Integrated Risk Management Plan

Response Review 2021 - 2024

Last Updated: March 2021

Tyne and Wear Fire and Rescue Service
Creating the Safest Community
www.twfire.gov.uk

Document Control

Version	Revision Date	Revised by	Change Description
2	09/02/2021	Dave Leach Paul Russell Sophie Danskin	Amendments
3	21/02/2021	Catherine McCormick	Finance section added
4	01/03/2021	Dave Leach Paul Russell	Review of report
5	01/03/2021	Sophie Danskin	Formatting

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1 INTRODUCTION

1.1 The Fire and Rescue Services Act 2004 places a statutory duty on all fire and rescue authorities to respond to fires and a range of other emergencies. Additional responsibilities result from a range of legislation including the Civil Contingencies Act 2004 and the Health and Safety at Work Act 1974. In addition to those duties, the legislative obligations, enacted through the National Framework for Fire and Rescue Services (FRS), is to produce and publish an Integrated Risk Management Plan (IRMP).

1.2 *"Each Fire and Rescue Authority must produce an integrated risk management plan that identifies and assesses all foreseeable fire and rescue related risks that could affect its community, including those of a cross-border, multi-authority or national nature. The plan must have regard to the community risk registers produced by Local Resilience Forums and any other local risk analyses as appropriate".*

1.3 IRMP is the approach adopted to make significant changes to the shape of the Fire and Rescue Service. This ensures the balance of efficiency and community risk when planning, designing and delivering services. The IRMP ensures risk and available resources are balanced.

1.4 The proposed changes to operational response intends to support standards through utilising staff and resources more effectively, efficiently and appropriate to risk and demand both locally and nationally.

1.5 A Response Review Team was formed to co-ordinate and undertake a comprehensive review of Response in support of the Integrated Risk Management Planning process (IRMP). The team was led by Area Manager Service Delivery and included a number of people in different departments across the Service. The DCFO for Community Safety attends in an ex officio capacity.

1.6 The Response Review Team has identified and assessed the anticipated fire and rescue related risks that affect our community. This reinforces the response capabilities proposed within this IRMP, with the intent of delivering our vision of "Creating the Safest Community".

1.7 The objectives for the Response Review Team were to:

- Review and consider any outstanding actions and proposals from the previous IRMP process;
- Review the current response model, identifying areas for improvement;
- Seek opportunities to introduce further and build on current flexibility;

- Objectively challenge existing arrangements, to identify potential options for improved / more efficient and effective delivery;
- Consider the type and quantity of resources required; including people, skills, equipment and vehicle types;
- Consider all known current (actual) and projected risk and demand, using all available data and local expertise;
- Consider technological developments and applications;
- Consider local, regional and national picture – e.g. current and anticipated legislation and policy; local guidelines and good practice; what other emergency services are doing;
- Consider impact on, and impact of, other IRMP Reviews and other areas of the Service;
- Ensure Value for Money within the response model;
- Produce options for the future provision of operational cover;
- Consider the effect and implications of any proposals on other parts of the Service such as training, recruitment, finance and asset management; and
- Present these options for consultation and then recommendation to Fire Authority.

1.8 The following activities were **in scope** for the purposes of the Response review based on the current (actual) and projected risk:

- All response resources for emergency activity
- Staffing arrangements for all appliances across the service
- Staffing arrangements for the provision of flexible duty officer system
- Organisational structure requirements to support proposals

1.9 The terms of reference for the Response Review Team can be found in appendix A.

1.10 The Strategic Community Safety Plan and IRMP are informed by our Community Risk Profile 2020-23 which provides a comprehensive and forward looking assessment of the risks in our community. The Strategic Community Safety Plan can be found in appendix B and the Community Risk Profile 2020-23 can be found in appendix C.

1.11 The coronavirus pandemic and its wide ranging implications had resulted in an urgent review of operational response and resilience. As with other emergency services, the situation with coronavirus and the implications regarding staff availability are an ongoing concern.

1.12 These are and continue to be unprecedented times and the situation regarding the impact of coronavirus is extremely dynamic and often requires

actions and decisions to enable the service to remain resilient in terms of providing a fire and rescue service to the community and playing a full part in the Northumbria Local Resilience Forum and civic society by supporting the public sector and other organisations.

1.13 Our current risk levels are broadly categorised as the following:

Risk Level 1:
Incidents which pose an **immediate threat to human life** or pose a risk of severe human injury

- Person trapped in machinery
- Person fallen in water
- Building on fire possible persons
- Train derailment
- Full emergency at the airport

Risk Level 2:
Incidents which pose a **Serious Hazard** & high risk threat to life, the environment, society, property or heritage

- Car on fire
- Building on fire
- Domestic alarms possible persons
- Gas leak indoors/outdoors

Risk Level 3:
Incidents which pose a **potential serious hazard** to human life, the environment, society, property or heritage.

- Fire – unable to state
- Alarms – AFA commercial/domestic/residential
- Suspect package

Risk Level 4:
Incidents which pose a **potential hazard** to human life, the environment, society, property or heritage.

- Bus shelter on fire
- Jetty on fire
- Embankment on fire
- Animal rescue – animal stuck or trapped

Additional information in regards to risk level can be found in appendix D.

2 OUTSTANDING IRMP ACTIONS FROM 2017 - 2020

2.1 A decision was made by Fire Authority in February 2019, where it was agreed that the previous IRMP actions were carried over. These actions were as follows:

2.2 Proposal 2 – Introduce a range of duty systems based on risk and demand

2.2.1 This proposal involves redefining the duty system operated on certain stations to better accommodate relatively lower levels of community risk and incident related demand whilst minimising the impact on attendance times.

2.2.2 The Service currently runs duty systems that range from whole time on the majority of stations through to the on-call (retained duty system) at Chopwell. A review of duty systems indicate that the targeted introduction of a Day Crewing (On-call) and On-call (Retained) duty systems would provide a balanced approach at certain locations. The Day Crewing (On-call) duty system would involve a two watch system where crews are available throughout the day and revert to an 'urban' on-call system being available to respond within a pre-determined time to their home station or a specific agreed location. This duty system differs from the Day Crewing Close Call system already in operation on two locations and is expected to be based on nationally agreed terms and conditions.

2.2.3 Analysis indicted that Wallsend and Hebburn were the most appropriate for the use of the Day Crewing (on-call) duty system.

2.2.4 Further analysis indicated that the category 2 appliance (Q02) at Farringdon was suitable for conversion to the on-call duty system.

2.2.5 The analysis identified that by introducing proposal 2 along with the previously agreed proposal 1 (Dynamically adjust the distribution and availability of appliances based on risk and demand) would increase response times to all incidents. The time taken to reach risk level 1 incidents would have increased by 17 seconds for the first appliance and 35 seconds for the second appliance.

2.3 Proposal 3 – Adjust the staffing model to deliver a more effective and efficient use of resources

2.3.1 Within this proposal there were 3 separate elements proposed:

- Adjust start and finish time of shift
- Moderate staffing levels at all stations
- Amend staffing levels in mobilising control

2.3.2 In relation to adjusting the start and finish time of shift and moderate staffing levels at all stations, this will be covered in section 5 of the main body of the report.

2.3.3 The element to amend staffing levels in mobilising control was concluded on 12th October 2020. It was agreed by Fire Authority to no longer look to reduce the control room by four firefighters. It was deemed too high a risk to reduce the resilience provided by the control operators.

2.4 To look at the outstanding actions from the previous IRMP in isolation would be unfair, as this would not take into account the new data which is now available for further review. This is also supported by the updated Community Risk Profile 2020-2023 and the current Medium Term Financial Strategy (MTFS). Therefore, all of the actions which have been postponed have been encompassed and challenged within the main body of this review report.

3 RESPONSE

3.1 The Service provides an efficient and effective response to the whole of Tyne and Wear. Our stations, staff and appliances are spread throughout the five local authority areas of Tyne and Wear in the most effective configuration to get to fires and other incidents quickly. Appliances work across station areas and can be deployed to incidents whilst away from their home station.

3.2 Response activities cover the initial call to our mobilising control through to the conclusion of an incident. We attend a wide range of incidents including fires, road traffic collisions, building collapse, rope rescue, hazardous materials, humanitarian services, water rescues and flooding, amongst others.

3.3 The coronavirus pandemic and its wide ranging implications had resulted in an urgent review of operational response and resilience. As with other emergency services, the situation with coronavirus and the implications regarding staff availability are an ongoing concern.

3.4 These are and continue to be unprecedented times and the situation regarding the impact of coronavirus is extremely dynamic and often requires actions and decisions to enable the service to remain resilient in terms of providing a fire and rescue service to the community and playing a full part in the Northumbria Local Resilience Forum and civic society by supporting the public sector and other organisations.

3.5 Tyne and Wear Fire and Rescue Service (TWFRS) operates 17 community fire stations: 14 whole time, 2 staffed using the Day Crewing Close Call (DCCC) system and 1 staffed using the Retained Duty System (RDS); 7 stations have 2 pumping appliances, whilst 10 are 1 pump stations (7 Wholetime, 2 DCCC, and 1 RDS). 4 Targeted Response Vehicles (TRV's) are introduced into the fleet at 18:00hr to 00:00hr on a risk basis removing 2 pumping appliances in line with the current agreed response model.

3.6 The map below illustrates the positions of our Fire Stations, Headquarters, Training Centre, Technical Service Centre and displays our current disposition of resources, further detail is provided in the below table.

3.7 In October 2020, Fire Authority approved a pilot which increased the overall pumping appliances available by 1 and also introduced a primary staffed Aerial Ladder Platform (ALP).

3.8 Our staff have continued to develop their understanding of the differences within our communities, allowing them to deliver the best possible service. We have a range of working patterns based around:

3.8.1 Whole-time watch based 2 x 9 hour days on shift, then 2 x 15 hour nights on shift. Followed by 4 rota days. Whole-time crews currently participate in a trial of Extended Days (E-days) that converts 2 x 15 hour nights to 2 x 15-hour extended dayshifts approximately 6 times a year.

3.8.2 Whole-time day-crewing, close call (DCCC) 13-hour days on or around the station, 11-hour nights from accommodation on the fire station. On average, staff work four days in an 8-day period.

3.8.3 Retained duty system (RDS) staff work primarily in other occupations, receive 3 hours of training per week, and provide up to 120hrs of on-call operational cover under a secondary contract.

3.9 In total, community fire stations are currently crewed by 490 operational staff, over four watches including 22 staff who work DCCC with a further 12 working RDS. Of the 490 operational staff, there are 60 Watch Managers, 86 Crew Managers and 344 Firefighters.

3.10 The table below displays our current disposition of all response resources.

Station	Pumping Appliance	Special Appliance	Capability
A	Cat 1 / Cat 2	A 07	C&C
C	Cat 1/Cat 2	TRV X 2	
E	Cat 1	ALP / A12	Aerial / Welfare
F	Cat 1/Cat 2	Fireboat	Water Rescue
G	Cat 1		Mass Decontamination
H	Cat 1		
J	Cat 1/Cat 2	MDU	Mass Decontamination
K	Cat 1/Cat 2	K 06 / 4x4	Heavy Rescue Line Rescue
M	Cat 1	ALP	Aerial
N	Cat 1/Cat 2	TRV X 2	
Q	Cat 1/Cat 2		Mass D Support
S	Cat 1	Hazmat	Mass D Support
T	Cat 1		Heavy Rescue Line Rescue
V	Cat 1/Cat 2	ALP / V 05	Aerial / Foam and Logistics
W	Cat 1	HDIM	
Y	Cat 1	HVP / 4x4	High Volume Pump
Z	Cat 2		

Linked Stations

3.11 As a Service, we have a duty to respond to the ever-changing nature of emergencies. Training is essential for our staff to operate effectively at incidents such as road traffic collisions (RTCs), building collapse, rope rescue, and water rescue. We have a wide range of specialist resources and equipment including ALPs, several water-based assets including a rescue craft supported by our swift water rescue technicians. Urban Search and Rescue (USAR) staff who can be deployed alongside National Resilience assets. Flexi Duty Officers who provide an enhanced incident management role, also provide specialist functions such as fire safety enforcement, fire investigation, water incident management and hazardous material identification and guidance.

3.12 The challenge of climate change has resulted in changes to the frequency and severity of flooding. We have an important role when large-scale flooding occurs assisting householders and businesses that need help. TWFRS have line rescue operators based at two locations capable of rescues on the

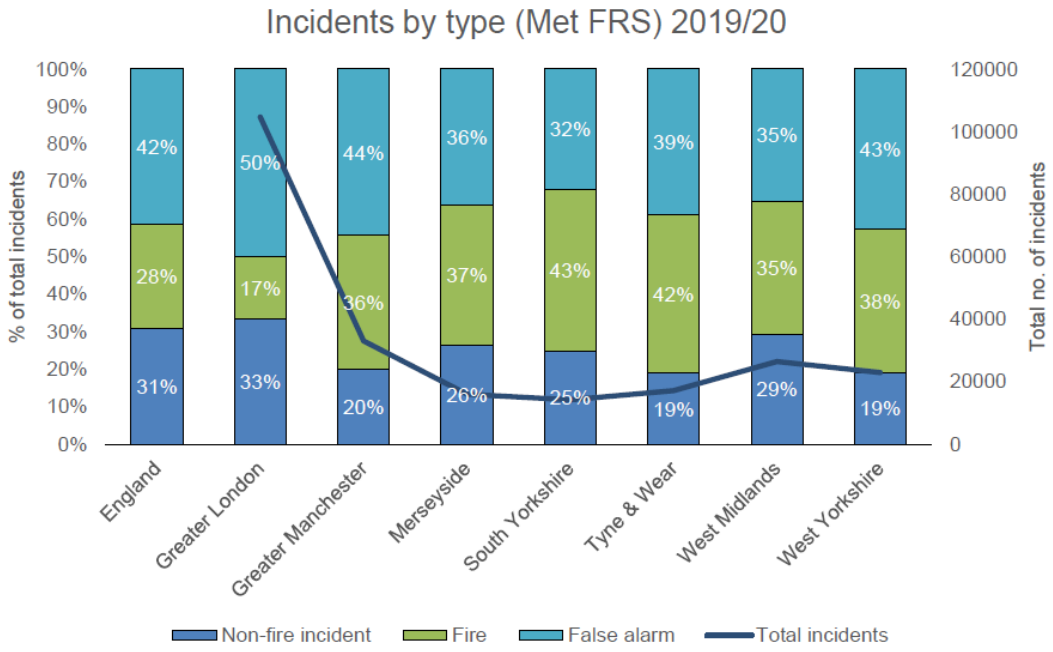
regions coastline and urban environments including bridges. Animal rescue equipment also assists us with our humanitarian response.

3.13 As TWFRS is a Metropolitan Fire and Rescue Service (Met FRS), the Response Review Team has analysed the data contained within the Met report, which provides an overview of the organisation's performance against Community Outcome Indicators. The full report can be found in appendix E. The following information has been taken from the Met's report.

3.13.1 In 2019/20 TWFRS attended 16,776 incidents, a decrease of -3.39% (589 incidents) on the previous year. Nationally, there has been a -3.31% decrease in the total number of incidents attended by FRSs.

3.13.2 When looking at the percentage change in all incidents, 32 of the 45 FRS's saw a decrease, TWFRS saw a decrease of -3.39%. Isles of Scilly saw the greatest increase in incidents with 146.15% and Nottinghamshire saw the greatest reduction with -14.14%.

3.13.3 The chart below shows the percentage split between fires, false alarms and non-fire incidents for all Met FRSs alongside England as a whole. The total number of incidents is also displayed.



National Incidents Statistics Report (Appendix E)

3.13.4 Of the total incidents attended by TWFRS in 2019/20, 7,070 (42%) were fire incidents, a decrease of -6.94% when compared to the previous year. Nationally, fires account for 28% of all incidents and show a decrease of -15.83% when compared to 2018/19.

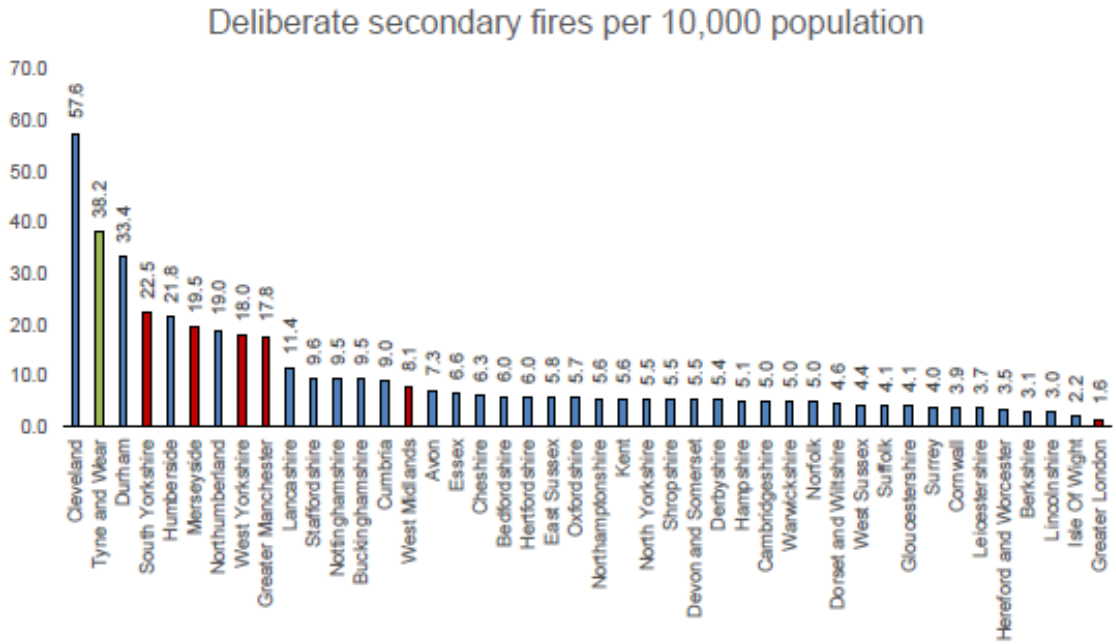
3.13.5 TWFRS rank 5th of the Met FRSs for the number of fire incidents attended. Greater London are top with 17,748 incidents (17% of all incidents) and Merseyside bottom with 5,646 (37% of all incidents).

3.13.6 Nationally, the Met FRSs make up the top seven FRSs for the number of fire incidents attended with Greater London have the highest number of fires and TWFRS ranking 5th.

3.13.7 When comparing the percentage change in the number of fire incidents, TWFRS have the lowest decrease of the Met FRSs with a decrease of -6.94%. West Yorkshire was the best performing Met FRS with a decrease of -28.83%

3.13.8 Nationally, only Cleveland saw an increase of the 45 FRSs 0.02% (1 incident). Staffordshire saw the greatest reduction with -29.35%.

3.13.9 Nationally, TWFRS rank 2nd of 45 FRSs for deliberate secondary fires. Cleveland is the highest with 57.6 and Greater London the lowest with 1.6, although Isles of Scilly had no deliberate fires in 2019/20. It should be noted that there is inconsistencies in the way that Met's report the data.



National Incidents Statistics Report (Appendix E)

3.14 The Response Review Team maintain that a priority for the IRMP is that we maintain a speed and weight of attack based on risk and demand. Our average response time is 5 minutes 50 seconds – the fourth fastest service in the country in responding to primary fires and the fastest metropolitan fire service in the country to dwelling fires.

3.15 Our current response model is built around risk level 1 to 4 and all IRMP's are designed to maximise our speed and weight of attack as shown in section 1.13.

3.16 The table below indicates that TWFRS speed of response is improving every year. This is a result of previous IRMP's which have ensured our resources are in the right place at the right time. This is due to a deliberate change in which TWFRS dynamically mobilise resources in relation to risk and demand.

Attendance Time of Incidents							
Risk Levels	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Difference between**	
	2015/16	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**Year 1 & Year 5**	
1	00:07:01	00:06:58	00:05:12	00:05:16	00:05:08	↓	**00:01:53**
2	00:07:06	00:06:22	00:05:39	00:05:49	00:05:36	↓	**00:01:30**
3	00:05:52	00:05:58	00:05:23	00:05:27	00:05:13	↓	**00:00:39**
4	00:07:10	00:07:52	00:07:28	00:07:25	00:06:46	↓	**00:00:24**
Average	00:06:47	00:06:48	00:05:55	00:05:59	00:05:41	↓	**00:01:06**

Table: TWFRS's speed of response from 2015/2016 – 2019/20

3.16.1 The average attendance time for all incident risk levels (between 2015/16 – 2019/20) has reduced by 1 minute 6 seconds.

3.16.2 The table below is the number of incidents by all risk levels by each station area over the previous 3 fiscal years of 2017, 2018 and 2019. The data highlights that the two pump stations have a high level of risk and demand, with additional capability of specialisms.

Fire Station	2017/2018	2018/2019	2019/2020	Grand Total
Byker (F)	1717	1922	1711	5350
Newcastle Central (C)	1882	1772	1607	5261
Gateshead (V)	1564	1579	1345	4488
Sunderland Central (N)	1285	1435	1547	4267
South Shields (K)	1245	1278	1298	3821
West Denton (A)	1351	1277	1114	3742
Gosforth (E)	1159	1115	1098	3372
Marley Park (M)	1028	1020	1054	3102
Tynemouth (J)	996	961	886	2843
Farringdon (Q)	832	848	863	2543
Washington (S)	745	787	740	2272
Hebburn (T)	800	799	653	2252
Swalwell (Y)	679	686	651	2016
Wallsend (G)	557	761	670	1988
Rainton Bridge (H)	622	540	706	1868
Birtley (W)	377	434	353	1164
Chopwell (Z)	60	65	59	184
Grand Total	16899	17279	16355	50533

Table: The number of incidents by all risk levels by each station area over the previous 3 fiscal years 2017, 2018 and 2019.

3.16.3 The Response Review Team have focused on risk level 1 and 2 incidents for speed and weight of attack based on risk and demand.

3.16.4 The table below is the number of incidents by risk level 1 by each station area over the previous 3 fiscal years of 2017, 2018 and 2019.

Fire Station	2017/2018	2018/2019	2019/2020	Grand Total
Byker (F)	481	415	358	1254
Newcastle Central (C)	332	350	297	979
Gateshead (V)	332	325	301	958
Sunderland Central (N)	246	283	311	840
South Shields (K)	237	239	273	749
Tynemouth (J)	233	201	222	656
Gosforth (E)	239	210	196	645
West Denton (A)	224	185	171	580
Marley Park (M)	198	157	161	516
Farringdon (Q)	158	164	166	488
Hebburn (T)	158	179	141	478
Swalwell (Y)	142	169	147	458
Wallsend (G)	125	162	128	415
Washington (S)	116	124	127	367
Rainton Bridge (H)	108	89	112	309
Birtley (W)	84	90	71	245
Chopwell (Z)	13	15	13	41
Grand Total	3426	3357	3195	9978

Table: The number of incidents by risk level 1 by each station area over the previous 3 fiscal years 2017, 2018 and 2019.

3.16.5 The table below is the number of incidents by risk level 2 by each station area over the previous 3 fiscal years of 2017, 2018 and 2019.

Fire Station	2017/2018	2018/2019	2019/2020	Grand Total
Byker (F)	210	241	179	630
Newcastle Central (C)	186	150	158	494
Sunderland Central (N)	109	169	170	448
Gateshead (V)	136	168	119	423
West Denton (A)	133	152	105	390
South Shields (K)	127	107	106	340
Gosforth (E)	105	110	113	328
Marley Park (M)	115	99	90	304
Tynemouth (J)	96	87	83	266
Farringdon (Q)	88	86	87	261
Hebburn (T)	79	96	68	243
Washington (S)	85	63	72	220
Rainton Bridge (H)	71	70	66	207
Swalwell (Y)	66	70	50	186
Wallsend (G)	60	64	61	185
Birtley (W)	35	44	30	109
Chopwell (Z)	3	5	5	13
Grand Total	1704	1781	1562	5047

Table: The number of incidents by risk level 2 by each station area over the previous 3 fiscal years 2017, 2018 and 2019.

3.16.6 The table below is the number of incidents by risk level 1 and 2 by each station area over the previous 3 fiscal years of 2017, 2018 and 2019.

Fire Station	2017/2018	2018/2019	2019/2020	Grand Total
Byker (F)	691	656	537	1884
Newcastle Central (C)	518	500	455	1473
Gateshead (V)	468	493	420	1381
Sunderland Central (N)	355	452	481	1288
South Shields (K)	364	346	379	1089
Gosforth (E)	344	320	309	973
West Denton (A)	357	337	276	970
Tynemouth (J)	329	288	305	922
Marley Park (M)	313	256	251	820
Farringdon (Q)	246	250	253	749
Hebburn (T)	237	275	209	721
Swalwell (Y)	208	239	197	644
Wallsend (G)	185	226	189	600
Washington (S)	201	187	199	587
Rainton Bridge (H)	179	159	178	516
Birtley (W)	119	134	101	354
Chopwell (Z)	16	20	18	54
Grand Total	5130	5138	4757	15025

Table: The number of incidents by risk level 1 and 2 by each station area over the previous 3 fiscal years 2017, 2018 and 2019.

3.16.7 The tables shown for risk level 1 and 2, highlight that our two pump stations which are in excess of 1,000 incidents over a 3 year period for risk level 1 and 2 are in the appropriate risk area. Annually the figures are not excessive, therefore over 3 year periods where stations have between 750 – 1,000 incidents, it would be beneficial if the two pump stations remained under review.

3.17 In the Fire Authority meeting 12 October 2020, a report was presented to pilot the improvement of operational response and resilience. The report requested the Fire Authority's approval to commence a pilot ahead of a full review of the Service's IRMP. The pilot would increase the Service Delivery establishment allowing for additional resilience in operational response. Specifically, this related to either adding an additional pumping appliance to the response model or placing additional Firefighters at a number of our one pump fire stations. This was approved.

3.18 Using the data available and highlighted in sections 3.16.2 to 3.16.5, the Station identified for an appliance to be re-introduced was West Denton. The

total number of Incidents that West Denton respond to highlights that this Station is the busiest one pump station.

3.19 It was agreed that the additional appliance at West Denton community fire station would also provide greater resilience and direct response in relation to speed and weight of attack at Swalwell and Gosforth community fire stations which are one pump stations.

3.20 The following tables in sections 3.20.1 to 3.20.3, show incidents by station area by hour of the day for the 3 year fiscal period covering all incidents, risk level 1 and also risk level 1 and 2 combined.

3.20.1 Total number of incidents by all risk levels by station area by hour of the day over the previous 3 fiscal years 2017, 2018 and 2019.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Grand Total
Byker (F)	177	167	116	115	91	82	93	112	120	164	199	197	254	206	212	235	321	378	445	438	378	352	282	216	5350
Newcastle Central (C)	223	200	153	142	106	91	100	138	114	136	156	154	229	207	225	230	265	324	384	420	403	357	267	237	5261
Gateshead (V)	156	133	140	117	99	84	73	93	101	110	109	137	119	167	202	216	257	298	348	367	374	326	270	192	4488
Sunderland Central (N)	167	154	127	114	121	101	88	87	78	118	111	127	148	134	181	201	243	309	297	355	313	267	236	190	4267
South Shields (K)	131	118	107	84	96	78	76	69	81	95	116	116	168	148	171	196	215	295	310	311	273	229	177	161	3821
West Denton (A)	103	87	67	68	74	55	43	66	64	74	95	104	125	126	159	190	232	274	352	453	386	267	164	114	3742
Gosforth (E)	102	79	62	63	58	72	62	101	99	109	123	124	136	131	140	157	211	250	294	292	250	208	130	119	3372
Marley Park (M)	90	104	69	77	44	53	32	44	77	60	72	99	115	130	140	185	209	251	281	268	262	181	158	101	3102
Tynemouth (J)	88	82	80	62	58	64	61	59	63	83	97	100	98	116	132	138	142	191	221	215	215	206	154	118	2843
Farringdon (Q)	82	75	68	61	54	50	37	38	47	58	68	72	101	94	118	130	171	187	233	229	224	165	96	85	2543
Washington (S)	51	53	48	36	47	49	43	53	41	59	49	79	83	77	73	97	159	175	218	210	237	149	104	82	2272
Hebburn (T)	88	57	56	57	54	42	35	45	49	49	69	87	79	77	87	111	145	156	203	178	201	126	110	91	2252
Swalwell (Y)	66	49	58	57	37	37	41	41	50	61	74	74	79	108	102	92	123	157	164	164	129	93	89	71	2016
Wallsend (G)	65	54	39	45	36	39	41	42	27	41	53	64	80	82	81	92	132	150	194	181	180	124	86	60	1988
Rainton Bridge (H)	56	41	37	38	28	27	21	28	24	50	37	47	56	53	68	106	133	143	178	225	175	138	95	64	1868
Birtley (W)	33	35	24	22	21	15	23	31	26	30	32	37	52	55	68	58	66	71	89	108	81	86	54	47	1164
Chopwell (Z)	5	0	2	8	3	3	2	5	4	3	7	6	7	10	9	15	13	14	19	16	9	9	9	6	184
Grand Total	1683	1488	1253	1166	1027	942	871	1052	1065	1300	1467	1624	1929	1921	2168	2449	3037	3623	4230	4430	4090	3283	2481	1954	50533

Table: Total number of incidents by all risk levels by station area by hour of the day over the previous 3 fiscal years 2017, 2018 and 2019.

3.20.2 Total number of incidents by risk level 1 by station by hour of the day over the previous 3 fiscal years 2017, 2018 and 2019

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Grand Total
Byker (F)	48	42	29	17	22	16	26	26	27	45	46	57	79	46	50	62	79	89	97	102	69	67	59	54	1254
Newcastle Central (C)	43	36	23	30	20	7	10	14	20	29	42	41	63	50	49	52	55	63	59	61	61	43	51	57	979
Gateshead (V)	46	33	34	38	28	17	23	21	20	33	21	35	36	38	56	59	50	60	52	58	57	55	51	37	958
Sunderland Central (N)	29	38	18	17	16	13	16	11	16	21	22	30	36	30	38	39	61	53	64	54	54	55	58	51	840
South Shields (K)	22	20	25	19	14	11	11	14	22	21	27	34	50	35	33	39	47	44	50	52	32	41	40	46	749
Tynemouth (J)	25	15	15	11	9	17	21	12	10	18	27	32	22	31	32	41	44	43	61	47	41	38	23	21	656
Gosforth (E)	16	14	11	7	9	7	12	14	27	23	26	32	39	35	30	34	53	50	52	44	36	32	19	23	645
West Denton (A)	20	15	12	12	16	7	9	12	9	20	20	26	35	27	27	25	45	43	42	46	41	23	31	17	580
Marley Park (M)	8	10	13	17	11	8	11	11	12	14	18	24	23	24	23	32	41	37	33	39	37	21	23	26	516
Farringdon (Q)	21	13	11	12	11	9	10	8	16	20	16	16	31	24	21	16	32	35	29	40	39	17	23	18	488
Hebburn (T)	18	10	13	14	13	10	9	10	11	7	16	21	19	27	19	18	32	29	35	47	34	23	19	24	478
Swalwell (Y)	16	6	11	14	7	13	10	10	15	20	21	15	24	29	24	22	30	37	31	27	21	20	19	16	458
Wallsend (G)	12	13	8	10	6	9	10	7	6	10	19	26	18	23	23	21	34	24	36	27	29	10	22	12	415
Washington (S)	17	9	6	4	5	5	8	9	5	12	11	29	18	24	16	20	33	27	23	22	15	16	17	16	367
Rainton Bridge (H)	15	6	5	7	7	5	4	5	5	16	13	9	13	10	8	12	26	27	24	23	23	20	16	10	309
Birtley (W)	6	4	3	9	4	4	9	8	9	13	12	10	19	8	17	17	8	15	17	9	9	10	14	11	245
Chopwell (Z)	2	0	0	3	1	0	0	1	2	2	2	2	2	1	2	3	3	3	2	1	2	2	3	2	41
Grand Total	364	284	237	241	199	158	199	193	232	324	359	439	527	462	468	512	673	679	707	699	600	493	488	441	9978

Table: Total number of incidents by risk level 1 by station by hour of the day over the previous 3 fiscal years 2017, 2018 and 2019

3.20.3 Total number of incidents by risk level 1 and 2 by station by hour of the day over the previous 3 fiscal years 2017, 2018 and 2019.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Grand Total
Byker (F)	68	65	39	34	31	29	34	32	53	67	73	82	106	69	71	84	123	137	151	153	108	101	95	79	1884
Newcastle Central (C)	62	57	40	48	34	13	17	31	32	41	57	57	76	74	69	76	86	94	92	91	97	81	80	68	1473
Gateshead (V)	64	42	46	43	33	27	32	31	31	40	30	47	49	51	67	73	77	88	83	94	86	95	85	67	1381
Sunderland Central (N)	49	51	29	29	35	25	22	18	17	35	33	46	52	44	56	52	83	89	96	88	91	87	84	77	1288
South Shields (K)	42	28	34	23	26	19	17	22	28	37	41	43	58	43	49	61	63	62	70	73	57	68	63	62	1089
Gosforth (E)	30	20	17	13	18	18	19	23	38	34	41	48	47	45	42	42	77	69	74	71	60	55	37	35	973
West Denton (A)	36	21	20	16	21	17	15	18	20	31	31	36	44	34	43	50	68	75	74	84	74	58	49	35	970
Tynemouth (J)	31	21	26	15	16	22	29	15	14	25	37	41	35	43	45	56	60	60	79	65	52	54	41	40	922
Marley Park (M)	16	22	23	23	16	16	13	14	21	22	27	33	33	32	34	54	56	62	62	62	60	42	41	36	820
Farringdon (Q)	30	22	18	14	15	14	12	12	19	26	22	20	38	32	31	32	49	48	55	69	60	44	34	33	749
Hebburn (T)	33	18	18	24	17	16	12	13	18	11	25	27	28	33	29	29	47	46	51	66	61	38	28	33	721
Swalwell (Y)	25	11	16	15	10	15	12	13	21	28	27	21	27	37	34	34	40	46	45	39	39	29	34	26	644
Wallsend (G)	22	19	11	15	13	15	16	9	8	13	21	36	25	35	29	29	41	35	47	38	45	25	33	20	600
Washington (S)	21	13	12	9	12	9	9	19	10	23	13	40	28	28	21	26	46	46	42	34	45	32	27	22	587
Rainton Bridge (H)	23	11	11	12	13	8	7	7	8	20	16	14	15	17	15	27	38	39	36	46	40	41	28	24	516
Birtley (W)	11	9	8	11	8	4	9	9	10	16	14	14	24	14	19	20	19	21	24	20	14	21	20	15	354
Chopwell (Z)	2	0	0	3	2	1	0	1	2	2	2	2	2	2	2	4	6	5	2	3	3	2	4	2	54
Grand Total	565	430	368	347	320	268	275	287	350	471	510	607	687	633	656	749	979	1022	1083	1096	992	873	783	674	15025

Table: Total number of incidents by risk level 1 and 2 by station by hour of the day over the previous 3 fiscal years 2017, 2018 and 2019.

3.21 Further detail and proposals in relation to the additional pumping appliance or placing additional fire fighters at a number of our 1 pump stations, will be covered in section 6.

3.22 In the previous IRMP 2014-2017, it was agreed that the number of ALPs would be reduced from 3 to 2.

3.23 In the Fire Authority meeting 12 October 2020, a report was presented to pilot the improvement of operational response and resilience. The report requested the Fire Authority's approval to commence a pilot ahead of a full review of the Services IRMP. The pilot would increase the Service Delivery establishment allowing for additional resilience in operational response by primary staffing an ALP.

3.23.1 The existing response model allows for our special appliances, of which our ALP is included, to be dual staffed. This means that if a special appliance is required then a pumping appliance is placed unavailable and staff from that appliance crew the special appliance. This practice was implemented through previous IRMPs at times when there was successive requirements to save money as a result of a prolonged period of reducing finances available to the Fire Authority.

3.23.2 This has resulted in occasions where a pumping appliance has been at an incident and the special appliance requested has not been readily available, resulting in a potential delay of attendance.

3.23.3 The Service currently has three ALP's stationed at Marley Park, Gateshead and Gosforth Community Fire Stations.

3.23.4 The ALP's are dual staffed by a crew taken from a pumping appliance. Due to this they are only dispatched for identified premises in Tyne and Wear on request from the Incident Commander or if a pre-determined criteria is met upon receipt of information taken by fire control.

3.23.5 Following significant national Incidents involving fires in tall buildings, it would support community and firefighter safety to have ALP's readily available at all times and reduce the risk that the crew which would staff the appliance are already in attendance at an incident.

3.23.6 A full review of the ALP's was undertaken as part of the specials review within the IRMP group, this is detailed in appendix F.

3.23.7 Further detail and proposals in relation to the ALPs, will be covered in section 6.

4 STAFFING

4.1 TWFRS has historically operated using the traditional FRS Model of two days, two nights, four rota days (2/2/4) across the majority of our stations. This was reviewed following the Bain Report 2002 and resulted in an alteration to the day shift hours which were increased by one hour to increase productivity. Current staffing arrangements include a combination of on-call duty system, day crewing close call (DCCC) and 2/2/4.

4.2 TWFRS have implemented numerous pilots to manage the staffing levels to an optimum level and although this has been heralded as a success there remains scope for further improvements in this efficiency.

4.3 Notwithstanding operational risk, there are a number or overarching external factors that have been considered during this review when analysing shift patterns.

4.4 Any proposed system should be consulted on with the recognised trade unions and comply with grey book terms and conditions as detailed below.

The options are grey book compliant duty systems, which are:

Shift duty system
The hours of duty of full-time employees on this system shall be an average of fortytwo per week. The hours of duty of part-time employees shall be pro-rata. The rota will be based on the following principles:

(1) Each period of twenty-four hours shall be divided into a day shift and a night shift.
(2) The night shift shall not be less than twelve hours.
(3) There shall be at least two complete periods of twenty-four hours free from duty each week.
(4) Leave days shall change week by week in a regular progressive manner.
(5) No rota system shall include continuous duty periods of twenty-four hours.
(6) Three hours shall be specified for meal breaks in every twenty-four hours. The timing of these periods is at the discretion of the authority. Account shall be taken of meal breaks interrupted by emergency calls.

Day-crewing duty system
The hours of duty of full-time employees on this system shall be an average of fortytwo per week. The hours of duty of part-time employees shall be pro-rata. The rota will be based on the following principles:

(1) An average of thirty-five hours per week shall be worked at the station.

(2) An average of seven hours per week shall be on standby at home. Employees are required to respond to any emergency call received during this standby period.
(3) Employees on this system may be requested to undertake retained duties outside the hours at (1) and (2).
(4) There shall be at least two complete periods of twenty-four hours free from any duty each week.
(5) One hour per day shall be specified as a meal break. Account shall be taken of meal breaks interrupted by emergency calls.

Day duty system

The hours of duty of full-time employees on this system shall be an average of fortytwo per week. The hours of duty of part-time employees shall be pro-rata. The rota will be based on the following principles:

(1) The normal working day shall cover the period of normal office hours.
(2) There shall be nine working days per fortnight, which shall fall on Mondays to Fridays.
(3) One hour per day shall be specified as a meal break.
(4) Where work (such as lectures and inspections of clubs) must necessarily be undertaken outside the normal working day, equivalent time off in lieu should be given during the normal working day.

Retained duty system

The hours of availability of employees on this duty system shall be agreed between the fire and rescue authority and individual employees. An employee on this duty system shall be required to attend for duty as follows:

(1) At the station to which the employee is attached for training, development and maintenance duties for an average of two hours per week (or three hours at the discretion of the fire and rescue authority).
(2) Promptly at the station to which the employee is attached in response to an emergency call at any time during the employee's period of availability.
(3) At any incident or other occurrence or at any other station for standby duties during the employee's period of availability.

4.5 There is a flexible working scheme within the service and further scope may be explored in the future of an additional shift system, providing additional cover where required. Alternative flexible options will be explored.

4.6 In 2015, a pilot was introduced to enable two appliances to be removed from the response fleet between the hours of 00:00 to 09:00. This was a result of a previous IRMP which looked to stand down two appliances during quieter

periods. As the current staffing model did not support the removal of the two appliances the pilot was introduced for 8 personnel to work “Extended days” (E days) of 09:00 to 00:00 as opposed to a night shift of 18:00 to 09:00.

4.6.1 The benefits of Extended Days has resulted in 8 additional personnel being available to be nominated for off watch training.

4.6.2 Extended Days has proven to be difficult to manage within the existing pilot due to the restrictions of the agreement.

4.7 Within the previous IRMP, it was proposed that the start and finish times were to be altered due to the shift patterns being inflexible as far as they are not divisible into themselves, i.e. a day shift of 9 hours is not divisible of the night shift of 15 hours.

4.7.1 It was also highlighted that a change of shift occurs during historical periods of high demand. This is still evident looking at the evidence contained in section 3.20.1

4.7.2 The previous IRMP highlighted that by starting the night shift earlier to 17:00 would enable Targeted Response Vehicles (TRV’s) to be placed on the run earlier in the night shift.

4.8 The table below highlights the period for risk level 4 incidents when TRV's would be best placed to be on the run during peak hours. The table shows that between the hours of 16:00 to 22:00, there is a high demand. However as highlighted in the specials review appendix F, the role of the TRV should be available for these incidents 24/7, therefore it would be practical to enable TRV availability throughout the day if required based on risk and demand.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Grand Total
West Denton (A)	27	18	18	11	8	14	5	15	14	13	27	35	46	51	77	104	119	161	209	310	239	154	78	31	1784
Gateshead (V)	33	29	25	18	16	15	5	15	24	19	34	30	29	48	75	84	115	140	187	192	216	162	120	72	1703
Newcastle Central (C)	58	32	29	25	21	17	18	16	23	30	28	37	58	65	79	86	93	133	152	188	179	161	81	75	1684
Sunderland Central (N)	50	45	30	27	36	38	30	29	26	33	20	43	43	54	78	91	102	156	135	181	156	108	85	68	1664
Byker (F)	36	36	18	24	16	14	11	20	19	15	30	29	44	51	69	71	107	139	176	195	174	146	90	60	1590
South Shields (K)	38	23	19	13	17	13	15	16	17	19	23	31	48	52	73	84	105	178	173	179	158	110	73	49	1526
Marley Park (M)	35	25	10	11	8	8	5	7	22	12	19	24	42	59	65	97	110	141	162	150	145	87	65	27	1336
Gosforth (E)	27	19	7	7	8	7	8	11	15	14	31	27	26	31	44	51	72	108	128	154	131	81	43	26	1076
Washington (S)	9	14	11	3	12	12	8	10	14	17	19	21	31	30	32	51	84	112	133	136	152	86	49	26	1072
Farringdon (Q)	20	13	8	9	6	8	5	7	13	13	16	20	30	33	51	60	98	96	138	120	127	82	32	19	1024
Tynemouth (J)	23	18	6	11	7	8	5	6	12	22	18	17	26	28	50	58	47	77	84	95	108	89	64	31	910
Hebburn (T)	34	9	6	12	9	5	5	9	16	14	22	21	21	21	44	52	69	80	99	84	98	62	54	35	881
Rainton Bridge (H)	13	9	7	5	0	3	5	11	8	10	8	21	20	23	33	61	75	76	110	143	105	68	41	24	879
Wallsend (G)	17	9	6	5	6	7	7	6	10	10	11	8	30	23	28	44	66	80	113	112	98	62	36	19	813
Swalwell (Y)	10	13	7	9	4	2	4	6	14	17	19	27	25	43	44	41	60	83	84	96	60	46	27	19	760
Birtley (W)	5	4	4	1	1	3	2	4	7	3	5	11	10	15	21	23	30	36	35	69	40	37	15	15	396
Chopwell (Z)	1	0	1	0	0	1	1	1	1	1	4	2	5	5	5	11	7	5	13	9	3	6	3	2	87
Grand Total	436	316	212	191	175	175	139	189	255	262	334	404	534	632	868	1069	1359	1801	2131	2413	2189	1547	956	598	19185

Table: Total number of incidents by risk level 4 by station by hour of the day

4.9 The optimum staffing pilot introduced over certain periods has benefitted the service however there has remained occasions were staffing has remained above optimum levels.

4.9.1 It would be effective value for money if the agreed response level staffing numbers are never exceeded. Therefore, a way of working to minimum staffing numbers which would enable savings in reduction of overtime were there are staffing deficiencies should be explored

5 PROPOSALS AND OPTIONS

5.1 To achieve a sustainable service, all proposals detailed in this report require a joined-up approach that drives the effective use of resources and delivers the efficiencies required. The following range of proposed solutions are, for the most part, mutually dependent and are to be considered as a suite of changes that can have an increasing impact.

5.2 Our approach to emergency response remains to ensure we have the correct resources in place to deal with identified levels of risk and demand. We must ensure we have the right firefighters and fire appliances, in the right place, at the right time, delivering the right standards of response to emergencies. We have a statutory duty to respond to fires and road traffic collisions. We also have specific plans in place to deal with many other emergency incidents that occur within our community.

5.3 It is our intention that whenever a member of the public requires the attendance of TWFRS following the result of a serious incident, they should receive mostly a similar emergency response in terms of the resources deployed and the time taken to arrive.

5.4 This IRMP intends to build on the previous IRMP that allows a response model to be driven by risk and demand as highlighted by data, statistics and intelligence.

5.5 By incorporating the resources at our disposal, with the intention of maintaining and building on our response model, the concept of operations based on the following High-Level Principles.

Flexibility in operational response:

- Review Service Delivery establishment allowing for additional resilience in the operational response
- Review of special appliances.

Review the flexibility in the staffing model

- Review shift system and times based on risk/demand.

5.6 FLEXIBILITY IN OPERATIONAL RESPONSE

5.6.1 Proposal 1: Review Service Delivery establishment allowing for additional resilience in the operational response

Option A: A crew of 5 on 4 selected 1 pump stations (16 FTE)

Option B: Reintroduce a CAT02 appliance (16 FTE)

Fire Authority approval is required for Proposal 1.

5.6.2 It is proposed to increase the Service Delivery establishment which would allow for additional resilience in the operational response. Specifically, this relates to either adding an additional pumping appliance to the response model or placing additional Firefighters at a number of our one pump fire stations.

5.6.3 On 20 January 2014, the Fire Authority approved the proposal to crew pumps at one pump stations with four staff with the Chief Fire Officer authorised to begin the process of planning the implementation over a three-year period.

5.6.4 At the 6 November 2017 Fire Authority meeting it was approved to implement the proposal and staff all pumping appliances with four staff. During the same period, a number of pumping appliances have also been removed from the Operational Response model with the second appliance at West Denton community fire station, (call sign A02) removed as of 7 October 2016.

5.6.5 The Service has previously produced a Brigade Response Options Strategy model to prove the concept that staffing all appliances with four is safe and nothing alters that position. Safety of our staff will remain a top priority. The introduction of one extra member of staff on an appliance would not increase our speed and weight of attack in response to number of appliances available but would allow for some additional resilience and tasks to be performed in the initial stage of an incident.

5.6.6 The coronavirus pandemic and its wide ranging implications resulted in an urgent review of operational response and resilience. As with other emergency services, the situation with coronavirus and the implications regarding staff availability are an ongoing concern. It was agreed at Fire Authority on 12th October 2020, for the reintroduction of the second appliance at West Denton Community Fire Station, while the IRMP was being completed.

5.6.7 Currently, due to the coronavirus pandemic and the additional steps introduced by the Service to maintain social distancing as much as practicably possible whilst travelling to incidents, a crew of four is the maximum number that could travel in a pump. At this time, introducing a five person crew would reduce the social distancing measures implemented on pumps and most likely compromise the current temporary arrangements in place to ensure social distancing on appliances can be maintained.

5.6.8 These are and continue to be unprecedented times and the situation regarding the impact of coronavirus is extremely dynamic and often requires actions and decisions to enable the service to remain resilient in terms of providing a fire and rescue service to the community and playing a full part in the Northumbria Local Resilience Forum and civic society by supporting the public sector and other organisations.

5.6.9 To understand where the additional appliance should be located, a number of data sources were reviewed to understand the overall picture.

5.6.10 Using the table below, the appliance which would be reintroduced would be West Denton. The total number of incidents that West Denton respond to highlights that this station is the busiest 1 pump station.

Fire Station	1 pump stations	2017/2018	2018/2019	2019/2020	Grand Total
Byker (F)		1717	1922	1711	5350
Newcastle Central (C)		1882	1772	1607	5261
Gateshead (V)		1564	1579	1345	4488
Sunderland Central (N)		1285	1435	1547	4267
South Shields (K)		1245	1278	1298	3821
West Denton (A)	✔	1351	1277	1114	3742
Gosforth (E)	✔	1159	1115	1098	3372
Marley Park (M)	✔	1028	1020	1054	3102
Tynemouth (J)		996	961	886	2843
Farringdon (Q)		832	848	863	2543
Washington (S)	✔	745	787	740	2272
Hebburn (T)	✔	800	799	653	2252
Swalwell (Y)	✔	679	686	651	2016
Wallsend (G)	✔	557	761	670	1988
Rainton Bridge (H)	✔	622	540	706	1868
Birtley (W)	✔	377	434	353	1164
Chopwell (Z)	✔	60	65	59	184
Grand Total		16899	17279	16355	50533

Table: Number of incidents attended by each station over the 3 fiscal year period 2017, 2018 and 2019.

