



Norfolk
County Council



Norfolk Fire and Rescue Authority

IRMP 2020-23

www.norfolkfireservice.gov.uk

Foreword to the draft IRMP

Welcome to Norfolk Fire and Rescue Service's draft Integrated Risk Management Plan (IRMP) for 2020-2023. The draft IRMP sets out to identify foreseeable changes in community risks for Norfolk that the fire and rescue service has responsibility for and the strategies we intend to use to mitigate these risks.



The Fire and Rescue Service national context is changing and, following the tragedy of Grenfell Tower, has led to a refocus on our statutory community fire protection services.

The proposals for development and change in this IRMP are focused on improvement, but before any decisions are made we want to hear your views about your service. We will consider all of your feedback in January 2020, before making a final decision on the proposals in February 2020.

Councillor Margaret Dewsbury, Cabinet Member for Communities, Norfolk County Council.

Introduction to your Fire and Rescue Service

Norfolk Fire and Rescue Service is a service delivered on your behalf by Norfolk County Council.



Over recent years of consecutive IRMPs, Norfolk has seen a reduction in serious fires in businesses that provide sleeping accommodation, a reduction in false alarms from automatic fire alarms and our service has developed an emergency operational response that has recently been judged as good by our inspectorate.

Since our last IRMP in 2016 we have utilised our Urban Search and Rescue (USAR) teams to provide extra fire cover at Dereham and we regularly review its effectiveness.

Our fire and rescue service is also leading the country in how it collaborates with other services through our blue light Memorandum of Understanding (MOU). With a shared headquarters and control room with Norfolk Constabulary, **the service is delivering better services and saving taxpayers' money which helps us to make the service affordable now and in the future.**

However, there is more that can and must be done to ensure we deliver an outstanding service. This draft IRMP is the basis for improvement that will ensure the service is the best it can be.

Stuart Ruff, Chief Fire Officer

Strategic context

Our vision and mission

Our vision is that Norfolk Fire and Rescue Service will be at the heart of protecting the communities of Norfolk.

Based on this vision, our long standing mission is Making Norfolk Safer. This is achieved through the prevention of emergencies, the protection of people, buildings and the environment, extinguishing fires and undertaking rescues.

To help us guide the development of Norfolk Fire and Rescue Service over the coming years we have developed a forward view:

Norfolk Fire and Rescue Service;
Relevant, Capable and Agile

Forward view

"By 2025 we will have helped deliver stronger communities by working 'Together, for Norfolk'. We will do this by continuing to ensure our services are relevant and by being a capable organisation; with our systems, people and kit deployed flexibly to meet our communities' needs.

We will have continued to deliver an effective Fire and Rescue Service and will be seen as a key service to resolving major incidents; delivering an integrated response with other blue light services, the voluntary sector, neighbouring fire and rescue services and other agencies.

We will have embraced technology and ways of working that have enabled us to deliver an outstanding service.

We will be an agile organisation; with our people empowered to make decisions at the right level. Innovation and adoption of best practice will be the norm; whilst we ensure we consistently meet organisational and relevant national standards.

Our service will be diverse, inclusive and a great place to work. Our people will be able to develop themselves and undertake specialist roles.

We will have reduced our service's environmental impact and have continued to introduce new vehicles, equipment and capabilities in response to our changing climate.

Our Values

Take accountability – do what we say we will

Make strategy happen – take action which makes Norfolk a better place

Be evidence based – target our work to make the biggest difference

Be business-like – think smarter to ensure value for money

Be collaborative – better working together



Our role as a service of Norfolk County Council

As a service delivered by Norfolk County Council we play an important role in working across council services and other agencies to deliver the six-year NCC plan Together, for Norfolk. The plan outlines how we will deliver our outcomes.

Together, for Norfolk

Collaborating with families and communities

From collaborative 'early help hubs', which deliver services to people and families in their communities, to strategic groups that aim for improved working between agencies, we already participate in a number of different partnerships across all sectors, which work to meet the needs of local people in more effective, consistent and financially viable ways.

Joining forces with our partners

Wherever possible, we'll continue to collaborate with our partners and aim to coordinate and integrate all our plans and outcomes, to make the best use of resources available, achieve the maximum impact on the most pressing problems that we face, and celebrate and build on what is good about our County.

A genuine desire to work together

Despite ongoing funding challenges, our public sector partners share this desire to work in a more joined-up way, and our plans to integrate further with the local NHS will enable us to improve the experiences of those of us who find themselves in crisis.

Growing the economy, building the homes that are needed, encouraging inward investment, as well as delivering vital services (such as providing early help, improving public health or safeguarding vulnerable children and adults) depend on us working closely with our local partners, local people and local communities. How we collaborate to deliver those services will define our success in the future.

The way we work better together will be even more ambitious in future and will focus on:

- Bringing together resources across organisations where it makes sense
- Cross-organisations teams to support key initiatives and programmes
- Collaborative investment in our workforce to ensure it is fit for the future

Together, we can help Norfolk's economies, people and communities to grow, thrive and become stronger

Our national strategic drivers

Statutory framework and legislation

The following legislation provides the main legal basis and outlines the statutory responsibilities and powers of Norfolk Fire and Rescue Authority.

- The Fire and Rescue Services Act 2004
- The Civil Contingencies Act 2004
- Regulatory Reform (Fire Safety) Order 2005
- Policing and Crime Act 2017

In 2018, the Government published a new Fire and Rescue National Framework which sets out the Fire Authority's main responsibilities and these are shown.

Norfolk Fire and Rescue Authority is required to:

- Contribute to safer communities by developing an Integrated Risk Management Plan (IRMP) to identify, assess and mitigate all foreseeable fire and rescue related risks faced by the communities of Norfolk.
- Work in partnership with the people of Norfolk and a wide range of partners locally and nationally to deliver a capable, resilient service.
- Be accountable for our actions and decision making.
- Have scrutiny arrangements in place.
- Provide assurance to the people of Norfolk and to Government (through our Statement of Assurance, ***found here***)

The Fire and Rescue Services Act 2004

The Fire and Rescue Services Act 2004 sets the legislative framework within which the service operates. Through implementing legislation we work internally, with partners and with the community.

The Act puts prevention at the heart of what the fire and rescue service does, for example, a duty for all fire and rescue authorities to promote fire safety and other powers to help create safer communities, particularly for the most vulnerable in society.

Civil Contingencies Act 2004

The Civil Contingencies Act imposes a number of duties on us to assess the risk of an emergency occurring, to prepare and coordinate with our partners and to maintain plans for responding to a wide range of emergencies and ensure business continuity.

Regulatory Reform (Fire Safety) Order 2005

Norfolk Fire and Rescue Authority is the enforcing authority for this legislation within Norfolk. Norfolk Fire and Rescue Service inspectors use the powers of the legislation to work with responsible persons to help ensure fire safety for non-domestic premises.

The Policing and Crime Act (2017)

The Act places a statutory duty on fire and rescue authorities, police forces, and ambulance trusts to:

- Keep collaboration opportunities under review;
- Notify other emergency services of proposed collaborations that could be in the interests of their mutual efficiency or effectiveness; and
- Give effect to a proposed collaboration where the proposed parties agree that it would be in the interests of their efficiency

or effectiveness and that it does not have an adverse effect on public safety.

In 2018 collaboration in Norfolk was further strengthened by the signing of a formal Memorandum of Understanding between Norfolk's Police and Crime Commissioner, Norfolk County Council, Norfolk Fire and Rescue Service and Norfolk Constabulary on emergency services collaboration.

Home Office fire reform programme

In 2016, the Home Office outlined an ambitious programme of reform for the fire and rescue sector. It includes:

- Transforming local governance of fire and rescue by enabling mayors and police and crime commissioners to take on responsibility for fire and rescue services where a local case is made;
- Establishing Her Majesty's Inspectorate of Constabulary and Fire and Rescue Services (HMICFRS) as an independent inspection regime for fire and rescue authorities;
- Developing a comprehensive set of professional standards to drive sector improvement;
- Supporting services to transform commercially with more efficient procurement and collaboration;
- Increasing the transparency of services with the publication of greater performance data and the creation of a new national fire website; and
- Driving forward an ambitious programme for workforce reform.

Our integrated risk management planning

Integrated Risk Management Planning is how we identify and plan to mitigate Norfolk’s community risks through our prevention, protection and response services.

The National Framework for Fire and Rescue Authorities 2018 places a legal duty on Norfolk Fire and Rescue Authority to produce a plan that identifies and assesses all foreseeable fire and rescue related risks that could affect the communities it serves.

With finite numbers of people and equipment, a judgement has to be made on how best to deploy these resources and the IRMP process takes an overview of the full range of risks to ensure we have plans to manage all of them in an effective and efficient way.

Our IRMPs over the years have contributed to the long term evolution of our service. The next phases of our integrated risk management planning are mechanisms to further develop the service and deliver our vision:

IRMP 2020-23	Annual delivery plans	Forward view 2020 - 25
IRMP 2023-26	Annual delivery plans	
IRMP 2026-29	Annual delivery plans	Forward view 2025 - 30

Identifying community and customer need



Delivering our vision that Norfolk Fire and Rescue Service **will be at the heart of protecting the communities of Norfolk.**

How we identify community risk

Aside from the IRMP analysis process, awareness of community risk is developed through community engagement. Examples include;

Early help hubs are where we join other services to come together to share information and identify vulnerability and community risk to provide co-ordinated and early support.

Liaison meetings are the strategic and local groups we attend to ensure we are aware of the changes to community risk. Examples include the Norfolk Strategic Infrastructure Planning group and Norfolk Adult Safeguarding Board.

Community engagement from public meetings and public events to liaison with community representatives, we try to ensure we hear our communities' views and areas of risk they are concerned about.

Community risk we work with other services across Norfolk County Council and our borough, district and city councils to identify community and individual service user risk. Services include Trading Standards, Adult Services and Environmental Health.

Co-location with the police enables information sharing (subject to our MOUs) and closer working. On a daily basis our analysis team meet Norfolk Constabulary's analysts to identify deliberate fire setting.

How we manage risk

Service risk registers

Identified from the bottom up and top down, we manage risk at all levels of our service and where sufficient mitigation is not achievable, risk is escalated to the service risk register and ultimately to our NCC departmental risk register. Our service risks are focused on community, health and safety, business delivery and finance.

Risk mitigation

We ensure control measures and activities to reduce risk are included in all of our annual delivery plans and priorities. Risk and control measures are standing agenda items for our one to one meetings and our formal meetings.

Using learning to test our IRMP

After operational incidents our crews undertake hot debriefs and for serious incidents, a structured debrief. Any lessons identified are fed into our operational learning group who look for opportunities to embed improvement, share learning and identify new community risks or requirements not identified in our IRMP.

Operational risk information

Those premises that pose a specific risk to our crews are identified and information is collated to ensure our crews and commanders are aware of the risk when they attend an incident.

How we manage our resources

Our people

At the centre of our People Strategy is the principle of enabling our staff to become the best they can be, operating as one team. It is our people who will enable us to deliver an excellent service and that is why we are focused on creating a great place to work.

To ensure we are well organised to deliver this IRMP, an organisational review is currently underway. The organisation will be structured to ensure our service remains relevant to the needs of our communities and our structure will reflect how we manage risk (see diagram opposite).

Our people full time equivalent at end of March 2019:

- Firefighters; 278 wholetime, 451 on-call
- 75 non-uniformed
- 24 control room operators

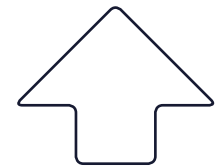
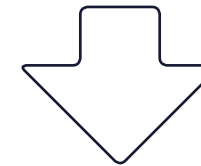
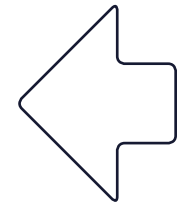
Our finance

The IRMP sets out the budget requirement for the service, which feeds into the County Councils Medium Term Financial Strategy. This is reviewed on an annual basis where we look for opportunities for savings and efficiencies, as part of this process we also review any areas of costs pressures that may be linked to change in service and community risk profiles.

How Risk is managed

Analyse

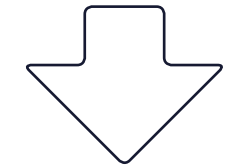
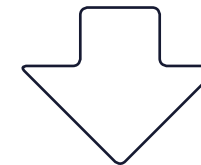
Using data, knowledge and information we identify community risk and need. Modelling is used to identify opportunities for improving community safety and changes to Norfolk's infrastructure and operating context.



Enable

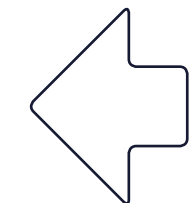
Strategies are developed to manage the community risk and from these strategies plans are developed, the organisation is structured, funded and capabilities are developed to deliver the strategies.

**Review
and Assure**



Deliver

Delivery of the strategies to manage the community risk of Norfolk; using the integration of prevention, protection and response services.



Our assets

Our buildings and estates form part of Norfolk County Council's portfolio and we utilise the NCC estate strategy, with its focus on One Public Estate, to encourage closer working with our partners and to reduce our costs.

Our vehicles are replaced on a rolling programme and to support the delivery of our new IRMP we are developing a new 10 year vehicle and equipment replacement logistics strategy. This strategy will be shaped by the proposed refresh of our operational doctrine.

Our performance

Our performance is measured against a suite of performance indicators. Our strategic level indicators, some of which were former national indicators, include reducing: deliberate fires; accidental dwelling fires; fire deaths and injuries; and accidental non-domestic fires. Our local level indicators enable managers to manage local issues closely such as: emergency response standards; on-call availability; the time taken to answer 999 calls; and the number of home fire risk checks completed.

Our performance is managed through the organisation using performance reviews and is monitored by our Service Management Team and Chief Fire Officer, who is held to account by elected members for our performance.



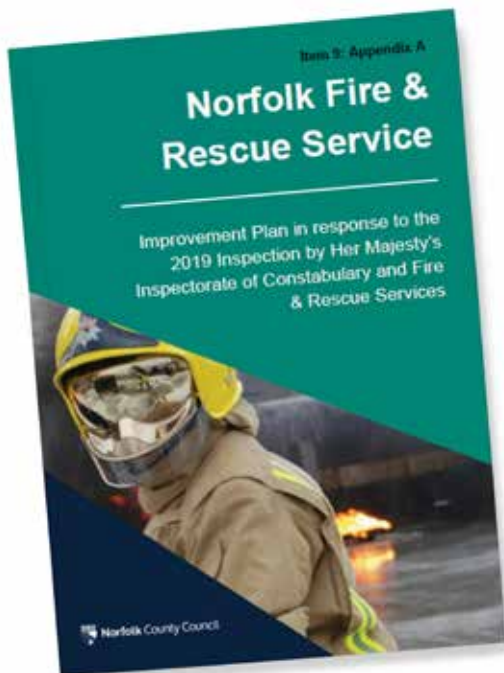
External performance reviews

Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS) undertook a week long inspection of Norfolk Fire and Rescue Service (NFRS) in February 2019.

This is the first time that HMICFRS have inspected fire and rescue services across England.

Our HMICFRS findings

HMICFRS found that we are good in the way we respond to fires and other emergencies and good in the way we respond to national risks such as terrorism. The inspectorate also concluded that we are good at making the service affordable now and in the future and we are good at getting the right people with the right skills.



Although inspectors found we are good at how we respond to emergencies, it concluded improvements are required in how the service understands the risk from fire and other emergencies, how it prevents these risks from occurring and how it protects the public through fire safety regulation.

HMICFRS also found that we are good at ensuring we are affordable, but improvement is required in how we make the best use of the resources available.

Inspectors concluded that we are good at ensuring we get the right people with the right skills. Improvement is required in how we promote our values and culture; ensure fairness and equality, how we manage performance and how we develop our leaders.

Based on their findings, HMICFRS have provided an overall graded judgement of 'requires improvement' against their 3 main questions of efficiency, effectiveness and people.

A copy of our HMICFRS improvement plan can be found [here](#).

Some of our achievements since our last IRMP

Enhanced fire cover at Dereham

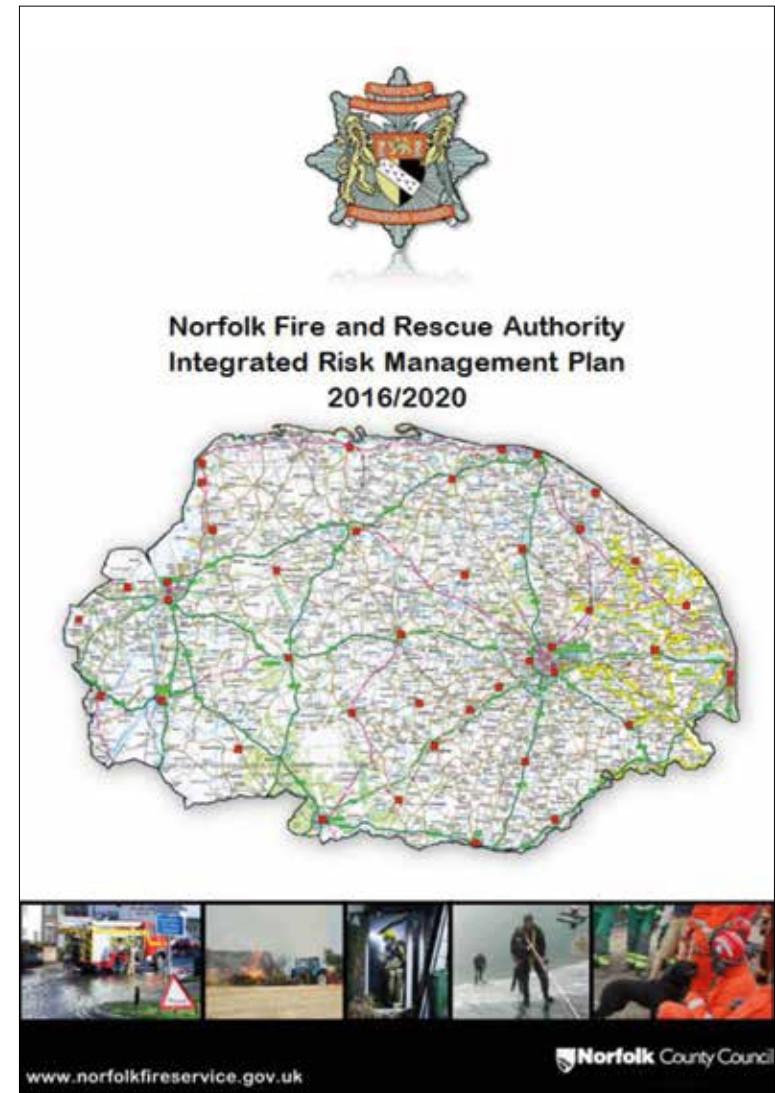
Following the consultation on our last IRMP, we have enhanced fire cover during the day at Dereham fire station by using our National Urban Search and Rescue (USAR) teams to crew the fire appliances on the station when they are in residence. In this way, we are able to provide enhanced fire cover for 12 hours a day throughout the week. Our on-call team continue to crew the second appliance when USAR are on station and for both appliances when USAR are off station.

Joint Communication and Control Room (CCR)

We have co-located our fire control with the police to create a joint communication and control room. This joint CCR is improving the coordination and exchange of information in an emergency and saving taxpayers money in estates costs.

Joint estates

Working with the police and our other partners we are reducing costs by sharing premises. Since our last IRMP we have moved in with the police to create a shared headquarters and work has begun on redeveloping Reepham and Holt fire stations to create joint police and fire stations.



Community Risk Profile

How we develop our community risk profile

Our community risk profile is how we identify and assess all of the foreseeable fire and rescue-related risks in the county of Norfolk. The risk profile considers the aspects of our county that have a bearing on the strategies we need to develop, the services we need to deliver and how we organise our resources.

We have used a wide set of information sources and data sets, including analysis of nine years of fire and rescue incident data.

As part of our community risk profile refresh, a specialist company (ORH Ltd) were commissioned to provide support in analysing emergency response standards and modelling station locations in relation to major infrastructure development in the county.

For an example of the information sources used in the community risk profile, please see appendix 1.



Norfolk community risk profile on a page

County context	Community context	People context
Increasing population	Coastal flooding, cold and snow are very high community risks	Although fire deaths are relatively low, older people (especially those over 80) are more vulnerable to dying in a dwelling fire
Increasing percentage of older people in the population	Changes to climate drives wildfires and extreme weather	The majority of people injured in fire are younger people
Fifth most rural county in the country	Deliberate fire setting has reduced but the reduction has plateaued	Smoking and smoking materials are the largest cause of fatal dwelling fires
Increased housing with modern fire safety measures	Fires in businesses and non-domestic premises are reducing	42% of fatal dwelling fires did not have a working smoke detector
Improving road infrastructure	Serious fires have reduced but this reduction has now plateaued	The majority of deaths from accidental dwelling fires occur in rural towns and villages
	Types of rescue undertaken have diversified	The majority of dwelling fires occur in single occupancy homes
		Cooking is the major cause of accidental dwelling fires
		The number of people killed or being seriously injured on the roads is increasing

How we will mitigate these risks

- Prepare for emergencies through the Norfolk Resilience Forum
- Match our capabilities to risk
- Deliver our community safety strategy
- Deliver our operational response strategy

Our county Norfolk

Norfolk has a balance of urban and rural districts with Norwich the most urban and North Norfolk the most rural.

60% of our population aged 65+ live in a rural area.



Currently more than 120,000 people in Norfolk live in areas categorised as the most deprived 20% in England. Mainly located in the urban areas of Norwich, Great Yarmouth, Thetford and King's Lynn; together with some identified pockets of deprivation in rural areas, coastal villages and market towns.

Norfolk remains a very safe place. It continues to have one of the lowest crime rates in England, with the level of crime and disorder in most places being well below the national average. However, this varies across the county with the highest level in Norwich and the lowest level in Broadland.

Access to green space is important to the quality of life, fresh air and exercise, benefiting both physical and mental health. Breckland has the largest proportion of its area made up of accessible green space. Health services in Norfolk are commissioned by five CCG's and approximately one third of spending on social care is commissioned by Norfolk County Council.

Housing continues to provide challenges as rent and prices rise, as well as the demand for specialist housing for an aging population.

