2” and lighter blue, and the areas of white are lower risk: “Flood zone 1”

Special Services for every 10,000 people: Flooding



This chart shows the incidents of flooding rescues in Surrey over the last eight years. The orange line illustrates that it has generally been around 2 or 3 flooding incidents for every 10,000 people in Surrey, although in 2013/14 which was a particularly notable year for floods that increased to 5 incidents. The purple circles show that in terms of relative position in England Surrey tends to be in the highest third of such incidents.

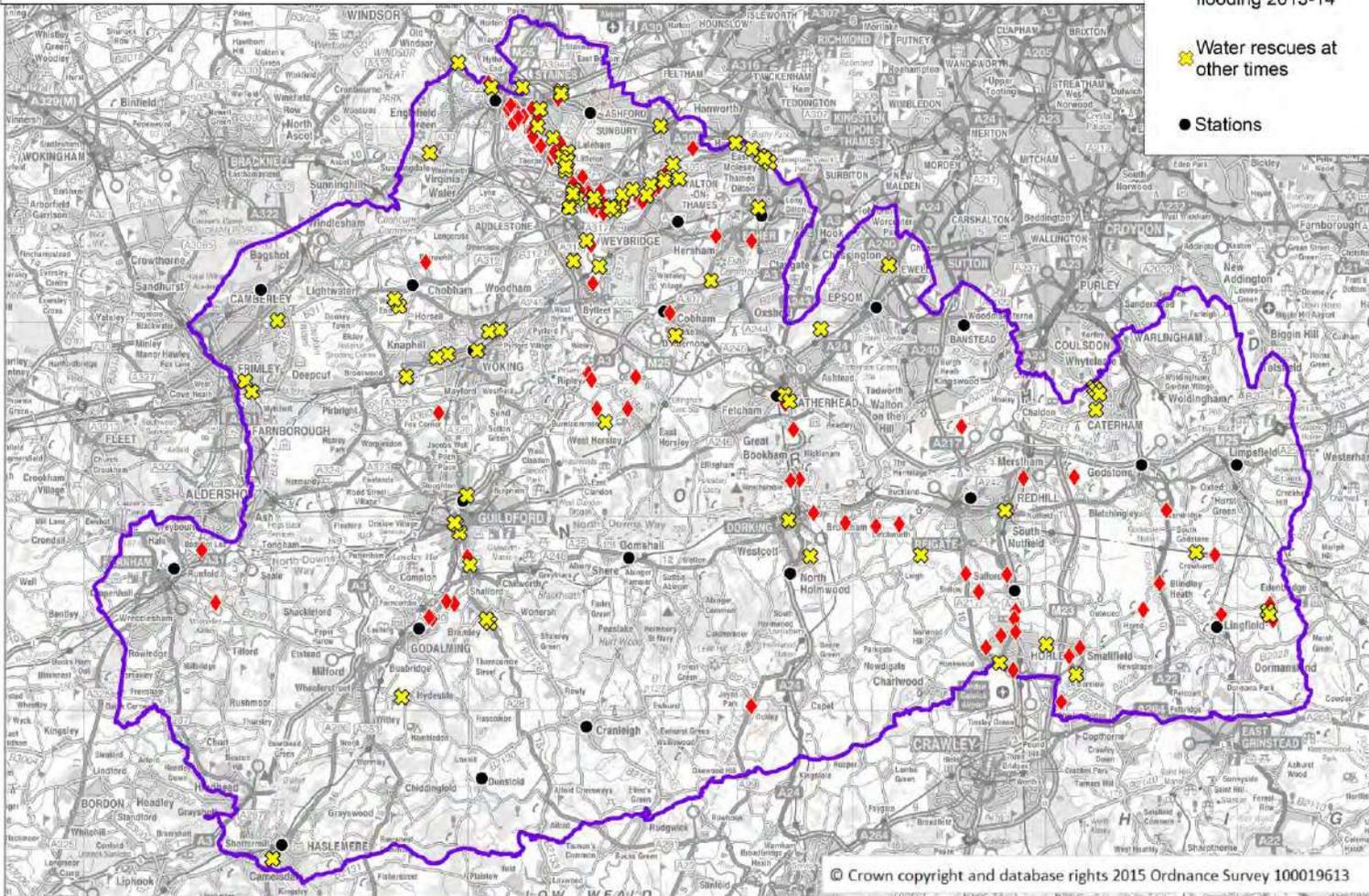
The rescue or evacuation from water trend line shows a similar pattern as might be expected but with an even more pronounced spike in 2013/14. Apart from that year the number of people rescued has been around 1 to 2 for every 100,000 people. What is different to flooding is the relative ranking, which has an average of 21<sup>st</sup> and therefore in the lower half of fire and rescue services.

