IRMP 21-25 Risk Review; Performance.

Contents

Context of this review

This risk review is based on internal data. An external report is also supplied in a separate risk review this provides an independent analysis of SFRS incident data and performance. (Performance External Report.) The bulk of this report was completed in early 2020 as such Service data for 2019/20 is not widely available and in some cases has been predicted. Where year end data 31/3/2020 has become available this has been added.

Executive Summary

The total number of incidents the Service attended over the five-year period between 2015-2020 has marginally increased. [1]

Reductions across some incident types have been offset by a growth in others - most notably special service calls.

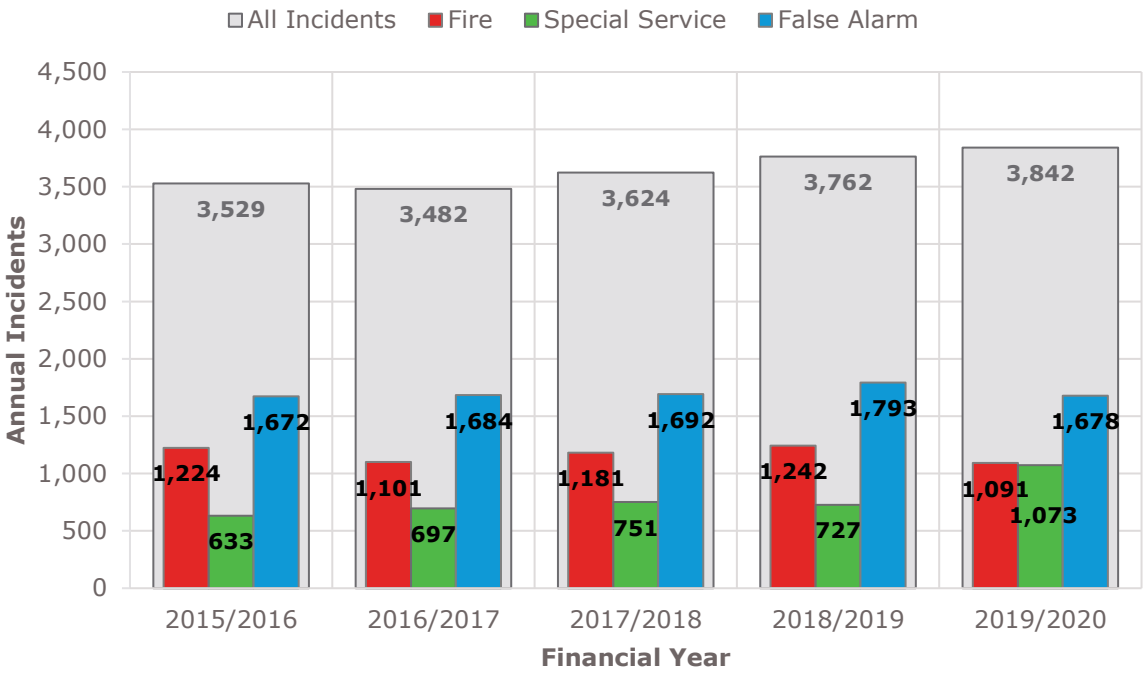
This is a consequence of significant weather events, especially during 2019/20. It is also due to increased partner support such as assisting Police with missing persons searches or working with the Ambulance Service, gaining entry to properties to allow for emergency medical treatment.

Accidental dwelling fires continue to reduce in number.

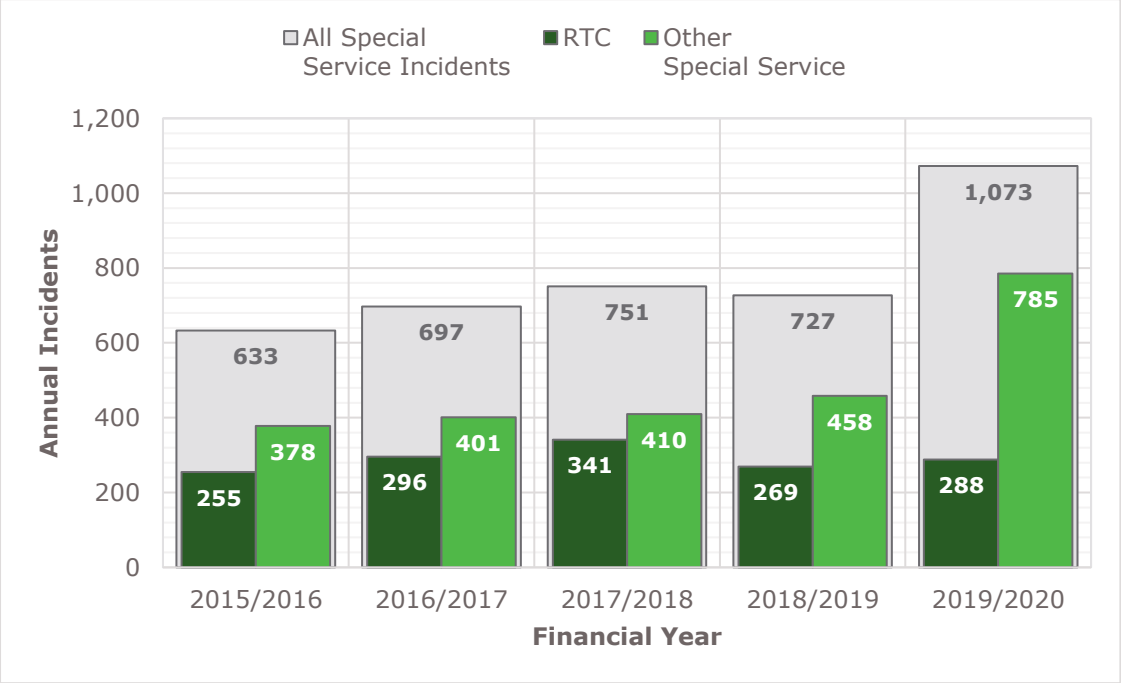
Arson has dropped but maybe at a plateau.

[1] Year end 2019/20 data included verified by external report.

Total Incidents by Year



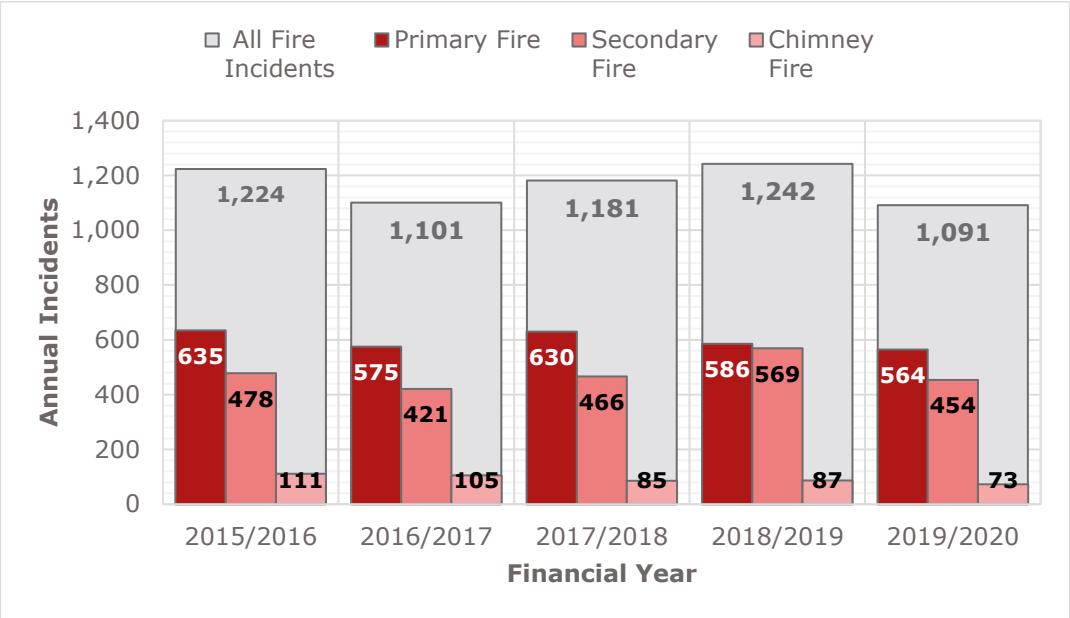
Special Service Calls by Year



All Fire Incidents

Fire Incidents[2] have reduced by 10.9%.

- Primary fires have reduced by 11.2% including a 20% reduction in accidental dwelling fires (254 to 203)
- Secondary Fires have reduced by 5%
- Chimney Fires reduced by 34%

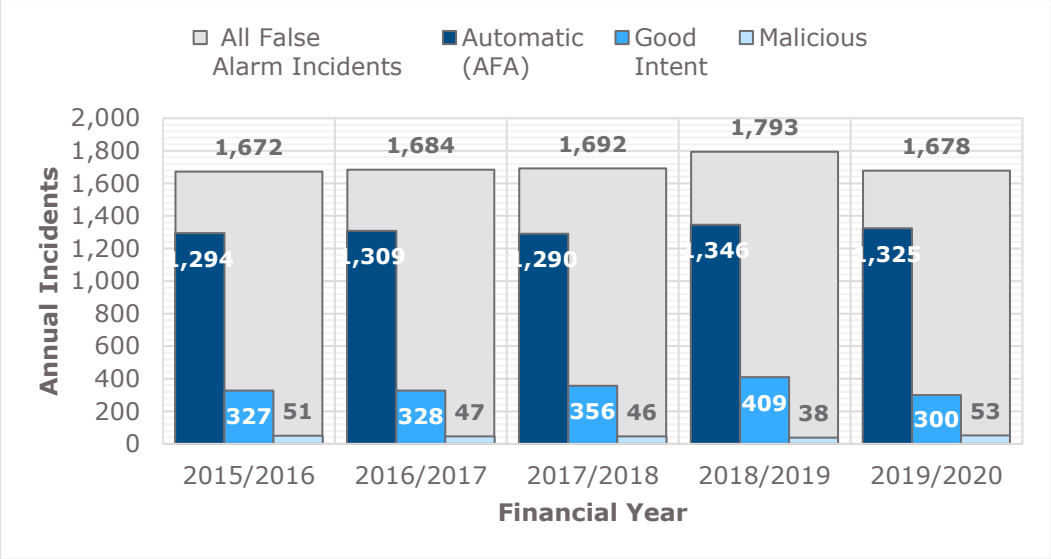


False Alarms

Since 2015, automatic fire alarm (AFA) activations have remained static, accounting for about 30% of responses despite a growth in the provision of such systems.

Call challenging and other initiatives targeted at reducing the number incidents are already having an impact and work will continue to reduce these incidents.

[2] Primary fires are generally more serious fires that harm people or cause damage to property. Secondary fires are generally small outdoor fires, not involving people or property. Incident Recording System (IRS).



Both the 2015-20 and the proposed 21/25 IRMP response standard will be challenging as Countywide risk flattens. This will be driven by an increasing proportion of incidents in rural areas, often involving greater travel distances coupled with an increasing number of incidents. Total incidents are projected to further increase as incidents such as missing persons searches and gaining entry requests increase.

Accidental primary fire data can be influenced by hot weather. Future climate predictions and the increasing use of rural land to support tourism and leisure increase the likelihood of outdoor primary fires. This has also been reflected by an increase in agricultural vehicle fires.

Accidental dwelling fire numbers have dropped by 20% since 2015. However, we recognise the challenges of the changing risk profile of Shropshire. Numbers of pensioners, especially the 85+ are predicted to increasing significantly. This will leave more people in the community, often living alone, statistically highly vulnerable to fire.

Whilst arson continues to fall the ignition of rubbish, possibly through fly-tipping, appears to be the greatest contributor. This type of arson is opportunist and generally not pre-planned. There appears to be a significant issue with it in the Wellington and south Telford areas. This reflects the social deprivation challenges of Telford.

From studying domestic fires that have spread from the room of origin we have established that;

1. there is no correlation between the number that extend beyond the room of origin and their respective response times; with the ratio of fires that spread beyond the room of origin being lower in the rural areas than would be expected by the ratio of fires that occur there.

2. 50% of the failures are in owner occupied properties, which is a slightly higher percentage than would be expected from their percentage of all domestic fires (40%). Council data shows OAP ownership of property is significantly above the national average and set to increase further.

3. People are 2½ times more likely to have a fire that gets out of the room of origin if they don't have a working smoke alarm.

4. Unusually, only 6% of the fires that spread, started in the kitchen, compared to typically 63% of all domestic fires starting there. A working assumption could be that people are perhaps more likely to be confident in tackling the average small fire in the kitchen (e.g. burning food etc.) than they are in dealing with fires in other rooms in the house.

5. Candles and fires starting in electrical equipment or wiring are a common cause of these types of fires. Again, suggesting that fire risks left unattended lead to potentially more devastating fires in homes. These types of fire may also take longer to detect than a kitchen fire.

6. A fire starting between 10pm and 2am is three times more likely to spread beyond the room of origin. This is most likely to be related to people being in bed at this time, further emphasising the importance of having working smoke alarms fitted in all homes.

Findings based against Service Targets,

- Response
- Accidental Primary Fires
- Accidental Dwelling Fires
- Deliberate Fires
- Fire Related Deaths and Serious Injuries
- Fires Confined to Room of Origin (not a Service target)
- Injuries Sustained by Staff Through Firefighting

Incident Data

- Accidental Dwelling Fires, Cause, Tenure and Statistics
- Commercial Fire Data (link to more detailed incident data)
- Automatic Fire Alarm (AFA)
- False Alarm Good Intent
- False Alarm Malicious
- Flooding and Water Rescue
- RTC
- HAZMATS
- Missing Persons
- Gaining Entry

Findings;

Response

Year	Target	Performance
2015/16	89%	90%
2016/17	89%	90%
2017/18	89%	89%
2018/19	89%	86%
2019/20	89%	85%

The attendance target of a 15-minute average on 89% of occasions has become a significant challenge despite the Service having the best mainland availability in England. Times have increased and continue to do so.
These increases could be the result of a host of underpinning factors covered in greater detail in this risk review.

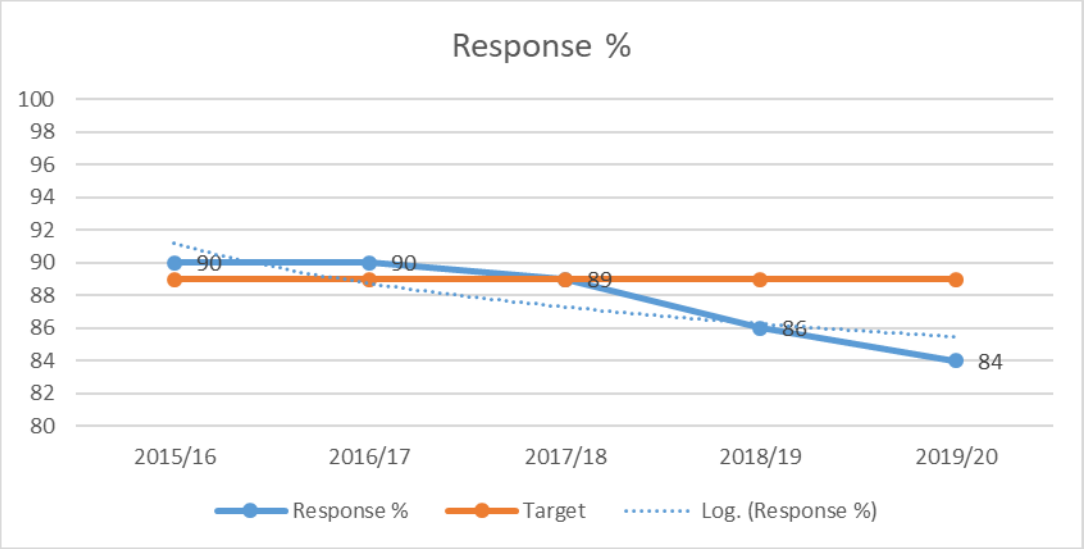


Figure 1 - Shropshire's annual performance against its 15-minute Response Standard

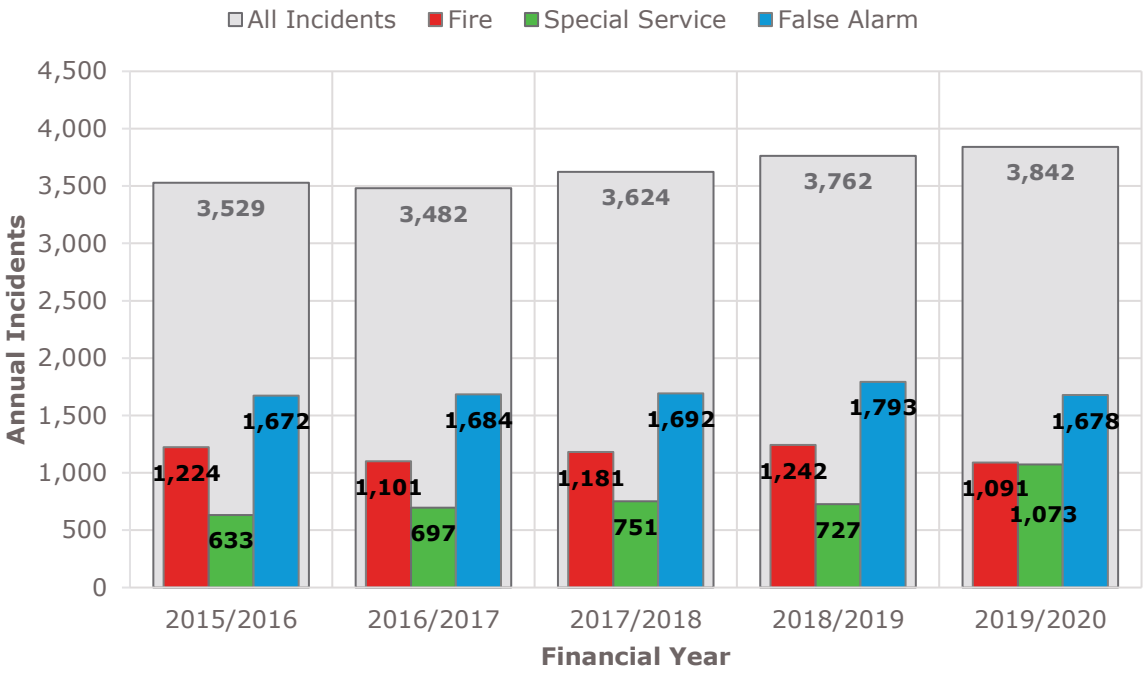


Figure 2 - Total number of incidents attended by SFRS between 2015 and 2020 externally data cleansed

Performance in this area is made up of three elements:

- 999 Call handling times;
- Response time for travel into the station for On Call personnel, plus the time to turnout from the station for Wholetime and On Call crews;
- Travel time from the station to the incident.

Analysis of those incidents where the Service has failed to meet the target, continues to show that the vast majority of the failures are in rural, and remote rural, areas. Here the actual travel distance to the incident is the determining factor and makes attainment of the 15-minute target challenging or impossible.

Figures 3 and 4 compare the Service's performance against those of other similar fire and rescue services, as well as the average across England. It is clear there is a general trend towards increasing response times. National research shows that this has been an ongoing trend over the last 20 years or so.

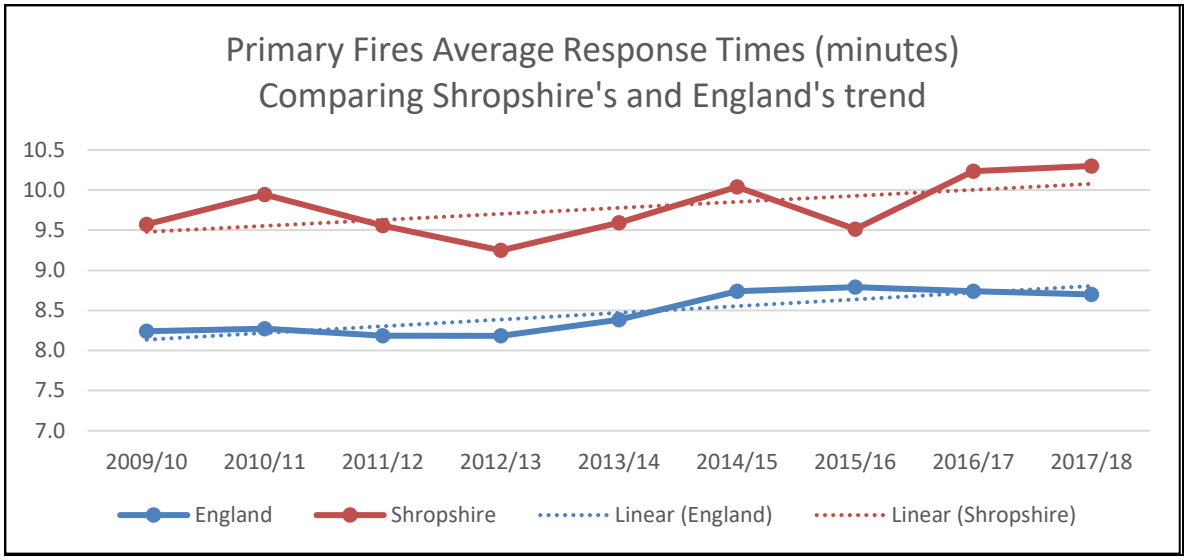


Figure 3 - Shropshire's average response time compared to England.

Shropshire Fire and Rescue Service (SFRS) are not alone in experiencing a rise in Response standards and Figure 3 (below) illustrates the latest available data captured by Home Office and a significant rise across all incident types can be seen since 2012/13. The main contributory factor is cited in the report as travel time and that rising traffic levels was the primary cause.

Table 1 Response times to fires by type of fire with a summary of trends[9], England; 2017/18

Type of Fire[10]	2017/18	Change since 2016/17	Change since 2012/13
Primary	8 minutes 45 seconds	0 seconds =	+34 seconds ↑
Dwelling	7 minutes 44 seconds	+2 seconds ↑	+21 seconds ↑
Other building	8 minutes 30 seconds	-1 second ↓	+38 seconds ↑
Road vehicle	9 minutes and 35 seconds	0 seconds =	+27 seconds ↑
Other outdoor	10 minutes and 46 seconds	+8 seconds ↑	+1 minute 9 seconds ↑
Secondary	9 minutes 10 seconds	+1 second ↑	+48 seconds ↑

Source: FIRE1001

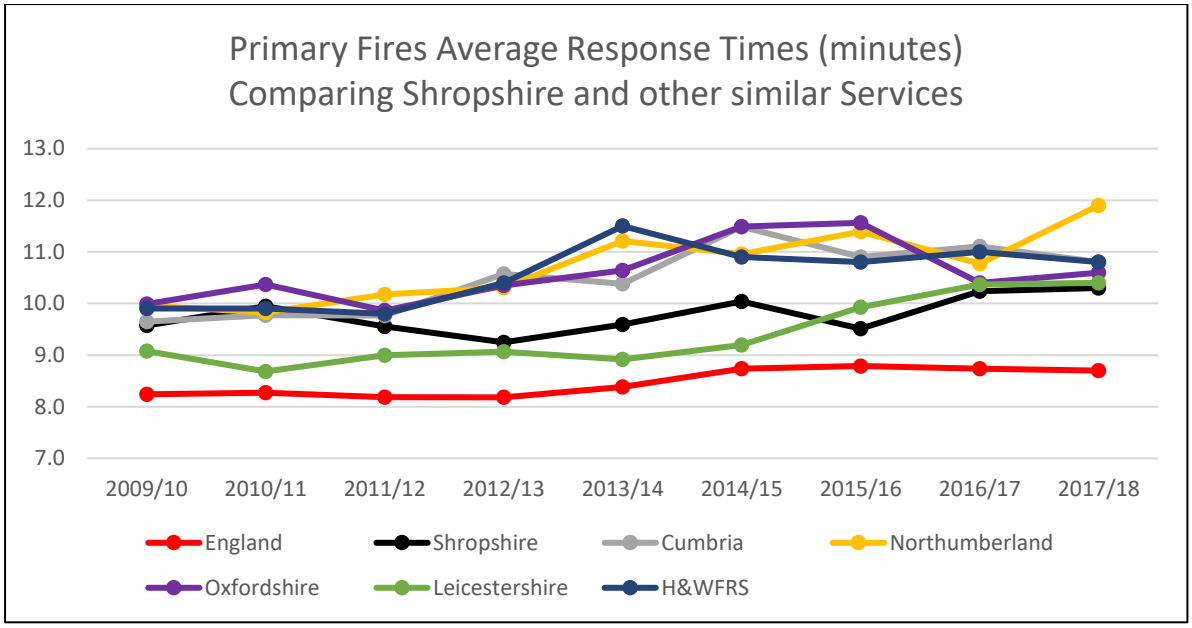


Figure 4 - Comparing Shropshire's response times to other similar Services and England

The national research has drawn the following conclusion about possible factors that have affected this:

These may include changing traffic levels, health and safety policies, 'drive to arrive' policies and control staff typically asking more questions of the caller to better assess the risk and attendance needed. However, it is difficult to isolate the impact of any of these individual factors, and there may also be other factors, locally or nationally, which affect response times.[3]

It is certainly true to say that all these factors are, or have been, potentially at play within Shropshire. It is, however, pleasing to note that the apparent increase in risk, which could be expected to result because of this trend, is not apparent in terms of the numbers of fires and resultant casualties we are seeing either in Shropshire, or across England.

However, it is notable that these factors do not take any account of possible changes that may have occurred in 'where' the incidents are happening; instead assuming the incident profile has remained consistent. Local analysis has identified several other factors that may possibly be contributing to the change in performance over the last 12 months.

3 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/675939/response-times-fires-england-1617-hosb0318.pdf

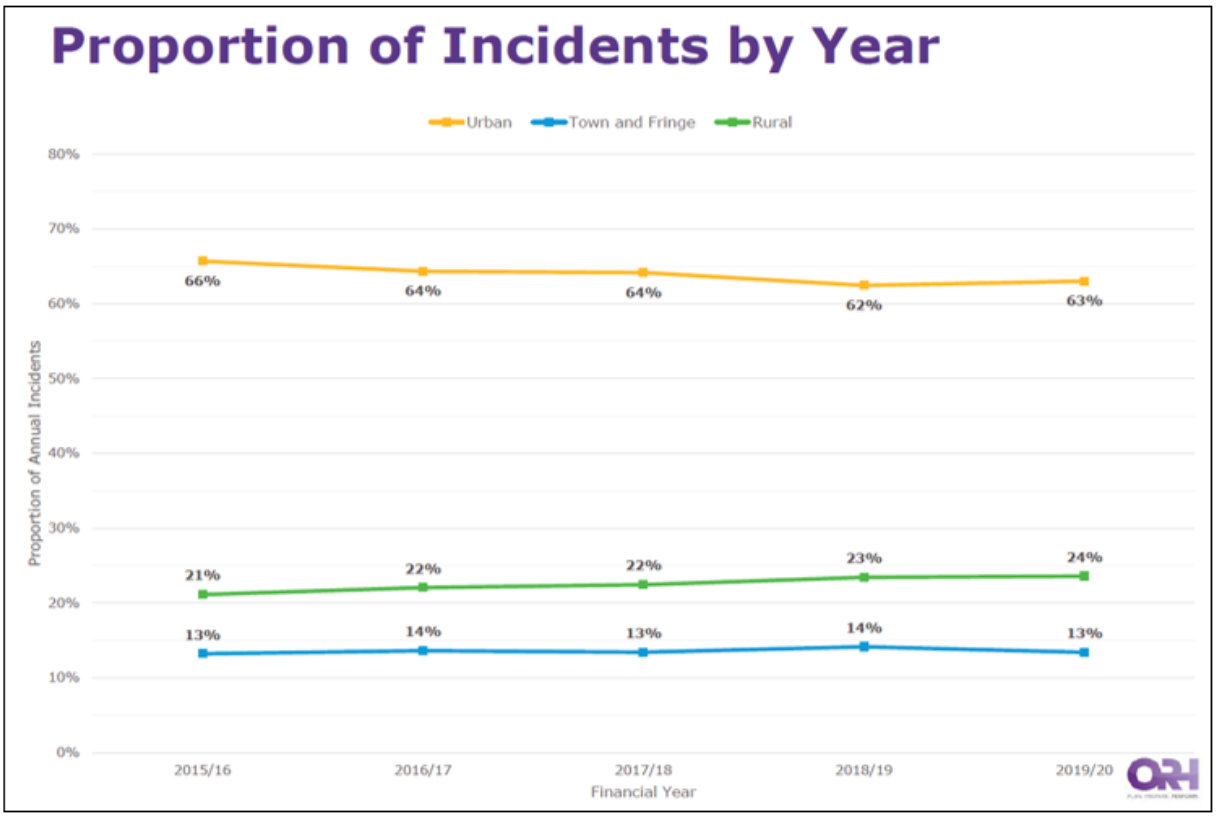


Figure 5 - Changes in the percentage of incidents occurring in different parts of the county

Less fire incidents in urban areas and a growth of incidents in rural areas.