Homelessness in Norfolk is better than the national rate; this varies across the county with a higher rate in Great Yarmouth and a lower rate in South Norfolk.

Employment within Norfolk is slightly higher than that of England although the average earnings are slightly lower.

The rural nature of Norfolk presents opportunities in providing access to natural greenspace, but presents a higher risk of being killed or seriously injured on the roads.

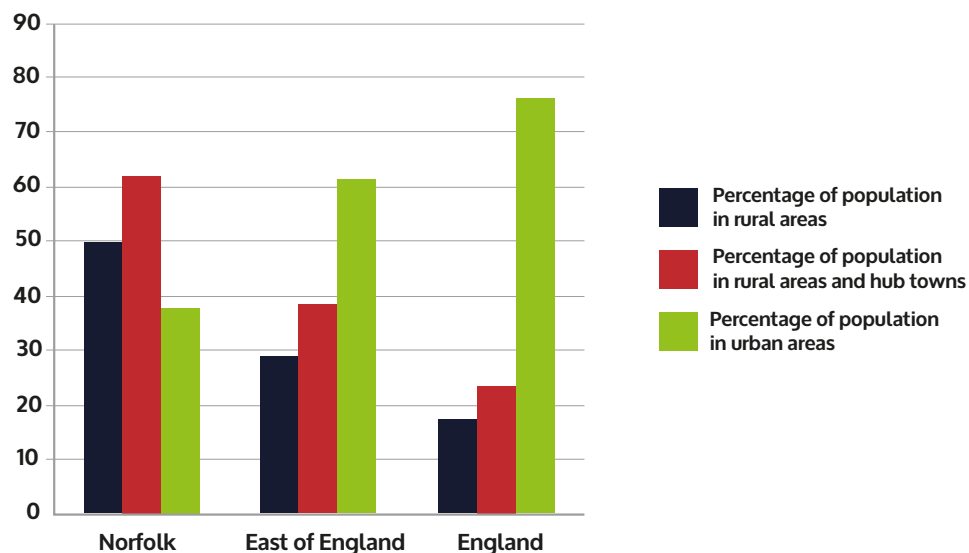
Across Norfolk, the rural-urban classification varies from urban within Norwich to mainly rural in Breckland, North Norfolk and South Norfolk. 88% of North Norfolk is classed as rural. This variation across the county provides challenges to the delivery of services.

Rural-urban classification*

Norfolk has a higher population in rural and hub towns compared to the East of England and England, with a lower percentage of population in urban areas.

* DEFRA 2011 <https://www.norfolkinsight.org.uk/environment/>

Rural / Urban Classification.



Percentage of	Norfolk	East of England	England
Population in rural areas	50	28.9	17.6
Population in rural areas and hub towns	62	38.6	23.6
Population in urban areas	38	61.4	76.4

Norfolk's housing profile

In Norfolk, the percentage of housing that is bungalows and detached houses is greater than the rest of the East of England and England. There is an increase in provision of flats in the urban areas, especially in Norwich, which has seen an increase in student accommodation. Norwich has nine high rise residential flats and one student accommodation, with two further high rise buildings being constructed.

Following the Grenfell Tower fire a number of blocks of flats across the county were tested for flammable aluminium composite cladding and five blocks were identified to have this cladding in Geoffrey Watling Way, Norwich. We worked with the building owners to help them put in additional fire control measures to reduce the risk of a fire starting and to provide early detection. Should a fire occur at one of these blocks we have also put in place an enhanced operational response whilst a long term solution is delivered.

Percentage of	Norfolk	East of England	England
Bungalows 2017	24.3	13.4	9.5
Flats/maisonettes 2017	12.6	17.4	22.8
Terraced houses 2017	21.1	24.9	26.5
Semi-detached houses 2017	18.6	22.2	23.9
Detached houses 2017	20.8	20.1	15.5

Norfolk has five managed and authorised gypsy and traveller sites across the county and a number of transit sites. The number of unauthorised sites fluctuates through the year. There is an emerging community of house boats on the broads and river network.

Norfolk's population profile

Norfolk generally has an older population that is projected to increase at a greater rate than the rest of England. Almost all of the population increase over the last five years has been in those aged 65 and over.

Norfolk's population is predominantly white (96.5%) with a smaller percentage of black and minority ethnic population than the East of England or the rest of England.

Over the next ten years the population is expected to increase by 50,700, with most increase in the 65 and over age bands. Outcomes for older people in Norfolk are generally good and older people's rating of their health related quality of life is higher than the rest of England.

Emergency admissions for injuries related to falls is lower than the rest of England, but there were still 1,200 emergency admissions for broken hips in 2016/17. Across Norfolk as a whole, there are nearly 50,000 emergency hospital admissions for people aged 65 and over each year.

People whose day-to-day activities are limited by their health or disability are just over 1 in 5. It is estimated that prevalence of physical disability aged 16 to 64 is 11.8%, a little less than 62,000 people, which is slightly higher than England at 11.1% (Public Health 2017).

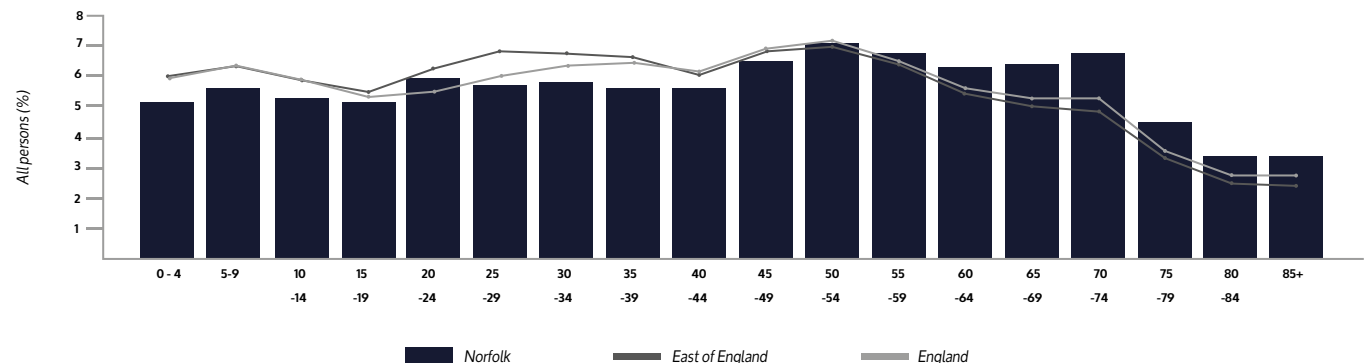
People with learning disabilities have poorer health than the general population, much of which is avoidable. For example men with learning disabilities die on average 13 years younger than men in the general population and women 20 years younger. Learning disability prevalence (all ages) in Norfolk is higher in Norfolk than the rest of England (Public Health 2017).



Norfolk population projections for all persons by year

2020	913,600
2021	918,800
2026	944,100
2041	1,002,300

Population estimates for all persons by 5-year age group for 2018



Norfolk businesses by industry

Norfolk has a higher percentage of businesses involved in agriculture, manufacturing, retail, accommodation and food services and health in comparison to the rest of the East of England and England.

Transport

Norfolk's key strategic connections by road are to London and the south and an east-west road connection. Rail lines link Norfolk to the Midlands and north of England, London and the south, Midlands and the north of England via Cambridge, the south and Europe via St Pancras / Thameslink from King's Lynn. Norfolk's other gateways are Norwich Airport and the Ports at King's Lynn and Great Yarmouth.

Airports

Fixed wing and rotary aircraft operate from Norwich Airport, ranging in size from small single seat aircraft to large passenger planes.

Ports and Harbours

There are seven ports and harbours in Norfolk, with King's Lynn Docks, Great Yarmouth Quays and Great Yarmouth Outer Harbour constituting the largest; accommodating commercial shipping and the occasional cruise ship.

For how we are aligning our resources and capabilities to respond to incidents involving transport please see the response section.

Our heritage

There are 541 Grade I listed buildings and they form an important part of Norfolk's Cultural heritage and economy.

The protection of Norfolk's Heritage is factored into both our fire safety risk based inspection programme and how we plan for our emergency response, such as developing site specific plans, salvage plans and exercises.

Our environment

The natural environment of Norfolk ranges from Thetford Forest, which is the largest lowland pine forest in Britain covering over 19,000 ha, to agricultural land, heaths, rivers, marshes and coastal environments. There are 90 miles of coastline and 250 miles of navigable inland waterways including the Norfolk Broads.

The Norfolk Coast includes an Area of Outstanding Natural Beauty, covering more than 450 km² of coastal and agricultural land; from The Wash in the west, through coastal marshes and cliffs, to the sand dunes at Winterton in the east.

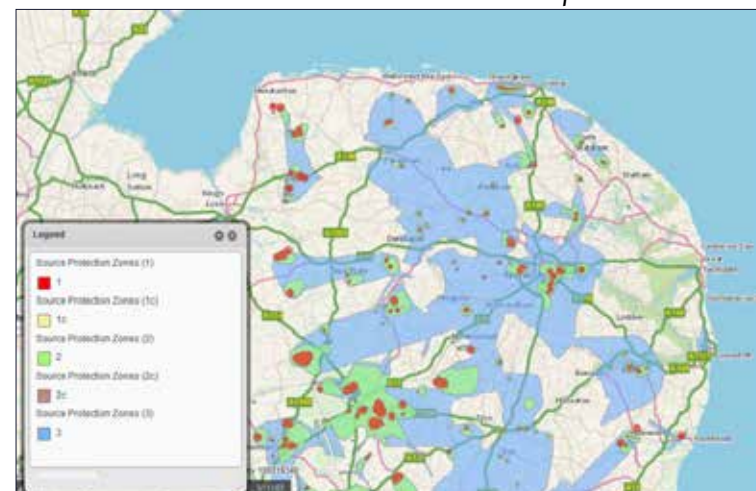
The protection of our environment is one of the key priorities for our incident commanders, who prepare for incidents by identifying site specific risks in their communities and by undertaking operational exercises and training scenarios.

For further details on how we match our operational capability to environmental risk please see our response section.



Sites of Special Scientific Interest.

Groundwater source protection zones.



Severe weather

In Norfolk over the past few years we have experienced a range of extreme weather, often in a single year, such as 2018 which saw heavy snowfall and prolonged cold temperatures in the winter and a heatwave in the summer.

We use the National Heatwave and NHS Cold Weather plan and their alerts to make sure we have proactive plans and preparations in place, which allows us to work with our partners to ensure community safety.

For further details on our preparedness and how we match our operational capability to climate changes please see the Prepare and Response section.



“ In the UK we are experiencing a warmer and wetter climate. All of the top ten warmest years on record have occurred since 1990 with eight of those since 2000. The UK’s hottest year on record was 2014 and the chances of the UK breaking its temperature record are now at least **10 times higher** compared to the time before we started burning fossil fuels. Extremely warm summers, such as the European heat wave of 2003 which was responsible for 2,000 excess deaths in the UK, are now expected to happen twice a decade compared to twice a century in the early 2000s. Seven out of the top ten wettest years in the UK have occurred since 1998 and the winters of 2014 and 2016 have been the two wettest on record. An extended period of extreme winter rainfall in the UK is now about seven times more likely than in a world without human emissions of greenhouse gases. The current set of UK Climate Projections (UKCP09) tell us that the UK will continue to warm in the future and more so in summer than winter. UK winters are also expected to become wetter while summers could be slightly drier.” (DEFRA 2018). ”

Wildfire

Severe wildfire is listed in the National Risk Assessment (NRA) and National Risk Register and is classified as a low risk in the Norfolk Community Risk Register. Wildfires pose a specific community risk in Norfolk relating to forestry, standing crops and heathland.

The Chief Fire Officers Association Climate Change Adaptation Report 2014, using central government's Climate Change Risk Assessment and categories, identified the main strategic risks in terms of both likelihood and consequence as follows:



Agriculture & Forestry: Wildfires, landslips, sinkholes, flooding – An increase in frequency and severity, which could have subsequent impacts on critical national infrastructure (e.g. road, rail, utility and communications network)

Business: Heat damage to buildings and infrastructure networks and assets, landslips, sinkholes, flooding, building subsidence – An increase in frequency and severity, which could have subsequent impacts on individual businesses as well as critical national infrastructure (e.g. road, rail, utility and communications networks)

Health & Wellbeing: Wildfires (air-borne pollutants), flooding (physical and mental health impacts) – An increase in frequency and severity, which could also have the knock-on impacts in relation to access to health services.

Buildings & Infrastructure: Wildfires, heat damage to buildings and infrastructure networks and assets, landslips, sinkholes, flooding, building subsidence – An increase in frequency and severity, which could have subsequent impacts on critical national infrastructure (e.g. road, rail, utility and communications networks)

Natural Environment: Wildfires – An increase in frequency and severity, which could have subsequent impacts on habitats (destruction and pollutants). *Reference CFOA 2014.

For how we are preparing for, and responding to, the wildfire risk in Norfolk please see our response section.

Flooding

Norfolk's Community Risk Register identifies the threat of flooding as a **"Very High"** risk.

In total, some 42,200 properties in Norfolk are in main river or tidal floodplains and are considered to be at risk of flooding.

In addition, the risk of property from surface water flooding countywide is estimated in the region of 36,000 properties. Many more people work in, visit or travel through areas potentially vulnerable to flooding and may be unfamiliar with the risk.



Flood risk, copyright Flood Warning Service

Flooding in Norfolk can occur from a number of sources:

Coastal (Tidal) Flooding

The primary factors for coastal flooding in Norfolk are the low lying nature of the land, length of the coastline and the proximity of the population to that coastline.

The most significant threat is from a north sea tidal surge event. This occurs when a combination of strong winds, low atmospheric pressure and high tides cause extreme high tides levels in the North Sea. These have the potential to breach defences and cause significant flooding along the East Coast. This risk (referred to in National and Community Risk Registers as H19) is deemed as being the most significant natural disaster that the UK faces.

The effects will be exacerbated by later tides making repairs difficult to effect and flood water being unable to drain back to the sea. Monitoring equipment and tidal prediction are such that there should be advance warning of such an event.

River (Fluvial) Flooding

River flooding occurs as a result of water overflowing from river channels. This is influenced by two key factors; the volume of rainfall and the capacity of the ground and rivers to absorb and transport the water.

Surface Water (Pluvial) Flooding

Surface water flooding usually occurs quickly, without warning and is hard to predict. It occurs when natural and man-made drainage systems have insufficient capacity to deal with the volume of rainfall. The critical factors for surface water flooding are the volume of rainfall, where it falls and its intensity. In urban areas, sudden and intense rainfall cannot drain away as quickly as it can in rural areas.

Accurate predictions are very difficult, for example, thunderstorms can cause flooding in one location whilst others only a short distance away are unaffected.

The Broads

The Broads form a complex system of waterways in east Norfolk comprising the tidal rivers Waveney, Yare, Bure, Ant and Thurne which can only drain out into the North Sea at Great Yarmouth.

The tidal reaches of rivers in the Broads are particularly susceptible to tidal surges, especially when high water affects the ability of fresh water to drain to the sea, or salt water is forced deeper into fluvial systems.



Infrastructure development

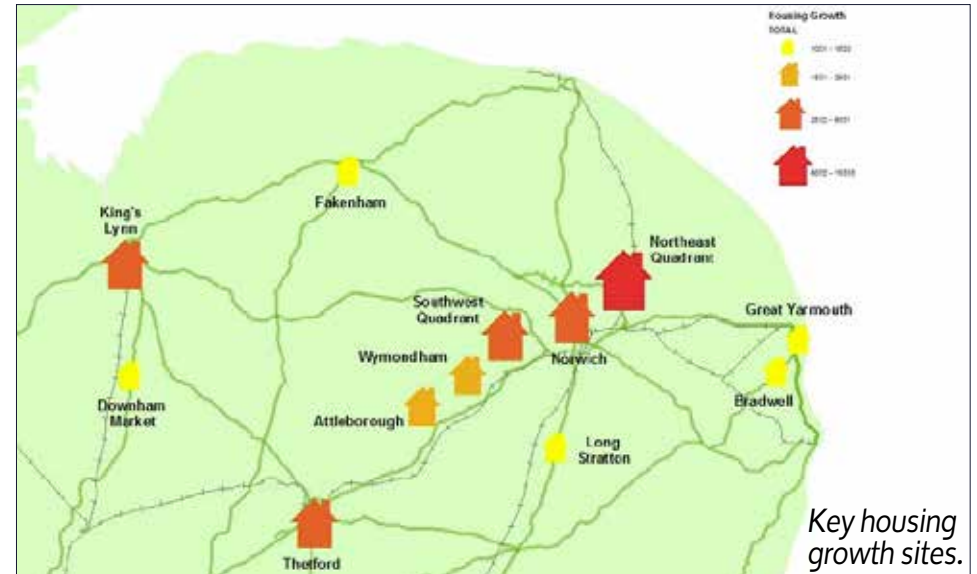
The Norfolk Sustainable Infrastructure Development Plan (SIDP) sets out the Norfolk wide high level strategic infrastructure priorities for the next 10 years and is reviewed annually.

This list has been compiled in collaboration with stakeholders including internal county council departments, district councils, utility companies and government agencies. These projects align with the County Council's priority for improved infrastructure, the ambitions of the recently adopted Norfolk and Suffolk Economic Strategy (NSES), District Council Local Plans, the County Council's administration's priorities, Children's Services Local Growth and Investment Plan and the Norfolk Strategic Planning Framework agreed by all Norfolk planning authorities.

Norfolk Fire and Rescue Service meet regularly to discuss the development of infrastructure and uses the SIDP to identify future changes in risk and opportunities to improve services.

Changes to housing and infrastructure

The Norfolk Strategic Planning Framework suggests Norfolk authorities will need to collectively plan for an additional 84,000 homes by 2036.



The map above outlines the key strategic housing sites that will deliver the majority of this growth, with growth focussed around key urban areas that have existing infrastructure and services that have the capacity to support high levels of growth. It also identifies all the places in our county that are expected to grow by at least 1,000 homes over the relevant local plan period. As well as the major urban areas of Norwich, King's Lynn and Great Yarmouth there are groupings of towns along the A11 as well as key individual market towns that can make a significant contribution to growth.

It is anticipated that the following schemes will present a change to risk profiles and further modelling will be conducted over the next few years as the schemes progress:

- A11 Corridor
- Great Yarmouth Third River Crossing
- Thetford Sustainable Urban Extension (SUE)

A11 Corridor

Development growth along the A11, such as the 4,000 homes planned for Attleborough, housing growth in Wymondham and development of new business enterprises.

Great Yarmouth Third River Crossing

The plan for a third river crossing in Great Yarmouth will see a lifting bridge constructed to ease traffic congestion on the town's roads, shortening journey times and improving journey reliability. Subject to gaining development consent, construction is due to start in late 2020 and with an aim to have the bridge finished and operational by early 2023.

Thetford Sustainable Urban Extension (SUE).

A large new housing development of around 5,000 homes — known as Kingsfleet or the Sustainable Urban Extension (SUE) has been granted planning permission on the northern edge of Thetford. The development is planned to take place over five phases, between 2018 and 2043.



Proposed third river crossing at Great Yarmouth.

Thetford Sustainable Urban Extension (SUE).

- Phase 1:** 1050 houses (2018 - 2024)
- Phase 2:** 965 houses (2025 - 2029)
- Phase 3:** 985 houses (2030 - 2033)
- Phase 4:** 1291 houses (2034 - 2039)
- Phase 5:** 709 houses (2040 - 2043)



Broadland Growth Triangle and the Broadland Northway

The Joint Core Strategy for Broadland, Norwich and South Norfolk is the key planning policy document for the Greater Norwich area. It forms part of the Local Plans for the districts of Broadland, Norwich and South Norfolk setting out the broad vision for the growth of the area and containing strategic policies for the period 2008 – 2026.

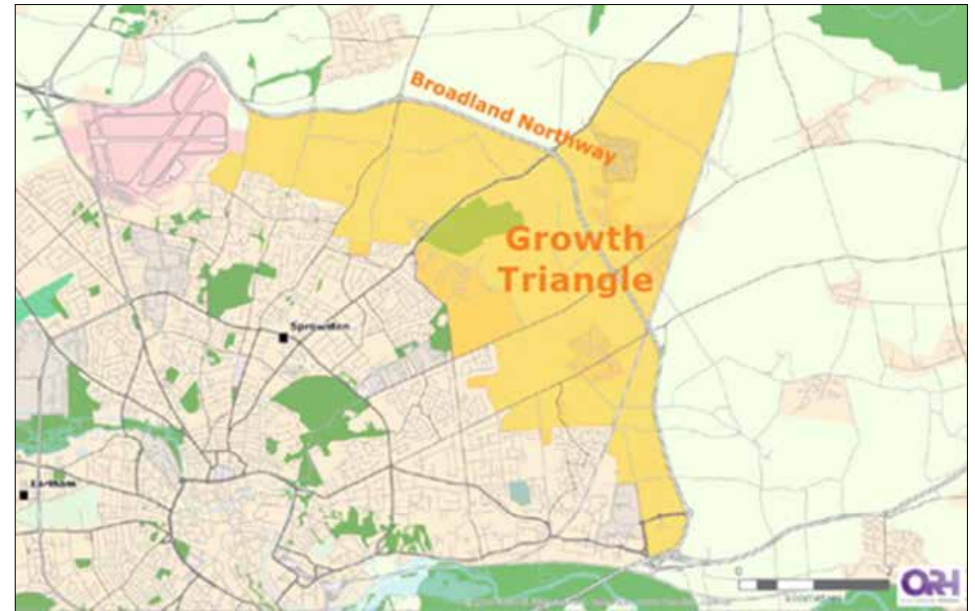
ORH Ltd were commissioned to model the potential changes in demand to the increase in housing and infrastructure. We also asked them to identify the optimum location for a fire station in north Norwich which would minimise response times to the Broadland Growth Triangle and take advantage of the access provided by the Broadland Northway and the potential western link extension.

All options for the western link were modelled.

Broadland growth triangle - changes in demand

ORH Ltd modelling predicts a 5.8% increase in demand for Norwich stations and as would be expected, the greatest demand will be experienced by Sprowston fire station.