Special Services for every 10,000 people: Rescue or evacuation from water



Locations of water rescues - 5 years 2013-14 to 2017-18  
Showing incidents during major flooding Dec 1013-Feb 2014 and other incidents

- Water rescues
- ◆ during major flooding 2013-14
- ✕ Water rescues at other times
- Stations



### **Risks associated with rivers and lakes – how we use risk in our service plans and strategies**

We have specialist trained staff and rescue equipment available to respond to a range of flooding and water incidents across the County. We are involved in the Respect the Water campaign to ensure that a consistent water safety message is delivered to the public including at specific school visits. We have also worked closely with Districts and Boroughs to install public throwlines and signs, and train staff at pubs and restaurant along the Thames in the use of this equipment.

### **Surrey Fire and Rescue Service relevant strategies and plans**

- [Community & Business Strategy](#)
- [Mobilising & Response Strategy](#)

## **Risks associated with the environment and climate change**

The Surrey countryside is a highly valued leisure and commercial space. Surrey is a densely populated county and so the demands on green spaces are high. We aim to protect green spaces from fire, to protect the plants and animals which inhabit them, alongside safeguarding the enjoyment of these areas and the safety of residents.

### **Wildfires**

Any fire occurring in natural vegetation, consuming the natural fuels and spreading in the environment can be classified as a wildfire. Surrey's mix of natural fuels, such as pine needles, tree moss, fir trees, leaves and twigs, make it susceptible to wildfires.

Wildfires and common fires have a number of impacts. They can threaten the health and wellbeing of visitors to the land, and may damage residential and commercial properties and recreation amenities. Wildfires can also affect critical national infrastructure, like transport networks and power lines. There can be an economic impact, like losses to forestry businesses and the wood processing sector, providers of tourism and recreation and also the cost of restoring woodlands after a wildfire.

Environmentally, wildfires can cause damage to the natural and historic environment (e.g. protected sites, endangered species, and listed buildings). Wildfires also release carbon dioxide stored in vegetation and soil, which increases carbon emissions and contributes to climate change.

Common and wildfires require a large number of our resources and may affect our ability to maintain fire cover elsewhere in the county.

### **Climate change and extreme weather**

The current international predictions for the effects of climate change indicate that temperatures will rise, with increasing levels of rainfall. Higher temperatures for prolonged periods mean that we can expect to see more outdoor fires. This will impact also on water supplies, which is something that as a Service we need to take into account in our management and fighting of fires. More