5.6.11 The table below shows that in addition to the total of number of incidents which West Denton respond to, the number of fires over a 3 year period was higher than all other 1 pump stations.

Fire Station	1 pump stations	2017/2018	2018/2019	2019/2020	Grand Total
Sunderland Central (N)		292	320	351	963
West Denton (A)	✔	362	273	245	880
Gateshead (V)		332	293	245	870
Newcastle Central (C)		296	304	235	835
Byker (F)		229	305	266	800
South Shields (K)		250	224	199	673
Marley Park (M)	✔	213	191	205	609
Farringdon (Q)		182	164	203	549
Tynemouth (J)	✔	180	153	159	492
Rainton Bridge (H)	✔	151	140	191	482
Washington (S)	✔	150	171	133	454
Gosforth (E)	✔	164	161	127	452
Hebburn (T)	✔	148	185	113	446
Wallsend (G)	✔	86	128	139	353
Swalwell (Y)	✔	90	101	88	279
Birtley (W)	✔	69	74	66	209
Chopwell (Z)	✔	10	13	5	28
Grand Total		3204	3200	2970	9374

Table: Total number of fires attended over the 3 fiscal year period 2017, 2018 and 2019.

5.6.12 West Denton community fire station also dual staffs the Services Incident Command Unit which responds to incidents in excess of 5 pumps and provides additional command and control at incidents. Due to the number of staff required to crew the Incident Command Unit, this additional resilience is currently provided by the crew on the one pump at Gosforth community fire station. Gosforth also dual staffs an ALP. By increasing the number of appliances at West Denton this would provide the additional resilience not only for operational response but also for the Incident Command Unit with a knock on availability of the ALP at Gosforth community fire station.

5.6.13 The staffing model on a one pump station is six staff per watch: one Watch Manager, one Crew Manager, four Firefighters. To increase this to enable a two pump station this would be an increase of one Crew Manager and three Firefighters per watch resulting in an additional four Crew Managers and twelve Firefighters for the station. This would require sixteen additional staff. The 4 Crew Managers would allow for greater resilience in relation to the number of Incident Commanders available for our operational response.

5.6.14 The additional appliance at West Denton community fire station would provide greater resilience and direct response in relation to speed and weight of attack at Swalwell and Gosforth community fire stations which are one pump stations. It is for this reason that option 2 is the preferred option.

5.6.15 Risks v Benefits - Review Service Delivery establishment allowing for additional resilience in the operational response.

Recommendation Option 2: Reintroduce a CAT02 appliance (16 FTE)

Risks:

- Failure to periodically review resources placed according to risk may result in incident attendance times becoming less efficient and extended.

Benefits:

- Resources placed in accordance with risk and demand.
- Attendance times are maintained and improved.
- Strengthening resilience for operations on incident command unit.

Assessment:
Having assessed the risks and benefits, the findings are that the mitigation put in place for the identified risks, that the benefits outweigh the risks which have been assessed as tolerable.

5.7 Proposal 2: Review of Special Appliances

Option A: Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station and the associated crewing, along with crewing a TRV during periods of high demand.

Option B: Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station and Gosforth Community Fire Station and the associated crewing, along with crewing a TRV during periods of high demand.

Fire Authority approval is required for Proposal 2.

5.7.1 It is proposed to further increase the Service Delivery establishment to allow for Aerial Ladder Platforms (ALP) to be primary staffed.

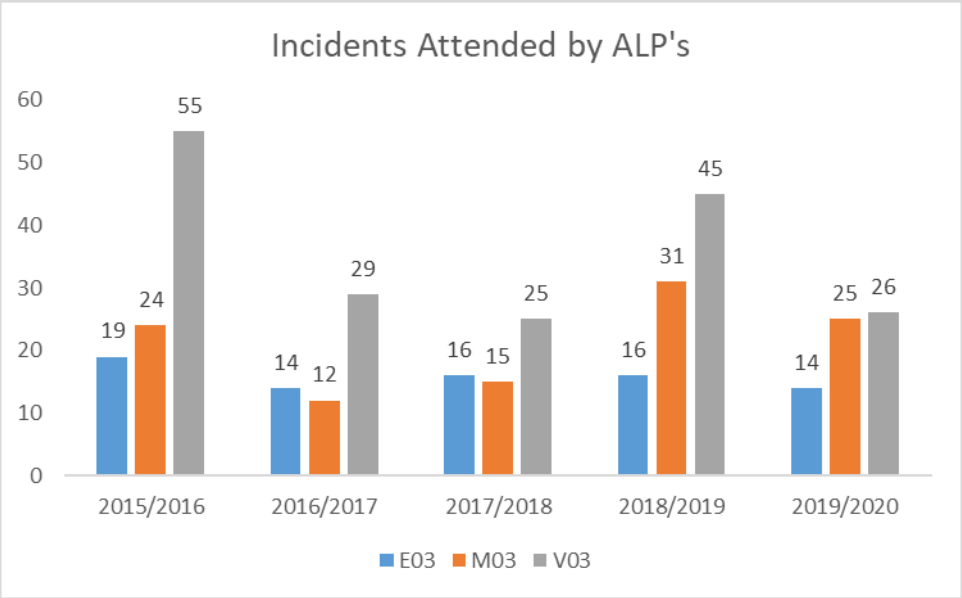
5.7.2 The Service currently has three ALP's stationed at Marley Park, Gateshead and Gosforth community fire stations.

5.7.3 Currently, the ALP's are dual staffed by a crew taken from a pumping appliance. Due to this they are only dispatched for identified premises in Tyne and Wear on request from the Incident Commander or if a pre-determined criteria is met upon receipt of information taken by fire control.

5.7.4 Following significant national incidents involving fires in tall buildings, it would support community and firefighter safety to have an ALP readily available at all times and reduce the risk that the crew which would staff the appliance are already in attendance at an incident.

5.7.5 Data suggests that 3 ALP's are an over provision; this is due to there being no incidents when all three ALP's were in use at the same time. There was an action from a previous IRMP 2014 – 2017, which proposed to reduce the provision of ALP's in the service from three to two, this action was never implemented and as a result the service is now running with an ALP which has passed its disposal date.

5.7.6 The graph below shows the number of attendances per ALP per year to incidents within Tyne and Wear.



Key: E03 (Gosforth); M03 (Marley Park); V03 (Gateshead)
Graph: Number of incidents attended by Aerial Ladder Platforms per year

5.7.7 By having an ALP primary staffed, this would enable the pre-determined attendances of high risk premises to be amended to include the ALP. This would include high-rise premises, which already have four pumping appliances responding to a confirmed fire. The ALP attending at the initial stages of an incident could prove invaluable to firefighter safety and casualty outcomes.

5.7.8 Further analysis in regards to the specials review is contained within Appendix F.

5.7.9 It is further proposed that the Targeted Response Vehicles (TRV's) are paired up with the ALP's which are primary staffed.

5.7.10 TRV's are currently located at Newcastle Central Community Fire Station and Sunderland Central Community Fire Station; when they were originally introduced this was under a different response model to the one currently in use. They are currently staffed by 2 personnel and are deployed to only risk level 4 incidents throughout the service area.

5.7.11 Their current response model is that at 18:00hrs, the category 2 appliances at Newcastle Central Community Fire Station and Sunderland Central Community Fire Station are replaced by 2 TRV's, they remain available for fire cover until midnight when the category 2 appliances are then re staffed to provide pumping appliance cover through the night.

5.7.12 The table below shows the number of incidents in each station area by risk level 4 incidents, fires only.

	2017/2018	2018/2019	2019/2020	Grand Total
West Denton (A)	523	484	365	1372
Gateshead (V)	465	442	312	1219
Newcastle Central (C)	426	443	332	1201
Sunderland Central (N)	343	382	460	1185
Byker (F)	314	449	329	1092
South Shields (K)	314	352	314	980
Marley Park (M)	307	294	338	939
Washington (S)	282	267	237	786
Farringdon (Q)	231	212	248	691
Gosforth (E)	230	229	214	673
Rainton Bridge (H)	220	183	262	665
Hebburn (T)	226	224	158	608
Tynemouth (J)	199	196	185	580
Wallsend (G)	132	198	197	527
Swalwell (Y)	145	160	137	442
Birtley (W)	104	102	65	271
Chopwell (Z)	22	27	15	64
Grand Total	4483	4644	4168	13295

Table: Total number of risk level 4 incidents attended in each fiscal year 2017, 2018, 2019.

5.7.13 The concept of TRV's remains a beneficial way of working with different response models tried through different IRMP's. The idea of TRV's being available 24/7, to enable lifesaving appliances remaining available is still the way forward.

5.7.14 Looking at the data below which shows the number of risk level 4 incidents over the 3 fiscal years 2017, 2018 and 2019. The data can be interpreted that the TRV's which are currently staffed between 18:00 and 00:00 hours are appropriate to risk and demand.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Grand Total
West Denton (A)	21	14	16	7	6	10	3	11	9	7	12	13	25	31	50	75	87	129	173	262	201	124	59	27	1372
Gateshead (V)	23	21	20	13	13	11	2	10	14	10	22	14	16	24	51	63	73	103	145	147	166	120	85	53	1219
Newcastle Central (C)	38	24	25	20	18	12	15	11	16	18	12	23	34	39	39	62	60	99	105	147	145	127	59	53	1201
Sunderland Central (N)	38	35	23	21	29	33	25	20	17	16	8	17	25	33	48	55	69	113	104	133	119	86	62	56	1185
Byker (F)	30	29	14	16	10	7	9	15	11	6	13	12	21	25	36	44	78	98	131	131	134	112	66	44	1092
South Shields (K)	26	16	16	11	10	9	13	10	9	5	8	19	22	33	37	56	62	131	116	121	100	75	44	31	980
Marley Park (M)	28	16	8	8	7	7	4	3	13	6	9	11	22	32	41	66	75	107	117	113	115	68	41	22	939
Washington (S)	7	11	7	1	12	11	7	6	9	11	8	15	18	21	24	39	56	85	97	111	116	63	34	17	786
Farringdon (Q)	12	10	4	5	5	7	4	6	9	3	6	11	18	20	34	42	63	74	102	79	85	59	20	13	691
Gosforth (E)	19	9	5	6	4	3	3	7	7	4	9	10	12	11	27	35	38	78	85	103	100	53	27	18	673
Rainton Bridge (H)	12	7	3	5	0	3	4	8	4	7	5	7	12	16	21	47	61	52	84	113	87	60	35	12	665
Hebburn (T)	26	6	4	8	8	5	2	5	8	6	10	7	15	12	26	40	48	67	75	56	69	46	38	21	608
Tynemouth (J)	15	17	5	9	6	7	2	5	4	9	7	3	11	12	29	31	30	55	60	62	79	58	49	15	580
Wallsend (G)	14	7	3	3	4	5	5	3	2	4	4	1	14	13	18	30	48	57	82	77	68	37	17	11	527
Swalwell (Y)	5	10	3	5	1	2	4	3	9	8	9	10	8	16	22	19	36	59	52	69	38	27	15	12	442
Birtley (W)	3	1	2	1	1	2	2	2	4	1	2	5	7	8	14	14	19	25	25	52	29	28	11	13	271
Chopwell (Z)	1	0	0	0	0	1	1	1	1	0	2	1	5	4	3	9	6	5	8	7	1	4	3	1	64
Grand Total	318	233	158	139	134	135	105	126	146	121	146	179	285	350	520	727	909	1337	1561	1783	1652	1147	665	419	13295

Table: Total number of risk level 4 incidents over 3 fiscal years 2017, 2018 and 2019 period by hour of the day.

5.7.15 Taking into the account the proposals contained within the special review, it would be beneficial to twin the TRV's with the primary staffed ALP's. The focus must remain on the ALP's being available with the TRV's only being placed on the run during periods of high demand.

5.7.16 We currently have 4 TRV's in the service, if 2 were to be staffed at the ALP's stations this would result in 2 further TRV's spare as highlighted in the specials review. These would be repurposed to a welfare unit and forward control unit, whilst retaining capacity as a TRV for risk level 4 incidents if required. The disposition of the remaining 2 TRV would be Sunderland Central Community Fire Station due to the retaining of the existing skill set, therefore limiting the training commitments.

5.7.17 Following the pilot at Marley Park Community Fire Station, where the establishment was temporarily increased resulting in 6 personnel being on duty as opposed to 4, it would be a requirement to repeat this at Gosforth Community Fire Station.

5.7.18 It is for the reasons above that the proposal for the ALP's and TRV's are detailed below. The Response Review Team agree with all of the further proposals detailed within the specials review.

5.7.19 Risks v Benefits - Review of Special Appliances

Recommendation Option 1: Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station and Gosforth Community Fire Station and the associated crewing, along with crewing a TRV during periods of high demand.

Risks:

- Unavailability of ALP due to TRV usage

Benefits:

- Primary staffing of an ALP enables immediate response
- Wider availability of TRV's over 24 hour period

Assessment:

Having assessed the risks and benefits, the findings are that with the mitigation put in place for the identified risks, that the benefits outweigh the risks which have been assessed as tolerable.

A further option to be considered in future would be to primary staff the other 2 TRV's, exploring different response models using day duty staff.

5.8 REVIEW THE FLEXIBILITY IN THE STAFFING MODEL

5.8.1 Proposal 3: Review shift times.

The start and finish times do not require negotiation or approval from Fire Authority and can be determined by TWFRS, however the options for the review of shift times are below:

Option 1: Amend start and finish times to avoid peak periods of demand

Option 1a: Day shift start time 09:00 finish time 17:00

Option 1b: Day shift start time 08:00 finish time 16:00

Option 1c: Day shift start time 09:00 finish time 21:00

Option 1d: Day shift start time 08:00 finish time 20:00

All options are grey book compliant as detailed in section 4.4.

5.8.2 To enable our goal of having the 'right people' with the 'right resources' at the 'right place' at the 'right time.' Our shift system must be appropriate based on risk and demand.

5.8.3 TWFRS currently operate with four watches of Red, Blue, Green and White. The duty shift time for these stations and associated watches currently are:

Shift type	Start	Finish	Length
Day	09:00hr	18:00hr	9 hours
Night	18:00hr	09:00	15 hours

5.8.4 As identified in the previous IRMP, the current shift times remain inflexible as they are not divisible of the night shift of 15 hours.

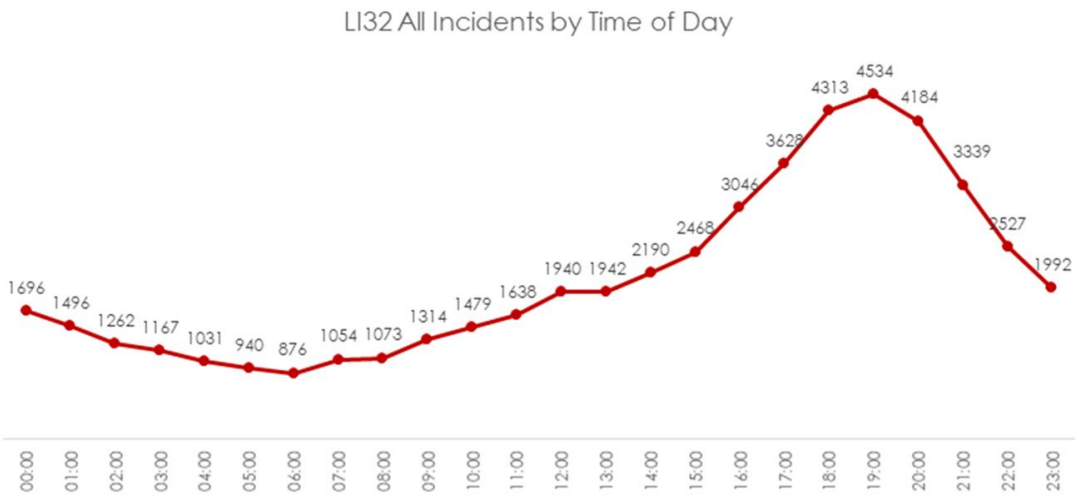
5.8.5 The table below shows the number of incidents by hour of day for all risk levels and the periods of high demand identified.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Grand Total
Byker (F)	177	167	116	115	91	82	93	112	120	164	199	197	254	206	212	235	321	378	445	438	378	352	282	216	5350
Newcastle Central (C)	223	200	153	142	106	91	100	138	114	136	156	154	229	207	225	230	265	324	384	420	403	357	267	237	5261
Gateshead (V)	156	133	140	117	99	84	73	93	101	110	109	137	119	167	202	216	257	298	348	367	374	326	270	192	4488
Sunderland Central (N)	167	154	127	114	121	101	88	87	78	118	111	127	148	134	181	201	243	309	297	355	313	267	236	190	4267
South Shields (K)	131	118	107	84	96	78	76	69	81	95	116	116	168	148	171	196	215	295	310	311	273	229	177	161	3821
West Denton (A)	103	87	67	68	74	55	43	66	64	74	95	104	125	126	159	190	232	274	352	453	386	267	164	114	3742
Gosforth (E)	102	79	62	63	58	72	62	101	99	109	123	124	136	131	140	157	211	250	294	292	250	208	130	119	3372
Marley Park (M)	90	104	69	77	44	53	32	44	77	60	72	99	115	130	140	185	209	251	281	268	262	181	158	101	3102
Tynemouth (J)	88	82	80	62	58	64	61	59	63	83	97	100	98	116	132	138	142	191	221	215	215	206	154	118	2843
Farringdon (Q)	82	75	68	61	54	50	37	38	47	58	68	72	101	94	118	130	171	187	233	229	224	165	96	85	2543
Washington (S)	51	53	48	36	47	49	43	53	41	59	49	79	83	77	73	97	159	175	218	210	237	149	104	82	2272
Hebburn (T)	88	57	56	57	54	42	35	45	49	49	69	87	79	77	87	111	145	156	203	178	201	126	110	91	2252
Swalwell (Y)	66	49	58	57	37	37	41	41	50	61	74	74	79	108	102	92	123	157	164	164	129	93	89	71	2016
Wallsend (G)	65	54	39	45	36	39	41	42	27	41	53	64	80	82	81	92	132	150	194	181	180	124	86	60	1988
Rainton Bridge (H)	56	41	37	38	28	27	21	28	24	50	37	47	56	53	68	106	133	143	178	225	175	138	95	64	1868
Birtley (W)	33	35	24	22	21	15	23	31	26	30	32	37	52	55	68	58	66	71	89	108	81	86	54	47	1164
Chopwell (Z)	5	0	2	8	3	3	2	5	4	3	7	6	7	10	9	15	13	14	19	16	9	9	9	6	184
Grand Total	1683	1488	1253	1166	1027	942	871	1052	1065	1300	1467	1624	1929	1921	2168	2449	3037	3623	4230	4430	4090	3283	2481	1954	50533

Table: Total number of incidents for all risk levels by hour of the day.

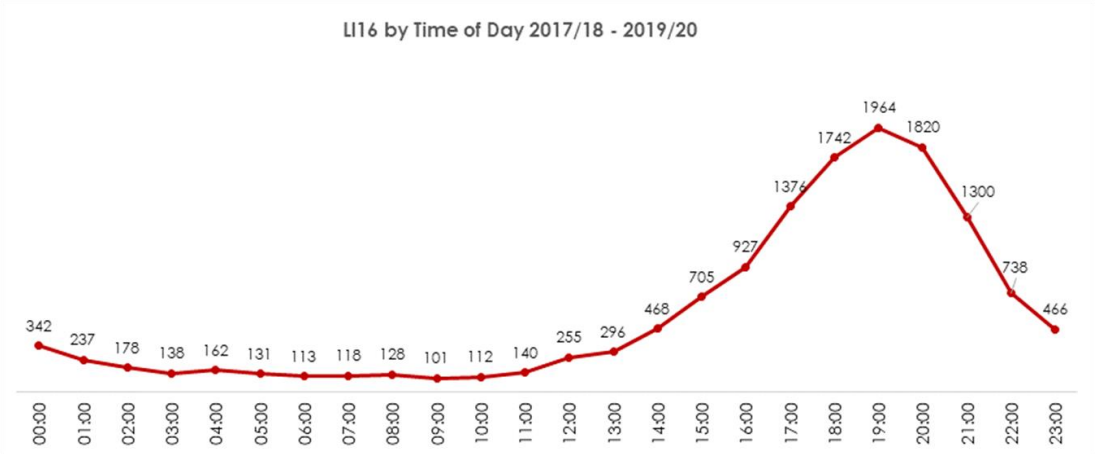
5.8.6 The data informs us that our shift change time at 18:00, over a three year period 3623 incidents occurred between 17:00 – 18:00 and 4230 incidents occurred between 18:00 – 19:00, therefore during one of our busiest periods there is a change of shift.

5.8.7 The graph below shows that the peak of all incidents is at 19:00.



Graph: All incidents by time of day

5.8.8 The graph below shows that the peak for deliberate secondary incidents is at 19:00.



Graph: All deliberate secondary incidents by hour of day

5.8.9 As stated in section 4.6, 2 appliances are taken away from the response model between 00:00 - 09:00.

5.8.10 To create the most effective and efficient response model as is possible, it would be appropriate for the required number of appliances to be available at the relevant times.

5.8.11 The response review team has analysed the data and the findings, the options are detailed in 6.9.1 which should be consulted with the workforce.

5.8.12 Risks v Benefits – Amend start and finish times to avoid peak periods of demand

Risks:

- Change of shift is currently at peak demand
- This proposal may have contractual implications
    - Consultation with the staff will be undertaken along with an Equality Assessment.

Benefits:

- Potential reduction in casual overtime payments due to shifts starting during periods of lower demand.
- Align with day shift working hours
- Enable day shift personnel to maintain competence without accruing flexi time.

Assessment: Having assessed the risks and benefits, the findings are that the mitigation put in place for the identified risks, that the benefits outweigh the risks which have been assessed as tolerable.

5.9 Proposal 4: Optimum Staffing

This does not require negotiation or approval from Fire Authority and can be determined by TWFRS.

Option 1: Introduce a staffing model to ensuring as far as reasonably possible there are no additional personnel on duty beyond those required.

5.9.1 To increase staffing flexibility and ensure the best use of resources by ensuring appliances stay available, service optimum staffing levels should be implemented. This should enable the required number of operational personnel on duty at any time and avoid surplus staff at all times.

5.9.2 In light of the global pandemic this has become more prevalent than at any time prior to ensure the risk is minimised to staff.

5.9.3 This staffing proposal would enhance the existing swap a shift which has operated successfully for a number of years. It should be identified that a swap a shift is taken where an individual utilises the existing leave procedure for the benefit of the individual and the service.

5.9.4 Optimum staffing would be introduced by identifying stations which have surplus staff and a member of personnel would not report for duty for that shift and subsequently owing the service a shift back.

5.9.5 Flexibility remains the key ingredient for this process which can be agreeable for all parties.

5.9.6 The introduction of optimum staffing will assist the service in delivering off watch risk critical training which is currently supported by extended days.

5.9.7 The aim for optimum staffing will be that no one will be sent home at the start of any shift, however this may not always be possible.

5.9.8 Optimum staffing has previous successful pilots, however a more formalised and documented system is required.

5.9.9 This will run alongside a full review of admin procedure 02.01 Sickness and Absence Management and also admin procedure 02.16 Leave Grey Book Conditions of Service.

5.9.10 Risks v Benefits – Optimum Staffing

Risks:

- Excessive and inefficient surplus staff
- Additional staff on station

Benefits:

- Efficient and effective use of resources
- Reduction in overtime
- Staffing levels maximised

Assessment: Having assessed the risks and benefits, the findings are that the mitigation put in place for the identified risks, that the benefits outweigh the risks which have been assessed as tolerable.

5.10 Proposal 5: Extended Days

This does not require negotiation or approval from Fire Authority and can be determined by TWFRS, however the options for extended days are listed below:

Option 1: Formally introduce extended days across the service

Option 2: Formally introduce extended days across the service, utilising 1 appliance within the service.

5.10.1 As stated in 4.6, extended days has supported off watch training but also results in two appliances being removed from the operation response model between 00:00 to 09:00.

5.10.2 Extended days works on a rotational basis across the service and has been unpopular with the workforce and difficult to manage.

5.10.3 Extended days has resulted in a number of our specialist capabilities being unavailable for periods of times throughout the year.

5.10.4 By removing extended days the service will need to adjust the ways of working for off watch training to reduce the burden faced on Service Delivery.

5.10.5 A range of options are available and will be consulted on appropriately with the workforce, however a solution should be sought which is favourable with the service.

5.10.6 Risks v Benefits – Extended Days

Risks:

- Appliances being unavailable on a rotational basis throughout the calendar year
- Reduction in specialist capabilities as a result of appliances being unavailable
- Change to the current training delivery model.

Benefits:

- Availability to support training under the current model
- Reduction in response model as agreed by Fire Authority in previous IRMP

Assessment: Having assessed the risks and benefits, the findings are that the mitigation put in place for the identified risks, that the benefits outweigh the risks which have been assessed as tolerable.

5.11 PROPOSAL SUMMARY

5.11.1 Proposal 1: Review Service Delivery establishment allowing for additional resilience in the operational response.

Fire Authority approval is required for Proposal 1.

Option A: A crew of 5 on 4 selected 1 pump stations (16 FTE)

Option B: Reintroduce a CAT02 appliance (16 FTE)

5.11.2 Proposal 2: Review of Special Appliances

Fire Authority approval is required for Proposal 2.

Option A: Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station and the associated crewing, along with crewing a TRV during periods of high demand.

Option B: Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station and Gosforth Community Fire Station and the associated crewing, along with crewing a TRV during periods of high demand.

5.11.3 Proposal 3: Review shift times.

This does not require negotiation or approval from Fire Authority and can be determined by TWFRS

Option 1: Amend start and finish times to avoid peak periods of demand

Option 1a: Day shift start time 09:00 finish time 17:00

Option 1b: Day shift start time 08:00 finish time 16:00

Option 1c: Day shift start time 09:00 finish time 21:00

Option 1d: Day shift start time 08:00 finish time 20:00

5.11.4 Proposal 4: Optimum Staffing

This does not require negotiation or approval from Fire Authority and can be determined by TWFRS

Option 1: Introduce a staffing model to ensuring as for reasonably possible there are no additional personnel on duty beyond those required.

5.11.5 Proposal 5: Extended Days

This does not require negotiation or approval from Fire Authority and can be determined by TWFRS

Option 1: Formally introduce extended days across the service

Option 2: Formally introduce extended days across the service, utilising 1 appliance within the service.

6 FINANCIAL IMPLICATIONS

6.1 12 month pilots of Proposal 1 (Option B) and Proposal 2 (Option A) were approved by Members in October 2020. These were implemented with effect from 1 November 2020. The costs of the remainder of these pilots are provided for in the revenue budgets for 2020/21 and 2021/22 up to 30 October 2021.

6.2 The costs of all options for each of the proposals outlined in paragraph 5.12 above are shown in the tables below for direct comparison purposes.

6.3 **Proposal 1**: Review Service Delivery establishment allowing for additional resilience in the operational response

6.3.1

Option	Proposal 1 Description	Change to FTE	Annual Ongoing Cost / - saving
		Number	£
A	A crew of 5 on 4 selected 1 pump stations	16	740,784
B	Reintroduce a CAT02 appliance	16	760,700

6.4 **Proposal 2**: Review of Special Appliances

6.4.1

Option	Proposal 2 Description	Change to FTE	Annual Ongoing Cost / - saving
		Number	£
A	Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station	12	575,504
B	Primary crew the Aerial Ladder Platform (ALP) at Marley Park Community Fire Station and Gosforth Community Fire Station	24	1,151,008

6.5 Proposals 3, 4, and 5 have no direct financial implications on the Authority's revenue budget.

6.6 Provision has been made within Strategic Contingencies in the Authority's revenue budget for 2021/22 for IRMP actions to accommodate implementation of the above proposals.

Appendix A

Tyne and Wear Fire and Rescue Service

IRMP 2020-2023

Response Review: Terms of Reference

1.0 Introduction

A review team has been formed to co-ordinate and undertake a comprehensive review of Response in support of the Integrated Risk Management Planning process (IRMP). The team will be led by Area Manager Service Delivery and will include a number of people in different departments across the Service. The ACFO, for Community Safety attends in an ex officio capacity.

1.1 Aim

As a best value Authority we must make arrangements to secure continuous improvement in the way in which our functions are exercised, having regard to a combination of economy, efficiency and effectiveness.

The aim of this IRMP 2020/23 is to carry out a review of the response model for TWFRS objectively and consistently based on actual and projected risk of all incident types and the demand these present for resources.

1.2 Objectives

- Review and consider any outstanding actions and proposals from the previous IRMP process;
- Review the current response model, identifying areas for improvement;
- Seek opportunities to introduce further and build on current flexibility;
- Objectively challenge existing arrangements, to identify potential options for improved / more efficient and effective delivery;
- Consider the type and quantity of resources required; including people, skills, equipment and vehicle types;
- Consider all known current (actual) and projected risk and demand, using all available data and local expertise;
- Consider technological developments and applications;
- Consider local, regional and national picture – e.g. current and anticipated legislation and policy; local guidelines and good practice; what other emergency services are doing;
- Consider impact on, and impact of, other IRMP Reviews and other areas of the Service;
- Ensure Value for Money within the response model;
- Produce options for the future provision of operational cover;
- Consider the effect and implications of any proposals on other parts of the Service such as training, recruitment, finance and asset management; and

- Present these options for consultation and then recommendation to Fire Authority.

1.3 **Scope**

The scope of the review covers the response model for TWFRS encompassing all operational personnel, fire appliances and other vehicles, learning and development, risk data, protection and Fire Control and the provision of flexible duty officer cover and staffing processes.

Appendix A contains a comprehensive list of those items which are in scope and those which are deemed out of scope for response review.

2.0 Composition

2.1 Membership

The review team will include:

- ACFO Community Safety – Ex Officio member
- Exec Support – secretariat
- AM Service Delivery - Review Lead Manager
- GMB Ops Standards Service Delivery - Review Support Officer (deputy)
- Finance Business Partner
- HR Business Partner
- GMB – L&OD
- GMB Operations Dept
- Corporate Communications business representative

Please see appendix B for a breakdown of roles and responsibilities.

Attendees
Attendees are not members of the Team but may be requested to attend where an
area of business requires some additional/ specialist input. This may include

- Specialist Advisors (as necessary);
- Others as required.

2.2 Attendance

All Review Team Members are required to attend the initial review meeting, and then the Review Lead Manager will decide on which members are required to attend each meeting. Once invited, each team member is expected to attend the meetings. If the team member is not able to attend then apologies and progress reports should be provided to the Review Lead Manager prior to the meeting.

3.0 Meetings

3.1 Frequency

The Review Teams will initially meet on a fortnightly basis and meetings last for a maximum of 2 hours. It is the responsibility of the Review Lead Manager to determine the frequency of these meetings once the reviews are underway. The purpose of the meetings will be to monitor progress and decide on action to be taken. Agenda and papers for discussion will be made available or circulated at least 48 hours before each meeting.

3.2 Chair

The role of the chair shall be fulfilled by the Review Lead Manager (Review Support Officer in their absence).

3.3 Agenda and Papers

A standard agenda (appendix C) will be followed using the following headings:

- Apologies for absence
- Action points from last meeting (and matters arising)
- Progress
- Items for discussion
- Actions
- Emerging Risks

3.4 Record

The Exec Support representative is responsible for keeping a record of each meeting. The minutes and action points will be saved in a central file (S drive and/or Teams) for all team members to access. Progress reports (if required) for the IRMP Board will be submitted using a standard template (appendix D).

3.5 Task Handling

In order to fulfil its remit, the Review Team may invite, if necessary, external experts and relevant staff representatives to attend meetings. It may also create and dissolve project teams if required, to execute specific pieces of work.

3.6 Communication

Communication will be undertaken throughout the reviews in accordance with the IRMP Communications Plan. Reports and recommendations will be submitted to ELT and Fire Authority during the Autumn / Winter of the year prior to implementation. The results will be communicated to the wider audience through the most appropriate communications mechanism including consultation.

TWFRS IRMP Response Review

SCOPE

This document defines the scope of the **Response Review** in TWFRS.

IN SCOPE:

The following activities are considered in scope for the purposes of the **Response** review based on the current (actual) and projected risk:

- All response resources for emergency activity
- Staffing arrangements for all appliances across the service
- Staffing arrangements for the provision of flexible duty officer system
- Organisational structure requirements to support proposals

In order to determine options for greater flexibility, the following activities will be undertaken as part of the review:

- What current response models do we employ and what improvements / changes and adjustments can be made
- Existing and future resources required
- How can we build on current flexibility
- Establish quantity and skills of staff – current & future?
- Consider duty systems / timing of shifts
- What arrangements do other FRS and emergency responders have
- Identify new and developing technology – and possible impact on resources / staffing
- Current legislation, guidance & policy – opportunities / challenges / risks
- Determine Risk profile
    - Current: local; regional; national, including resilience / counter terrorism
    - Emerging from FRS, partners, government
- Consider impact of partner agencies – local, regional & national - Financial and operational
- Consider impact on organisational culture.

Note:

As the options generated by this review will have an impact on other IRMP Reviews, a complementary approach by Review Teams and regular communication between Review Lead Managers is required. Scopes for these reviews will be developed in conjunction with one another, and work streams cross-referenced where appropriate. This will be achieved via the Review Lead Managers and Review Support Officer.

IRMP Response

Review Teams - Role and Responsibilities

Review Team Roles and Responsibilities		
Role	**Team Member**	**Responsibilities**
Review Lead Manager	ELT team Member	❑ Project manage the review, ensuring that: ♦ the milestone and detailed plans are maintained and the review remains on schedule and at a strategic level ♦ progress against the target dates is monitored and action taken to mitigate problems ♦ project management is applied correctly and that the documents produced at all stages of the Review are of an acceptable content and quality ❑ Facilitate each stage of the review, in particular, providing guidance to the Review Support Officer. Report progress to relevant PO throughout the process ❑ Ensure full communication and engagement with staff in the functions under review throughout the process ❑ Provide objectivity and challenge ❑ Upon completion, compile and present to ELT a report outlining the progress, findings and options / recommendations of the review ❑ Following approval, prepare an action plan and ensure handover to the relevant manager for implementation, monitoring and review
Review Support Officer	SLT Team Member	They will: ❑ Assist Review Lead Manager with the project management of the review ❑ Assist with the report preparation and presentation of findings ❑ Facilitate aspects of the review on behalf of the Review Lead Manager ❑ Deputise for the Review Lead Manager where appropriate ❑ Provide objectivity and challenge ❑ Provide advice, guidance and support on all review matters ensuring that the review findings are aimed at delivering continuous improvement ❑ Liaise with the Review Lead Manager to review progress and define the steps for future stages. ❑ Identify appropriate tools and techniques and facilitate their delivery

Review Team Roles and Responsibilities		
Role	**Team Member**	**Responsibilities**
		❑ Provide data and information and co-ordinate consultation activities ❑ Co-ordinate the arrangements necessary to carry out the tasks, eg organise workshops, visits, etc. (the Review Secretariat would organise the arrangements). ❑ Provide objectivity and challenge
Review Admin Support	Exec Support	Assist the Review Lead Manager and Review Support Officer with administration, writing reports, collating evidence etc
Service Specialists	One or more individuals from the area being reviewed	❑ Provide information on the current service, including completion of self-assessments, process maps etc. as required ❑ Advise on key issues facing the service ❑ Contribute as appropriate throughout the review
Independent Officer(s)	Individual(s) who are independent of the area being reviewed	Provide challenge and an independent view (NB It is not necessary for the independent officers to attend all meetings but they should at least be integral to challenge workshops and offer objectivity to review findings)
Specialist Advisors	Individuals from areas of the organisation that can provide specialist knowledge, for example Finance, Equality and Diversity and ICT	These individuals will assist with any specialist activities. It is important that the same officer is involved in the review from start to finish to ensure consistency.

Tyne and Wear Fire and Rescue Service

IRMP Response

Review Team - Agenda

1. Apologies for absence
2. Minutes from last meeting (and matters arising)
3. Progress
4. Items for discussion:
    -
    -
    -
    -
5. Actions
6. Emerging Risks

IRMP Response – Highlight Report

FUNCTION:

Submitted by:

Date of meeting:

ISSUES	**UPDATE (by exception)**
Emerging Activities	
Agreed Activities	
Consultation	
Support required	
Risks/Issues	
Progress on Plan	
Feedback/Comments	

Please keep it brief and DO NOT EXCEED one side. Please use Arial 12 and bullet points where possible.

Appendix B

Tyne and Wear Fire and Rescue Authority

Creating the Safest Community

Strategic Community Safety Plan

(Interim)

2020-2021

Contents

This Plan is designed to be an electronic document t and as such relies on hyperlinks for more detailed information. If you are unable to access these hyperlinks and require further information, pleased dont hesitate to contact us as detailed on page 32.

The 2020 refresh of this plan reflects:

- The appointment of a new Fire Authority Chair
- Inspection by HMICFRS
- Updated performance and data information
- COVID-19 pandemic
- New imagery.

Foreword

Councillor Tony Taylor
Tyne and Wear Fire and Rescue Authority Chair

As the Chair of the Tyne and Wear Fire and Rescue Authority, it is an honour to be introducing our Strategic Community Safety Plan.

TWFRS are committed and work hard to deliver our vision of 'creating the safest community' – which is outlined in this plan.

We are fortunate to have highly dedicated, professional and well-trained employees whose clear motivation is the protection and safety of our communities across Tyne and Wear. But even as a high performing fire and rescue service, rated by Her Majesty's Inspectorate for Constabulary and Fire and Rescue Services (HMICFRS) as Good in all three areas inspected, we want to continually improve our service to you, and we are committed to implementing changes that will help us to achieve this goal.

We welcome feedback and thoughts on our Plan. The details on how you can do this are available at the end of this document.

Chris Lowther
Chief Fire Officer and Chief Executive

The Fire and Rescue Service has faced many challenges in recent years, not least in 2020. The COVID-19 pandemic has tested all areas of the Service, and I believe we have met this challenge with resilience, professionalism, and leadership.

Our Plan sets out our commitment to the continued delivery of a first class fire and rescue service and our intention of how we will continue to improve, whatever the challenge. Our clear vision and strategic priorities set direction for the Service, help us to measure performance, and ensure we deliver value for money to the public.

The Plan has been developed using intelligence, insight, and an understanding of current and future risks, both in Tyne and Wear and nationally. We will continue to be adaptable and innovative to address the changing needs we face, and work with our valued partners and the community, to achieve our vision and deliver a Service we are proud of.

1

About us

Introduction

Tyne and Wear Fire and Rescue Authority (the Authority) is the publicly accountable body that oversees the policy and delivery of fire and rescue services on behalf of the community.

Tyne and Wear Fire and Rescue Service (the Service) successfully leads the operational delivery of fire and rescue services such as fire and other emergency prevention, fire protection, operational response and resilience.

The Authority and the Service work closely together to help create the safest community within Tyne and Wear.

Nationally, the UK fire and rescue services have experienced a downward trend in fire incidents and fatalities over the last decade. In addition, buildings are now safer and communities more secure which enables greater capacity for fire and rescue services to focus efforts on those with a high degree of vulnerability or with significant challenges caused by deprivation.

We remain one of the fastest responding fire services in the country, which is important to us in protecting our communities. Our prevention activity has continued to see investment as we aim to stop fires and other emergencies from occurring. Our highly successful preventative work and fast response means that in the past ten years we have reduced the number of injuries from accidental dwelling fires.

There are both opportunities and challenges ahead, but we are not complacent. It is through this Strategic Community Safety Plan that we will remain focussed on the right things, the most effective things, to deliver our vision of 'creating the safest community'.

The Policing and Crime Act 2017 brought in a statutory duty for fire, police and emergency ambulance services to collaborate. Through our joint working over a number of years we have already achieved better outcomes for the communities of Tyne and Wear and we will undoubtedly strengthen all our emergency services further, over the life of this plan.

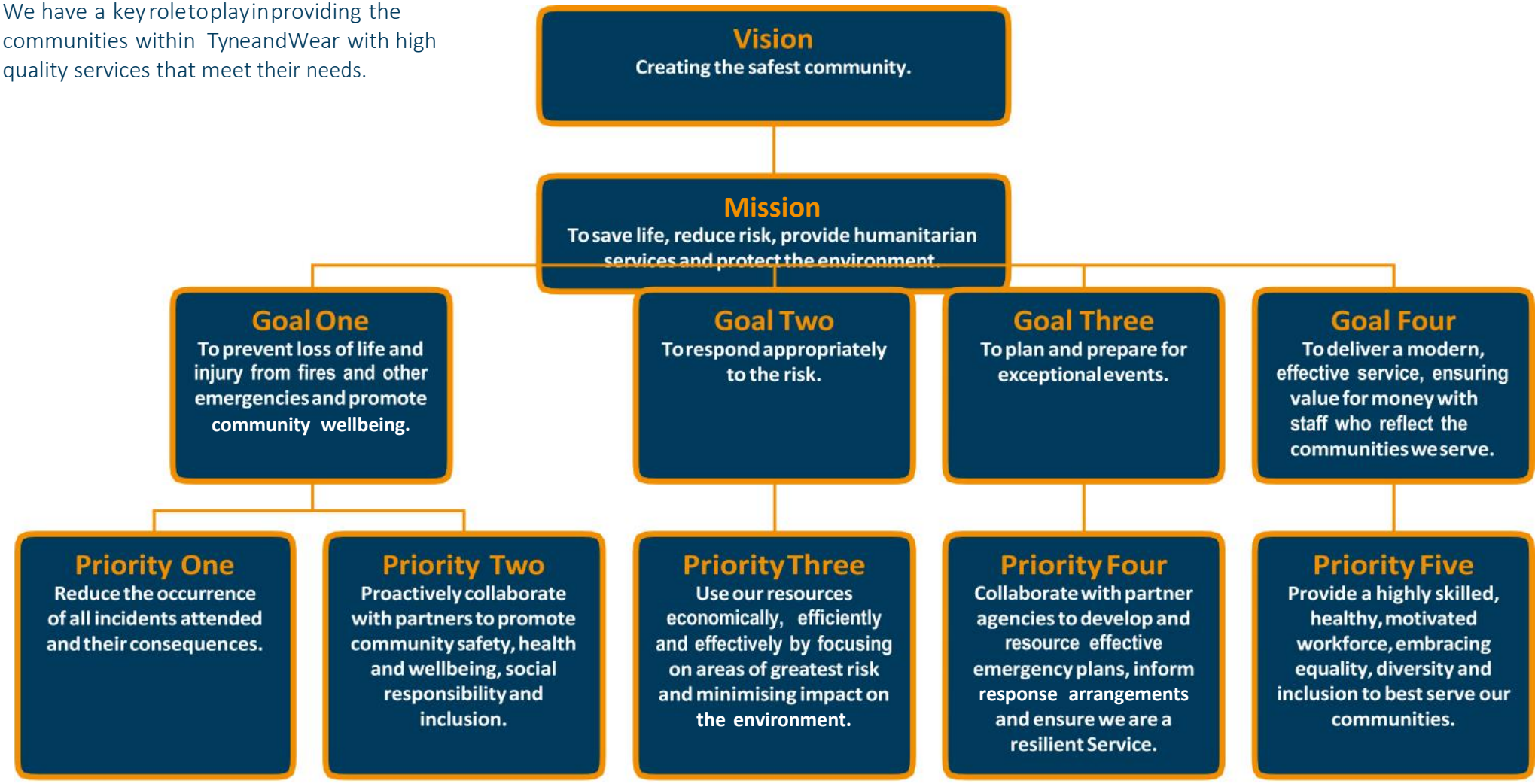
Like many public services, we will continue to face financial challenges. Our Integrated Risk Management Plan (IRMP), which drives continuous improvement and innovation, will ensure the savings we make are achieved in a safe way, balancing risk and resources.

This plan will guide our approach as we continue to strive for the highest performance. The investment in our staff, their skills and resources, together with our strong partnership approach, will ensure we remain one of the safest, most inclusive and highest performing public services.

This is an interim Plan and the 2020 - 2025 Plan is currently in development and due to be published in 2021.

Vision

We have a key role to play in providing the communities within Tyne and Wear with high quality services that meet their needs.



Our vision of **'creating the safest community'** is delivered through our shared mission 'to save life, reduce risk, provide humanitarian service and protect the environment' and reflects the primary focus of our Service.

To do this effectively we must know and understand the communities we protect. We use local knowledge and shared information to help us identify the areas of most risk and the most vulnerable in our society. This analysis enables us to target our services effectively. Our Community Risk Profile provides more detail.

Our organisation goals set out our direction and our priorities and have evolved to reflect the complex and changing community we serve.

Public service reform, financial austerity, an ageing and diverse population and the increasing risk of terrorism are just some of the challenges the Service faces.

Our strategic ambition to manage such challenges extends beyond the three years of this plan to encompass longer term outcomes, we are currently developing a five year plan for 2020-25, to help achieve this.

Values

A strong values driven culture supports our strategic priorities and corporate objectives and is key to our success.

Our leadership bond sets out our culture and leadership behaviours that bring this to life.

In achieving our vision we ensure that our services are effectively led and managed as we strive for excellence and seek opportunities through collaboration with partners and our community.

We provide an effective management structure to ensure our people, finances, assets, resources, estates and facilities are efficiently and effectively deployed.

This supports the continuous improvement for our services to the public, in a professional, sustainable and legislatively compliant manner.

Everyone within the Authority needs to have an understanding of our core values which support our long term success:

We value service to the community by:

- working with all groups to reduce risk
- treating everyone fairly and with respect
- being answerable to those we serve
- striving for excellence.

We value diversity in the Service and community by:

- treating everyone fairly and with respect
- providing varying solutions for different needs and expectations
- promoting equal opportunities in employment within the Service
- challenging prejudice and discrimination.

We value all our employees by practising and promoting:

- fairness and respect
- recognition of merit
- honesty, integrity and mutual trust
- personal development
- co-operative and inclusive working.

We value improvement at all levels of the Service by:

- accepting responsibility for our performance
- being open minded
- considering criticism thoughtfully
- learning from our experience
- consulting others.


Boyle
Cassland

Tyne and Wear Profile

Tyne and Wear consists of the five local authority areas of Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland. It borders Northumberland County to the North and Durham County to the South.

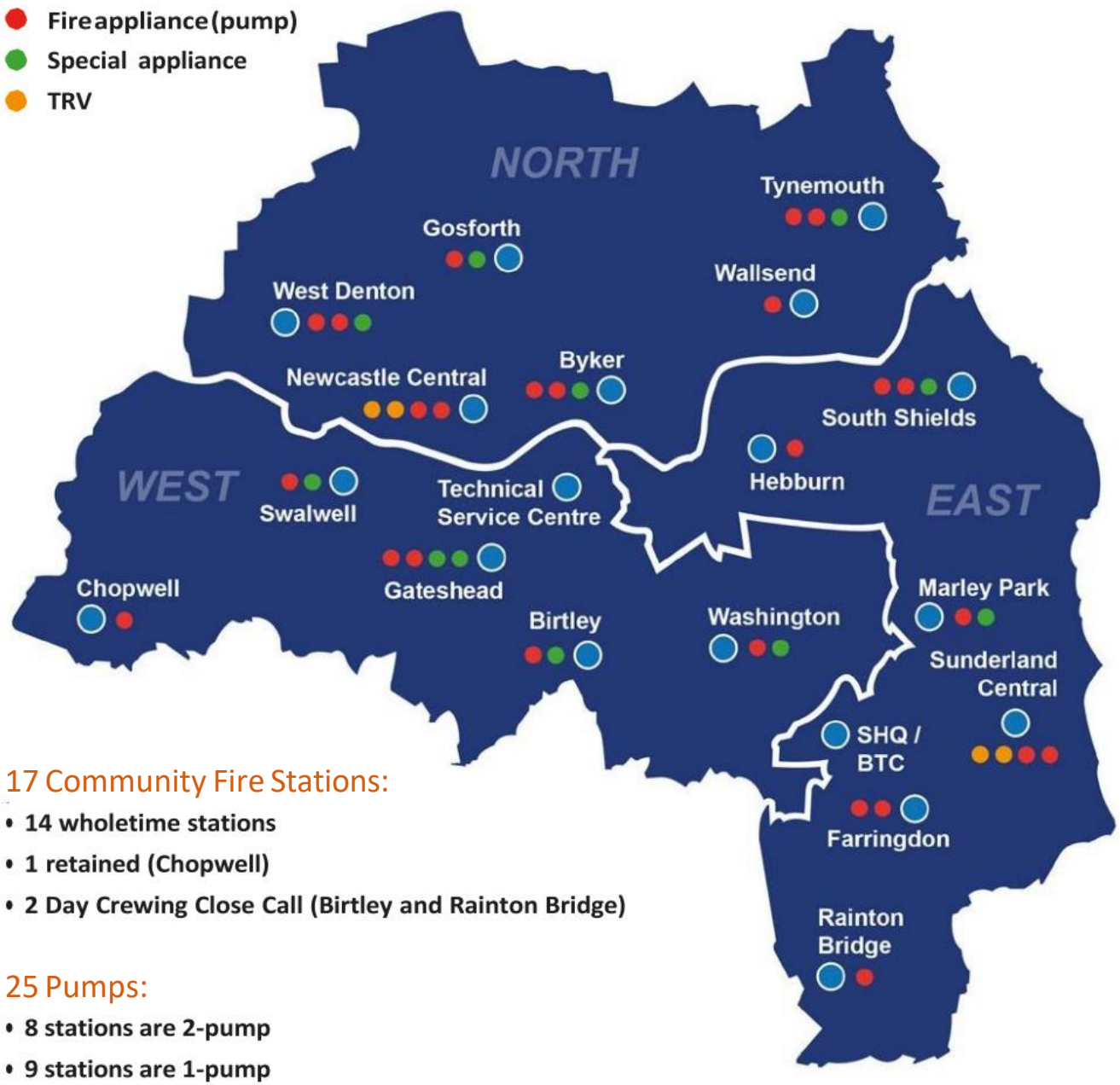
It is a densely populated metropolitan area with 1.1 million residents covering 538km2. Whilst only representing 6% of the region's land, it is home to 43% of the region's population with over 500,000 households. The population is growing, ageing and becoming more diverse, presenting further challenges for service provision.