Although new housing and road infrastructure may slightly increase demand, the modern fire safety requirements of new housing (such as fire doors and hard wired smoke detectors) means that damage in new housing is generally less than traditional housing without modern fire safety measures.



Broadland Growth Triangle.

Predicted number of incidents following the development of the Growth triangle.

Station	Annual changes in number of incidents from base position
Carrow	+38
Earlham	+ 28
Sprowston	+ 123
Wroxham	+ 37
Overall	+ 221

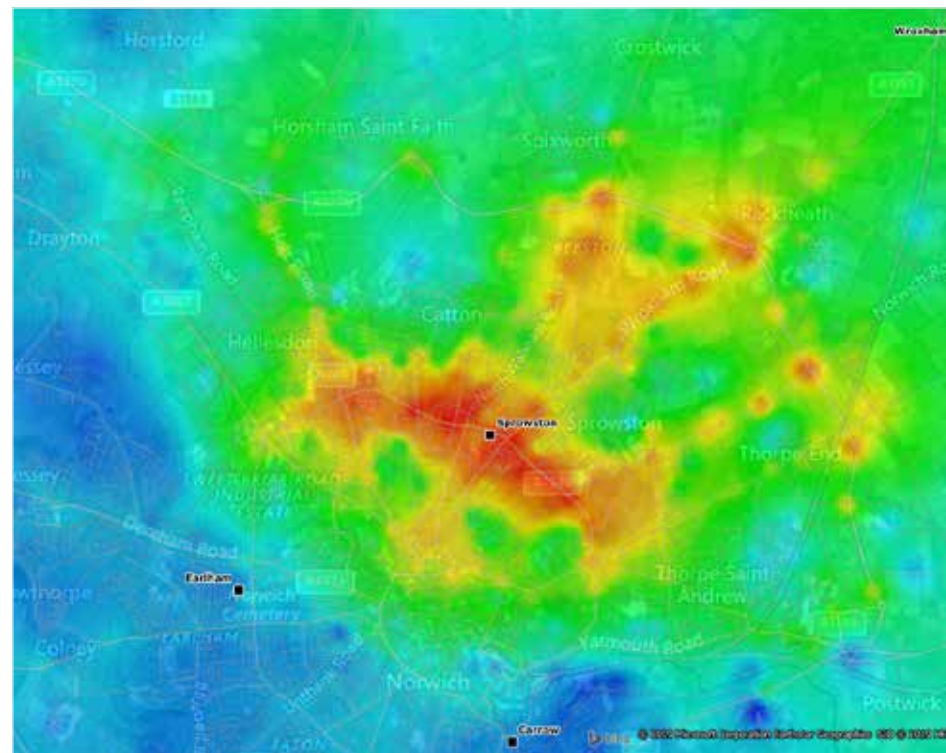
Station Location

In modelling the optimal location for a fire station in the north of the city, ORH ltd used the additional demand across the Growth Triangle area with a profile similar to incidents in the Norwich area.

The future road network in the Growth Triangle is unknown, so the current road network with the Broadland Northway and potential routes for a Norwich Western Link Road were added to the road network for use in the location optimisation modelling.

All stations, except Sprowston, were fixed in the model with their current deployments and turnout times.

The optimisation modelling gives an indication of the coverage required for the Growth Triangle, but further modelling would be beneficial when the exact infrastructure layout is confirmed.



Optimal location of a northern Norwich fire station.

■ Current Station Location Best Location Worst Location Optimal Site Search

Analysis shows that the current location of Sprowston continues to be in the optimal location to minimise response times based on our current understanding of the growth triangle.

Norfolk Community risk

The Norfolk Community Risk Register (CRR) is produced by the Norfolk Resilience Forum and helps identify hazards that may lead to an emergency. The forum has a legal duty (under the Civil Contingency Act) to produce a register of risks that may impact on our county. This helps us to focus our planning arrangements to mitigate these risks.

As a member of the Norfolk Resilience Forum we work with our partners to identify strategic community risks and quantify both the likelihood of the event happening and the severity of the impact of the event.

If a risk is included in the CRR, it doesn't mean it will happen. It means it is a possibility, and organisations need to have made arrangements to reduce its impact. Risks are rated as either Very High (Red), High (Amber), Medium (Yellow) and Green (Low).

Relative Impact	Catastrophic (5)				• Pandemic Flu	
	Significant (4)			• National electricity transmission	• Cold and Snow • Flooding - Coastal	
	Moderate (3)		• Outbreak of plant disease • Railway incident		• Heatwave	
	Minor (2)	• Fire or explosion on an offshore oil/gas installation • Disruption of loss of telecommunications systems • Large scale public disorder in site • Fire or explosion at gas pipeline following ignition of flammable gas under high pressure • Biological pathogen release • Radiation release from nuclear foreign	• Very large toxic chemical release	• Industrial action - fuel tankers • Drought • Communicable disease outbreak • Storms and Gales • Road or Tanker incident containing dangerous goods. • Fire or explosion at a gas LPG or LNG terminal or flammable gas storage site • National strike of prison officers	• Industrial action - service critical to preservation of life • Severe Space Weather • Surface Water Flooding • Food supply contamination	• Fires involving scrap / recycling site
	Limited (1)	• Incident leading to evacuation of vessel on inland waterways • Coastal pollution • Failure of water infrastructure or loss of drinking water • Major reservoir dam failure / collapse • Fire or explosion at a range of industrial sites including fuel distribution sites or sites storing flammable and/or toxic liquids in atmospheric pressure storage tanks	• Radiation exposure from stolen good • Earthquake	• Aviation accident • Severe wildfires • Outbreak of exotic notifiable disease in animals	• Influx of British Nationals	
	Low (1)	Medium (2)	Medium (3)	Medium High (4)	High (5)	

Very High High Medium Low

Relevant community risks to Norfolk Fire and Rescue Service

Very high: Flooding – Coastal; Cold and snow.

High: Heat wave.

Moderate: Fires involving scrap/recycling; surface water flooding; Storms and gales; road or tanker accident containing dangerous goods; Fire or explosion at a gas LPG or LNG terminal or flammable gas storage; very large toxic release; railway accident.

Low: Incident leading to evacuation of vessel on inland waterways; Fire or explosion at a range of industrial sites including fuel distribution sites or sites storing flammable and/or toxic liquids in atmospheric pressurised storage tanks; Radiation exposure from stolen goods; aviation accident; severe wildfires; Fire or explosion at gas pipeline following ignition of flammable gas under high pressure.

Control of Major Accident Hazards (COMAH)

COMAH applies mainly to the chemical industry, but also to some storage activities, explosives and nuclear sites, and other industries where the threshold quantities of dangerous substances identified in the Regulations are kept or used.

There are two types (tiers) of establishment which are subject to COMAH, known as 'Upper Tier' and 'Lower Tier' depending on the quantity of dangerous substances they hold. Upper Tier establishments will hold greater quantities of dangerous substances, meaning that additional requirements are placed on them by the Regulations.

Norfolk has eight upper tier COMAH sites and 20 lower tier sites. We help mitigate the risk of these sites through our resilience forum planning, exercising and sending an enhanced number of appliances to any incidents on these sites.

Major Accident Control Regulations (MACR)

MACR relates to military sites and implements arrangements to achieve results at least as good as those achieved by non-MOD controlled sites which fall within scope of COMAH.

Norfolk is home to operational bases at RAF Marham, Feltwell and Robertson Barracks at Swanton Morley, as well as the Stanford Training Area.

How we prepare for community risks

Norfolk Fire and Rescue plays a key role in the preparedness and planning for potential community risk through the Norfolk Resilience Forum (NRF).

We co-produce multi-agency response and recovery plans to ensure our response is fully integrated and undertake joint exercising against these plans.

We also conduct an annual training needs analysis at the strategic, district and station level. This analysis identifies the training that firefighters and their commanders need to undertake against specific risks identified in the community risk register, to ensure they are fully prepared to respond to the risk.

Mutual assistance for responding to large scale community risks is secured through the fire and rescue service National Coordination Advisory Framework (NCAF) and through formal agreements with our neighbouring fire and rescue services.



How we integrate our response to major incidents to mitigate the impact of an event

In the event of a serious or major incident we contribute to the joint multi-agency command, control, coordination and communication arrangements (C4).

To improve the exchange of information and co-ordination during emergencies, we have co-located with Norfolk Constabulary to develop a joint communications and control room. To provide additional resilience, we are also part of a fire and rescue service East Coast and Hertfordshire consortium which is looking to develop a networked common command and control system across the four counties.

All of our commanders are trained and focused on delivering a joined up response to emergencies, with the Joint Emergency Services Interoperability Principles (JESIP) as their guiding principles. To ensure intra-operability with other fire and rescue services, we are standardising our operations by adopting National Operational Guidance (NOG) as quickly as possible. Where our current operations do not meet NOG, we are re-engineering our ways of working to meet the guidance and we only derogate in exceptional circumstances.

Please see the response section for how we match our operational capability to community risk.



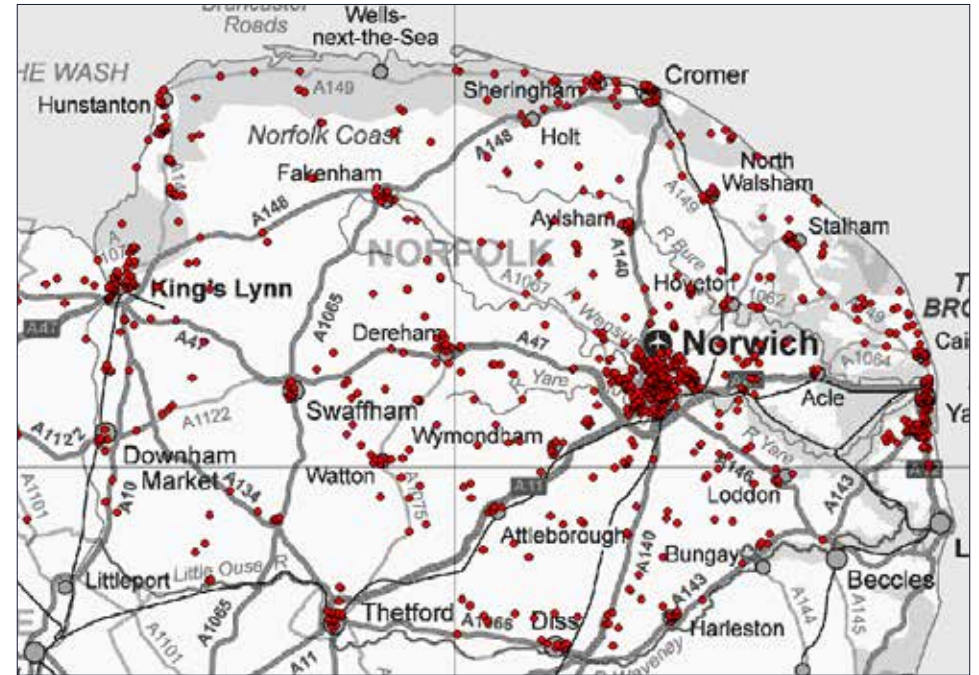
Future developments in preparedness
We plan to explore with our partners the introduction of the multi-agency incident transfer system (MAIT), enabling the fast exchange of emergency information via data rather than telephony.

Prevention and Protection

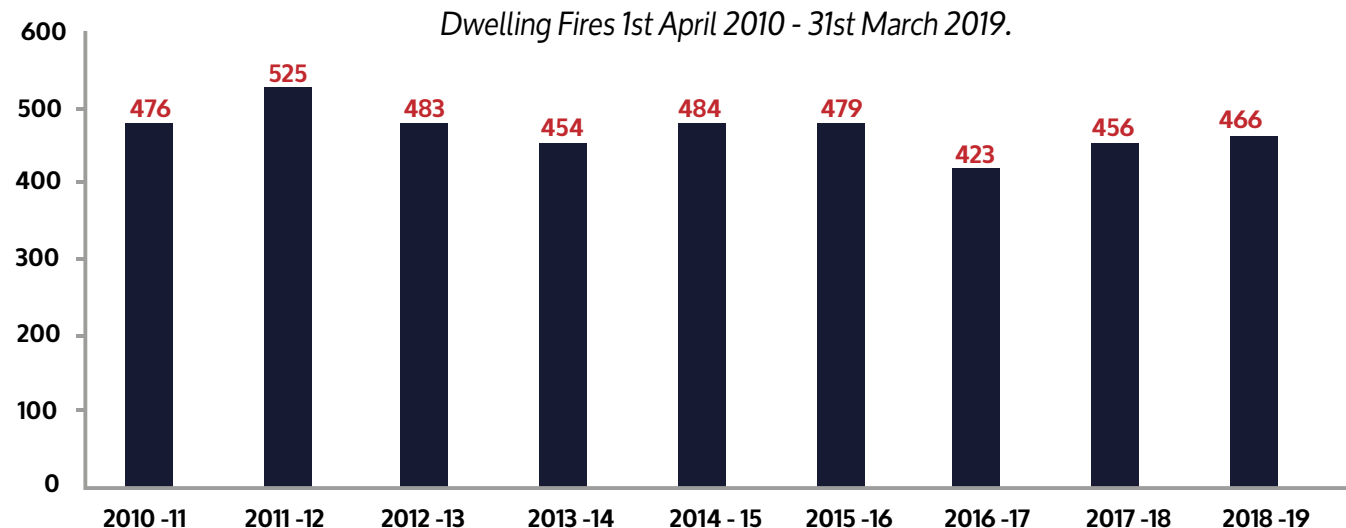
Accidental dwelling fires

The number of accidental dwelling fires has remained fairly constant in Norfolk. As a proportion of total dwellings it has reduced.

The total number of dwellings increased from **371,000 in 2008** to **420,00 in 2018**.



Location of dwelling fires 2010/11 to 2019/20.



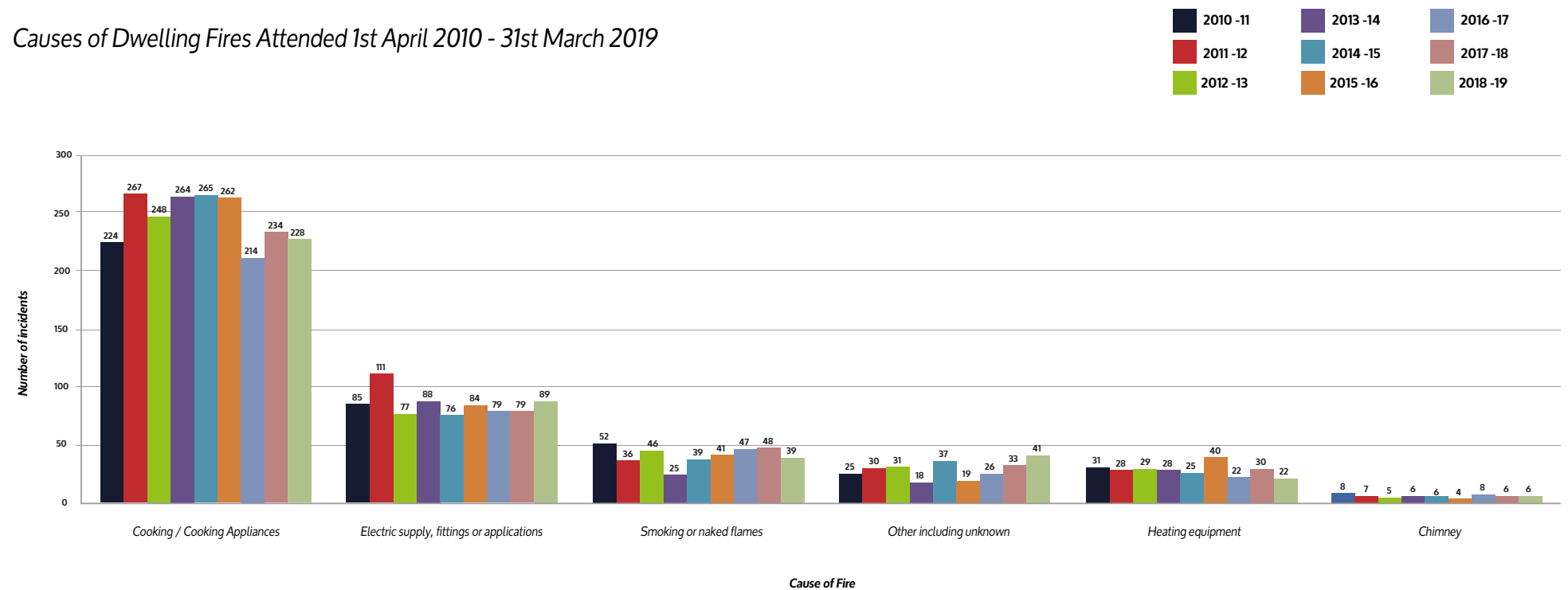
The degree of damage from accidental dwelling fires ranges from burnt food and damage to cookers to the destruction of premises.

What causes accidental dwelling fires?

Over the past nine years the majority of accidental dwelling fires in Norfolk have consistently been caused by cooking and cooking appliances. This is in line with previous national studies.



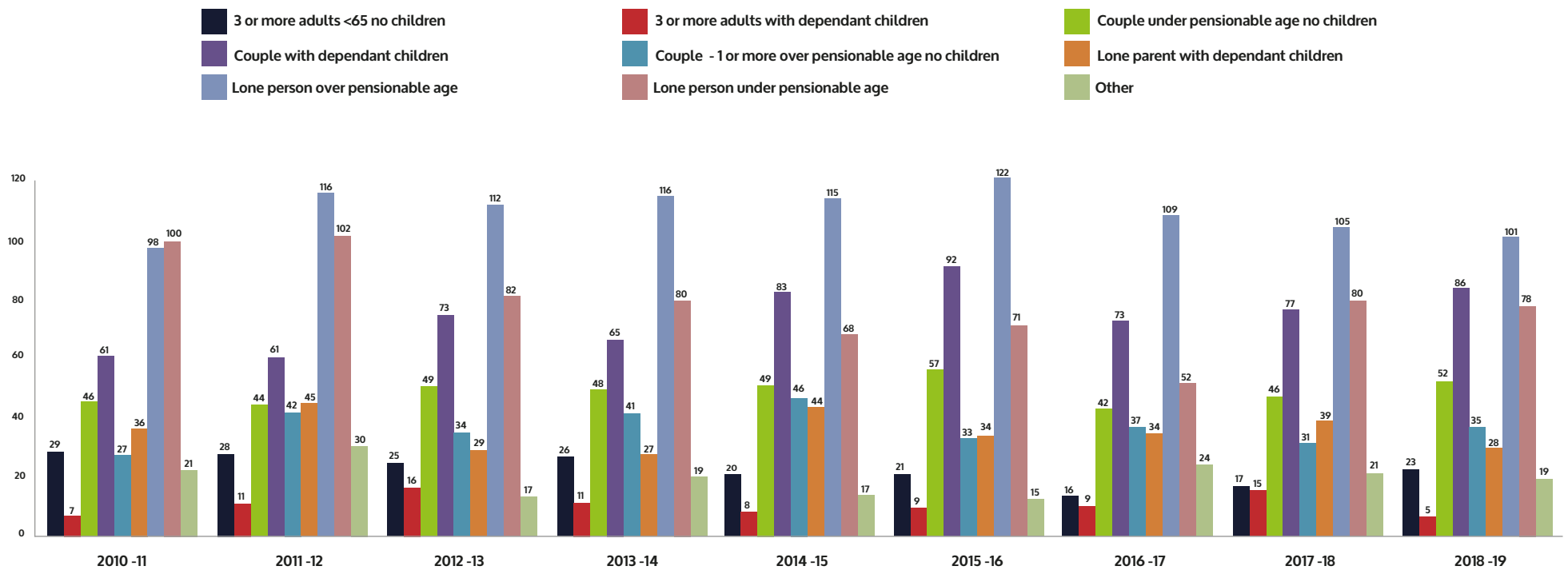
Causes of Dwelling Fires Attended 1st April 2010 - 31st March 2019



What type of occupancy experiences accidental dwelling fire?

When occupancy type is subdivided, the largest number of accidental dwelling fires occur in homes where people live alone.

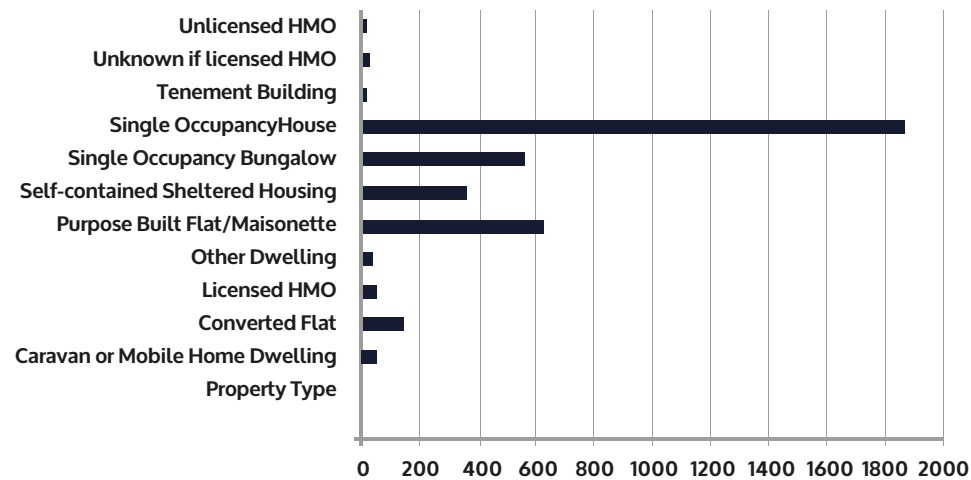
Accidental Dwelling Fires by Occupancy 1st April 2010 - 31st March 2019



What type of premises do accidental dwelling fires occur in?

The majority of accidental dwelling fires occur in single occupancy houses, flats and bungalows. There have been three accidental dwelling fires on traveller and gypsy sites over the last nine years.