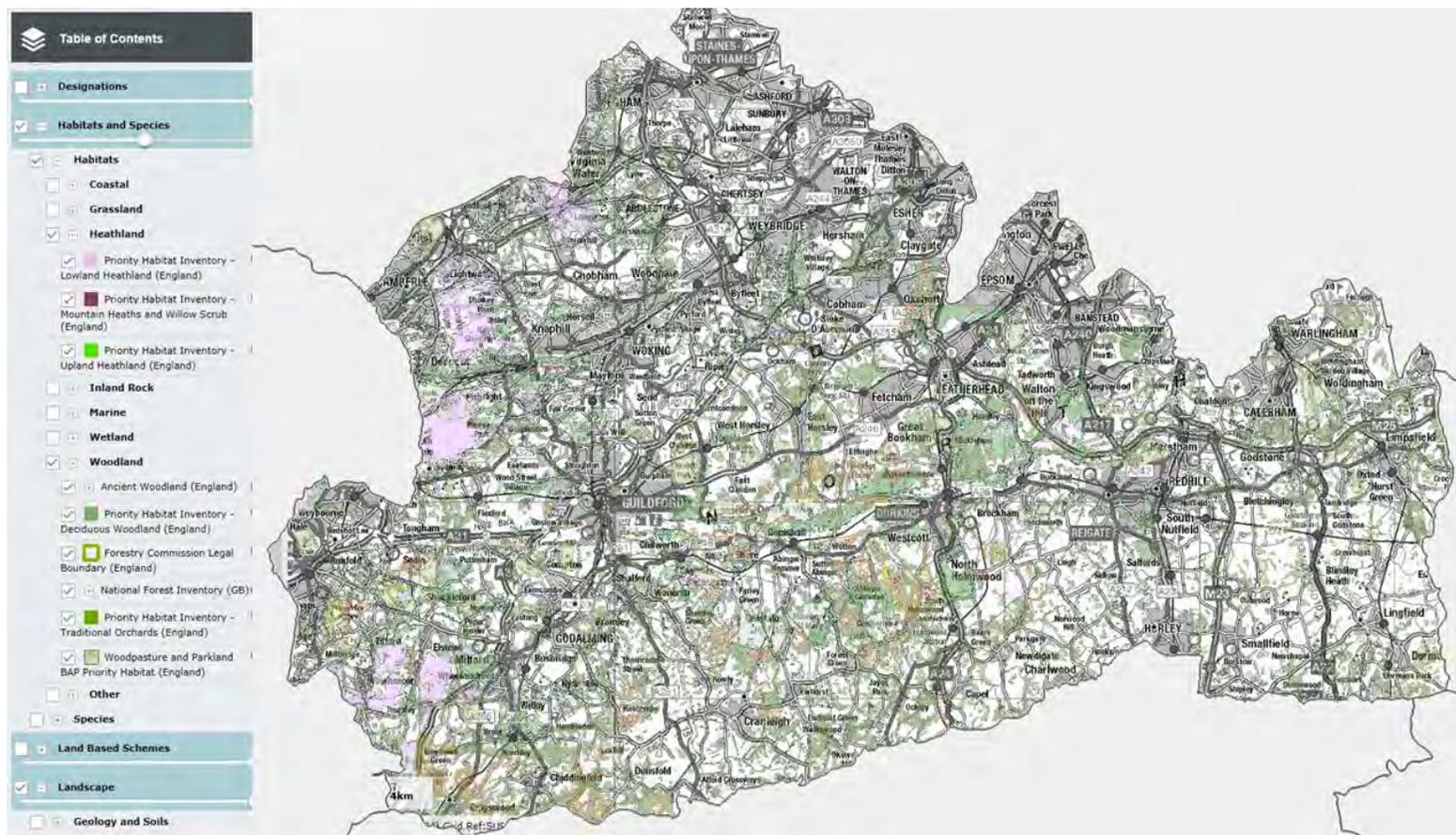


rainfall can lead to flooding, especially in communities close to rivers. Stormy weather can affect travel across the county, causing debris from fallen trees. Ice and snow can cause additional hazards on our roads.

**Risks associated with the environment and climate change – incident and comparative data**

Forest, heathland, agricultural, and other vegetation fires have considerable direct and indirect impacts on society, the economy, health and well-being, and may impact directly upon the transport and recreation sectors. Projected climate change highlights the urgency with which fire prevention planning for wildfires should be addressed.