Further information about the demographic makeup of the community is detailed in the Community Risk Profile, highlighted on page 17.

Our stations, staff and appliances are strategically placed across Tyne and Wear to ensure efficient and effective response to fires and other emergencies.

Appliances work across station areas and can be mobilised whilst away from their home station. We also have robust arrangements with neighbouring services to enable additional support during major emergencies.

We have 17 community fire stations operating a variety of duty / shift systems. Operational resources are reviewed constantly using community risk and incident data to inform our deployment strategies.



17 Community Fire Stations:

- 14 wholetime stations
- 1 retained (Chopwell)
- 2 Day Crewing Close Call (Birtley and Rainton Bridge)

25 Pumps:

- 8 stations are 2-pump
- 9 stations are 1-pump

2

Our Strategy

Strategic Planning and Governance

This Plan sits at the heart of our strategic planning framework. We recognise that good corporate governance is essential to ensure that the Service is properly directed, controlled and held to account. Effective governance provides a blend of value for money and accountability and transparent decision making. **1.1.1**

Our corporate governance is underpinned by effective planning and performance, management of risk, environmental responsibility and good communication and engagement. It complies with the Fire and Rescue National Framework issued in 2018.

The Fire Authority are responsible for ensuring that we conduct our business in accordance with legal and regulatory standards, and that public money is safeguarded, properly accounted for and used appropriately. For further information regarding our Fire Authority, please visit our website.

Our Corporate Governance Framework is reviewed regularly to ensure we continue to do the right things, in the right way, for the right people, in a timely, inclusive, open, honest and accountable manner.

Organisational Strategy

The SCSP is supported by a range of organisational policy, plans and procedures.

Our three Strategies include;

- **Organisational Development Strategy** – sets out how we can all work together to lead our people and promote continuous improvement of the Service and improve outcomes for our staff and Communities.
- **Medium Term Financial Strategy** – details the financial position of the Service over the medium term and establishes the approach to direct resources to achieve value for money.

- **Community Safety Strategy** – sets a clear vision for Prevention, Protection, Response and Resilience activities and explains how we will shape services and target resources to achieve better outcomes for the community.

These three strategies are communicated to staff through departmental policies and procedures, to ensure the strategic goals and priorities of the Service are understood by staff, promoting leadership and accountability by all.

Strategic Planning Framework
Creating the Safest Community

m

SCSP - Strategic Community Safety Plan incorporating IRMP

Finance

We continue to face a period of considerable change with significant financial uncertainty because of the potential adverse impact that the COVID-19 pandemic may have on the national economy and the implications this may have on public sector resources which will not be known until the government release details in their proposed three year Comprehensive Spending Review 2020 (CSR20) in late autumn.

This along with other major factors such as the unknown impact of Brexit which will take place 31st December 2020 and the further delayed implementation of the proposed new funding arrangements now due in 2021/22 mean that the improved funding position the Authority received for 2020/21 may not be sustainable and could in the worst case scenario see a return to austerity for the fire service.

Our financial planning approach continues to be robust despite these uncertainties and although the reported Medium Term Financial Strategy (MTFS) in February 2020 shows a fully funded revenue budget position from 2020/21 to 2023/24, this was based on the Government assertion austerity had ended and that the devastating impact of the COVID-19 pandemic had not yet struck the country. The MTFS will be revised once the detail of the CSR20 is released by Government but the aim of our MTFS remains unchanged in that it keeps efficiency and value for money at the heart of all our plans for the service.

The Medium Term Financial Strategy (MTFS) provides an analysis of the financial position likely to face the Authority over the next four years. It establishes approaches which direct resources to address the strategic priorities of the Authority, achieve value for money in the use of those resources and assist the budget planning framework for the preparation of the Revenue Budget and Capital Programme.

The External Auditors present the Annual Audit Letter to the Authority every autumn. This audit examines our Statement of Accounts and gives an opinion on both the Service's financial health and their views and conclusion on how the Authority achieves value for money.

The Authority embraces national joint collaborative procurement initiatives with other emergency services to ensure we get the best equipment, uniform and services at the best price.

Revenue Budget

Balancing risk and resources will continue to be challenging given the ongoing significant uncertainty surrounding Government spending when so much is presently unknown of the impact on the economy of both the COVID-19 pandemic and Brexit. As a result, the Service faces a period of uncertainty and is expecting to continue to face significant challenges throughout the life span of this plan.

We have just completed the final year (2019/20) of the agreed 4 year funding settlement with Government covering the period 2016/17 to 2019/20. We published our efficiency plan covering this period and we achieved significant savings in this time of £9.287m which was £1.039m in excess of those originally planned. This position however unfortunately did not bolster our reserves as the additional savings of just over £1m were actually needed to meet additional budget cost pressures faced by the Authority that it had no control over.

A revised MTFS has been issued for 2020/21 to 2023/24, however this was based on an improved one year financial settlement for 2020/21 where the Government indicated austerity had ended but before the pandemic had hit the country. We were projecting a sustainable budget position up to the end of 2023/24 however this position is expected to change materially once the outcome of the CSR20 is known. If this is the case then a revised MTFS will be published.

The current position setting out a fully sustained budget over the medium term meant that the Authority's Integrated Risk Management Plan could continue to identify efficiencies but these could then be reinvested in service priorities rather than help meet a budget resource shortfall, which was the case under austerity. This position will need to be reviewed once we know the outcome of the CRS20 on the Authority.

Capital Programme

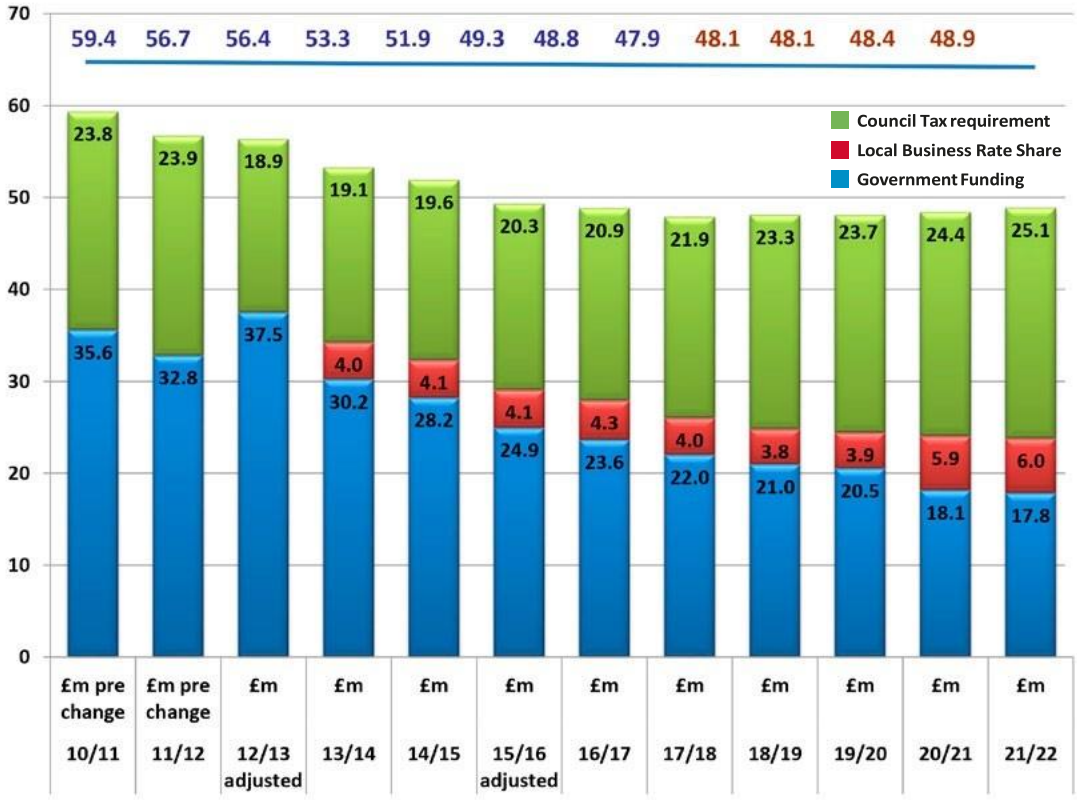
Since 2015/16 the Authority does not receive any Government funding to pay for capital expenditure, which covers the cost of replacing fire vehicles, specialised appliances, modernising community fire stations and acquiring essential fire equipment. We are exploring ways to cover these significant costs, but with limited revenue funding likely, the Authority will have little option but to use its limited reserves at the very time they could be needed to help protect its future revenue budget.

Business Rates Retention

The Government was reviewing the way that business rates are currently distributed with the aim of implementing a revised funding system for April 2020, however external factors including Brexit and the pandemic have resulted in delays until April 2021.

We will continue to work with Government on these proposed changes to our funding arrangements to ensure we can continue to deliver effective and efficient fire and rescue services, but this adds yet another layer of uncertainty to those already identified.

Cumulative impact of cuts 2010 to 2022 (current MTFS February 2018)



Total reduction £10.5m (17%)

2017/18 to 2021/22 includes the Authority's more prudent assessments for both Council Tax and Business Rates. Based on these figures the pace of reductions slow and there is an increase in Core Spending Power (CSP) from 2019. However, the cut to CSP over the 4 year settlement to 2019/20 is -2.0%; the worst of all fire authorities.

3

Our Performance

Overview of Key Performance

Our performance is monitored,managed and analysed at both Service and Local authority area level,toenable us to identify issues and implement improvement action where required.

This approach also allows us to identify successes, so we can build on these and promotegood practice across the Service.

The data captured in our performance reports is scrutinised quarterly with local operational intelligence incorporated with statistical analysis.

All data is compared to the same time period for the previous year.

To enable the Service to demonstrate the 'golden thread' of performance management effectively, each area produces an annual plan highlighting performance, current targets and local priorities.

The plans provide the public, our partners and Councillors with an overview of the initiatives and projects that are to be delivered in their communities.

Our Statement of Assurance / Annual Report provides an accessible way for our stakeholders to see how we are achieving our strategic goals and review our corporate achievements.

Our significant performance achievements over the last ten years include:

- *Zero accidental dwelling fire deaths recorded* ***twice in seven years; 2012/13 and 2015/16***
- *Consistently one of the fastest fire and rescue services in England in response to dwelling fires (currently the fastest)*

- *46% reduction in injuries in accidental fires*

- *Over 26,000 Home Safety Checks (HSC)* ***delivered each year.***

The number of incidents attended nationally by the fire and rescue services has reduced significantly in the last ten years. This applies equally to TWFRS and we attribute these excellent reductions in incidents to our successful prevention and protection work.

We strive to continuously improve all that we do. All services are monitored and scrutinised, and projects evaluated to ensure we continue to learn.

Improvement opportunities also arise as a result of HMICFRS inspection, internal reviews, consultation activities and external accreditations. Resulting improvement actions are captured in a Service wide Improvement Plan which is monitored and reported regularly.

1.1.2 External Review

Over the last year, the Service has been successful in achieving several awards and accreditations.

These include:

- *Investors In People (IIP) Gold award 2019*
- *ISO 9001 Quality Management Assessment*
- *Disability Confident Leader 2019 – 2022*
- *Stonewall Diversity Champion 2020*
- *Inclusive Top 50 award*
- *White Ribbon Accreditation 2019 – 2020*
- *Council for Learning outside the classroom (LOtC) quality badge awarded to Safetyworks in* ***September 2019***
- *The RoSPA Awards scheme - We achieved Gold* ***in the internationally renowned RoSPA Health and Safety Awards in 2019.***
- *Gold Award - Better health at Work* ***September 2020***

TWFRS has registered for the RoSPA Achievement Award in 2020. The award requires a self- assessment submission including statistics relating to the previous year's personal injury and vehicle accidents.

In May 2020, the Prince's Trust team achieved Matrix Accreditation. Matrix is the international quality standard for organisations that deliver information, advice and / or guidance (IAG). The Matrix Standard is the Department for Education's (DfE) standard for ensuring the quality of the delivery of high-quality information, advice and guidance.

TWFRS has been awarded a Gold Award in the Better Health at Work Awards, a regional scheme to encourage employers to improve the health and wellbeing of their workforce.

The award also recognises the achievements of the organisation in managing health at work and helps support organisations in developing and implementing high quality health promotion to employees.

We proactively support the Mind Blue Light programme. We are committed to raising awareness of mental health across the Service, complementing the work of our award winning Trauma Support Team who provide early intervention to our operational

workforce following attendance at traumatic incidents.

Her Majesty's Inspectorate of Constabulary and Fire and Rescue Services

Her Majesty's Inspectorate of Constabulary and

fire and Rescue Services (HMICFRS) carried out the first inspection of TWFRS in 2018/19. The Service received the following judgements:

- **Effectiveness** – an assessment of how effective the Service is at keeping people safe and secure from fire and other emergencies. HMICFRS judgement: **GOOD**
- **Efficiency** – an assessment of how efficiently the Service uses its resources and manages risk. HMICFRS judgement: **GOOD**
- **People** – an assessment of how well the Service looks after its people. HMICFRS judgement: **GOOD**

To ensure continuous development the Service produced a Post Inspection Improvement Plan, detailing timescales and areas for improvement, which has been monitored and progressed over the last year.

HMICFRS carried out a thematic inspection of TWFRS in September 2020 assessing how the Service is responding to the COVID-19 pandemic. Findings will be published in early 2021.

4

Integrated Risk Management Plan

Our IRMP is how we drive continuous improvement and innovation in our Service, ensuring that services are planned, designed and delivered in a way that balances efficiency and community risk. We use the IRMP process to improve community outcomes, strengthen prevention, reduce costs, reduce incidents and manage the risk in our communities.

Community Risk

Our role as a fire and rescue service is to mitigate risk in the community to reduce the likelihood of fires, and other emergencies. If they do occur, we work to reduce the impact on individuals and the community.

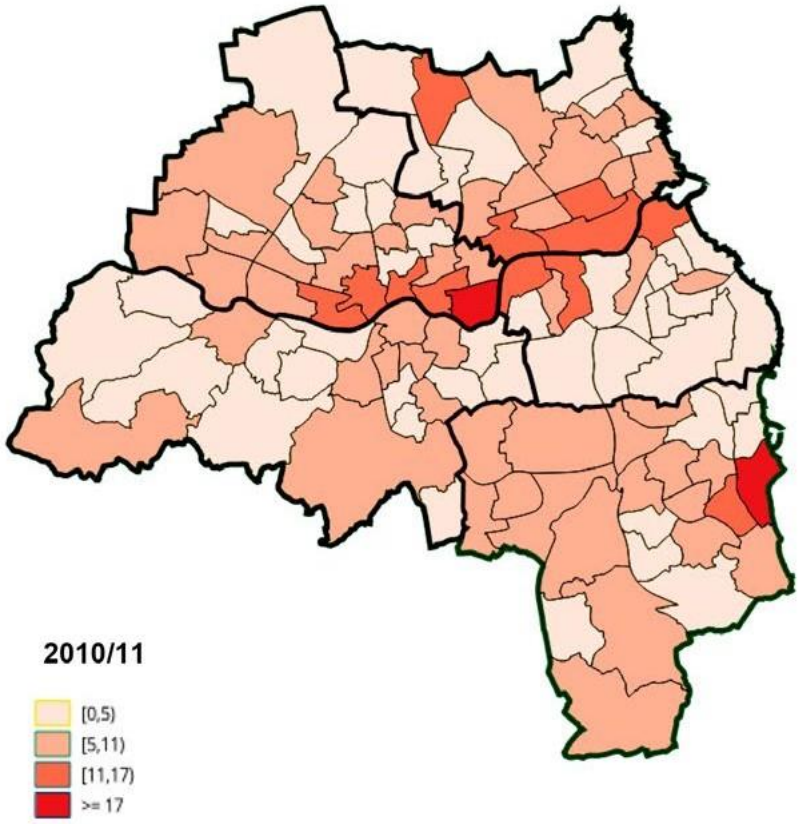
The Community Risk Profile (CRP) is an overview of our assessment and analysis of risk. It is derived from detailed incident data, census data, geographical and environmental datasets and information from our partners. This information is analysed to create a picture of risk in Tyne and Wear to enable us to strategically target our resources effectively.

The Office of National Statistics (ONS) produce Indices of Deprivation every five years. These show that, based on average indices of multiple deprivation rank, residents of Tyne and Wear suffer levels of deprivation that are amongst the highest in the country. Evidence shows that there is a correlation between deprivation in an area and fire risk; household makeup, tenure and length of residence all have an influence on fire risk which is reflected in the incidents that occur. For example, analysis of accidental dwelling fires indicates that such fires are more likely to occur in rented accommodation. In addition, deliberate (anti-social behaviour) fires are also linked to the level of deprivation in an area.

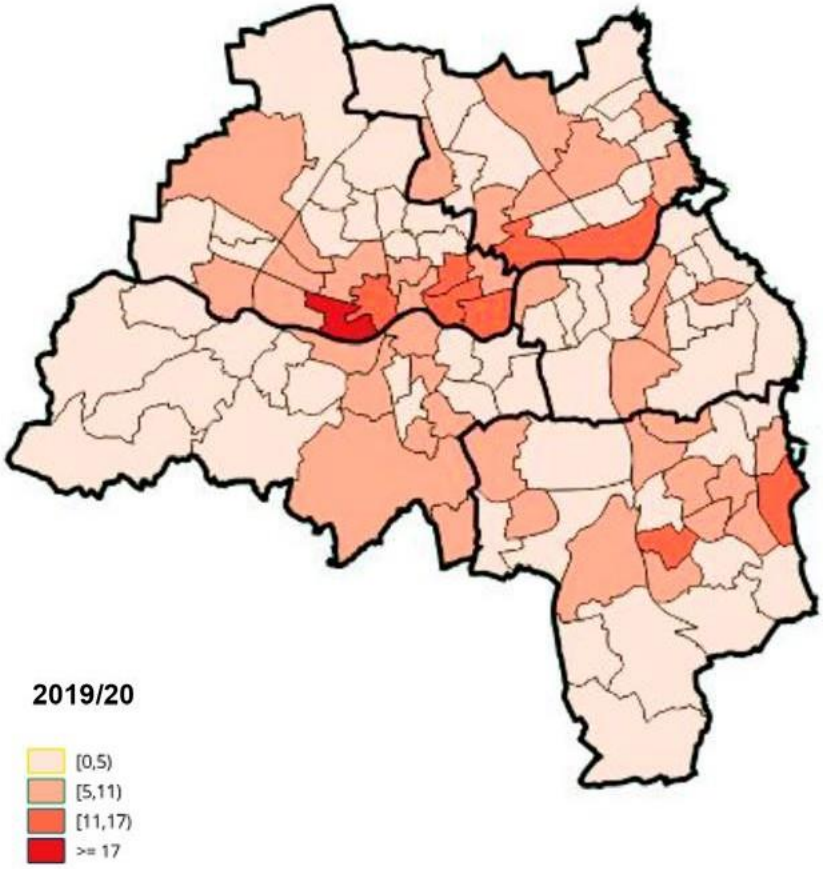
These maps demonstrate the reduction in distribution of risk in relation to accidental dwelling fires between 2010/11 to 2019/20. We have achieved a reduction of 13.5% in the number of deliberate fires in the same period.

In accordance with the changing risks, we constantly monitor the allocation and location of our resources to ensure that we are able to respond appropriately. The latest Home Office response time data shows we are the fastest fire and rescue service in responding to dwelling fires.

Accidental Dwelling Fires by Ward 2010/11



Accidental Dwelling Fires by Ward 2019/20



Tyne and Wear, like the country in general, is encountering an increasingly diverse and ageing population. Although over 90% of the Tyne and Wear population declare themselves to be of white British origin, evidence shows that we are becoming a more diverse community with an increasing population seen across nearly all ethnic groups.

Attendance at special service incidents are an important part of our work, road traffic collisions (RTCs) account for the majority of them. Flooding related incidents also factor highly in the number of special service incidents we attend. Along with partners in the Northumbria Local Resilience Forum (LRF), the Service makes extensive use of risk data from the Environment Agency in developing plans and procedures to prepare for extreme weather conditions.

Tyne and Wear has a relatively low number of sites registered under Control of Major Accident Hazards (COMAH) regulations 2015, however by their nature they pose a more significant risk to the local community than other industrial sites. Risks at these sites are well managed through the Northumbria LRF.

In addition, the LRF Community Risk Register lists a number of pollution or contamination risks as high, including pollution of controlled waters and accidents involving the spillage of fuel or explosives.

The Service has a key role in preventing / mitigating such incidents, including exercise of regulatory powers and use of mass decontamination assets.

The LRF Community Risk Register lists Building Collapse as a high risk and notes the Fire and Rescue Service's role in mitigation through Urban Search and Rescue (USAR) capability, working alongside partners.

Although it is not possible to totally remove all risk of fires and other incidents, the CRP, along with data systems, demographic profiling tools and workload modelling software help us to make connections between the risk and the incidents. This enables us to target our resources at the greatest risk – whether this means the positioning of fire stations and appliances or the targeting of our programme of Home Safety Checks (HSCs) or Risk Based Inspections of business premises.

1.1m

Population in Tyne and Wear

Properties rented

41%

21.2%

Households aged 65 or over

Accidental dwelling fires smoking related

8%

6.1% (in the North East)

Unemployment level

Of all fires are deliberate

74%

20%

Of households are workless

ONS population estimates 2021
Incident Data 2019/20

Prevention

Supporting safer, healthier, more inclusive communities.

Prevention is at the forefront of our proactive approach to prevent incidents from happening, through education, advice and intervention. Our preventative work is informed by understanding our community and through collaborative working with partners to identify those who are most at risk.

We work to educate our community about what they can do to keep themselves safe from fire, as well as reducing the risk of a wide range of other emergencies. We do this by:

- *Delivering over 26,000 Home Safety Checks (HSC) a year*
- *Providing free smoke alarms and safety devices* ***for the vulnerable in our society***
- *Delivering Safe and Well visits to vulnerable* ***people***
- *Delivering Schools Education Programmes*
- *Working with partners to promote the* ***installation of domestic sprinkler systems. Over 1,965 domestic properties are now protected. This is amongst the highest level nationally.***
- *Delivering targeted fire safety campaigns*
- *Delivering a range of other safety campaigns,* ***including water safety and road safety.***

We work with a range of partners to ensure the safety of our community. This includes working closely with the health service and the police, who are similarly seeking to address social and health inequality to improve community outcomes.

Our dedicated Prevention & Education teams provide a valuable link with hard to reach people ensuring that, as a Service, we can help all communities in the Tyne and Wear area and

provide support to particularly vulnerable groups.

Our highly skilled staff and volunteers successfully use an intelligence led approach to deliver our community engagement activities to those who need it most.

Our volunteers come from a variety of backgrounds and bring a wide range of skills and experience to the organisation. All our volunteers are valued because they give their time and skills freely to assist people in various community safety activities.

We deliver a range of activities to engage with young people across the five local authority areas of Tyne and Wear. These include:

- *Prince's Trust Programme*
- *Fire Cadets*
- *Phoenix Project*
- *Juvenile Firesetters Education Programme*

SafetyWorks! is an interactive safety centre based in Newcastle managed by the Service working in partnership with Northumbria Police and Crime Commissioner (PCC), Northumbria Police, Nexus, RNLI, St John's Ambulance and Sainsburys.

It provides realistic, interactive educational experiences for young people, as well as other groups, to gain knowledge about a wide range of safety focused learning activities to make

communities safer. By delivering this wide range of activities in a targeted way, we are able to help make people safer, in their homes and within their communities.

Early Intervention Activities

Sunderland and Newcastle Community Hub

Working in Partnership with the Police and Crime Commissioner (PCC) Violence Reduction Unit, a new Newcastle Community Hub (NCH) at West Denton Fire Station will soon be opening.

Due the successful launch of the Sunderland Community Hub (SCH) in 2019, based at Sunderland Central Fire Station, the Newcastle Community Hub will work in partnership with the PCC Violence Reduction Unit, Northumbria Police and the local authority with a view to provide early intervention through sport.

Project 'Knuckle Down'

In partnership with Northumbria Police, and the support of England Boxing, the Project 'Knuckle Down' campaign will educate ten young people on the Anti-Social Behaviour (ASB) within the Sunderland area, giving them a stronger voice on issues which affect their lives and create a more positive perception of young people in society.

The project is designed to highlight a range of anti- social behaviour issues (including knife crime) and demonstrate that by the 'Knuckle Down' approach, success can be achieved

inside and outside the boxing ring. By using positive community role models (firefighters and police officers) candidates will be shown that by taking the correct pathway, ASB can be avoided.

Protection

Supporting economic growth through intelligence led proportionate regulation

Our protection work aims to reduce the risk and impact of fire on the business community, and safeguards our firefighters. We are focussed on reducing the regulatory burden on compliant businesses through promoting the principles “Better Business for All”, but we will not shy away from enforcement action where it is in the interest of public safety.

To prevent the loss of life, injuries and reduce economic and social costs caused by fire, during 2019/20 we:

- support over 31,000 commercial business sites with fire safety advice
- carry out around 2,000 audits of commercial premises a year, with only a few progressing to enforcement
- deliver over 4,100 other activities including Building Regulation Consultations, Licencing reviews, cause for concerns, Operational Health Check referrals
- provide 2,400 operational health checks of commercial buildings each year.
- work with 11 Primary Authority Partnerships, supporting over 13,500 business premises

We also work collaboratively with other agencies supporting:

- Building Regulations submissions; this includes complex fire strategies for the built environment and supporting innovative design concepts including fire engineered solutions
- Consultations under the Licensing Act 2003, for the Licensing objective of Public Safety
- Engagement and enforcement under the Petroleum (Consolidation) Regulations 2014 and the Explosive Regulations 2014
- Promoting firefighter safety by collecting risk information whilst carrying out fire safety activities
- Reducing the number of unwanted fire signals by 54% over 10 years within the commercial sector across Tyne and Wear
- Maintaining a highly skilled and knowledgeable Department qualified to the standard of Level 4 Diploma in Fire Safety

Our targeted risk based inspection programme, is continually monitored and reviewed annually to ensure effective use of resources without overburdening businesses with unnecessary regulation. By prioritising premises based on

risk, premises type and history of compliance, we ensure that our activities are conducted in a way that helps to support business.

We operate an intelligence led approach to our engagement activities by identifying trends in non-domestic fires and areas of poor compliance; for example our successful campaign in targeting commercial premises with anti-arson advice where a suspicious fire has occurred nearby and supporting NFCC campaigns such as the Business Safety Week, Sprinkler Safety Week, Fire Door Safety Week.

The Primary Authority Scheme has allowed us to form a number of partnerships with businesses throughout the UK, providing consistent advice and guidance, leading to reduced bureaucracy and a safer business community.

We fully support and promote economic growth through better regulation. However, we will not hesitate to take enforcement action where necessary to ensure the safety of the public and our staff. The Authority will continue to prosecute in cases where serious breaches pose significant risk to life.

Response

Protecting 1.1 million people each and everyday

Making a timely and appropriate response to fire and rescue incidents is one of our top priorities.

We are currently the fastest metropolitan service in the country in responding to dwelling fires. Doing this means we reduce loss of life, injuries and damage to property.

To better protect our communities we respond to incidents with; the right people, with the right training, with the right resources and at the right

time. Our community fire stations across Tyne and Wear enable us to deliver excellent services to the public each and every day.

The following response activity gives a picture of how we make Tyne and Wear a safer place to live, work, and to do business:

Helping to make our communities safer – our recent responses

- We have successfully reduced the number of accidental fires in people's homes
- During 2019/20, we received over 28,000 emergency calls and attended over 16,000 incidents
- Our average response time is 5 minutes 50 seconds – the fourth fastest service in the country in responding to primary fires and the fastest metropolitan fire service in the country to dwelling fires
- By sending smaller, specialised vehicles to over 1,900 lower risk incidents, we ensured that our fire engines were available for the high-risk emergencies
- Our highly trained swift water rescue teams respond to water related incidents and the increased risk of flooding resulting from climate change
- We respond more effectively to incidents in high buildings with our new aerial ladder platform supporting operational response
- We continue to reduce the risk of injury to our firefighters by introducing new technology e.g. Body Worn Video Cameras
- We invest in equipment which provides improved safety and reduced exposure for casualties and members of the public
- We have reduced the risk of injury to our firefighters by introducing new technology to suppress fires without needing to enter unstable buildings
- We rescue people faster from road traffic accidents and other incidents with modernised cutting equipment available on all fire engines
- Highly trained, skilled and specialised control room staff coordinate the response to all incidents, as well as providing expert advice and guidance to the public in times of emergency.

Our record demonstrates the excellence of our past responses to community fire and rescue incidents but we are always focused on how we improve in the future.

Helping to make our communities safer – improving our future response

- The introduction and embedding of remote- controlled drone technology helps us to learn more about how and why fire and rescue incidents occur, and can search inaccessible or difficult areas.

- Following the Grenfell Tower tragedy and subsequent inquiry we have developed a comprehenive action plan to address recommendations.

- We manage major incidents effectively. We have a national role in responding to the Kerslake Report (2017) following the tragic events at the Manchester Arena. Any findings of the review will inform our future service provision.

COVID-19 Operational Response

The Service made an early decision to protect and maintain its response model to ensure we could provide a proportionate and resilient response

to incidents on the basis of risk and demand, at a local, regional and national level. We recognised the potential of the virus to affect a number of locations (stations) and needed to ensure we were able to maintain our ability

to provide an effective level of response to the public.

Resilience

Ready to tackle, with confidence, threats to everyday life in our communities

By collaborating with partners, we have strengthened our capacity and capability to respond effectively to and speed recovery from incidents or threats that can cause major disruptions in our communities.

Our resilience arrangements cover major events such as:

- Chemical, biological, radiological, nuclear or explosives incidents
- Major industrial accidents and transport incidents
- Collapse of large structures
- Terrorism-related incidents
- Natural disasters, such as flooding.

These are exceptional events but, if they happen, they can be highly disruptive for our communities.

We, and our partners, must have a high degree of preparedness to react quickly and effectively to reduce the impacts, locally, regionally and nationally.

Our specialised resilience department leads our coordination and co-operation with partners.

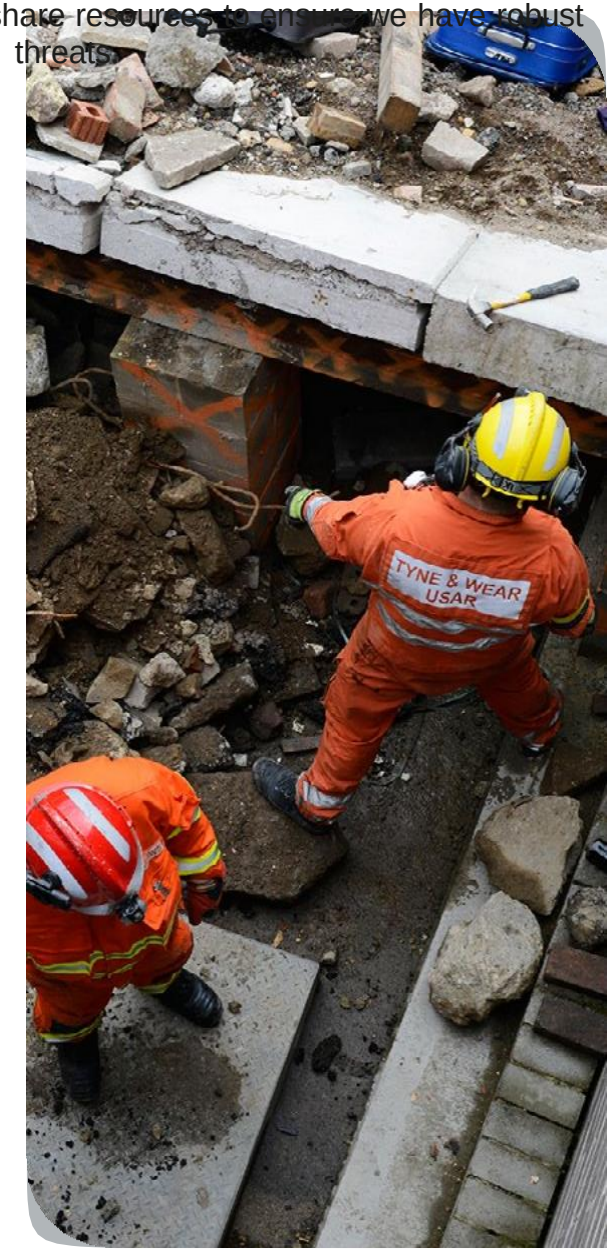
Working together, we continue to identify risks and share resources to ensure we have robust and effective plans and responses to ever changing threats.

We have specific responsibilities under the National Resilience Programme (NRP).

This programme is central to the Government's plan to increase resilience to exceptional incidents that threaten our national infrastructure. We host a number of national assets that enhance our ability to respond to major incidents on a local, regional and national scale. Assets include Urban Search and Rescue (USAR), Mass Decontamination and response to Marauding Terrorist Firearms Attacks (MTFA).

We also respond to incidents involving hazardous materials, with rapid identification of substances involved. We participate in the National Counter- terrorism Programme and testing joint responses to potential major incidents in collaboration with other emergency services, the armed services, Government departments and others.

Locally, we are a key member of the Northumbria Local Resilience Forum. This is a statutory partnership of emergency services, local authorities, clinical commissioning groups, hospital trusts and other organisations. Participation in the Forum helps us to build a community risk register, which identifies the significant local risks and sets out how we and our partners will respond to such incidents. We have highly trained tactical advisors who are able to offer



expert support and information at these complex incidents.

We will continue to support partners and peers to ensure that all national guidance is up to date and share experience to help drive improvements in our approach.

IRMP Actions 2017-2020

The IRMP supports our journey for innovation and continuous improvement. It is an important part of how we manage the impact of funding reductions, along with continued good financial management and ongoing work to improve efficiency, procurement and effective use of assets and other resources.

In recent years the Service has undertaken the following reviews:

- *Review of Operational Response Model*
- *Control Review*
- *Feasibility of a Trading Company*
- *An Organisation and Management Review (OMR);*
- *Collaboration – to explore further joint working* ***with other emergency services and key partners.***

Following implementation on 1 April, the majority of actions approved in the Operational Response Model have been completed. This action saved the Authority £749k from 2019/20.

Approval was granted in July 2020 by Fire Authority, to authorise the Chief Fire Officer to further consider some of the Operational Response proposals in the forthcoming IRMP 2020-2023. This will allow for new ways of working to be considered and lessons learnt from the worldwide COVID-19 pandemic.

The new IRMP 2020 - 2023 will be developed with reference to budgetary savings to direct resources to priority areas going forward.

If the public sector resource position should change because of the impact of COVID-19 on the economy then the IRMP will be adapted and amended accordingly.

Control room staffing

The potential action from the current IRMP (2017-20) to reduce the number of staff in our control room

will not be carried forward to IRMP 2020-23.

This comes after a period of review as requested by the Fire Authority and having done so, it's clear that for resilience we should retain our current staffing level of 28 people.

ALP primary staffing

We will soon begin to pilot primary staffing of M03, the aerial ladder platform (ALP) based at Marley Park Community Fire Station. ALPs are currently dual- crewed, which means that a pumping appliance crew also has to crew the ALP. This could potentially result in delays in deploying to fires in tall buildings. Outcomes, recommendations and lessons from serious fires in tall buildings have been a factor in bringing forward this proposal.

Additional fire appliance

We will pilot the introduction of a second pumping appliance at West Denton Community Fire Station to strengthen our capability, capacity and resilience.

A02 will also provide opportunities to support deployment of our incident command unit and provide additional coverage north of the Tyne. This in turn will provide greater resilience for incidents that call for the ALP based at Gosforth Community Fire Station. We will draw on our existing staffing resources to facilitate the pilots and intend to start them imminently. The pilots will inform our full proposals for IRMP 2020-23, which we intend to develop by the end of this financial year.

Action 1: Review how we respond relative to risk

Examine the operational response delivered by the Service to ensure all opportunities for efficiency are explored, in relation to the risks we face, so

that we achieve the best possible outcomes for our community.

Action 2: Explore further opportunities for collaborative working with emergency services and other partners

Drive the collaborative agenda forward where it improves effectiveness and efficiency, strengthening services, increasing innovation, delivering significant savings and better protecting our communities.

Action 3: Examine our ways of working and consider opportunities for further efficiency and effectiveness

Foster leadership and innovation to drive efficiency through a review of our policies, systems and ways of working. Using an intelligence-led approach to maximise

personal and organisational performance and minimise risk.

The IRMP 2020 - 2023 is currently in development and will be published by the end of 2020.

5 Continuous Improvement

This plan sets out how we will deliver our vision of creating the safest community and our commitment to improve community safety. We will continue to develop our approach to collaboration, manage the 'heightened threat' of terrorism and continue support of reform of the fire and rescue service nationally and locally.

TWFRS 2025 Programme

Over the next five years we anticipate that change across the Fire and Rescue Sector will continue and most likely accelerate with strategic drivers and events contributing towards the pace and extent of change will require TWFRS to remain relevant and continue to add value for money. To coordinate the key project work being carried out across the Service and in support of continuous improvement, the TWFRS 2025 Programme has been established in 2020.

The TWFRS 2025 Programme will incorporate three key work streams that will drive and direct Service activity over the next five years. The three work streams are:

- *Inclusion*
- *An All Hazards Approach to Managing Incidents*
- *Digital and Data*

A Programme Board has been established, which will have corporate oversight of all Service projects and will be a key strategic driver for this transformational change.

Collaboration

The Policing and Crime Act 2017 placed a duty on fire, police and ambulance services to collaborate. For a number of years, we have secured the benefits of working closely together with colleagues in other emergency services, and we will continue to strive for more collaboration where it will bring efficiency, increased effectiveness and keep the public safe.

The Service has a successful track record of collaborating, including co-location at a number of sites and improved operational and preventative activities. The following blue light partners form a formalised collaboration group:

- *Northumberland Fire and Rescue Service (NFRS);*
- *Northumbria Police (NP);*
- *The Office of the Police and Crime Commissioner for Northumbria (OPCC);*
- *The North East Ambulance Service NHS Foundation Trust (NEAS).*

In addition, to the above, the Service continues in Fire-Fire collaboration with County Durham

and Darlington Fire and Rescue Service (CDDFRS); and NFRS. This partnership has undertaken collaboration including; fire investigation, health and wellbeing, water and hydrant management, Emergency Services Network (ESN) implementation, procurement, workforce development including recruitment, talent management, succession planning and cross service secondments.

The partnerships above set out to develop opportunities aligned to the following objectives:

- *Provide improved outcomes - maintaining or improving the services to local people and communities;*
- *Reduce demand - contributing towards strategic objectives of decreasing risk in communities by reducing demand on services;*
- *Deliver better value for money - producing quantifiable efficiencies*

The onset of COVID-19 has strengthened existing partnerships through national and local associations. The Services' response has also initiated interactions with new partners, increasing engagement with the most vulnerable in our community.

The Collaboration Group will continue to find better ways of working together to ensure we keep our communities safe.

Fire Service Reform

The statutory duty to collaborate contained in the Policing and Crime Act helps us achieve the objectives presented by the fire service reform.

We are keen to drive collaboration opportunities across all business areas. We are working with health and wellbeing partners to support the delivery of their Sustainability and Transformation Plans that set out how they will improve health inequalities and deliver safe and sustainable health and care services.

We recognise that better joint working can undoubtedly strengthen our emergency services, delivering significant savings for taxpayers and improving services to the community. Better procurement, greater transparency and shared resources can only improve the efficiency of our services.

We welcome, and are supporting, the devlopment of the new professional standards by the

Fire Standards Board. HMICFRS will provide benchmarking and opportunities to share notable practice.

An Inclusive Service

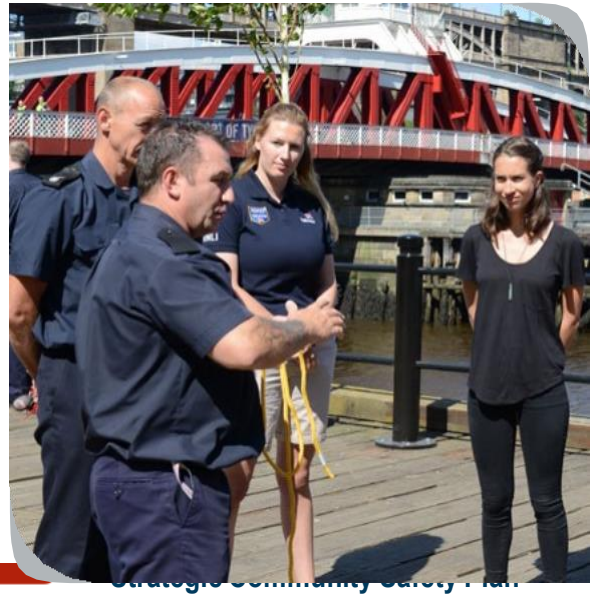
TWFRS are committed to being an inclusive Service, that reflects the community we serve. We are proud of our achievements to date. In 2016 we were the only fire and rescue service nationally

to have been twice awarded Excellent under the Fire Service Equality Framework. In 2019 we also retained our Investors in People Gold award.

However, like many services, we know there is more we can do.

One of our key priorities is to think more inclusively, be more inclusive in our work and improve the diversity of our workforce.

We want everyone in the Service to be inclusive in everything they do.



Operational Communications and Heightened Threat of Terrorism

Operational Communications

The Emergency Services Network (ESN) is the next generation of critical communications for the three Emergency Services and other user organisations that is being delivered by the Emergency Services' Mobile Communications Programme (ESMCP).

Utilising EE's 4G mobile network it will replace the current Airwave system and provide a common communications platform for all emergency services supporting collaborative communications and enhancing access to data and information thus improving community outcomes. This is a complex programme being led by the Home Office. Our Service is making preparations to accommodate transition which is currently scheduled during 2023. This involves upgrading equipment in our Control Room and installing new communications equipment in fire appliances.

Heightened Threat of Terrorism

The changing threat to national security cannot be underestimated. The type and scale of risk changes continuously, so our resilience capacity must change to cope with this. We use modern technology and up-to-date intelligence to identify and address the changing risks.

We will support the national response to terrorist incidents and ensure we learn the lessons from tragic events to ensure we can better protect our communities. We will continue to work closely with our partners and ensure that our staff are trained in the emerging risks. Cross-agency counter-terrorism exercises are becoming more frequent and complex. Whilst they are resource intensive, they will only strengthen our collective ability to respond to any potential terrorist attacks regionally and across the UK.

Supporting Health and Wellbeing

The number of older people within Tyne and Wear is predicted to rise over the next decade. This will generate increased demand on all public services for example; slips, trips and falls. While increased life expectancy is good for Tyne and Wear, age is

a risk factor for fire. Since the largest percentage increase in population is in the 65 and over category, our policies, procedures and resource allocation will need to be continually adapted to protect this vulnerable group.

Our brand and the esteem in which the Service is held gives us access to people's homes.

This, alongside the successful reduction of fire risk through prevention, has led to a

greater understanding that we can make a real difference to the wider health and wellbeing of our communities.

We undertake Safe and Well visits in some communities within our area, the Service continues to collaborate with health and social care partners to deliver falls prevention visits to those aged 65 years and over, whilst raising awareness of frailty and its impact.

In the case of a medical emergency, we also help the ambulance service gain entry into property. Feedback from health colleagues on

our involvement across all these activities is very positive.

We deliver over 26,000 HSCs a year. Every HSC represents an opportunity to 'make every contact count.' Collaboration with other public services continues to be essential if we are to maximise the impact of public funding and reduce bureaucracy for the public. We are working closely with our partners, focussing our support on the areas we can have the greatest impact.

Further Information

This plan sets out how we will deliver our vision of creating the safest community and our commitment to improve community safety, response and resilience whilst continuing to meet the financial challenge of fire service reform.

If you would like to comment on this document or the services provided by Tyne and Wear Fire and Rescue Service, you can:

Write to:
Tyne and Wear Fire and Rescue Service
Headquarters Nissan Way

Barmston
Mere
Sunderland
SR5 3QY

Phone:
0191 444 1500

E-mail:
comments@twfire.gov.uk

Alternatively, if you would like more information regarding Tyne and Wear Fire and Rescue Service, you can:

Visit our website:
www.twfire.gov.uk

Like us on Facebook:
www.facebook.com/twfrs

Follow us on Twitter:
www.twitter.com/tyne_wear_frs

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If you would like our plan in another format or language, please contact us so we can discuss your needs. For further details, please contact **0191 444 1500**

Strategic Community Safety Plan

(Interim)

2020 - 2021

Appendix C

Tyne and Wear Fire and Rescue Service

Creating the Safest Community

Community Risk Profile

2020 - 2023

Community Risk Profile 2020 - 2023

Tyne and Wear Fire and Rescue Service

Creating the Safest Community

- 5 local authorities
- 1.1 million residents
- Over 500,000 households
- 1 international airport
- 2 major cities
- 2.41 million m² retail floor space
- 3 universities

Lowest median household total wealth**

No coastal flood risk & limited river flood risk

Better than average casualty rates for road traffic accidents*

- Average age of 40
- 95.4% White British
- 95.9% English speaking
- 65% Christian
- 21.2% of households aged 65 or over
- 41% of properties rented
- 36,600 non-domestic properties
- Higher than average case of mental health issues*

North East

- Highest rate of unemployment*
- Highest rate of hospital admissions due to alcohol*
- Higher than average mortality rates from alcohol*
- 16% of adults smoke*
- Highest rate of mortality attributable to smoking*
- Highest number of hospital admissions due to drug use (per 100,000 population)*
- Highest levels of obesity*
- Higher than average levels of antisocial behaviour*

* England **Great Britain

www.twfire.gov.uk

Contents

Community Risk Profile
Foreword

Chris Lowther
Chief Fire Officer and
Chief Executive

We're here to keep Tyne and Wear safe for everyone.

We do this by responding quickly and efficiently to emergencies, but also by preventing emergencies from happening in the first place. To achieve this, we need to understand the people that we serve and the places where they live and work.

Like most public sector organisations, our resources are limited. That's why it's essential that we target them effectively, using an evidence-based understanding of our communities and the risks they face.

Tyne and Wear is very different today from how it was when I first became a firefighter over 20 years ago. Our society is constantly evolving and our services need to evolve with it

– so the information presented here plays a crucial role in helping us keep people safe, not just today, but tomorrow too.

Community Risk Profile
2020 - 2023

This Community Risk Profile (CRP) informs our Strategic Community Safety Plan (SCSP) and Integrated Risk Management Plan (IRMP). It provides a comprehensive and forward looking assessment of the risks in our community that will both impact upon, and shape service delivery over the coming years.

This document is an analysis of risk across the communities of Tyne and Wear. It is derived from detailed incident, census, geographical and environmental datasets, including information from our partners. This information is analysed to create a picture of risk in Tyne and Wear, enabling us to target our resources effectively.

This information plays a key role in the development of our IRMP and other key documents and ensures we follow an evidence- led approach to managing our activities and resources. All fire and rescue authorities have a statutory responsibility to produce an IRMP that sets out how it will address locally identified risks, and this document forms part of this process.

Utilising the data and information we identify who or what is at risk of harm from incidents. Once these have been identified the CRP will be used to determine how we address these issues.