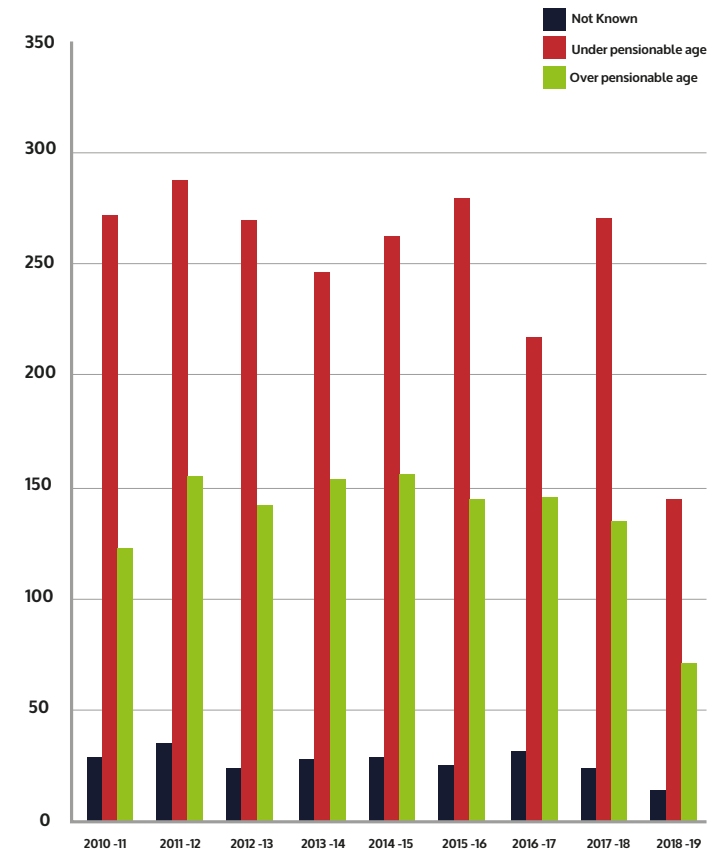
Accidental Dwelling Fires by Property Type 1st April 2010 - 31st March 2019



Who experiences accidental dwelling fires?

Over the past nine years the majority of accidental dwelling fires in Norfolk occur in dwellings with younger occupants who are under the pensionable age. This is in line with previous national studies.

Accidental Dwelling Fires by Age 1st April 2010 - 31st March 2019



Targeting fire safety messages

Although people under the pensionable age make up the majority of age ranges experiencing a fire, by using the Mosaic geodemographic classification we can identify homes most likely to experience a fire on a geographical basis.

The typology information can be used to help understand people in these groups so that we can develop appropriate communications and interventions to help reduce the risk of accidental dwelling fire in the future. These geodemographic classifications can also be used with other data we use such as the Exeter data (people registered at a doctors surgery aged over 65 years) to prioritise interventions and by our crews when they are targeting prevention activity in a geographic area. The table on the right lists all those types in Norfolk with a fire risk index greater than 120.

**The three highest rated groups are:
Dependent Greys, Pocket Pensioners
and Streetwise Singles.**

Mosaic Type	Fire Risk Index	Postcodes	Accidental Dwelling fires per 1,000 postcodes per year
N60 Dependent Greys	842	112	139
N59 Pocket Pensions	596	329	98
O63 Streetwise Singles	460	315	76
O64 High Rise Residents	421	16	69
N58 Aided Elderly	404	170	67
M55 Families with Needs	315	400	52
O62 Low Income Workers	307	136	51
L49 Disconnected Youth	283	119	47
L51 Make Do & Move On	243	111	40
N61 Estate Veterans	208	386	34
M54 Childcare Squeeze	207	137	34
L50 Renting a Room	200	580	33
M56 Solid Economy	199	244	33
J42 Learners & Earners	197	185	32
O66 Inner City Stalwarts	184	11	30
J45 Bus-Route Renters	183	409	30
J43 Student Scene	168	12	28
J40 Career Builders	163	161	27
M53 Budget Generations	160	105	26
I39 Ageing Success	141	349	23
L52 Midlife Stopgap	140	444	23
D14 Cafes and Catchments	139	29	23
N57 Seasoned Survivors	135	170	22
K46 Self Supporters	129	194	21

How we quantify the risk of accidental dwelling fires

The framework used to assess community safety risk (and how to target areas of high need) has been developed to be consistent with Norfolk County Council's local service strategy.

Locality	All ages	% of single person 65+ household	One or more frailty syndromes SMR 65+	3+ LTC SMR 65+	% of postcodes in area with high risk Mosaic Type	Fires per 100,000 people per year	Average accidental dwelling fires per year
Attleborough	11,861	60%	97	98	11%	35.6	4.2
Aylsham	6,131	60%	96	91	8%	39.9	2.4
Cromer	7,652	67%	110	91	47%	69.7	5.3
Dereham	19,113	63%	102	94	30%	36.6	7.0
Diss	8,085	66%	89	87	44%	38.5	3.1
Downham Market	10,726	60%	134	124	19%	34.2	3.7
Fakenham	7,725	64%	113	107	29%	61.8	4.8
Gorleston	25,567	68%	101	112	57%	61.7	15.8
Great Yarmouth	28,518	74%	100	122	87%	111.4	31.8
Holt	3,962	62%	89	86	27%	8.4	0.3
Hunstanton	3,980	64%	132	122	44%	69.8	2.8
King's Lynn	41,180	73%	152	139	66%	72.9	30.0
Loddon	2,783	65%	96	76	5%	47.9	1.3
Long Stratton	2,025	62%	122	107	5%	32.9	0.7
North Walsham	12,696	62%	102	104	31%	37.6	4.8
Norwich 1	36,635	75%	106	109	81%	88.3	32.3
Norwich 2	17,492	73%	98	104	69%	69.2	12.1
Norwich 3	36,486	71%	133	108	67%	52.1	19.0
Norwich 4	48,259	73%	110	88	59%	83.1	40.1
Redenhall with Harleston	5,006	61%	75	81	17%	59.9	3.0
Sheringham	7,359	58%	87	88	31%	58.9	4.3
Stalham	2,850	66%	98	116	29%	81.9	2.3
Swaffham	7,557	61%	134	128	27%	33.8	2.6
Thetford	26,185	65%	134	132	60%	40.3	10.6
Watton	7,563	56%	99	101	14%	36.7	2.8
Wells-next-the-Sea	2,575	65%	91	91	1%	38.8	1.0
Wroxham and Hoveton	3,742	56%	84	91	4%	47.5	1.8
Wymondham	15,711	63%	101	88	15%	28.3	4.4
Other	475,554	59%	95	95	2%	35.9	170.8
Norfolk	884,978	62%	101	99	20%	48.0	425.1

In the fire prevention need index we have selected

- % of single person aged 65+ household
- One or more frailty syndromes; standard mortality rate (SMR) aged 65+
- 3+ long term conditions (LTC) SMR 65+
- Accidental dwelling fires per 100,000 people per year

The fire prevention need index includes vulnerable people who might benefit from home safety visits and the actual incidence of fires.

This framework is used to check provision is correctly targeted and to shape service delivery with our partners through Norfolk County Council's local service strategy.

Who is vulnerable from dying or being injured in accidental dwelling fires?

The number of deaths in Norfolk from accidental dwelling fires over the past nine years has fluctuated from between **one and six people per year**.

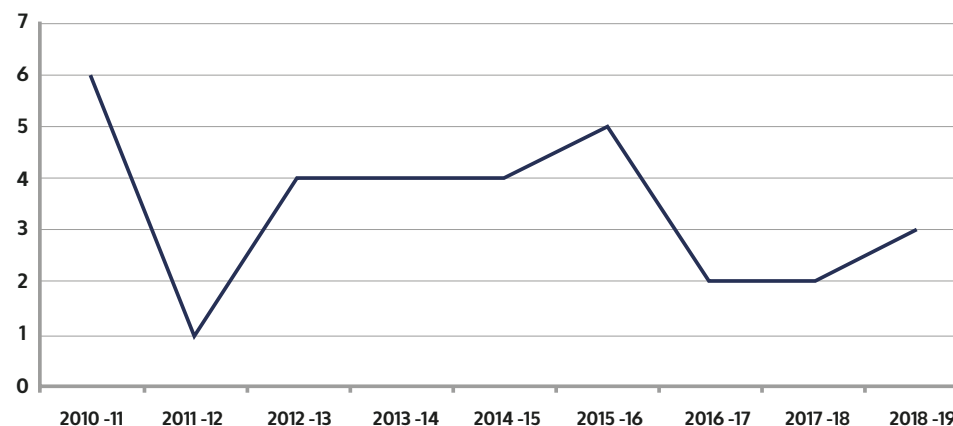
The majority of people who died in accidental dwelling fires over the past nine years were older people (21 people aged 60+) with the largest proportion of older people over 80 years old.

This is in line with previous national studies which has shown "Those aged 80 and over have a higher fire-related fatality rate, accounting for five per cent of the population but 20 per cent of all fire-related fatalities in 2016/17" (Home Office 2017).

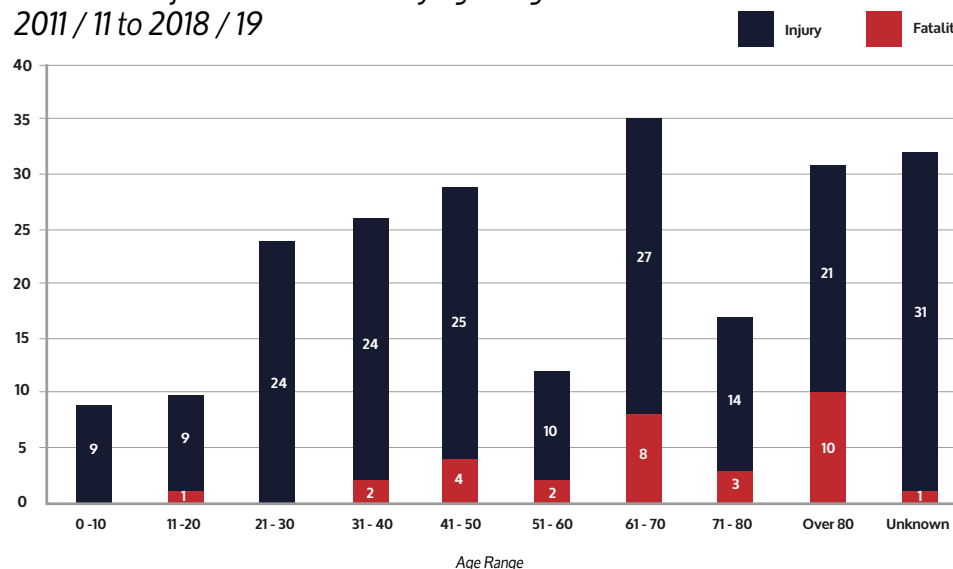
Where did the fires occur?

Over the past nine years the majority of fatal accidental dwelling fires occurred in built up areas of the county; with 10 fatalities in urban city and towns and seven in rural towns. In rural areas, such as rural villages, and in sparse settings there were 14 fatalities, this reflects the age profile of rural areas.

Deaths from Accidental Dwelling Fires in Norfolk 1st April 2010 - 31st March 2019



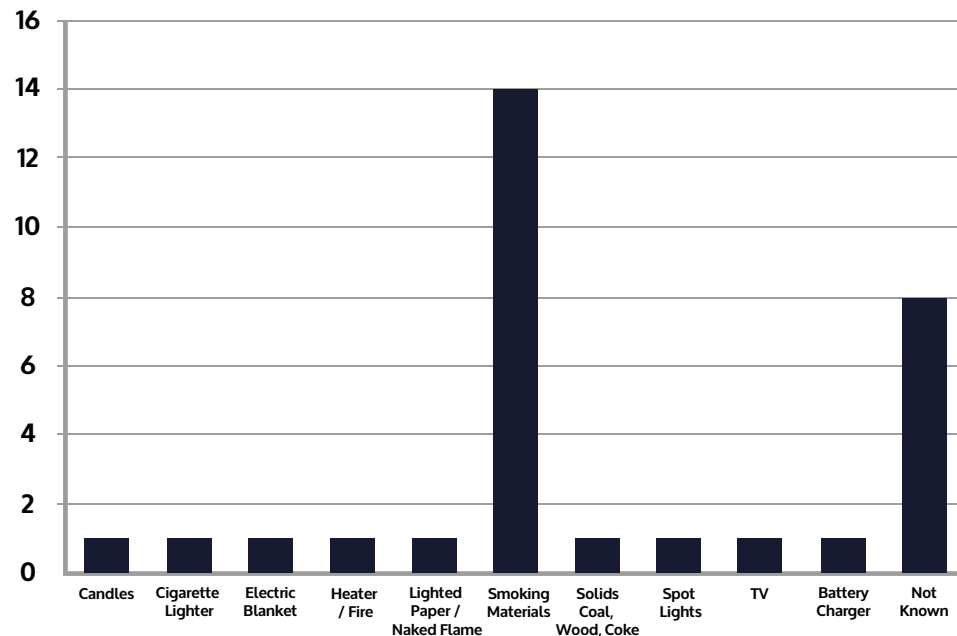
Number of injuries and fatalities by age range 2011 / 11 to 2018 / 19



What were the causes of accidental dwelling fires that led to a death?

The majority of fatal accidental dwelling fires in Norfolk over the past **nine years** were caused by smoking.

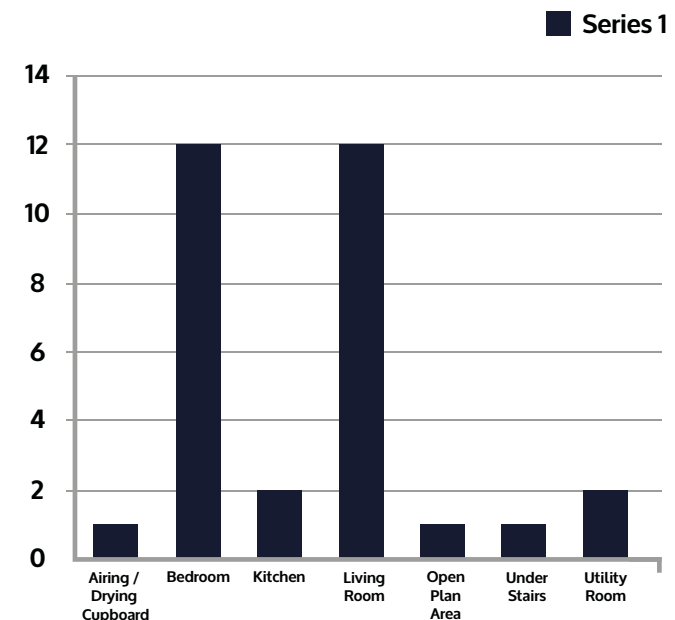
*Causes of accidental fires that caused a fatality.
1st April 2010 - 31st March 2019*



Which room did the fire start in?

The majority of accidental dwelling fires that caused a fatality occurred in either the bedroom or living room.

*Room where accidental fire started that caused a fatality.
1st April 2010 - 31st March 2019*



Raising the alarm

The England Housing Survey in 2017-18 found that **90%** of households had at least one working smoke alarm.

The proportion of households with working smoke alarms varied depending on tenure. Housing association tenants were most likely to have at least one working smoke alarm (96%), compared with 93% of households renting from a local authority, 89% of owner occupiers, and 89% of private renters.

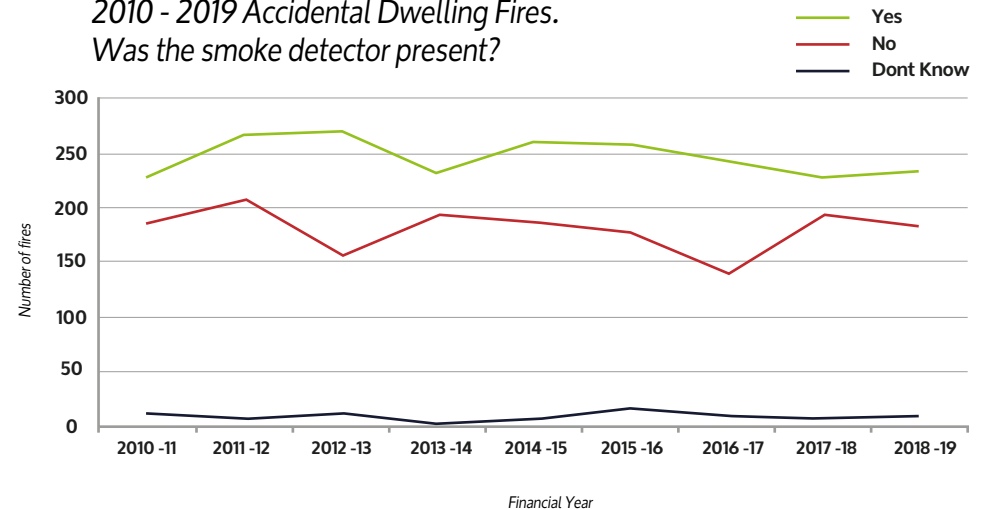
While the proportion of homes with smoke alarms increased, about a quarter of households (23%) reported that they had never tested their smoke alarm, with a higher proportion of private and social renters reporting they had never tested their smoke alarm.

A large proportion of accidental dwelling fires in Norfolk occurred in homes that did not have a working smoke detector.

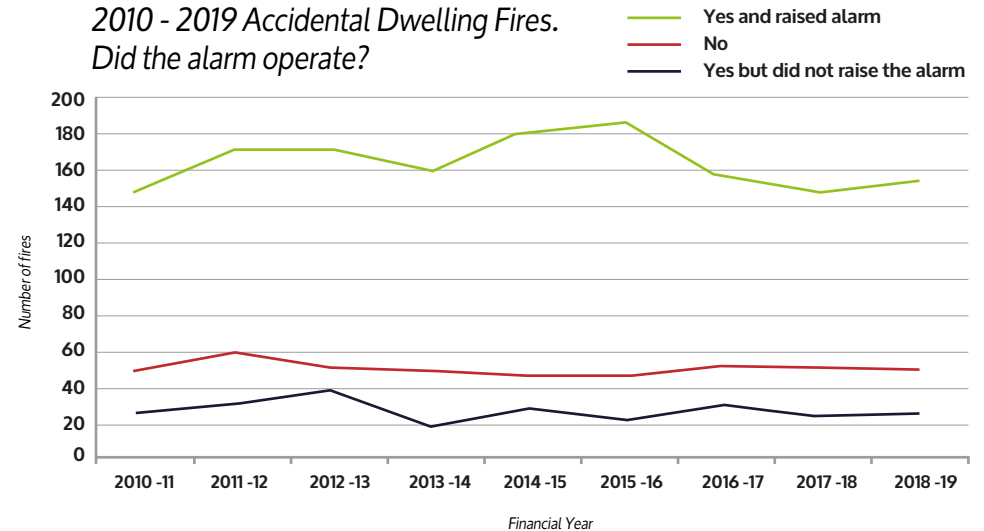
Over the past nine years, 13 dwellings where someone died in a fire did not have a working smoke detector fitted.

The majority of times a smoke detector did not operate was because the fire had not reached the detector, for example if the fire was confined to the room of origin and the smoke detector was not located in the room or immediately outside the room.

2010 - 2019 Accidental Dwelling Fires.
Was the smoke detector present?



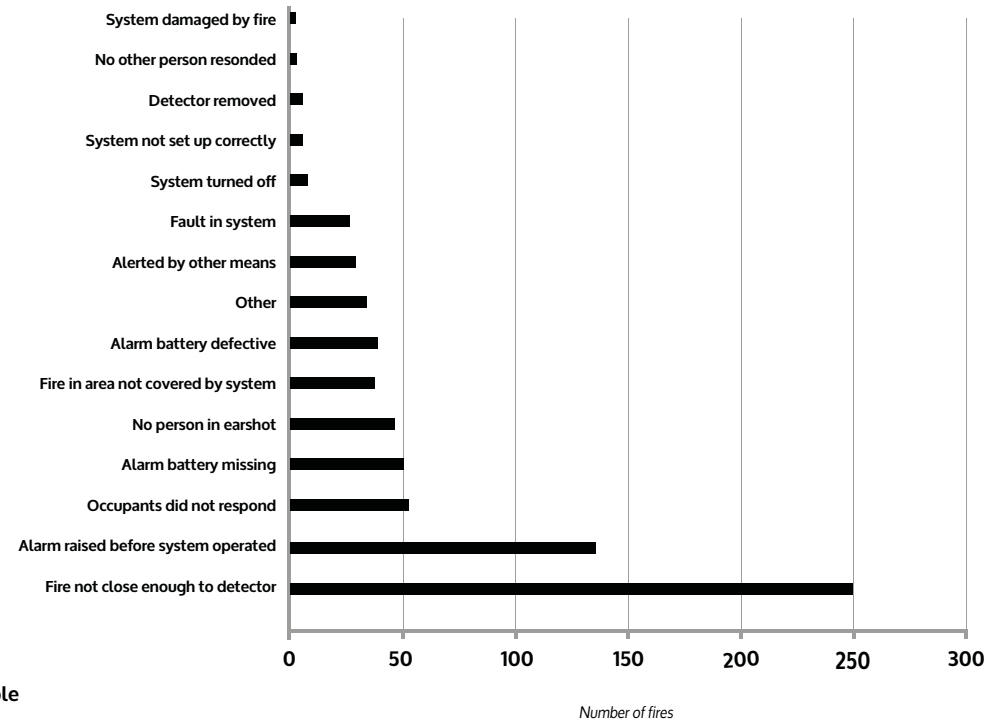
2010 - 2019 Accidental Dwelling Fires.
Did the alarm operate?