## Heathland and Woodland in Surrey – courtesy of the MAGIC interactive map

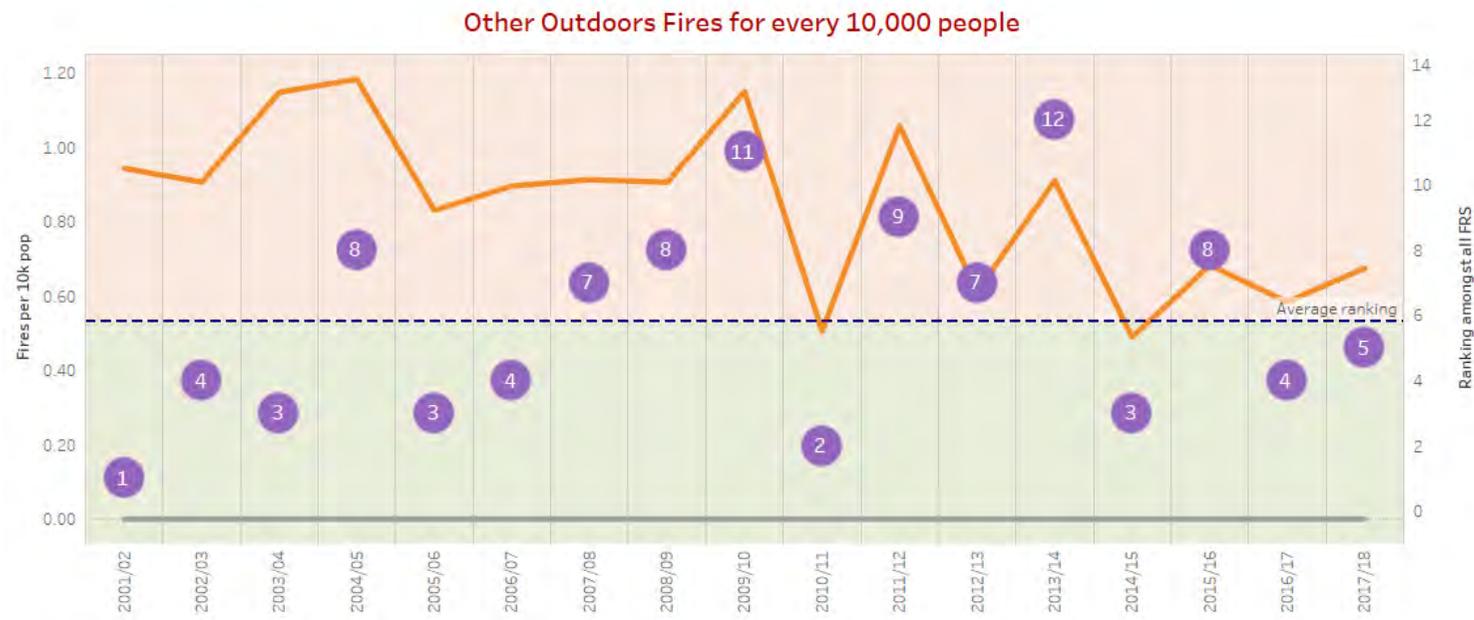


Surrey is the most wooded county in England. Waverley Borough, with nearly half of its land covered by trees, is almost as wooded as the New Forest.

Woodland covers 23% of the land area of Surrey, far more than the national average of 8.5%. However the figure for Europe is 33%.

To explore this map online in further detail please go to [this site](#).

Outdoor fires for the last 17 years have shown quite a volatile trend, but generally appears to be going downwards. Generally there has been 1 or 2 such fires for every 20,000 people in Surrey. Despite its wooded nature, Surrey's ranking position compared to others has generally fallen amongst the lowest 10.