As illustrated in figure 5, the number of incidents occurring in different parts of the county has steadily changed since 2012/13; with proportionately fewer incidents in the more urban areas and more in the most rural parts of the county. The Service believes that this is a natural consequence of all the targeted prevention activity that has been undertaken by the Service, in conjunction with its partners, over the last 5-10 years, and it demonstrates success. The downside to this excellent work is that the 'average incident' is likely to be located further away from our fire stations, resulting in the 'average attendance time' inevitably being longer. This is believed to be a factor at play in relation to the performance against this standard.

A lesser factor relates to the fact that the 2015-2020 response standard, ALL incident types are included in this measure and therefore the way that our fire engines respond to different types of incidents can impact on their response time. An example of this is the Service's response to Automatic Fire Alarms (AFAs), received from businesses and domestic properties. The Service is committed to attending all notifications of AFAs. However, our policy dictates that, in considering the most appropriate response to each incident (i.e. the appropriate weight and speed of response), account should be taken of the information received within the control room during that call for assistance. A primary response (i.e. using blue lights etc.) is appropriate if there is no information available to suggest this could be a false alarm. However, if we receive confirmation from the premises that it is a known false alarm, crews will proceed for details about the alarm, but will do so under normal road and driving conditions, resulting in slower response times. Continuing to respond for details about the alarm ensures that the Service continues to play its role in making sure that premises are

managing their alarm systems effectively (thereby helping them to reduce the risk and disruption to their business that comes from repeated false alarms) but has a negative impact on the average response time.

Unfortunately, our current method of collating data does not enable the Service to easily distinguish between the incidents that warranted a primary response and those that were for details only. AFA response is just one example of where the Service's response is varied, based on this type of risk assessed approach.
However, with AFAs accounting for approximately ¼ of all incidents, a relatively small change in the ratio of these two types of responses will inevitably have an impact on the average response time overall. Additional data development work is needed to improve the Service's current understanding of how this factor may have impacted on the Response Standard results achieved over the last few years.

Finally, over the last 10 years both Unitary Authorities have experienced significant population growth and corresponding housing and other building development across their entire area; not just confined to the mostly urban areas. The Service is working with the data analysis teams within both Authorities to understand what, if any, impact this is likely to have on our incident profile into the future. (See population risk review)

Accidental Primary Fires

Service Target

2018/19 Target	Performance 2018/19
462	486
2019/20 Target	Performance 2019/20
433	422

Performance throughout the year has been broadly in line with the taget month on month with a reduction of 64 incidents when comparing to the total figure for 2018/19 (486 for 2018/19 compared to 422 for 2019/20)

The total of 422 was made up of the following incident types:

- Dwelling fires- 195
- Vehicle Fires- 103
- Other residential property fires- 26
- Commercial property fires- 83
- 'Other' fires- 15

The end of year figure has been influenced by a high number of accidental primary fires in the first half of the year, a consequence of hot weather. Figure 7 illustrates the Service's performance since the five-year plan was published and follows a downward trend, running at an annual reduction of approximately 4%, just below the 5% year-on-year reduction target set in the 2015 IRMP.

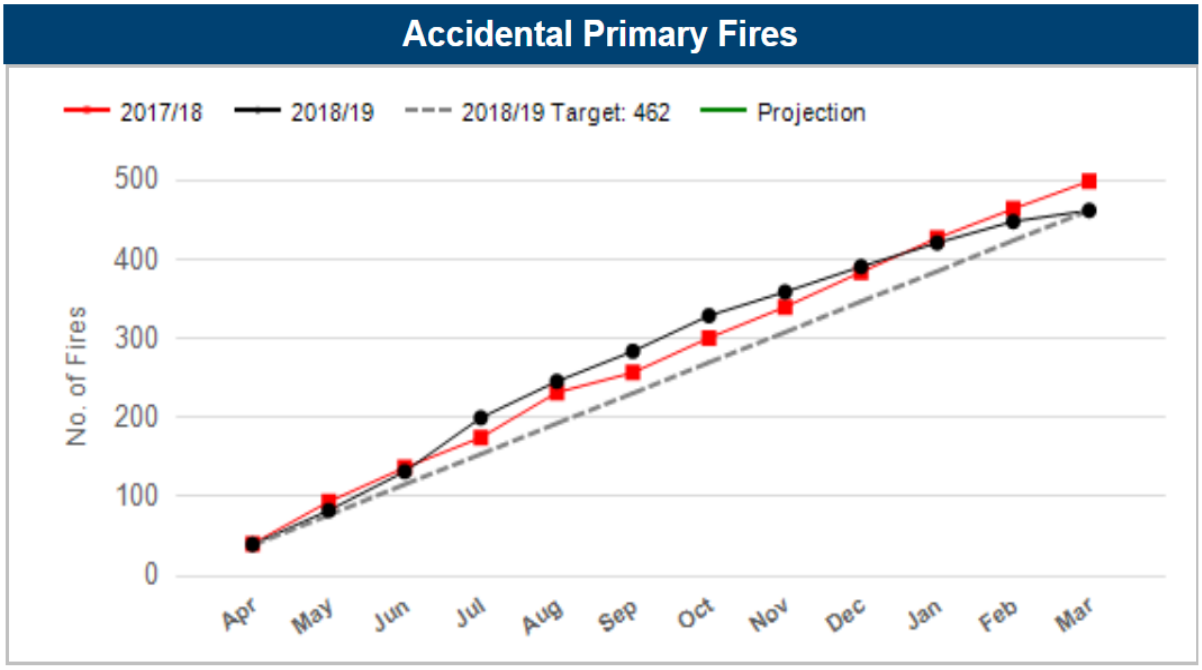


Figure *6* – Monthly performance against the annual target for Accidental Primary Fires

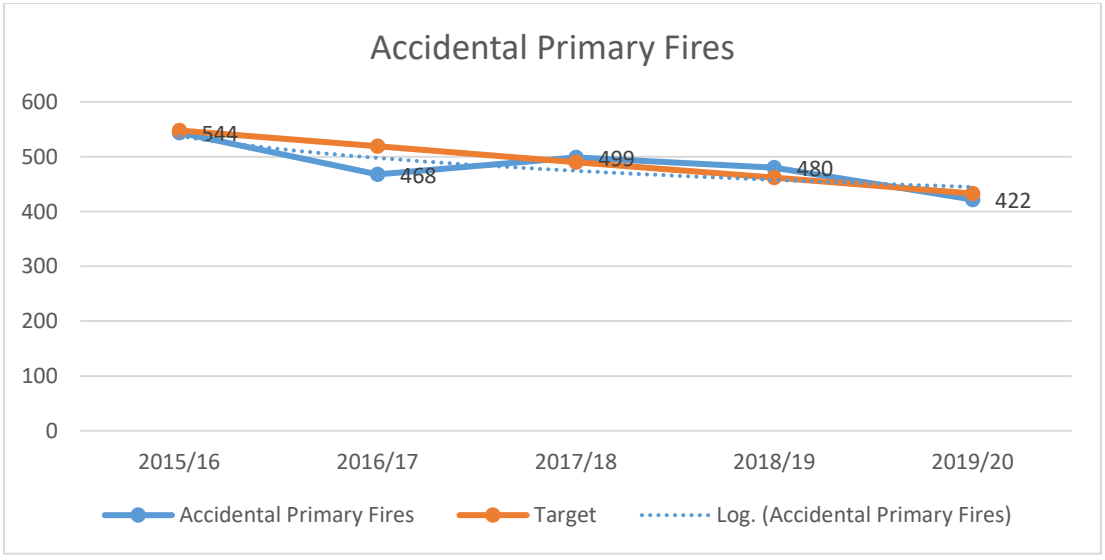


Figure 7 – Performance against the 5-year target for Accidental Primary Fires

The drop in the number of domestic fires has certainly contributed towards this improved performance. Outdoor and other primary fires were higher than normal through summer 2018, during hot weather, this led to earlier harvests across much of the country and earlier crop storage.

There has been a 10% reduction in the number of vehicle fires since 2017/18 figure, 2018/19 was a year of two halves, with a notable difference between the 79 fires during the first 6 months (half of which were in agricultural vehicles) and only half the number between October and March.

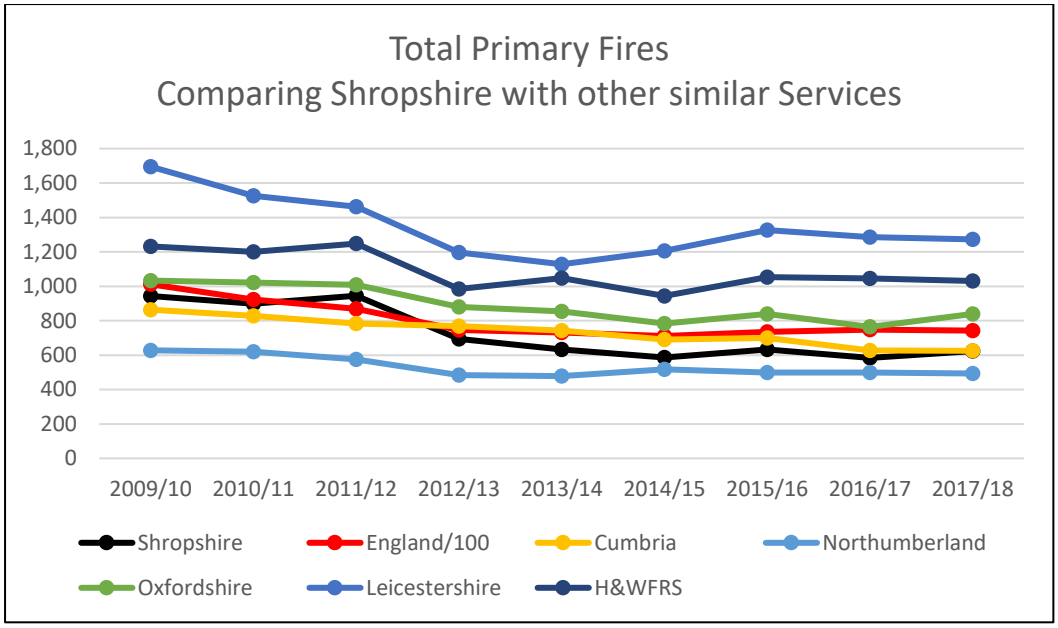


Figure 8 - Comparing the number of Primary Fires in Shropshire with other Service areas

As can be seen from figure 8, Shropshire's performance over the last 9 years mirrors our benchmark FRS colleagues, with a steady drop in fires up until 2013/14, but a levelling off since. This demonstrates the challenging target the Service set itself over this five-year period.

In addition to the continued work we intend to do around Accident Dwelling Fires (explained in the next section), based upon the learning from this year the Service will look to focus further work on vehicle fires, including an increase in our prevention messaging, especially relating to vehicle maintenance, to Shropshire's farming community.

Accidental Dwelling Fires (ADF)

Service Target

2018/19 Target	Performance 2018/19
198	208
2019/20 Target	P 2019/20
186	195

2018/19 saw a significant improvement on the previous year and continues a general downward trend in these fires over the last 4 years. This has resulted in the lowest number of dwelling fires ever recorded in the county. The reduction from 254 fires in 2015/16, to 208 during 2018/19, equates to a 4.3% year-on-year reduction over the last four years; just below the 5% target. The drop to 195 in 2019/20 represents a 20% reduction.

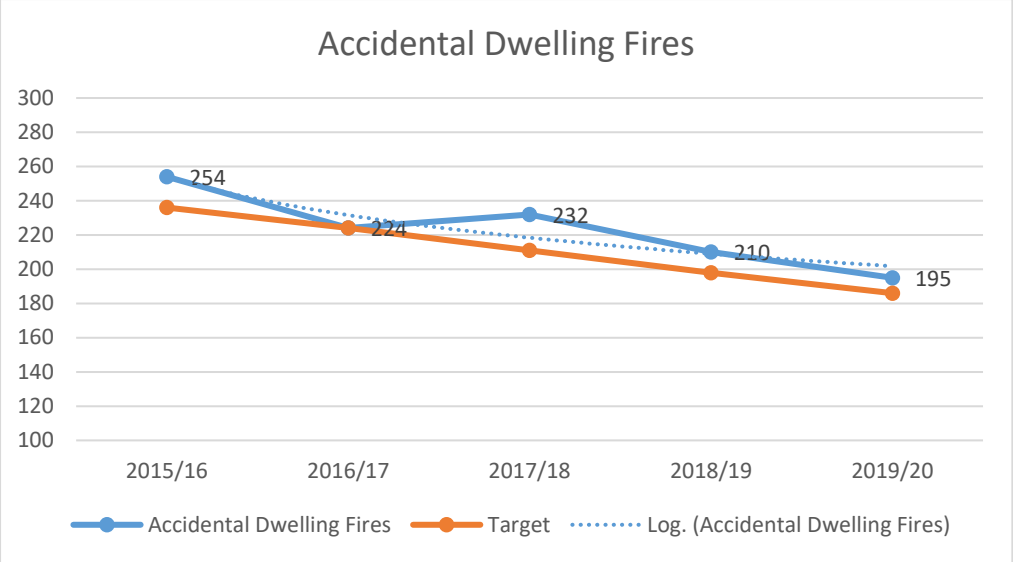


Figure 9 - Performance against the 5-year target for Accidental Dwelling Fires

In relation to where these fires are happening, Telford has seen quite significant drops across the southern and central areas, but fires have remained consistent with previous years in the Wellington area. Shrewsbury has seen ADF remain relatively static averaging around 45 per year.
Across the more rural parts of the county, whilst the number of fires in Oswestry and Ludlow are showing a slight year-on-year increase, therefore warranting the additional Prevention effort we are putting into these towns, the numbers have remained stable, or in some cases reduced, in other towns across the county; most notably in Whitchurch and Bridgnorth.

Our ADF strategy, which is driving this work, was implemented during 2018, helping to ensure that the Service's limited resources are directed to the areas and people at most risk. The strategy achieves this through four steps:

1. Identify the areas of focus, based on their incident profile
2. Identify the specific risk profiles of the most vulnerable people in those individual areas
3. Use data to then locate the vulnerable people in each risk area; and finally
4. Target these vulnerable people with our ongoing prevention campaigns, including the 'Safe and Well' visits

The Service feels that this has progressed well in Telford, but there is still work to be done, especially in relation to steps 3 and 4, for the rest of the county.

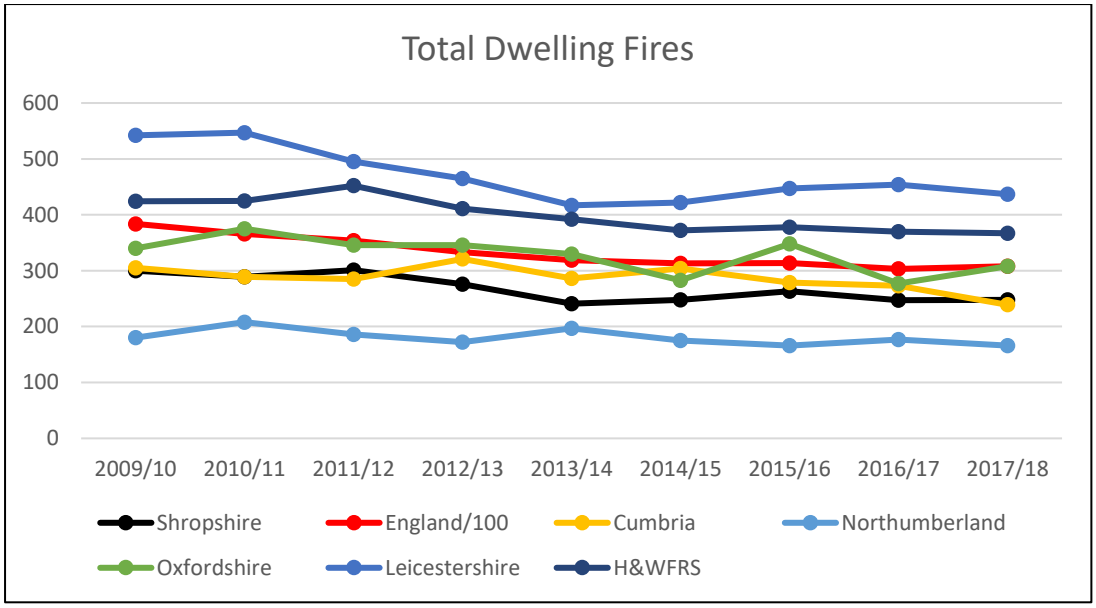


Figure 10 - Comparison between Shropshire and other Service areas in ALL Dwelling Fires - Accidental and Deliberate

Figure 10 compares the trend in the number of dwelling fires in Shropshire with those in similar Services, as well as generally across England. Note that this includes both accidental and deliberate dwelling fires and therefore the numbers shown do not directly correlate to this specific indicator, however they do serve as a useful comparator. The graph serves to demonstrate that there is a general trend towards dwelling fires now plateauing, rather than continuing with the sort of reductions we have seen across the country over the last 10 years.

Deliberate Fires

Service Target

2018/19 Target	Performance 2018/19
584	397
2019/20 Target	Performance 2019/20
547	396

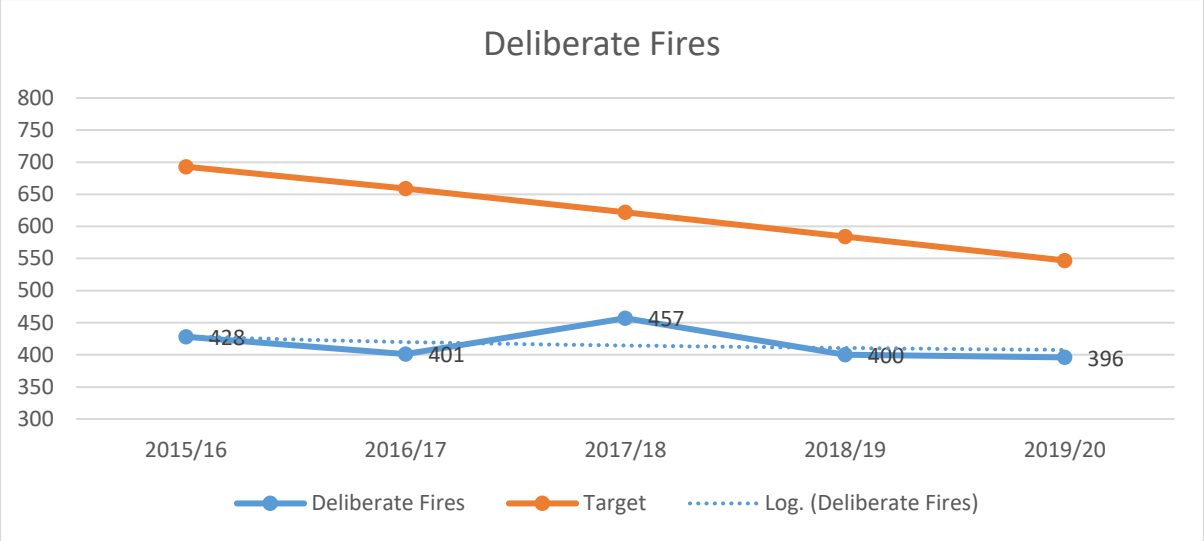


Figure 11 - Annual performance against the 5-year targets for Deliberate Fires

Service target 2018/19 has been met with a 16% drop in the number of deliberate fires compared to 2017/18. Whilst the Service has easily met the target for the last four years (a target based on much worse performance in the previous 5 years – see figure 11), the four-year trend is showing only a slight downward trend. 2019/20 has seen a plateau in arson numbers.

The ignition of rubbish, possibly through fly-tipping, appears to be the greatest contributor to the number of deliberate fires in the county. This predominantly occurs in both Shrewsbury and Telford, but there appears to be a significant issue with it in the Wellington and south Telford areas. The Rogue Landlord Task Force, which has recently come into force across Telford, is looking at this type of issue as part of their work, although this is very much in its infancy.

Our deliberate fires prevention programme is coordinated by the Fire Crimes Officer (FCO). The professional trust fostered between the FCO, West Mercia Police and other partners has been key to the consistent success in arson reduction. Early intervention with partners has enabled SFRS to identify and proactively stop arson, including re-offending.

Our I-Learn programme has also been developed to cover 'Looked after Children' and support Children's Services. After dealing with several 'Looked after Children' cases, the Service has now modified its schools' education programme, to include specialist schools that support children placed in care. SFRS has also developed a bespoke package relating to 'Looked after Children' referrals. Our improvements in this area will further help the Service to play its part in helping to reduce many forms of anti-social behaviour, as well as arson.

Increasing domestic violence awareness has also resulted in SFRS carrying out greater numbers of risk visits and providing more safety devices to these very vulnerable people. This proactive approach also incorporates mitigating the risk from

"County Lines" dug gangs and has ensured that the individuals and their families have early warning and a basic defence against attack.

SFRS plans to continue and further develop these initiatives through working with the Safeguarding Board's Domestic Abuse Forums West Mercia Police and other partner organisations. The 'Safe and Well' visits also provide a framework for signposting such risk.

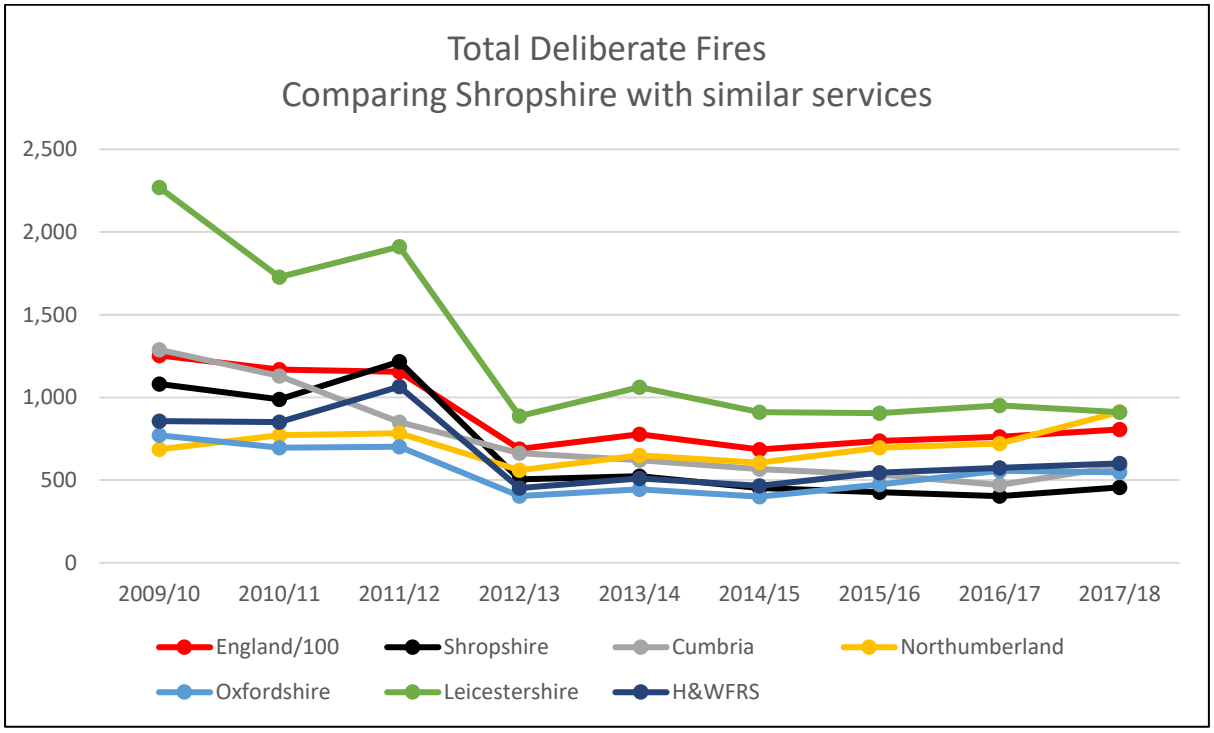


Figure 12 - Comparison between Shropshire and other Service areas in the number of Deliberate Fires

As shown in figure 12, the 9-year trend for SFRS is very similar to that being experienced across the rest of the country where, following a significant and steady drop in deliberate fires up until 2012/13, Services are now seeing a plateauing of these numbers.

Fire Related Deaths and Serious Injuries

Service Target

2018/19 Target	Performance 2018/19
17	5
2019/20 Target	Performance 2019/20
16	7

As demonstrated in figure 13, SFRS have successfully achieved this 5-year target in each year. The incidents involving the 2 fatalities in 2018/19, were Accidental Dwelling Fire fatalities - both involving fires in detached houses. There were no fatalities or serious injuries in commercial property fires. In 2019/20 the Service also achieved the target with incidents that included;

- 2 Accidental Dwelling Fire fatalities - both involving fires in houses
- 5 Serious injuries in Dwelling Fires
- No fatalities or serious injuries in commercial property fires.

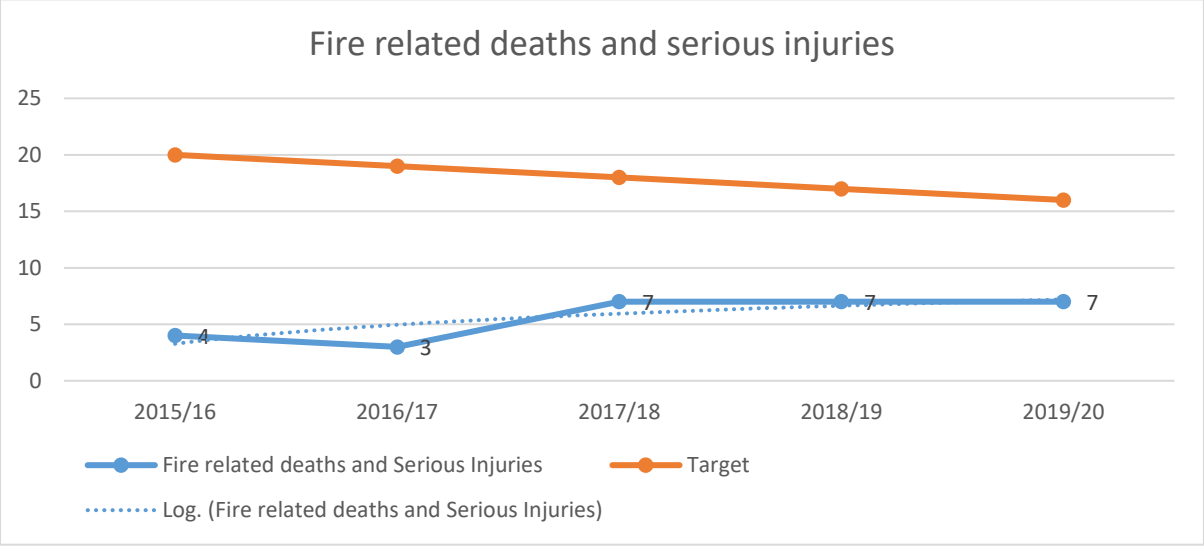


Figure 13 - Annual number of fire related deaths and serious injuries

Looking at the nine-year comparison with other fire services (figure 14), the numbers are all low and are therefore vulnerable to individual events that might involve multiple casualties. Whilst the graph therefore shows the large variances that can exist within individual fire services, the trend across England has been tending to be slightly downward, although the 2017/18 figure was impacted by the tragic loss of 72 lives in the Grenfell fire, contributing to an increase in that year.