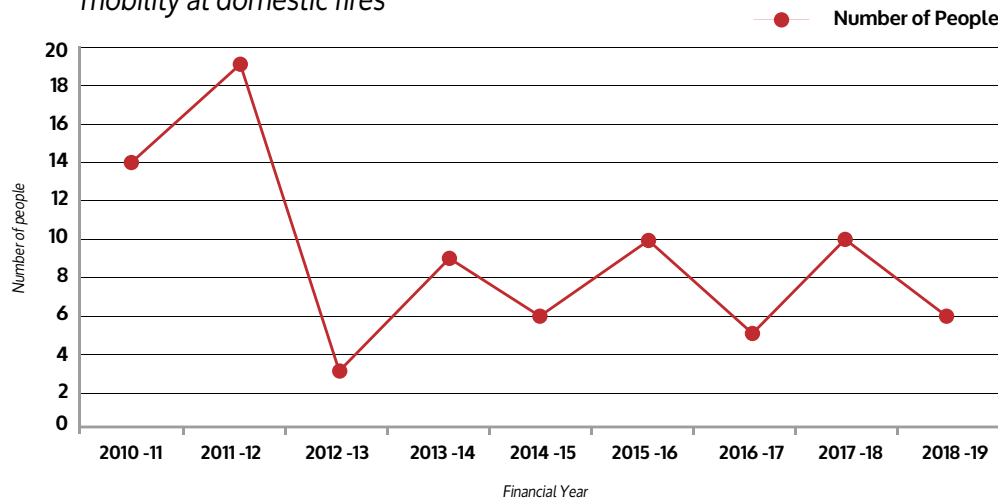
Disability and/or lack of mobility

The ability to escape a dwelling fire once an alarm is sounded is a key area we address as part of our Home Fire Risk Check Service.

2010 - 2019 Accidental Dwelling Fires.
Reason for smoke detector not raising alarm.



People with a disability and/or lack of mobility at domestic fires



Although the number of disabled people recorded as experiencing accidental dwelling fires is low, a number of people who have died in accidental fires over the past nine years have had a disability.

Hoarding

Hoarding disorder was previously considered a form of Obsessive Compulsive Disorder (OCD).

Hoarding is now considered a standalone mental disorder and is included in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) 2013.

However, hoarding can also be a symptom of other mental disorders. Hoarding disorder is distinct from the act of collecting and is also different from people whose property is generally cluttered or messy. It is not simply a lifestyle choice. The main difference between a hoarder and a collector is that hoarders have strong emotional attachments to their objects which are well in excess of the real value.



Hoarding Clutter Scale 9 - (Level 3).

Fires and hoarding

The National Fire Chiefs Council identifies the risk of hoarding and fires as the inability to escape a fire, fire spread and intensity, increased smoke and many people do not want people to access their space to make repairs that would reduce the chance of a fire occurring.

As part of the Norfolk Safeguarding Adults Board's Self Neglect and Hoarding Strategy, we work with our partners through early help hubs to help resolve hoarding and mitigate the risk to occupants.

Broads boats

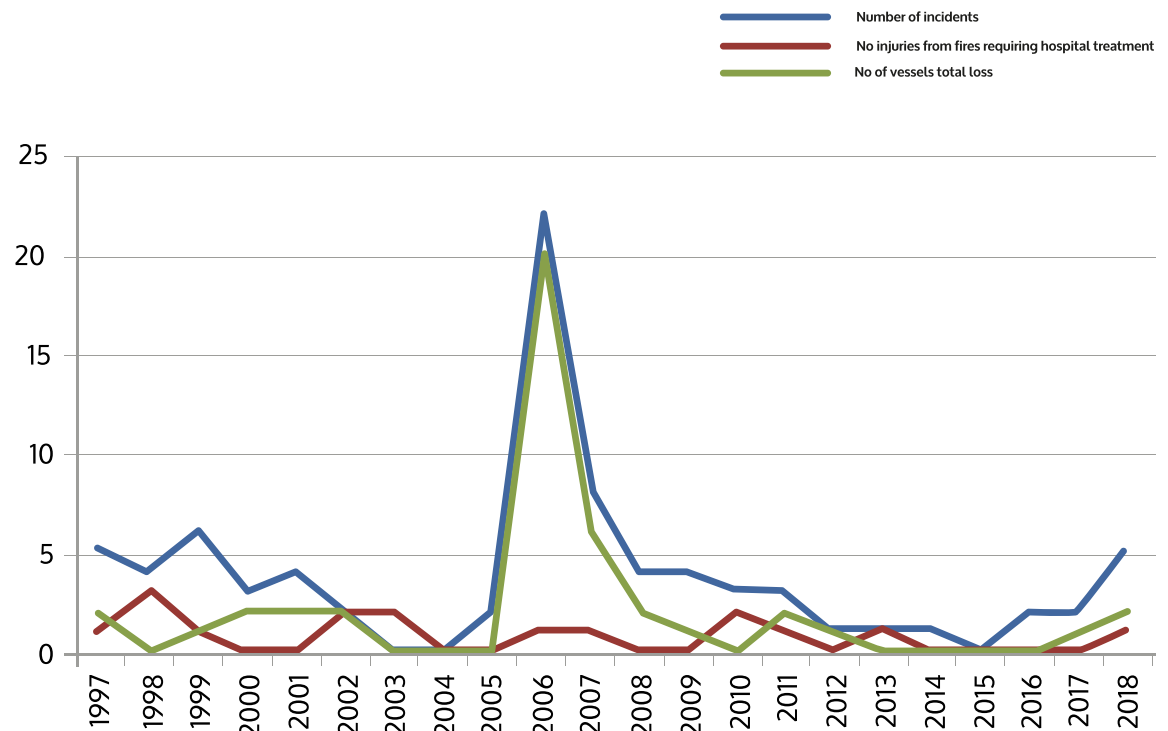
“Boat fires continue to remain at a low level demonstrated in previous years. All boats involved in fires held current Boat Safety Scheme Certificates.

The vessels on fire related data suggest that when viewed over several years, the statistics continue to demonstrate a fairly static position.

The majority of incidents where hospital treatment was required continue to be attributed to embarkation and disembarkation with an increase in numbers in comparison with the previous years. The number of fire related injuries is very low.

The Authority, through the Boat Safety Scheme (BSS), has recently introduced the requirement for boats with accommodation to have a Carbon Monoxide alarm fitted. This is following the tragic death of two people on the Broads in 2016 from Carbon Monoxide. The BSS and the Broads Authority will continue to raise awareness of the Carbon Monoxide hazard. Leaflets and a communications campaign has been developed jointly between Council for Gas Detection and Environmental Monitoring (CoGDDEM) and BSS”.

(Broads Authority 2019)



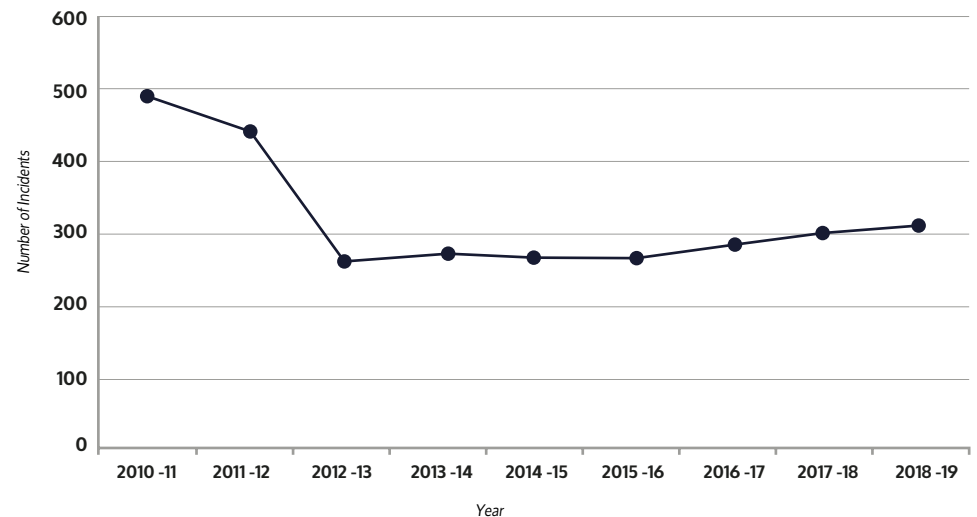
Deliberate fires

Although deliberate fires have reduced since 2010/11 they have plateaued with a small increase in 2018/19 related to the heatwave. In 2018/19 there were 690 deliberate fires, with 64% of these being secondary (low value) fires.

Deliberate fires and arson can be devastating for communities and businesses and so we work closely with business owners and local authorities to reduce the risk of arson. Through our fire intelligence unit we liaise on a daily basis with Norfolk Constabulary to exchange data to assist in reducing the threat from arson.

In order to reduce the likelihood of children setting fires, we use interventions, such as our Firesetters Education Programme, to work with families and carers whose children show an unhealthy interest in fires.

*Deliberate Primary Fires
1st April 2010 - 31st March 2019*

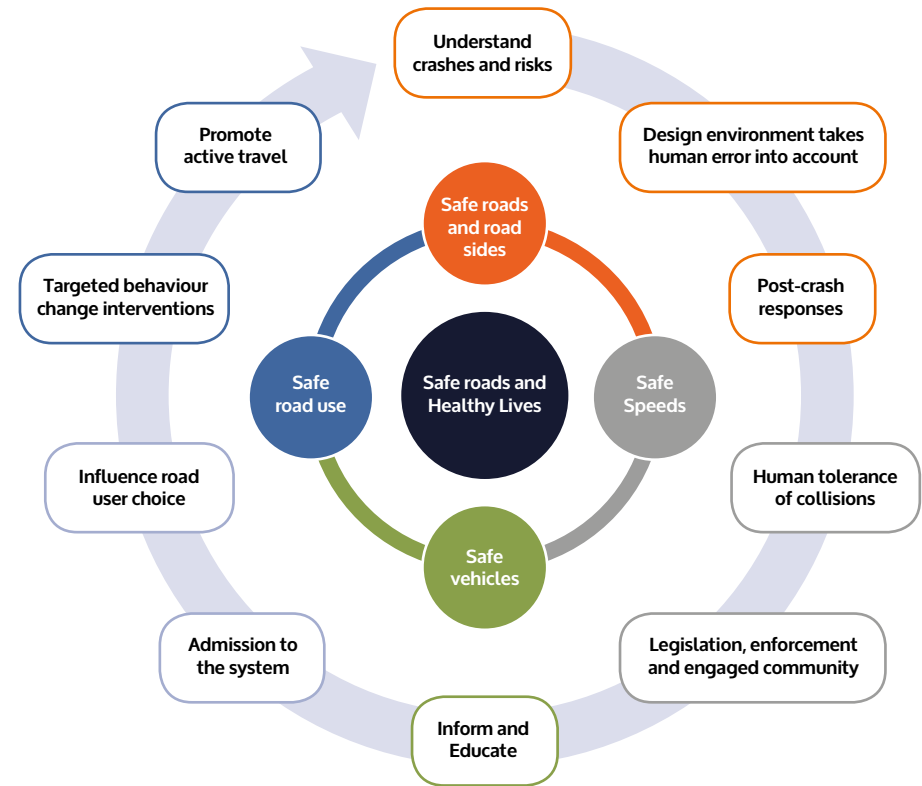
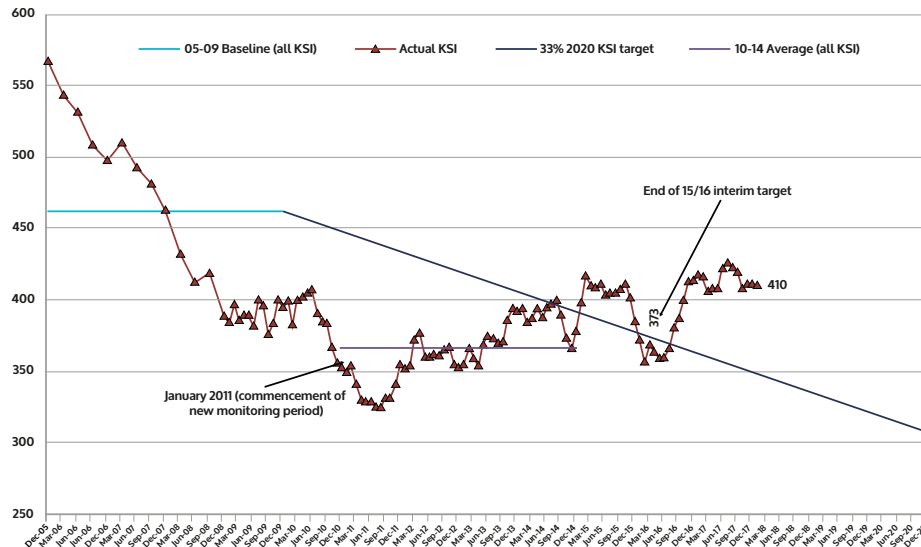


Road traffic collisions

Safe system approach

A review in 2018 led by elected members will result in a new "safe system" strategy approach that considers all the factors (road, vehicles, road use and speed) to prioritise initiatives focused on prevention and reducing risks.

Norfolk KSI casualties with 33% 2020 reduction figure



This will mean that all partners will be encouraged to shift attention away from a single focus to influencing wider road user behaviour.

Protection

Frequency and causes of fires occurring in non-domestic premises in Norfolk.

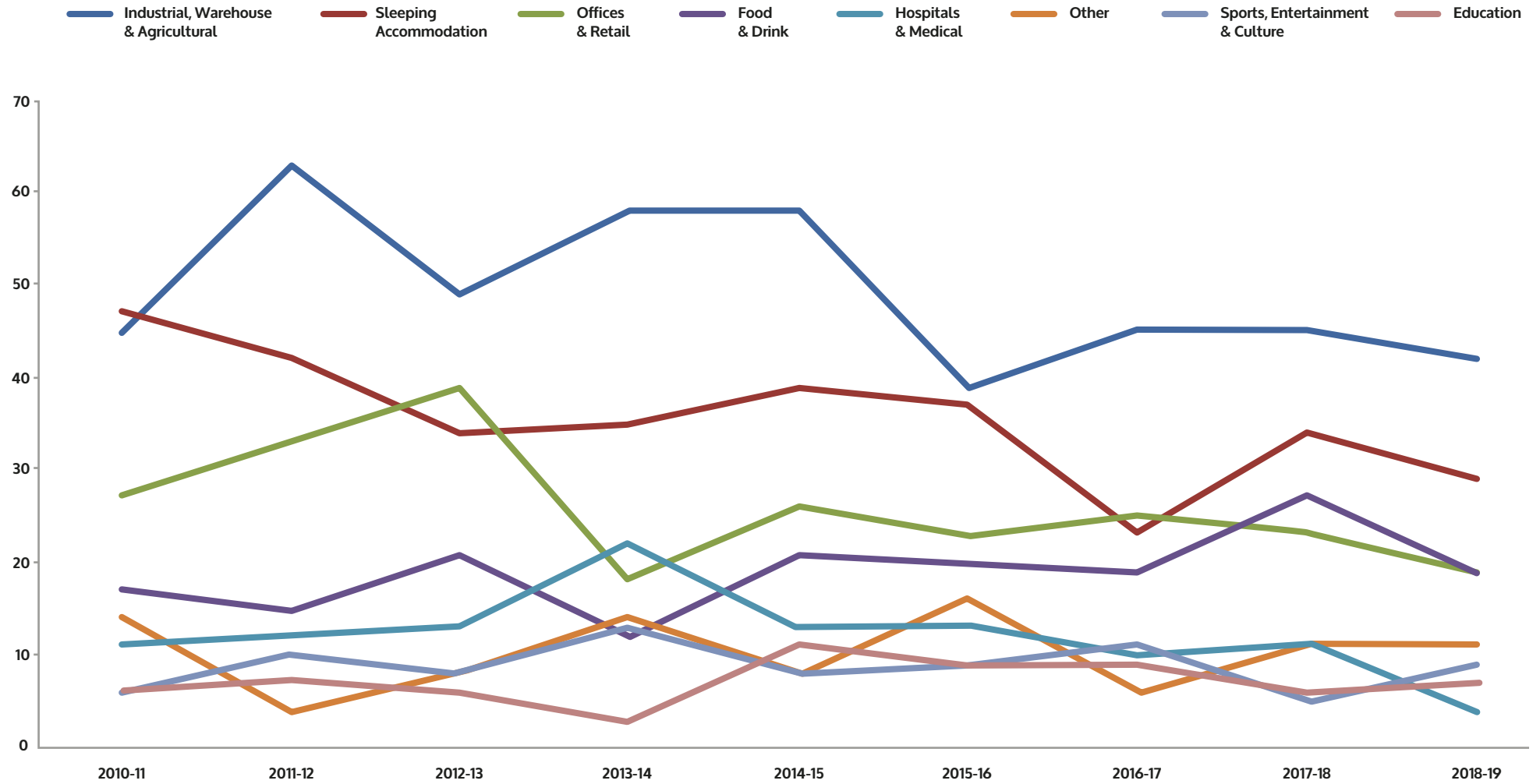
There is a downward trend in fires in all non-domestic premises, with the largest reduction seen in the number of fires in sleeping accommodation, which is the focus of our fire safety inspections. Industrial, warehouse and agriculture premises fires have also reduced, but they continue to constitute the majority of our non-domestic fires.

There have been three fire fatalities in non-domestic premises over the past nine years (all related to manufacturing and industrial processes) and three people suffered serious injuries from accidental fires.

The main cause of fire in non-domestic premises continues to be electrical fittings, appliances and cooking.

Main Property Type									
Financial Years	Industrial, Warehouses, Agricultural	Sleeping Accommodation	Offices & Retail	Food & Drink	Hospital and medical	Other	Sports, Entertainment & Culture	Education	Grand Total
2010 - 11	45	47	27	17	11	14	6	6	173
2011 - 12	63	42	33	15	12	4	10	7	186
2012 - 13	49	34	39	21	13	8	8	6	178
2013 - 14	58	35	18	12	22	14	13	3	175
2014 - 15	58	39	26	21	13	8	8	11	184
2015 - 16	39	37	23	20	13	16	9	9	166
2016 - 17	45	23	25	19	10	6	11	9	148
2017 - 18	45	34	23	27	11	11	5	6	162
2018 - 19	42	29	19	19	4	11	9	7	140
Total	444	320	320	233	109	92	79	64	1512

Fires in Non-Domestic Premises by Property Type
1st April 2010 - 31st March 2019



Our risk based inspection programme

Our resources are targeted at those premises which have the highest potential risk of death or injury, should a fire occur. There are two categories of risk for each premises; **generic** and **assessed**.

Generic risk

National guidance* provides a way for fire and rescue services to target their resources based on societal life risk fires using historical national data. Societal life risk is defined as the risk of five or more fatalities occurring in any one incident. This generic life risk score provides a high level comparison of risk between different types of premises. In simple terms, fires occurring in non-domestic premises where people sleep provide the greatest risk of multiple deaths should a fire occur.

Those premises where there is a generic risk of five or more deaths, should a fire occur, are classed as having a 'High generic risk'.

Assessed risk

Assessed risk is where an inspection has occurred or where an inspector has used their judgement. A 'High assessed risk' is either due to concerns about the fire safety measures following an inspection or the inherent risk of the premises. This risk is recorded on our fire safety management information system (CFRMIS) and drives our re-inspection programme.

Norfolk Fire and Rescue Service risk based inspection programme focuses on premises with the highest societal risk, which is sleeping accommodation.

Other premises may be included on the inspection programme using professional judgement, considering:

- the strategic importance of a particular property or business
- the potential loss of heritage
- the potential for environmental damage and
- the need to assess likely fire-fighting operations

Borough, City and District Councils enforce fire safety in common areas of houses in multiple occupation and flats, except where the escape route goes through a commercial premises, in which case we are the lead authority.

Our risk based inspection programme is flexible in nature and can be adapted as risks emerge, for example, following the Grenfell Tower fire all residential high-risk buildings across the county were inspected.

Following an inspection, the risk of a premises is quantified based on national guidance* and this provides an assessed risk with a re-inspection frequency.

* CLG 2009.

Occupancy Type – Social life risk by ranked occupancy type	Premises in Norfolk (1)	Generic Risk	Assessed risk	Re-inspection frequency
Hospitals (and prisons)	51	High generic risk	High	Annual
Hostels	31			
Care homes	652		Medium	Every 3 years
Houses in Multiple Occupation (common areas)(2)	756			
Houses converted to flats (common areas)(3)	107			
Purpose built Flats (common areas)(4)	470		Low	Every 6 years
Hotels	929			
Shops	4670	Medium to low generic risk	High	Every 3 years
Other sleeping accommodation	687			
Schools	674			
Further Education	91		Medium	Sample audit
Public Buildings	350			
Other buildings open to the public	1024			
Licensed Premises	1857			
Factories/Warehouses	2436		Low	Sample audit
Other Workplaces	1266			
Offices	2959			

1 Premises in Norfolk relates to number of individual premises records held on NFRS database, one site may have a number buildings.

2 Houses in Multiple Occupation (common areas)* Only HMOs that are part of a commercial premises are re-inspected

3 Houses converted to flats (common areas)* Not part of the re-inspection programme but inspected based on complaints or intelligence

4 Purpose built Flats (common areas)* Only high rise flats are part of the re-inspection programme

How we join forces with our partners

In addition to pre-programmed inspections, we undertake intelligence led and reactive inspections. Examples include;

Joint working with Environmental Health Officers

We share information and undertake joint inspections of houses of multiple occupation and flats where concerns have been identified.

Joint inspections with the Environment Agency

We undertake joint inspections with the Environment Agency for licensed waste/recycling poor performing sites (PPS). This also acts as a control measure against the community risk register entry of fires involving scrap/recycling.



Joint action against modern day slavery

Working with Norfolk Constabulary our inspectors visit premises that intelligence suggests may be involved in modern day slavery; our powers are used to ensure any premises are safe.

Post fire inspections.

Our inspectors undertake a post fire audit of non-domestic premises that have experienced a fire to investigate whether there was a breach of the legislation.

International/national/regional learning:

Working with the National Fire Chiefs Council our inspectors learn from serious fires experienced in other areas and undertake local based inspections based on this learning. Recent examples include inspecting all high rise towers in Norfolk following the Grenfell Tower fire and the inspections of escape rooms in Norfolk following an incident in Poland.

How we match capability to risk

Competency levels

To ensure we achieve an integrated approach to managing risk, we use both dedicated fire safety staff and operational crews to deliver our community fire protection services.

It is important we match the competency of our people with the complexity of fire safety. For this reason, we have adopted the NFCC Competency Framework for Business Fire Safety Regulators. We use 3 levels of competency:

Fire Safety Inspector

A Fire Safety Inspector is an individual who has been developed in line with the recommendations of the framework and should have obtained a qualification equivalent to the Level 4 Diploma in Fire Safety. They can complete inspections of all regulated premises, including generic and assessed high risk sites, or those incorporating fire engineering principles. They can investigate and report on breaches of fire safety legislation for the commencement of legal prosecutions. They can report on submissions in liaison with building control bodies and advise on fire safety issues relating to the construction, demolition and/or refurbishment of regulated premises. They are qualified to take enforcement action for a breach of fire safety legislation.