We access this data from a range of sources:

National Risk Register (NRR)	The NRR is an assessment of risks that have the potential to cause disruption in the UK.
Local Resilience Forum (LRF) Community Risk Register (CRR)	The CRR provides information on emergencies that could happen within the Northumbria area, together with an assessment of how likely they are to happen and the impacts if they do.
Census	The census is a count of all people and households. That last census was held on 27th March 2011. The next census in England and Wales will be in 2021.
Mosaic	Mosaic is a consumer segmentation model from Experian which segments the population into groups and types that helps you to understand an individual's likely behaviour.
Exeter data	Health data detailing individuals aged over 65 registered with a GP practice within our area.
Partner agencies	We work closely and consult with a number of partner agencies to share information and working practices in relation to risks.
Incident Recording System (IRS)	The IRS is an electronic system operated by the Home Office for recording incident data for research and statistical purposes.
Cadcorp SIS	Cadcorp SIS is a desktop Geographical Information System (GIS) used for spatial data analysis and is capable of measuring the impact of potential changes in service deployment.
Community Fire Risk Management Information System (CFRMIS)	CFRMIS is an electronic system used to store and manage data relating to business and community fire safety.
Site Specific / Operational Risk Information	This is information we gain from visits to high risk premises and is then made available to operational crews when dealing with incidents.
Corporate Risk Profile	The Authority's specific risk profile which captures and evaluates risks to our organisation that may Impact our ability to deliver services safely and effectively.
Horizon scanning	Horizon scanning by our Senior Management Group.

The National Risk Register of Civil Emergencies 2017 edition provides an updated government assessment of the likelihood and potential impact of a range of different civil emergency risks (including naturally and accidentally occurring hazards and malicious threats) that may directly affect the UK over the next 5 years.

In addition to providing information on how the UK government and local responders manage these emergencies, the National Risk Register also signposts advice and guidance on what members of the public can do to prepare for these events.

The risks identified by the National Risk Register of Civil Emergencies are:

Natural hazards

Flooding, Severe weather, Space weather, Volcanic eruptions, Poor air quality, earthquakes, Wildfires.

Diseases

Human diseases, Animal diseases.

Major accidents

Widespread electricity failure, System failure, Transport accidents, Industrial and urban accidents.

Societal Risks

Industrial action, Public disorder.

Malicious attacks

Malicious attacks, Attacks on crowded places, Attacks

on transport systems, Attacks on infrastructure, Cyber attacks, Chemical, biological, radiological and nuclear attacks.

Managing Risk

The Community Risk Register (CRR) provides information on emergencies that could happen within the Northumbria area, together with an assessment of how likely they are to happen and the impacts if they do.

The Northumbria community risk register is produced by Northumbria Local Resilience Forum. It summarises the top risks in Northumbria together with an assessment of how likely they are to happen and the impacts if they do. It gives information on how you can be prepared and what to do in an emergency.

It is based on a National Risk Register produced by the Government. This is centred around a range of data including historic, scientific and expert analysis to assess the risks to the UK as a whole. Using this information we can identify which are relevant locally and add any additional risks. Again this process involves looking at a range of data, including incidents that have occurred, local knowledge and expert guidance.

The risks identified by the CRR are as follows:

- Flooding
- Animal disease
- Pandemic influenza
- Industrial Site accident
- Adverse weather
- Hazardous transport
- Cyber Attacks

PREPARING FOR EMERGENCIES

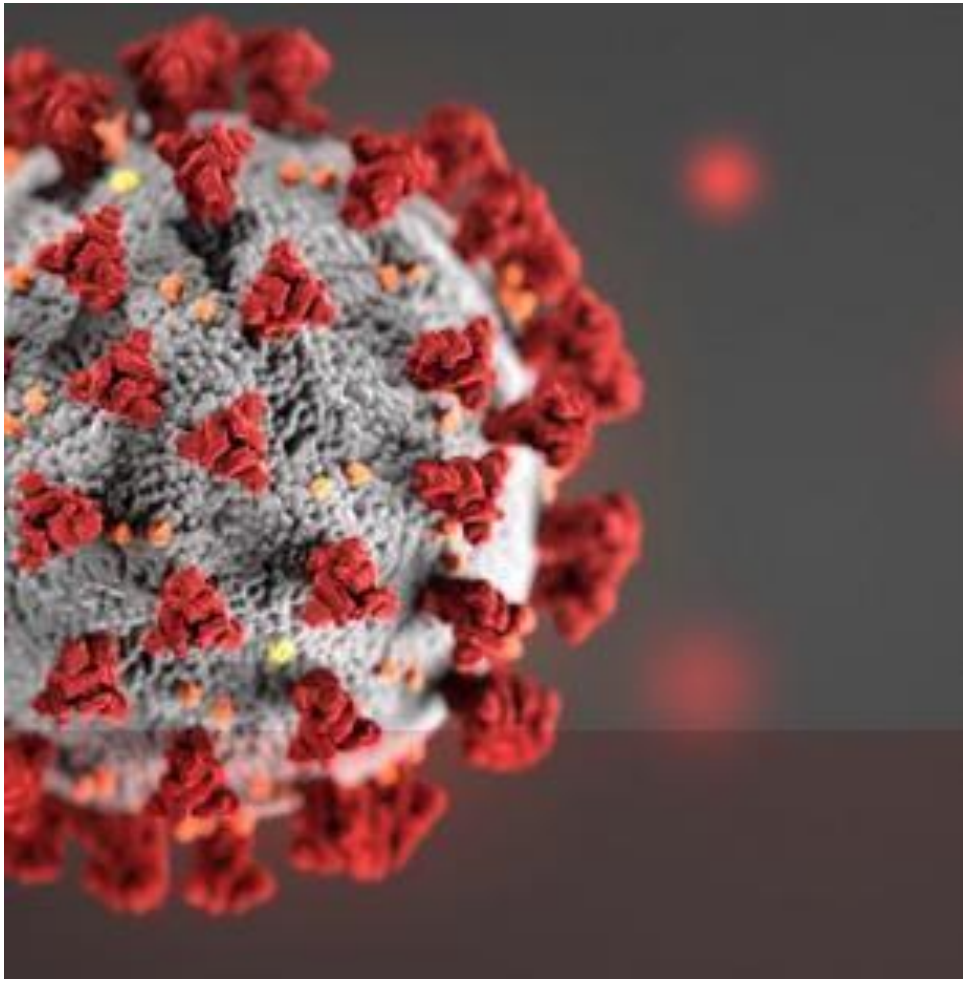
IN NORTHUMBRIA

Coronavirus (COVID-19)

The North East and Yorkshire had one of the highest death rates outside of London from Covid-19. In order to maintain our Service to the communities of Tyne and Wear TWFRS implemented our Business Continuity Plans.

We also established a Logistics Cell to support the response to Covid-19. Current and former staff volunteered to support our own departments and our LRF partners through tasks including delivering PPE and other essential activities. Hundreds of people volunteered and enabled the Logistics Cell to effectively manage various requests for support.

This work has made such a significant difference for the community and charities we serve during these unprecedented times.



Managing Risk

We take a standard approach to understanding risk which is made up of the **likelihood** that something could happen and the **impact** it would have if it did happen. Our role as a fire and rescue service is set out in legislation including the Fire and Rescue Services Act 2004, the Civil Contingencies Act 2004, the Regulatory Reform (Fire Safety) Order 2005 and the Fire and Rescue (Emergencies) (England) Order 2007.

That role is essentially to mitigate the risk by:

- Reducing the **likelihood** that fires will happen (through the Prevention and Protection activities that are part of our legal duty).

- Reducing the **impact** if incidents do happen. This is part of our duty to respond and provide resilience (extinguishing fires, rescuing people in a variety of situations, and being able to help the community if a major incident or disaster occurs). It also links to the Prevention and Protection duties through the promotion of measures that make sure people get out if there is a fire, or prevent the ignition and the spread of fire (sprinklers, smoke alarms, fire doors, fire retardant materials for vulnerable people and many others).

When thinking about the likelihood of fire and other incidents, the CRP is important because it helps us to understand the community. This understanding is cross referenced with incident data to enable resources to be targeted for Prevention, Protection and Response.

It is important to note that community risk and incidents are not the same thing. Community risk is inherent in the community and is connected with the social factors in the population, including poverty / deprivation, age, health and lifestyle. Individuals at risk of harm from fire and other accidents are often also at risk of other types of harm.

We know both from our routine local analysis, and national research[i] that incidents are more likely to happen to some individuals and in some areas, than others.

Managing Risk




Our knowledge of the community includes historical and recent information about where incidents happen and to whom. We routinely make use of data systems including Community Fire Risk Management Information System (CFRMIS) and demographic profiling tools (e.g. MOSAIC), both of which provide information to household / business level. Other systems record patterns and frequency of incidents and allow us to model any proposed changes (e.g. Workload Modelling software).

This helps us to make the connections between the risk and the incidents and to target the available resources at the greatest risk areas, or the targeting of our programmes of Home Safety Checks (HSCs) or Risk Based Inspections (RBIP) of business premises.

Of course there will always be some fires and other accidents and it is not possible to totally remove all risk of these.

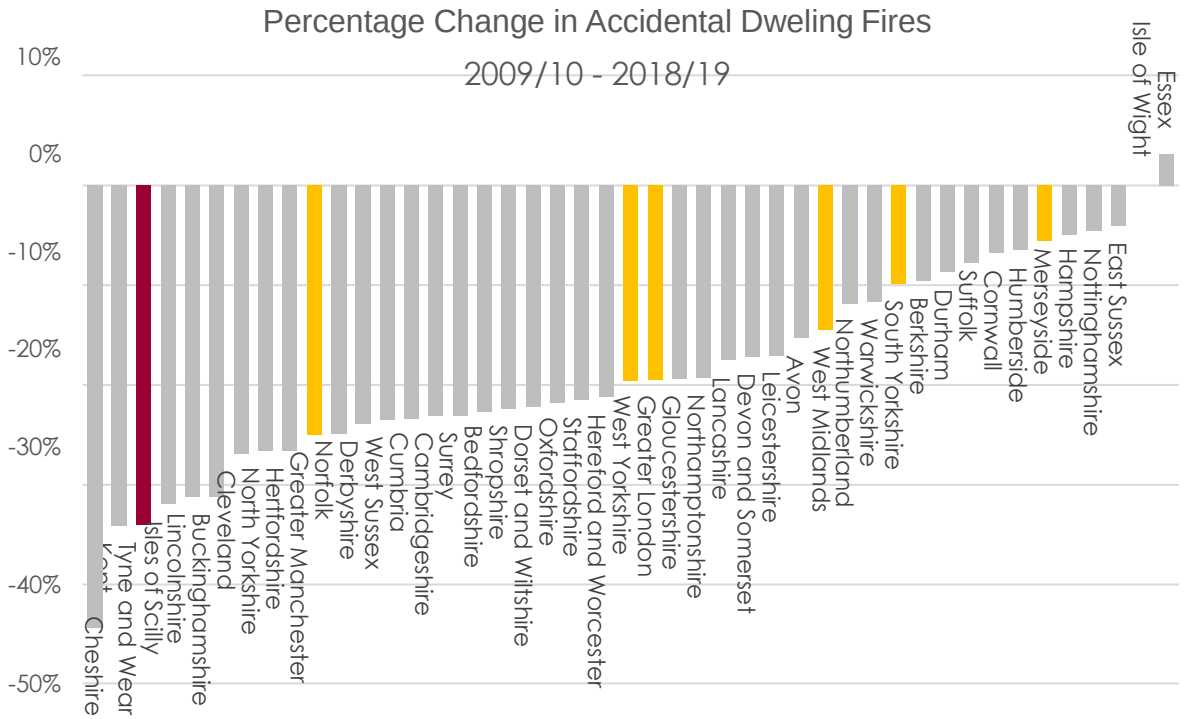
Throughout this document we have set out some of the key risks. Our approach to targeting these risks is also described. Policies and procedures are in place dealing with the specifics of targeting risk through Prevention (e.g. Home Safety Check targeting policy), Protection (e.g. Risk Based Inspection Programme for fire safety) and Response (e.g. Standard Operating Procedures and Pre-Determined Attendances).

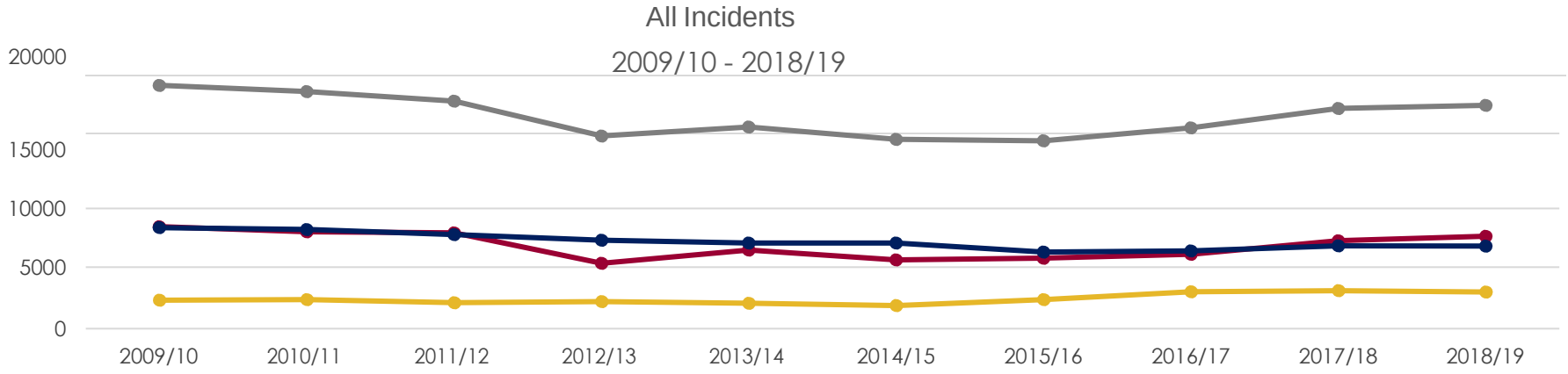
When we analyse our performance, we compare ourselves to the other Fire and Rescue Services (FRS) in our 'family group' as categorised by Government. The group is more commonly referred to as 'the Mets' and includes: Greater Manchester FRS, London Fire Brigade, Merseyside FRS, South Yorkshire FRS, West Yorkshire FRS and West Midlands FRS. A full range of data on how we are performing is contained in our Annual Report / Statement of Assurance.

Managing Risk

Our approach to managing risk has enabled Tyne and Wear Fire and Rescue Service (TWFRS), working with key partners, to drive down risk and therefore reduce incidents. The chart opposite illustrates how our risk based approach has helped reduce accidental fires in peoples' homes.

The number of all incidents has reduced from 2009/10, however over the last few years we are seeing an increase in the number of fire incidents due to an increase in deliberate secondary fires.






Fire
False Alarm
Special Service
Total Incidents

About Tyne and Wear





Tyne and Wear is a densely populated metropolitan area with 1.104 million residents located in the North East of England[ii]. Covering 538km^2 it represents only 6% of the North East region's land, yet it is home to 43% of the region's population with over 500,000 households. The population is growing, ageing and changing, the impact of this is covered in more detail later.

Tyne and Wear consists of five local authority areas: Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland. It borders Northumberland County to the North and Durham County to the South. Along with the other urban areas of Tees Valley, these four county areas constitute the North East region of England.

Tyne and Wear has an international airport, two major cities, nearly 2.41 million m^2 of retail floor space, five indoor shopping centres, three universities and a variety of specialist sporting facilities hosting both domestic and international competitions and events. Tyne and Wear also has a number of high risk sites registered under the Control of Major Accident Hazards (COMAH) regulations 1999.

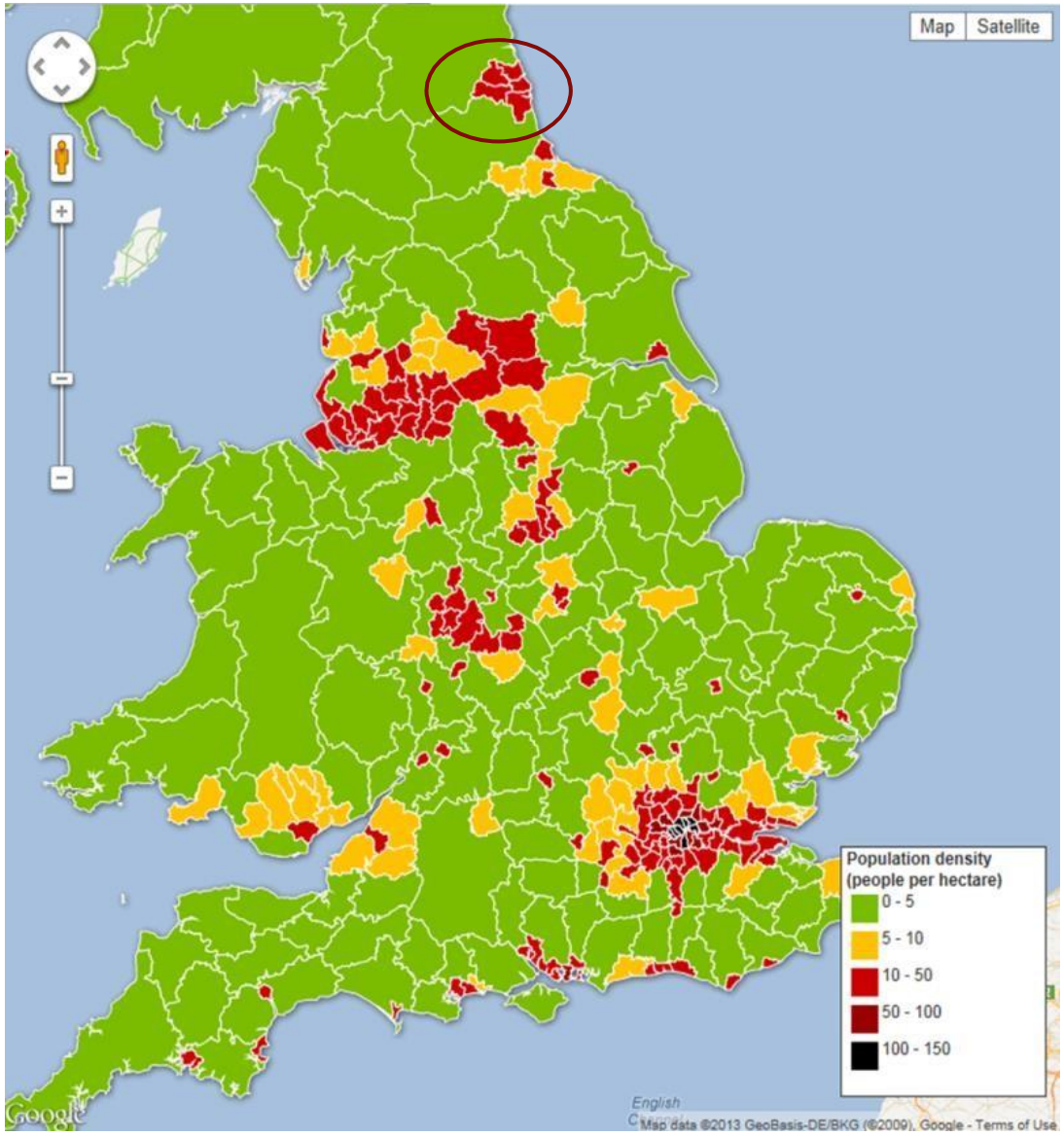
The industrial makeup of the area has changed from largely heavy industry to a more diverse economy including a number of major enterprises such as the Nissan plant in Sunderland. The recession has hit the North East harder than many areas and recovery is slower.

Population

Population is a key risk factor for fire and rescue as reflected in the current Government arrangements for funding Fire and Rescue Authorities (FRAs). Put simply, risk goes with people and the number of people in an area is a key determinant of risk alongside social factors in how the population is made up. As a Metropolitan FRA covering five densely populated urban local authority areas, population is a key consideration throughout our planning.

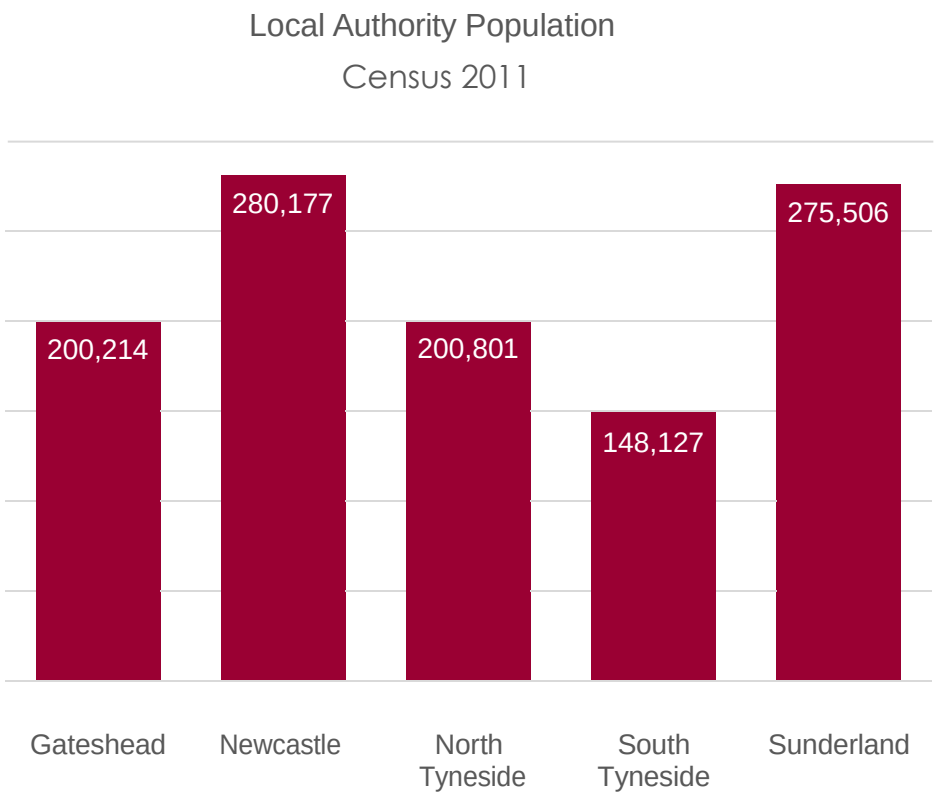
Based on 2011 census data, the population of Tyne and Wear is 1.104 million with an average age of 40 years.

The relative density of Tyne and Wear's population is shown in the map[iii] (circled area).

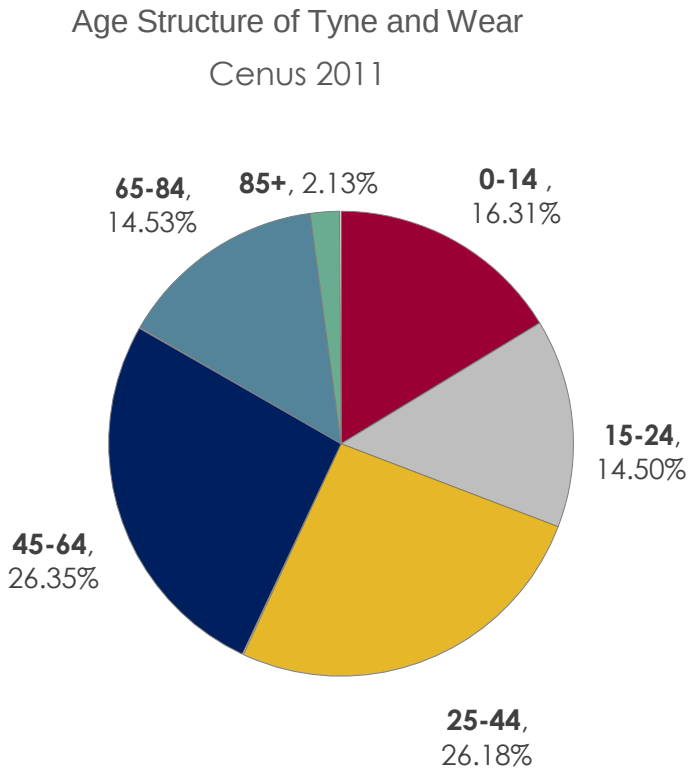


Population

The following chart shows the population of Tyne and Wear broken down across the Local Authority areas.



The age structure of the population within Tyne and Wear is detailed below:



Over 50% of the population within Tyne and Wear are within the 25 - 64 age group and those aged 65 and over make up over 16%

Population

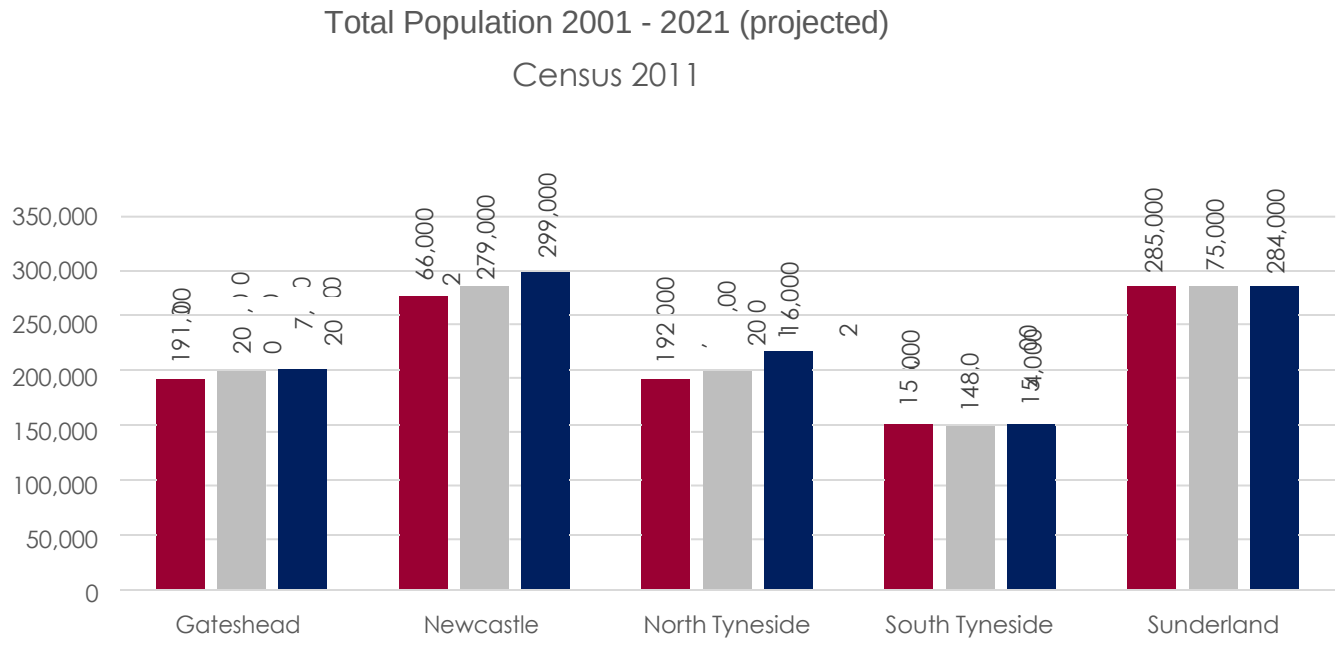
In the decade between Census 2001 and Census 2011, the population on Tyne and Wear showed an increase of 1.65% (17,300).

The rate of population Change in each constituent Local Authority was as follows:

- Gateshead: + 9,100 (+ 4.8%)
- Newcastle: + 12,900 (+ 4.8%)
- North Tyneside: + 9,200 (+ 4.8%)
- Sunderland: - 9,300 (- 3.3%)
- South Tyneside: - 4,600 (- 3.0%)

Regional projections indicate that this picture is set to change again by 2021 with Tyne and Wear's total population rising to 1.160m, a 5.1% increase spread across all of the constituent local authorities. This is lower than that in most other metropolitan areas (Greater Manchester 6.5%, West Midlands 7.6%, South Yorkshire 5.7%, West

Yorkshire 9.1%) other than Merseyside (0.8%).



Population

2001 2011 2021

Population

In terms of changes by age band, the projections for Tyne and Wear are as follows:

Under 25s: In 2021 the 0-14 age group is expected to remain at around 16% of the population total. The percentage share of the population relating to the 15-24 age group is expected to reduce from 14.5% to 12.74%.

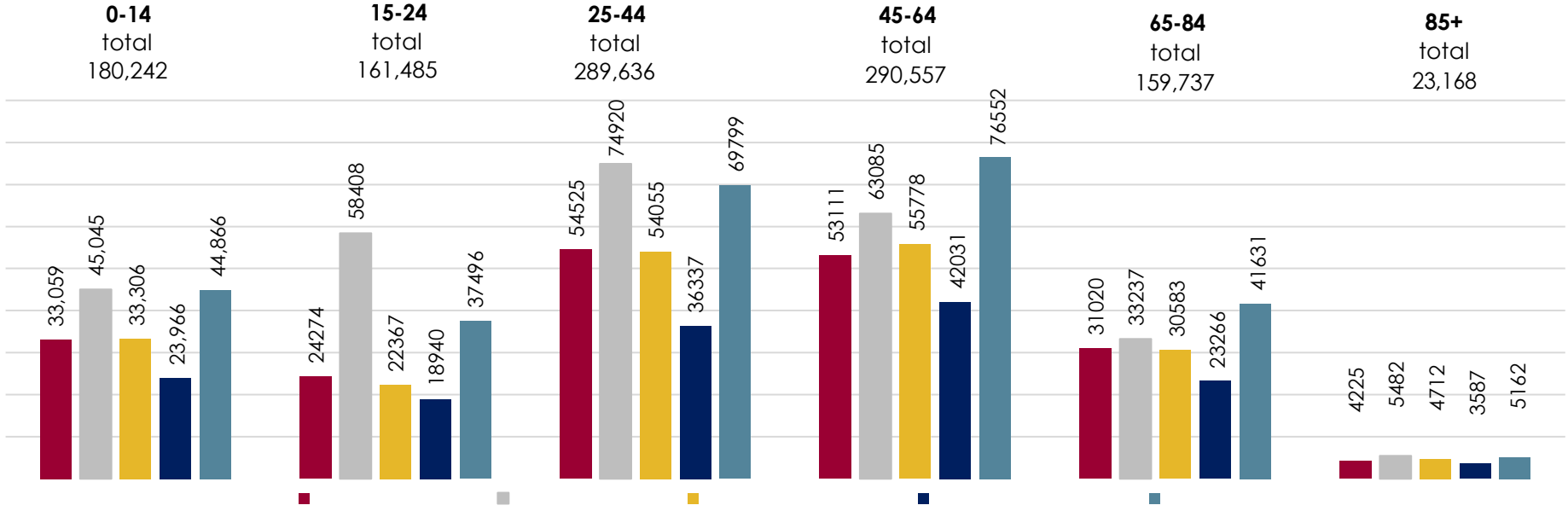
25-44: The percentage share of the population in this group is expected to remain around 26%.

45-64: The percentage share of the population in this group is expected to reduce from 26.4% to 24.8% by 2021.

65 and over: The regional projections[iv] indicate that "the percentage of the population aged 65 and over is projected to be one of the fastest growing among the regions". The percentage share of the population relating to the 65 and over age group is expected to show an increase from 16.66% to 18.89% which is an increase of 19% from 2011 to 2021.

Population by Local Authority Area and Age Group

Census 2011



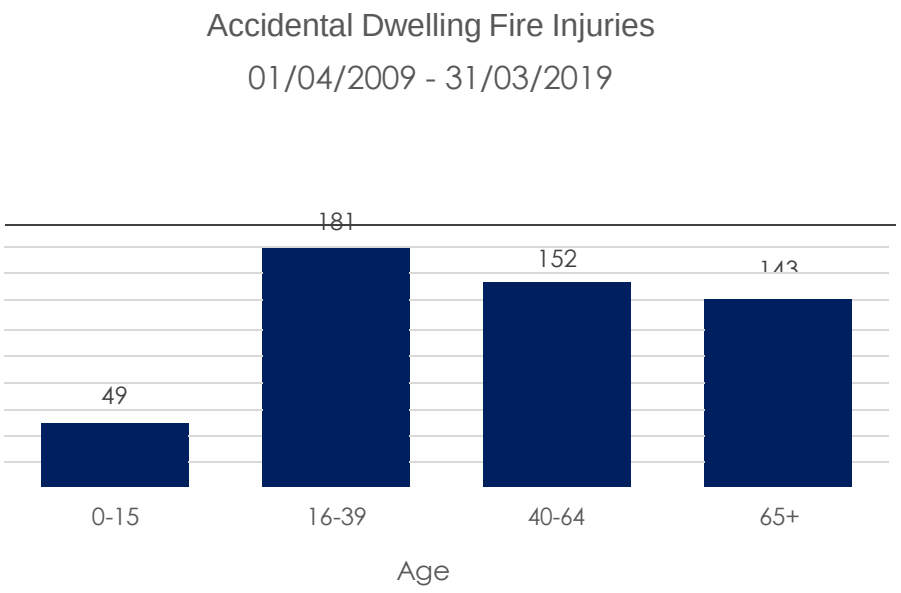
0-14 15-24 25-44 45-64 65-84 85+

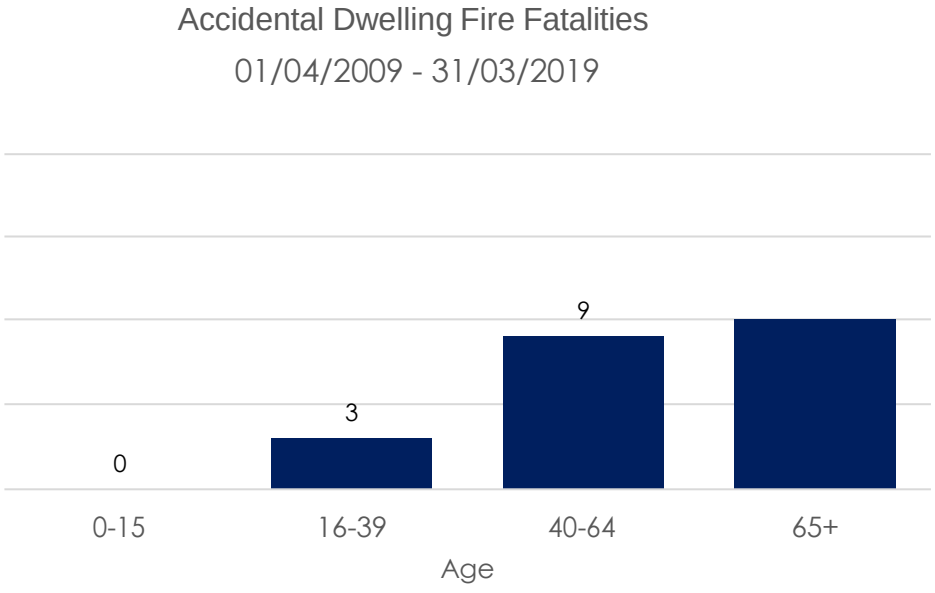
Gateshead Newcastle North Tyneside South Tyneside Sunderland

Population

There is a clear indication that Tyne and Wear like the country in general, is encountering an ageing population. Age is a risk factor for fire. The charts below show fire deaths and injuries in Tyne and Wear by age group. Our targeting and delivery policies take account of this. It is worth noting that our community is among the safest in the country from fire deaths and injuries[v].

Since the largest percentage increase in population is in the 65 and over category, our policies, procedures and resource allocation will need to be continually adapted to protect this vulnerable group.





Ethnicity and Language

Ethnicity

Comparison of the last two censuses show that the population of Tyne and Wear is becoming more ethnically diverse: in 2001 95.4% of the population declared themselves as White British whereas in 2011 this figure was 91.5%.

The breakdown of the population by local authority area is as follows[vi].

	White British (%)	White other (%)	Asian/ Asian British (%)	Black/ African/ Caribbean / Black British (%)	Mixed and multiple ethnic groups (%)	Other (%)
Gateshead	94.1	2.2	1.9	0.5	0.8	0.5
Newcastle	81.9	3.6	9.7	1.8	1.5	1.5
North Tyneside	95.1	1.5	1.9	0.4	0.9	0.2
South Tyneside	95.1	0.9	2.2	0.3	0.9	0.7
Sunderland	94.8	1.1	2.7	0.5	0.6	0.3

Main Language

In relation to language, the vast majority (95.9%) of residents aged 3 or over use English as their main language. However, there are a number of other languages spoken within Tyne and Wear which largely correspond to the migration patterns experienced in each local area.

The most commonly spoken languages as defined in the census 2011 are shown below[vii].

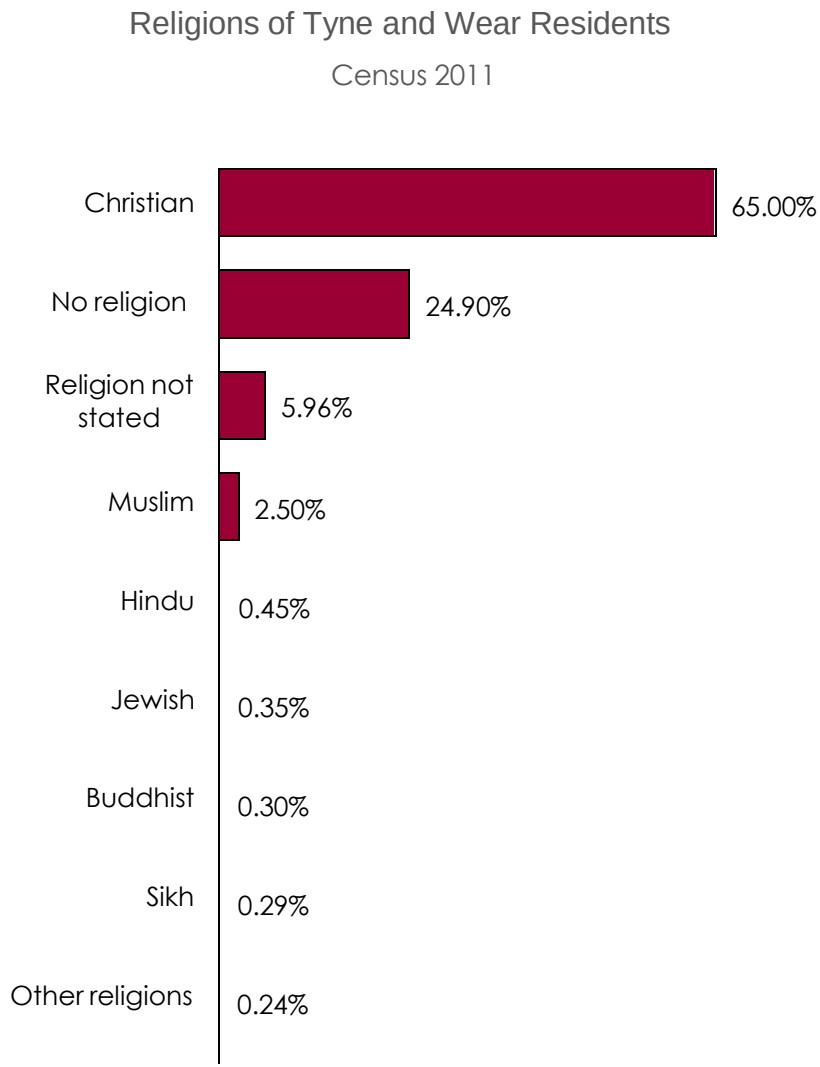
Language	Speakers	%
English	1,021,903	95.9%
Bengali	4,907	0.46%
All other Chinese (exc: Mandarin, Cantonese)	4,783	0.45%
Polish	3,715	0.35%
Arabic	3,203	0.30%
Urdu	2,111	0.20%
Persian/Farsi	1,776	0.17%
Panjabi	1,623	0.15%
Tagalog/Filipino	1,237	0.12%
French	1,231	0.12%
All Other Languages	19,642	1.84%

Religion

65% of the population across Tyne and Wear identified themselves as Christian in the 2011 census. A further 24.9% stated that they followed no religion, while 5.96% did not state a religious preference on their census return.

There are significant variations within local authorities: Newcastle has the greatest ethnic diversity, Sunderland the least. Tyne & Wear's Jewish community in Gateshead and the Muslim community in Newcastle are larger than the national average.

The religions followed by Tyne and Wear residents are shown in the chart opposite.



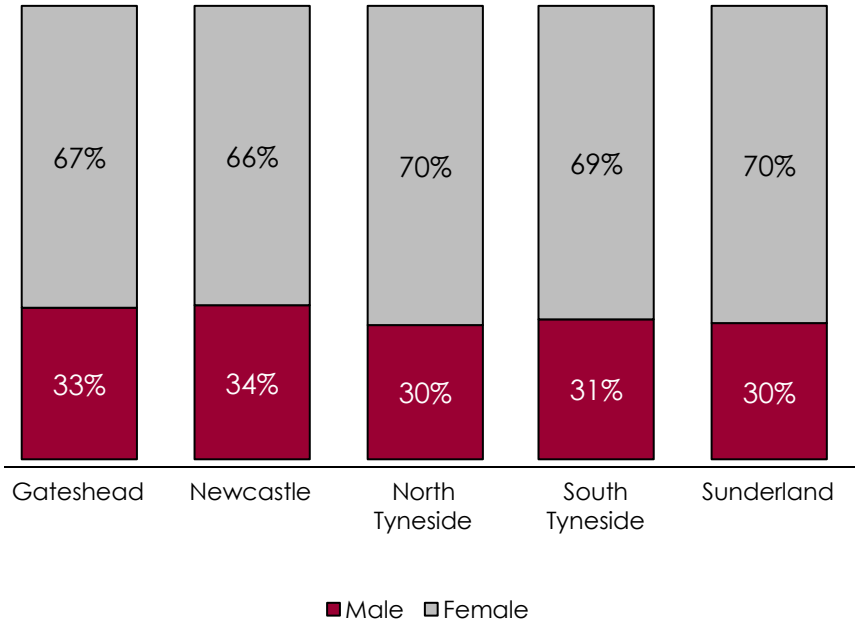
Housing

33.5% of homes within Tyne and Wear are one-person households, the majority of which fall into the 'aged 50 and over' category.

When looking further into the composition of these households, most are single females. 40% of one-person households are aged 65 or over, 68% of which are female.

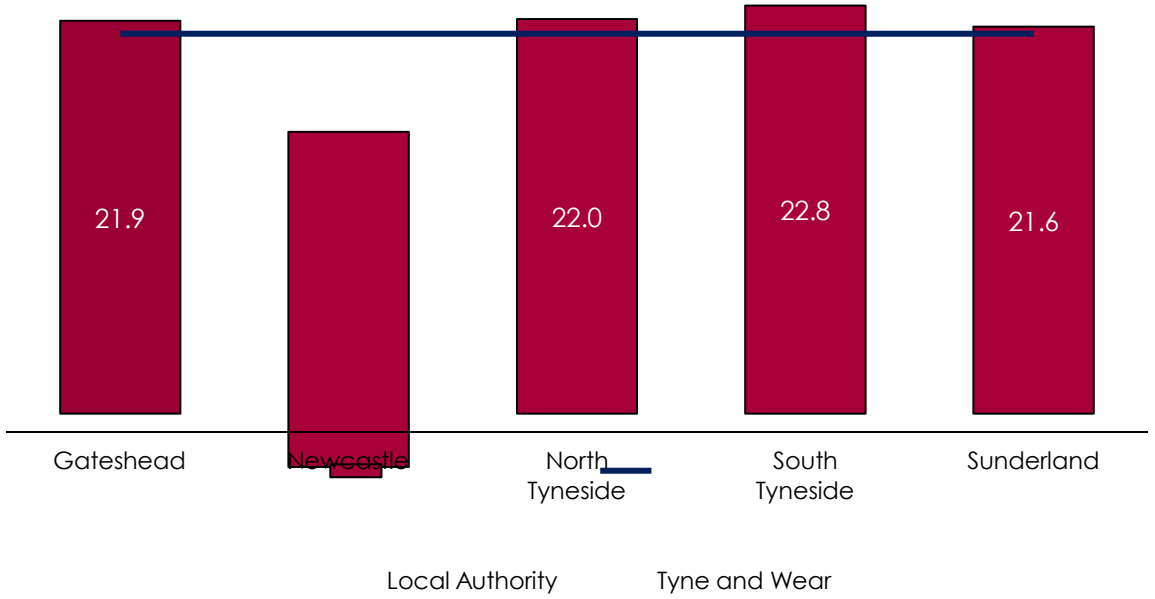
21.2% of all households within Tyne and Wear are aged 65 or over; the percentage in Newcastle is somewhat lower than in other parts of Tyne and Wear.

Male / Female split of one person households



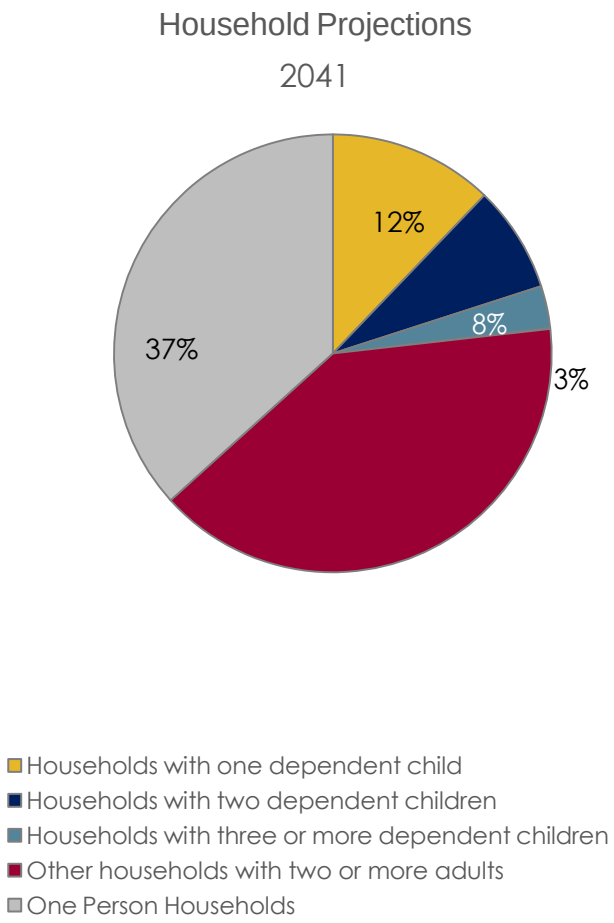
% of Households Aged 65 or over

2011 Census

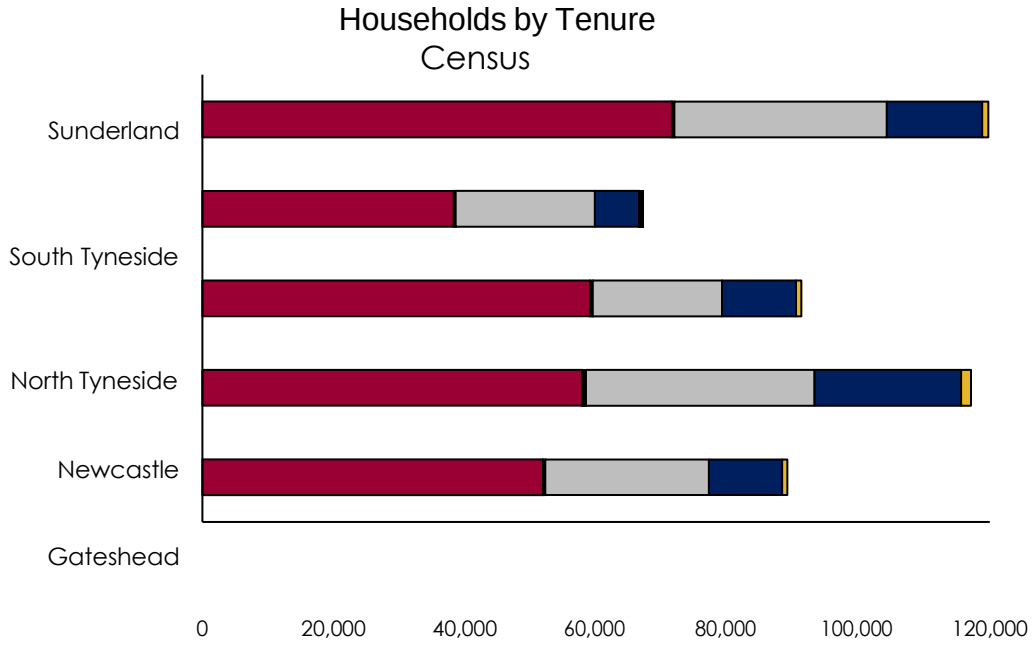


Housing

It is expected that households in Tyne and Wear will increase by 11% by 2041[viii] and one-person households will continue to make up the greatest proportion.



In terms of tenure, 41% of individuals rent their properties which is higher than the national average of 34.5%.