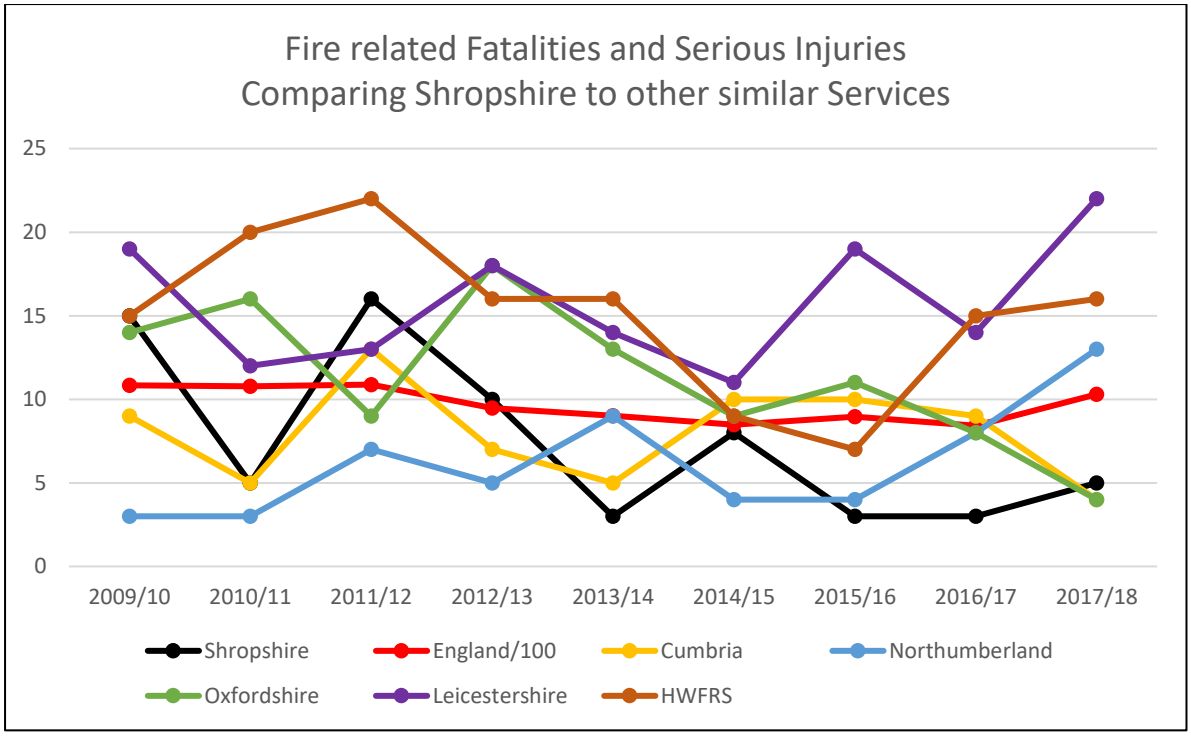


Figure 14 – Comparison between Shropshire and other Service areas in the number of Fatalities and Serious Injuries resulting from fires

Within Shropshire, the Service target has been met each year including 2019/20. However, predicted population changes may challenge this. In particular, the projected growth in the elderly population of Shropshire increases the risk of more fire related deaths and injuries. More people living independently (some fiercely independent), with multiple conditions, often in remote rural locations, will present challenges. To assist in addressing this, SFRS are constantly working with its partners to access risk data about where these vulnerable people live.

Fires Confined to the Room of Origin

Service Indicator not a specific target.

2018/19 indicator	Performance 2018/19
89.5%	88.33%
2019/20 indicator	Performance 2019/20
89.5%	89%

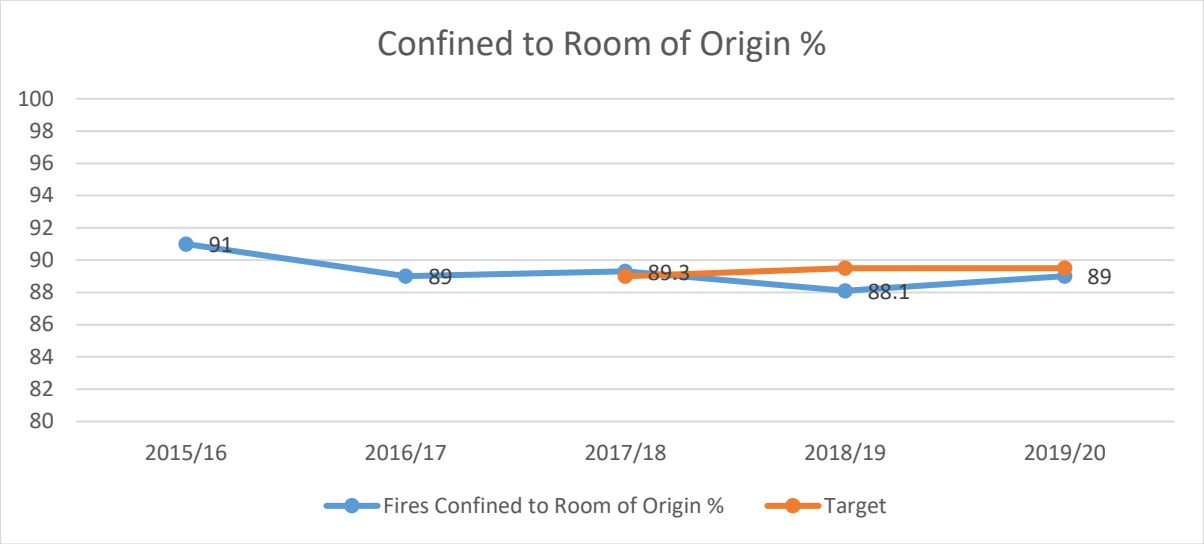
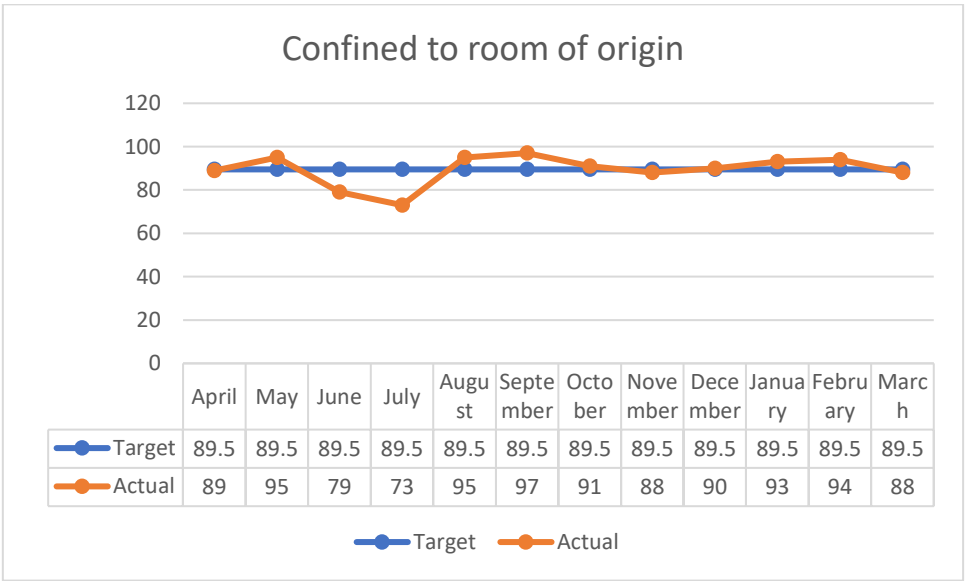


Figure 15 - Annual percentage of fires contained within the room of origin

The Service considers this measure to be an excellent way for it to get an overall view on the quality of the services it provides to the people of Shropshire, as its success depends on the effective integration of its prevention, protection and response activities. As such, many of the issues raised in the previous sections are also relevant here.

This is only the second year that this measure has been monitored, however the analysis that can now be undertaken, especially on those incidents where the fire is not contained to the room of origin, is starting to identify some significant issues that will help SFRS to further improve its services to the communities of Shropshire in the coming years.



	April	May	June	July	August	September	October	November	December	January	February	March
Target	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5
Actual	89	95	79	73	95	97	91	88	90	93	94	88

Figure 16- Monthly performance against target

As illustrated within figure 16 above, performance for the year was broadly in line with the monthly targets, however June and July witnessed several agricultural

building fires that impacted upon performance over these two months. With most of these incidents involving fires in barns, with their significant fire loading, relatively light construction generally consisting of one large room, it is perhaps unsurprising that, when a fire does manage to take hold, it is more likely than not, to spread beyond the outer walls of the barn.

When analysing data for this performance target it is clear that although the measure includes both domestic and commercial buildings, there is disparity between the two, with commercial fires only accounting for approximately a third of the fires, they account for a higher number of the failures (Approximately half). This is comparable with findings over previous years and as previously stated, building construction and use of premises will factor heavily within the indicator.

With the agricultural industry being so important to the economy of Shropshire, it is imperative that the Service makes best use of the lessons it has learnt, especially in relation to the risk of fire in barns and also the risk from poor maintenance of agricultural vehicles, which also contribute to accidental primary fires. By working with our partners (e.g. the National Farmers Union) we hope to be able to play our part in helping the farming community to avoid the financial and other impacts that so often arise when a business is hit by fire.

A more detailed breakdown can be seen below in the 2018/19 data. (this was not available for 2019/20 at time of writing)

Type of property	Number of fires	Confined to room of origin	Number extended beyond the room of origin	Fires contained to room of origin
Domestic	204	185	19	90.7%
Commercial	107	89	18	83.2%
Total	311	274	37	88.1%

(Table A. Data as of 18th March 2019 not end of year)

As shown in table A, this indicator includes fires in both domestic and commercial buildings. It also shows that, although commercial property fires only account for approximately a third of the fires included in this measure, they account for a disproportionately higher number of the failures (approximately half).

In looking at the commercial fires in particular (see table B), we see that agricultural buildings have a disproportionate negative impact on the failures that occur in commercial fires; accounting for more than half of all of all commercial fires that are not contained within the room of origin. With most of these incidents involving fires in barns, with their significant fire loading, relatively light construction generally consisting of one large room, it is perhaps unsurprising that, when a fire does manage to take hold, it is more likely than not, to spread beyond the outer walls of the barn.

Year	Number of commercial fires (CF)	Number of CF spread beyond the room of origin	CF spread beyond room of origin (%)	Number of agricultural building fires (ABF)	ABF as a percentage of all CF (%)	Number of ABF spread beyond room of origin	ABF spread beyond the room of origin (%)
2018/19	107	18	16.8	16	15.0	7	43.8
2017/18	103	11	10.7	13	12.6	9	69.2
2016/17	102	17	16.7	18	17.6	7	38.9
2015/16	110	15	13.6	16	14.5	10	62.5
2014/15	135	18	13.3	16	11.9	11	68.8
Average	111	16	14.2	16	14.2	9	55.7

(Table B)

With the agricultural industry being so important to the economy of Shropshire, it is imperative that the Service makes best use of the lessons it has learnt over the last year, especially in relation to the risk of fire in barns and also the risk from poor maintenance of agricultural vehicles (see section 6). By working with our partners (e.g. the National Farmers Union) we hope to be able to play our part in helping the farming community to avoid the financial and other impacts that so often arise when a business is hit by fire. (See risk review diversification in farming and risk review economy)

Moving on to fires in domestic properties, investigations into the 19 fires that spread beyond the room of origin have identified some interesting points.

- There is no correlation between the number that extend beyond the room of origin and their respective response times; with the ratio of fires that spread beyond the room of origin being lower in the rural areas than would be expected by the ratio of fires that occur there.

- 50% of the failures are in owner occupied properties, which is a slightly higher ratio than would be expected from their ratio of all domestic fires (40%)

- People are 2½ times more likely to have a fire that gets out of the room of origin if they don't have a working smoke alarm.

- Unusually, only 6% of the fires that spread, started in the kitchen, compared to typically 63% of all domestic fires starting there. We do not yet understand why this should be the case, but a working assumption could be that people are perhaps more likely to be confident in tackling the average small fire in the kitchen (e.g. burning food etc.),than they are in dealing with fires in other rooms in the house.

- Candles and fires starting in electrical equipment or wiring are a common cause of these types of fires. Again, suggesting that fire risks left unattended lead to potentially more devastating fires in homes.

- A fire starting between 10pm and 2am is three times more likely to spread beyond the room of origin. This is most likely to be related to people being in bed at this time, further emphasising the importance of having working smoke alarms fitted in all homes.

- The Service will use this learning to further inform its future campaign messages and 'Safe and Well' visits.

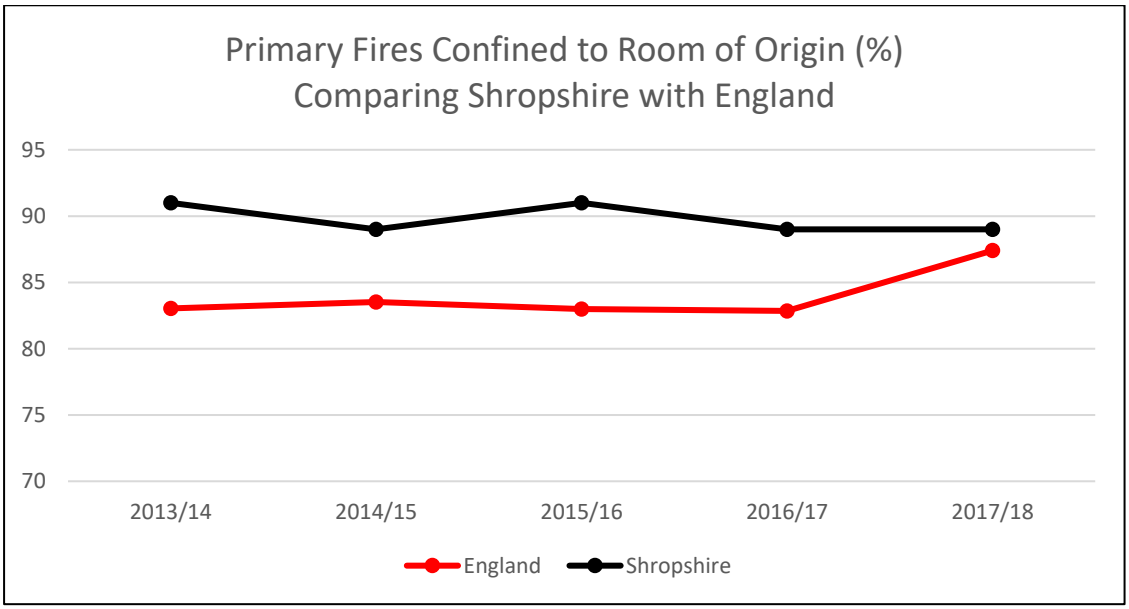


Figure 16 - Comparison between Shropshire and England in the percentage of all primary fires confined to the room of origin

Figure 16 demonstrates that, despite Shropshire's average response time to fires being over 1.6 minutes longer than the average for England (as shown in figure 3 previously), it is performing well in terms of ensuring that fires are confined to the room of origin. By constantly reviewing risk and implementing learning, as outlined throughout this risk review, the Service will remain agile in mitigating risk.

Injuries sustained by staff through firefighting

2018/19 Target	Performance 2018/19
22	17
2019/20 Target	Performance 2019/20
21	13

The Service achieved the 2019/20 target for this measure and has achieved the 5-year Service Plan target; reducing the total number of injuries sustained to staff through firefighting to 21.

With such relatively low numbers of injuries occurring each year, it is easy for the Service to miss this indicator due to accidents that involve more than one person (see figure 17.)

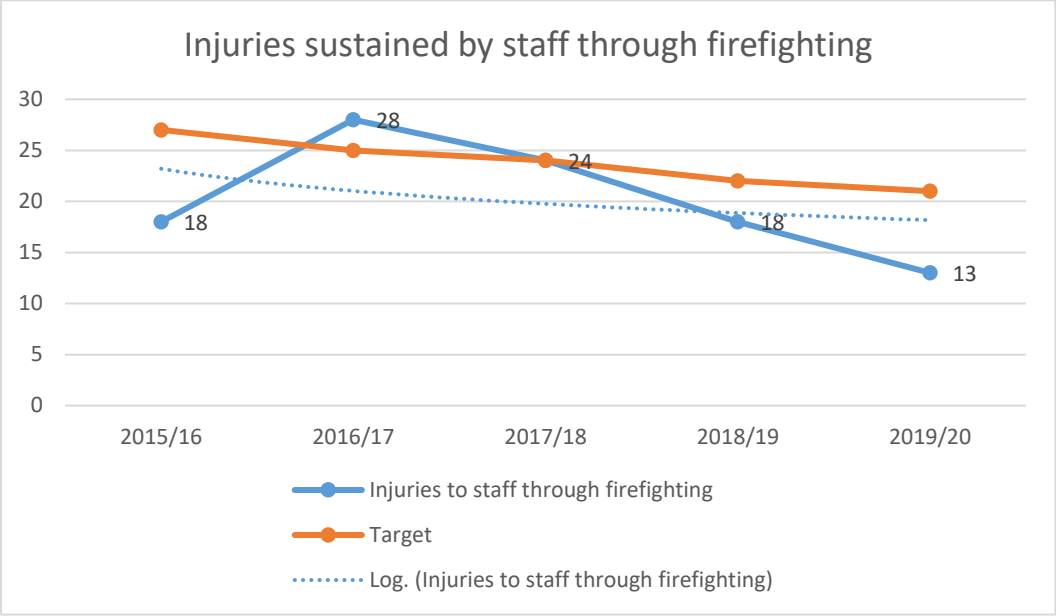


Figure 17 - Annual number of injuries sustained to staff through firefighting activities

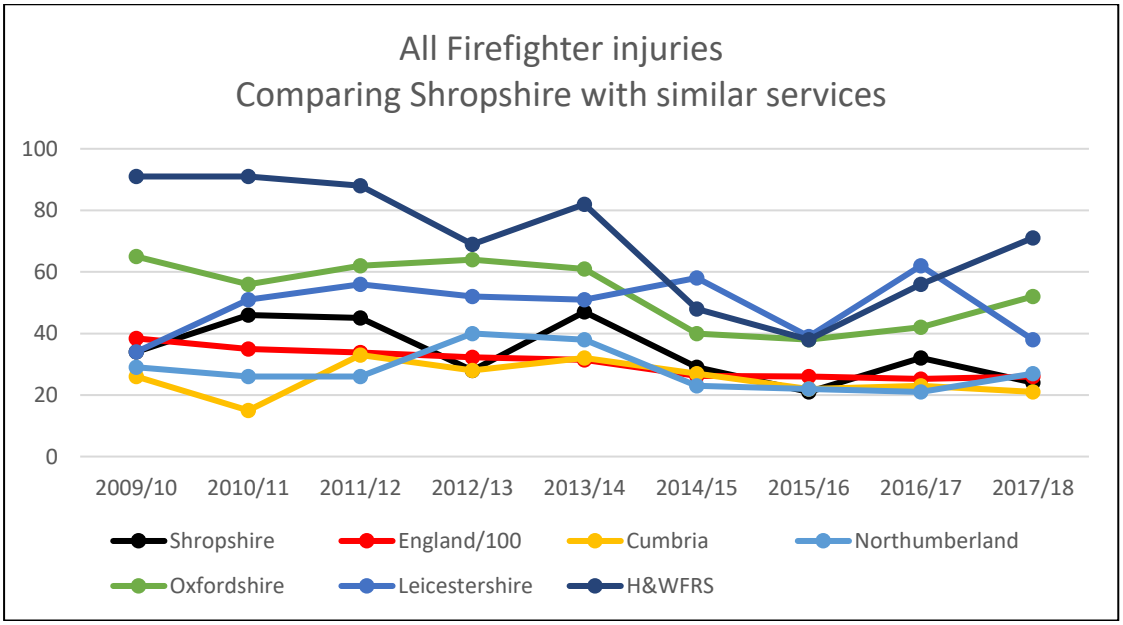


Figure 18 – Comparison between Shropshire and other Service areas in the number of Firefighter injuries

The common trend across the accidents that do occur continues to be in relation to slips, trips and falls, either during training events or actually at an incident. This also continues to be the most common cause of accident across all of the fire services in the West Midlands region.

As demonstrated in figure 18, the focus on safety within the fire sector results in relatively low numbers of injuries being sustained across the board.

Again, whilst annual variability in such low numbers can impact on the ability to see a year on year trend, the long-term downward trend in Shropshire is like that being seen across England as a whole.

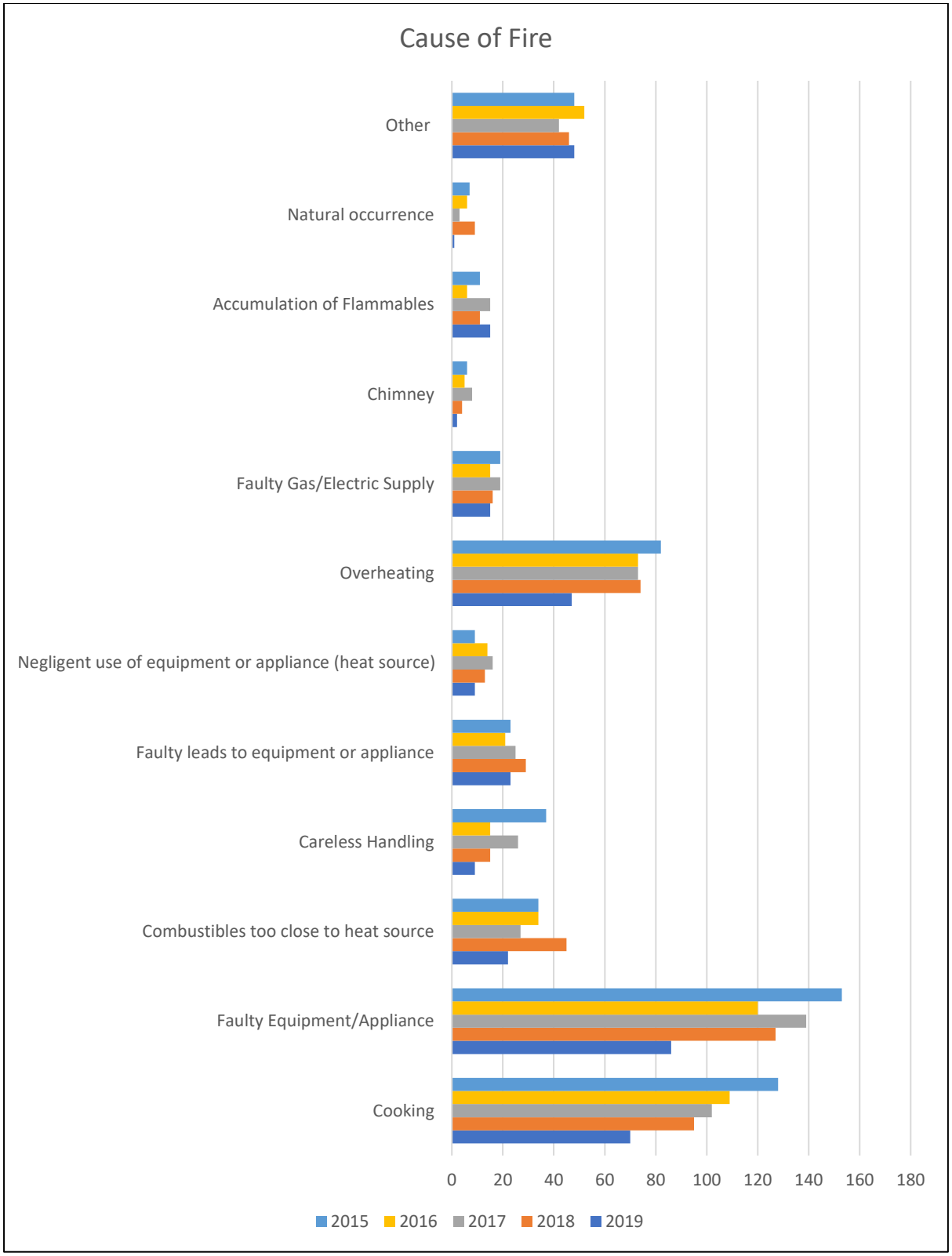
The Service will continue to actively encourage the reporting, monitoring and thorough investigation of all accidents and near misses. Best practice continues to be actively shared with neighbouring services through a well-established regional audit programme and network of health and safety professionals.