Fire Safety Advisor

A Fire Safety Advisor is an individual who has been developed in line with the recommendations of the framework and should have obtained a qualification equivalent to the Level 3 Certificate in Fire Safety. They can offer advice and educate those responsible for fire safety in regulated premises. They are not qualified to take enforcement action for a breach of fire safety legislation and must do this in coordination with a Fire Safety Inspector.

Business engagement and compliance

Our operational crews undertake visits to medium and low generic risk sites to support businesses with arson audits, ensure escape routes are clear and to help them familiarise themselves with the site (known as a 72d) should a fire occur.

There is no national competency standard for this level of activity so we provide bespoke training.

Our business engagement

Although our focus is on enforcing the relevant fire standards, we do this with a supportive and proportionate approach, working with organisations to help them ensure the safety of their staff, premises and customers.

We use formal enforcement and prosecutions when we find deficiencies that are very serious, or when, despite working with an organisation, they have failed to improve their fire safety standards. Our approach is shaped by the principles set out in the Statutory Code of Compliance for Regulators and the Enforcement Concordat.

Our risk based inspection programme is always based on the risk we believe premises pose to their occupants, but we wanted to ensure that as we developed our new risk based inspection programme for this IRMP it felt proportionate to businesses.

So we surveyed all of the persons in Norfolk who are responsible for our high generic risk premises with an assessed risk of high, medium, and low, asking them what they thought was a proportionate re-inspection frequency for their premises. We also took the opportunity to ask them how well our inspectors supported them in making sure their premises were safe from fire and what else we could do to support them

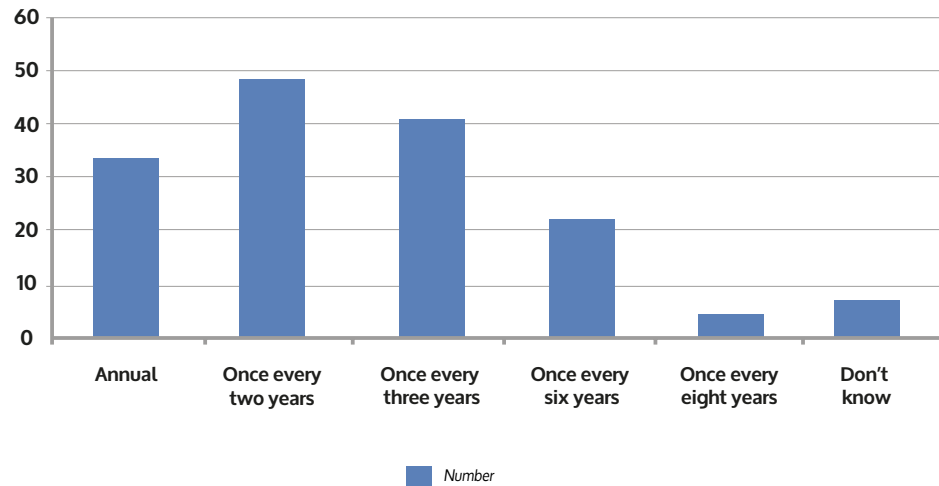
Ten per cent of organisations responded to our engagement and we have used this valuable feedback in setting our re-inspection frequencies on page 50 and developing our strategy.

Suggestions from respondents for how we can improve our support include;

- Regular email updates/newsletter on fire safety matters
- A help desk contact number/email for fire safety enquiries

We will consider how we can implement these suggestions.

How often do you think we should inspect your premises?



Response

Operational response

Under the Fire and Rescue Services Act 2004, fire and rescue authorities (FRAs) have a range of statutory duties to prepare for:

- fighting fires and protecting people and property from fires
- rescuing people from road traffic collisions
- and dealing with other specific emergencies, such as a terrorist attack

In addition, all FRAs are able to do other things to respond to the particular needs of their communities and the risks they face, this is achieved by:

- Ensuring that fire and rescue authorities can do things that are not specifically set out in the Act but which will help them meet their statutory duties.
- Giving authorities powers to prepare properly for other risks to life and the environment.
- Allowing authorities, where they have capacity, to use staff and equipment for any other purpose they believe appropriate.

This framework of powers enables individual fire and rescue authorities to decide, in consultation with their communities, how and where to deploy their resources and improve their ability to respond to the range of risks set out in their IRMPs.

Context of operational response:

All incidents involve:	The context of an incident may include:	Activities undertaken at an incident may include:
Operations	Industry utilities and fuels	Fires and firefighting
Incident command	Subsurface, height, structures and confined space	Performing rescues
Environmental protection	Transport	Hazardous materials
	Major incidents	Fires in buildings
		Wildfires
		Fires in buildings under construction/demolition
		Fires in waste sites
		Fires on board vessels
		Incidents involving animals
		Water rescue and flooding

How we organise our emergency response

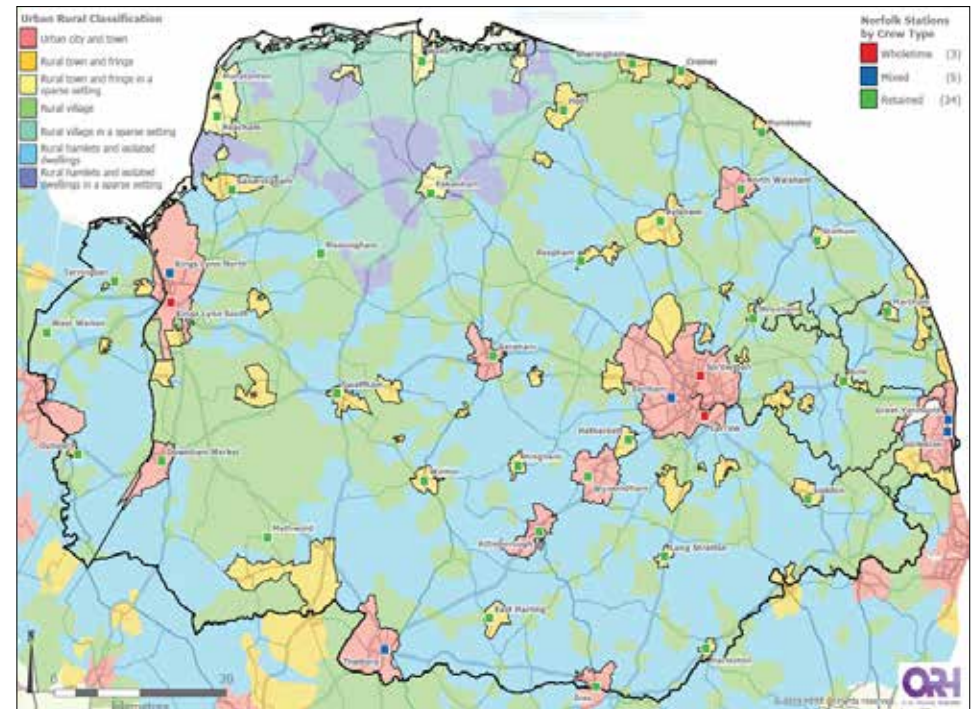
How we organise our emergency response capability and the location of our emergency response resources is the result of the analysis of six previous IRMPs.

Previous IRMPs have delivered new fire stations at North Earham, King's Lynn, moved a city centre fire station to Carrow as well as providing enhanced fire cover at Dereham and Gorleston.

Fire Control

All emergency incidents start with an emergency call and our teams of fire control operators handle 999 calls, manage risk critical information and support our fire crews and commanders to resolve the incident.

Following the learning from national major incidents such as the 7/7 bombings in London, we have co-located with Norfolk Constabulary to further improve how we respond together and share information.



Urban / Rural areas.

On Call

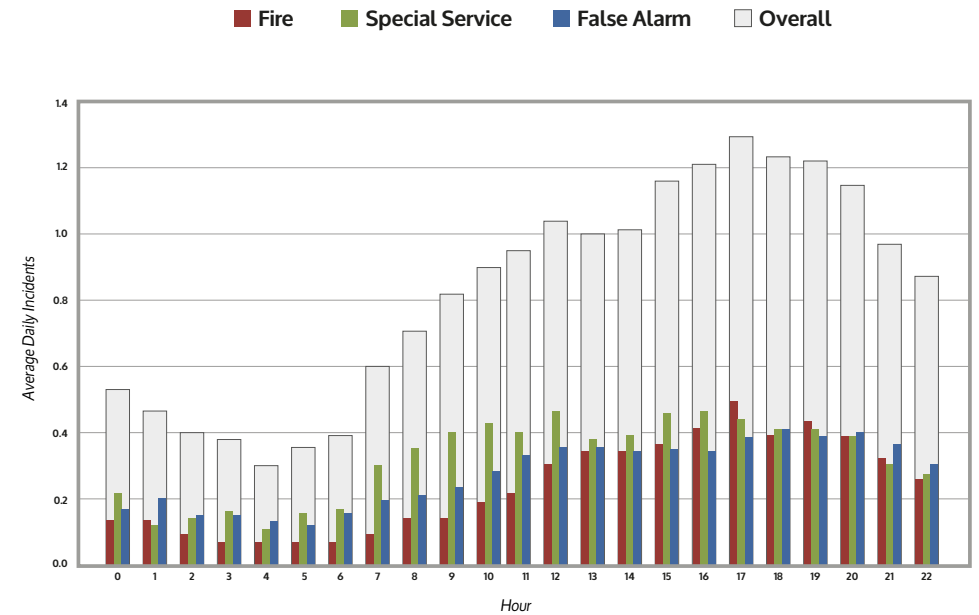
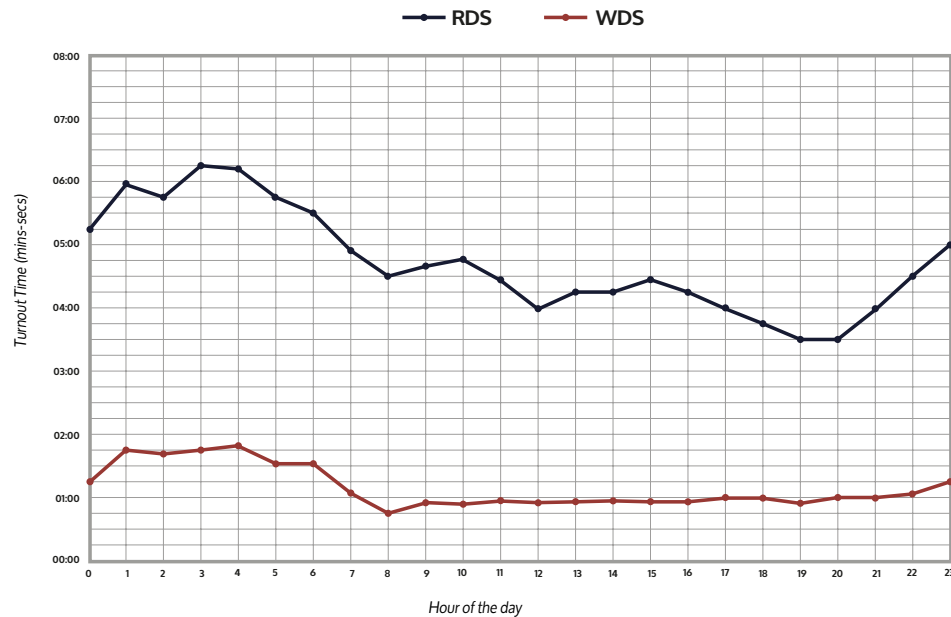
Our emergency fire cover in Norfolk is predominately on-call covering 39 teams and relies on the commitment of our people to provide cover.

This cover is not guaranteed due to a number of reasons, not least that employment is predominantly in the towns and urban areas, making it harder for us to recruit for daytime cover in the more rural areas.

Wholetime Duty System

Firefighters working on the wholetime system work two days then two nights. This system requires four shifts, known as watches, to provide guaranteed fire cover 24/7 at five of our stations.

Average Turnout Time by Crew Type by Hour



Day Duty System

At Thetford, firefighters on our Day Duty System (DDS) work during the day between Monday and Fridays with on-call firefighters providing cover in the evenings and weekends

Dereham USAR

Our National Urban Search and Rescue (USAR) teams based at Dereham Fire Station crew the fire appliances on the station when they are in residence. In this way, we are able to provide enhanced fire cover during the day for 12 hours throughout the week. Our on-call team continue to crew the second appliance when USAR are on station and for both appliances when USAR are not on station.

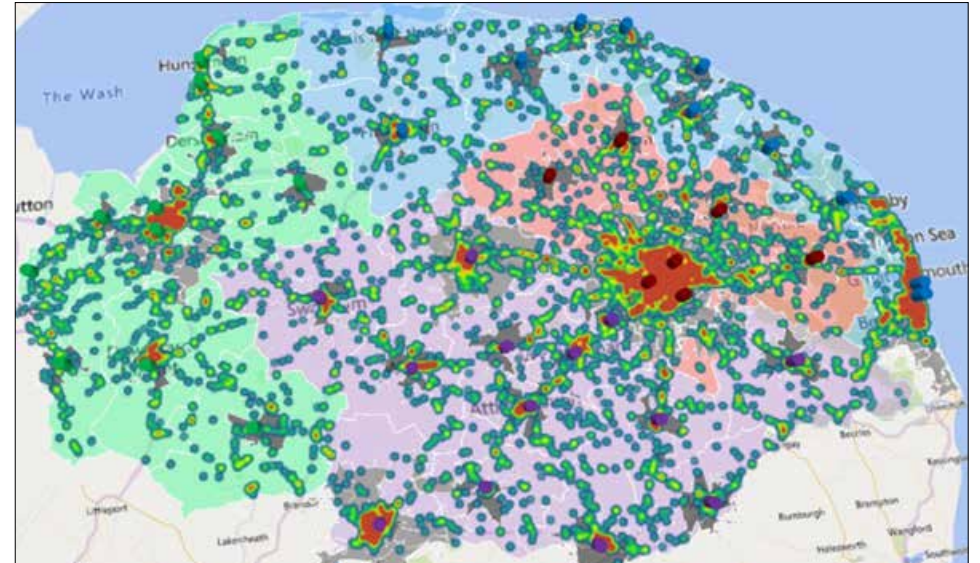
Turnouts

Our team's turnout to incidents is quicker during the day when they are often already on the appliance or working close to the station if they are on-call, and slower at night when they are asleep.

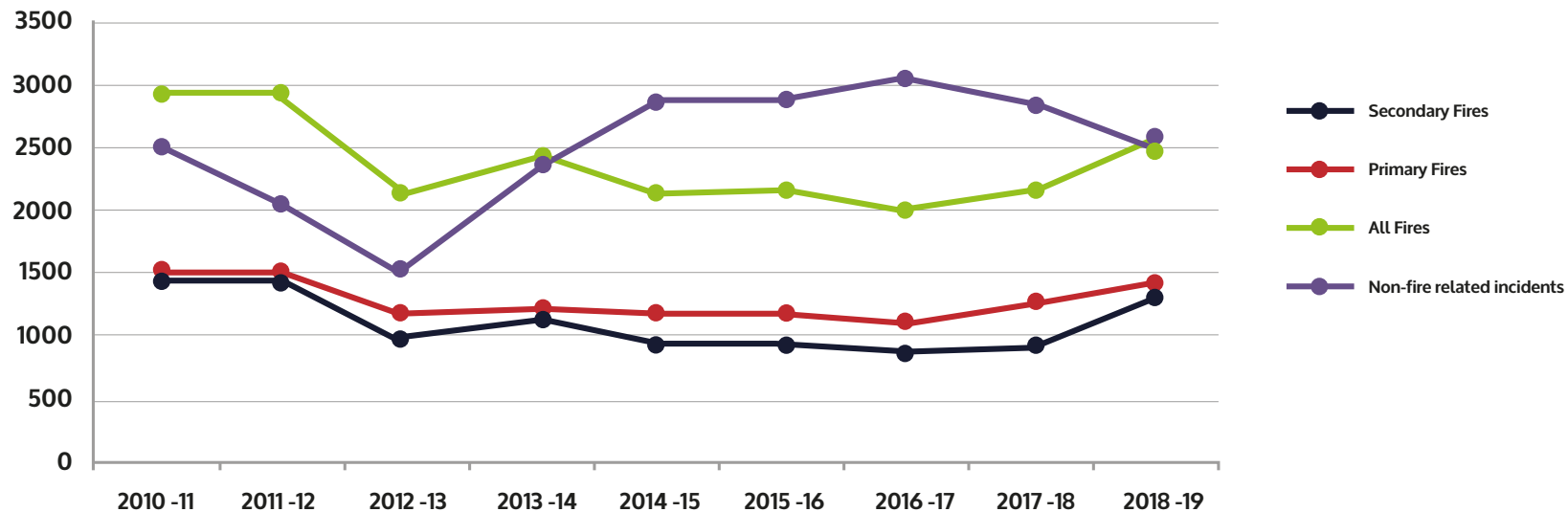
When do incidents occur?

As would be expected, road traffic collisions predominately occur when people are traveling through the day. False alarms and fires peak in the evening when people are cooking.

Our incident response profile



Location of incidents in Norfolk
2010/11 to 2019/20.



Understanding our response profile

Primary fires

Primary fires are all those fires with a monetary value associated with them, such as buildings, cars, tractors and boats.

Secondary fires have no monetary value such as rubbish and waste ground.

There has been a small downward trend in all primary fires since 2010/11 with the exception of outdoor fires (woods and fields of crops) in 2018/19 which saw an increase linked to the heat wave. The rate of decline has plateaued.

This plateaued trend is replicated across the country.

In 2001/2, the rate of primary fire varied by fire and rescue services between 2.5 and 6.5 fires per 1,000 people.

By 2012/13, the rates in all fire and rescue services were between one and two fires per 1,000 people.

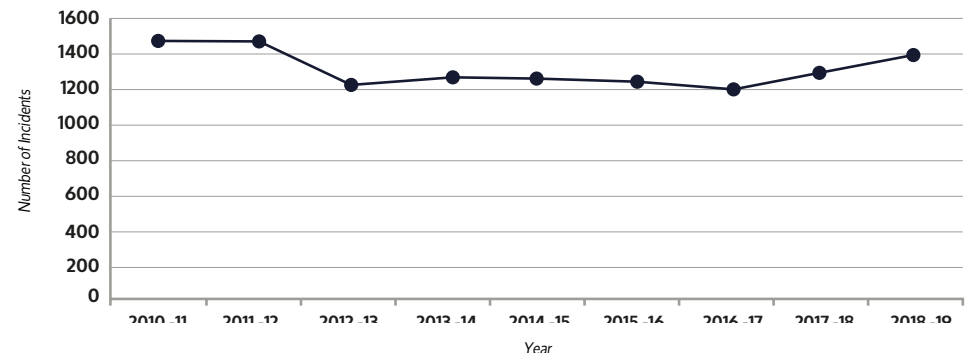
Over the last five years, the rates of fires for all fire and rescue services remained stable.

In Norfolk, 2018/19 saw a slight increase in primary fires due to the heat wave with an increase in primary from 1.4 to 1.5 fires per 1,000 people.

Source: ORH Ltd

Fires (including Assist other FRS)	2010 - 2011	2018 - 2019
Secondary fires	1,433	1,234
Primary fires	1,482	1,401
Total Fires	2,915	2,635

Primary (serious) fires
1st April 2010 - 31st March 2019



Wildfires

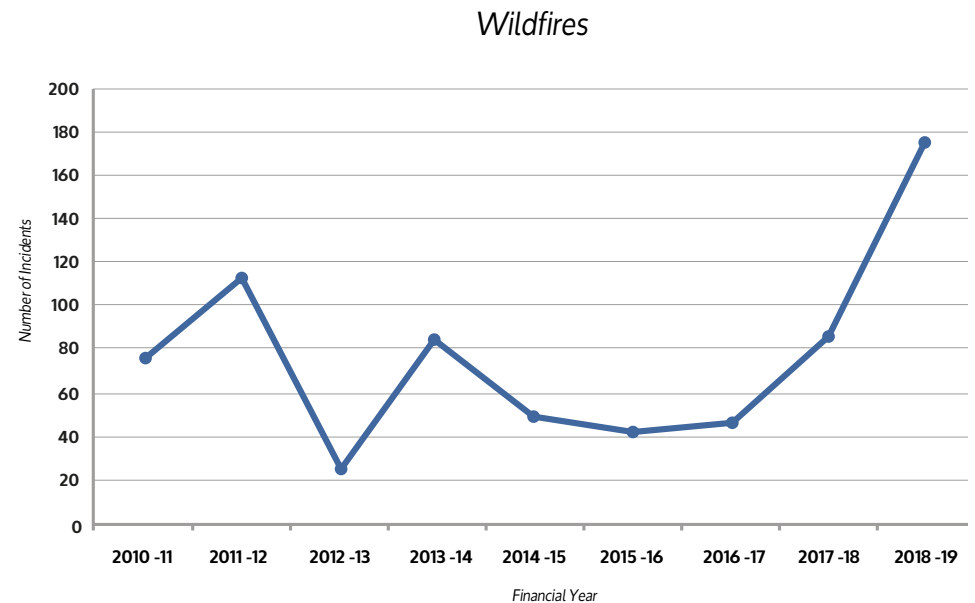
The number of wildfire incidents increased substantially in the summer of 2018 due to the heatwave.

We use the Fire Severity Index (FSI) to vary the number of appliances we send to wildfire risks, such as forestry and standing crops. By working with landowners such as the Forestry Commission through the East of England Fire Operations Group, we ensure our planning and response to wildfire is coordinated and we support them in promoting the dangers of fire to visitors of the forests.

Local work is also undertaken with private landowners to encourage the use of effective fire breaks and fire management in woodland.

We have plans to further develop our wildfire preparedness and capability in the coming year by working with partners through the new Eastern Wildfire Group, developing a National Tactical Wildfire Advisor to support our preparedness and response to wildfires in Norfolk and by learning from other regions and countries.

