Resourcing to Risk WFRS Data

About this Document

This document provides data and information about both the current arrangements and the arrangements under the proposed model to support understanding of why the changes are being proposed.

If you have any issues with viewing any of these documents please contact us via the following email: wfrsr2r@warwickshire.gov.uk and we will try to assist.

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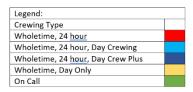
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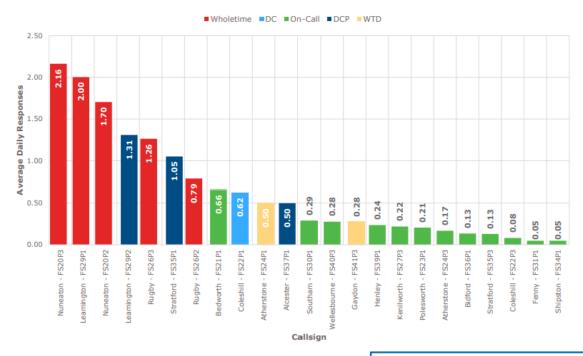
Incident Demand and Activity

Average Daily Responses by Callsign:

Throughout this document, the term 'appliance' refers to a frontline fire engine with an optimum crewing level of four firefighters.

The graph below shows incident activity as a daily average for each appliance (callsign) in the Service. The Data source is the Firecrest Incident Reporting System.





2-Year Sample (Jan 2021 to Dec 2022)

Average Annual Responses

The table shows the average annual number of responses to all incidents by individual appliances (callsign) and to P1 and P2 (life and property risk) incidents by station.

		All Incidents per year -	P1+P2 Incidents
		Average	per year - Average
Appliance	Appliance Type	By Call Sign (appliance)	By Station
		2 year sample, 2021-	5 year sample, 2018-
		2022	2022
Nuneaton 2	Wholetime 24 hour	788	85
Nuneaton 1	Wholetime 24 hour	620	05
Leamington 2	Wholetime 24 hour	730	80
Leamington 1	Wholetime 24 hour, Day Crew Plus	478	00
Rugby 2	Wholetime 24 hour	459	60
Rugby 1	Wholetime 24 hour	288	60
Stratford	Wholetime 24 hour, Day Crew Plus	383	33
Stratford	On Call	47	33
Coleshill	Wholetime 24 hour, Peak Demand Plus	226	29
Coleshill	On Call	29	29
Atherstone	Wholetime, Day Only	182	24
Atherstone	On Call	62	24
Bedworth	On Call	240	20
Alcester	Wholetime 24 hour, Day Crew Plus	182	17
Southam	On Call	105	13
Gaydon	Wholetime, Day Only	102	12
Henley	On Call	87	12
Kenilworth	On Call	80	9
Bidford	On Call	47	7
Wellesbourne	On Call	102	7
Polesworth	On Call	76	6
Shipston	On Call	18	4
Fenny Compton	On Call	18	3

The 'All Incidents' column includes first attendance by the appliance to fires, special services and false alarms. This data does not include 'over the border' calls (ie outside Warwickshire), 'make ups' to large incidents, or standby moves to other fire stations.

The P1 and P2 column includes actual life risk incidents occurring in the area covered by the corresponding fire station (irrespective of what appliance attends).

P1 and P2 are the highest emergency incident priorities that the Service attends, and are further explained in the table below:

Priority Level & Definition	Examples
P1 (Highest Priority)	Persons physically trapped
1 I (mg/reset memery)	Rescue from water
Incidents which pose an immediate	Rescue from Road Traffic Collision
•	
threat to life or property	Building fire, persons reported
P2	Building fire or explosion
	Fire in a train
Incidents which pose a serious hazard	Fire in electrical installations
and high risk threat to life or property	Caravan fire
	Lorry or coach fire
P3	Car fire
	Hazardous Materials
Incidents which pose a potential serious	Chimney
hazard to life or property	Railway Embankments
P4	Small fire outdoors
	Roadside Furniture
Incidents which pose a potential hazard	
to life or property	
P5 (Lowest Priority)	Fire believed to be already out
Incidents which pose a confirmed low	
hazard to life or property	

Performance and Attendance Times

Proposed Intervention Standards:

Fire and Rescue Services throughout the UK are now using 'mean average' targets when reporting response times. This is in line with the approach to reporting taken by the Office of National Statistics (ONS). The following tables reflect this approach, and quotes mean average targets in relation to intervention times.