Incident Data

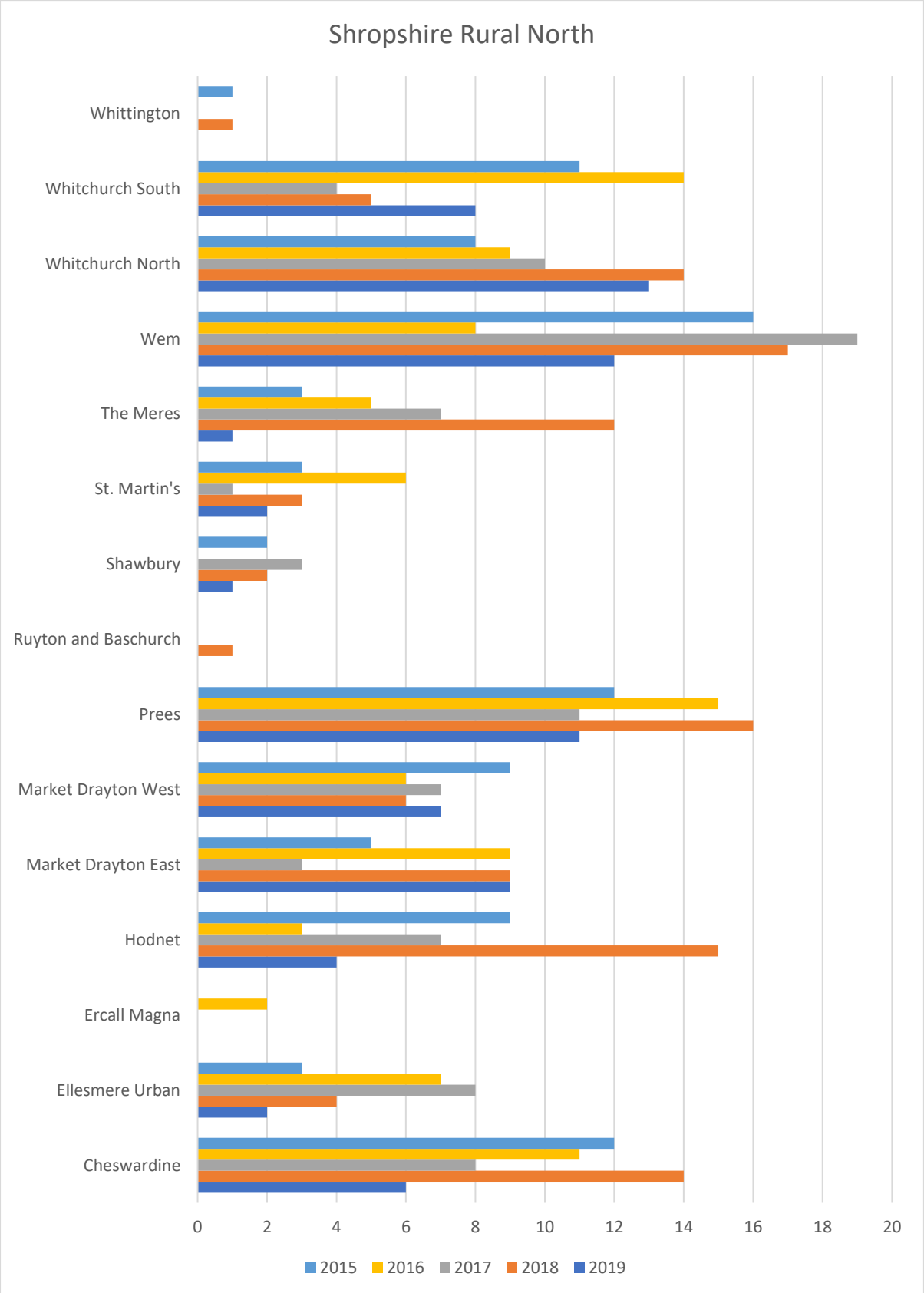
- Accidental Dwelling Fires, Cause, Tenure and Statistics
- Commercial Fire Data
- False Alarm
- Flooding and Water Rescue
- RTC
- HAZMATS
- Missing Persons
- Gaining Entry

Accidental Dwelling Fires

Cause of Fire	2019	2018	2017	2016	2015
Cooking	70	95	102	109	128
Faulty Equipment/Appliance	86	127	139	120	153
Combustibles too close to heat source	22	45	27	34	34
Careless Handling	9	15	26	15	37
Faulty leads to equipment or appliance	23	29	25	21	23
Negligent use of equipment or appliance (heat source)	9	13	16	14	9
Overheating	47	74	73	73	82
Faulty Gas/Electric Supply	15	16	19	15	19
Chimney	2	4	8	5	6
Accumulation of Flammables	15	11	15	6	11
Natural occurrence	1	9	3	6	7
Other	48	46	42	52	48


Cause of Fire
Other
Natural occurrence
Accumulation of Flammables
Chimney
Faulty Gas/Electric Supply
Overheating
Negligent use of equipment or appliance (heat source)
Faulty leads to equipment or appliance
Careless Handling
Combustibles too close to heat source
Faulty Equipment/Appliance
Cooking
0
20
40
60
80
100
120
140
160
180
2015
2016
2017
2018
2019

ADF by Area


Shropshire Rural North
Whittington
Whitchurch South
Whitchurch North
Wem
The Meres
St. Martin's
Shawbury
Ruyton and Baschurch
Prees
Market Drayton West
Market Drayton East
Hodnet
Ercall Magna
Ellesmere Urban
Cheswardine
0
2
4
6
8
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12
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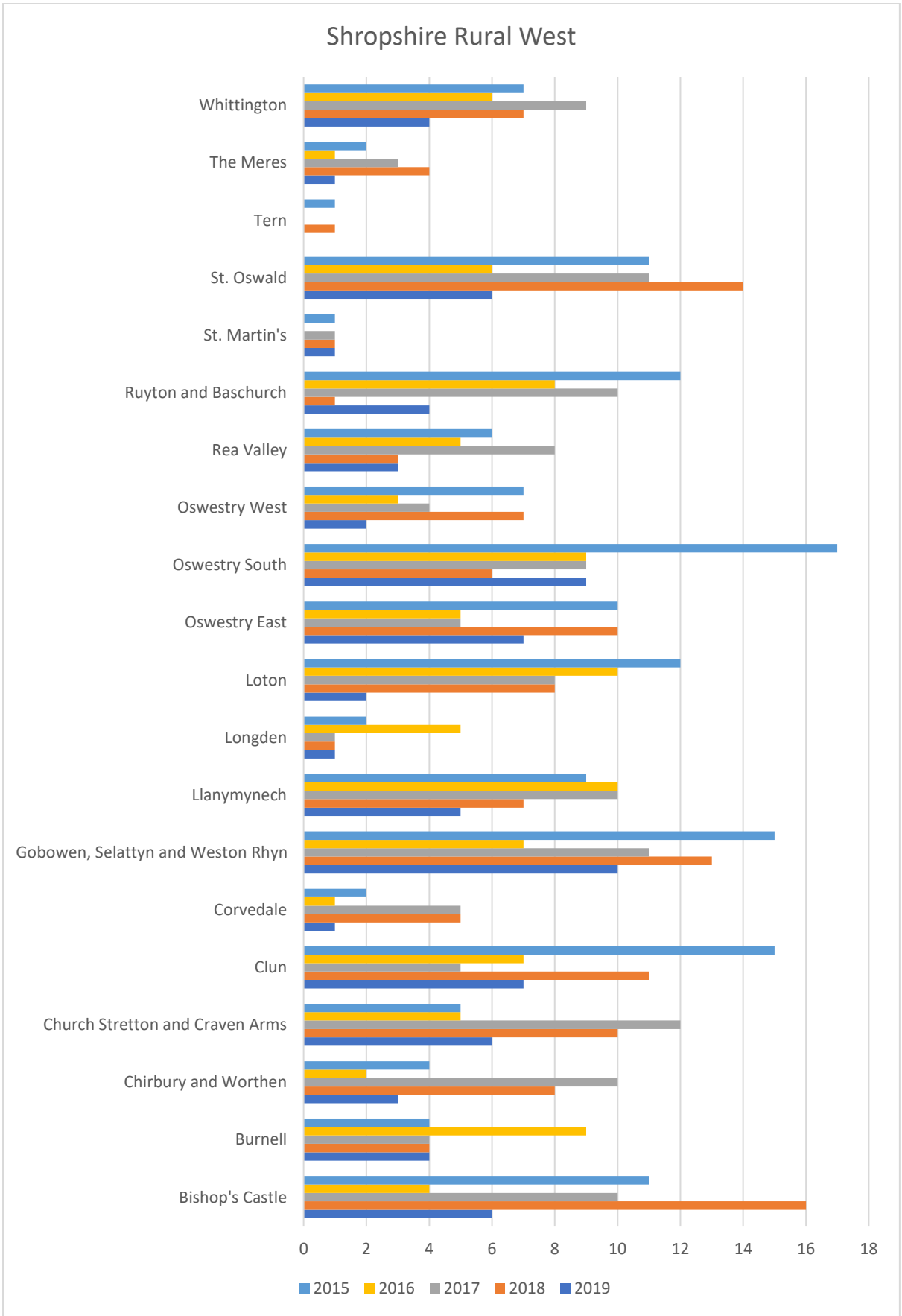
16
18
20
2015
2016
2017
2018
2019


Shropshire Rural West
Whittington
The Meres
Tern
St. Oswald
St. Martin's
Ruyton and Baschurch
Rea Valley
Oswestry West
Oswestry South
Oswestry East
Loton
Longden
Llanymynech
Gobowen, Selattyn and Weston Rhyn
Corvedale
Clun
Church Stretton and Craven Arms
Chirbury and Worthen
Burnell
Bishop's Castle
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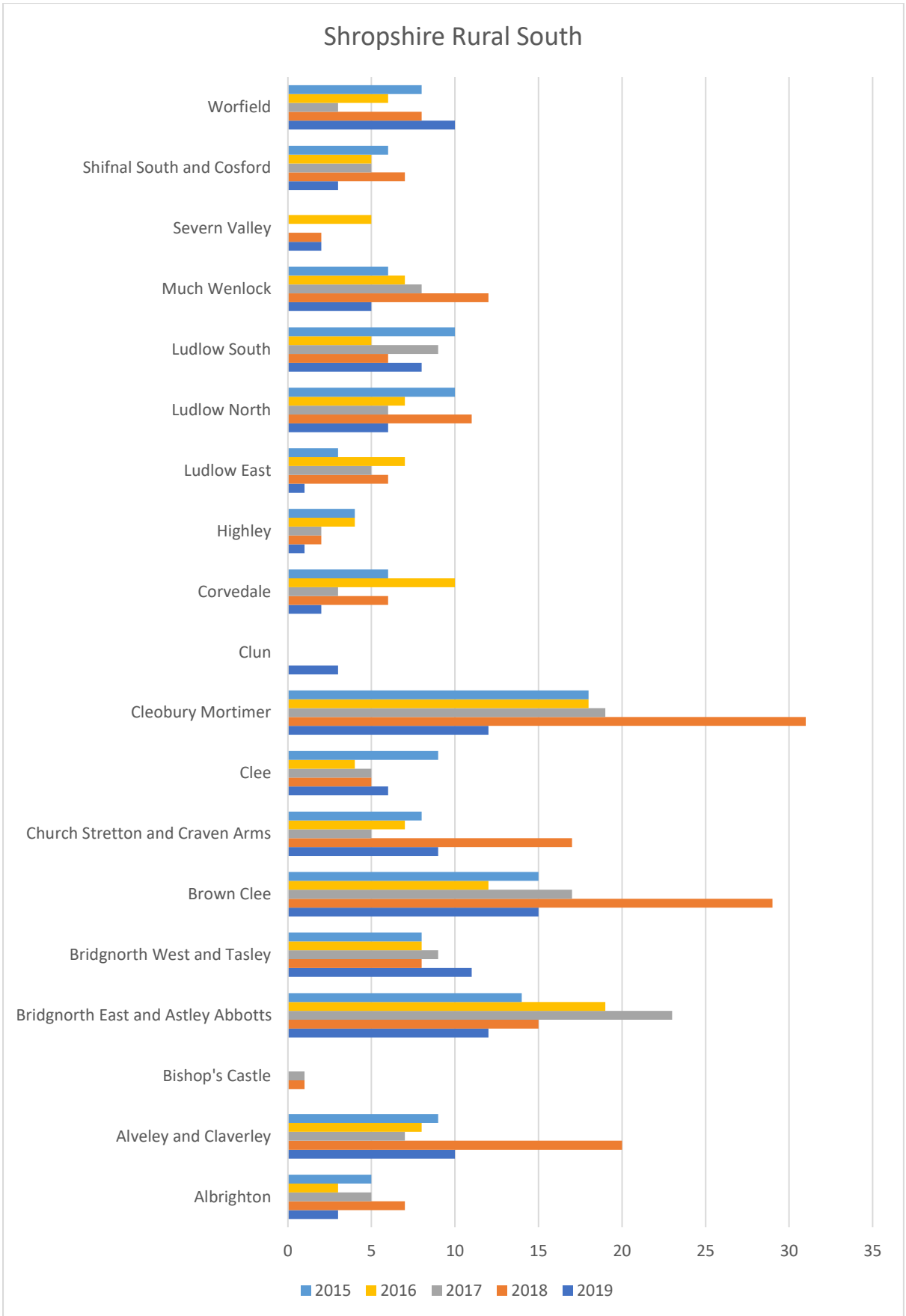
2018
2019


Shropshire Rural South
Worfield
Shifnal South and Cosford
Severn Valley
Much Wenlock
Ludlow South
Ludlow North
Ludlow East
Highley
Corvedale
Clun
Cleobury Mortimer
Clee
Church Stretton and Craven Arms
Brown Clee
Bridgnorth West and Tasley
Bridgnorth East and Astley Abbotts
Bishop's Castle
Alveley and Claverley
Albrighton
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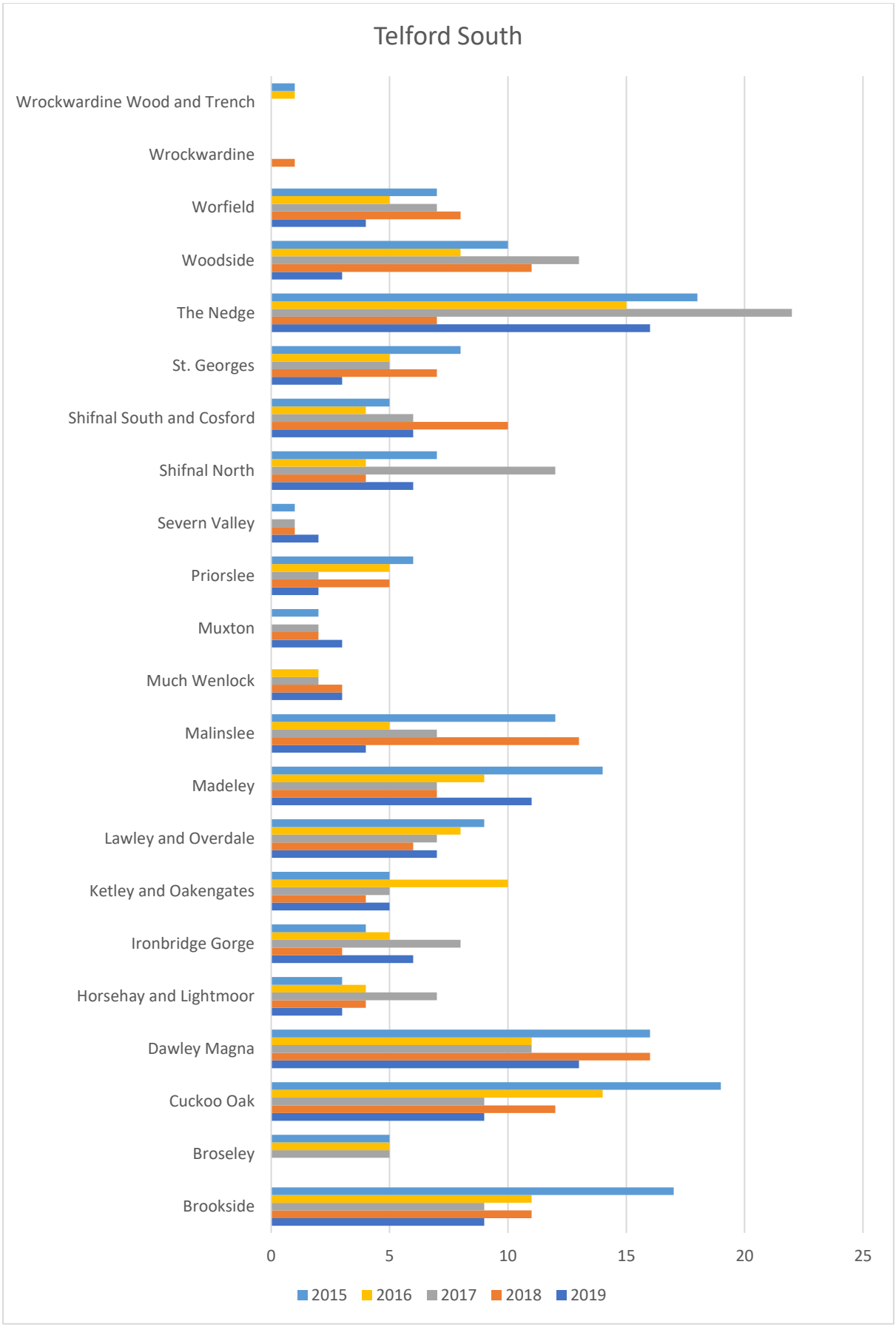
15
20
25
30
35
2015
2016
2017
2018
2019


Telford South
Wrockwardine Wood and Trench
Wrockwardine
Worfield
Woodside
The Nedge
St. Georges
Shifnal South and Cosford
Shifnal North
Severn Valley
Priorslee
Muxton
Much Wenlock
Malinslee
Madeley
Lawley and Overdale
Ketley and Oakengates
Ironbridge Gorge
Horsehay and Lightmoor
Dawley Magna
Cuckoo Oak
Broseley
Brookside
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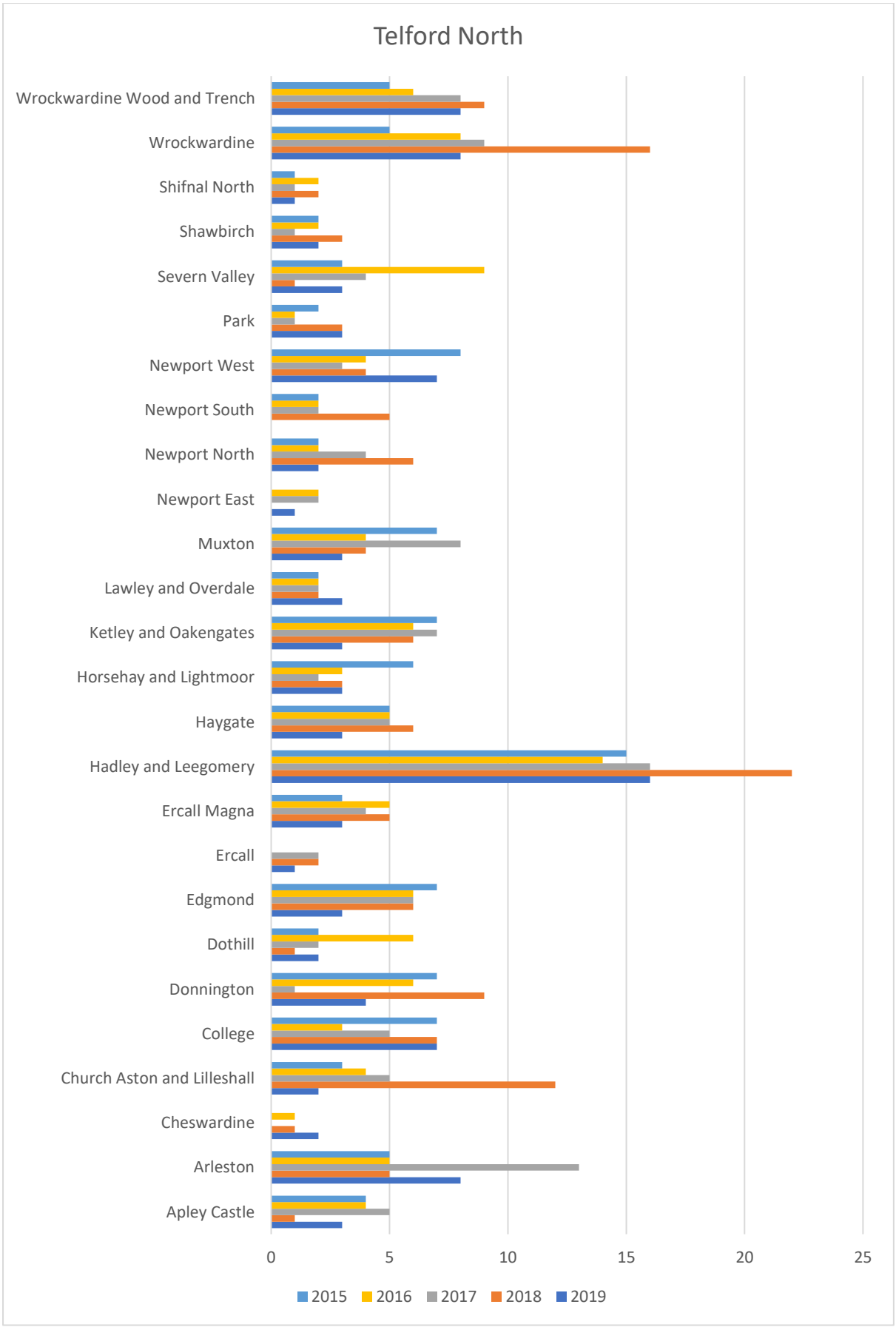
Telford North
Wrockwardine Wood and Trench
Wrockwardine
Shifnal North
Shawbirch
Severn Valley
Park
Newport West
Newport South
Newport North
Newport East
Muxton
Lawley and Overdale
Ketley and Oakengates
Horsehay and Lightmoor
Haygate
Hadley and Leegomery
Ercall Magna
Ercall
Edgmond
Dothill
Donnington
College
Church Aston and Lilleshall
Cheswardine
Arleston
Apley Castle
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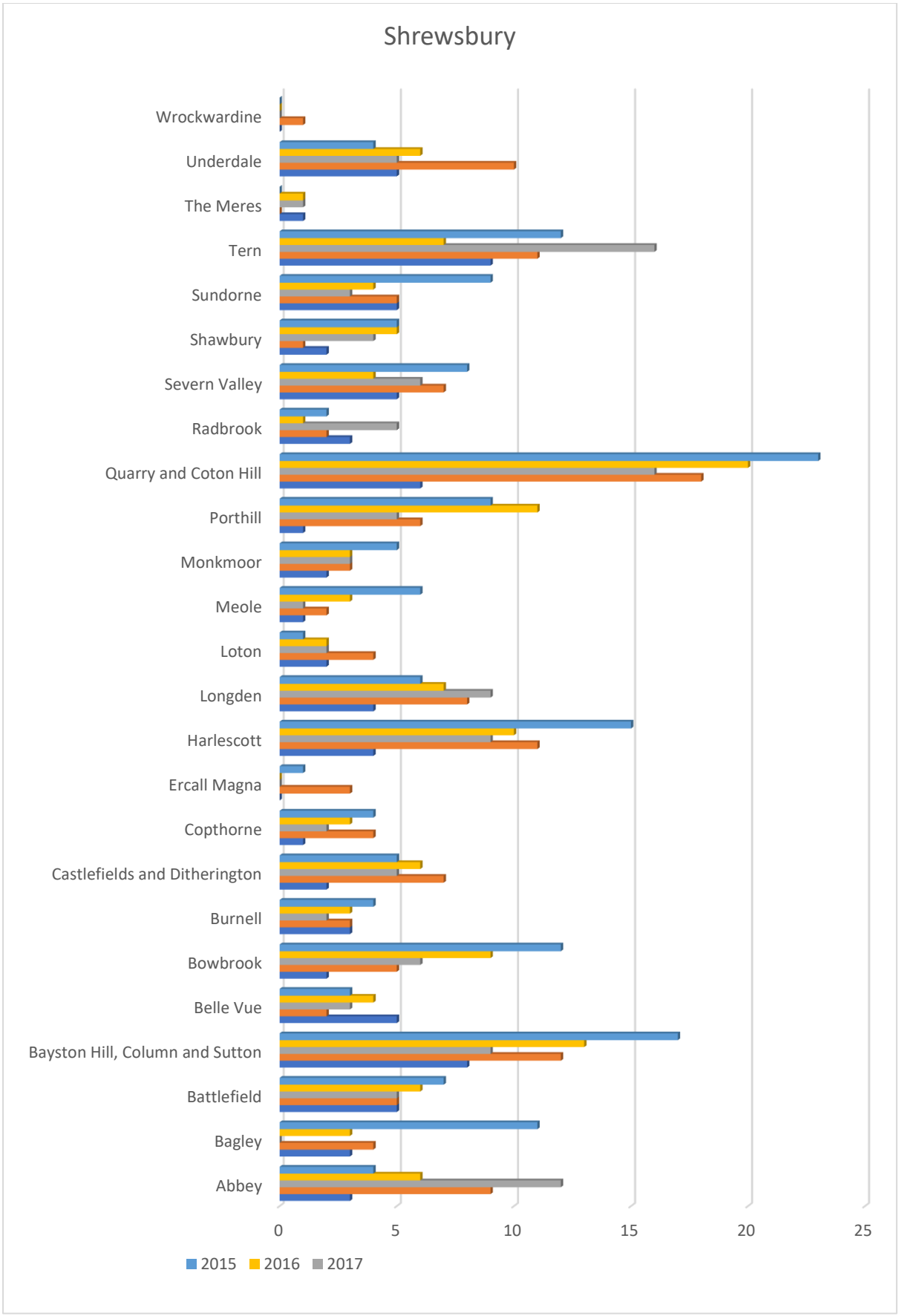
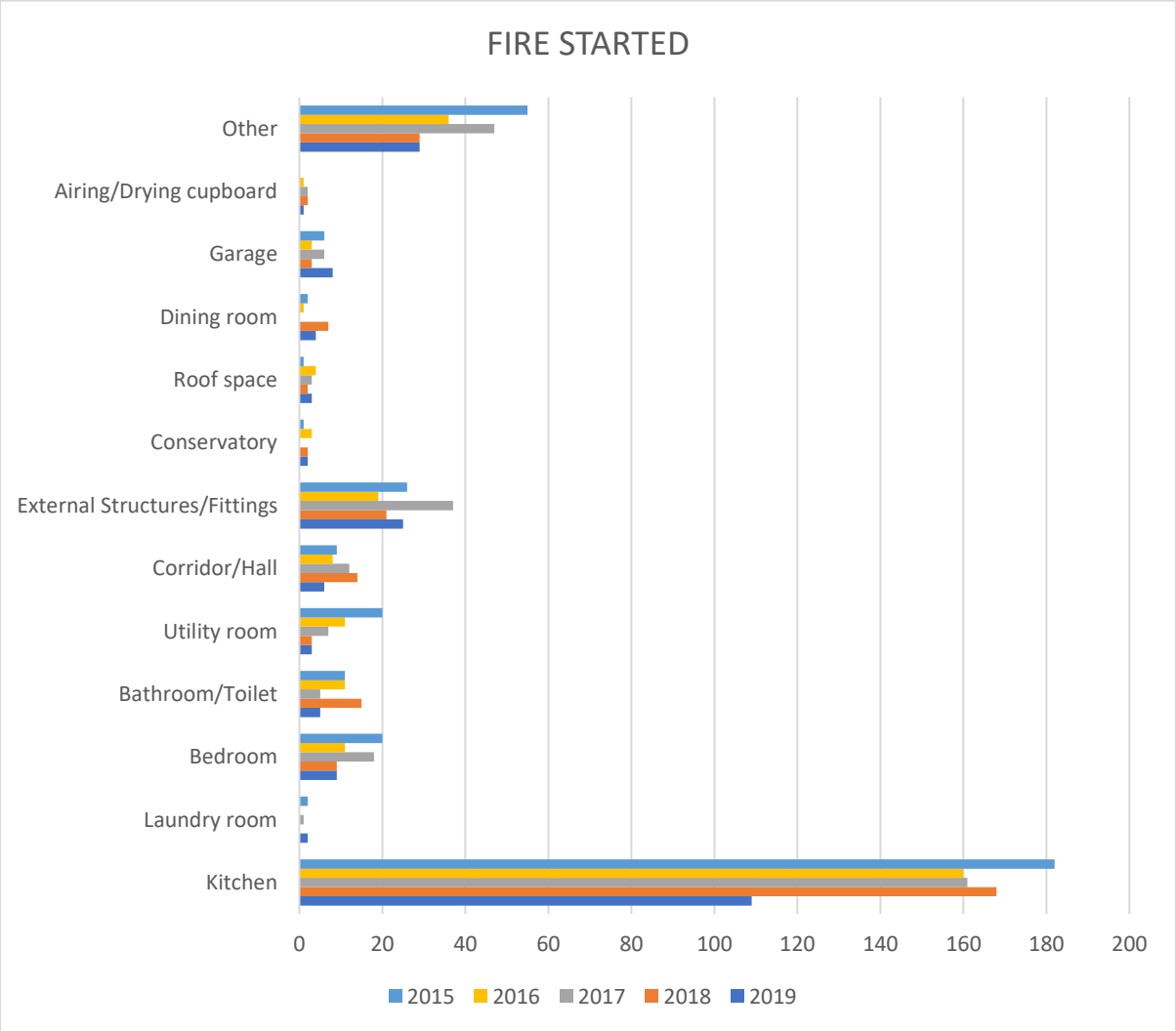
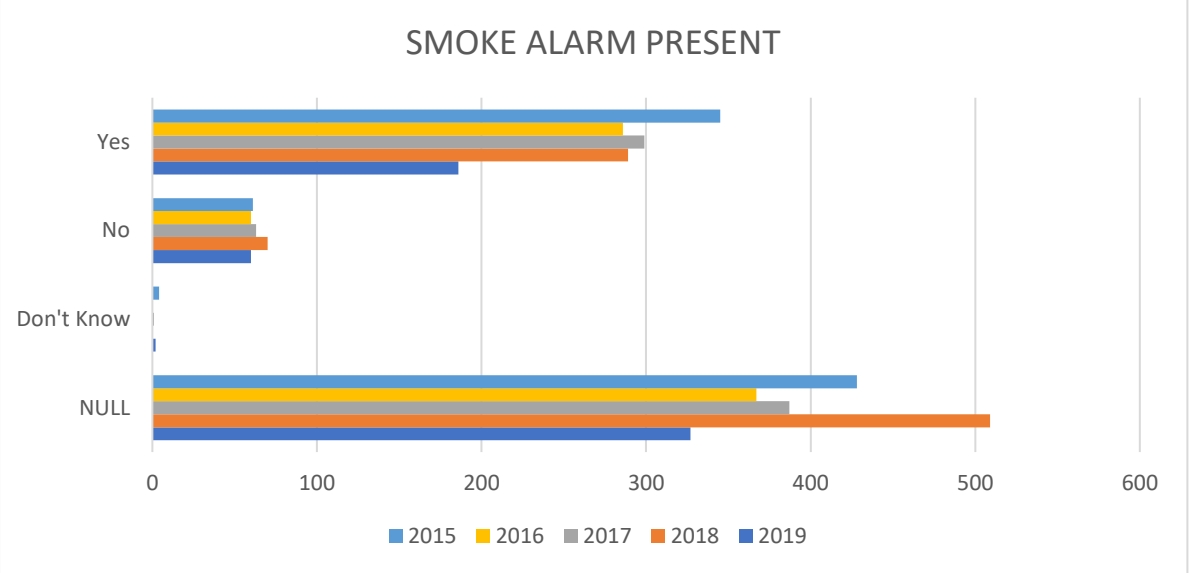