### **Risks associated with the environment and climate change – how we use risk in our service plans and strategies**

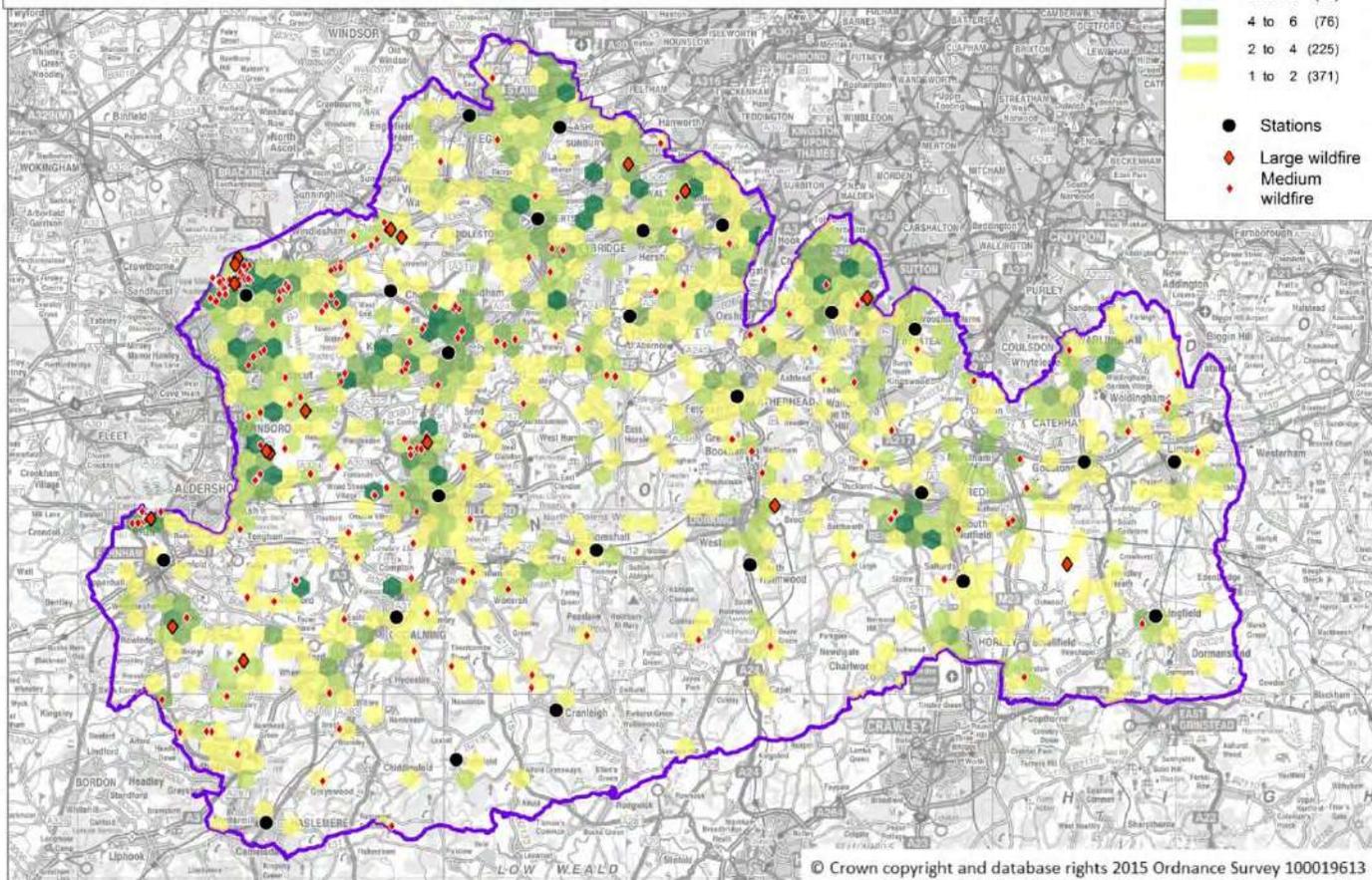
Preparing for wildfires includes maintaining specialist vehicles and specific additional training. Our focus is on prevention of wildfires and so we engage with local communities and provide education to young people through schemes such as FireWise and the Youth Engagement Scheme (YES). We engage with residents to provide information on reducing the risk of a wildfire occurring, and advice for evacuation if necessary. We have carried out inspections of areas at risk of wildfire and identified sites and premises that should be evacuated if a wildfire occurs.

The map below shows the density of wildfires in Surrey. Further work will be done by the Service to understand the different types of vegetation that succumb to wildfire and where they are in the county. This spatial representation will enable us to put clear prevention strategies in place. We will continue to develop links and work partnership with others, such as local authorities, Natural

England, Forestry Commission, Environment Agency and national parks, to deliver an effective wildfire strategy. This will include ensuring that habitats that are likely to be susceptible to wildfire have a plan in place to prevent, and respond to an incident through collaborative work with land managers. Wildfire Subject Matter Advisers are available for operational incidents and also for consultation with landowners as required.