The Service's risk analysis has identified that areas of the County are defined as 'Very High' to 'Very Low' risk. With regards to response to emergency incidents, we will respond to 'Very High' risk areas of the County in 10.5 minutes and to 'High' risk areas of the County in 11 minutes. The proposed response intervention times to be adopted by the Service are shown in the table below:

Risk	Response		
Category	Targeted	Specialist	
Service	10 mins	N/A	
Wide	30 seconds	IN/A	
Very High	10 mins	45 mins	
very mign	30 seconds	מחוווו כ4	
High	11 mins	45 mins	
Medium	11 mins	60 mins	
Low	11 mins	60 mins	
Very Low	11 mins	60 mins	
very LOW	30 seconds	oo mins	

The proposed intervention times to be adopted by the Service for prevention and protection activities are shown in the table below:

Risk	Prevention		Protec	tion
Category	Targeted	Specialist	Reactive	Proactive
Service Wide	N/A		N/A	A
Very High	24 hrs		4 hrs	24 months
High	48 hrs		4 hrs	3 years
Medium	3 days		1 week	3+ years
Low	2 weeks	when escalated	1 week +	universal
Very Low	universal	universal	universal	universal

The universal offer for low and very low categories will be to provide advice and guidance to all, and this will be accessible through a variety of activities including safety messaging, educational toolkits, and telephone advice.

Proposed Option 2a Performance:

When compared to our current mean average appliance attendance times, the proposed option will enable the following mean average performance across the whole County:

Current 1st appliance	Option 1st appliance
Attendance Time	Attendance Time
10 min 37 secs	10 min 20 secs
Current 2nd appliance	Option 2nd appliance
Attendance Time	Attendance Time
14 min 16 secs	14 min 28 secs

First Appliance Attendance Times, P1+P2, in Risk Areas (LSOAs):

Within the Service's risk analysis, every Lower Layer Super Output Area (LSOA) in Warwickshire is categorised on a scale from very high to very low risk. An LSOA is comprised of 1,500 people on average. The current appliance attendance times for P1 and P2 incidents in these LSOAs, and the times for the proposed option, are shown in the tables:

First Appliance Attendance Times – P1 and P2 Incidents (Minutes.Seconds)			
	Current Option 2a		
County Wide	10.37	10.20	
Very high risk LSOAs	10.03	10.03	
High risk LSOAs	11.19	10.54	
Medium risk LSOAs	10.18	9.53	
Low risk LSOAs	10.49	10.10	
Very low risk LSOAs	10.47	11.06	

Second Appliance Attendance Times, P1+P2, in Risk Areas (LSOAs):

Second Appliance Attendance Times – P1 and P2 Incidents (Minutes.Seconds)				
	Current Option 2a			
County Wide	14.16	14.28		
Very high risk LSOAs	13.05	14.03		
High risk LSOAs	15.57	15.51		
Medium risk LSOAs	14.05	13.34		
Low risk LSOAs	14.06	14.30		
Very low risk LSOAs	13.18	13.46		

First Appliance Attendance Times, P1+P2, in Warwickshire areas

The current appliance attendance times for P1 and P2 incidents in the areas of Warwickshire, and the times for the proposed option, are shown in the tables:

P1 & P2 Incidents – Average First Attendance (Minutes.Seconds)			
Area Current Option 2a			
County Wide	10.37	10.20	
North Warks	11.09	11.02	
Nuneaton & Bedworth	8.34	7.59	
Rugby	9.18	9.07	
Stratford	11.45	13.49	
Warwick	8.48	9.20	

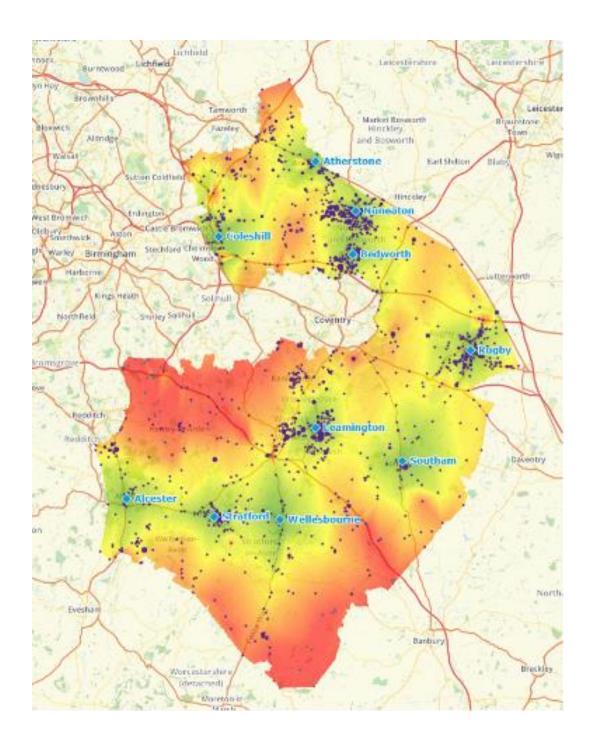
Second Appliance Attendance Times, P1+P2, in Warwickshire Areas:

P1 & P2 Incidents – Average Second Attendance (Minutes.Seconds)			
Area Current Option 2a			
County Wide	14.16	14.28	
North Warks	14.24	16.33	
Nuneaton & Bedworth	11.20	13.14	
Rugby	11.27	11.21	
Stratford	16.53	20.15	
Warwick	10.29	10.43	

Heat Map, Attendance Times, Day 0800-2200 hrs

The heat map below illustrates the modelled performance of the proposed option 2a, between 0800-2200hrs (day / evening). The red colouration illustrates areas of the County that fall outside a modelled 20 minute response. Green shows up to 10 mins, yellow is 10 to 18 mins, and orange is 18 to 20 mins.

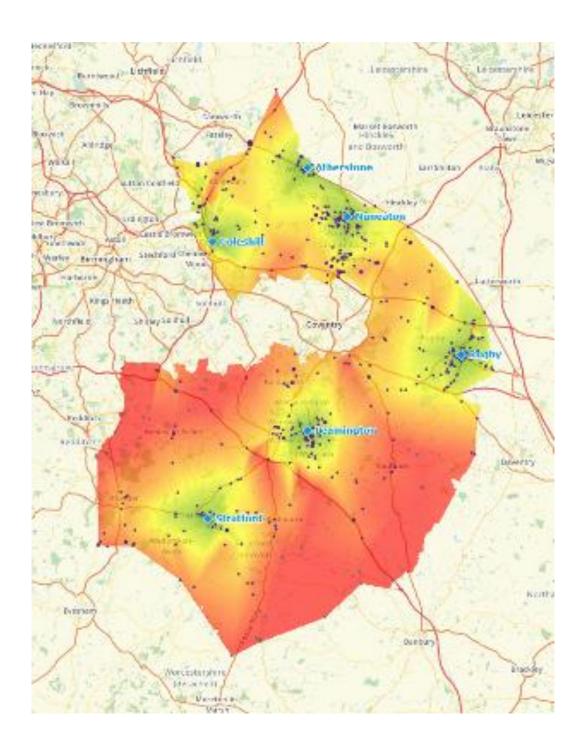
The purple colouration indicates all P1 and P2 incidents between 2018-2022 (5 years), that occurred during the day / evening. 89% of incidents involving life and property occur between 0800-2200 hrs.



Heat Map, Attendance Times, Night 2200-0800 hrs

The heat map below illustrates the modelled performance of the proposed option 2a, between 2200-0800hrs (night). The red colouration illustrates areas of the County that fall outside a modelled 20-minute response. Green shows up to 10 mins, yellow is 10 to 18 mins, and orange is 18 to 20 mins.

The purple colouration indicates all P1 and P2 incidents between 2018-2022 (5 years), that occurred at night. 11% of incidents involving life and property occur between 2200-0800 hrs.



Appliance Availability

On-Call Availability

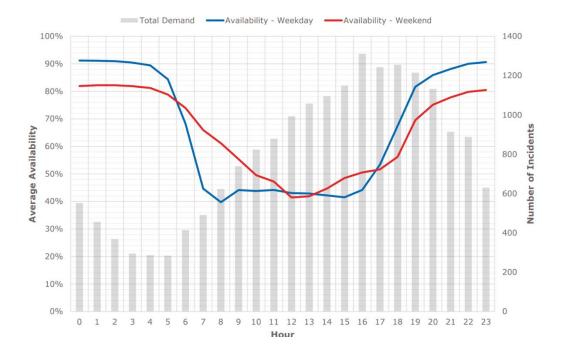
For a summary of on-call availability by area, please see 'R2R on-call availability':