Shrewsbury
Wrockwardine
Underdale
The Meres
Tern
Sundorne
Shawbury
Severn Valley
Radbrook
Quarry and Coton Hill
Porthill
Monkmoor
Meole
Loton
Longden
Harlescott
Ercall Magna
Copthorne
Castlefields and Ditherington
Burnell
Bowbrook
Belle Vue
Bayston Hill, Column and Sutton
Battlefield
Bagley
Abbey
0
5
10
15
20
25
2015
2016
2017

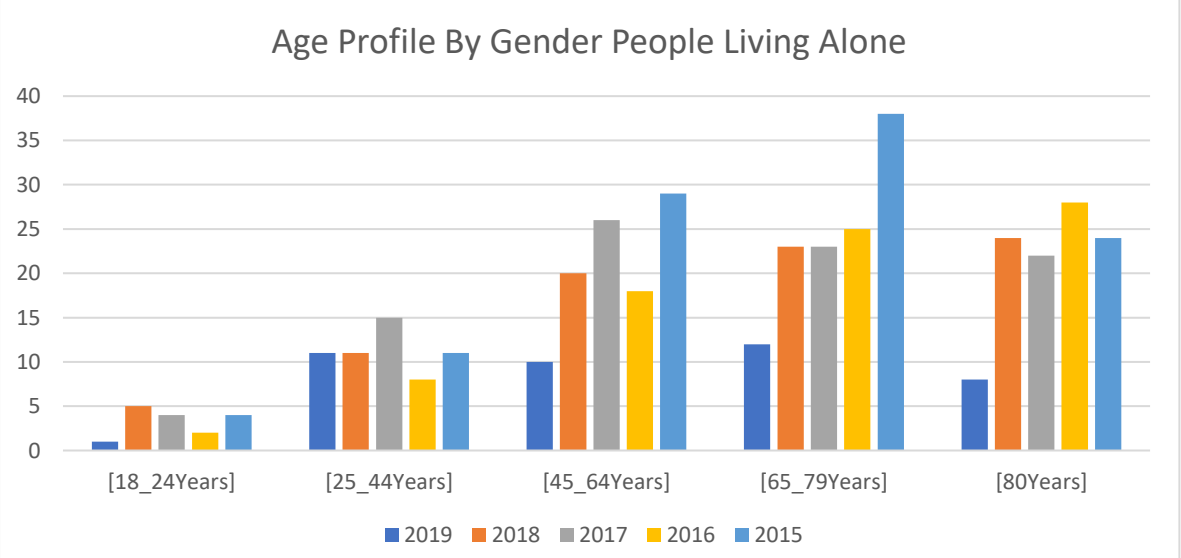
Fire Started	2019	2018	2017	2016	2015
Kitchen	109	168	161	160	182
Laundry room	2	0	1	0	2
Bedroom	9	9	18	11	20
Bathroom/Toilet	5	15	5	11	11
Utility room	3	3	7	11	20
Corridor/Hall	6	14	12	8	9
External Structures/Fittings	25	21	37	19	26
Conservatory	2	2	0	3	1
Roof space	3	2	3	4	1
Dining room	4	7	0	1	2
Garage	8	3	6	3	6
Airing/Drying cupboard	1	2	2	1	0
Other	29	29	47	36	55



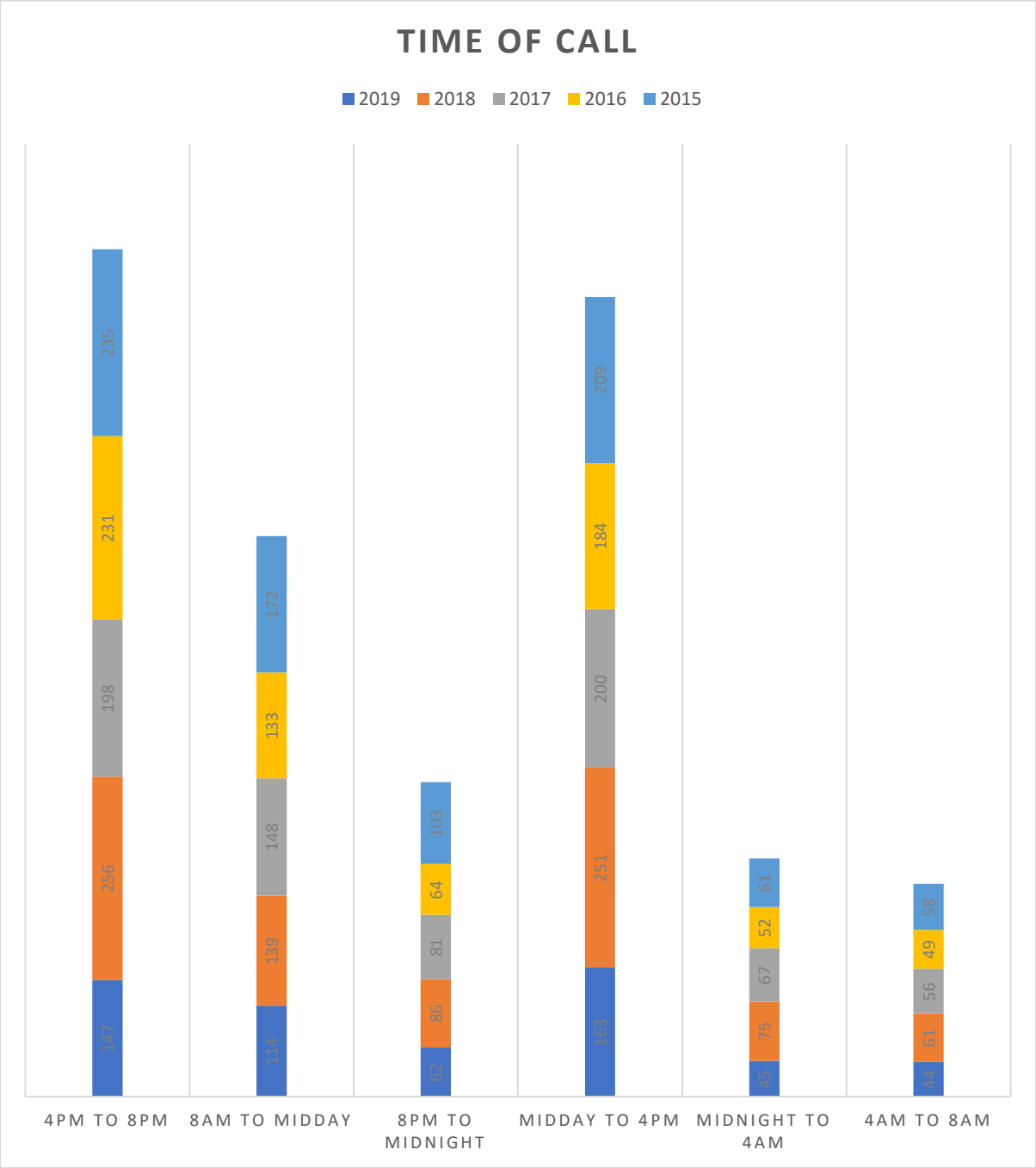
Smoke Alarm Present?	2019	2018	2017	2016	2015
NULL	327	509	387	367	428
Don't Know	2	0	1	0	4
No	60	70	63	60	61
Yes	186	289	299	286	345



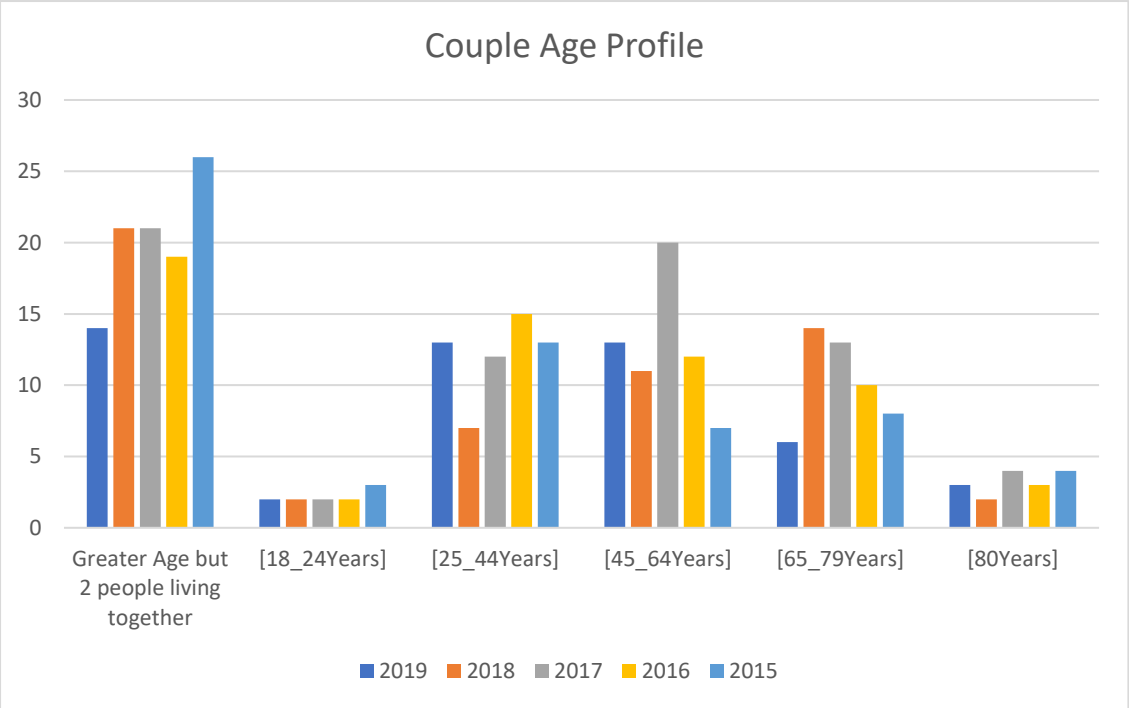
Age Profile by Gender People Living Alone	2019	2018	2017	2016	2015
[18_24Years]	1	5	4	2	4
[25_44Years]	11	11	15	8	11
[45_64Years]	10	20	26	18	29
[65_79Years]	12	23	23	25	38
[80Years]	8	24	22	28	24

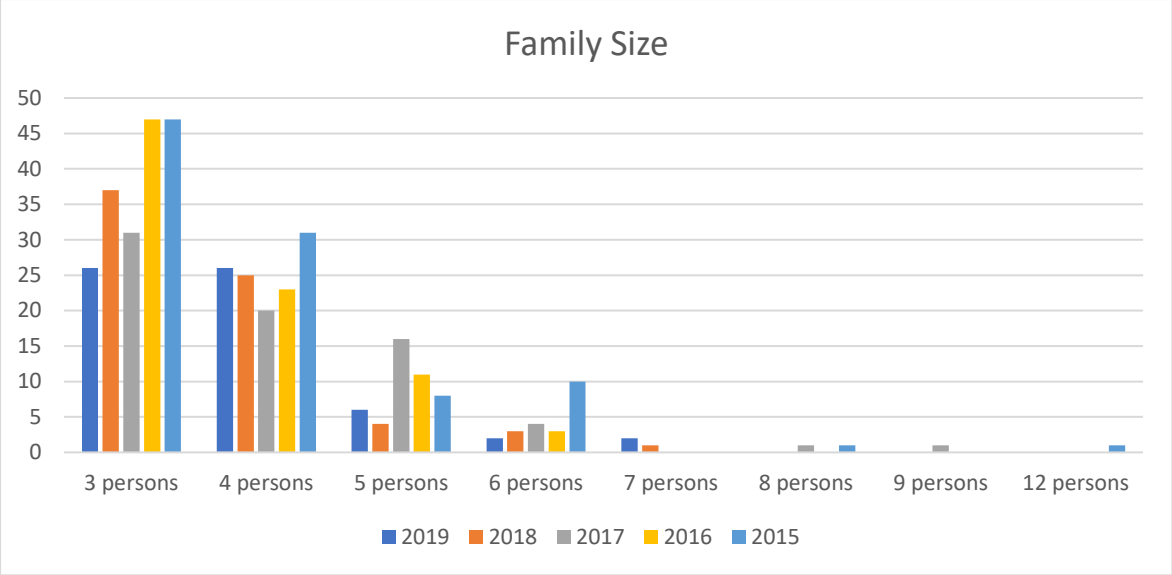


Time of Call	2019	2018	2017	2016	2015
4pm to 8pm	147	256	198	231	235
8am to Midday	114	139	148	133	172
8pm to Midnight	62	86	81	64	103
Midday to 4pm	163	251	200	184	209
Midnight to 4am	45	75	67	52	61
4am to 8am	44	61	56	49	58

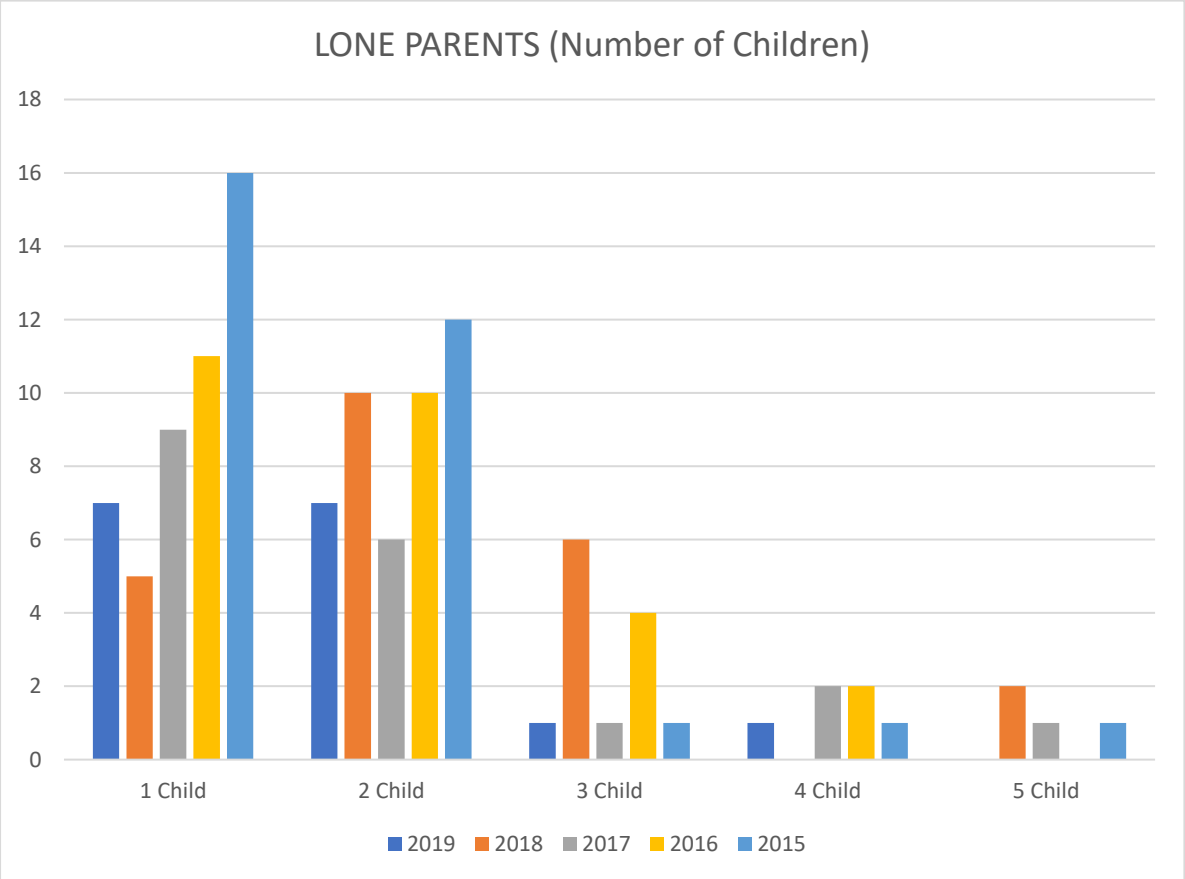


Couple Age Profile	2019	2018	2017	2016	2015
Greater Age but 2 people living together	14	21	21	19	26
[18_24Years]	2	2	2	2	3
[25_44Years]	13	7	12	15	13
[45_64Years]	13	11	20	12	7
[65_79Years]	6	14	13	10	8
[80Years]	3	2	4	3	4
Family Size	**2019**	**2018**	**2017**	**2016**	**2015**
3 persons	26	37	31	47	47
4 persons	26	25	20	23	31
5 persons	6	4	16	11	8
6 persons	2	3	4	3	10
7 persons	2	1	0	0	0
8 persons	0	0	1	0	1
9 persons	0	0	1	0	0
12 persons	0	0	0	0	1

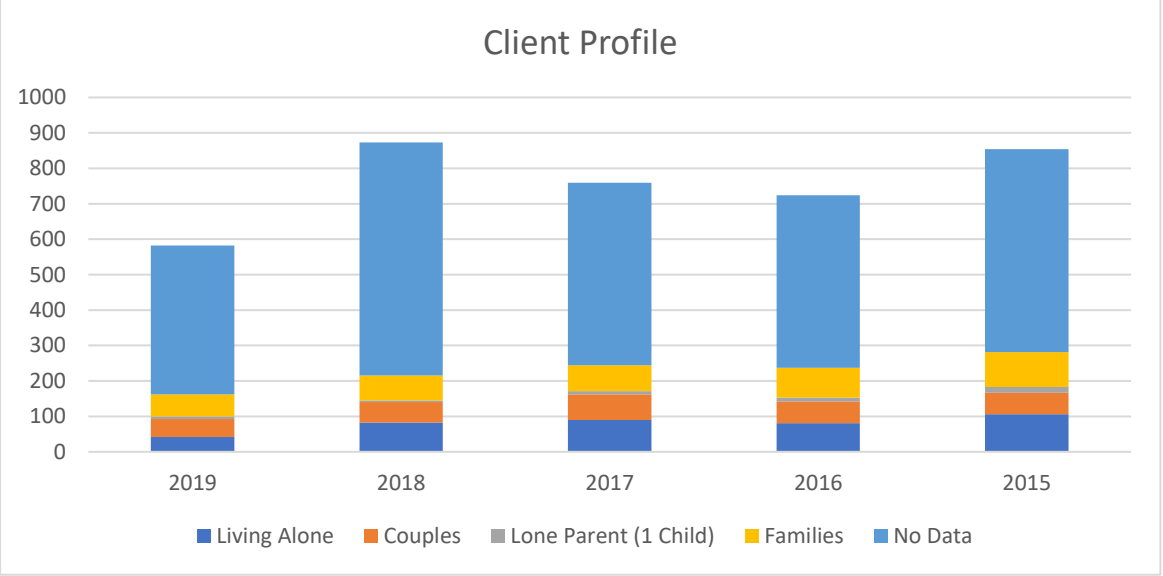




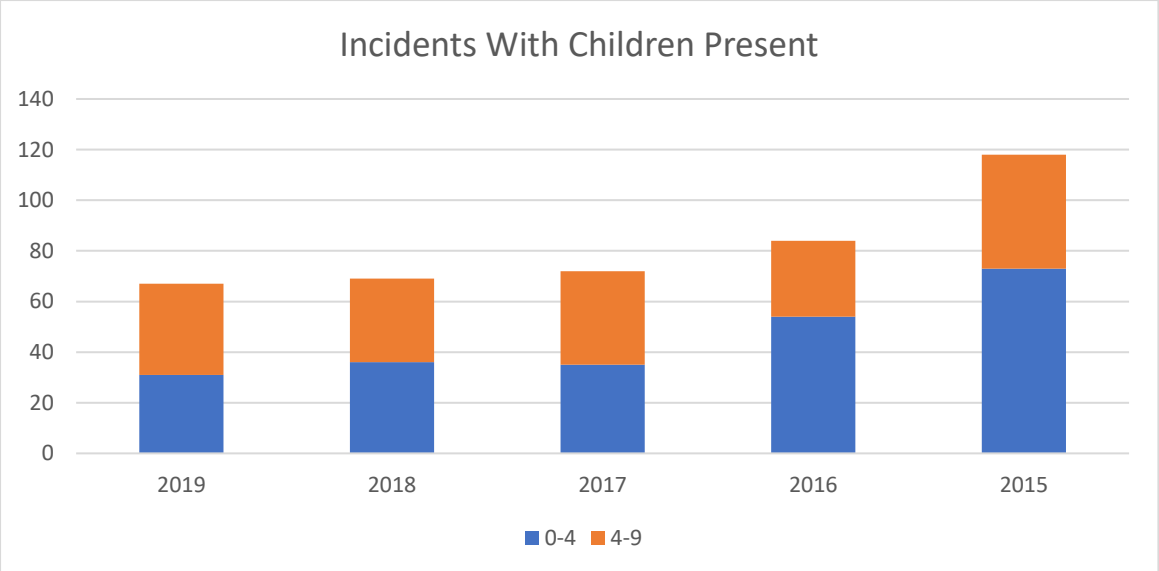
LONE PARENTS (Number of Children)	2019	2018	2017	2016	2015
1 Child	7	5	9	11	16
2 Child	7	10	6	10	12
3 Child	1	6	1	4	1
4 Child	1	0	2	2	1
5 Child	0	2	1	0	1

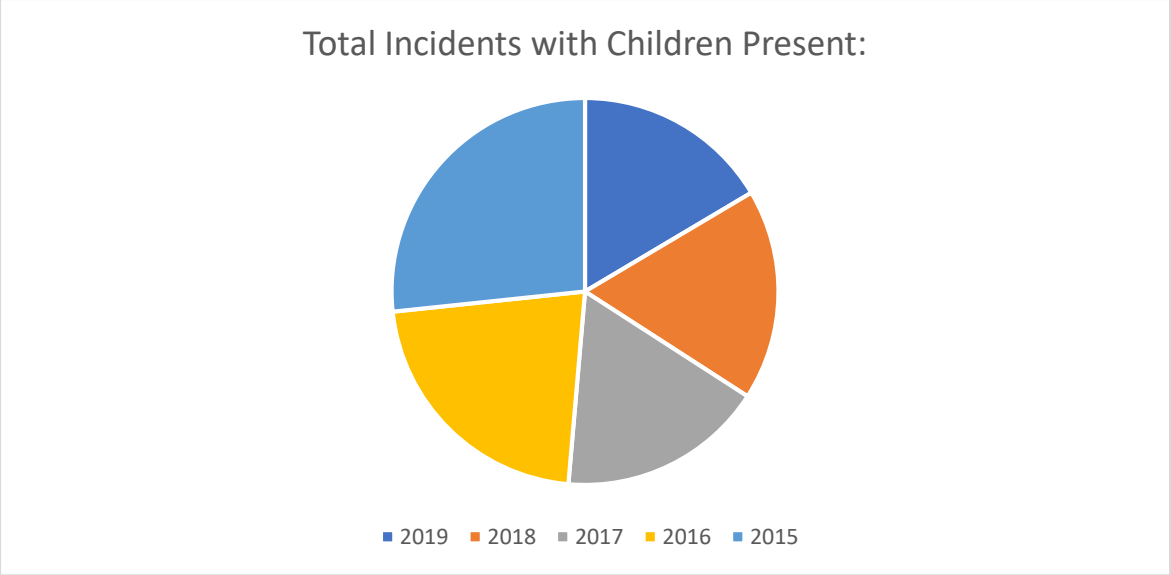


Client Profile	2019	2018	2017	2016	2015
Living Alone	42	83	90	81	106
Couples	51	57	72	61	61
Lone Parent (1 Child)	7	5	9	11	16
Families	62	70	73	84	98
No Data	420	658	515	487	573

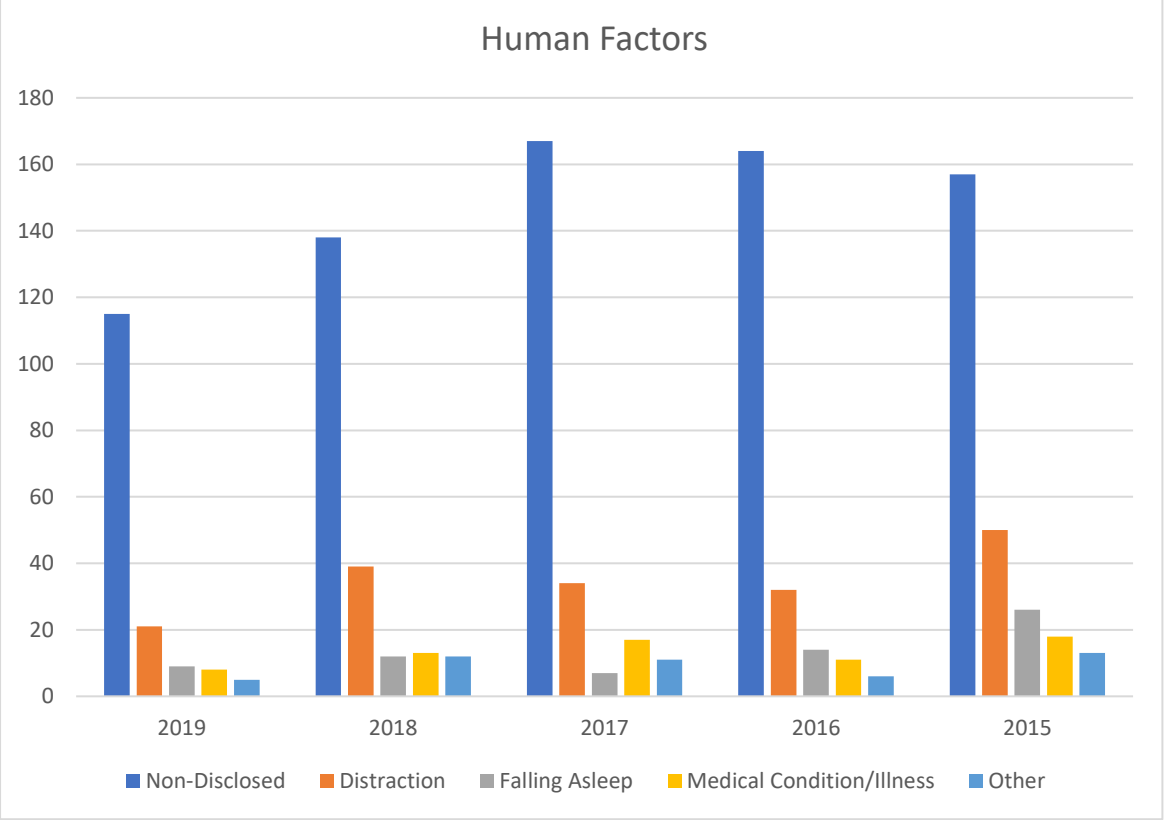


Incidents with Children Present	2019	2018	2017	2016	2015
0-4	31	36	35	54	73
4-9	36	33	37	30	45
Total Incidents:	42	45	44	56	68





Human Factors	2019	2018	2017	2016	2015
Non-Disclosed	115	138	167	164	157
Distraction	21	39	34	32	50
Falling Asleep	9	12	7	14	26
Medical Condition/Illness	8	13	17	11	18
Other	5	12	11	6	13

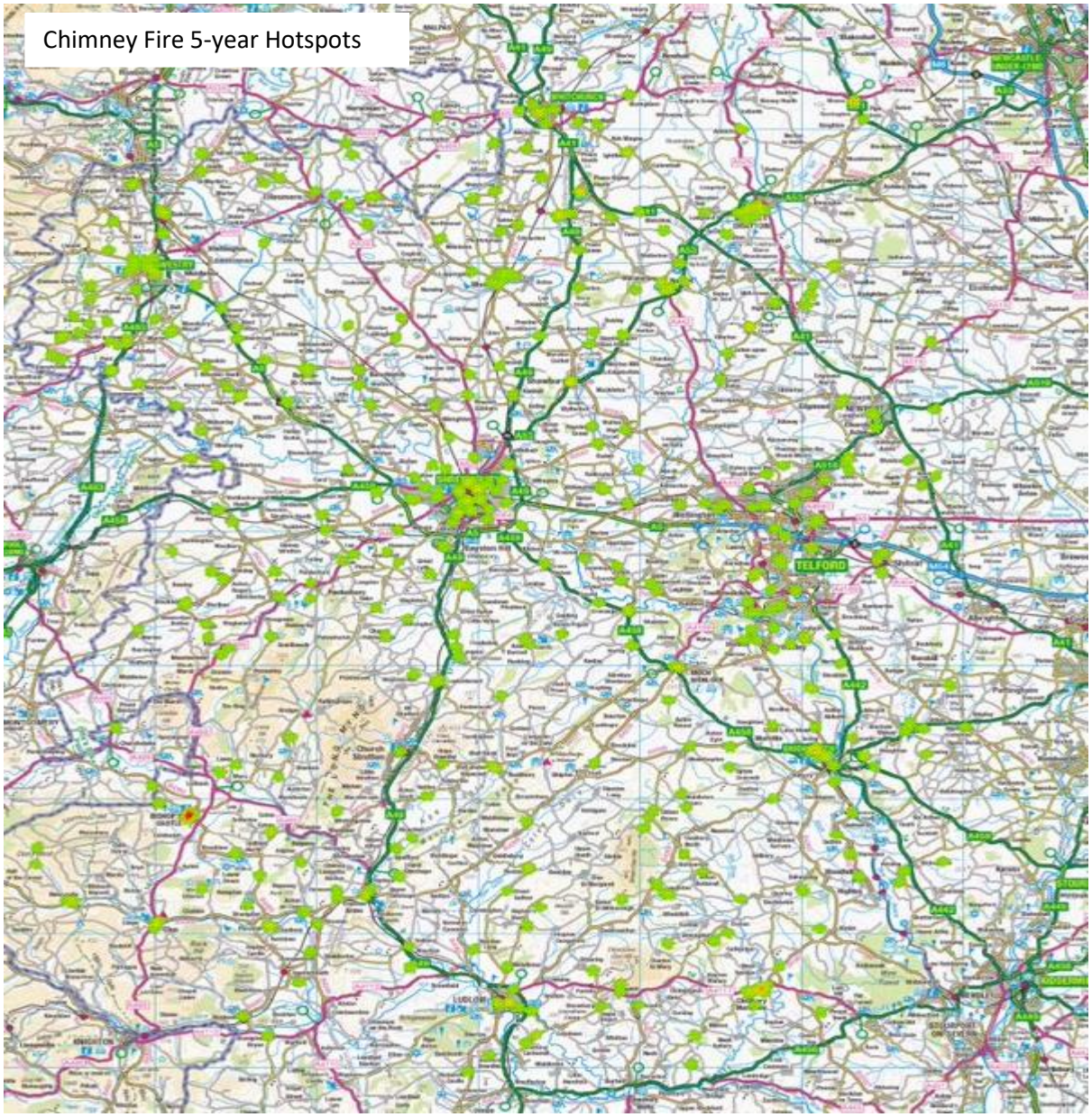


Chimney Fires

Fiscal Year	Chimney Fire Incidents
2014/15	148
2015/16	120
2016/17	112
2017/18	87
2018/19	89

Chimney fires have reduced by 39% since 2014/15. However, it should be noted that the numbers appear to have reached a plateau. The rise of wood-burner related chimney fires will need to be carefully monitored. The data indicates that chimney fires are more of an issue in the market towns and rural areas rather than in the Telford borough which has large sections of new town.