	Gateshead	Newcastle	North Tyneside	South Tyneside	Sunderland
Owned	51,915	57,955	59,136	38,333	71,566
Shared Ownership	363	489	374	297	352
Social Rented	24,941	34,850	19,677	21,204	32,399
Private Rented	11,125	22,318	11,300	6,758	14,552
Living Rent Free *	810	1,541	808	575	889

* The owner is not asking for payment

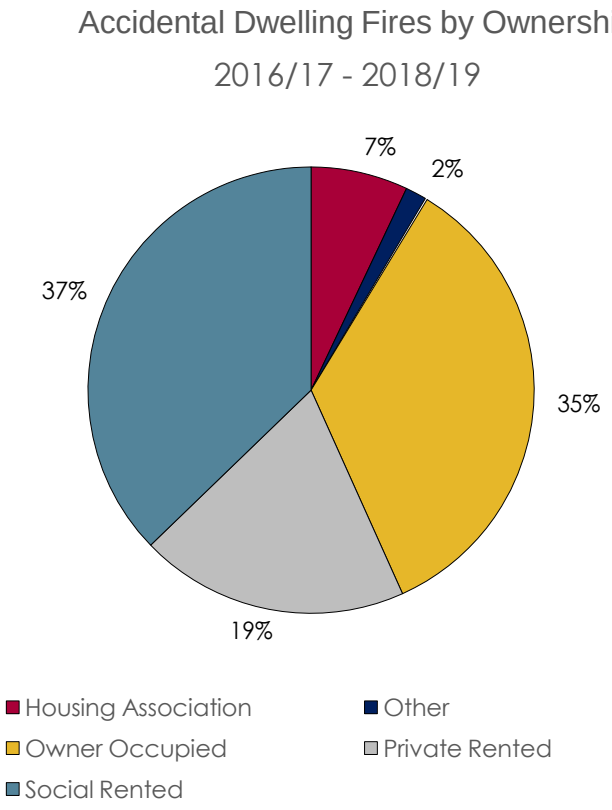
Dwelling Stock

In 2018 it was identified that Tyne and Wear is made up of 521,950 dwellings[ix]. This is an increase of 4% (20,020) since 2011 and is distributed as follows:

	Local Authority Owned	Private Registered Provider	Other Public Sector	Private Sector	Total
Tyne and Wear	**77,010**	**60,740**	**1,400**	**382,800**	**521,950**
Gateshead	19,290	5,220	400	69,000	93,910
Newcastle	25,700	10,240	1,000	92,850	129,790
North Tyneside	14,970	5,940	0	77,650	98,560
South Tyneside	17,050	5,090	0	49,730	71,870
Sunderland	0	34,260	0	93,570	127,830

Household makeup, tenure and length of residence all have an influence on fire risk and is reflected in the incidents that occur.

For example, analysis of accidental dwelling fires for TWFRS from 2016/17 to 2018/19 indicates that such fires are more likely to occur in rented accommodation (see following chart).



High Rise Buildings

In response to the Grenfell Tower fire on June 14th 2017, we engaged with all local social housing providers, setting out their responsibilities and providing options for future joint initiatives to continue to improve the safety of residents in these properties.

We also took a number of steps including:

- Visiting approximately 12,000 flats to provide reassurance and conduct safety checks.
- Conducting over 200 audits of high rise buildings which provided building owners and managers with the opportunity to ask advice and better assess the fire safety measures within their buildings. This also allowed our operational crews to gather vital risk information relating to each building to check and improve firefighter safety.
- Conducting high rise training in collaboration with partners utilising a local authority premises to ensure we are well prepared and can respond effectively to high rise incidents.

We also provided reassurance to residents and the wider community through a range of media releases; strengthened fire safety advice and radio and tv interviews. We have also been working with housing providers to direct residents to information regarding HSCs. We also engaged with hospitals, universities and other building owners where there was a potential increased risk due to cladding materials.

We continue to work with our community to support them following lessons learned from this tragic event, continuing to assess and implement the findings from the Grenfell Tower Inquest and revision of building standards.

Short Term Residence

Population transience and short term residence are other challenges we face in Tyne and Wear. The census only captures short term residence where this relates to people born outside the UK.

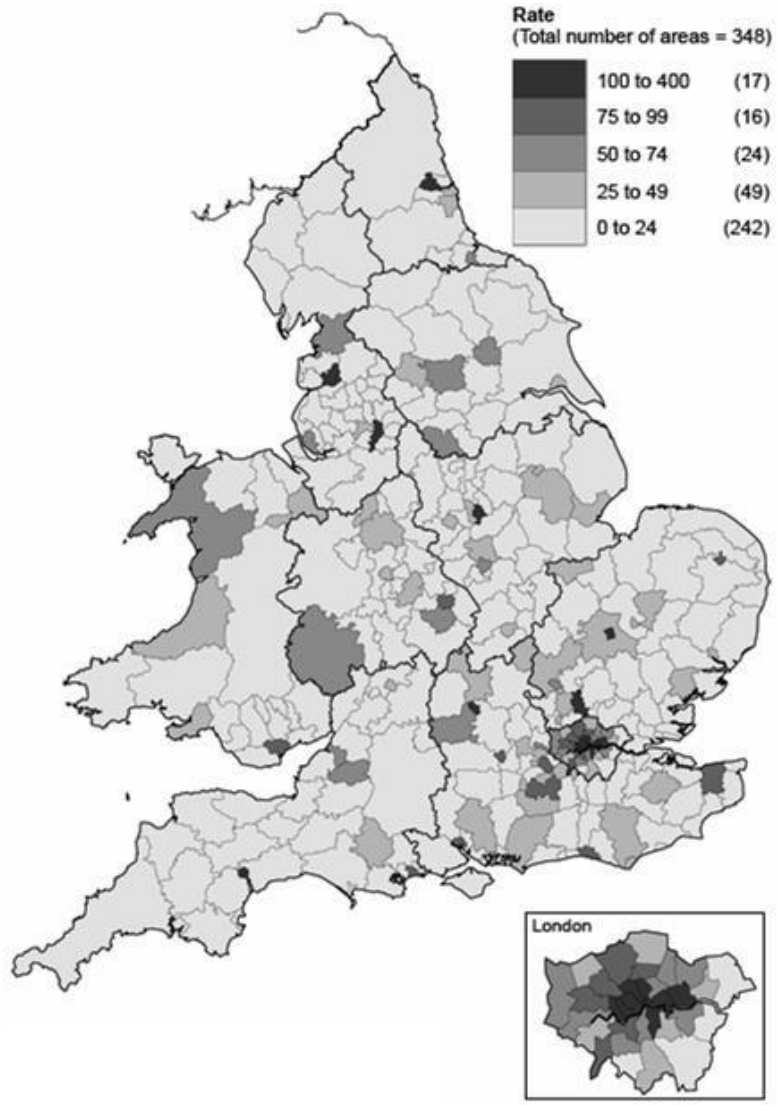
The census map opposite shows non-UK born residents per 10,000 usual residents for England and Wales broken down into local or unitary authority districts. The numbers are particularly high in Newcastle.

Another contributory factor in the transient population of the area is the student population. Tyne and Wear has three universities – two in Newcastle and one in Sunderland.

Student numbers for our universities were as follows in 2018/19[x].

University	Postgraduate	Undergraduate	Total
Newcastle	6,365	20,845	27,210
Northumbria	5,750	20,700	26,450
Sunderland	2,785	11,925	14,710

It will be less likely that a Home Safety Check, along with the accompanying fire safety in the home advice, will have taken place in these types of premises.



Growth and Development

Along with population growth, the social and economic regeneration activities led by our local authority partners influence the changing shape of the built environment and the makeup of different communities over the years.

Tyne and Wear FRS is informed of new properties (both domestic and non-domestic) when we receive gazetteer updates from Ordnance Survey; however we also work with partners to identify forward plans to inform our own strategic planning.

Domestic Properties

New premises are routinely added to CFRMIS through the gazetteer update and at the same time evaluated (as part of the import process) to determine their MOSAIC classification type code. Properties are then filtered into the relevant priority group for HSC or risk based inspection targeting in line with the current strategy.

Similarly, any domestic premises that have been demolished will have their building status amended accordingly in CFRMIS and will cease to appear on any targeting reports.

Non-Domestic Properties

The Valuation Office Agency states that Tyne and Wear have 36,600 non domestic premises as at 2019. New non-domestic premises are also imported automatically into CFRMIS. Depending on the use of the premises (and associated risk) a fire safety visit will be scheduled for a point in the future in accordance with the standard re-inspection frequencies held in CFRMIS's Inspection Frequency Officer Grade (IFOG) planner.

The Fire Safety pending workload schedule is evaluated annually and premises audits are prioritised based on risk, premises type, previous compliance and fire trend data. Any non-domestic premises that have been demolished or that have ceased trading, will not form part of the Risk Based Inspection Programme.

In terms of forward planning the following pages set out some of the changes envisaged throughout Tyne and Wear based on our planning strategy.

Growth and Development

Newcastle and Gateshead

Newcastle and Gateshead have been working together to produce 'The Core Strategy and Urban Core Plan'[xi] which will guide development in Newcastle and Gateshead through to 2030.

Some key elements from the plan specific to Newcastle include:

- 21,000 new homes to be built.
- 14,000 additional jobs created in areas such as offshore engineering and life sciences.
- Business expansion on sites such as: Science Central, East Pilgrim Street, the Central Station and Stephenson Quarter, on the banks of the Tyne and at Newcastle International Airport.

Some key elements from the plan specific to Gateshead include:

- 11,000 new homes to be built.
- 8,000 new jobs created.
- Regeneration of the area close to Dunston, Metrocentre and the River Derwent.
- District and local centres to be revitalised and strengthened; examples being Birtley, Blaydon and Felling.
- Development of Gateshead Quays and Baltic Business Quarter.

The full plan can be found at: www.newcastle.gov.uk

Growth and Development

North Tyneside

The below is an extract from the North Tyneside Local Plan 2017[xii] detailing potential development sites over the next 15 years.

The key elements of the plan include:

- Protect the Green Belt in North Tyneside
- Provide new accessible open space – adding to the 25% of the borough that is already open space.
- Regenerate and redevelop brownfield sites and deliver appropriate development of sustainable greenfield land amounting to around seven per cent of the borough's area – to support at least 12,700 new jobs and 23,000 more residents.
- Prioritise regeneration in Wallsend, North Shields, the coast and the North West.
- Ensure development considers the environmental, social and economic conditions of the area.

The full plan can be found at:

www.northtyneside.gov.uk

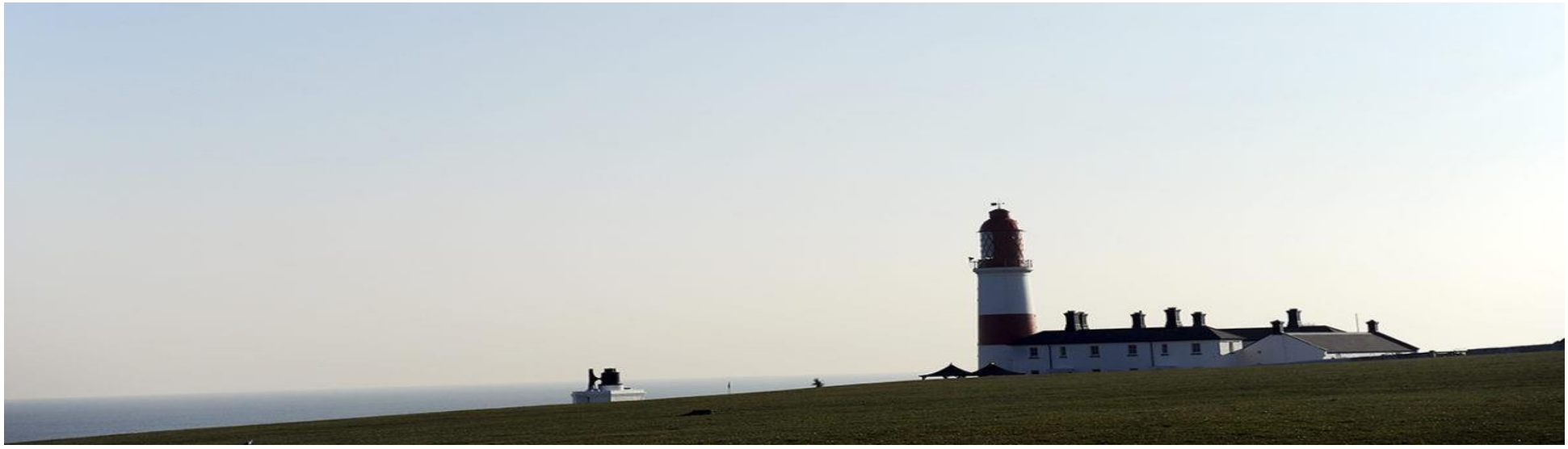
Growth and Development

South Tyneside

The South Tyneside Local Development Framework[xiii] sets out a number of proposals for the area including:

- Investing £180m in new and improved homes building on the success of 71 new affordable homes in Hebburn and UK's biggest solar-powered social housing project at Sinclair Meadows in South Shields, securing economic growth by building on the borough's reputation in marine, offshore and automotive industries to become a leading centre for advanced engineering and manufacturing. This will be supported by the ongoing partnership with Sunderland through the 'City Deal' agreement to drive economic growth for the borough and region.
- Meeting the demand for up to 12,000 new homes over the next 20 years working with a range of housing providers.
- Major new transport schemes such as Testo's Grade Separation, the extension of the Metro line and A185 improvements.
- Development plans for Hebburn Town Centre, Jarrow and South Shields Town Centres and Waterfront.
- Regeneration plans are also to be developed for Boldon, Whitburn and Cleadon.

The full plan can be found at: www.southtyneside.gov.uk



Growth and Development

Sunderland

Part of Sunderland's Local Plan[xiv] is the 'Core Strategy and Development Plan' which is a long- term plan for development across the city to 2033.

Some key points from the plan include:

- 13,824 new homes to be built across the city in various locations.
- An aim to provide an additional 10,337 new jobs.
- Regeneration of the city centre to provide extra retail and leisure facilities whilst limiting the number of hot food takeaways.
- Ensure that the impact of the development on the city's environment is limited.
- Produce an 'Infrastructure Delivery Plan' to set out the facilities required to deliver the proposed development.

The full plan can be found at

www.sunderland.gov.uk.

Deprivation

Indices of Deprivation (IMD)

IMD measures multiple deprivation for local authority areas and smaller Lower Layer Super Output Areas (LSOAs). The index is made up of seven themed Domains or groupings of deprivation indicators. Each Domain contributes a different amount (%) to the overall index as follows:

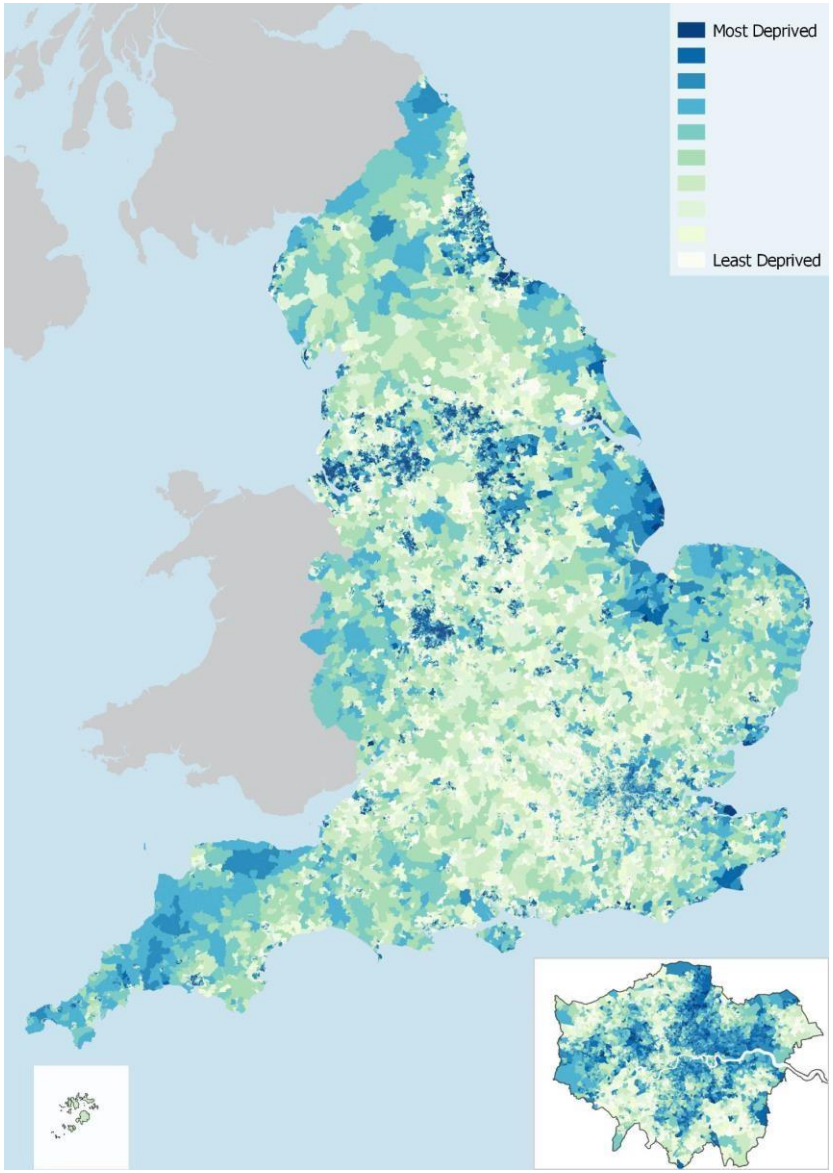
- Income Domain (22.5%)
- Employment Domain (22.5%)
- Health and Disability Domain (13.5%)
- Education, Skills and Training Domain (13.5%)
- Barriers to Housing and Services Domain (9.3%)
- Crime Domain (9.3%)
- Living Environment Domain (9.3%)

The overall IMD combines each of the themed domains into a single overall measure of deprivation. Each themed domain combines multiple quality of life indicators, totalling 39 overall.

Deprivation varies between and within local authority areas. Based on average ranks, Tyne and Wear residents experience levels of deprivation among the highest in the country, our local authority areas are ranked as follows out of **317**[xvi].

- South Tyneside: **26th** most deprived
- Sunderland: **33rd**
- Gateshead: **54th**
- Newcastle: **74th**
- North Tyneside: **128th**

IMD 2019 by LSOA in England



Deprivation

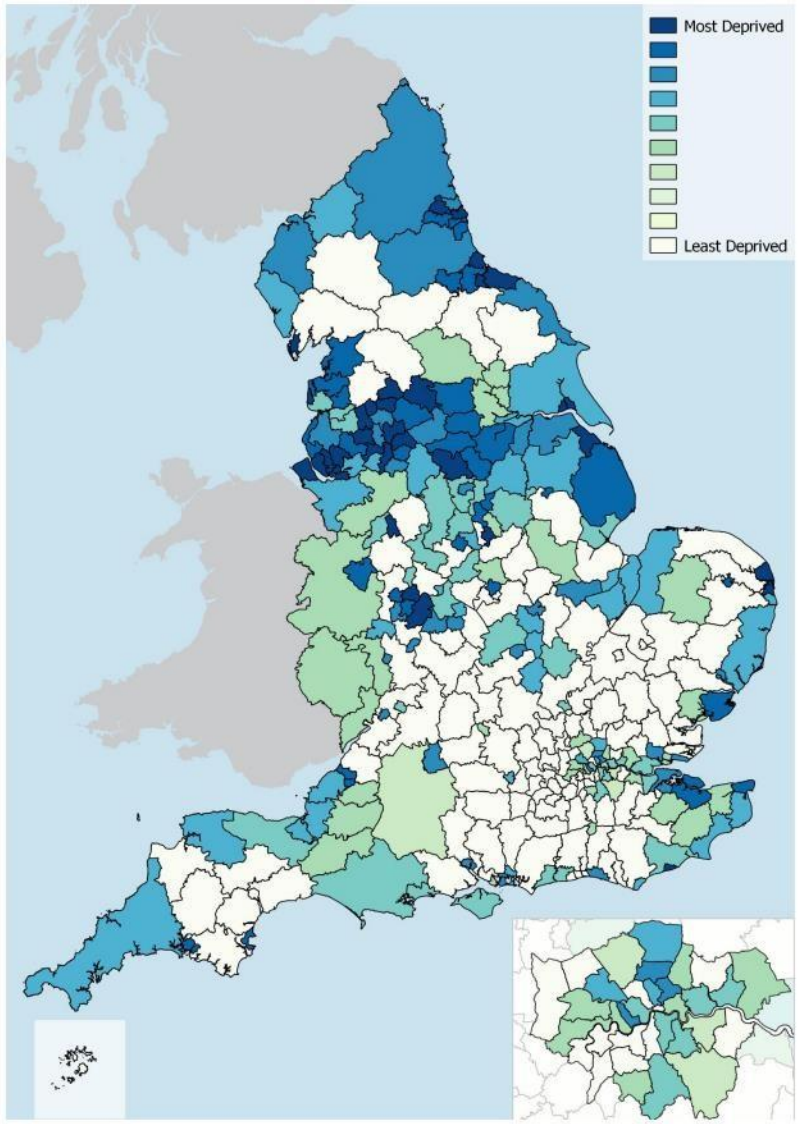
Indices of Deprivation (IMD)

As well as the overall makeup of the population, national research indicates that there is a correlation between deprivation in an area and fire risk. In particular, risk of accidental dwelling fires / casualties arising from these and risk of deliberate (anti-social behaviour) fires.

The map opposite shows the Indices of Deprivation data for each district. The colours on the map indicate the deprivation decile of each LSOA for England as a whole, and the coloured bars above indicate the proportion of LSOAs in each national deprivation decile. The most deprived areas (decile 1) are shown in blue. LSOAs have an average population of just under 1,500 (as of 2019).

The areas of greatest deprivation have a tendency to be clustered in former areas of heavy industry (e.g. along riverbanks or former coal mining areas) and in city or town centres.

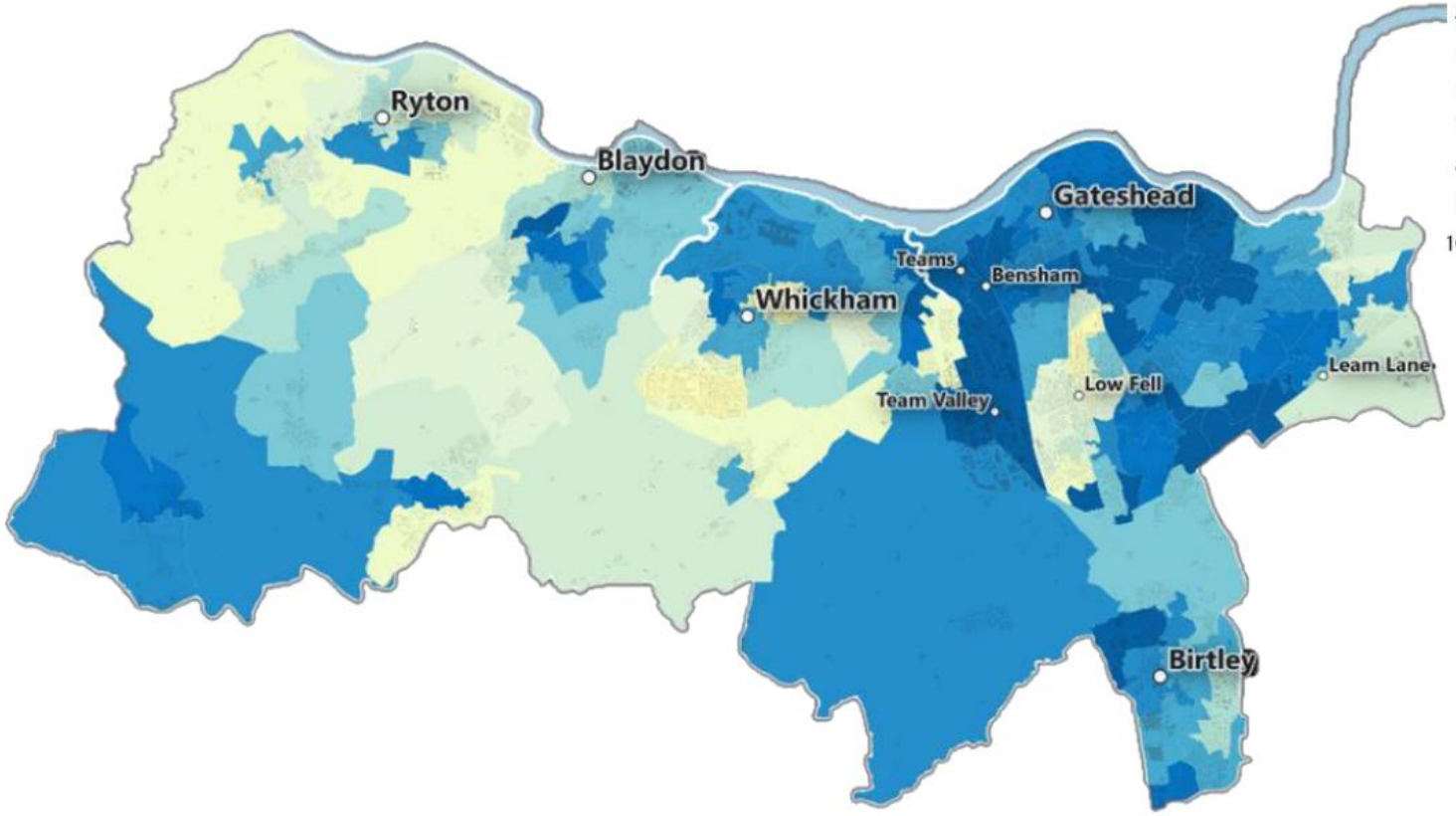
IMD 2019 by Local Authority in England



Note: there are 123 Districts with no Lower-layer Super Output Areas in the most deprived 10 per cent of areas. These areas score zero on this summary measure and are shown in the least deprived decile.

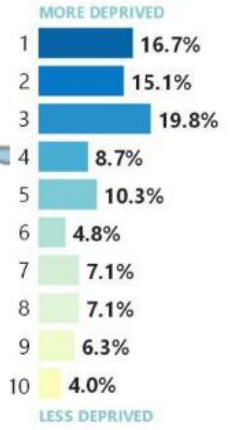
English Indices of Deprivation 2019

GATESHEAD



Local deprivation profile

% of LSOAs in each national deprivation decile

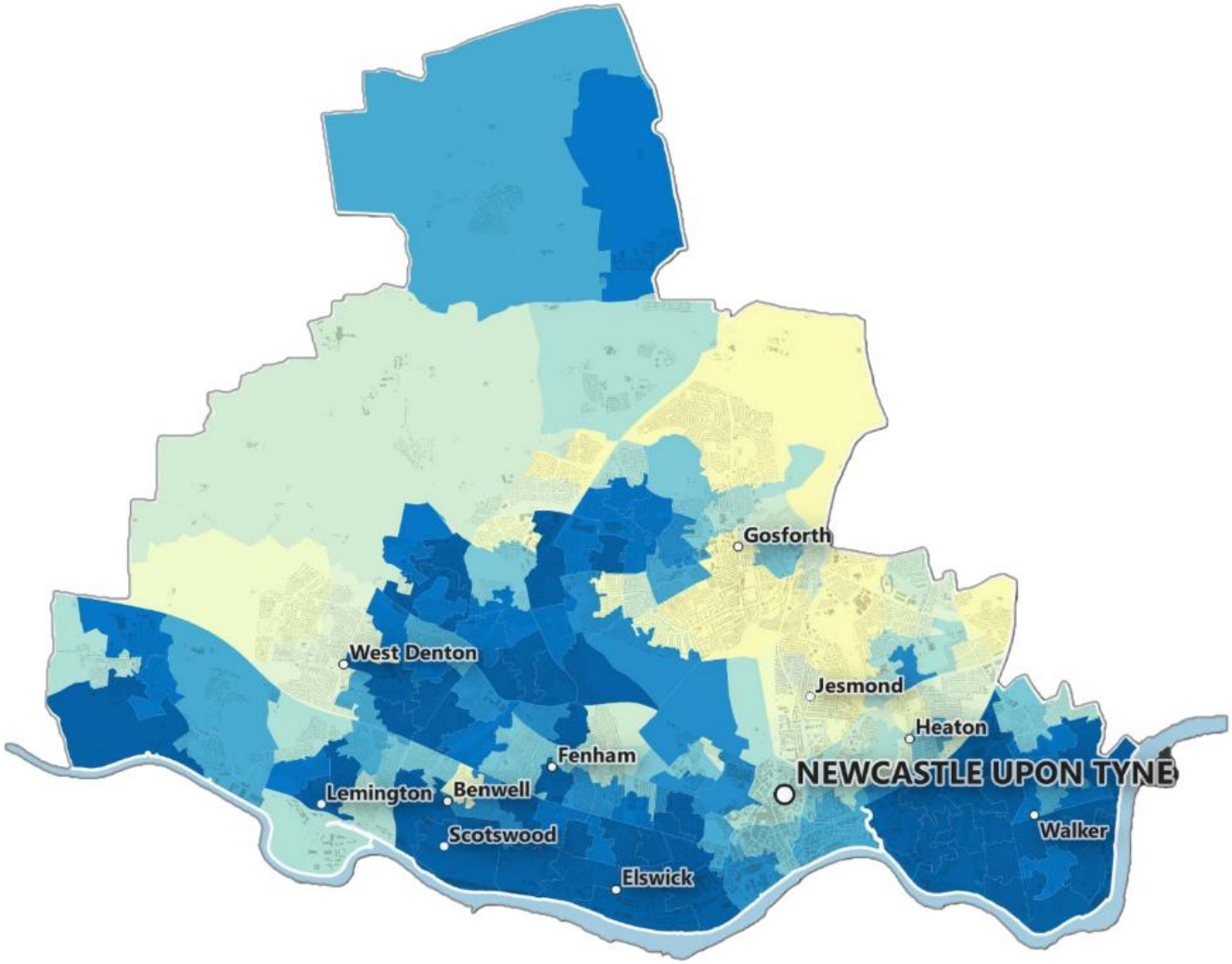


What this map shows

This is a map of Indices of Deprivation 2019 data for **Gateshead**. The colours on the map indicate the deprivation decile of each Lower Layer Super Output Area (LSOA) for England as a whole, and the coloured bars above indicate the proportion of LSOAs in each national deprivation decile. The most deprived areas (decile 1) are shown in blue. It is important to keep in mind that the Indices of Deprivation relate to small areas and do not tell us how deprived, or wealthy, individual people are. LSOAs have an average population of just under 1,700 (as of 2017).

English Indices of Deprivation 2019

NEWCASTLE UPON TYNE



Local deprivation profile

% of LSOAs in each national deprivation decile

MORE DEPRIVED

1	25.7%
2	13.7%
3	7.4%
4	7.4%
5	8.0%
6	7.4%
7	6.3%
8	6.9%
9	7.4%
10	9.7%

LESS DEPRIVED

What this map shows

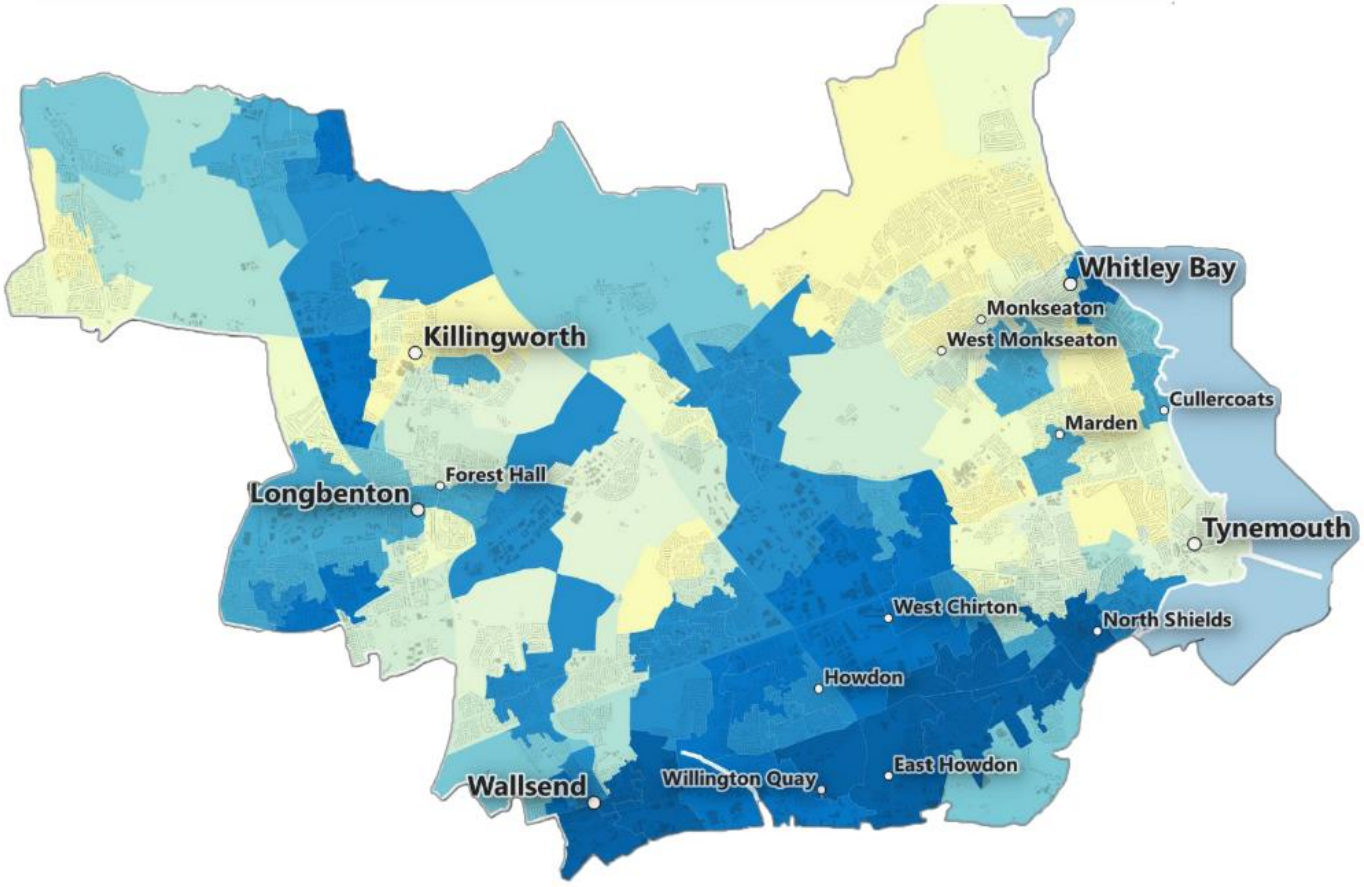
This is a map of Indices of Deprivation 2019 data for **Newcastle upon Tyne**. The colours on the map indicate the deprivation decile of each Lower Layer Super Output Area (LSOA) for England as a whole, and the coloured bars above indicate the proportion of LSOAs in each national deprivation decile. The most deprived areas (decile 1) are shown in blue. It is important to keep in mind that the Indices of Deprivation relate to small areas and do not tell us how deprived, or wealthy, individual people are. LSOAs have an average population of just under 1,700 (as of 2017).

More deprived **Less deprived**

Relative level of deprivation

English Indices of Deprivation 2019

NORTH TYNESIDE



Local deprivation profile

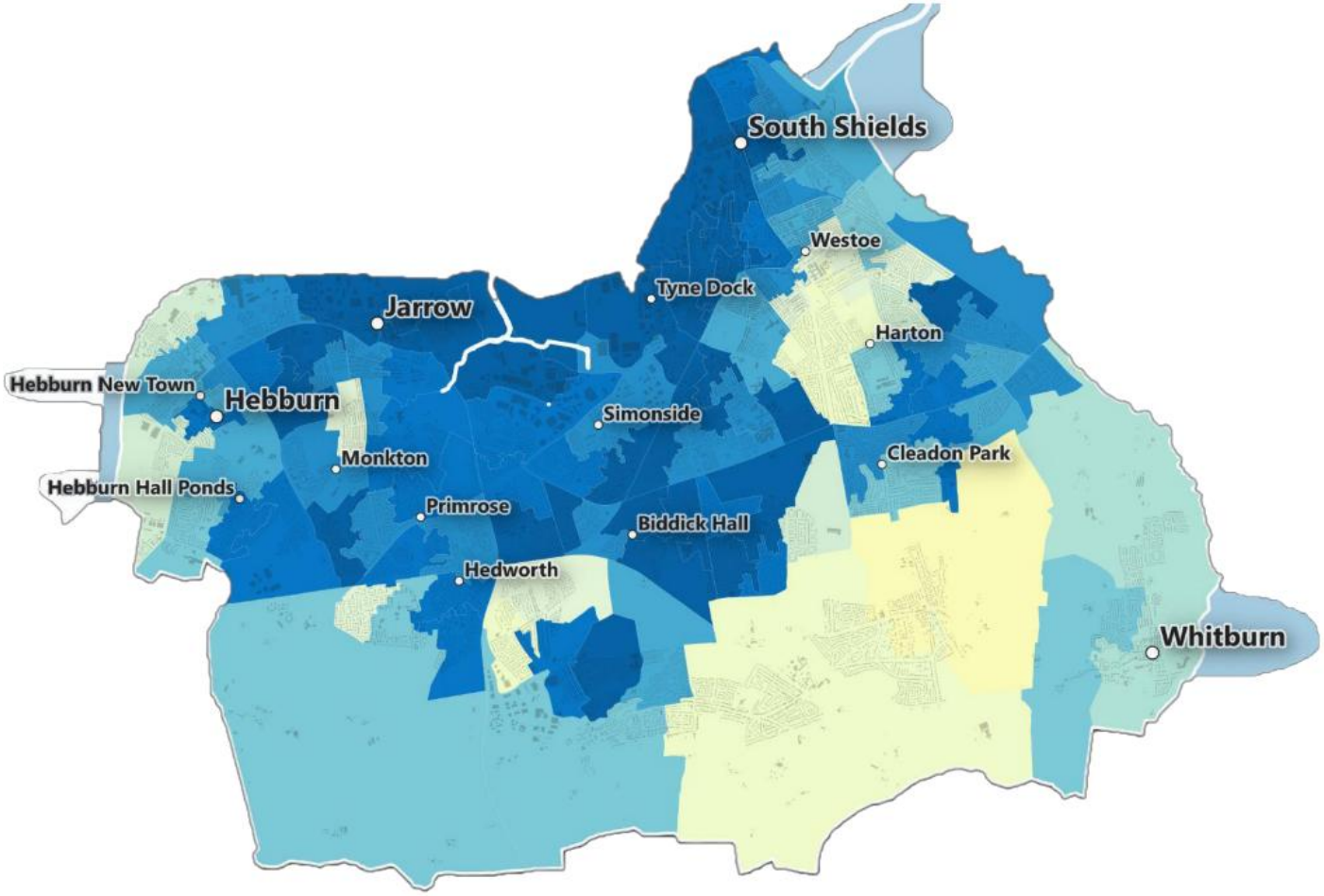
% of LSOAs in each national deprivation decile

What this map shows

This is a map of Indices of Deprivation 2019 data for **North Tyneside**. The colours on the map indicate the deprivation decile of each Lower Layer Super Output Area (LSOA) for England as a whole, and the coloured bars above indicate the proportion of LSOAs in each national deprivation decile. The most deprived areas (decile 1) are shown in blue. It is important to keep in mind that the Indices of Deprivation relate to small areas and do not tell us how deprived, or wealthy, individual people are. LSOAs have an average population of just under 1,700 (as of 2017).

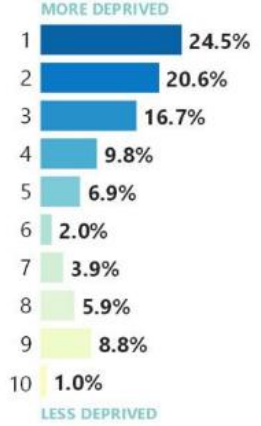
English Indices of Deprivation 2019

SOUTH TYNESIDE



Local deprivation profile

% of LSOAs in each national deprivation decile

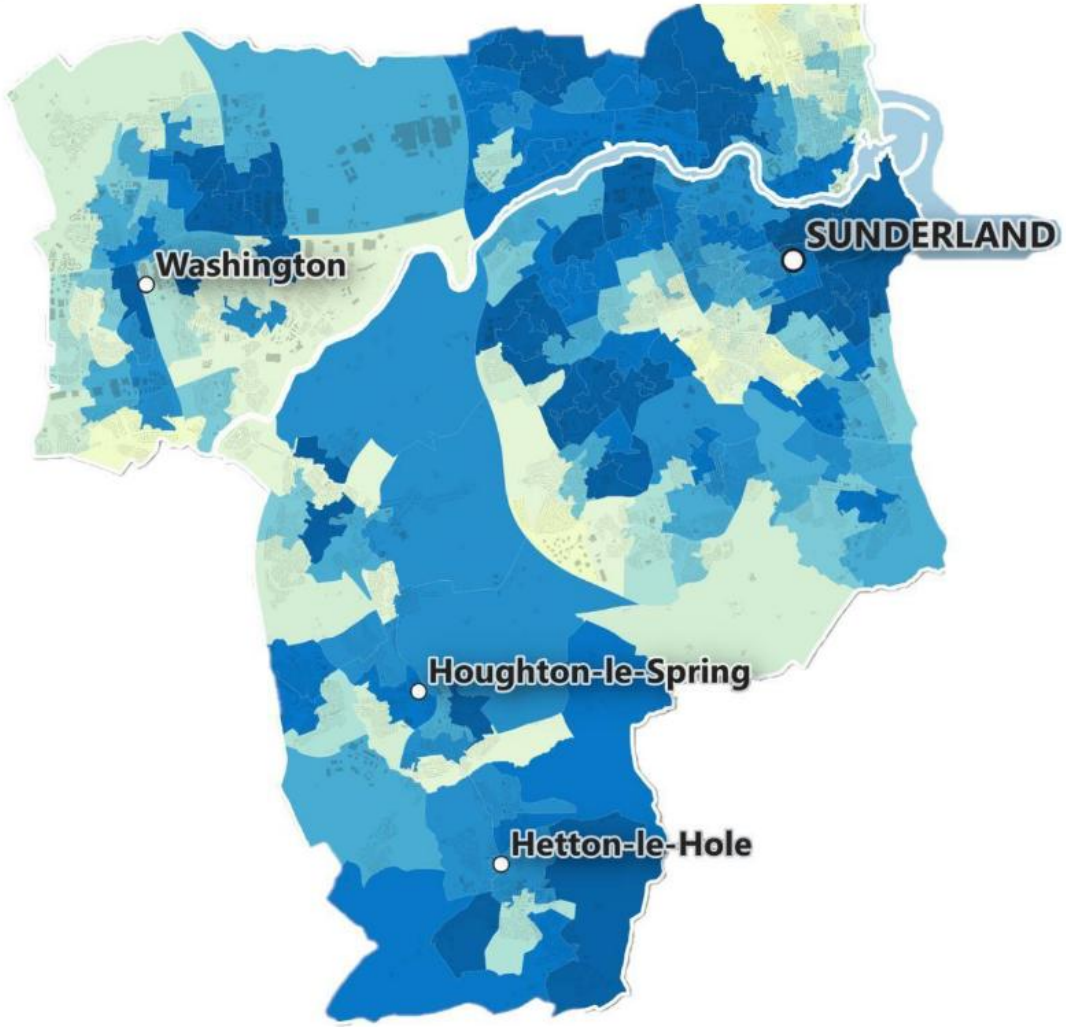


What this map shows

This is a map of Indices of Deprivation 2019 data for **South Tyneside**. The colours on the map indicate the deprivation decile of each Lower Layer Super Output Area (LSOA) for England as a whole, and the coloured bars above indicate the proportion of LSOAs in each national deprivation decile. The most deprived areas (decile 1) are shown in blue. It is important to keep in mind that the Indices of Deprivation relate to small areas and do not tell us how deprived, or wealthy, individual people are. LSOAs have an average population of just under 1,700 (as of 2017).

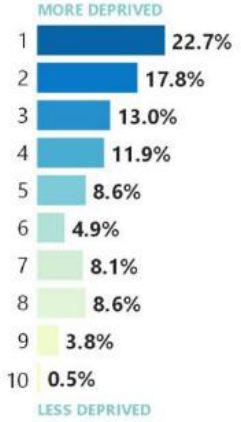
English Indices of Deprivation 2019

SUNDERLAND



Local deprivation profile

% of LSOAs in each national deprivation decile



What this map shows

This is a map of Indices of Deprivation 2019 data for **Sunderland**. The colours on the map indicate the deprivation decile of each Lower Layer Super Output Area (LSOA) for England as a whole, and the coloured bars above indicate the proportion of LSOAs in each national deprivation decile. The most deprived areas (decile 1) are shown in blue. It is important to keep in mind that the Indices of Deprivation relate to small areas and do not tell us how deprived, or wealthy, individual people are. LSOAs have an average population of just under 1,700 (as of 2017).

Unemployment

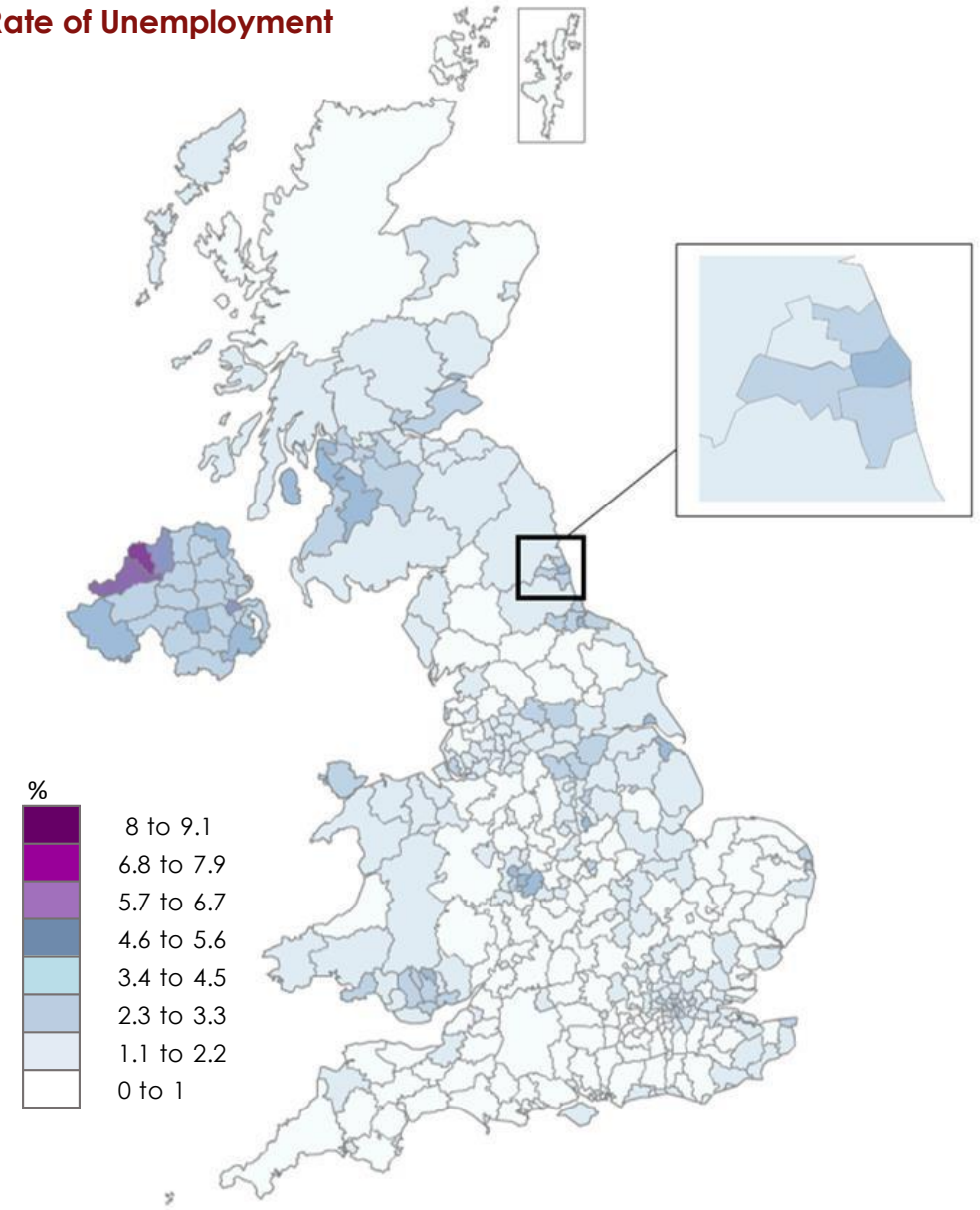
Level of employment is a key element in the makeup of deprivation rankings. The North East of England (including Tyne and Wear) is experiencing some of the highest unemployment figures in the country.

The map on this page shows unemployment amongst those aged 16 and over with the inset showing Tyne and Wear in detail. All parts of Tyne and Wear have a higher than average proportion of adult unemployment as measured through receipt of out of work benefits.

A regional labour market review in December 2019 by ONS[xvi] showed that although unemployment levels are decreasing, the North East continues to have the highest rate of unemployment in the UK (6.1%).

Unemployment amongst 16-24 years olds also remains particularly high. All parts of Tyne and Wear are experiencing levels higher than the national average.

Rate of Unemployment



Unemployment

In recent years the percentage of workless households in England has fallen[xviii]. Although Tyne and Wear has seen an increase, some local authority areas within Tyne and Wear have followed this trend.