R2R on-call availability information

On-Call Availability vs Demand

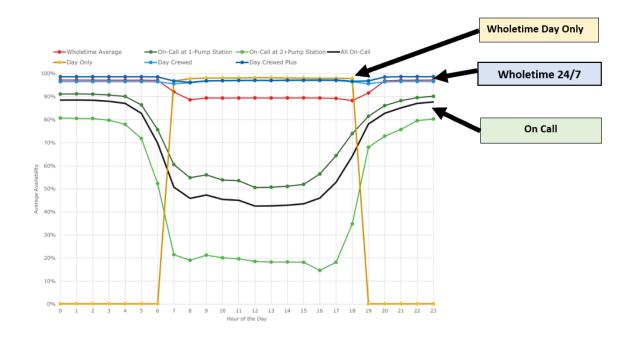
The graphs below show weekend and weekday availability for on-call crews by hour of day. This is superimposed over the daily incident demand pattern. This information is sourced from the Firecrest Incident Recording system. Availability is sourced from Fire Service Rota. The data is a two-year sample between 1 Jan 2021 and 31 Dec 2022.

The blue curve shows on call weekday availability by hour, the red curve is on-call weekend availability by hour, and the grey bar chart is total incident demand by hour.



Availability by Hour

The graph below illustrates the availability achieved by the various crewing systems in the Service. This information is sourced from the Service Analysis Report April 2023. The data is a two-year sample between 1 Jan 2021 and 31 Dec 2022.

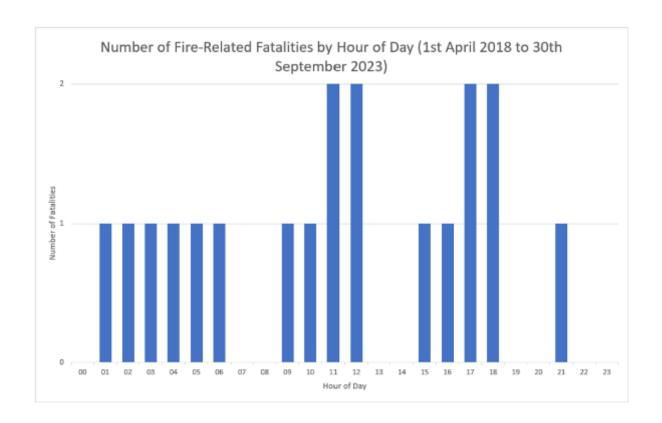


Fire Fatalities

Fire Fatalities by Hour of Day

The data below shows the number of fire fatalities between April 2018 and September 2023, by time of day. This data is taken from the Firecrest Incident Recording System. There were 19 fatalities in total (11 from accidental fires, 8 from deliberate fires). Of these:

- 13 occurred between 0800-2200 (day) (7 accidental / 6 deliberate)
- 6 occurred between 2200 0800 (night) (4 accidental / 2 deliberate)



Crewing Systems

Option 2a proposes to introduce nationally recognised crewing systems. These are shown in the charts below.

224	Wholetime 24 hour, operating 2 day shifts, 2 night shifts, 4 off.
Peak Demand Plus (PDP)	Wholetime 24 hour. Each 24 hour period is split into day positive
	hours on station followed by stand by hours at night from home.
Day Crewing Plus (DCP)	Wholetime 24 hour. Each 24 hour period is split into day positive
	hours on station followed by stand by hours at night, also on station
On Call (OC)	Staff respond to emergency incidents from home after being
	alerted.
Peak Demand	Wholetime, operating daytime crewing only
Surge	Firefighters recalled within specified time periods to make
	additional appliances available to meet surge in incident activity
	levels.

Key:	
Nationally agreed crewing system	
Not nationally agreed	

	Current	Option 2a
Nuneaton	224	224
Bedworth	ос	Day Shift + Evening Shift
Coleshill	PDP	224
	ос	
Polesworth	ос	surge
Atherstone	Peak Demand Crewing	224
	ос	
Rugby	224	224
Kenilworth	ос	surge
Leamington	DCP	224
	Self-Rostering	224
Southam	ос	Day Shift + Evening Shift
Fenny	ос	surge
Shipston	ос	surge
Stratford	DCP	224
	ос	
Bidford	ос	surge
Alcester	DCP	Day Shift + Evening Shift
Henley	ос	surge
Wellesbourne	ос	Day Shift + Evening Shift
Gaydon	Peak Demand Crewing	surge