Chimney Fires by Station: (5 year)	
Albrighton	1
Baschurch	17
Bishops Castle	25
Bridgnorth	42
Church Stretton	17
Cleobury Mortimer	20
Clun	17
Craven Arms	20
Ellesmere	15
Hodnet	19
Ludlow	27
Market Drayton	26
Minsterley	24
Much Wenlock	9
Newport	11
Oswestry	43
Out of Area	13
Prees	13
Shrewsbury	62
Telford Central	8
Tweedale	22
Wellington	22
Wem	13
Whitchurch	14



Commercial Fires

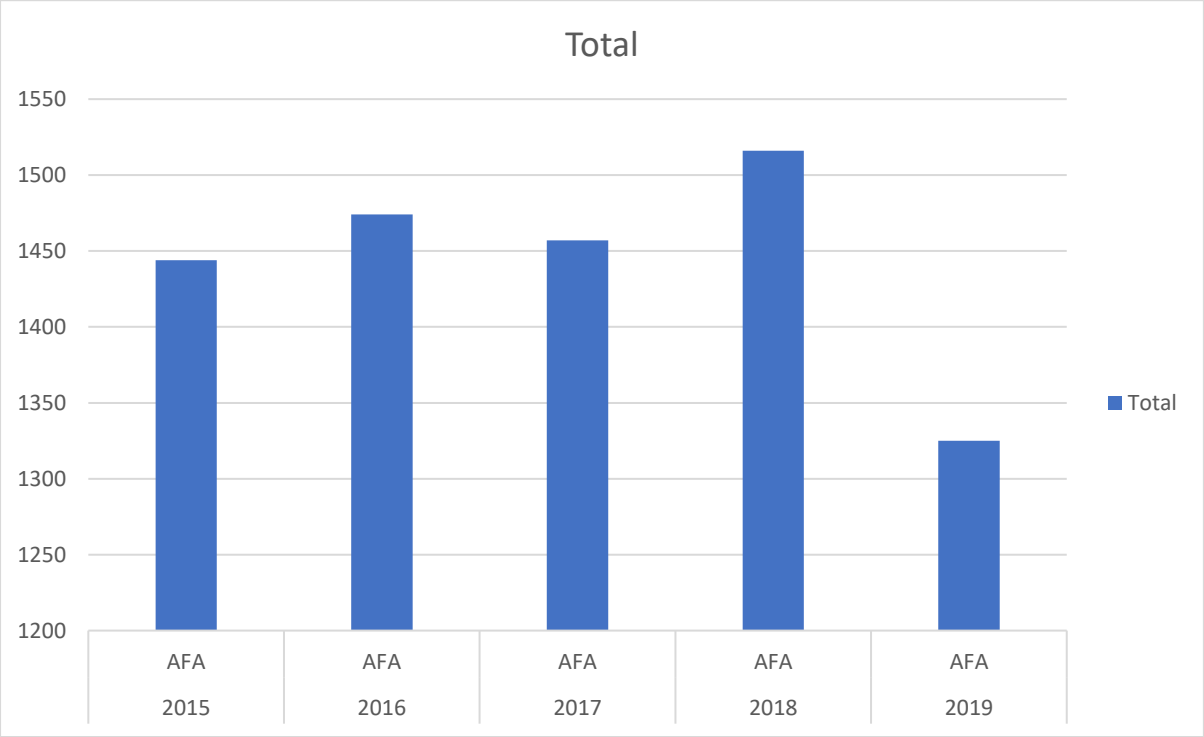
Fires affecting factories, shops, restaurants and takeaways, offices and farm buildings are generally categorised as fires in ‘non-residential premises. This analysis has broken down the category into a variety of premises types including; agricultural, industrial, commercial/shopping, public buildings and other. The ‘public buildings’ category includes premises such as schools, hospitals and prisons, while the ‘other’ category includes private property such as garden sheds and garages.

Incident Type	2014/15 Deliberate	2015/16 Deliberate	2016/17 Deliberate	2017/18 Deliberate	2018/19 Deliberate	2019/20 Deliberate
AGRICULTURAL BUILDING FIRE	0	0	3	3	1	3
BARN FIRE	5	0	0	0	0	0
PERSONS REPORTED FIRE	0	3	1	0	0	2
PROPERTY FIRE	9	0	0	0	0	0
SMOKE ISSUING	0	0	0	0	0	1

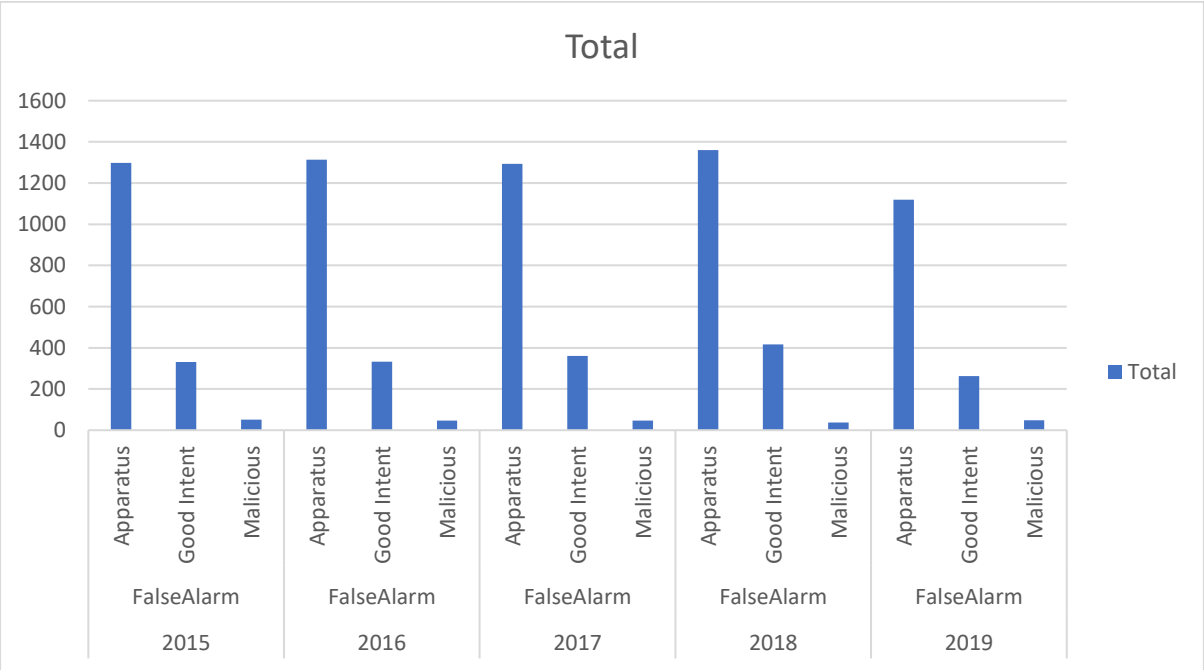
Incident Type	2014/15 Accidental	2015/16 Accidental	2016/17 Accidental	2017/18 Accidental	2018/19 Accidental	2019/20 Accidental
BARN FIRE	8	0	0	0	0	0
EXPLOSION REPORTED	0	1	1	0	0	0
FACTORY FIRE	1	0	0	0	0	0
FIRE COMMERCIAL	3	0	0	0	0	0
PERSONS REPORTED FIRE	0	1	0	0	1	1
PROPERTY FIRE PERSONS REPORTED	1	0	0	0	0	0
SMOKE ISSUING	0	3	1	2	0	0
PROPERTY FIRE	41	0	0	0	0	0
AGRICULTURAL BUILDING FIRE	1	13	15	12	13	12

False Alarm.

Automatic Fire Alarm Totals.



False Alarm by Intent



Year/Type	Count of Incident_Type3
2015	
False Alarm	**1680**
Apparatus	1298
Good Intent	331
Malicious	51
2016	
False Alarm	**1693**
Apparatus	1314
Good Intent	333
Malicious	46
2017	
False Alarm	**1700**
Apparatus	1294
Good Intent	360
Malicious	46
2018	
False Alarm	**1815**
Apparatus	1360
Good Intent	417
Malicious	38
2019	
False Alarm	**1429**
Apparatus	1119
Good Intent	262
Malicious	48
Grand Total	**8317**

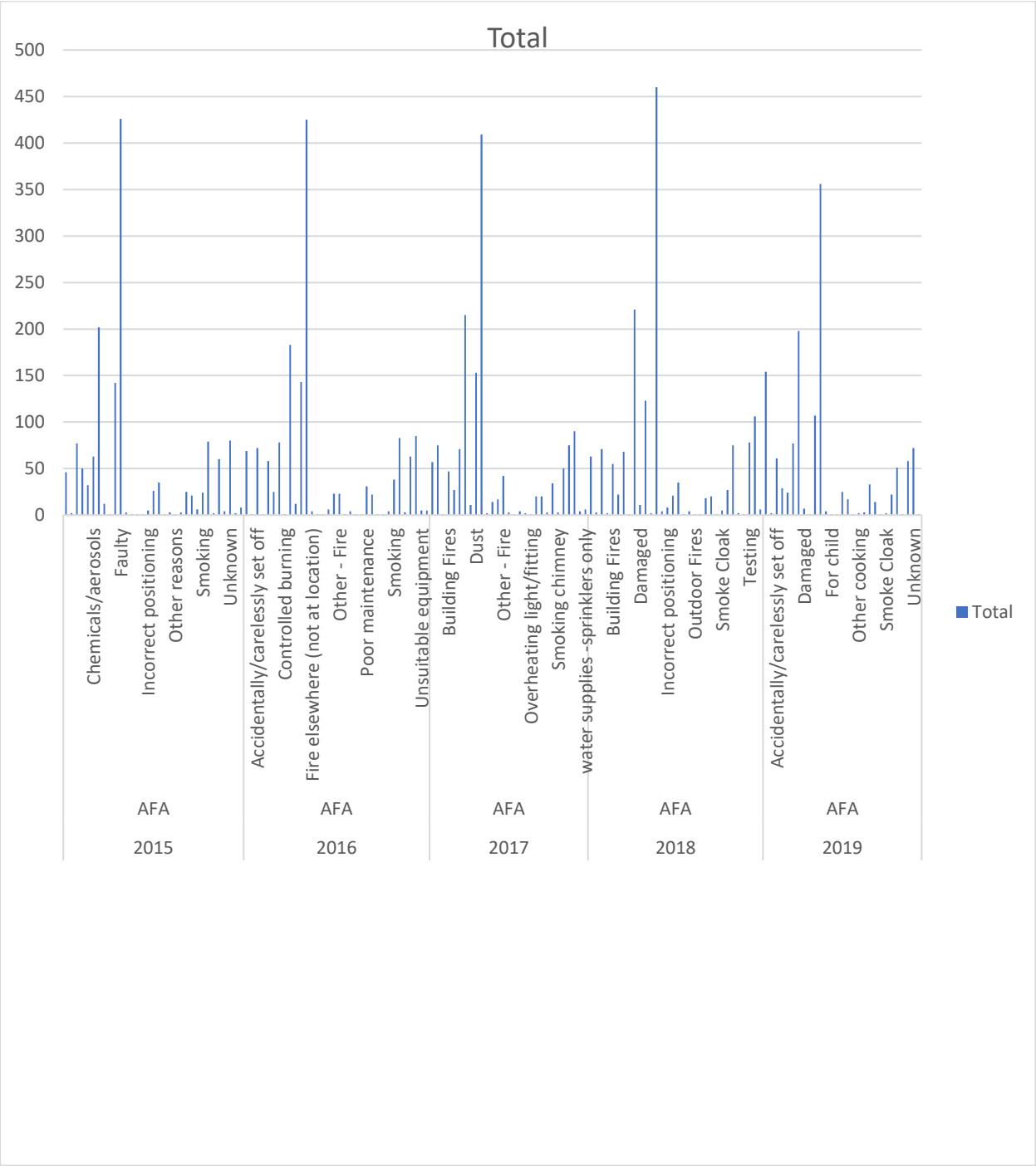
- False alarm due to apparatus has declined by 13.79% since 2015.

- False alarm due to apparatus accounted for 78% of false alarms in 2018/19.This percentage has had little variance over the 5-year period (74% in 2017/8)

- False alarm malicious accounts for between 2% and 3.35% of all false alarms, however the number has increased by 26% since 2017/18

- False alarm good intent has dropped by 37% in the year 2017/18 to 2018/19 however as a percentage of the total false alarms this has increased from 18% to 22%.

AFA by Cause.


Total
500
450
400
350
300
250
200
150
100
50
0
Chemicals/aerosols
Faulty
Incorrect positioning
Other reasons
Smoking
Unknown
Accidentally/carelessly set off
Controlled burning
Fire elsewhere (not at location)
Other - Fire
Poor maintenance
Smoking
Unsuitable equipment
Building Fires
Dust
Other - Fire
Overheating light/fitting
Smoking chimney
water supplies -sprinklers only
Building Fires
Damaged
Incorrect positioning
Outdoor Fires
Smoke Cloak
Testing
Accidentally/carelessly set off
Damaged
For child
Other cooking
Smoke Cloak
Unknown
AFA
2015
AFA
2016
AFA
2017
AFA
2018
AFA
2019
Total

Flooding and Water Rescue

Flooding Incident Breakdown by Incident Subcategory:

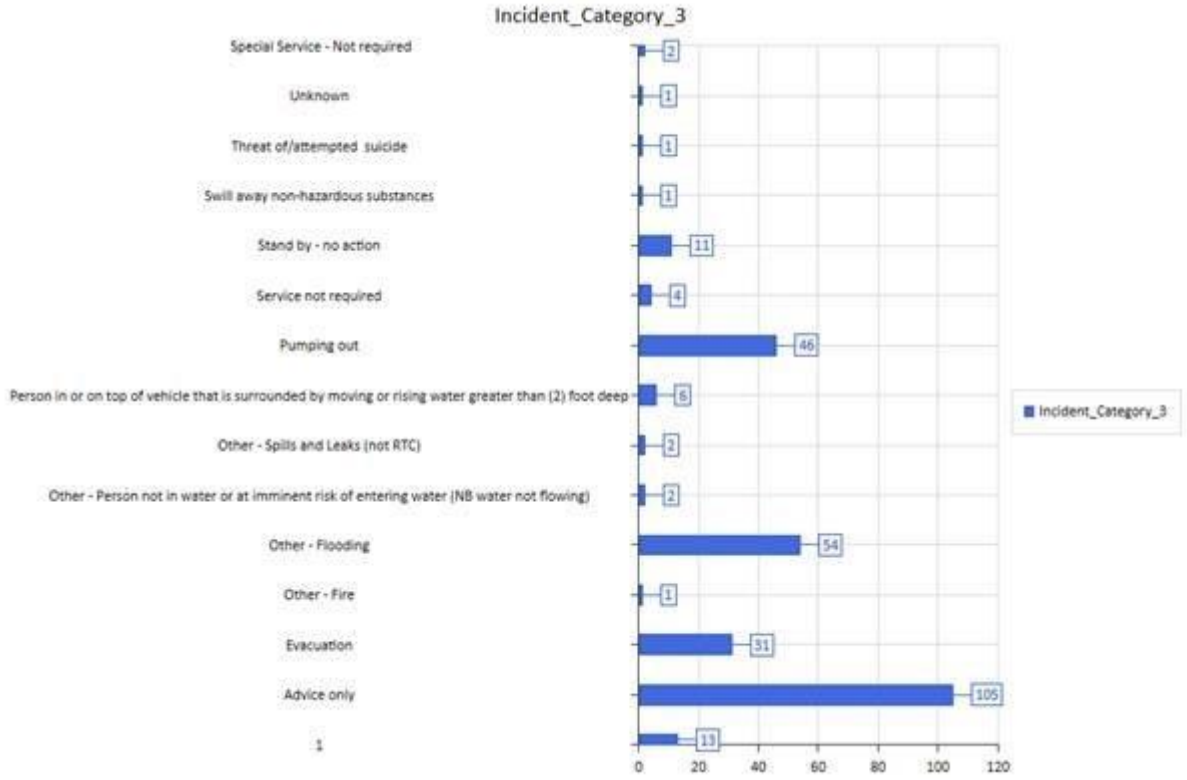
Flooding from the River Severn has been the subject of considerable flood defence work especially in Shrewsbury, this has been coordinated by the EA. The river flood defences have little or no impact on surface water or flash flooding. Such flooding, especially during SPATE conditions can impact on new developments and the rural road infrastructure.

For the vast majority of incidents, we provide advice only, these are likely to be during SPATE conditions. Pumping out and evacuation activities are the next most prevalent incident type.

In February 2020 Shropshire suffered widespread flooding from various rivers most notably the Severn. At its peak flood defences in Ironbridge and Shrewsbury were pushed to the limit. Areas previously free from flooding following the flood defence working that followed the last major flooding 20 years previously, became flooded once more.

The data below does not incorporate the 2020 floods.

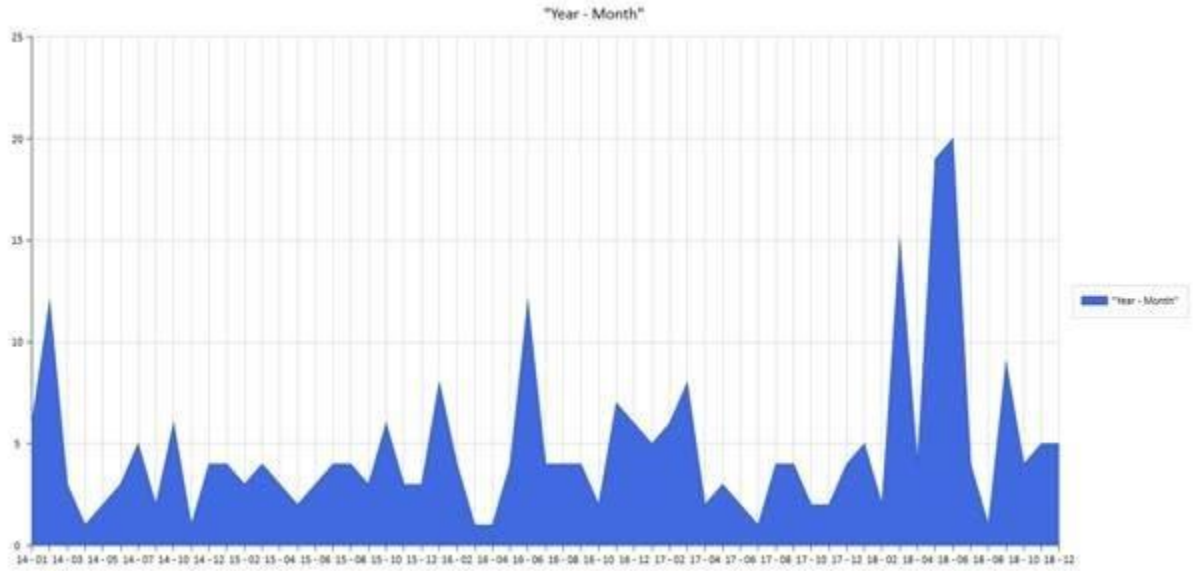
Flooding Incident Breakdown by Incident Subcategory:



Monthly Flooding Incident Totals: 5 years.

This data shows clear spikes of SPATE conditions where demand can become extreme and challenging. This requires a triaging of incidents.

Monthly Flooding Incident Totals: 5 years.

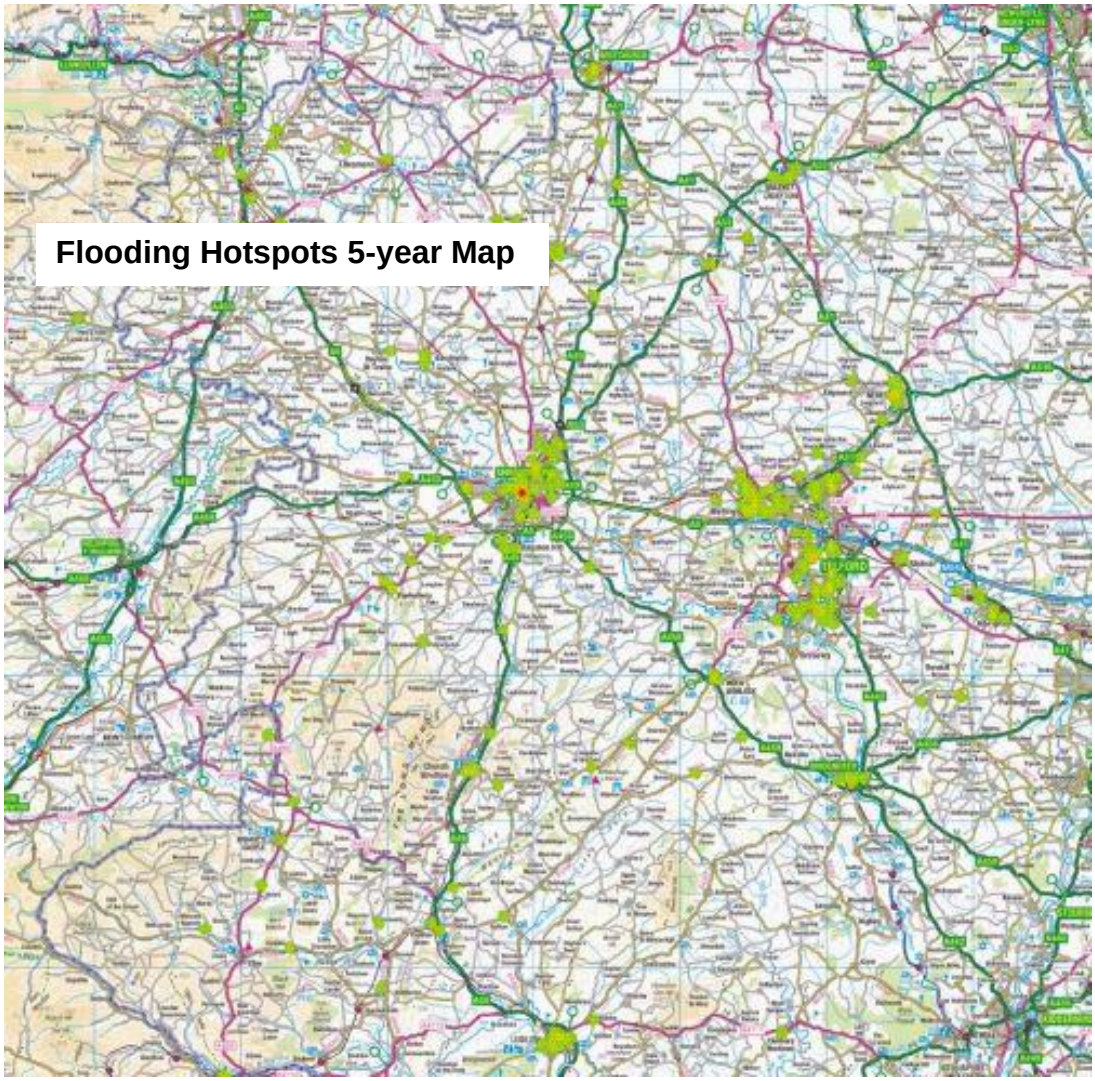


5 Year Flood Incidents by Station:

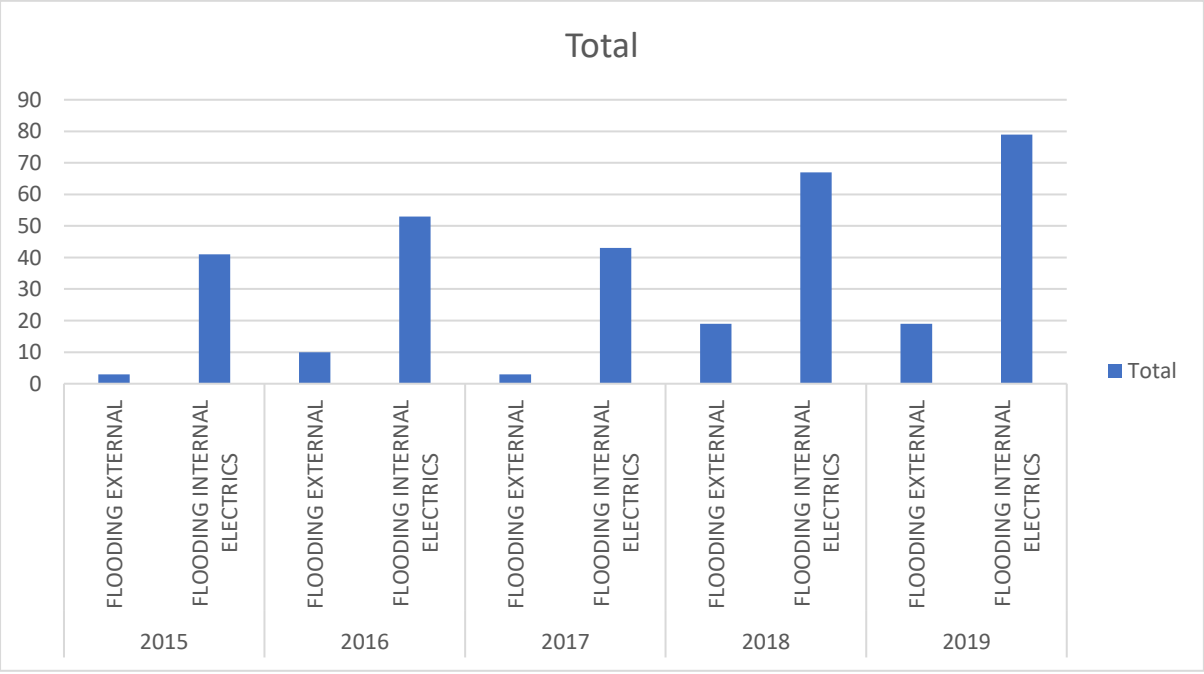
This data again shows that flooding incidents are not linked to the river network. Oswestry, Wellington have high numbers but no sizeable river.