Although our new fleet now includes off road fire appliances and vehicles, our replacement plan will be shaped by our proposed refreshed concept of operations, which will include a review of our wildfire capabilities.



False alarms from non- domestic premises automatic fire alarms

Norfolk Fire and Rescue Service receive calls from receiving centres that monitor fire alarm systems.

In order to minimise the number of times a fire appliance is mobilised to false alarms, we request the occupant checks for signs of fire. We call this 'call challenge'.

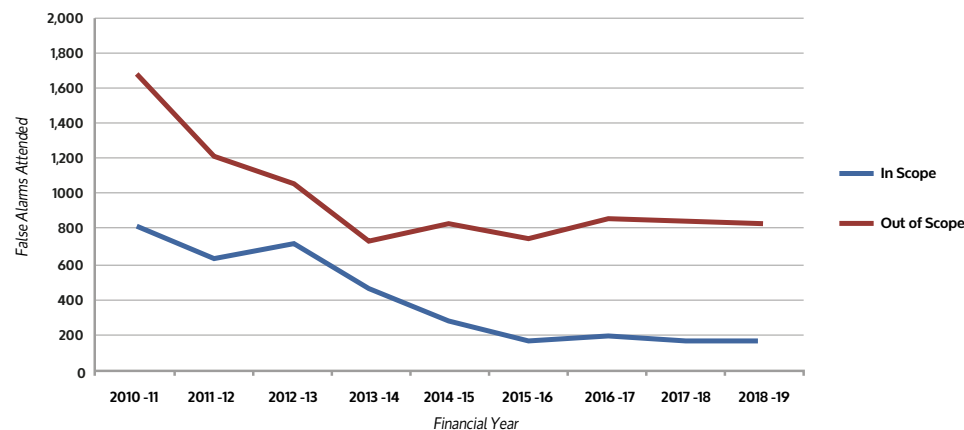
Our response to false alarms is one of the lowest rates in the country, allowing our resources to be available for other incidents.

This call challenge applies only to those premises that do not have a generic high risk (we call these 'In scope') namely; industrial premises, commercial premises, offices, shops, licensed premises without sleeping accommodation, places of worship and public buildings.

We do not call challenge those premises that are classed as having a generic high risk, such as care homes, flats, hospitals and hotels. Schools are also out of scope for call challenge. Although we automatically send a fire appliance to these premises, our fire safety teams work with premises owners to reduce their incidents of false alarms.

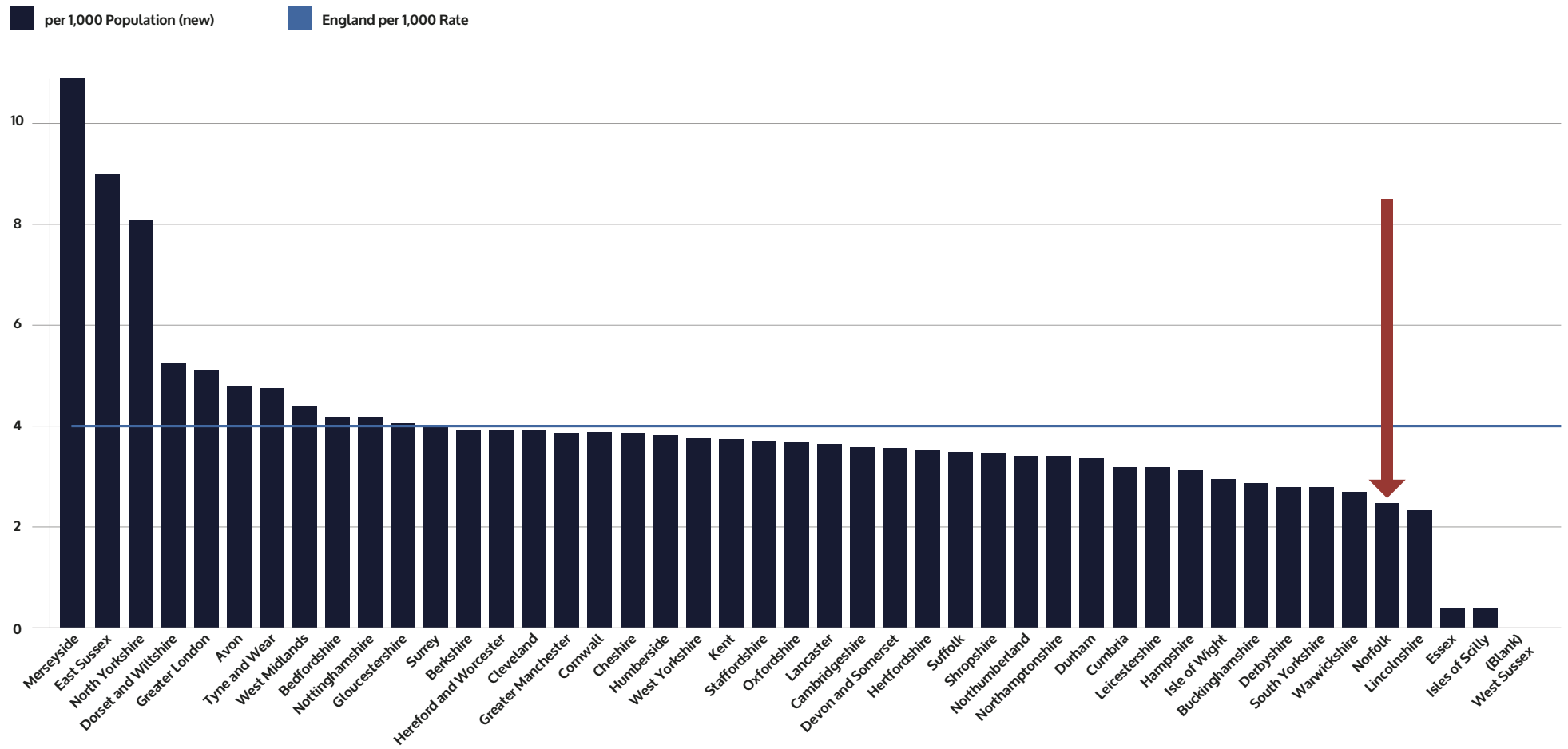
By using call challenge and by working with premises owners, since 2010/11 we have reduced our attendance at false alarms for in scope premises by 79% and for out of scope premises by 36%. This rate of reduction has now plateaued and we are currently reviewing our policy to identify further opportunities to reduce our attendance at false alarms.

Attended False Alarms due to Automatic Fire Alarms



All False Alarms (including assisting other FRS)	2010 - 2011	2018 - 2019
AFA's	2,600	1,270
False Alarms Good Intent	988	1,211
Hoax Calls	96	62
Total False Alarms	3,684	2,543

Automatic fire alarms calls per 1,000 population



False alarms from malicious 999 calls

Occasionally we receive false alarms that are malicious. We will often attend to ensure it is a false alarm and this ties up resources that are needed elsewhere. By working closely with other agencies, we identify persistent offenders which helps to reduce the number of these calls we receive.

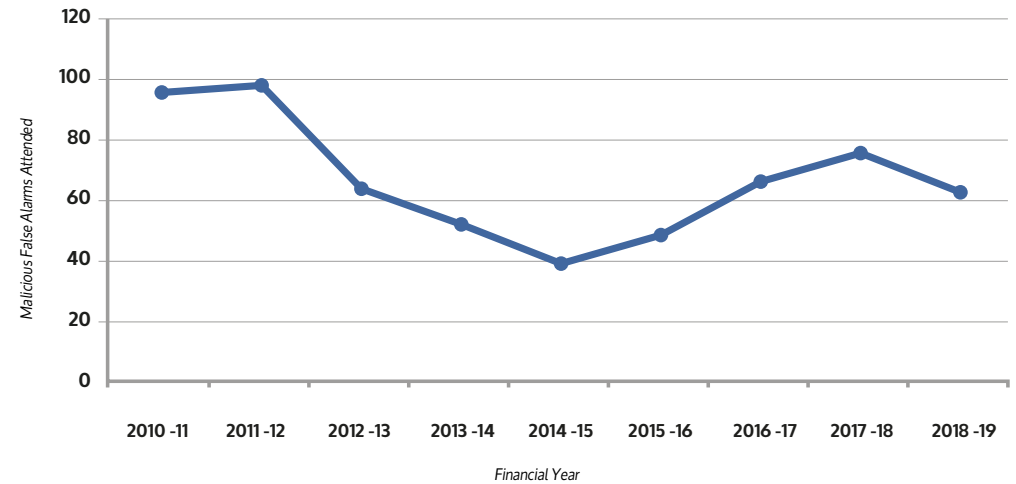
We have seen a reduction of **35%** since 2010/11 of incidents we attended that turned out to be a malicious call helping to ensure we are available for real emergencies.

Reports of fires that were false alarms but were well intended

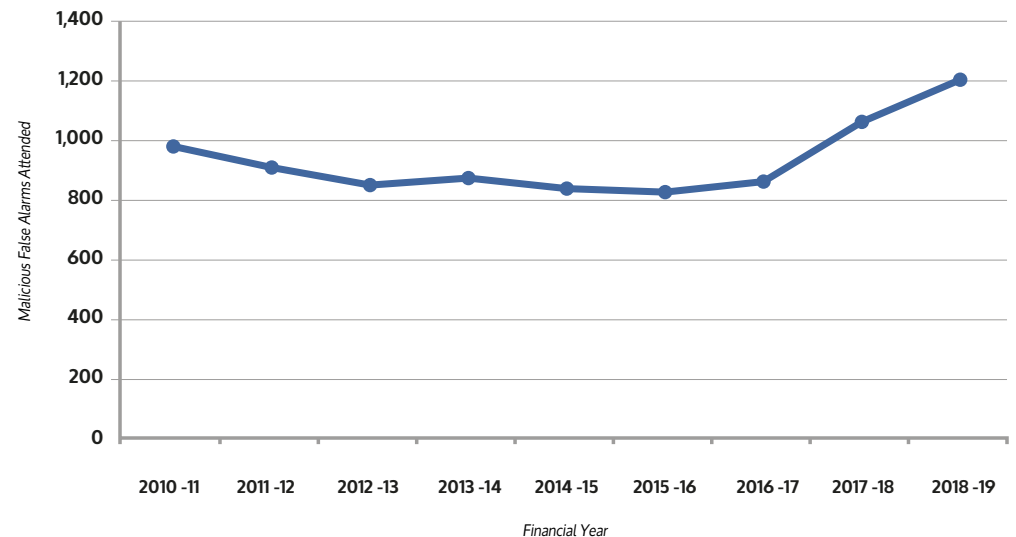
We often receive 999 calls from members of the public who see smoke or hear a domestic smoke detector sounding in a neighbouring house. We will always mobilise a resource to these types of incident, but it often turns out that the smoke is from controlled bonfires or from another ongoing incident. These incidents are classified as 'false alarm good intent'.

In 2017/18 – 2018/19 we saw an increase in false alarm good intent calls, possibly caused by increased vigilance during the heat wave and wildfire season.

False Alarm Malicious Intent Attended



False Alarm Good Intent Attended



Special Services

The biggest change over the past nine years in our incident response profile is an increase in special services. These are all non-fire related incidents and generally relate to rescues of people and animals, hazardous materials and flooding.

Non-Fire Incidents (including Assist other FRS) (Special services)	2010 - 2011	2018 - 2019
RTCs	1,671	724
Other non-fire incidents	853	1,785
Total Non Fire Incidents	2,524	2,509

Road traffic collisions

In 2015/16 the East of England Ambulance Service introduced a new mobilising system. This change allowed us to improve how we mobilise our crews to road traffic collisions (RTCs), ensuring we only attend when it is suspected that someone was either physically or medically trapped in the wreckage. This has seen a reduction in the number of RTCs we attend.

Forced entry for medical emergencies

A trial has been running since the 11th of March 2016 which sees our fire crews using their existing powers of entry into private dwellings to allow access for paramedics to deliver medical care. This is a function that has traditionally been undertaken by Norfolk Constabulary.

The trial is being formally evaluated and the next stage is looking to see how we can mobilise the nearest resource, be it fire or police.

Emergency medical care – corresponding

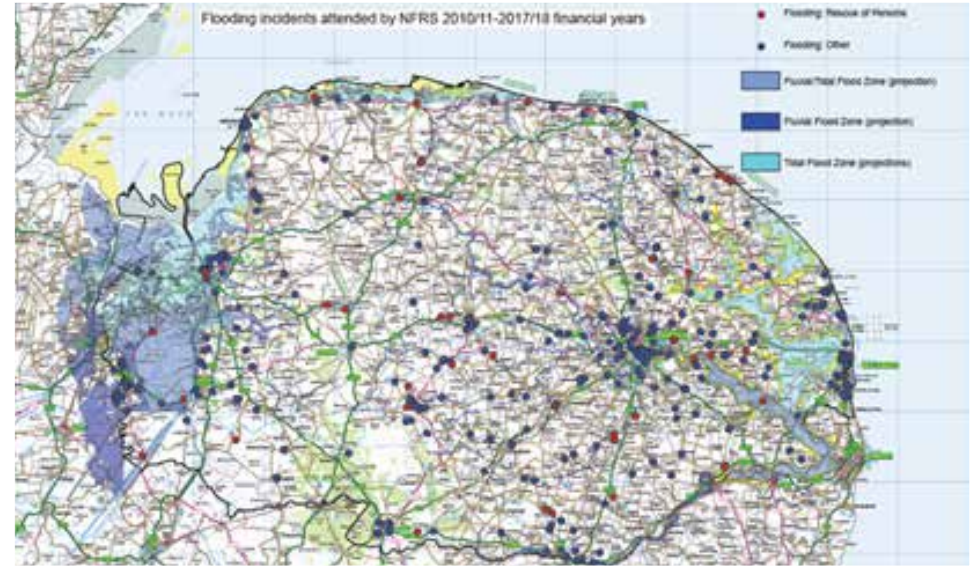
We participated in a national trial in 2016 with fire crews co-responding with paramedics to people suffering cardiac arrests. Twenty two fire crews participated in the pilot (the largest number in the region) from stations at Sprowston, Earlham, Carrow, Kings Lynn, Thetford, North Walsham and Sheringham.

Outcomes of the pilot were extremely encouraging with examples of crews delivering medical care with paramedics that have achieved cardio pulmonary resuscitation, improving the chances of survival for the patient.

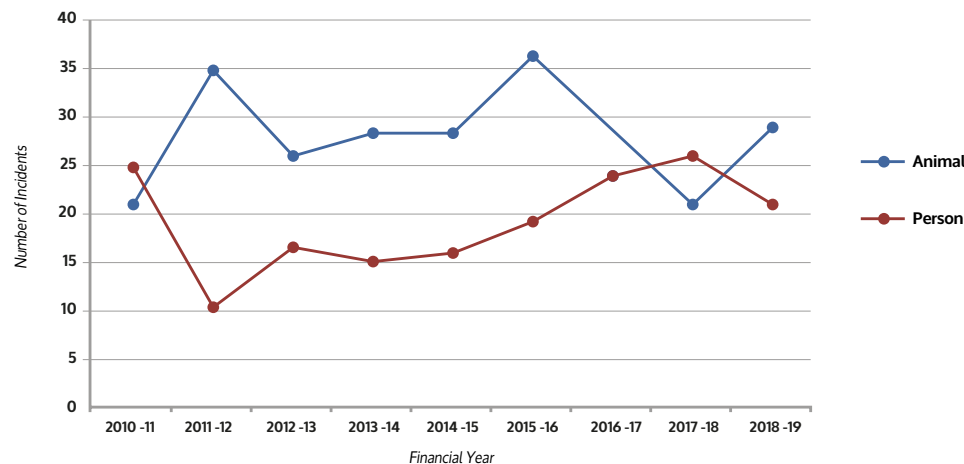
Flooding and Water Rescue

Norfolk Fire and Rescue Service has a statutory power (under the Fire and Rescue Services Act 2004) but not a duty to respond to flooding.

As a category 1 responder we work through the Norfolk Resilience Forum to develop multi-agency flood response plans. We have a responsibility for undertaking rescues with other agencies and voluntary responders, protecting property and critical infrastructure through water removal and assisting in the command, control and coordination of an event.



*Water Rescues of People and Animals Excluding Flooding
1st April 2010 to 31st March 2019*



We currently have 4 'team type B' specialist teams that were previously funded through grants from DEFRA, these teams are based at King's Lynn, Dereham, Carrow and Thetford. There are also 12 locally funded teams, aligned to the 'team type D'.

All of our fire crews are sent to someone who falls in the water to undertake a bankside rescue. Firefighters in type D teams are trained to undertake wading rescues and use inflatable rafts and our type B teams undertake swim rescues and have rigid inflatable boats.

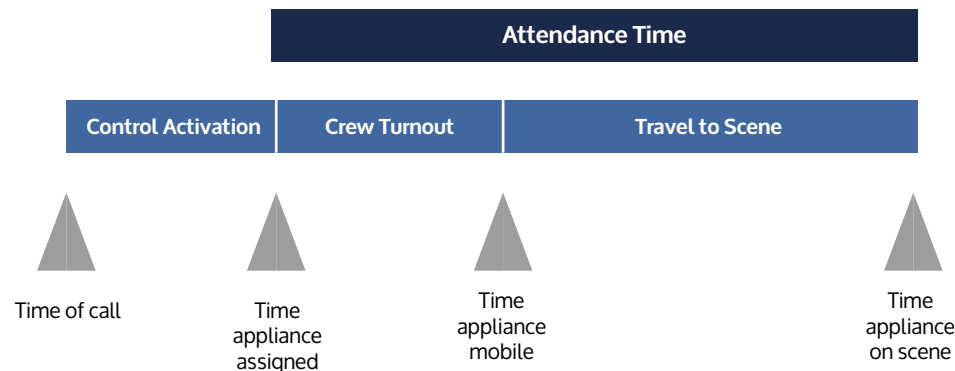
In preparedness for coastal tidal surges, type B teams, accompanied by type D teams, are pre-deployed to forward command posts in Great Yarmouth, King's Lynn and North Norfolk.

How we measure our performance

We receive emergency calls through a variety of means; from direct telephone calls from members of the public, to automatic calls from a business fire alarm system or calls for assistance from other emergency services or agencies.

The diagram below shows how the component parts of dealing with an emergency incident are defined and measured:

- The time of call to the time a fire appliance is assigned to an incident is dealt with by our control room staff.



- The time the appliance is assigned to the time it is mobile will vary from a short time (less than a minute) for our wholetime staff who are on station, to a longer period for our on-call staff who work in local communities and who respond via a pocket alerter when a call occurs. This is called the turnout time. We use historical data for each individual on-call station to calculate the average turnout time for that station when we consider which station to mobilise to an incident.

- From the time the appliance is mobile to the time it is on scene is the travel time from station to the incident itself.

Our current attendance time is measured from the time a station is alerted to the time the fire appliance arrives at the scene.

The Home Office and HMICFRS measure fire and rescue services performance from the time the 999 call is answered to the time the first fire appliance is on scene.

How are we performing against our response standards?

Currently each fire and rescue service sets their own emergency response standard, our current standard was agreed through the 2014/15 IRMP.

Emergency Response Standard			Performance					
On-scene target	For first appliance	For second appliance	2015/2016		2017/18		2018/19	
			1st Appliance	2nd Appliance	1st Appliance	2nd Appliance	1st Appliance	2nd Appliance
Fires where life may be at risk	80% within 10 minutes	80% within 15 minutes	71.90%	75.30%	72.80%	79.70%	71.00%	71.00%
Other emergencies where life may be at risk	80% within 13 minutes	No target	87.00%	n/a	87.50%	n/a	84.70%	n/a
Other fires	80% within 13 minutes	No target	80.80%	n/a	81.40%	n/a	80.40%	n/a
Non-emergency incidents	80% within 45 minutes	No target	99.00%	n/a	99.7%	n/a	99.2%	n/a

The reasons why some of our emergency response standards are challenging to meet are detailed in the following pages.

Reducing AFAs reduces our response performance

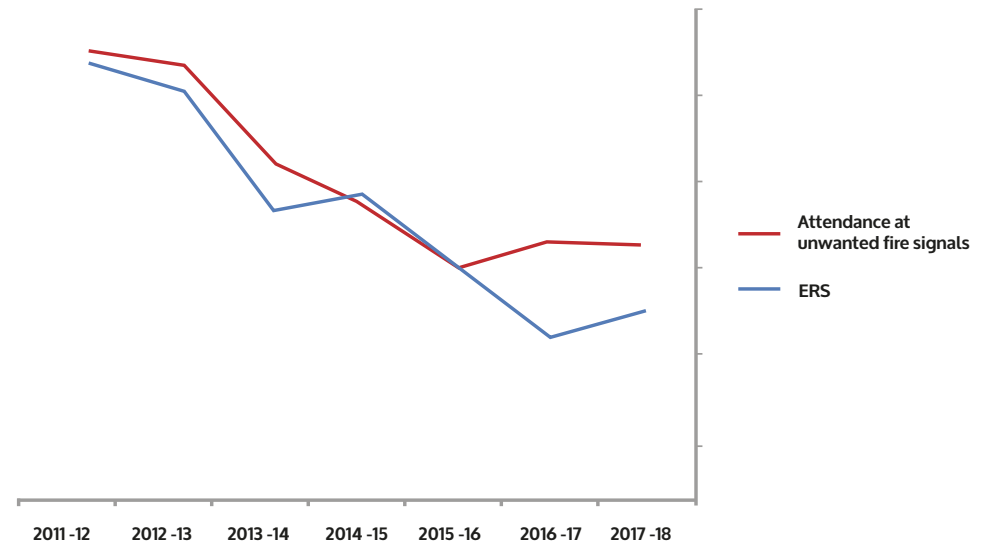
In our 2011/14 IRMP, we developed a new community fire protection strategy that included targeted engagement with commercial premises and the introduction of call challenge to reduce their level of false alarms. Since 2011/12 this engagement has led to a reduction in attendances at unwanted fire alarms from commercial premises.

Attendances at automatic fire alarms contributes to our performance against our emergency response standards (ERS). There is a correlation between reducing the number of unwanted fire signals we attend and the reduction in our performance against our ERS.