### Density of wildfires - 5 years 2013-14 to 2017/18

Large wildfires are those causing more than 10,000m<sup>2</sup> of damage, medium wildfires those causing more than 500m<sup>2</sup>



This map shows both the density of wildfires attended by the Service. This is from 1 April 2013 to 31 March 2018. It is evident from this that those categorised as 'Large wildfires' occur more frequently in the west of the County, particularly in the Borough of Surrey Heath.

Another area that the Service is looking to continue developing is understanding and mitigating the environmental impact of our operational response. This will include making use of our Environmental Protection Unit where required and ensuring that we are not leaving communities with negative environmental impacts as a result of our emergency response, for example water run-off from extinguishing fires which could cause flooding.

Fire and rescue vehicle and equipment play a key role in keeping our staff and residents safe. We want to make the best use of our resources, and have utilised Multi-Role Vehicles, designed to provide support in severe weather incidents where a fire engine cannot reach. Furthermore, we are looking at the environmental impact of vehicles throughout their production, use and when it's time to dispose of them. We are committed to operating sustainably and responsibly, assessing the carbon footprint and balancing with operational requirements, to ensure that at all times we are delivering the highest standards of public safety. We are encouraging our staff to become more aware of fuel-efficient driving, which both helps the environment and keeps our fuel costs down.

#### **Surrey Fire and Rescue Service relevant strategies and plans**

- [Community & Business Strategy](#)
- [Mobilising & Response Strategy](#)

## **National and regional risks**

### **Planning for Major Incidents and Emergencies**

The Civil Contingencies Act, and accompanying non-legislative measures, delivers a single framework for civil protection in the UK.

The Act and supporting Regulations and statutory guidance 'Emergency preparedness' establish a clear set of roles and responsibilities for those involved in emergency preparation and response at the local level. The Act divides local responders into 2 categories, imposing a different set of duties on each.

Those in Category 1 are organisations at the core of the response to most emergencies (the emergency services, local authorities, NHS bodies). Category 1 responders are subject to the full set of civil protection duties. They will be required to:

- assess the risk of emergencies occurring and use this to inform contingency planning
- put in place emergency plans
- put in place business continuity management arrangements
- put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform and advise the public in the event of an emergency
- share information with other local responders to enhance co-ordination
- co-operate with other local responders to enhance co-ordination and efficiency
- provide advice and assistance to businesses and voluntary organisations about business continuity management (local authorities only)

Partners involved in the emergency planning for Surrey come together in the Surrey Local Resilience Forum, chaired by the Chief Fire Officer, with the aim of coordinating the planning and response to incidents and to promote the cooperation between responders across Surrey.

## **Surrey's Very High Risks**

The Local Resilience Forum is required to review risks and currently the very high risks in Surrey include the following areas,

### **Pandemic of infectious disease**

This is a national risk. The impact would be very high given the expected infection numbers.

### **Widespread River (Fluvial) flooding**

This is a very high risk based on historical events and winter 2013/14 experiences.

### **National Supply disruption failure – electricity**

This a national risk. The impact of losing electricity for three days would be significant in Surrey.

There is a current focus on a number of other risks and threats including Terrorism and the impact on our communities, disruption to the supply chain for critical public services and the impacts from potential cyber-crime.



### **Emergency preparedness**

SFRS has dedicated staff responsible for working with our county, borough and district partners in preparing for emergencies. They work with residents, communities and local businesses to help them create community resilience plans. These plans outline the roles and responsibilities to be activated if an incident occurs, supported by lead agencies and service plans. Key areas of focus are our response to flooding, wildfires and winter weather.

### **Surrey Fire and Rescue Service relevant strategies and plans**

- [Community Risk Register](#)
- [Surrey Major Incident Protocol](#)