	Workless Households				
	2014	2015	2016	2017	2018
	(%)	(%)	(%)	(%)	(%)
England	15.8	14.9	14.6	14.1	13.9
Northumberland and Tyne and Wear	21.3	20.2	19.3	19.1	19.5
Gateshead	18.9	16.7	18.5	17.7	16.2
Newcastle	22.5	23.6	23.0	19.9	21.1
North Tyneside	16.0	14.3	13.6	15.1	17.1
South Tyneside	20.8	20.2	21.2	23.0	24.5
Sunderland	26.0	23.6	19.1	20.1	19.4

In 2018, out of the 201 county / unitary authorities in Great Britain, the Tyne and Wear local authority areas are ranked as follows:

- Newcastle – 22nd
- South Tyneside – 5th
- Sunderland – 31st
- Gateshead – 83rd
- North Tyneside – 68th

The North East region has the highest percentage of workless households in the country at 20%.

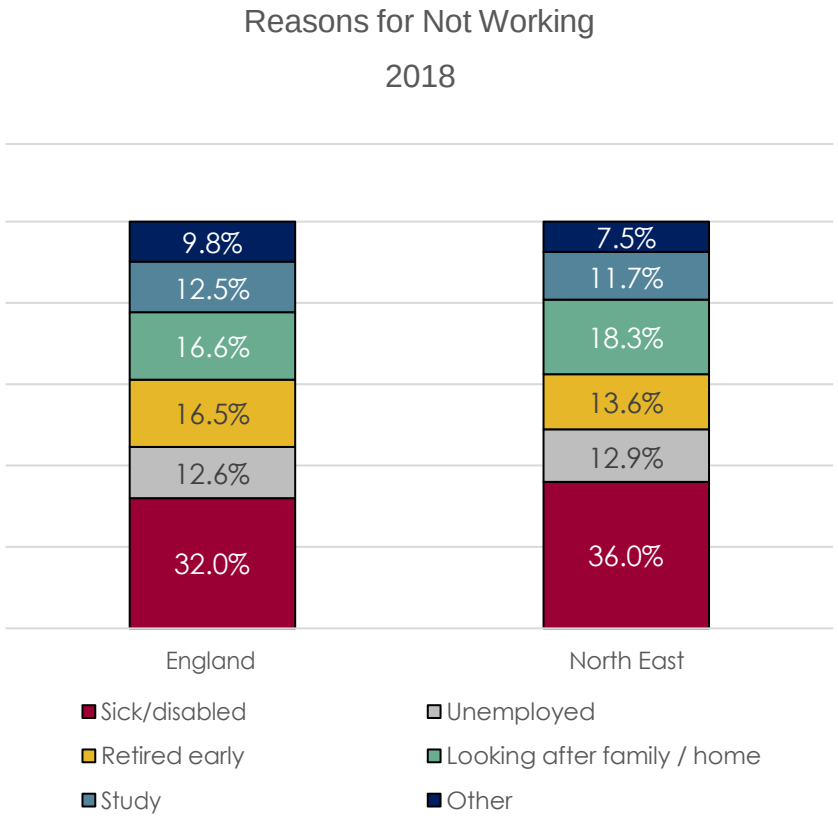
19.5% of households in Northumberland and Tyne and Wear are workless. This is higher than England as a whole which is 13.9%.

Unemployment

The following table shows the economic activity of households in England

	Working Households (%)	Mixed Households (%)	Workless Households (%)
England	58	28	14
North East	54	26	20
Tyne and Wear	54	27	20
Gateshead	57	27	16
Newcastle	53	26	21
North Tyneside	57	25	17
South Tyneside	50	26	24
Sunderland	52	26	19
North West	57	27	16
Yorkshire And The Humber	58	26	16
East Midlands	58	27	15
West Midlands	55	30	15
East of England	60	28	12
London	55	33	12
South East	61	28	11
South West	62	26	12

In 2018, the reasons given for not working both nationally and in the North East, are as follows



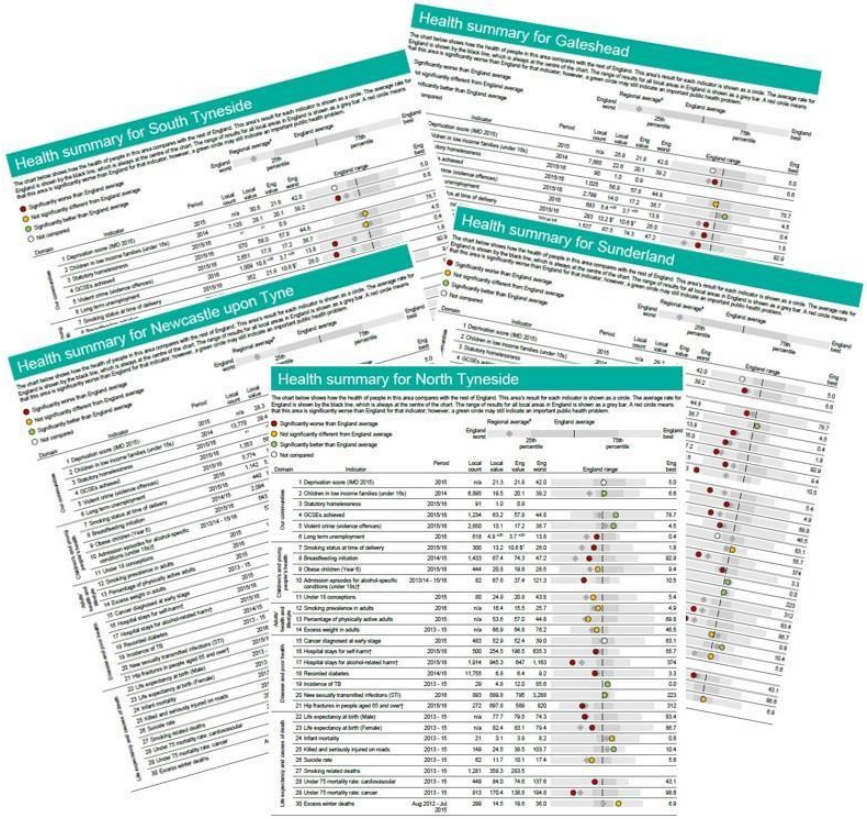
Health and Wellbeing

The health and wellbeing of the community at large and sections of the population within it, are also key elements of deprivation rankings which impact on community risk; including risk of fire and other harm.

Overall, across a range of public health indicators included in Public Health England health profiles[xix], health in Tyne and Wear is significantly worse than the national average. These indicators include:

- Adults smoking, smoking in pregnancy and smoking related deaths
- Obese children (Year 6)
- Increasing and higher risk drinking
- Hospital stays for alcohol related harm
- Drug misuse
- Male and female life expectancy
- Early deaths from heart disease and cancer

A number of these factors are also directly related to risk of fires, deaths and injuries.



Alcohol Use

Alcohol is very much a part of the culture of the North East and has been highlighted as a serious issue.

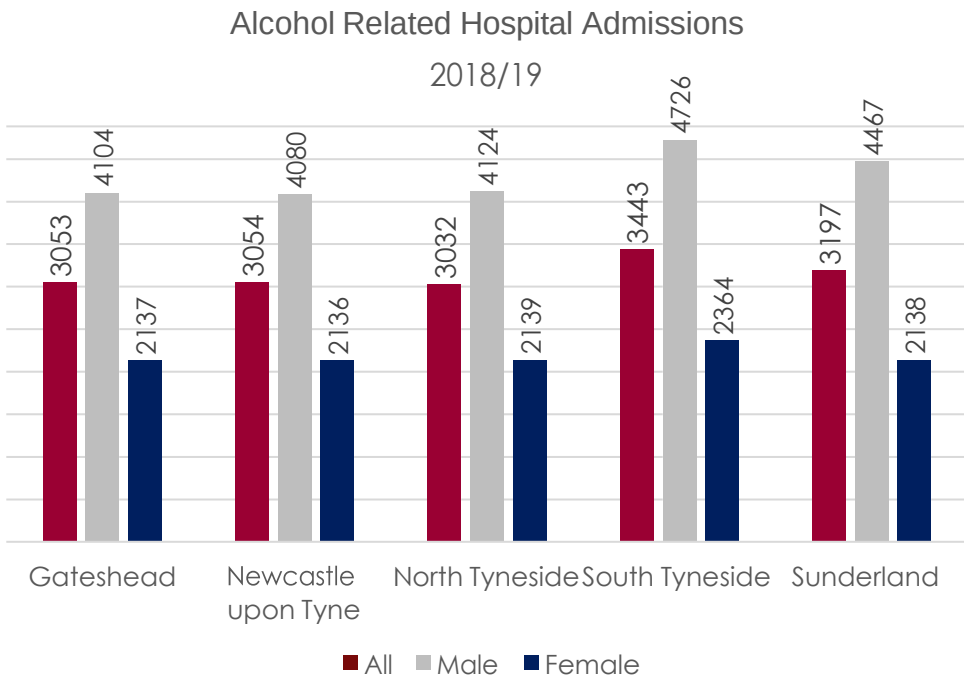
The table below shows some key facts relating to alcohol and how our local authority areas compare to the national average[xx].

In comparison to England			Better	Similar	Worse			
Indicator	**Period**	**England**	**North East**	**Gateshead**	**Newcastle**	**North Tyneside**	**South Tyneside**	**Sunderland**
Alcohol-specific mortality *	2016-18	10.8	15.7	16.9	18.3	15.2	22.1	22.1
Alcohol-related mortality *	2018	46.5	57.1	58.4	65.3	53.9	69	69
Alcohol related road traffic accidents ◊	2014-16	26.4	28.3	22.6	40.2	32.6	16.6	24.5
Number of premises licensed to sell alcohol per square kilometre	2015-16	1.3	1	3.8	9.6	6.7	6.4	5.6

(* per 100,000 population; ◊ per 1,000 population)

The rate of hospital admissions in the North East for alcohol attributable conditions per 100,000 population (2015/16) is the highest in England[xxi].

The chart below outlines the number of admissions per 100,000 of the Tyne and Wear population where the cause for admission is primarily, wholly or partly related to alcohol misuse.

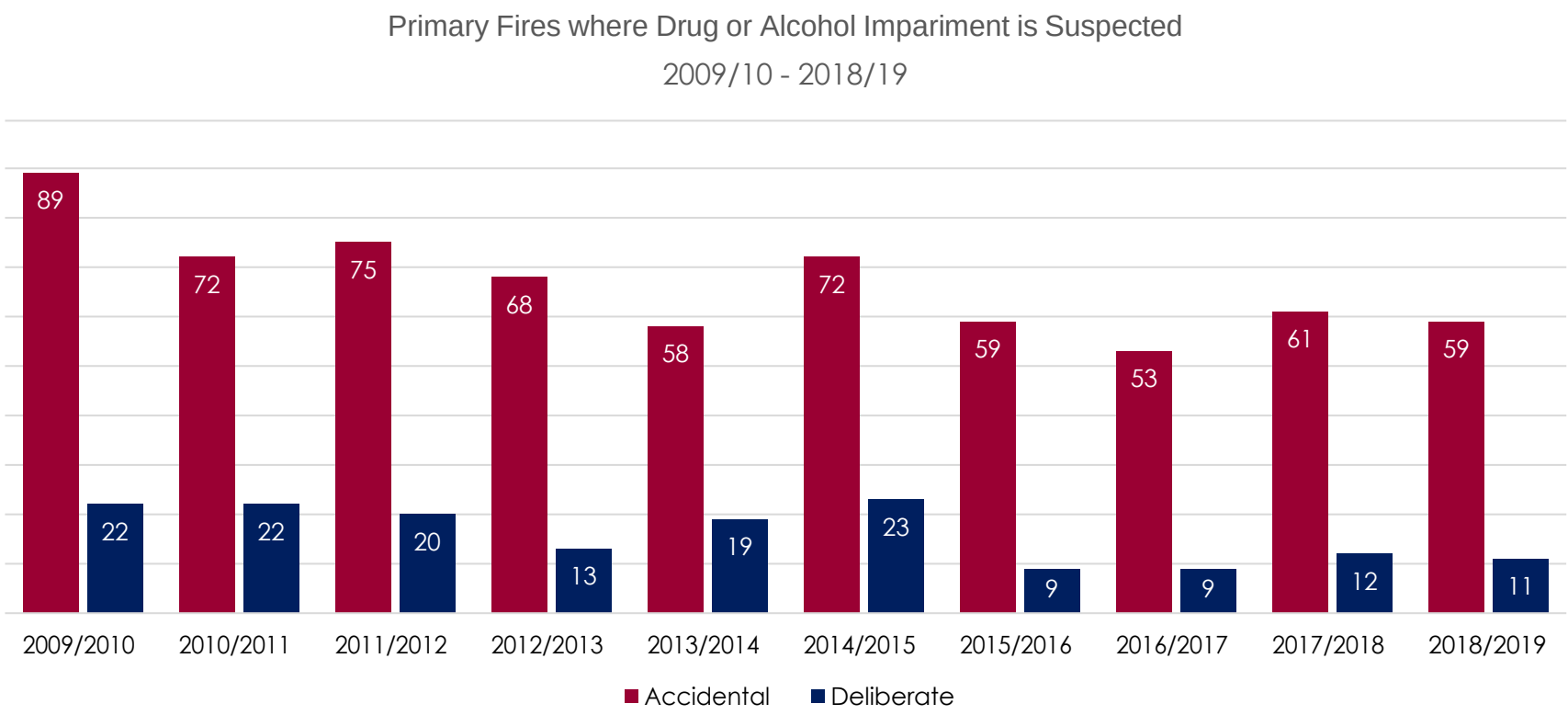


Alcohol Use

National historic statistics have shown that fire and rescue services attend a large number of alcohol and drug related fires. This is borne out by the observations of Tyne and Wear firefighters attending incidents.

Primary fires are generally more serious fires that harm people or cause damage to property. It is estimated that of the 18,411 primary fire incidents attended by TWFRS between 2009/10 and 2018/19, 4.5% were suspected of having drug or alcohol impairment as a contributory factor. Quite often the cause is due to people drinking alcohol and then falling asleep whilst cooking or smoking.

The chart below shows the breakdown of these incidents.



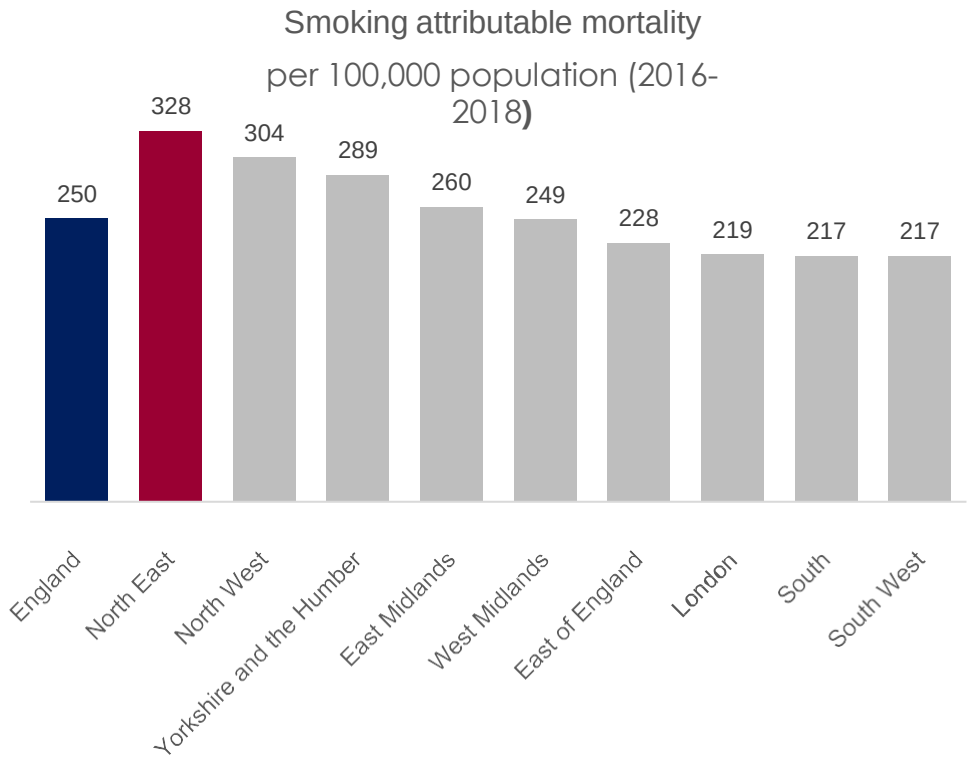
Smoking

Smoking also remains prevalent in the North East where 16% of adults are smokers[xxii]. Although smoking is on the decrease, it is still a contributory factor in the health of the region.

The table below shows the estimated prevalence of smoking by local authority area.

	Estimate of current smokers (%)
England	14.45%
North East	16%
Gateshead	17.8%
Newcastle	16%
North Tyneside	14.9%
South Tyneside	18.8%
Sunderland	20.2%

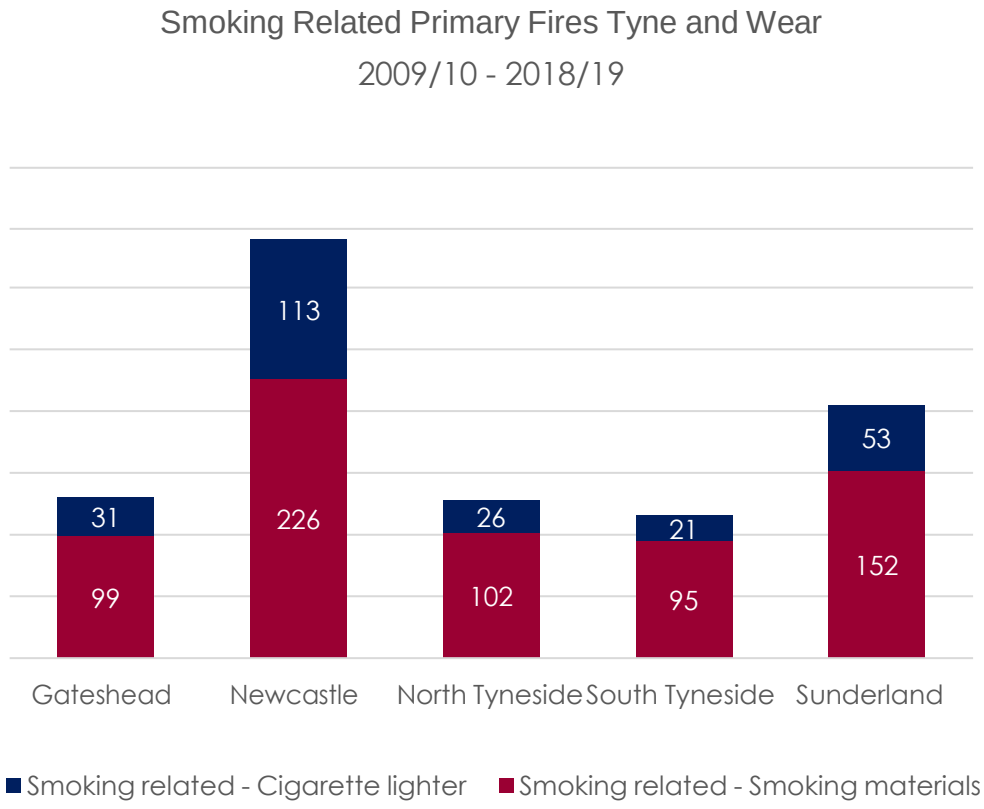
Mortality rates attributable to smoking are shown in the following chart with the North East experiencing a higher rate per 100,000 population then all other regions of England.



Smoking

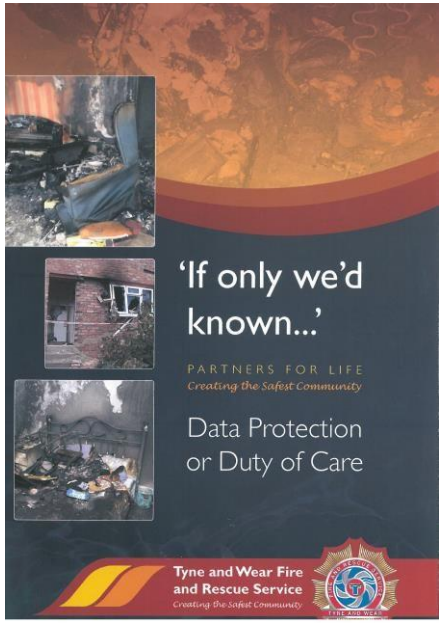
Smoking prevalence is a risk factor for fire. Between 2009/10 and 2018/19, 5% of primary fires were smoking related. The chart below shows the breakdown of these incidents by district.

Over the same period, 9% of accidental dwelling fires were smoking related.



Tyne and Wear has a relatively low incidence of fire deaths compared to other metropolitan areas. However, smoking has been a factor in a number of the fire deaths which have happened in recent years.

Our partnership document "If only we'd known …" contains a number of case studies about fire deaths including the cases of Elsie and Mark who were both heavy smokers. The document illustrates the extra assistance and advice TWFRS can give to vulnerable individuals who smoke.



Drug Use

The most recent Crime Survey for England and Wales[xxiii] indicates that drug use has fallen in England.

In 2018/19 the statistics show that:

- Around 1 in 11 (9.4%) adults aged 16 to 59 had taken a drug in the last year. This equated to around 3.2 million people. This is an increase from 2017/18 but significantly lower than a decade ago.
- Around 1 in 20 (5.0%) adults aged 16 to 59 had taken a drug in the last month, while around 1 in 9 (11.4%) of young adults aged 16 to 24 had done so.
- Around 1 in 5 (20.3%) of young adults aged 16 to 24 had taken a drug in the last year which equates to around 1.3 million people
- Around one-third (34.2%) of adults aged 16 to 59 had taken drugs at some point during their lifetime.

Drug use is a risk factor in fire, although it is not considered to be as prevalent a risk factor as smoking or alcohol use.

National Statistics show that in 2018/19, the North East region ranked top in the country for the number of hospital admissions per 100,000 population for drug use[xxiv].

	Total	Number of admissions per 100,000 population	Male	Female
England	**18,053**	**33**	**8,923**	**9,127**
North East	1,400	54	760	635
North West	3,555	50	1,730	1,825
Yorkshire and the Humber	1,965	37	975	985
East Midlands	1,515	32	750	765
West Midlands	1,860	32	940	920
East of England	1,610	27	740	870
London	1,210	13	625	590
South East	2,365	26	1,045	1,315
South West	2,075	38	950	1,120

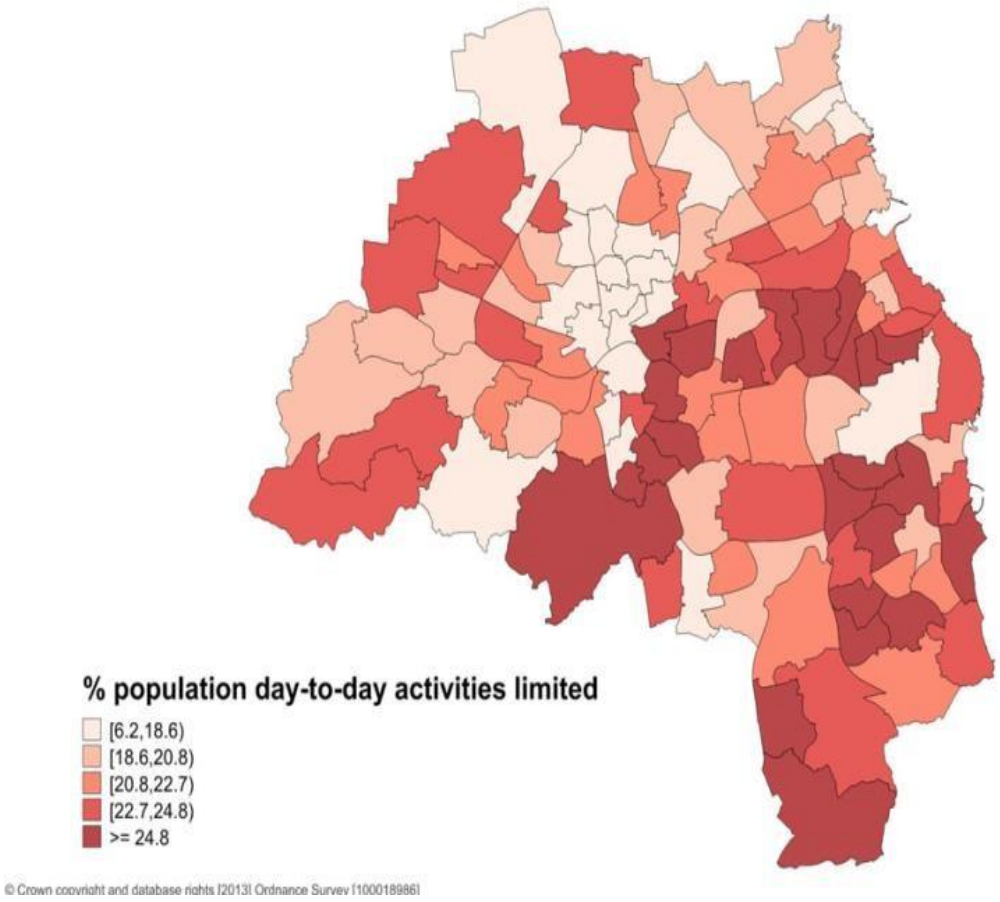
Mobility

The physical mobility of members of the community is anecdotally a risk factor for fire and also for ability to raise the alarm or get to safety should a fire occur, although incident analysis does not find a significant statistical correlation between mobility and fire injuries in Tyne and Wear.

Whilst Tyne and Wear has the lowest population of metropolitan fire authority areas, census data 2011 shows that the percentage of individuals in our population who have a long term illness or disability is one of the highest. This is broken down into those whose day to day activities are limited a lot, those whose activities are limited a little and the sum of both.

When looking at the percentage of the population whose day to day activities are limited a lot, Tyne and Wear is ranked 2nd highest of the metropolitan areas. When looking at the percentage of the population whose day to day activities are limited a little, Tyne and Wear is ranked 1st.

The map on this page is based on census data and shows the percentage of the population whose day to day activities are limited by ward. Byker and Walker in Newcastle and Hendon, Redhill and Hetton in Sunderland are the areas with the highest proportion of individuals who describe themselves as having limited activity.



Obesity

In 2017/18 there were 710,562 admissions to hospital where obesity was a factor. This is a 15% increase on 2016/17.

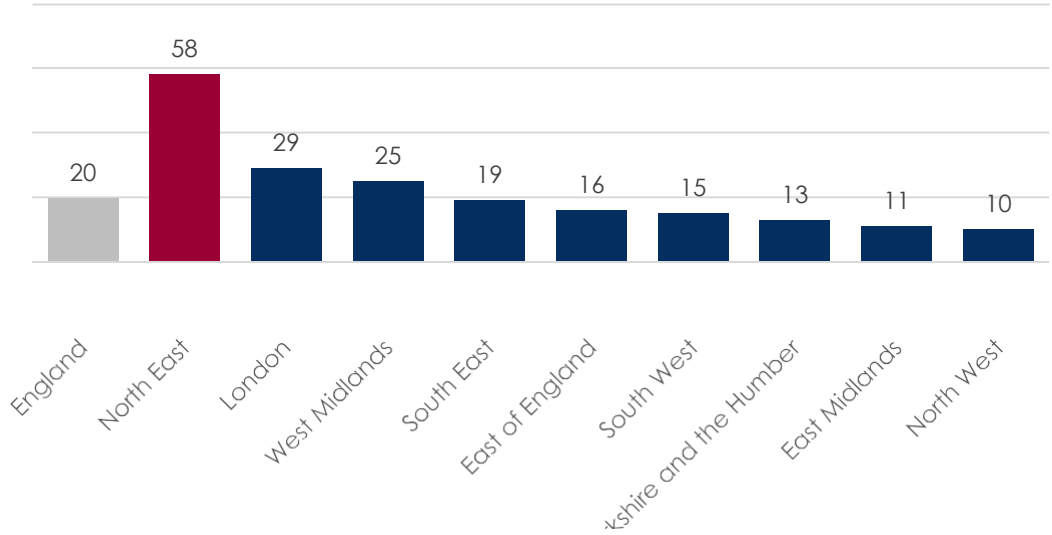
In 2017 29% of adults were classified as obese.

In 2017/18 20% of Year 6 children were classified as obese.

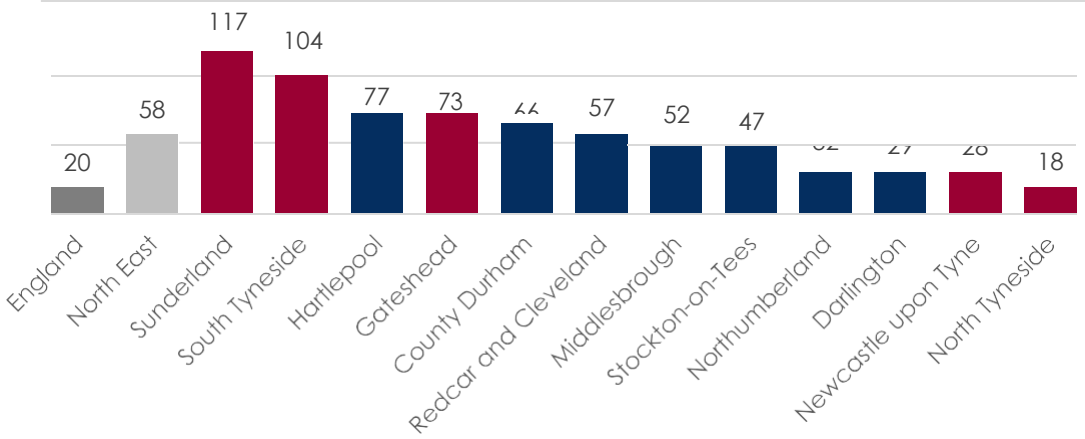
The North East has a higher level of obesity than any other area of the country, with Sunderland and South Tyneside the highest within the North East[xxv]. This is shown in the following charts which illustrates obesity related hospital admissions based on the patient's region of residence.

Obesity is linked to a number of health issues as well as to mobility; although not representing a significant part of TWFRS' operational workload, the number of bariatric rescues has increased in recent years - this requires particular skills and training.

Hospital Admissions Related to Obesity
per 100,000 population 2017/18



North East Hospital Admissions Related to Obesity
Per 100,000 population 2017/18

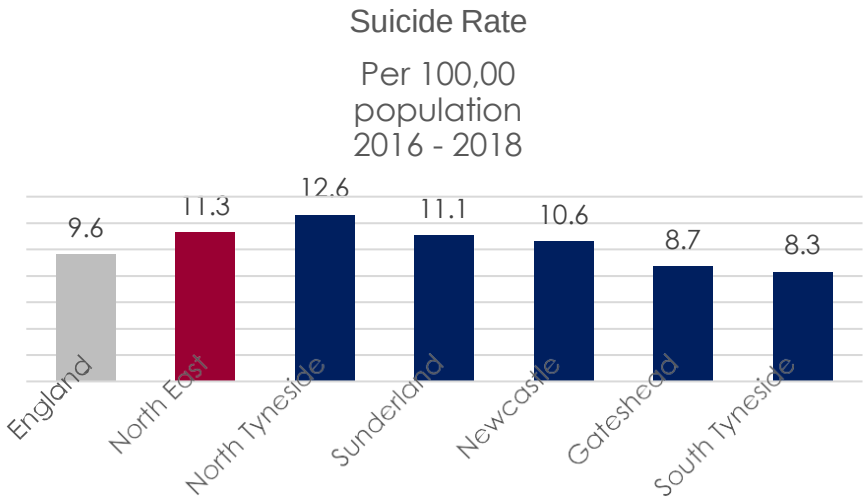


Mental Health

Public Health England publish local profiles associated with mental health[xxvi]. Some of the indicators relating to Tyne and Wear are shown opposite.

The table shows the figures for the North East Clinical Commissioning Groups (CCGs) alongside the Cumbria and North East NHS region and the average for England as a whole.

Some noticeable indicators include depression and anxiety prevalence and the rates of hospital admissions as a result of self harm; where the rate across nearly all local CCGs is worse than the national average.



Indicator	Period	England	Cumbria and North East NHS	NHS Newcastle & Gateshead	NHS North Tyneside CCG	NHS South Tyneside CCG	NHS Sunderland CCG
Long-term mental health problems (GP Patient Survey): ◊ (aged 16+)	2018-19	9.9	--	13.4	12.3	12.2	13.2
Depression and anxiety prevalence (GP Patient Survey): ◊ (aged 18+)	2016-17	13.7	--	17.3	15.7	17.1	17.8
Hospital admissions for mental health conditions	2017-18	84.2	95.5	82.9	93.9	135.1	166.6
Suicide rate *	2016-18	9.6	--	9.1	12.5	7.6	10.6

In comparison to England: Better | Similar | Worse

(* per 100,000 population; ◊ % of respondents; O % of practice register)

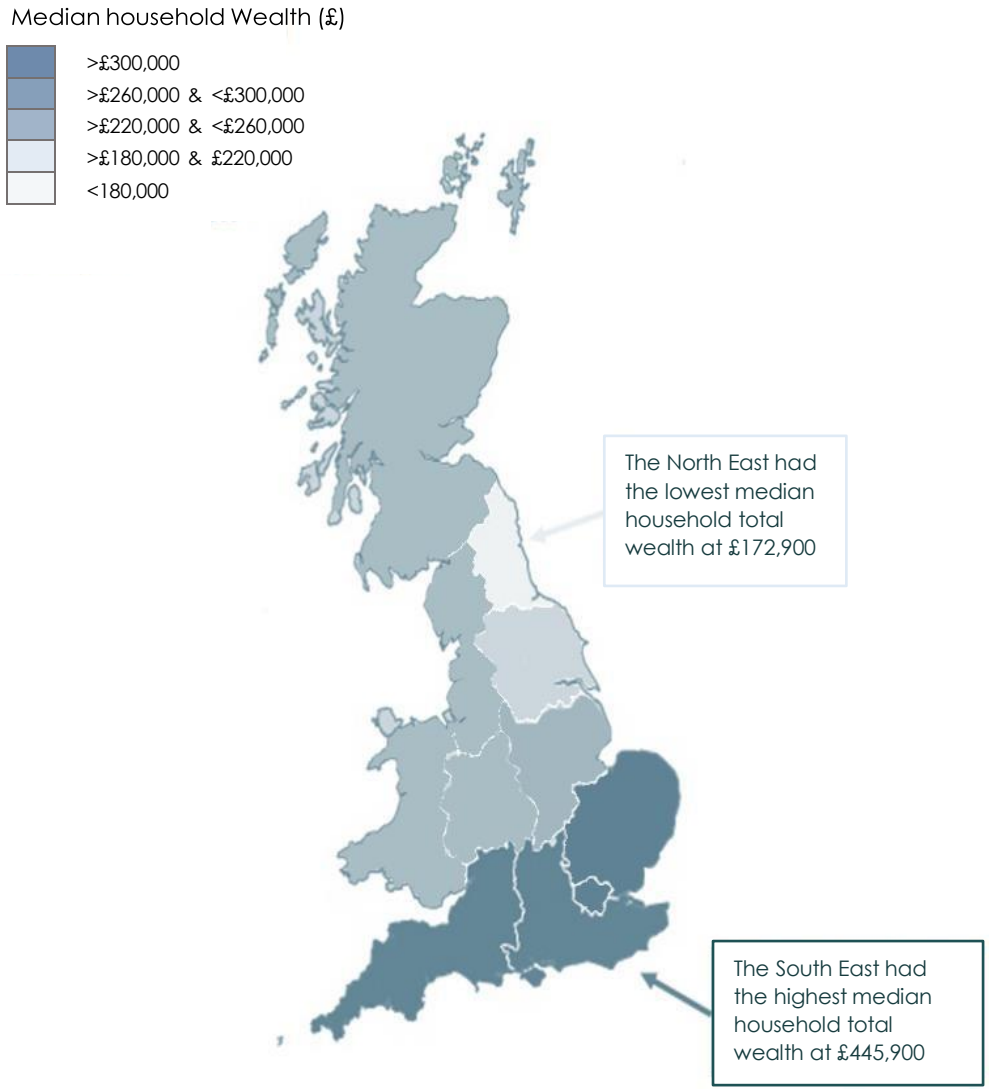
Wealth

Wealth is a key determinant of wellbeing.

The most recent Wealth and Assets Survey[xxvii] covers the period from April 2016 to March 2018 and combines property wealth, physical wealth, financial wealth and private pension wealth to calculate overall household wealth.

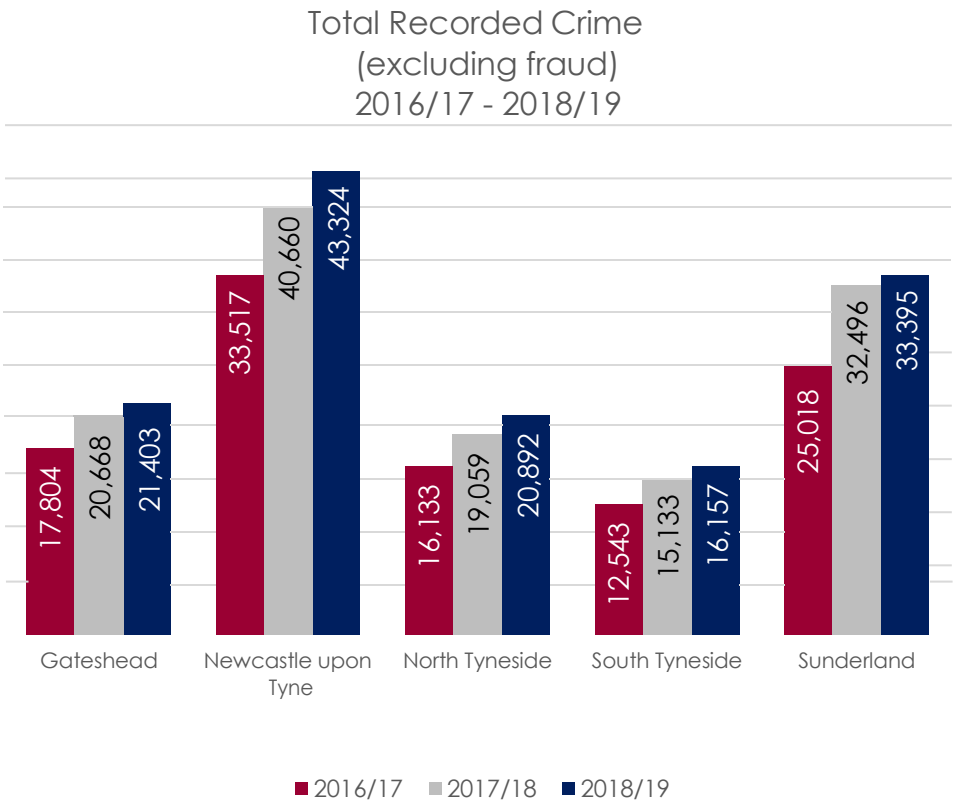
The report shows that:

- The North East has the lowest median household total wealth with a value of £172,900, as shown in the map opposite[xxviii].
- Households in the North East had the lowest aggregate net property wealth value.
- The North East region has one of the lowest ownership rates of households of all regions.
- Households in the North East had the lowest value of aggregate physical wealth.
- The North East have one of the lowest percentage rates of households with wealth in private pensions.



Crime and Anti-social Behaviour

The level of crime and anti-social behaviour (ASB) in an area also features in the makeup of deprivation profiles and community risk. Northumbria Police have produced a Police and Crime Plan for 2017 – 2021[xxix] which sets out how they will work with local authorities and community safety partnerships to reduce crime in the Northumbria area.



The chart opposite shows the total of all recorded crime (excluding fraud) between 2016/17 and 2018/19 in our local authority areas[xxx].

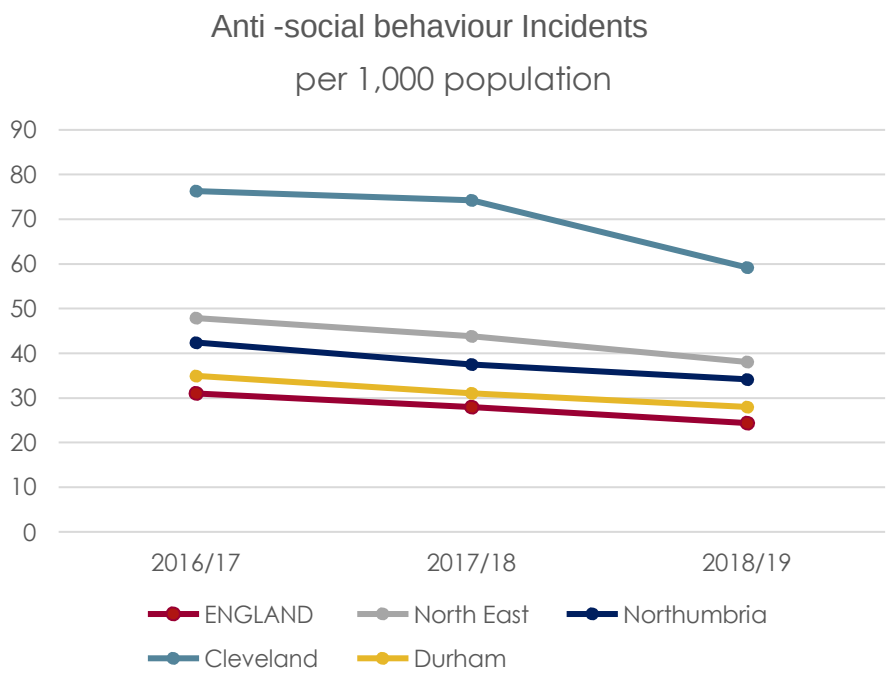
The Home Office has placed a duty on all partners to work together using the public health approach to community- wide issues, advocated by the World Health Organisation (WHO), focusing on serious violence, including homicide, drug-related crime and crime involving weapons, with the aim of addressing the root causes of violent behaviour.

TWFRS recently worked with the Police and Crime Commissioners Office and other partners from the NHS, Local Authority and justice system to produce a Violence Insight Report.

The insight summary is an important part of an evidence- based strategy to planning and then delivering prevention programmes. It concentrates on identifying and quantifying violence and its effects but also investigates the drivers and mitigating factors involved, at local authority and Northumbria Police area level, placed within the national context.

In terms of ASB the national trend is downward[xxxi], which is shown in the graph below.

The chart also illustrates that the North East and the Northumbria police area, which includes Tyne and Wear, lags behind England as a whole.



The table below shows the highest ranked Police Force areas.

It should be noted that these are ASB incidents reported to the police for each Police Force area. There is no accurate overall measure of ASB across different organisations.

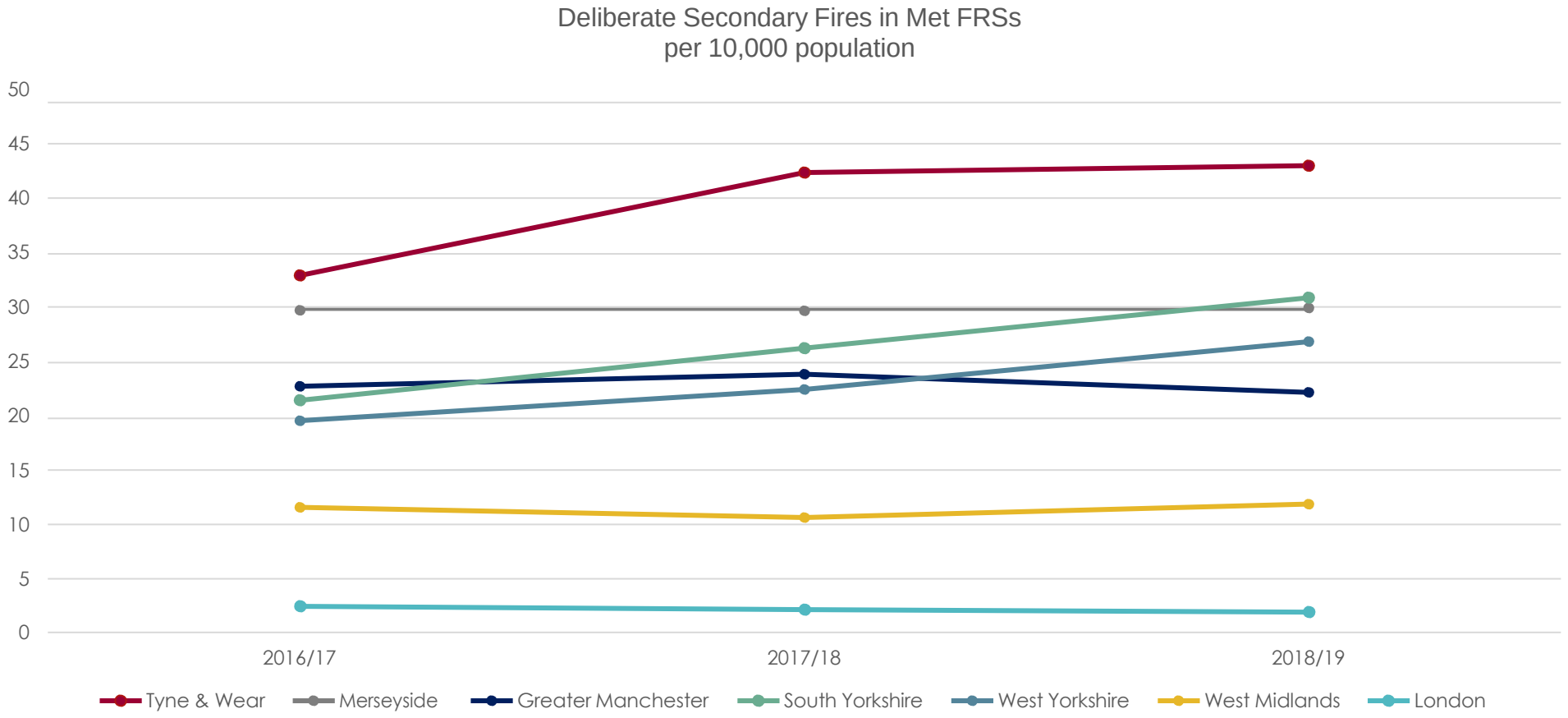
Police Force	ASB per 1,000 pop
Cleveland	59
Derbyshire	38
West Mercia	35
Northumbria*	34
Lancashire	34
Gloucestershire	32
Staffordshire	32
North Yorkshire	31
Dorset	31
Northamptonshire	29
South Yorkshire*	29
Metropolitan Police*	28
Durham	28
Nottinghamshire	28
Bedfordshire	26
Essex	26

* Met FRS

Crime and Anti-social Behaviour

Tyne and Wear's level of deliberate secondary fires per 10,000 population remains proportionately very high. The chart below shows TWFRS in comparison with the other Mets.

Deliberate fires represented 76% of all fires in Tyne and Wear in 2018/19 against a national average of 45% in the same year[xxxii]. Although these fires tend to have a lower impact than other fire types, the likelihood of them occurring is clearly a major element in the fire risk facing Tyne and Wear.



Special Service Incidents

Road Traffic Collisions

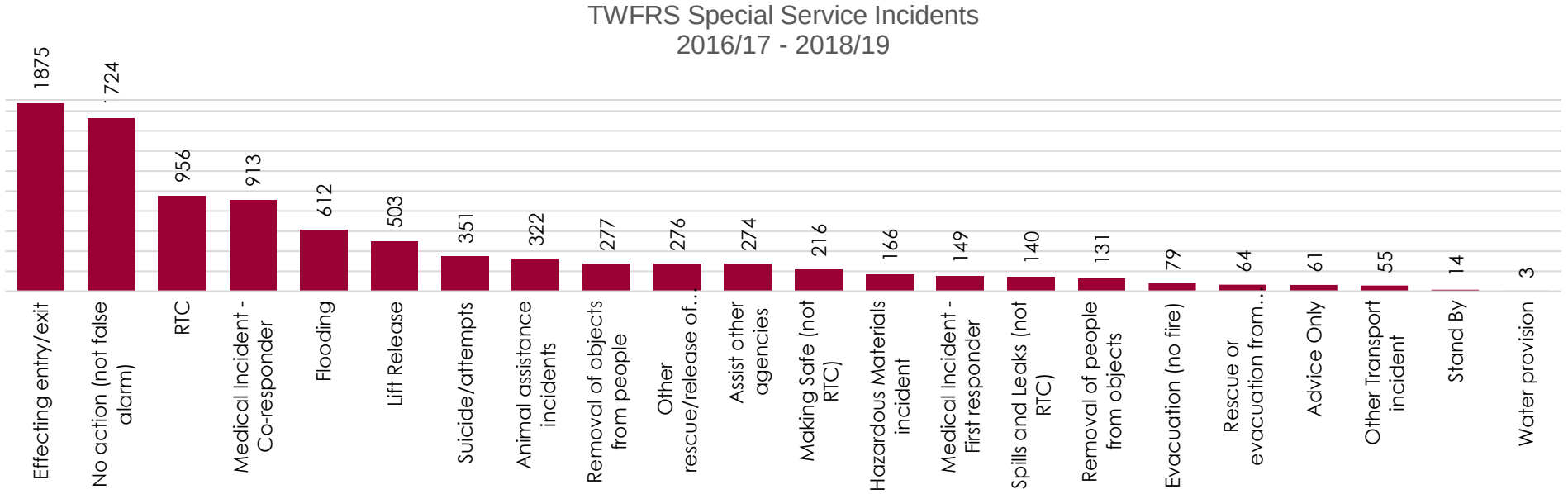
The graph below shows the number of special service incidents attended by TWFRS over a three year period.