5 Year Flooding Incidents by Station	
Albrighton	8
Baschurch	3
Bishops Castle	3
Bridgnorth	7
Church Stretton	9
Cleobury Mortimer	1
Clun	5
Craven Arms	7
Ellesmere	4
Hodnet	3
Ludlow	16

Markey Drayton	5
Minsterley	6
Much Wenlock	5
Newport	12
Oswestry	18
Out of Area	3
Prees	2
Shrewsbury	60
Telford Central	16
Tweedale	33
Wellington	43
Wem	7
Whitchurch	4



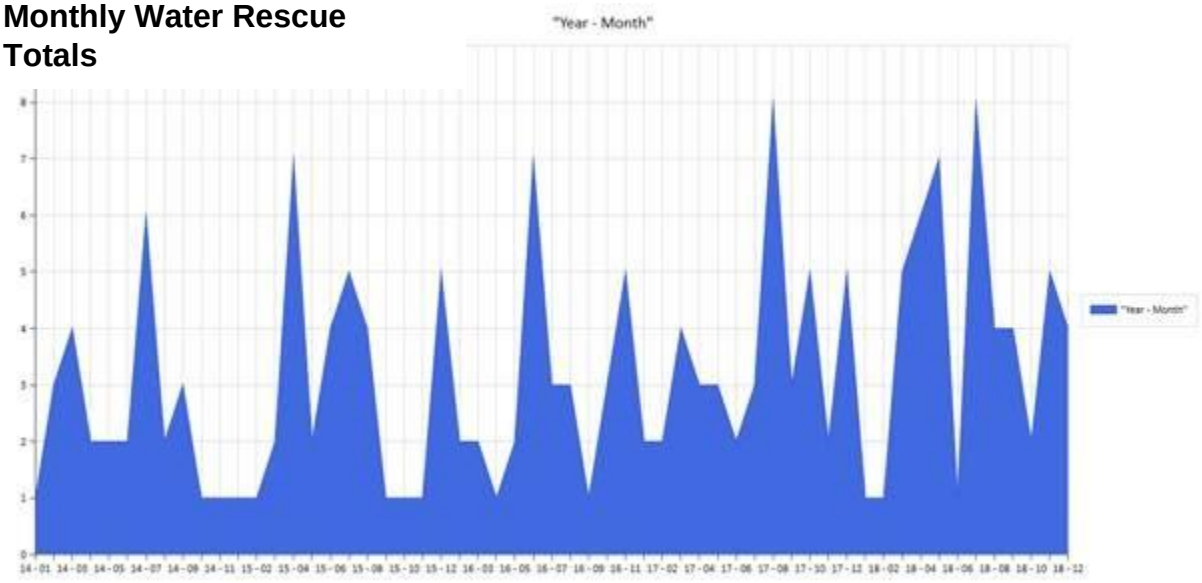
Flooding Incidents. Internal/External



Water Rescue.

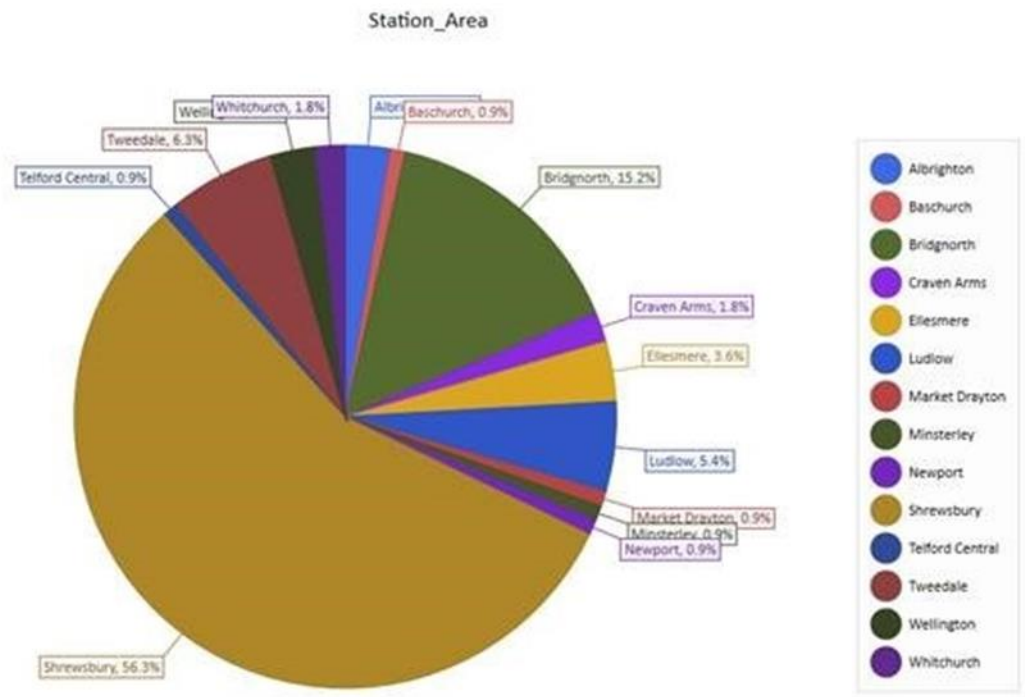
Water rescue incidents do not match the flooding spikes. Whilst people are rescued from flooding especially vehicles, the majority of water rescues occur at times of no flooding.

Monthly Water Rescue Totals

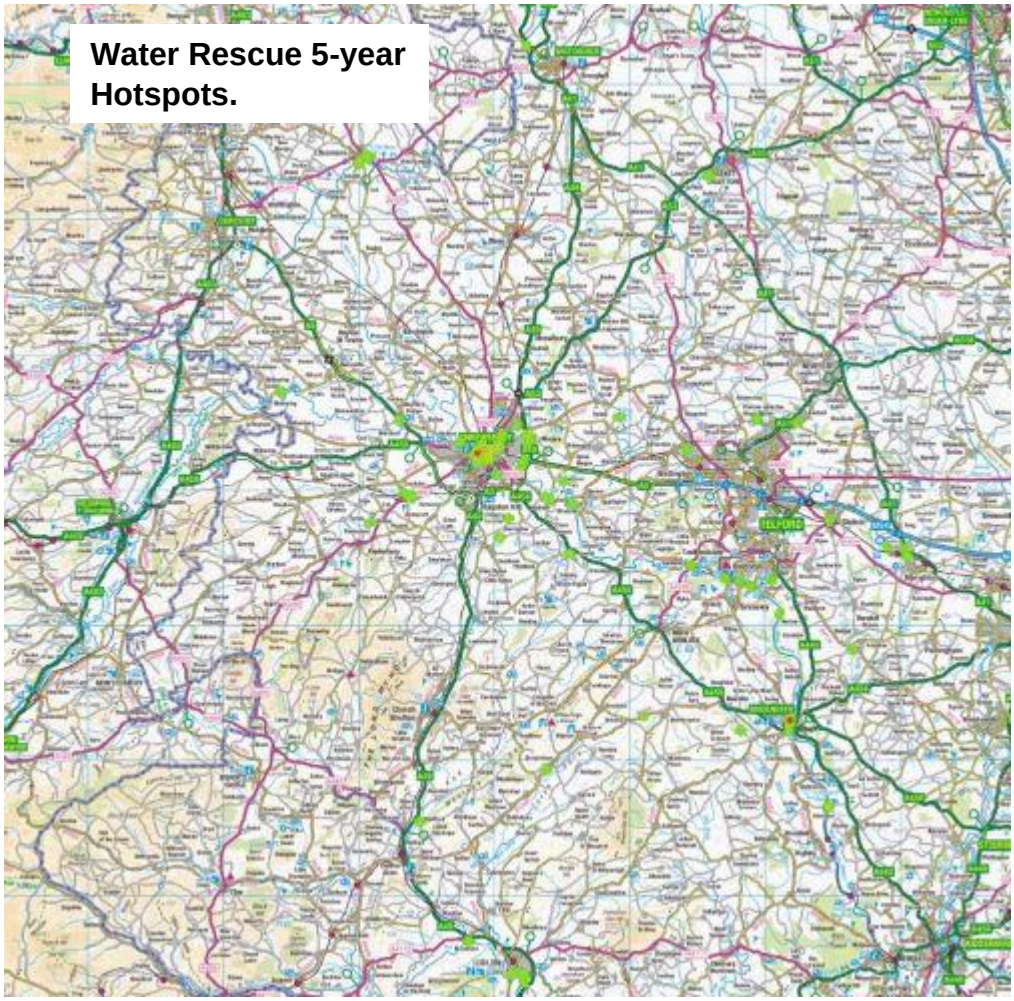


Water Rescue by Station Area.

Water rescue incidents are more prevalent at Stations with a river risk, Shrewsbury, Bridgnorth, Tweedale. These incidents do not correlate with flooding. The increasing use of the river network to support tourism will increase the risk and demand.



5 Year Water Rescue by station:	
Albrighton	3
Baschurch	1
Bridgnorth	19
Clun	1
Craven Arms	4
Ellesmere	4
Ludlow	9
Market Drayton	2
Minsterley	1
Newport	2
Oswestry	1
Out of Area	4
Shrewsbury	105
Telford Central	1
Tweedale	14
Wellington	6
Whitchurch	3

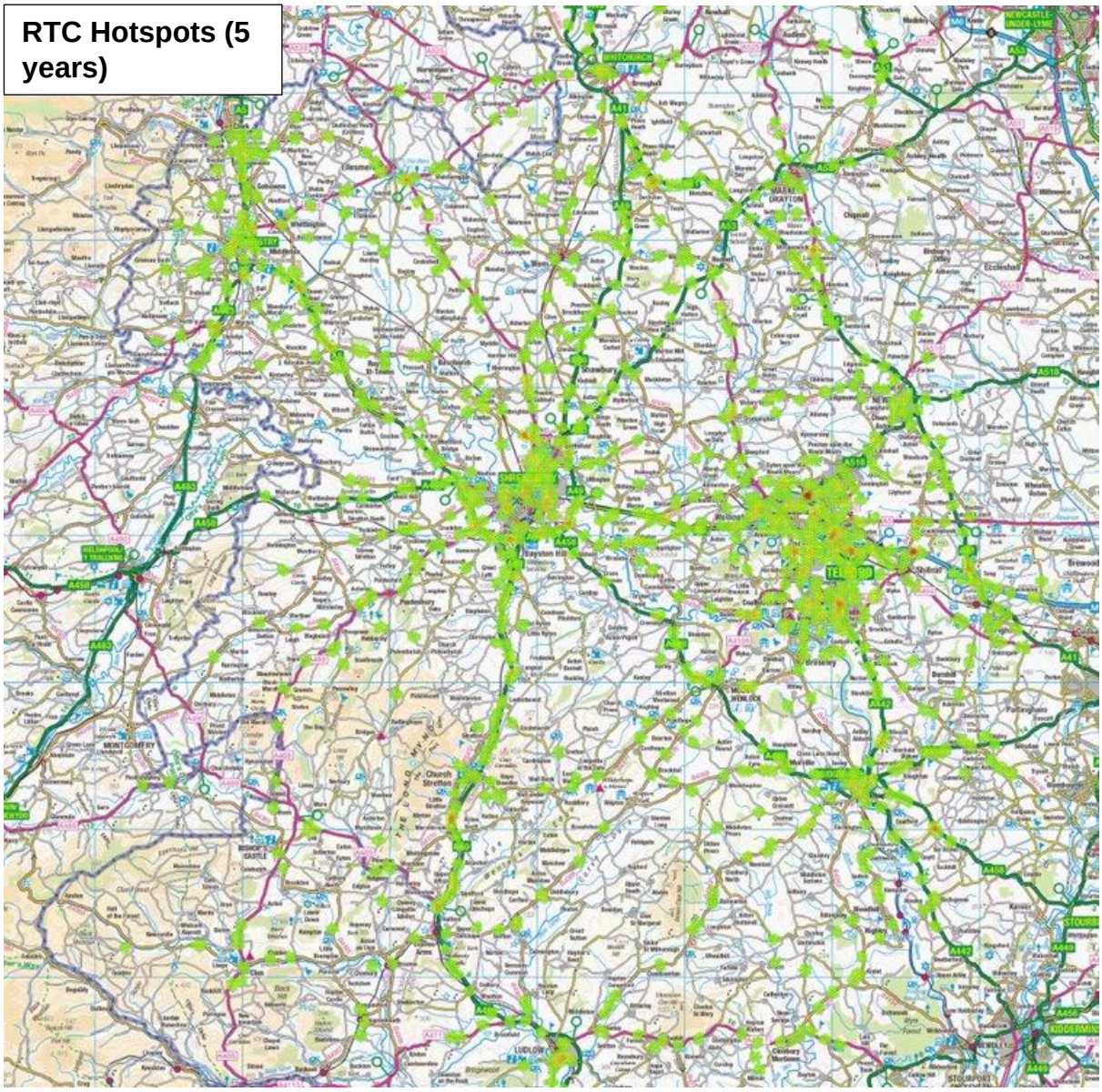


RTC

Telford & Wrekin and Shropshire counties are large, land-locked and predominantly rural areas situated in the West Midlands, bordering Wales and the North West. They are considered one of the most sparsely populated areas in England, however whilst parts of our area are considered remote, they are generally accessible by road quickly and easily.

A 22km section of the M54 motorway runs from the west side of Telford East to the border with Staffordshire. Other parts of Shropshire have arterial roads, e.g. the A5, A49, A53, A41 and A442, but the size and landscape of the local area naturally lends itself to a large network of 'B' roads and unclassified lanes. The great majority of Shropshire roads have evolved from ancient rights of way and have not been designed or constructed to modern design standards, whilst in towns historic street patterns still predominate.

RTC Hotspots (5 years)

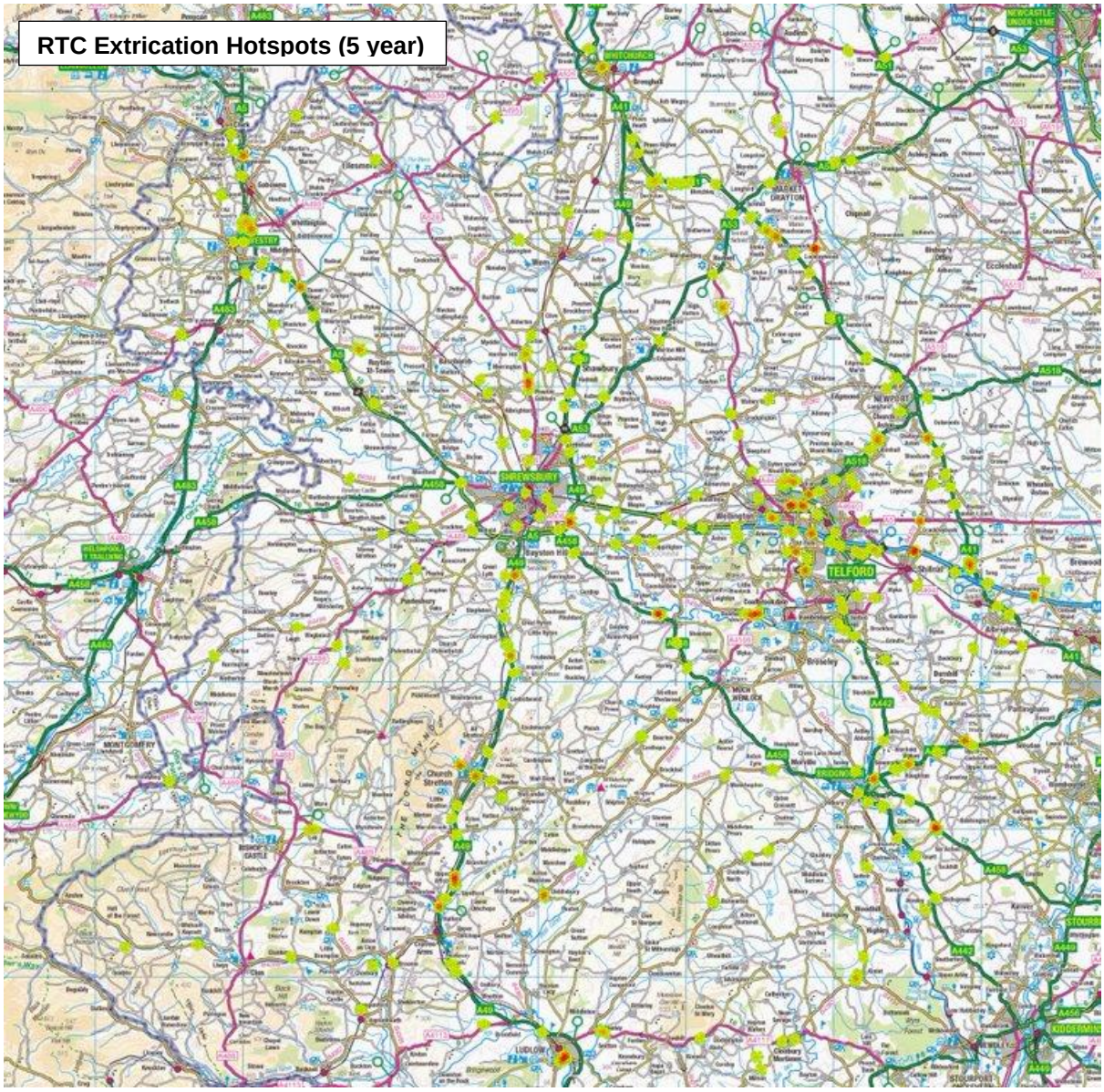


National statistics taken from the DfT (2018) indicate that 44% of traffic travels on rural roads, with the majority of fatal road traffic collisions (RTC's) occurring on this road type (58%).

Across all road types, overall casualty rates from RTC's in our Service area decreased by approximately 27.5% over the 5-year period 2014-18, but not in a linear or predictable fashion. Over the same period, fatality numbers have remained steady at between 1.27% and 2.24% of the total annual casualty rate (between 14 and 20 deaths p/a).

RTC by Station Area (5-year) % requiring extrication / % fatalities per incident

Station	RTC	Extrications	%	Fatalities	%
Albrighton	48	12	25%	2	4.1%
Baschurch	33	5	15%		
Bishops Castle	13	3	23%		
Bridgnorth	113	28	24%	4	3.5%
Church Stretton	53	15	28%	2	3.7%
Cleobury Mortimer	27	8	29%		
Clun	13	4	30%		
Craven Arms	40	15	38%	2	5.0%
Ellesmere	31	2	13%		
Hodnet	19	5	26%		
Ludlow	45	9	20%	1	2.2%
Market Drayton	57	18	31%	3	5.2%
Minsterley	29	6	20%		
Much Wenlock	39	7	18%	2	5.1%
Newport	50	14	28%	3	6.0%
Oswestry	117	21	18%	3	2.5%
Out of Area	28	7	25%	2	7.1%
Prees	31	7	22%	1	3.2%
Shrewsbury	231	45	19%	8	3.4%
Telford Central	134	19	14%		
Tweedale	113	19	17%	4	3.5%
Wellington	171	36	21%	3	1.7%
Wem	26	5	20%	1	4%
Whitchurch	18	3	17%	1	5%

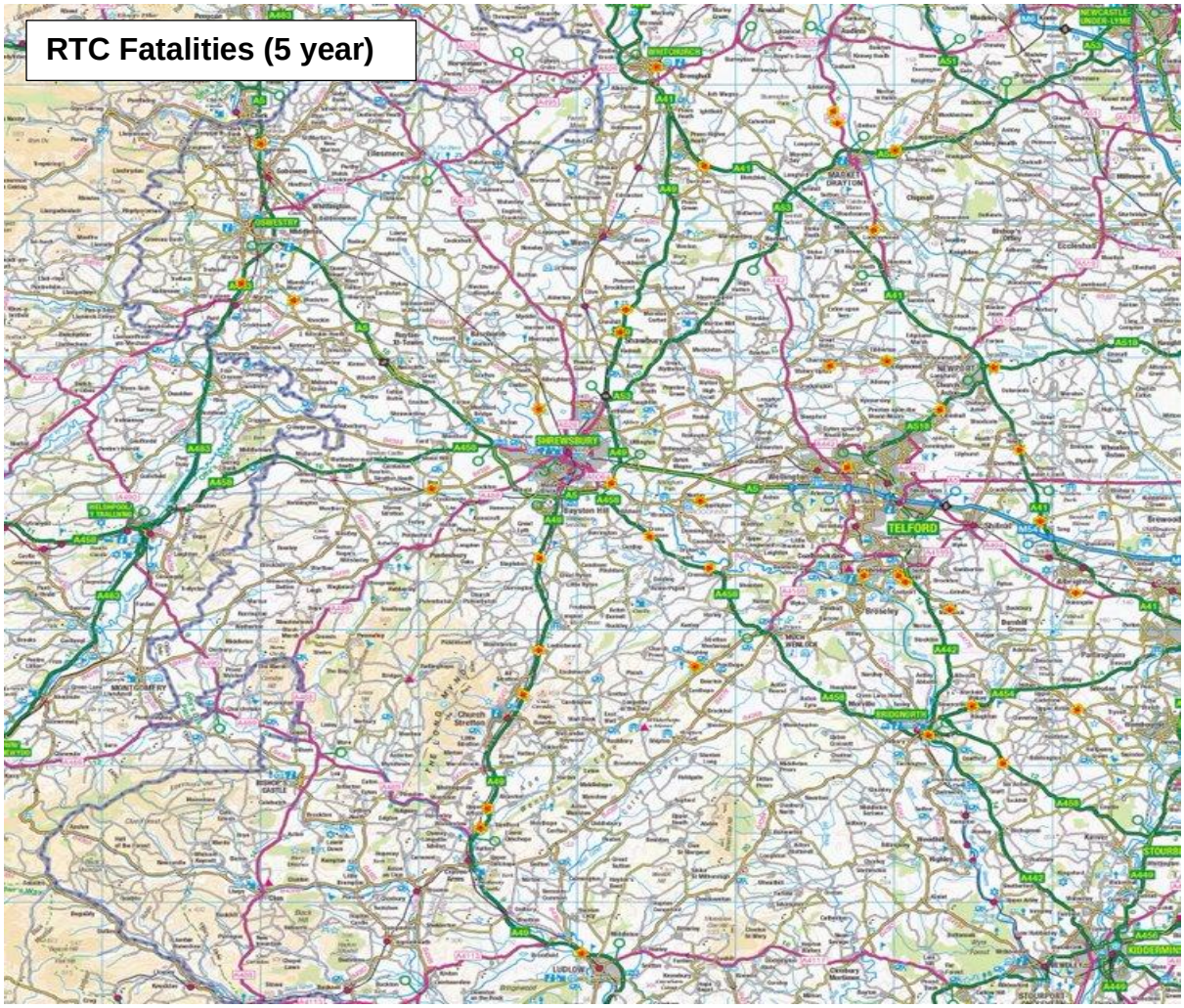


We recognise the Department for Transport priorities for road safety, centred around four priority groups:

- Young drivers
- Older drivers
- Two wheeled motorised vehicles
- Rural roads

Our risk reduction activity aims to address a broad spectrum of subjects, however, the ‘fatal four’ are considered core ‘prevention’ areas:

- Inappropriate speed
- Driver distraction (most commonly mobile phones)
- Lack of seatbelt
- Impairment (drug or alcohol).

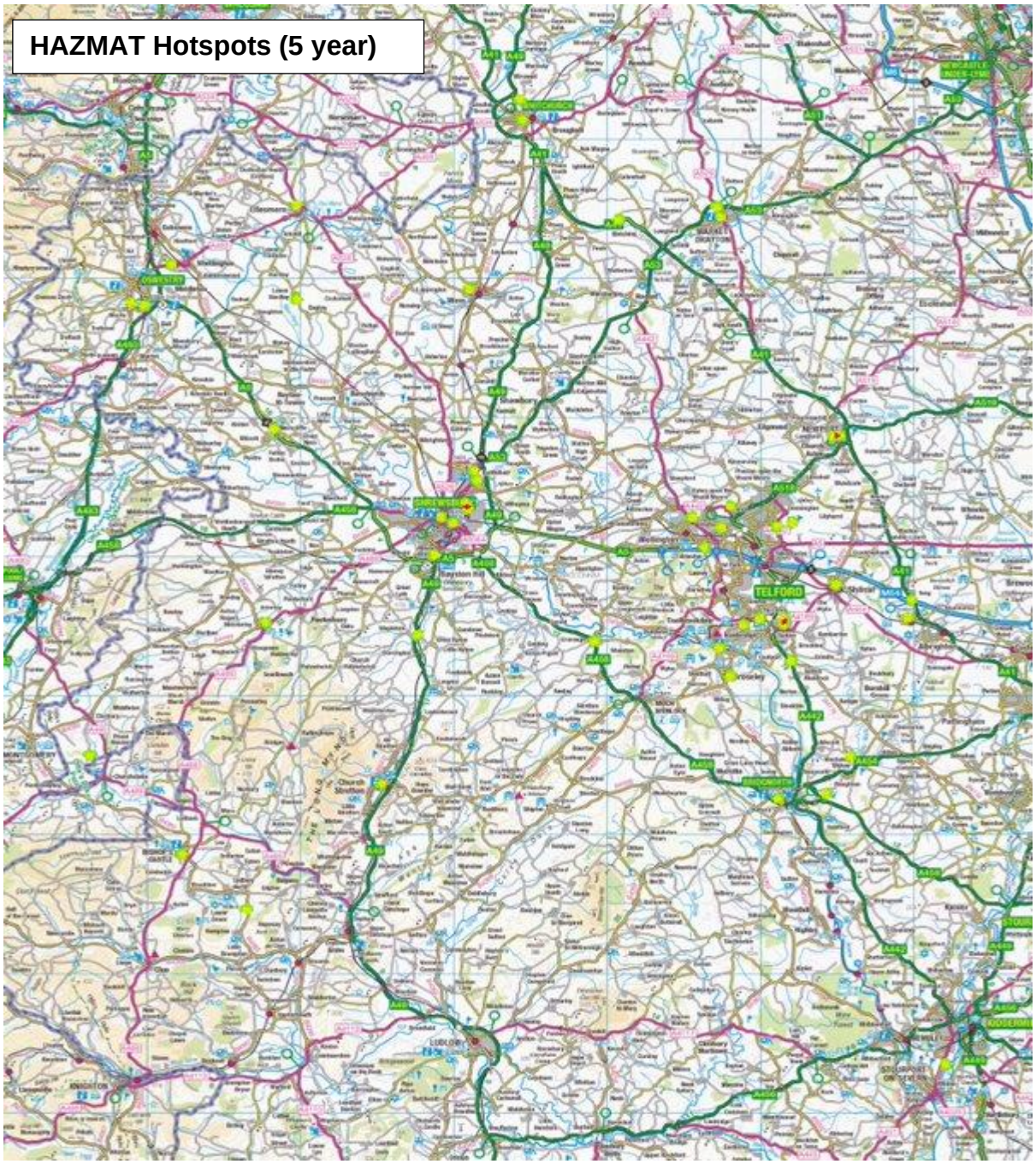


Shropshire Fire and Rescue Service follows the NFCC/NPCC 'National Road Partnership Calendar' to ensure a common approach to road safety messaging. This activity is often supported by Warwickshire and West Mercia Safer Roads Partnership (RSP) and others, widening our available resources and expertise.