As the majority of unwanted fire alarms occur in our urban towns and city we comfortably arrive within our ERS which has a positive impact on our performance against our ERS.

The impact of our call challenge strategy on our emergency response standards (ERS) was modelled before its introduction; this modelling predicted a decrease in performance against our ERS.

We have prioritised doing the right thing, even where this may have had a negative effect on our performance.



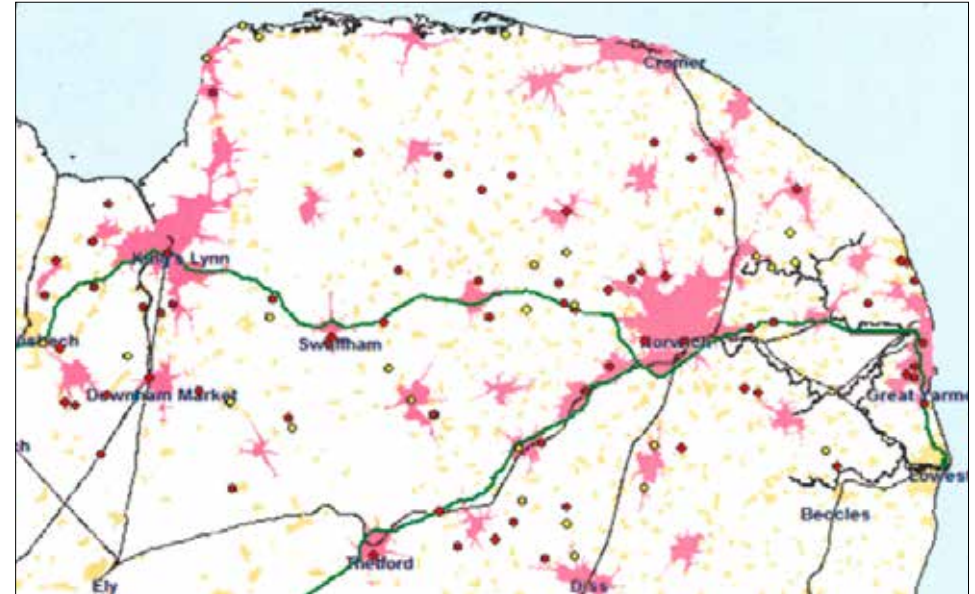
Further reducing our attendance at unwanted fires signals would see a further drop in our performance against our ERS of between **3 and 4%**.

The challenges of availability

Availability of some of our on-call fire appliances continues to be very challenging, but it is a key priority of our annual service delivery plan and is the daily focus for our managers.

When our fire crews are already committed to an incident, our control room and duty managers back fill them with another appliance on 'stand-by'. This is done on a risk based approach, aimed at maximising fire cover with the resources available. Very occasionally, in exceptionally busy periods, such as the summer fires we experienced in 2018, it can be challenging to meet demand (we call this spate conditions) which in turn leads to longer response times as appliances have to travel further.

Neighbouring stations will attend an incident when the local appliance is not available, sometimes meaning our emergency response standard is not met.



Geographic area that can be covered in 10 minutes from fire stations.

The challenges of geography

Our fire stations are located across the county to maximise fire cover, but the image above shows the limited geographical coverage each fire station can cover within 10 minutes.

This 10 minutes includes the time it takes for our crews to mobilise when a station is alerted. For our wholtime crews mobilisation is within 60 seconds on average, for our on-call firefighters this is between four and five minutes.

How we match our operational capability to the community risk

Fires and pumping

Relevant community risk register entries (please page 20)

Moderate: Fires involving scrap/recycling; Surface water flooding; Fire or explosion at a gas LPG or LNG terminal or flammable gas storage;

Low: Fire or explosion at a range of industrial sites including fuel distribution sites or sites storing flammable and/or toxic liquids in atmospheric pressurised storage tanks; Aviation accident; severe wildfires; Fire or explosion at gas pipeline following ignition of flammable gas under high pressure

All of our front line fire crews are trained to extinguish domestic, commercial and industrial fires. Training focuses on how to extinguish fires utilising breathing apparatus as respiratory protective equipment. Specialist capabilities such as cold cutting is requested as and when required from Cambridgeshire and Suffolk Fire and Rescue Service.

Sufficient firefighting foam (compressed air foam system CAFS, low expansion and high expansion) is available for extinguishing liquid fuel fires and deep seated fires.

We will train crews in King's Lynn and Great Yarmouth and the surrounding fire stations to extinguish fires on vessels in port.

Our tactical commanders at King's Lynn and Great Yarmouth receive additional training in commanding incidents on vessels.

We train all of our tactical and advanced tactical commanders on wildfires and provide an off road capability to provide access, equipment transportation and extinguishing media.

We will provide access to call off arrangements for heavy plant machinery to assist in us in extinguishing waste fires.

We supplement pumping appliances with water carriers and a high volume pump hosted and deployed on behalf of the National Resilience lead authority.

Appliance provision for fires and pumping:

General purpose type B fire appliances: response to fires and pumping, breathing apparatus, ladders, quick strike foam provision.

Rural fire appliances:

Response to fires and pumping, breathing apparatus, ladders, off road 4x4 capability, with CAFS.

Water Carriers: Bulk distribution of water and foam

Off road vehicles: Wildfire, water mist system

How we match our operational capability to community risk – Rescues

Relevant community risk register entries

Very high: Flooding – Coastal; Cold and snow

Moderate: Fires involving scrap/recycling; surface water flooding; Storms and gales; railway accident.

Low: Incident leading to evacuation of vessel on inland waterways; Aviation accident.

All of our fire crews are trained to perform rescues from height through the use of ladders. Aerial ladder platforms provide a safe working platform for rescues up to 32m. For heights higher than 32m or for inaccessible rescues, a rope rescue team is provided through Urban Search and Rescue (USAR) teams.

All of our fire crews are trained to undertake confined space rescues, with winch capabilities provided on our heavy rescue appliances and with a USAR specialist capability.

All of our fire crews are trained to rescue people from road traffic collisions and transport incidents.

All fire appliances are provided with hydraulic rescue equipment, supplemented by four heavy rescue appliances carrying enhanced equipment and with USAR providing a specialist capability.

USAR provides rescues from collapsed structures.

Our fire crews are trained and equipped to deliver intermediate medical care with clinical governance aligned with the East of England Ambulance Service.

All of our fire crews are trained to undertake bankside rescues of casualties in water, supplemented by water first responder type D teams to undertake wading and raft based rescues and team type B teams to undertake swift water rescues, via surface rescue boats and by swimming.

We respond to flooding incidents to protect property at risk of flooding and remove flood water from buildings and infrastructure. Rescues from fallen trees is provided by our USAR chainsaw operatives.

All of our fire crews are trained to safely work with trapped large animals; with dedicated animal rescue teams to undertake the rescues.

Appliance provision for rescues:

General purpose type B fire appliances: hydraulic rescue equipment, ladders, safe working near water equipment and throw bags, safe working at height.

Rural fire appliances; off road capabilities, hydraulic rescue equipment, ladders, winches, water rescue equipment, safe working at height.

Heavy Rescue Pumps: enhanced hydraulic rescue and cutting equipment, ladders, winches, confined space rescue.

Technical Rescue Unit: Specialist water and animal rescue, working at height.

Aerial Ladder Platform: Rescue from height.

Urban Search and Rescue: Rescues from building collapse, sub surface, height and stabilisation of dangerous structures, rope rescue, specialist cutting equipment including chain saws.

4 x 4 vehicles; transportation of equipment and personnel.



How we match our operational capability to community risk

Hazardous materials

Relevant community risk register entries

Moderate: Road or tanker accident containing dangerous goods; very large toxic release;

Low: Fire or explosion at a range of industrial sites including fuel distribution sites or sites storing flammable and/or toxic liquids in atmospheric pressurised storage tanks; Radiation exposure from stolen goods;

We provide hazardous environmental material protection advisers (HEMPAs) to provide advice to commanders on mitigating the effects of an accidental release of a hazardous material and the protection of the environment. HEMPA's are also trained to provide an Initial Assessment Team (IAT) to test substances in the field to identify hazards and to quantify the risk.

We work in partnership with the Environment Agency to transport and deploy large quantities of protective equipment to mitigate the effect of hazardous materials on the environment.

All of our fire crews are trained to use gas tight suits and undertake decontamination.

We deploy a mass decontamination capability on behalf of the National Resilience lead authority. All fire crews are trained and equipped to attend a chemical or biological attack as the initial operation response (IOR).

All of our fire crews are trained to attend incidents involving radiological or nuclear materials supported by monitoring and testing equipment.

Appliance provision:

General purpose type B fire appliances: Gas tight suits, level 1 environmental protection; dosimeters.

Rural fire appliances; Gas tight suits, level 1 environmental protection; dosimeters.

Heavy Rescue Pumps: Gas tight suits, level 1 environmental protection; dosimeters; survey meters.

Environmental Protection Units; Gas tight suits; full decontamination; covering drums; decanting; environmental protection.

Mass decontamination unit: equipment to decontaminate large number of people.

Terrorism

All of our fire crews will attend the aftermath of a terrorist attack to provide intermediate emergency medical care, to decontaminate the public and first responders, to rescue trapped casualties, to make structures safe and to extinguish fires.

We also provide National Incident Liaison Officers to assist Incident Commanders in deploying capabilities during a terrorist attack. Additionally, we provide a Marauding Terrorist Attack Specialist Response Team (SRT) that will be deployed during a terrorist attack to extinguish fires and treat and extricate casualties alongside the ambulance service and the police.

This function is deployed on behalf of the National Resilience lead authority.

Strategies

Our Community Safety Strategy (prevention and protection) 2020-23

How we will reduce the volume, impact and harm from emergency incidents

- We will join forces with our partners in Norfolk Constabulary and local authorities to work together and drive a reduction in arson
- We will improve community engagement following any serious incident or volume of repeat incident types. Activities include working with partners and communities to undertake arson reduction, undertake Home Fire Risk Checks and communications campaigns
- We will use local and national operational learning to ensure our preventative work is effectively targeting those most at risk and identify emerging risk
- We will evaluate all community safety activity to understand how to make it more effective and identify its impact.
- We will continue to integrate the delivery of community safety activities in the role of our firefighters
- We will strengthen our provision of prevention services in rural areas.

How we will help those most at risk through early help

- Exchange timely risk information through co-location partnership arrangements and referrals
- Look to develop a common community risk profile assessment methodology with our partners
- Develop and contribute to cross-organisations teams to support key initiatives and programmes
- Improve engagement and collaboration with families and communities to help identify vulnerability and develop community resilience
- Support the strategic Safeguarding Board, sharing information across our partners, with a multi-agency pathway to ensure that risk is identified and lessons are learnt
- The proactive use of all media channels to promote and provide guidance to help individuals, families and communities stay safe.

How we will work in partnership to deliver community safety education and development.

- Work in partnership to support youth development, such as the Prince's Trust Team Programme
- Provide Fire Cadet Units to support youth development and promote the role of the fire and rescue service as a career
- Lead the delivery of the multi-agency Crucial Crew safety educational experiences, accessible to year six school children across Norfolk
- Provide tailored intervention and education programmes for young people and children addressing 'Firesetting' behaviours
- Work with partners to promote safe driving through the new Safe System Approach
- Work with partners to promote the installation and testing of smoke detection and where appropriate sprinkler installations
- Work with partners to increase our capacity to improve the safety of vulnerable people through co-designed services.



How we will work with our communities and other regulators to inspect and protect Norfolk's businesses, buildings and heritage

- Engage with businesses to continue to drive down the number of false alarms from automatic fire alarms
- Work with partners to improve our engagement and support for businesses and organisations to minimise their risk from fire
- Deliver our risk based inspection programme
- Work with partners to deliver a joined up inspection programme that reduces duplication and helps prioritise inspection activity
- Take a proportionate approach to enforcing the fire safety requirements of the regulatory reform (Fire Safety Order) 2005
- Support businesses and organisations in complying with the legislation and taking consistent and focused enforcement action, including prosecutions, for serious contraventions
- Through our risk based inspection programme and regional working, we will support the protection of heritage from fire.

Our Operational Response Strategy 2020-23

The aim of our operational response strategy is to ensure that, should an incident occur, we can minimise the impact of that incident by providing a timely, appropriate and resilient response capability. Our response strategy comprises a number of key elements from the National operational concept of operation through to our local doctrine, as described below.

Our Fire Control

On receipt of emergency calls we will assess requirements and, where appropriate, deploy the nearest most suitable assets. We will look to maintain contact with callers to provide support, gain further information and, where applicable, provide immediate lifesaving guidance and also liaise with other agencies. Contact will also be established and maintained with all assigned operational assets throughout the emergency event. We will continue to drive down malicious calls through our call challenge procedures.

Our Incident Commanders

We will utilise the nationally recognised Incident Command System (ICS), which provides a framework for managing operational incidents and ensuring the health, safety and welfare of all personnel on the incident ground. There are four incident command levels covering initial, intermediate, advanced and strategic incident command.

The Fire and Rescue Service National Coordination Centre (FRSNCC)

The FRSNCC facilitates the deployment of national resilience assets (see below) to major incidents around the country. We will both provide and request assistance through the FRSNCC as required.

Our Response Levels

We have identified three levels of response which provide a framework for how we respond to incidents. Associated with each level are a number of capabilities. For all but the simplest type of incident, it is likely that a combination of response level capabilities will be utilised. The response levels are as follows:

Local response capability is an all hazards response and is designed to deal with the initial stages of any incident. This capability is delivered by both our on-call and wholetime firefighters operating from a number of fire stations around the county. All of our firefighters are trained to operate at this level in order to support this capability.

Specialist response is a specialist capability. We will maintain a number of special appliances including our Aerial Ladder Platforms, Technical Rescue Units, Environmental Protection Units and a Command Support Unit. Specialist teams are formed from within our existing staff who receive additional skills training as appropriate.

National response. The FRS has a vital role to play in providing a national resilience capability against risks such as chemical, biological, radiological or nuclear incidents, terrorist attacks or other major emergencies. Within Norfolk we will provide on behalf of the national lead authority, Urban Search and Rescue (USAR), team typed flood response, specialist teams to respond to marauding terrorist attacks, mass decontamination and high volume pumping.

Our Weight of Attack

Ensuring our initial response is appropriate to the incident type, is sustainable and that firefighters can operate within safe systems of work is essential to our response capability. Our initial response is described within our Pre-Determined Attendance (PDA) procedures which have been derived from operational learning, scenario planning and best practice. They are reviewed on a regular basis to reflect changes in risk and national guidance.

Scale and Concurrency

Historical analysis of incident types provides an indication of the scale and concurrency of incidents we attend. Based on this information we have assessed that, at any one time, we should plan to be able to respond to two large scale incidents (five plus fire appliances) plus numerous other small incidents (one - three fire appliances). In the event of spate conditions exceeding 48 hours duration or the declaration of a major incident or emergency we would consider requesting over the border, regional or national assistance.



Operational Risk Information

We recognise the importance of providing accurate and timely risk information to our operational crews. We will embed the national Provision of Risk Information System (PORIS) to provide incident commanders with timely, accurate and accessible information on known building and site risks.

Our Operational Assurance

We regularly review our performance at operational incidents to identify good practice and areas for improvement. This information is then shared throughout the service and with partners this is used to amend policies and procedures where appropriate, informs training delivery or influences the design and purchase of new equipment and tests our IRMP.

Our Operational Doctrine

We recognise the benefits of the National Operational Guidance programme and will continue to update our operational procedures. We will also work to ensure our operational doctrine reflects the national Joint Emergency Services Interoperability Principles.

Proposals

Proposed areas of development and change

Proposal 1.

Strengthen our community fire protection services

As part of our draft plan we have updated our understanding of the fire safety risks in our communities and revised our fire safety inspection programme. Since the Grenfell Tower tragedy, there has also been national work looking at fire safety.

Because of these changes we are proposing to put more resources into fire protection to increase the amount of support we provide to businesses to help them ensure their buildings are safe and for us to inspect more buildings.

We are currently looking at what resources we can reinvest from our existing budget into this vital work. However, we think that we are likely to need additional funding to support us with this.



Proposal 2.

Develop a new concept of operations

We always aim to respond in the best way we can and how we respond to emergencies is called our 'concept of operations'. We have developed our concept of operations over time by reviewing how effective we have been.

Things have moved on since our last IRMP and changes in technology, vehicles, equipment and systems of work mean that there are now potentially better ways of doing things. We want to look at what new technology and approaches are available and think about how we can respond better and deal with risks in our communities in the best way.

We are therefore proposing to review our concept of operations to make sure we take full advantage of these new developments to keep firefighters and communities safe. We are also proposing to speak to other fire and rescue services to explore how they deal with incidents and whether we would benefit from making changes.

Paris Firefighters deploying their firefighting robot (Shark Robotics).

Proposal 3.

Explore the potential to undertake co-responding

At the moment, our firefighters give medical care at incidents. However, we do not send them specifically to respond to medical emergencies.

Currently ambulances respond to medical incidents such as cardiac arrests, but we believe that if we were nearer to the scene than an ambulance and were able to respond, patients could be treated more quickly and we could help to save lives.

We are therefore proposing to explore the potential for responding to medical incidents such as cardiac arrests in conjunction with the ambulance service. This would involve discussing co-responding with our staff and partners and examining the potential for extra funding to pay for this additional service

Proposal 4.

Maintain our specialist water rescue capability

The risk of flooding in Norfolk is very high and we currently have specialist water rescue teams, which can help rescue people in lakes, rivers and during floods.

These teams were originally funded by Central Government but that is no longer the case.

We believe these teams are still essential and we are proposing to fund this service through council tax which comes through Norfolk County Council.

Proposal 5.

Change the way we measure performance against our emergency response standards

The time it takes for our fire appliances to reach a scene is known as an emergency response standard.

Across the country, fire and rescue services measure this in different ways. However, our inspectorate has recommended developing a common national approach and hopes these new national standards will be ready by the end of 2020.

We are proposing to adopt the new national standards once they are announced, which will mean bringing our approach to measuring performance in line with other fire and rescue services.



Appendix 1.

Constructing the IRMP – Methodology

In order to undertake analysis on demand, risk and site optimisation ORH Ltd were employed.



The 2020-23 IRMP uses a comprehensive data set including nine years of Norfolk Fire and Rescue Service incident data.

Sources of other data sets and information used include:

- Norfolk's Joint Strategic Needs Assessment
- Adult Social Services, Norfolk County Council
- Public Health England
- The Valuation Office Agency
- Norfolk Infrastructure Delivery Plan 2018-28
- Area Action Plans
- The Home Office
- The Broads Authority
- data.police.uk
- The Environment Agency
- The Health and Safety Executive
- Norfolk Fire and Rescue Service incident data
- Office of National Statistics
- Ministry of Housing, Communities and Local Government
- Previous IRMPs

This IRMP has been developed in accordance with national guidance <https://www.gov.uk/government/collections/integrated-risk-management-planning-guidance>.

Appendix 2.

Additional relevant legislation

Fire and Rescue Services (Emergencies) (England) Order 2007

Makes it mandatory for FRS to: make provision for decontaminating people following the release of chemical, biological, radiological or nuclear (CBRN) substances; make provision for freeing people from collapsed structures and non-road transport wreckages; use, on request, specialist CBRN or Urban Search and Rescue resources outside their own areas.

Regulatory Reform (Fire Safety) Order 2005

Applies to all non-domestic premises in England and Wales and requires all responsible persons in those premises to carry out a fire risk assessment and implement and maintain a fire management plan. FRSs are responsible for the enforcement of this legislation.

Health and Safety at Work etc. Act 1974

Places a duty on all employers to ensure, so far as it is reasonable practicable, the health, safety and welfare at work of all employees.

European Working Time Directive Implemented through the Working Time Regulations (1998) it provides direction on organisation of working time.

Localism Act 2011

Enables a general power of competence for Best Value Authorities

The Equality Act 2010

Brought together the laws on equality into one piece of legislation with the aim of simplifying their application. The purpose of the Act is to provide protection against discrimination and promote equality of opportunity for individuals and groups with protected characteristics.

References

- Broads Authority (2019) Annual health and safety report and the annual review of marine incidents. https://www.broads-authority.gov.uk/_data/assets/pdf_file/0020/1571501/Health-and-Safety-ba170519.pdf
- CFOA (2014) Climate Change Adaptation <http://www.cfoa.org.uk/download/58444>
- CLG (2009) Integrated Risk Management Planning Guidance Note 4; A risk assessment based approach to managing a fire safety inspection programme <https://webarchive.nationalarchives.gov.uk/20121029133723/http://www.communities.gov.uk/documents/fire/pdf/IRMPguidance4>
- DEFRA (2018) National Adaptation Programme https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727252/national-adaptation-programme-2018.pdf
- HMICFRS (2019) Fire and Rescue Service inspections 2018/19 Summary of findings from Tranche 2 <https://www.justiceinspectorates.gov.uk/hmicfrs/wp-content/uploads/fire-and-rescue-service-inspections-2018-19-tranche-2.pdf>
- Home Office (2017) Focus on trends in fires and fire-related fatalities https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/650869/focus-trends-fires-fatalities-oct17.pdf
- Health and Safety Executive COMAH establishments <http://www.hse.gov.uk/comah/comah-establishments.htm>
- MHCLG (2015) Indices of Deprivation <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>
- MHCLG (2018) English Housing Survey Headline Report, 2017-18 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774820/2017-18_EHS_Headline_Report.pdf
- Norfolk County Council Norfolk Learning Disabilities Strategy 2018-2022 <https://www.norfolk.gov.uk/care-support-and-health/disabilities/learning-disabilities/learning-disabilities-partnership-board>
- Norfolk Prepared Community Risk Register <http://www.norfolkprepared.gov.uk/>
- Norfolk Safeguarding Board Self Neglect and Hoarding Strategy 2019 <https://www.norfolksafeguarding-adultsboard.info/assets/SELF-NEGLECT-and-HOARDING/NSAB-SNandH-Strategy.2.1-JUN2019FINAL.pdf>
- Parliamentary Office for Science and Technology Climate Change and UK Wildfire (2019) <https://research-briefings.files.parliament.uk/documents/POST-PN-0603/POST-PN-0603.pdf>