Road Traffic Collisions (RTCs) account for a high number of the "special service" rescues undertaken by TWFRS, as indicated below.

In 2018, the number of reported road deaths from road traffic collisions in Great Britain reduced by 0.5% in comparison to 2017[xxxiii]. In Tyne and Wear there has been a reduction of 4 deaths.

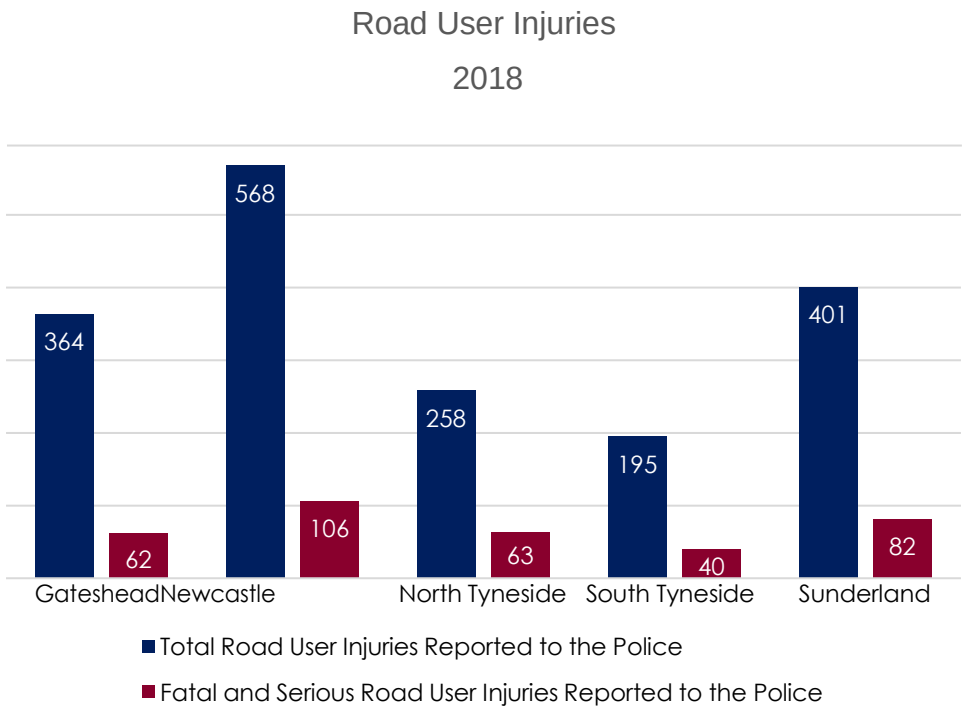
The number of reported casualties in Great Britain in 2016 continues to see reductions. Tyne and Wear saw a 1% decrease when compared to 2017, the lowest figure for the county over the last five years.

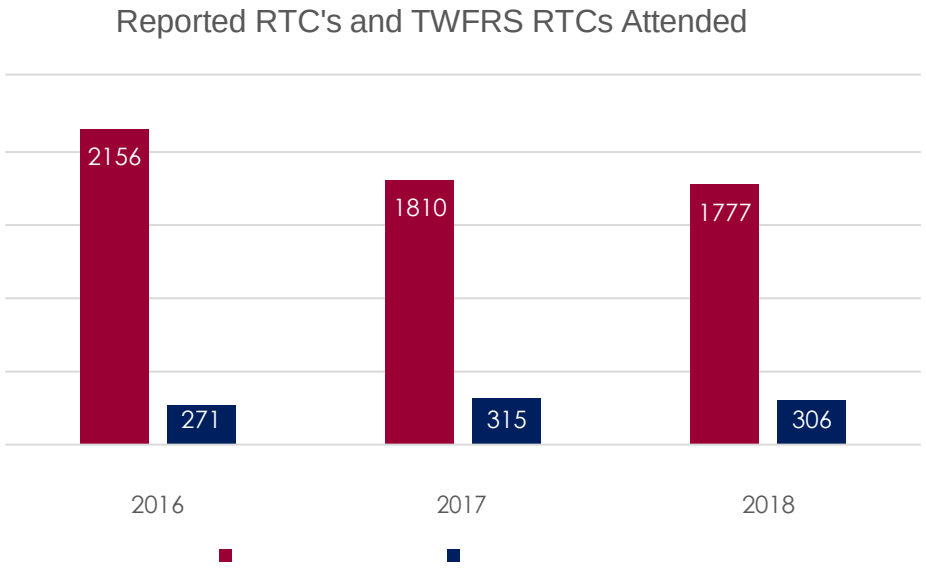
In 2018, England experienced a decrease of 5% in the number of reported road traffic collisions. This downward trend is mirrored in Tyne and Wear where there has been a decrease of 1.8%[xxxiv].



Special Service Incidents

The chart below shows the comparative number of reported collisions across Tyne and Wear. When comparing the total reported collisions and the number of TWFRS incidents it is clear that TWFRS are not called upon to assist at all road traffic collisions.





casualty rates given both the number of miles travelled on their road networks and the relative sizes of their populations, showing that the North East can be said to have a very safe road network when compared to the rest of England.

However a total of 2,139 people were injured in road traffic collisions in Tyne and Wear during 2018 of these 353 people were killed or seriously injured[xxxv].

Special Services

Flooding and Water Incidents

UK climate projections[xxxvii] estimate the impact of different carbon emissions scenarios on temperature and precipitation over different time periods. The levels of uncertainty in these projections are very high however, it is estimated that for the North East in terms of precipitation, the impact of a medium increase in carbon emissions compared with the 1961-1990 baseline could be as shown in the table below.

Decade	Winter mean precipitation (central estimate)	Summer mean precipitation (central estimate)
2020s	+4%	-6%
2050s	+11%	-15%
2080s	+14%	-18%

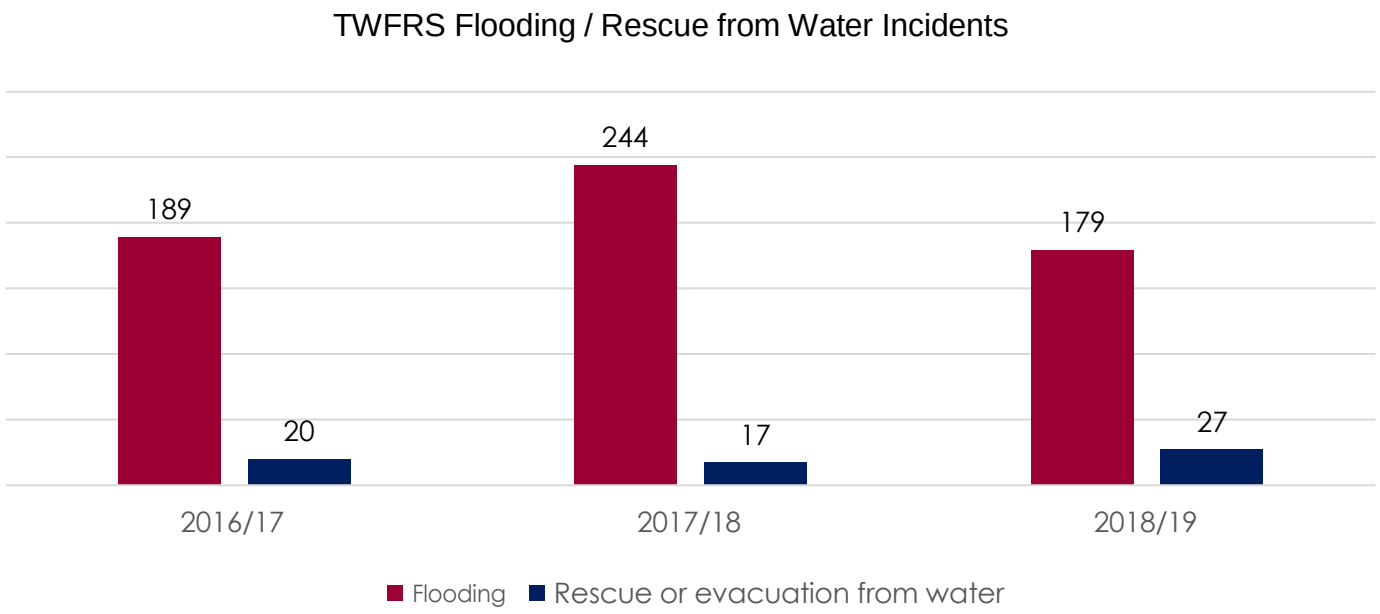
Special Services

Environmental challenges will continue to influence our operational response. Floods in particular are listed among the highest risk incidents in the Local Resilience Forum's Community Risk Register[xxxvi]. TWFRS's High Volume Pumping and Swift Water Rescue assets are part of the regional mitigation for such incidents.

The chart below shows the pattern of flood and other water related incidents in recent years.

Along with partners in the Local Resilience Forum, the Service makes extensive use of risk data from the Environment Agency in developing plans and procedures. This data includes:

- Detailed river network
- Flood alert areas
- Surface water flooding
- Surface water flooding from a 1 in 30 year event (similar to that experienced in 2012)
- Surface water flooding from a 1 in 200 year event
- Flood map (flooding from rivers and the sea)
- Flood warning areas
- Groundwater vulnerability
- Reservoir flooding



Special Services

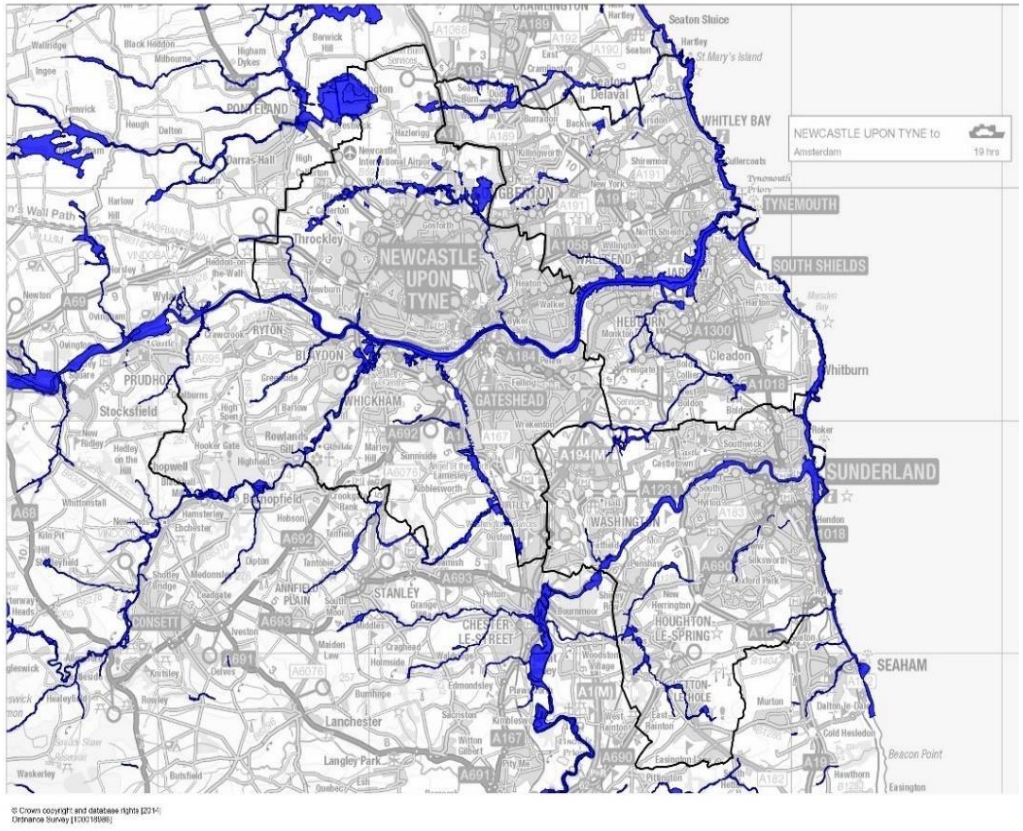
The Flood and Water Management Act 2010 provides for better, more comprehensive management of flood risk for people, homes and businesses, helps safeguard community groups from unaffordable rises in surface water drainage charges, and protects water supplies to the consumer and created a responsibility for local authorities to take the lead in the management and coordination for flood risk.

Climate projections suggest that extreme weather will happen more frequently in the future, this act aims to reduce the flood risk associated with extreme weather.

Further information is available via the links below in relation to Flood Risk Management for Tyne and Wear.

- Gateshead Flood Risk Management
- Newcastle Flood Risk Management
- North Tyneside Flood Risk Management
- South Tyneside Flood Risk Management
- Sunderland Flood Risk Management

The Environment Agency[xxxvii] considers that there is no coastal flood risk in Tyne and Wear and limited river flood risk is confined to particular areas as shown in the map below.



COMAH Sites

Tyne and Wear has a relatively low number of sites registered under Control of Major Accident Hazards (COMAH) regulations 2015 however, by their nature they pose more significant risk to the local community than other industrial sites.

Northumbria Local Resilience Forum's (LRF) Community Risk Register indicates mitigating actions for risk related to COMAH sites, including on and off site emergency plans for top tier sites and onsite procedures for other sites. These sites are not detailed in this document for reasons of security.

Multi agency exercising of plans is carried out every three years with full participation from TWFRS. Familiarisation with these sites is also part of firefighter training.

Premises

All industrial premises are assigned a risk category and inspected according to this through the Service's Risk Based Inspection Programme. In this way the service offers support, advice and if necessary, enforcement under the Regulatory Reform (Fire Safety) Order 2005.

Pollution and Contamination

The LRF Community Risk Register lists a number of pollution or contamination risks as High including pollution of controlled waters and accidents involving the spillage of fuel or explosives.

The Fire and Rescue Service has a key role in preventing / mitigating such incidents including exercise of regulatory powers and use of mass decontamination assets.

Building Collapse

The LRF Community Risk Register lists Building Collapse as a high risk and notes the Fire and Rescue Service's role in mitigation through Urban Search and Rescue (USAR) capability, working alongside partners.

[i] CLG report on link between deprivation and risk. Office for National Statistics. Region and Country Profiles: Population & migration 1 March 13

[ii] Census 2011

[iii] Guardian Datablog

[iv] 2013 Region and Country Profiles: Population & migration 1 March 2013. Sub regional – population estimates & projections, 2001 to 2021

[v] Fire Statistics Monitor April 2018 to March 2019

[vi] NOMIS Table LC2101EW

[vii] NOMIS Table KS206EW

[viii] 2014-based Household Projections: England, 2016-2041

[ix] www.gov.uk, Dwelling Stock, Live Table 100

[x] https://www.hesa.ac.uk/stats

[xi] www.newcastle.gov.uk/planning-and-buildings/planning- policy/core-strategy-and-urban-core-plan

[xii] www.northtyneside.gov.uk

[xiii] www.southtyneside.gov.uk/article/9065/Local-Development-Framework

[xiv] http://www.sunderland.gov.uk/CHttpHandler.ashx?id=19080&p=0

[xv] www.gov.uk/govenrment/statistics/english-indices-of-deprivation- 2019

[xvii] Regional labour market statistics in the UK: Feb 2020

[xviii] ONS, Workless households for regions across the UK, 2018

[xix] Public Health England health profiles 2019.

[xx] https://fingertips.phe.org.uk/profil/local-alcohol-profiles

[xxi] Statistics on Alcohol England (2019 (LAPE)

[xxii] https://fingertips.phe.org.uk/profile/tobacco-control

[xxiii] Statistical Bulletin: Drug Misuse: Findings from the 2019 Crime Survey for England and Wales.
[xxiv] Statistics on Drugs Misuse: England 2019
[xxv] Statistics on obesity, physical activity and diet, England 2019 (NHS Digital)
[xxvi] http://fingertips.phe.org.uk/profile-group/mental- health/profile/common-mental-disorders.
[xxvii] Wealth in Great Britain Round 6: 2016 to 2018, ONS
[xxviii] Contains OS data © Crown Copyright 2015 Source ONS licensed under the Open Government Licence v3.0
[xxix] Northumbria Police, Police and Crime Plan 2017-2021 (http://www.northumbria-pcc.gov.uk/v2/wp-content/uploads/2017/03/Police-and -Crime-Plan-2017.pdf)
[xxx] ONS, Crime Statistics
[xxxi] ONS, Crime in England and Wales, year ending March 2019 [xxxii] Home Office Incident Statistics: England 2018 to March 2019 [xxxiii] Department for Transport, Reported Rod Casualties in Great Britain 2018 annual report.
[xxxiv] www.gov.uk, table RAS10014
[xxxv] www.neroadsafety.org.uk Benchmarking of North East Local Authorities' Road User Casualties Against the Rest of England, 2018
[xxxvi] Community Risk register for the Northumbria Resilience
[xxxvii] Environment Agency website: Risk of Flooding from River and Sea, ukclimateprojections.metoffice.gov.uk
Icons used by Axialis https://www.axialis.com/free/icons Icons by https://www.axialis.com

Appendix D

Risk Level	Incident Types	
Very Significant Risk Level 1 Life and Property Risk	Civil Disturbance/ Unlawful act Bomb suspected and bomb confirmed explosion Explosion Vehicle LPG fuelled Fire - Aircraft - Large, light or military Fire - Building Fire - Caravan/Camping Fire - Cylinder Acetylene Fire - Persons reported Fire - Persons on fire Fire - Railway train passenger Fire - Ship Hazardous Materials - Gas involved Alarm - Smoke alarm Fire - below ground Fire - Boat	Hazardous Materials - Major hazmat Hazardous Materials - Radiation involved Rescue - Aircraft accident Rescue - Building collapse Rescue - Persons Trapped Rescue - Railway accident Rescue - Confined space rescue from entrapment Rescue - From height Rescue - From mud Rescue - From water Rescue - RTC persons trapped Rescue - Ship sinking Rescue - Suicide attempt Fire - Railway train goods Fire - Vehicle large Hazardous Materials - Minor Hazmat
Risk Level 2 Significant Life and Property Risk	Fire - Building thatched Fire - Cylinder other Fire - Electrical installations	Humanitarian or assistance - Flooding Rescue - Aircraft in distress Rescue - Animal rescue large Rescue - Boat Hazardous Materials - Pipeline
Risk Level 3 Some Life and Property Risk	Alarms - Automatic fire alarm Alarm - Gas alarm Civil Disturbance/ Unlawful Act - Civil Disturbance Fire - Barn Fire - Derelict Propert Fire - Vehicle small fire in the open - large	Humanitarian or assistance - Dangerous structure Humanitarian or assistance - Person collapsed Humanitarian or assistance - RTC rescue - persons locked in
Risk Level 4 Minimal Life and Property Risk	Alarm - Fire or intruder alarm at FRS property Civil Disturance Call or Unlawful Act - Challeneged Fire - Abandoned Call Fire - Chimney/Chimney thatched fire in the open - Small Fire - New out Fire - Late fire call Fire - Postbox Fire - Railway embankment Fire - Road furniture	Fire - Smoke in the open Hazardous Material - Oil pollution Hazardous Materials - Vehicle leaking fuel Humanitarian or Assistance - persons locked out Swill away , all advice given and other categories Rescue - Animal small rescue Lift - Person shut in

Appendix E

National Fire Incident Response Times April 2019 to March 2020 TWFRS Comparison

Date: January 2021

Author: Pauline Avis

Version: 1

Data and Information Audit	
Data compiled by:	PA
Data valid at:	25/01/2021 00:00:00
Data QA by:	MW
Approved by:	

Tyne and Wear Fire and Rescue Service
Creating the Safest Community
www.twfire.gov.uk

Table of Contents

Executive Summary

This report presents the headline findings of the **Fire Incident Response Times: April 2019 to March 2020, England statistical bulletin** – released by the Home Office on 14/01/2021.

This statistical bulletin has been published using the new Home Office statistical release template which does not include some previously reported data, as a result this report has been adapted.

Each time a fire and rescue service (FRS) attends an incident in England, details of that incident are uploaded to the Home Office's Incident Recording System (IRS) by the FRS. The IRS is used as the source of all the statistics in the statistical publication.

This statistical release presents statistics on response times to primary fires (dwellings, other buildings, road vehicles and other outdoor fires) and secondary fires, in England, for the financial year 2019/20.

The headline statistic reported is termed the **'total response time'**, which is the minutes and seconds taken from time of call to time of arrival at the incident by the first vehicle and is the time that is likely to be of main public interest. However, in response to user feedback, statistics on the component parts (call handling, crew turnout and drive times) of total response times were presented for the first time in the 2017/18 release.

Response times are published by the Home Office and presented in this comparison report as minutes and seconds rather than decimal minutes (e.g. '7.5' decimal minutes is now displayed as '7 mins 30 secs').

Some Fire and Rescue Services (FRSs) have local definitions for response times which may not include the call time, however this does not affect records in the IRS. The IRS questions concerning when a vehicle is mobilised (the earliest instance in an incident being the time the station is alerted) and becomes mobile (leaves the station) are not mandatory for FRSs to complete, therefore a small number of FRSs have not supplied this data for some years.
A number of fire incidents were excluded for the purpose of analysis. The following incidents were excluded:

a. Road vehicle fires, where the road vehicle was abandoned.

b. Where the location of the fire was a derelict property.

c. Where an FRS learned of the fire when it was known to have already been extinquished (known as 'late calls').

d. Where the total response time for an incident was over an hour or less than one minute.

e. Where the sequence of events are not recorded in a logical sequence, either through recording error or absence of data.

In previous years a further exclusion was applied:

f. Where there was heat and/or smoke damage only (no flame).

However, after a public consultation, exclusion f) has been discarded for the main reported response times in this release (i.e. incidents where there was heat and/or smoke damage only are now **included** in the average response times calculations). This decision was based on responses to the consulation, all of which supported including these incident types.
This report focuses on the new method of reporting incidents (including heat and smoke damage only).

The full release can be found at: Fire Incident Response Times - April 2019 to March 2020

National summary:

- Overall, total response times to fires have increased gradually over the past 20 years. However there was a general plateau from 2014/15 to 2017/18 but following increases in 2018/19 the 2019/20 responses times have generally decreased. The average response time to primary fires in 2019/20 was 8 minutes and 43 seconds, an increase of 36 seconds over the past decade.

- The average total response time to primary fires (potentially more serious fires that harm people or cause damage to property) in England in 2019/20 was 8 minutes and 43 seconds, a decrease of 6 seconds since 2018/19 but an increase of 6 seconds from five years previously in 2014/15.

- Three types of primary fires showed a decrease in average response times in 2019/20 (dwellings by 2 seconds, road vehicles by 3 seconds and other outdoor fires by 28 seconds), while the response time to other building fires increased by 2 seconds compared with 2018/19.

- The average response time to dwelling fires in 2019/20 was 7 minutes 45 seconds. Of these. The average response time to fires in flats was 7 minutes 0 seconds, compared with 8 minutes 13 seconds for houses/bungalows and 7 minutes 44 seconds for other dwellings.

- Average response times to secondary fires in 2019/20 (which can broadly be thought of as smaller outdoor fires, not involving people or property) decreased by 24 seconds to 9 minutes 18 seconds compared with 2018/19.

- Of the 45 fire and rescue authorities, 26 showed a decrease in average total response time to primary fires between 2018/19 and 2019/20, 18 showed an increase and one showed no change.

TWFRS summary:
TWFRS average total response times are:

- the fastest FRS in the country in response to primary fires and fastest responding MET.
- the fastest FRS in the country in response to dwelling fires, and fastest responding MET.
- the 2nd fastest to other building fires and 2nd fastest MET behind Greater London.
- the fastest FRS in England in response to road vehicle fires and fastest responding MET.
- the 3rd fastest responding FRS in the country to other outdoor fires behind Greater London fastest and West Mids FRS 2nd fastest.

- TWFRS are the top performing FRS in England and of the MET FRS in terms of response to primary fires, dwelling fires and road vehicle fires.
- TWFRS remain within the top three best performing FRS in England in terms of response in the featured categories.

The table below provides a summary of the trends in the last year for average total response times to fires.

Table 1 Average total response times to fires by type of fire with a summary of trends, TWFRS; 2019/20

Type of Fire	2019/20	Change since 2018/19	Change since 2010/11
Primary	6 minutes 29 seconds	-23 seconds ↓	+51 seconds ↑
Dwelling	5 minutes 55 seconds	-18 seconds ↓	+37 seconds ↑
Other building	6 minutes 43 seconds	-24 seconds ↓	+1 minute 18 seconds ↑
Road vehicle	6 minutes 34 seconds	-30 seconds ↓	+32 seconds ↑

Other outdoor	8 minutes 40 seconds	-26 seconds ⇩	+2 minutes 5 seconds ⇧

Please note: All figures used throughout this report to highlight TWFRS position are from the official data tables accompanying the statistical bulletin.

1 Primary Fires

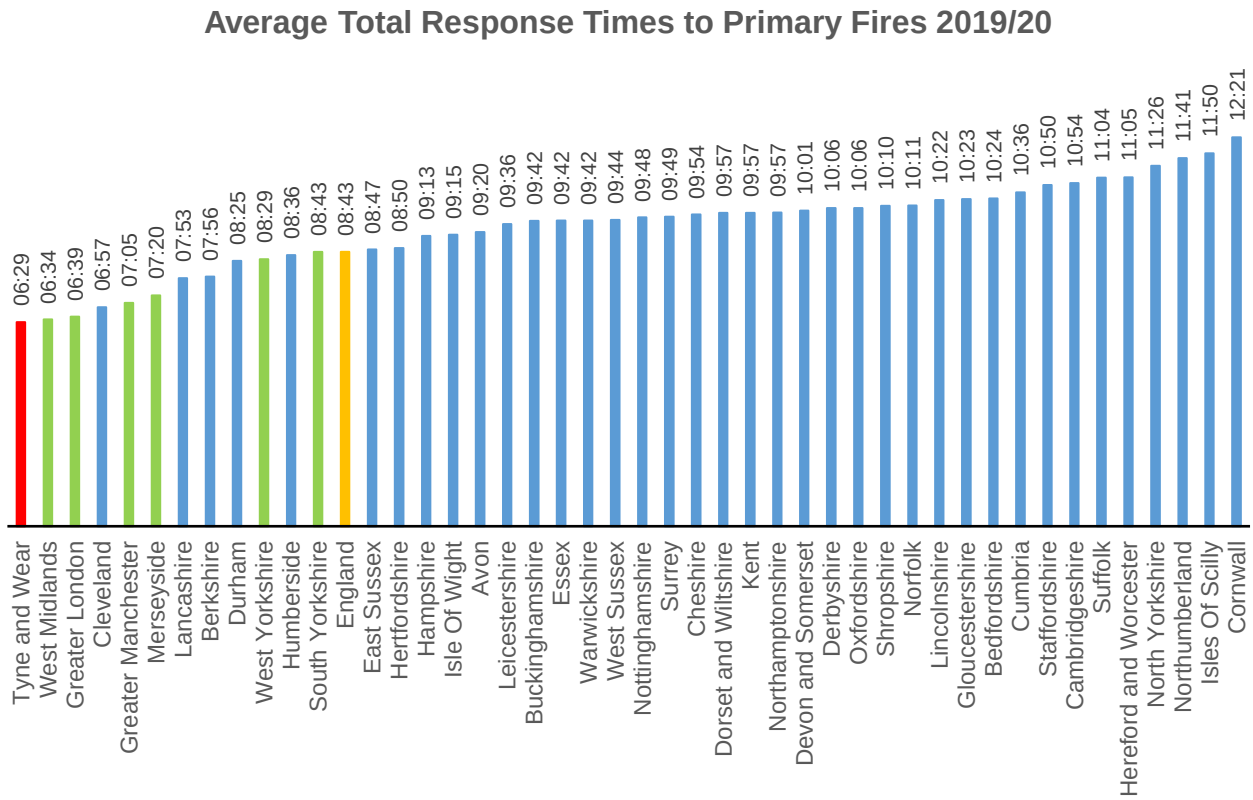


Figure 1 - average total response times to primary fires 2019/20

- Average total response time to primary fires in England is 8 mins 43 seconds – decrease of 6 seconds from 2018/19 and increase of 36 seconds from 2010/11.
- Average total response time to primary fires for TWFRS is 6 minutes 29 seconds – decrease of 23 seconds from 2018/19 and increase of 51 seconds from 2010/11.
- TWFRS are fastest of the MET FRS in response to primary fires.
- TWFRS fastest in England in response to primary fires.
- Of the MET FRSs, from 2018/19 to 2019/20, TWFRS and Merseyside saw the greatest reduction in average total response time with a decrease of 23 seconds. Greater London and West Yorkshire recorded increases in average total response times. The worst performing MET is South Yorkshire with an average total response time of 8 minutes 43 seconds.

- In England, Leicestershire saw the greatest reduction in the average total response time with a decrease of 44 seconds. Isles of Scilly had the greatest rise in the average total response time with an increase of 1 minute 2 seconds.

The graph below shows the average total response time to Primary Fires for the MET FRSs and England as a whole each year between 2010/11 and 2019/20.

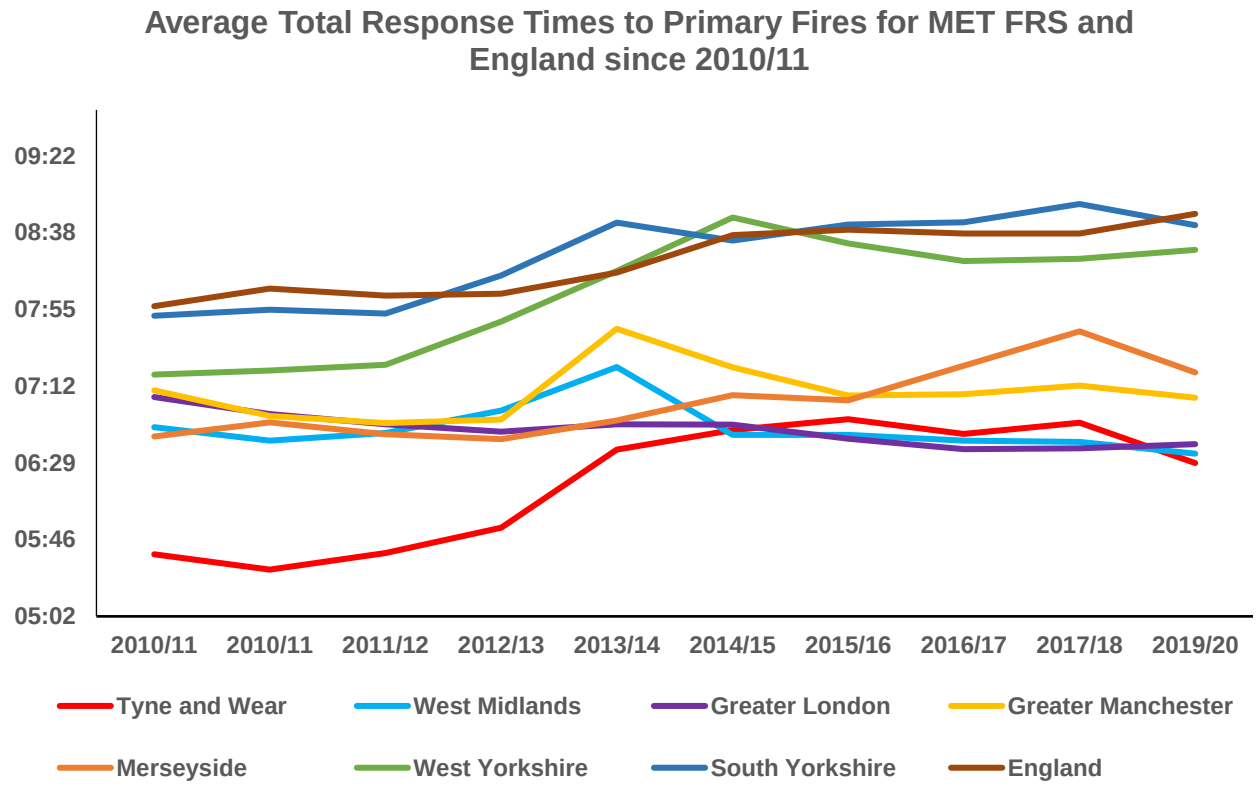


Figure 2 - average total response times to primary fires for MET FRSs and England since 2010/11

2 Dwelling Fires

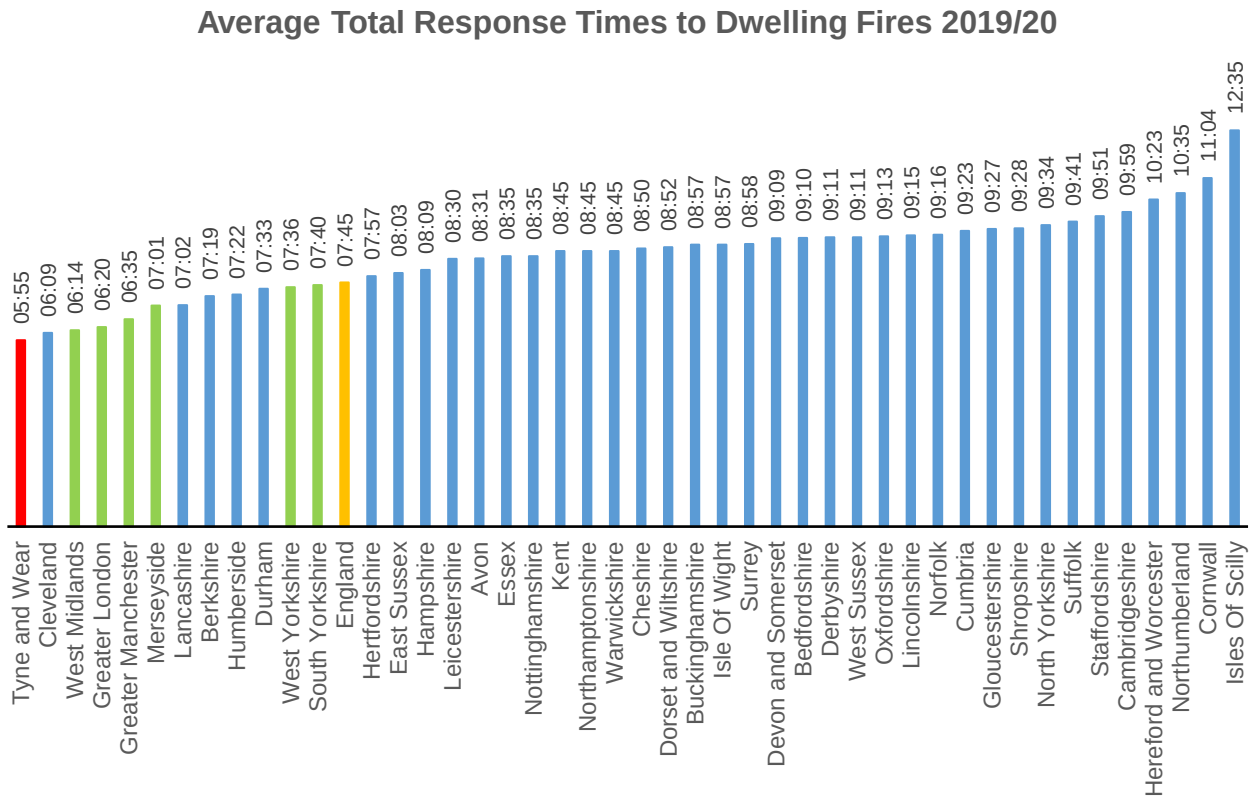


Figure 3 - average total response times to dwelling fires 2019/20

- Average total response time to dwelling fires in England is 7 minutes 45 seconds – decrease of 2 seconds compared with 2018/19 and an increase of 22 seconds from 2010/11.
- Average total response time to dwelling fires for TWFRS is 5 minutes 55 seconds – decrease of 18 seconds from 2018/19 and increase of 37 seconds from 2010/11.
- TWFRS are fastest of the MET FRSs, in response to dwelling fires. The worst performing MET is South Yorkshire with an average total response time of 7 minutes 40 seconds.
- TWFRS are fastest in England in response to dwelling fires. The worst performing FRS is Isles of Scilly with an average total response time of 12 mins 35 seconds.
- Of the MET FRSs, from 2018/19 to 2019/20, Merseyside saw the greatest reduction of the METs in average total response time with a decrease of 20 seconds. West Yorkshire had the greatest rise in average total response time with an increase of 5 seconds. The worst performing MET is South Yorkshire with an average total response time of 7 minutes 40 seconds.

- In England, Buckinghamshire saw the greatest reduction in the average total response time with a decrease of 1 minute 6 seconds. Cambridgeshire had the greatest rise in the average total response time with an increase of 38 seconds.

The graph below shows the average total response time to Dwelling Fires for the MET FRSs and England as a whole each year between 2010/11 and 2019/20.

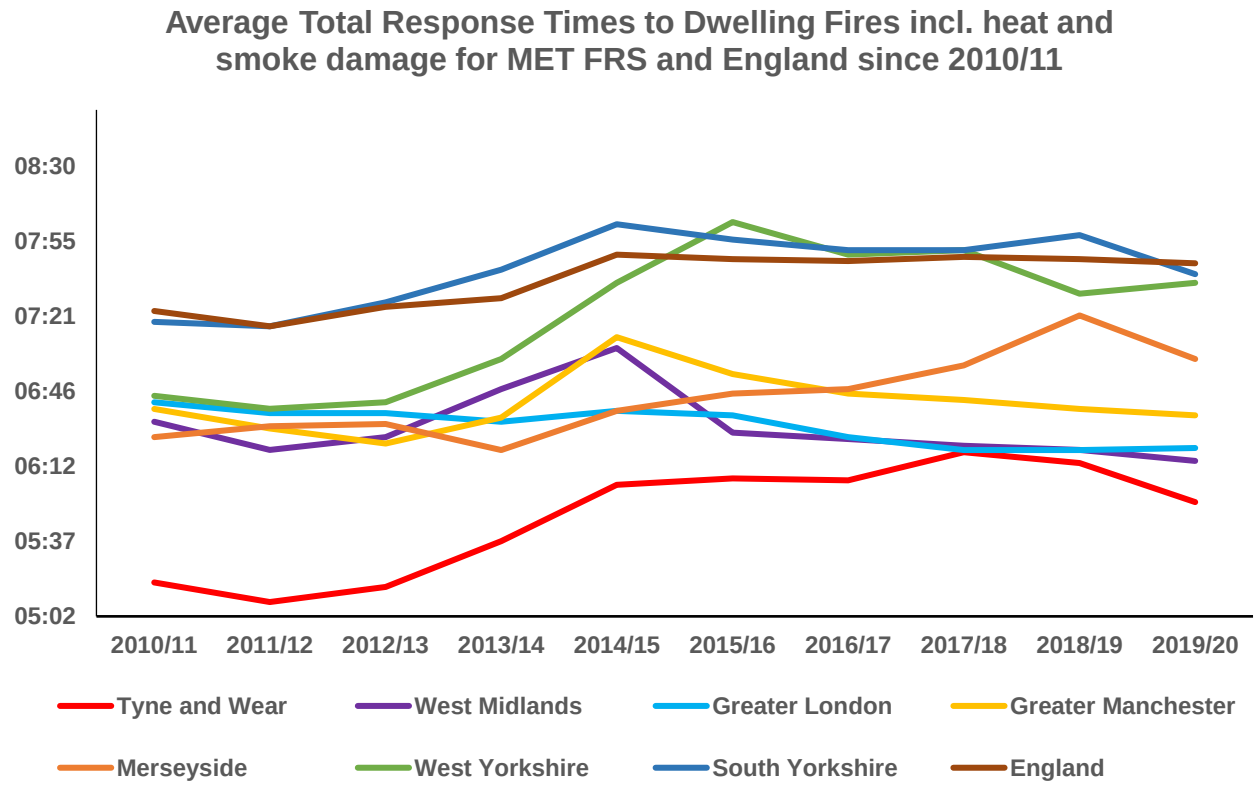


Figure 4 – average total response times to dwelling fires for MET FRSs and England since 2010/11

3 Other Building Fires

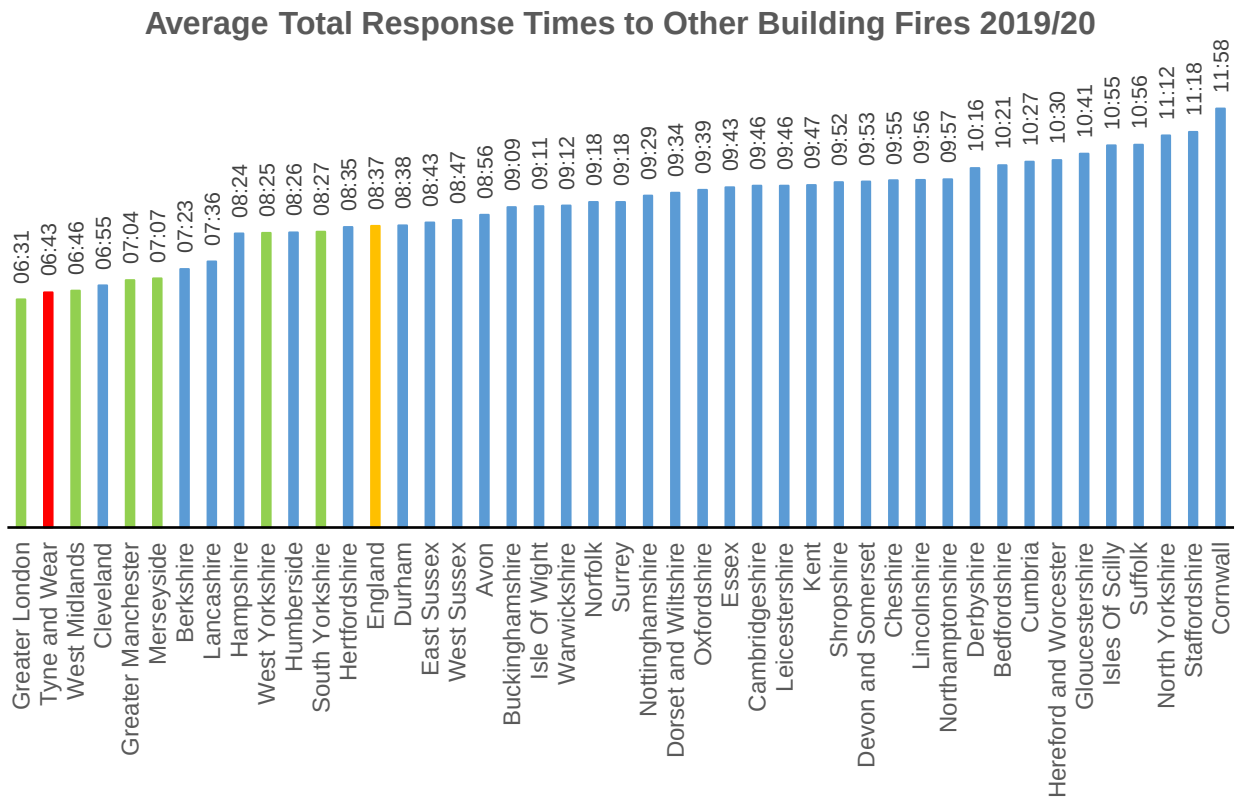


Figure 5 -average total response times to other building fires 2019/20

- Average total response time to other building fires in England is 8 minutes 37 seconds – increase of 2 seconds from 2018/19 and increase of 46 seconds from 2010/11.
- Average total response time to other building fires for TWFRS is 6 minutes 43 seconds – decrease of 24 seconds from 2018/19 and increase of 1 minute 18 seconds from 2010/11.
- TWFRS are 2nd fastest of the MET FRSs in response to other building fires. Best performing MET is Greater London with an average total response time of 6 minutes 31 seconds. Worst performing MET is South Yorkshire with an average total response time of 8 minutes 27 seconds.
- TWFRS are 2nd fastest in England in response to other building fires. Best performing FRS is Greater London with an average total response time of 6 minutes 31 seconds. Worst performing FRS is Northumberland with an average total response time of 12 minutes 12 seconds.
- Of the MET FRSs, from 2018/19 to 2019/20, South Yorkshire saw the greatest reduction of the METs in average total response time with a decrease of 32 seconds. West Yorkshire had the greatest rise in average total response time with an increase of 26 seconds.

- In England, Isles of Scilly saw the greatest reduction in the average total response time with a decrease of 1 minute 1 second. Gloucestershire had the greatest rise in the average total response time with an increase of 52 seconds.

The graph below shows the average total response time to Other Building Fires for the MET FRSs and England as a whole each year between 2010/11 and 2019/20.

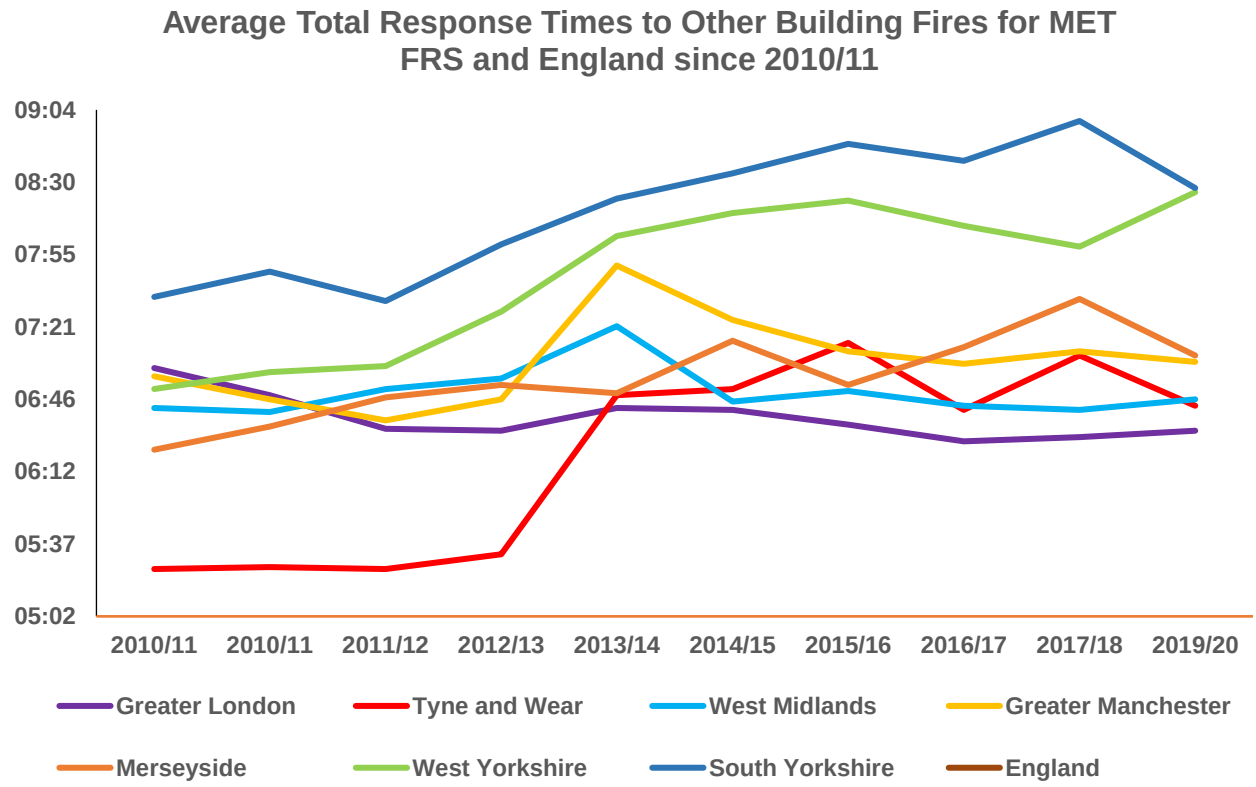


Figure 6 - average total response times to other building fires for MET FRSs and England since 2010/11

4 Road Vehicle Fires

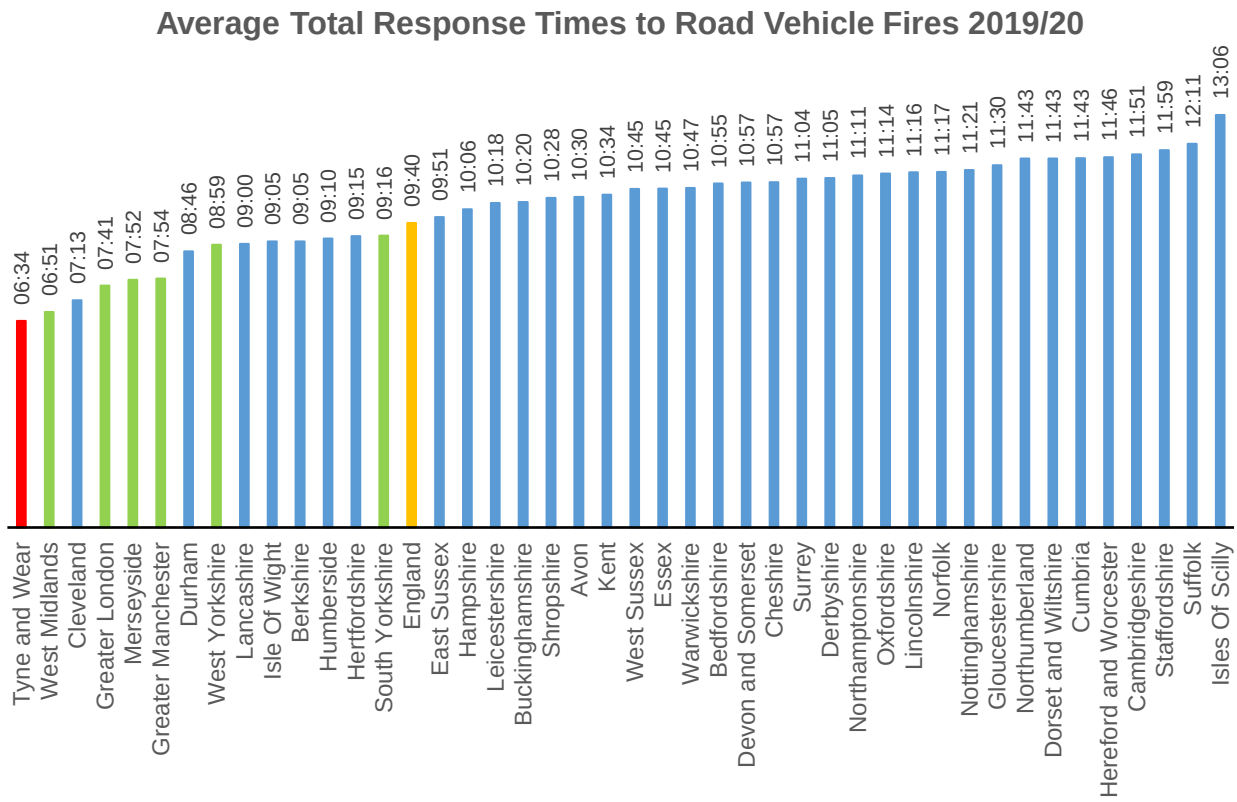


Figure 7 - average total response times to road vehicle fires 2019/20

- Average total response time to road vehicle fires in England is 9 minutes 40 seconds – decrease of 3 seconds from 2018/19 and increase of 40 seconds from 2010/11.
- Average total response time to road vehicle fires for TWFRS is 6 minutes 34 seconds – decrease of 30 seconds from 2018/19 and increase of 32 seconds from 2010/11.
- TWFRS are fastest of the MET FRSs in response to road vehicle fires. The worst performing MET is South Yorkshire with an average total response time of 9 minutes 16 seconds.
- TWFRS are fastest in England in response to road vehicle fires. Worst performing FRS is Cornwall with an average total response time of 13 minutes 21 seconds.
- Of the MET FRS, from 2018/19 to 2019/20, TWFRS saw the greatest reduction of the METs in average total response time with a decrease of 31 seconds. Greater London had the greatest rise in average total response time with an increase of 16 seconds.