We continually explore opportunities for joint working, most recently agreeing an alliance with Hereford and Worcester Fire and Rescue Service and registered charity YSS (Youth Support Services), addressing dangerous driving through behavioural change.

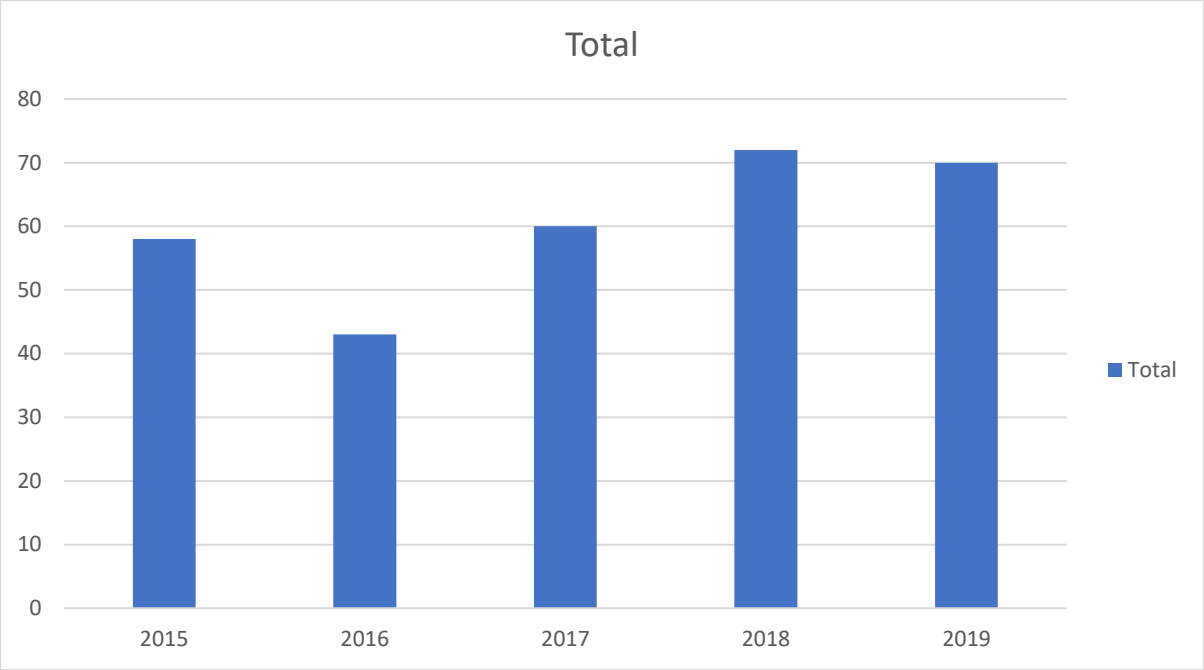
Working with the lead agencies for road safety, the Police and our local authorities, we aim to be a trusted partner across a range of local and national initiatives. Our overarching aim is a reduction in the number of people killed and injured on our roads.

HAZMATS



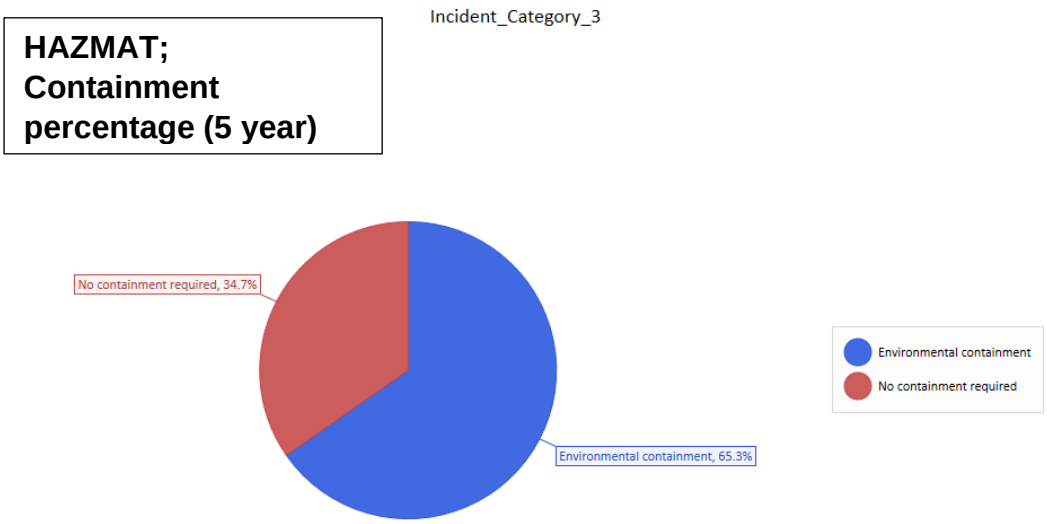
A significant proportion of HAZMAT incidents are linked to transportation and the road network.

Total HAZMAT incidents.

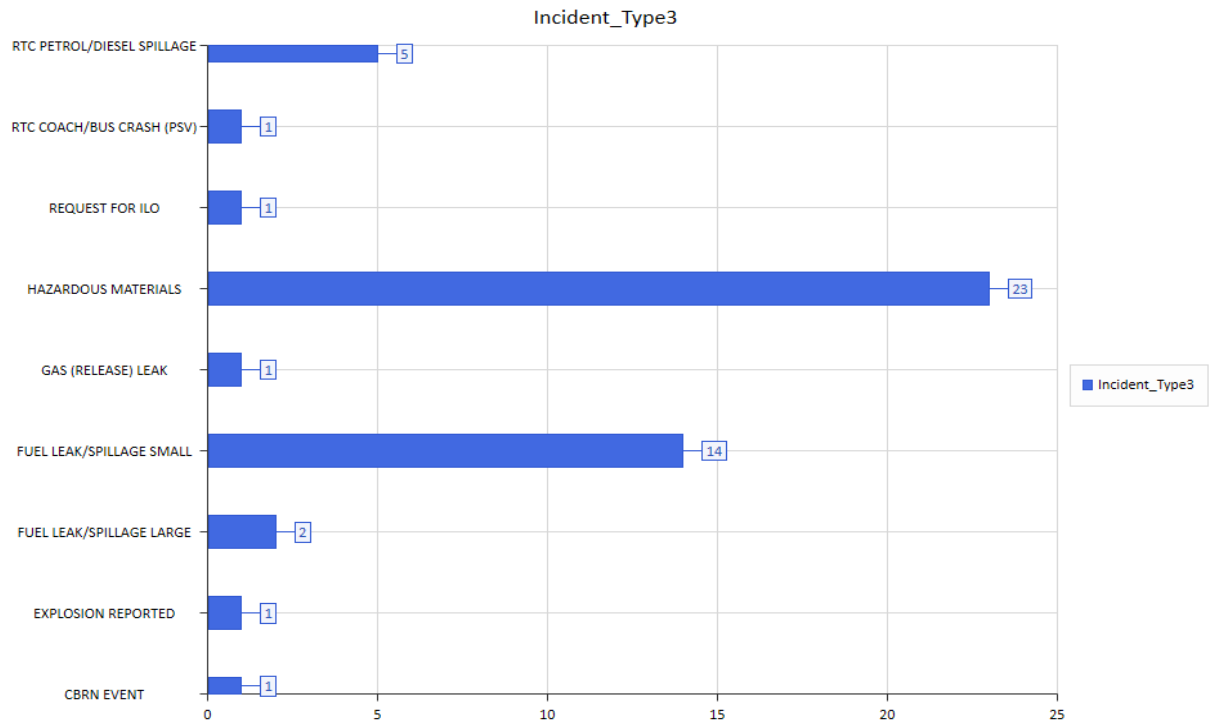


HAZMAT; Containment percentage (5 year)

The majority of HAZMAT incidents involve containment.



HAZMAT Incident Types (5 year)



This incident data is for exclusively HAZMAT incidents. In reality many other types of fire have HAZMAT aspects such as asbestos, water runoff and smoke plumes. These incidents are not recorded in this data. The headline figure is 23 Hazardous Materials Incidents in the 5-year period.

Assisting Police

Missing Person

Since November 2017, SFRS has dealt with 54 high-risk MisPer incidents, 42 of which were in county and 12 being dealt with on behalf of HWFRS.

There are a number of incidents recorded within fire control either as ‘Special Service’ requests or ‘Request NILO’ that may have resulted in MisPer mobilisations and are not included in the above figures.

Also not recorded are declined requests, where the duty NILO has declined to assist based on the search parameters provided by WMP.

Since 2019 a number of MisPer incidents have been dealt with utilising HWFRS’s Unmanned Aerial Vehicle (UAV) or ‘drone’, this has negated the need to deploy appliances and crews, with the incident being managed by a Level 2 Incident Commander or NILO.

Other MisPer incidents have required the provision of FRS specialist equipment only, such as;

· Thermal Imaging Cameras

· Lighting both fixed and mobile

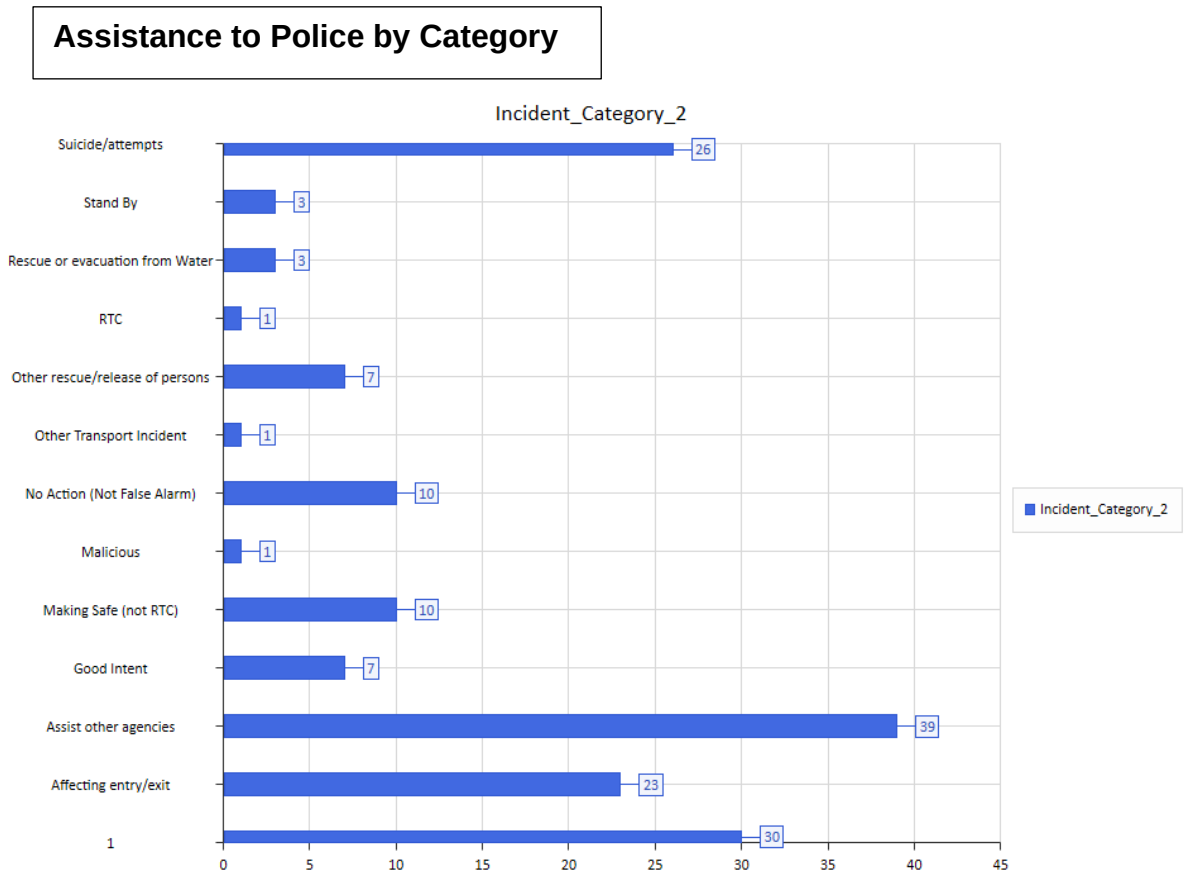
· Trauma / First Aid / Oxygen Therapy Packs

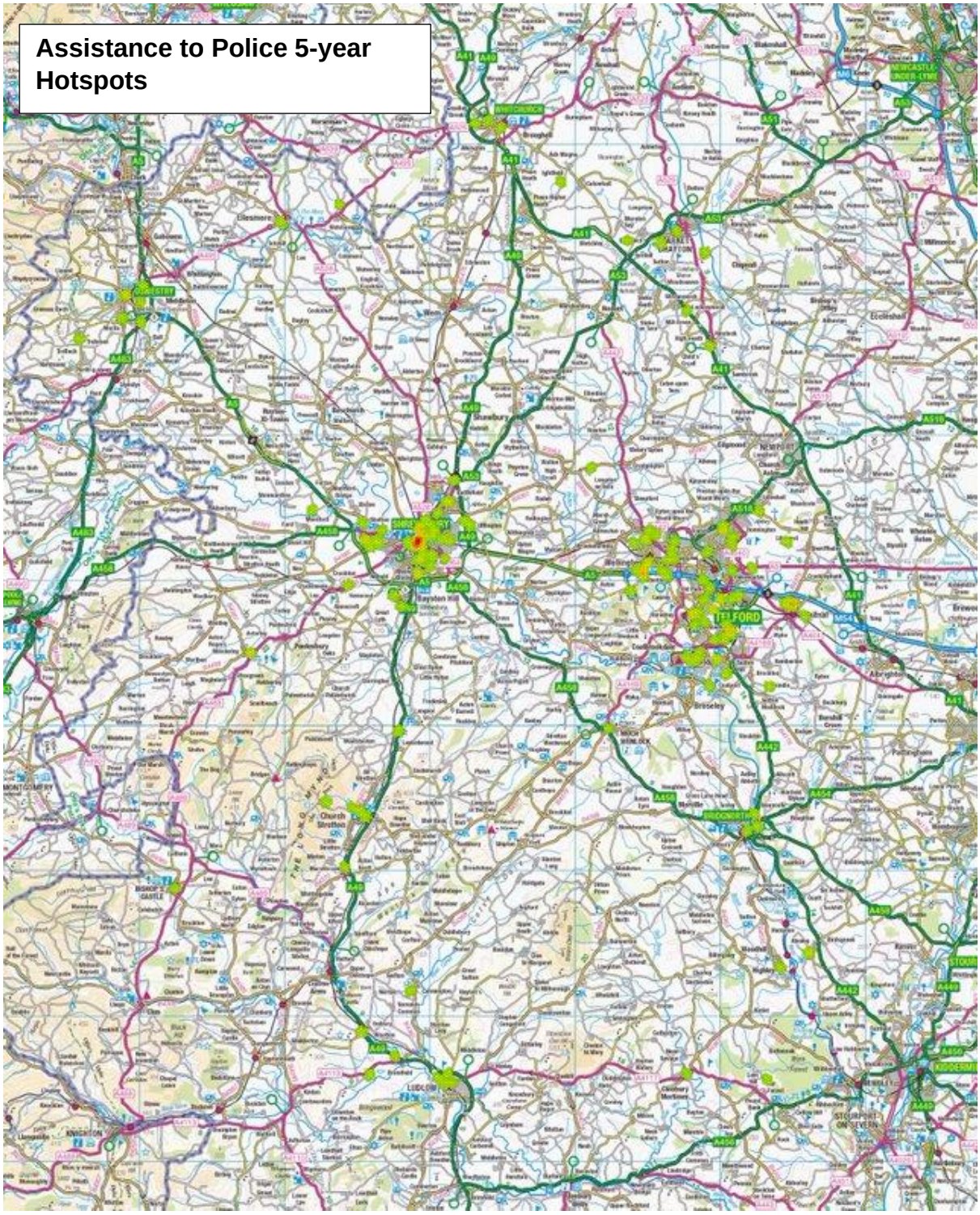
· Mobile Mapping data held on vehicle mounted MDT's.

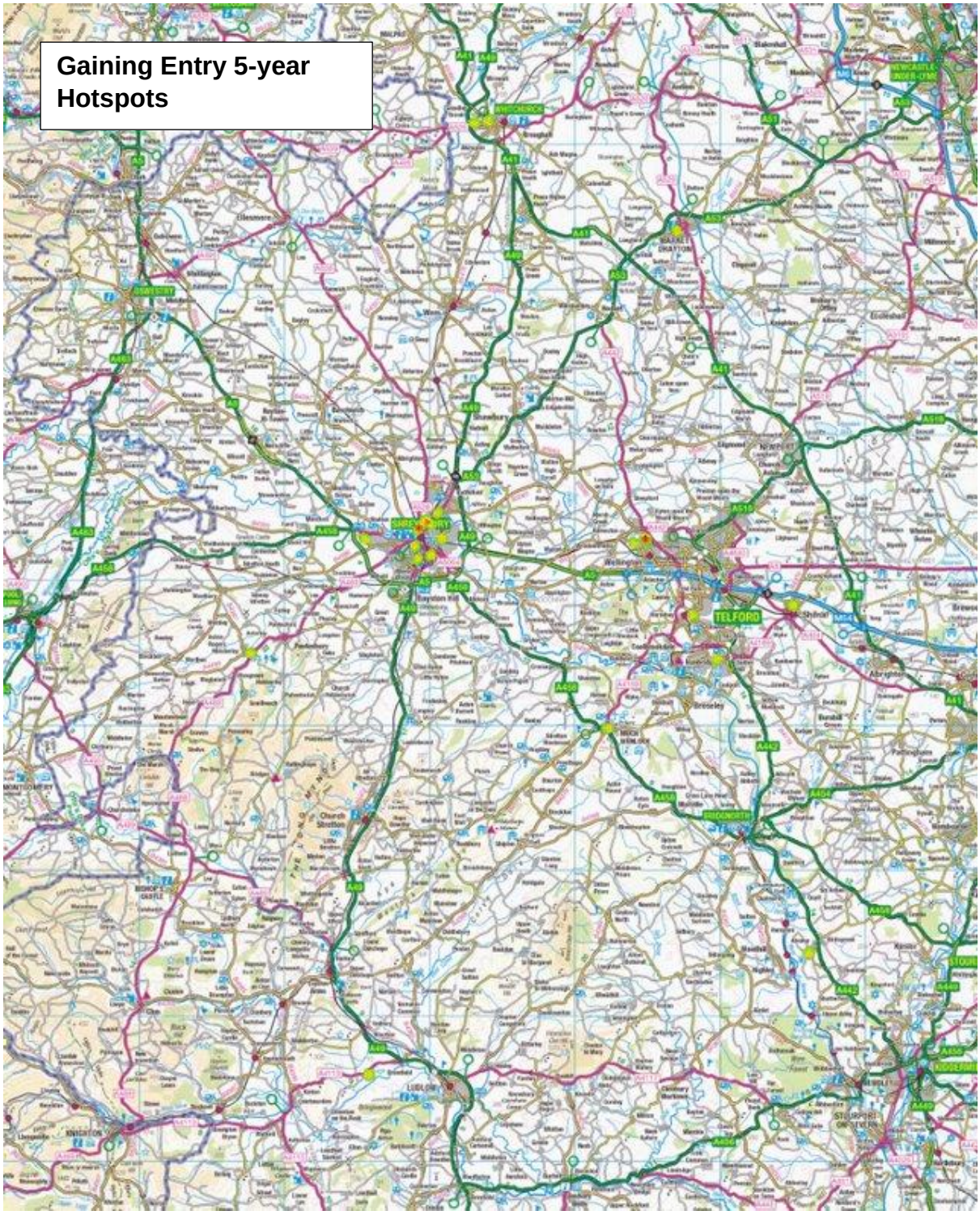
This equipment has been used in the search for missing people where the life or health of that person, or any other person, is at risk.

Where the Service has attended, crews have proactively searched within their capabilities and defined time frames to assist WMP and on several occasions have successfully located the MisPer

Assistance to Police by Category

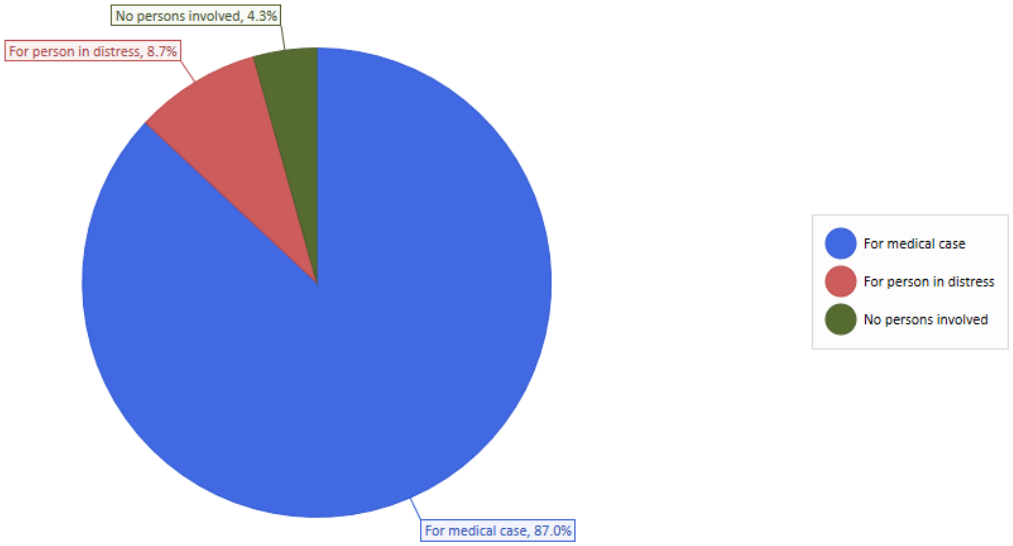



Assistance to Police 5-year Hotspots


Gaining Entry 5-year Hotspots
TELFORD

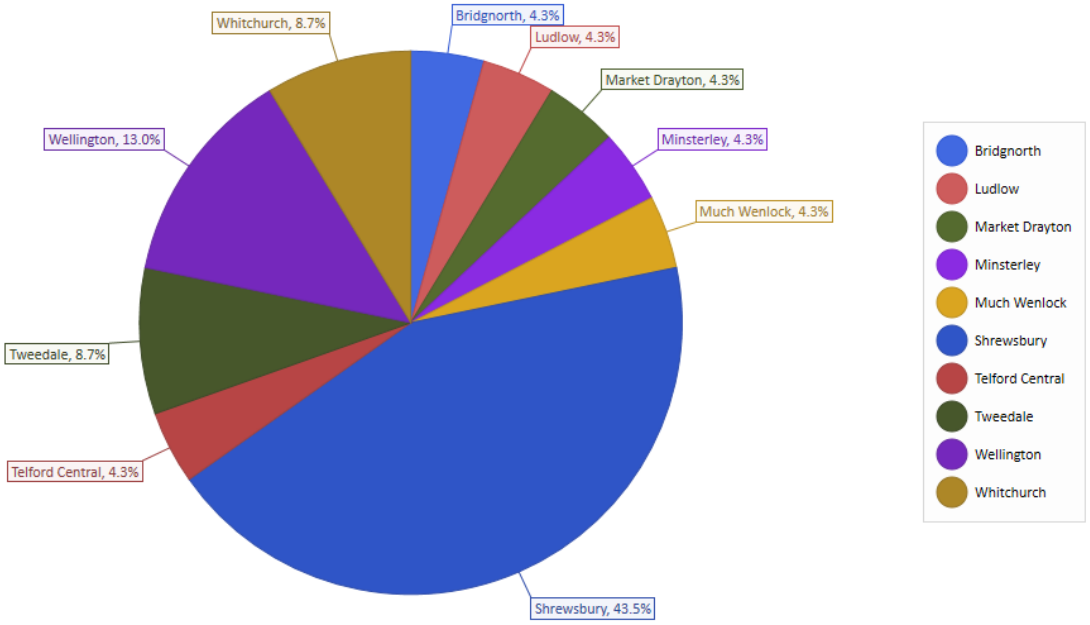
Assist Police Gaining Entry Incident Category

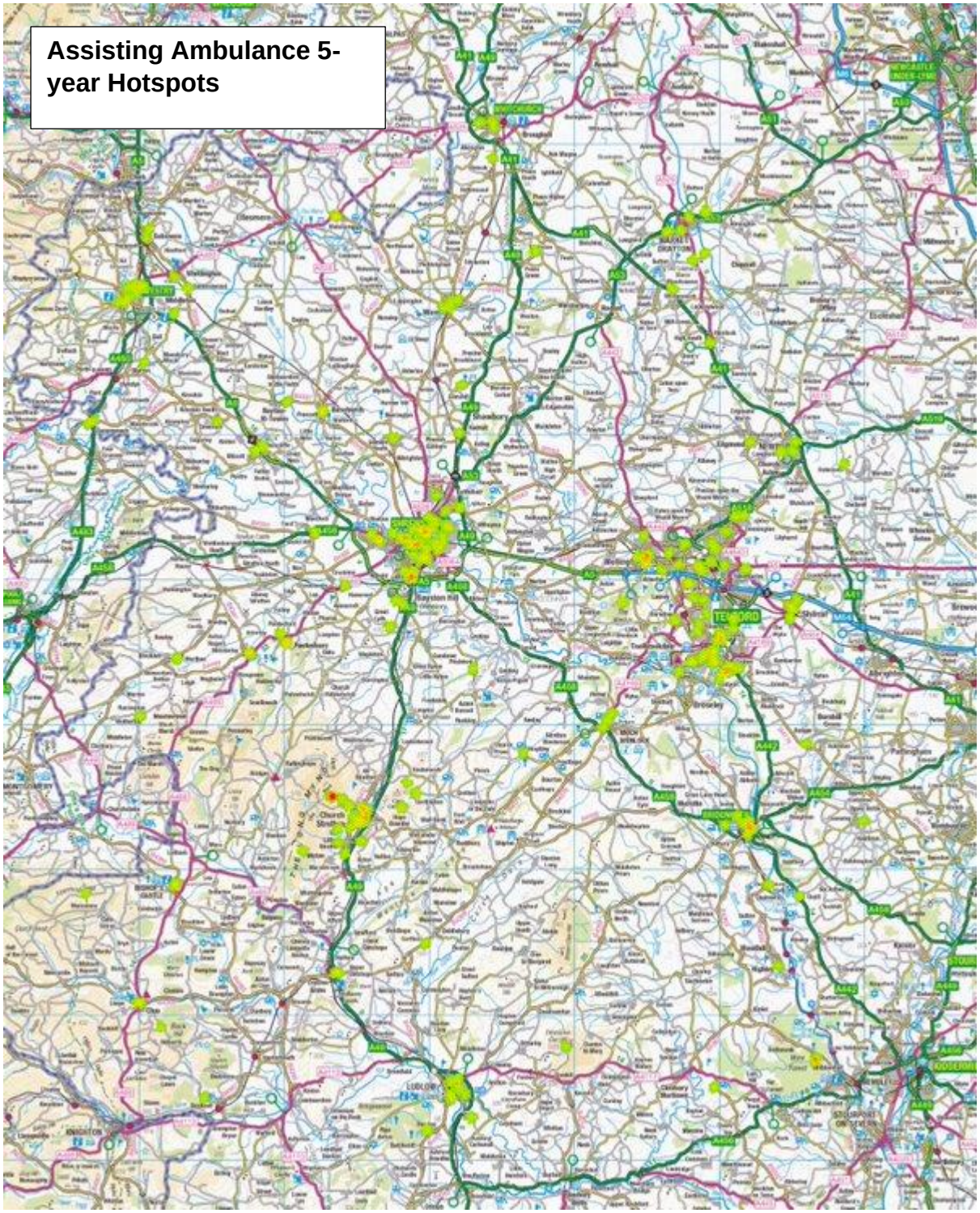
Incident_Category_3



Assistance to Police Gaining Entry by Station Area

Station_Area




Assisting Ambulance 5-year Hotspots