- In England, Isle of Wight saw the greatest reduction in the average total response time with a decrease of 1 minute 40 seconds. Surrey had the greatest rise in the average total response time with an increase of 1 minute 1 second.

The graph below shows the average total response time to Road Vehicle Fires for the MET FRSs and England as a whole each year between 2010/11 and 2019/20.

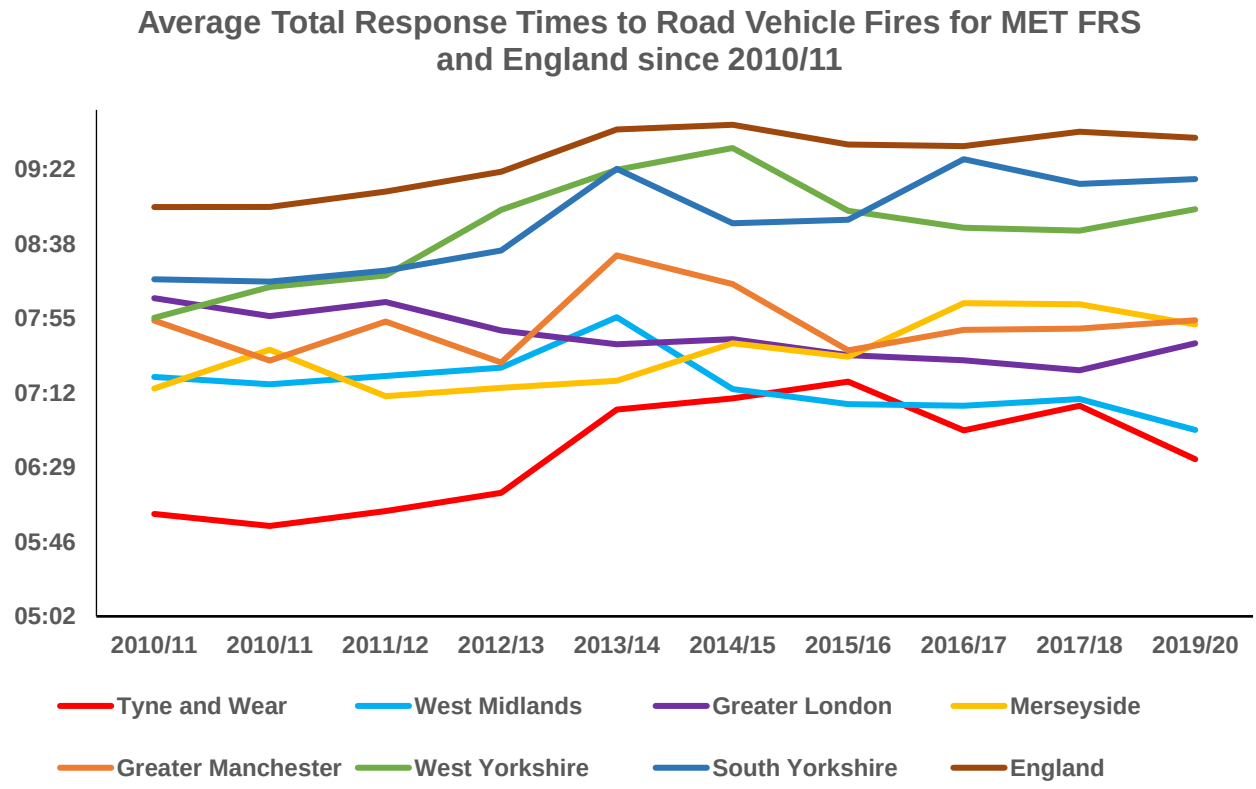


Figure 8 - average total response times to road vehicle fires for MET FRSs and England since 2010/11

5 Other Outdoor Fires

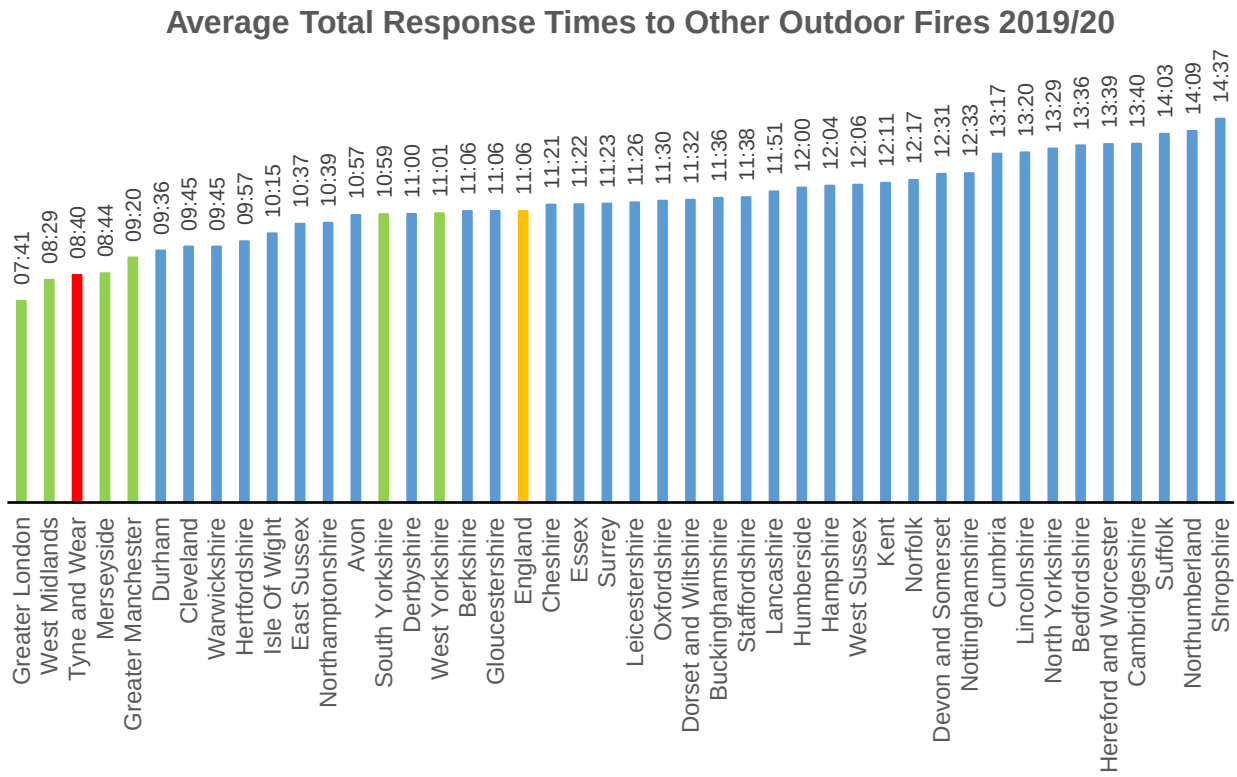


Figure 9 – average total response times to other outdoor fires 2019/20

- Average total response time to other outdoor fires in England is 11 minutes 6 seconds – decrease of 28 seconds from 2018/19 and increase of 1 minute 20 seconds from 2010/11.
- Average total response time to other outdoor fires for TWFRS is 8 minutes 40 seconds – decrease of 26 seconds from 2018/19 and increase of 2 minutes and 5 seconds from 2010/11.
- TWFRS are 3rd fastest of the MET FRSs in response to other outdoor fires. Best performing MET is Greater London with an average total response time of 7 minutes 41 seconds. Worst performing MET is West Yorkshire with an average total response time of 11 mins 1 second.
- TWFRS are 3rd fastest in England in response to other outdoor fires. Best performing FRS is Greater London. Worst performing FRS is Cornwall with an average total response time of 14 minutes 49 seconds.
- Of the MET FRSs, from 2018/19 to 2019/20, Merseyside saw the greatest reduction of the METs in average total response time with a decrease of 53 seconds. West Mids FRS had the greatest rise in average total response time with an increase of 27 seconds.

- In England, Leicestershire saw the greatest reduction in the average total response time with a decrease of 2 minutes 21 seconds. Shropshire had the greatest rise in the average total response time with an increase of 2 minutes 21 seconds.

The graph below shows the average total response time to other outdoor fires for the MET FRSs and England as a whole each year between 2010/11 and 2019/20.

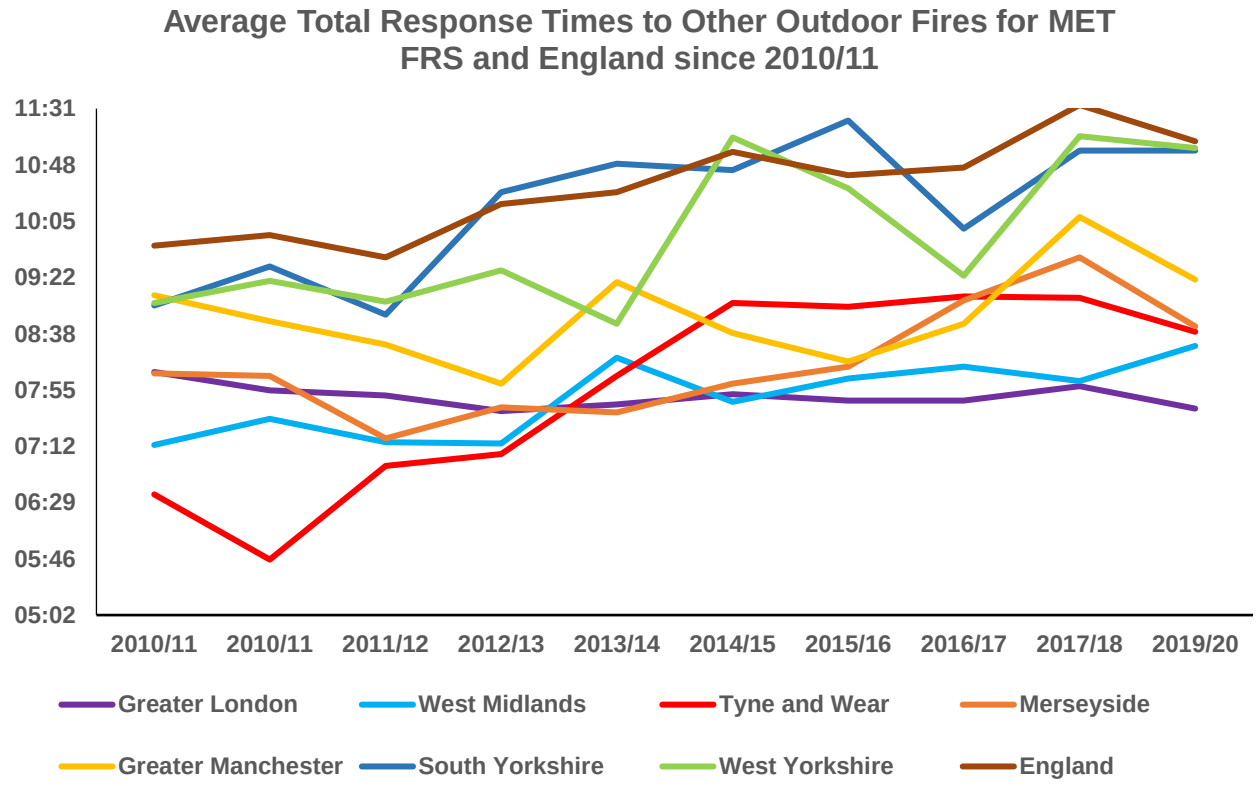


Figure 10 – average total response times to other outdoor fires for MET FRS and England since 2010/11

6 Response time components

The total response time (from time of call to time of first arrival) can be further divided into the following three components:

- **Call handling time:** from time of call to the station being alerted.

- **Crew turnout time:** time between the station being alerted and the time the first vehicle departs i.e. the time it takes for the firefighters to prepare to leave.

- **Drive time:** from the time the first vehicle leaves to the first vehicle arriving at the scene of the incident (not necessarily the same vehicle).

This is the third year that these breakdowns of the average response time have been published, in response to user need and to help explain which parts of the emergency response chain have changed over time.

National summary:

- Call handling times for primary fires decreased by one second in 2019/20 to 1 minute 22 seconds. Call handling times for secondary fires decreased by 6 seconds to 1 minute 41 seconds .

- Crew turnout times for primary fires decreased by three seconds in 2019/20 to 1 minute 35 seconds. Crew turnout times for secondary fires decreased 3 seconds to 1 minute 32 seconds.

- Drive times for primary fires decreased by three seconds in 2019/20 to 5 minutes 46 seconds for primary fires and 15 seconds to 6 minutes 5 seconds for secondary fires in 2019/20.

Whilst there has been a long-term upward trend in total response times over the past decade average call handling times and drive times have generally increased but average crew turnout time has decreased.

It is notable that dwelling fires have the quickest times in all three of the response time components, probably reflecting the relative ease with which a street address can be communicated on the telephone and the urgency with which an FRS responds to fires with the greatest potential risk to life. Other oudoor fires, by contrast, are typically among the slowest responses in all three categories, which could reflect the difficulty of describing an outloor location without a street address (call handling) and the difficulty of finding it once mobile (drive time).

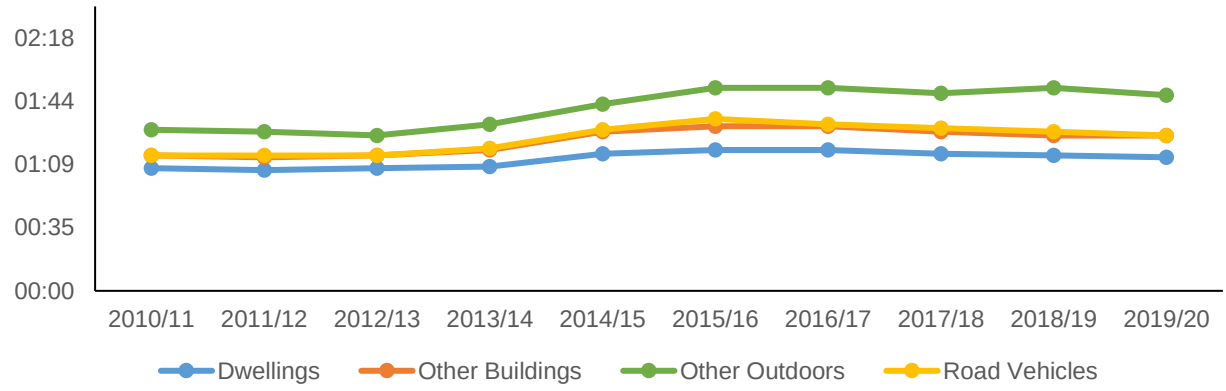
A range of possible factors could have contributed to the long-term increase in total response time to primary fires. These may include changing traffic levels and control staff typically asking more questions of the caller to better assess the risk and attendance needed. There may also be other factors, locally or nationally, which affect response times, such as urban sprawl and new housing deveolpments outdating the strategic positioning of fire stations.
The table below provides a summary of the trends in the last year for response times to fires.

Table 2 Average response times to fires by response time component, type of fire with a summary of trends, England; 2019/20

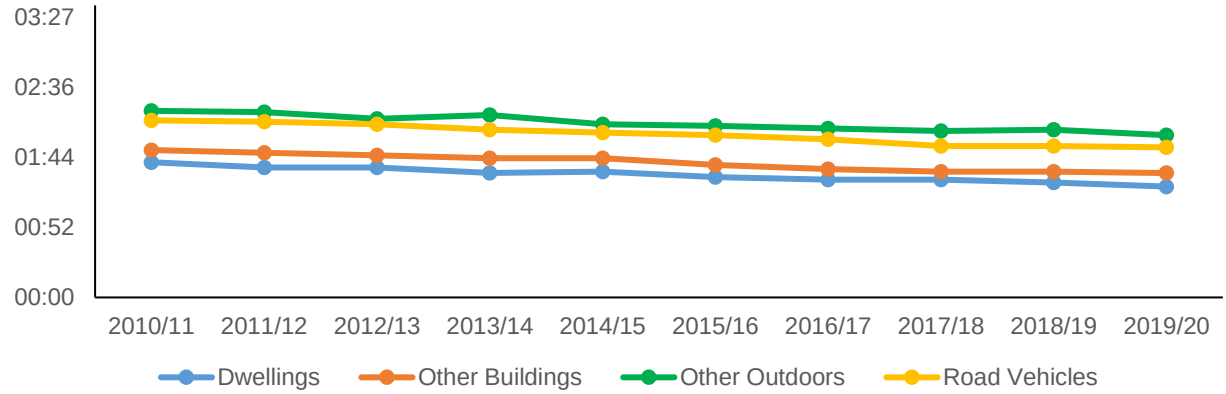
Type of Fire and response time component	2019/20	Change since 2018/19	Change since 2014/15
Primary			
Call handling	1 minute 22 seconds	-1 second ↓	-1 second ↓
Crew turnout	1 minute 35 seconds	-3 seconds ↓	-10 seconds ↓
Drive time	5 minutes 46 seconds	-3 seconds ↓	+17 seconds ↑
Secondary			
Call handling	1 minute 41 seconds	-6 seconds ↓	-6 seconds ↓
Crew turnout	1 minute 32 seconds	-3 seconds ↓	-8 seconds ↓
Drive time	6 minutes 5 seconds	-15 seconds ↓	+29 seconds ↑

Figure 11 Average response times (minutes) by response time component and type of fire, England; 2010/11 to 2019/20

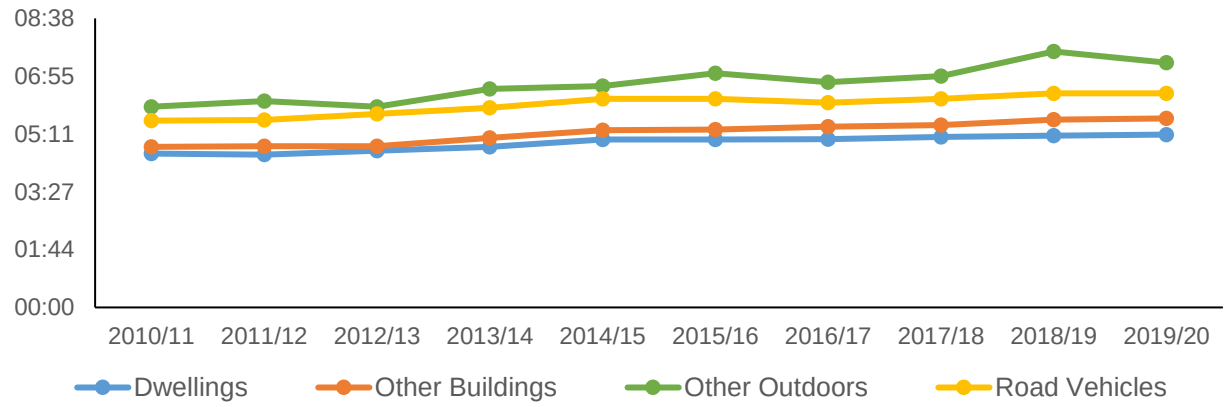
Call handling time



Crew turnout time



Drive time



TWFRS summary:

- call handling times have consistently decreased from 2014/15 across all of the types.
- crew turn out times have consistently decreased from 2014/15 across all of the fire types.
- drive times have decreased from 2018/19 across all of the fire types.

- the **quickest average call handling** time of the MET FRSs in response to Primary fires.

- the **quickest average crew turnout** time of the MET FRSs and quickest in England in response to Primary fires.

- the 3rd quickest average drive time of the MET FRSs and 5th quickest in England in response to Primary fires.

- the **quickest average call handling** time of the MET FRSs in response to dwelling fires.

- the **quickest average crew turnout** time of the MET FRSs and quickest in England in response to dwelling fires.

- the 3rd quickest average drive times of the MET FRSs and 4th in England in response to dwelling fires.

- the **quickest average call handling time** of the MET FRSs in response to other building fires.

- the **quickest average crew turnout** time of the MET FRSs and quickest in England in response to other building fires.

- the 4th quickest average drive times of the MET FRSs and 7th in England in response to other building fires.

- the **quickest average call handling time** of the MET FRSs and 4th quickest in England in response to road vehicle fires.

- the **quickest average crew turnout** time of the MET FRSs and quickest in England in response to road vehicle fires.

- the 3rd quickest average drive times in England and of the MET FRSs in response to road vehicle fires.

- the 3rd quickest average call handling time of the MET FRSs in response to other outdoor fires.

- the **quickest average crew turnout time** in England and of the MET FRSs in response to other outdoor fires.

- the 4th quickest drive times of the MET FRSs in response to other outdoor fires.

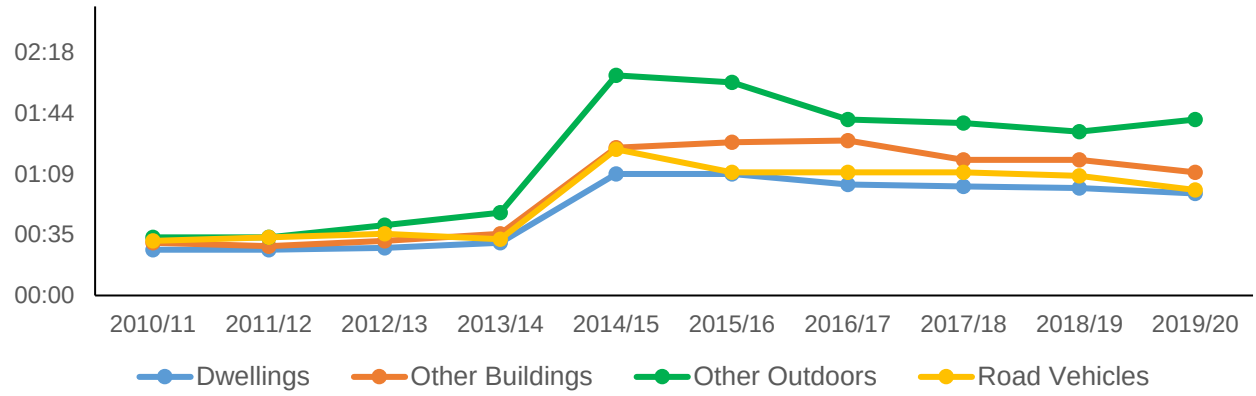
The table below provides a summary of the trends in the last year for response time components to fires.

Table 3 Average response times to fires by response time component, type of fire with a summary of trends, TWFRS; 2019/20

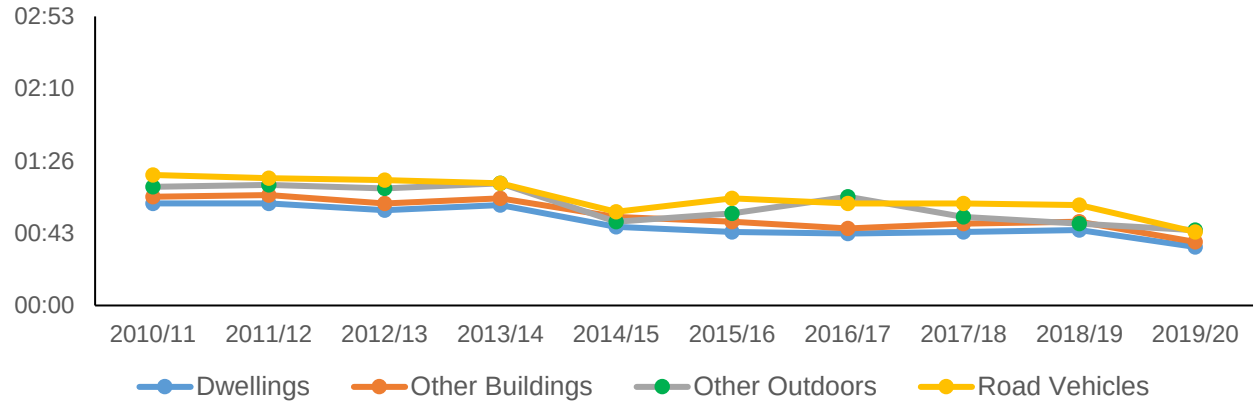
Type of Fire and response time component	2019/20	Change since 2018/19	Change since 2014/15
Primary			
Call handling	1 minute 3 seconds	-5 seconds ↓	-16 seconds ↓
Crew turnout	39 seconds	-13 second ↓	-12 seconds ↓
Drive time	4 minutes 46 seconds	-6 seconds ↓	+20 seconds ↑
Secondary			
Call handling	1 minute 22 seconds	-8 seconds ↓	-14 seconds ↓
Crew turnout	42 seconds	-11 second ↓	-12 seconds ↓
Drive time	6 minutes 10 seconds	-26 seconds ↓	+1 minutes 23 seconds ↑

Figure 12 Average response times (minutes) by response time component and type of fire, TWFRS; 2010/11 to 2019/20

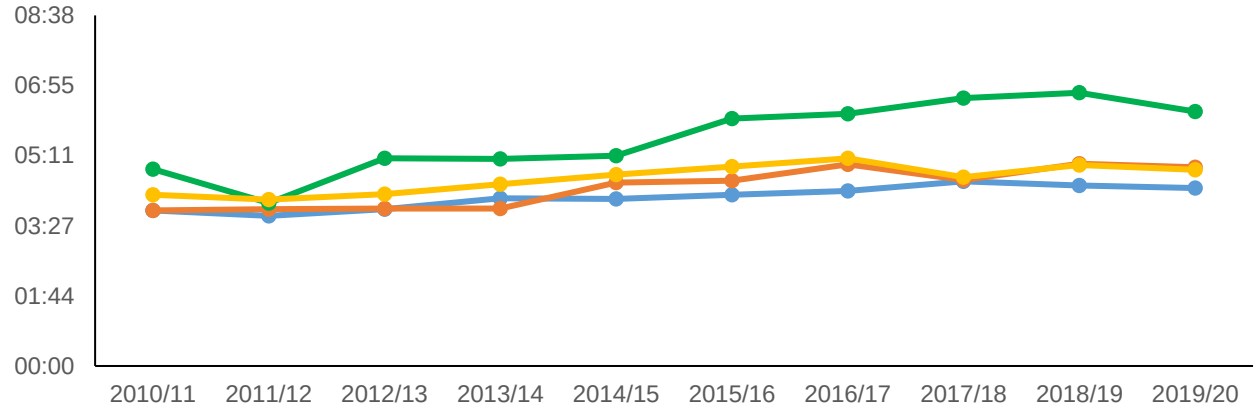
Call handling time



Crew turnout



Drive time



7 Call handling time

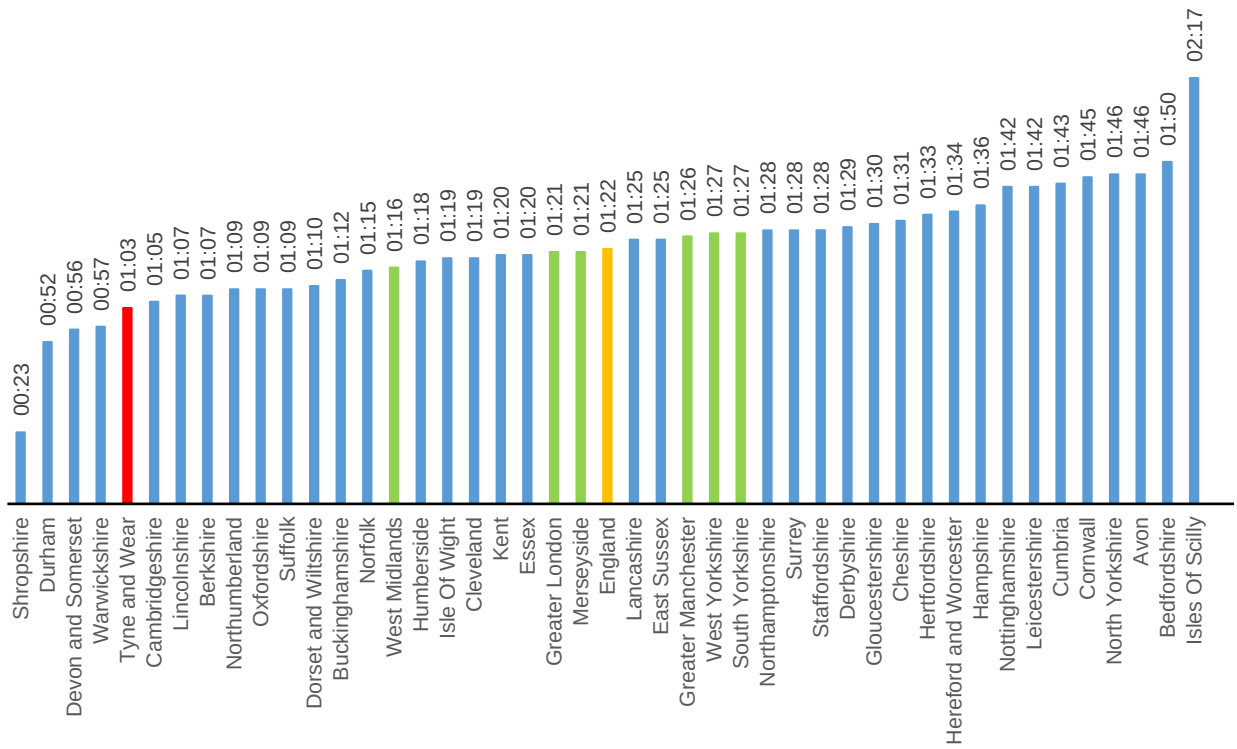


Figure 13 – average call handling times to Primary fires 2019/20

- Average call handling time to Primary fires in England during 2019/20 is 1 minute 22 seconds – decrease of 1 second from 2018/19 and increase of 10 seconds from 2010/11.
- Average call handling time to Primary fires in TWFRS during 2019/20 is 1 minute 3 seconds – decrease of 5 seconds from 2018/19 and increase of 34 seconds from 2010/11.
- TWFRS are the best performing MET with an average call handling time of 1 minute 3 seconds. Worst performing MET is South Yorkshire with an average call handling time of 1 minute 27 secsonds.
- TWFRS have the 5th fastest average call handling time in England in response to Primary fires. Best performing FRS is Shropshire with an average call handling time of 23 seconds. The worst performing FRS is Isles Of Scilly with an average call handling time of 2 minutes 17 seconds.
- Of the MET FRSs West Yorkshire had the greatest increase in average call handling time with an increase of 5 seconds.
- In England Isles of Scilly saw the greatest increase in average call handling time with an increase of 22 seconds.

8 Crew turnout time

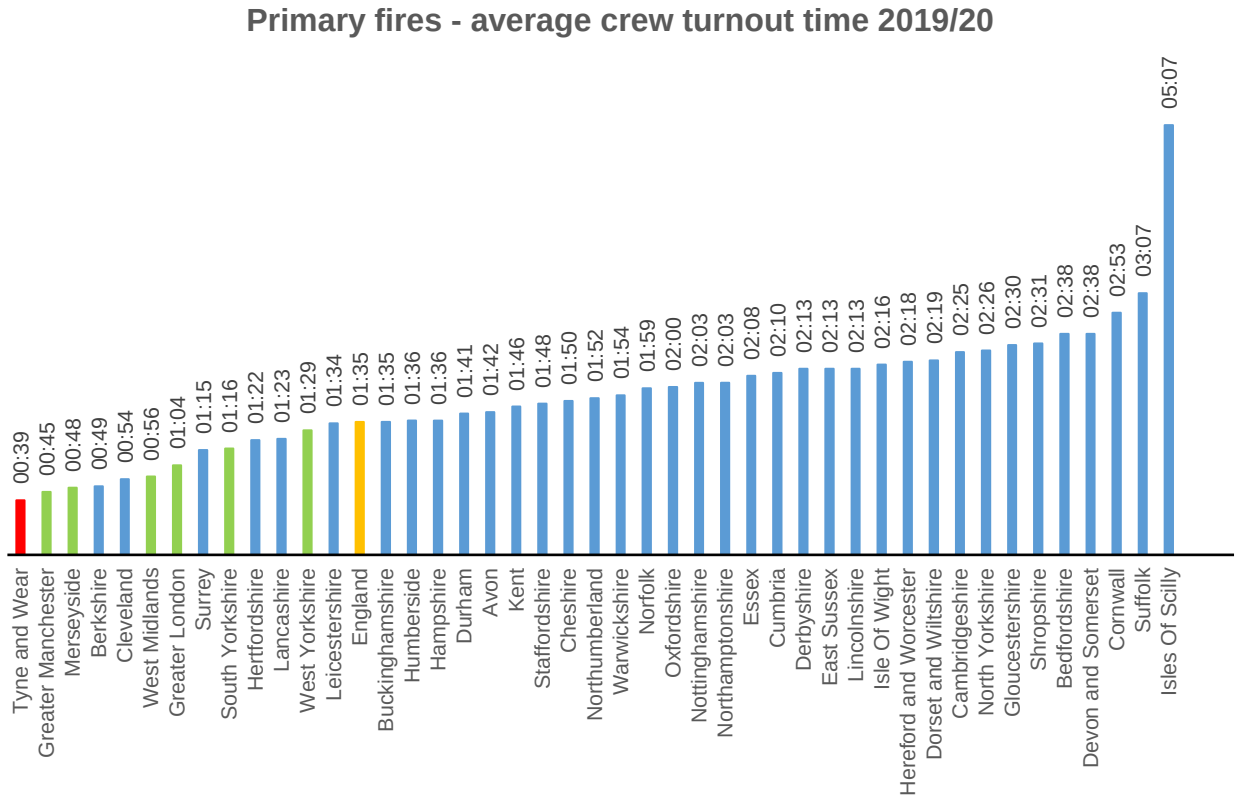


Figure 14 – average call handling times to Primary fires 2019/20

- Average crew turnout time to Primary fires in England during 2019/20 is 1 minute 35 seconds – decrease of 3 seconds from 2018/19 and decrease of 10 seconds from 2010/11.
- Average crew tunrout time to Primary fires in TWFRS during 2019/20 is 39 seconds – decrease of 13 seconds from 2018/19 and decrease of 29 seconds from 2010/11.

- TWFRS are the best performing MET with an average crew turnout time of 39 seconds. Worst performing MET is West Yorkshire with an average crew turnout time of 1 minute 29 seconds.
- TWFRS have the fastest average crew turnout time in England in response to Primary fires. Worst performing FRS is Isles Of Scilly with an average call turnout time of 5 minutes 7 seconds.
- The majority of the MET FRSs saw a decrease in crew turnout times or there was no change.
- In England Cambridgeshire saw the greatest increase in average crew turnout time with an increase of 22 seconds.

9 Drive time

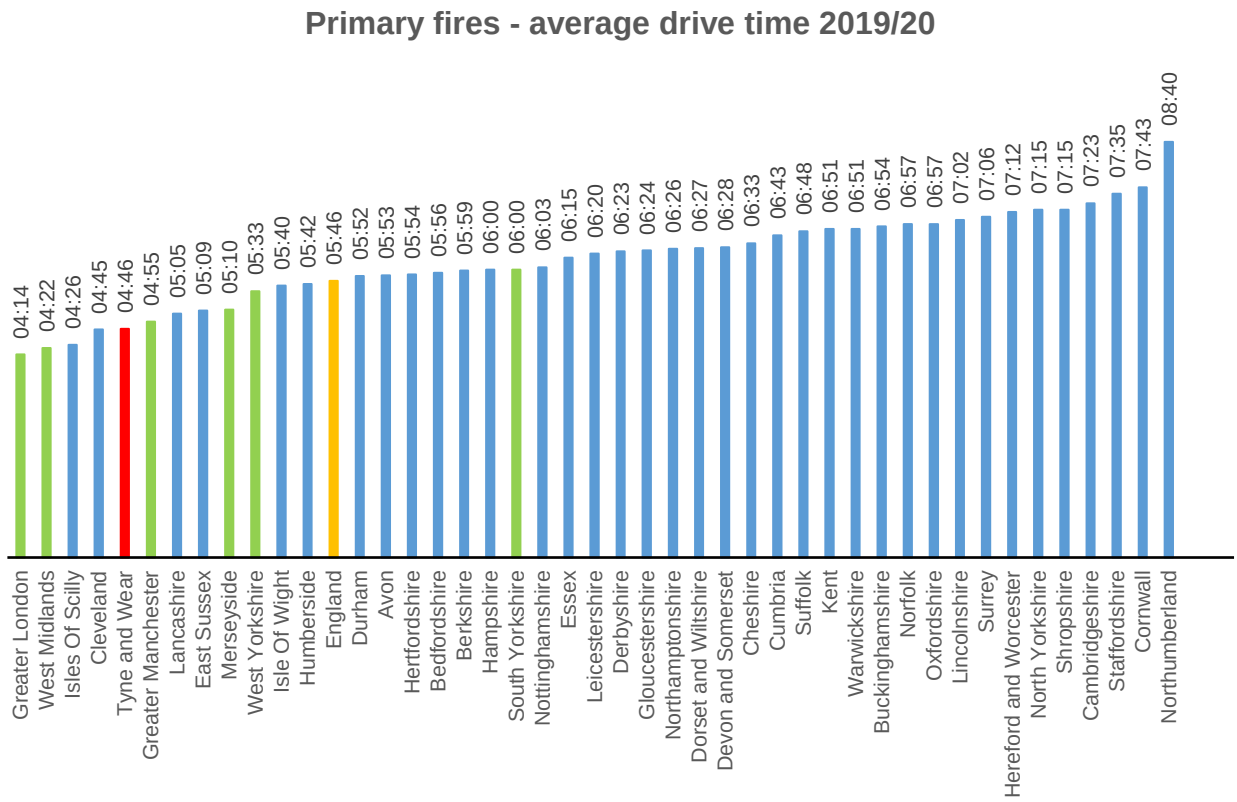


Figure 15 – average drive times to Primary fires 2019/20

- Average drive time to Primary fires in England during 2019/20 is 5 minutes 46 seconds – decrease of 3 seconds from 2018/19 and increase of 45 seconds from 2010/11.
- Average drive time to Primary fires in TWFRS during 2019/20 is 4 minutes 46 seconds – decrease of 6 seconds from 2018/19 and increase of 45 seconds from 2010/11.

- TWFRS have the 3rd fastest average drive time of the MET FRSs. Best performing MET is Greater London with an average drive time of 4 minutes 14 seconds.
- TWFRS have the 5th fastest average drive time in England in response to Primary fires. Best performing FRS is Greater London with an average drive time of 4 minutes 14 seconds. Worst performing FRS is Northumberland with an average drive time of 8 minutes 40 seconds.
- Of the MET FRSs West Yorkshire saw a a rise in average drive time with an increase of 1 second.

- In England Isles of Scilly saw the greatest increase in average drive time time with an increase of 33 seconds.

10 Response times and outcomes

There is not a straightforward relationship between response times and the outcomes of a fire as the type of fire and the time elapsed before the fire is discovered (both outside the control of FRSs) as well as other factors will also have an influence on the outcome. However, it is sometimes assumed that slower response times would be associated with greater instances of casualties/rescues and larger areas of damage due to the later starting of firefighting activities.

National summary:

- The average total response time to dwelling fires involving casualties and/or rescues in England in 2019/20 was 7 minutes 37 seconds. This was an unchanged compared with 2018/19.

- The average total response time to dwelling fires **not** involving casualties and/or rescues in England in 2019/20 was 7 minutes 46 seconds, a decrease of 2 second since 2018/19.

- In 2019/20 the average area of fire damage to dwellings (excluding those incidents with areas of damage over 5,000m²) in England remained unchanged compared to 2018/19. At the same time, the average response time to dwelling fires decreased by 2 seconds since 2018/19.

- In 2019/20 the average area of fire damage to other buildings (excluding those incidents with areas of damage over 1,000m²) in England increased by less than one per cent compared with 2018/19. At the same time, the average response time to other building fires increased by 2 seconds since 2018/19.

Dwelling fires with casualties (including fatalties) and/or rescues had consistently faster average response times than the majority of dwelling fires where no casualties and/or rescues were involved. Although these comprise a relatively small number of incidents so are potentially more susceptible to fluctuations in average response times, the pattern is consistent across all years in the series. This difference in response times to dwelling fires with casualties/and or rescues compared with those without is most strongly apparent in the drive time (six seconds faster in 2019/20). This suggests that, while dwelling fires are responded to most quickly of all primary fire types, response times appear to reduce even more for higher risk incidents which are likely to involve casualties or rescues, if it has been possible to collect this information from the caller.

The long term trend has been an increase in total response times, yet the average area of damage in both dwelling and ‘other building’ fires has been decreasing. It could be assumed that increased response time would lead to increased spread. However,

this assumption may be being countered by improved early detection (the proportion of households with a working smoke alarm has remained high), the gradual replacement of old furnishings with newer materials and improved fire resisting properties, new buildings with sprinkler systems and numerous other factors which are difficult to quantify.

Figure 16 Average total response times to dwelling fires with and without casualties or rescues and average extent of damage (excluding 5,000+ m²) for dwelling fires, England; 2010/11 to 2019/20

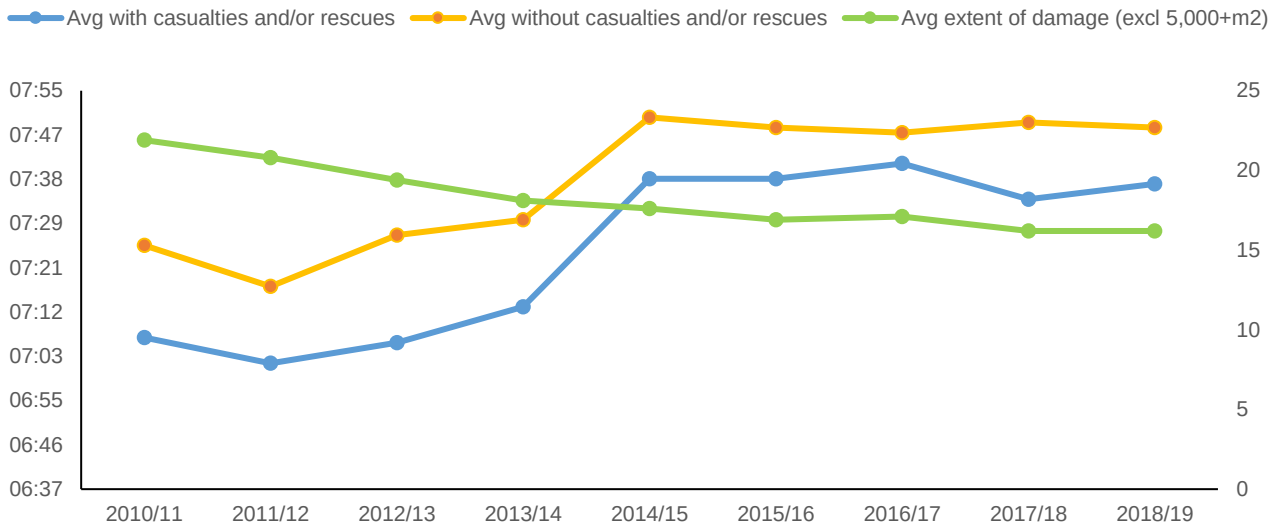
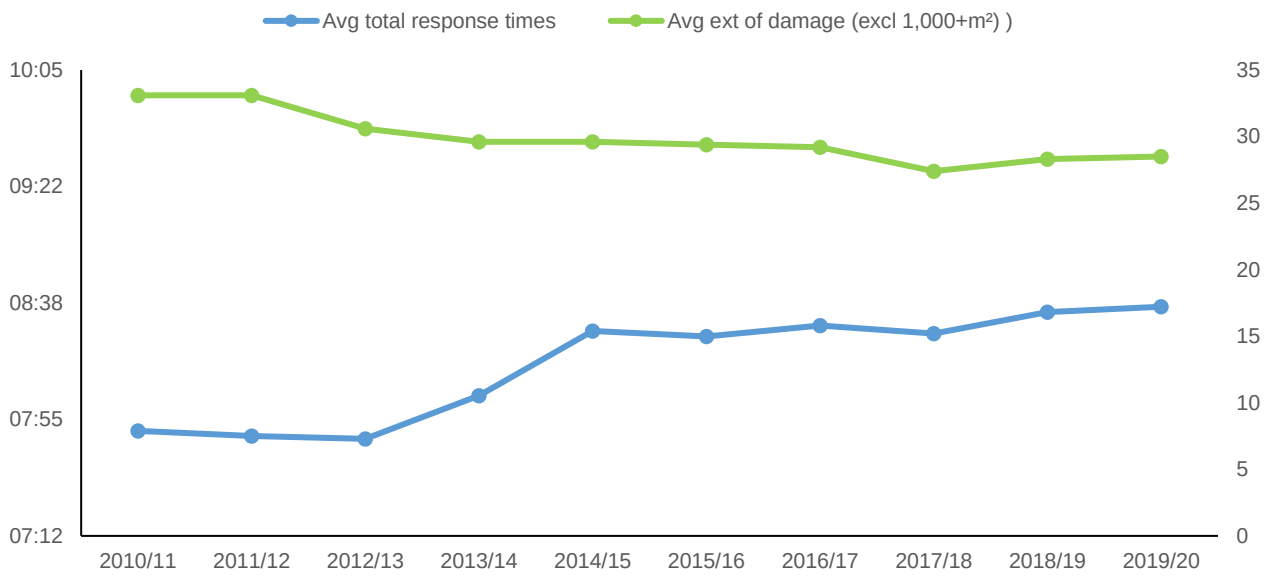


Figure 17 Average total response times and average extent of damage (excluding 1,000+ m²) for 'other building' fires, England; 2010/11 to 2019/20



11 COVID-19 National Lockdown

In response to the cornonavirus (COVID-19) pandemic, lockdown restrictions came into effect from 23rd March 2020 and imposed strict limits on daily life. These included significant restrictions on freedom of movement and a requirement by law for a range of businesses to close.

The figures presented in this bulletin relate to incidents attended by FRSs during the period 1 April 2019 to 31 March 2020. In response to the coronavirus pandemic, restrictions in England and Wales started from 12 March 2020 and the first national lockdown applied on 23rd March 2020. The start of the restrictions and the first eight days of lockdown are therefore captured in IRS data for the year ending March 2020.

Home Office statisticians have been monitoring incidents on the IRS since the beginning of the Covid-19 pandemic lockdown to ensure that data quality has not been reduced, and that all incidents are recorded. In addition, FRSs were asked to upload the information more quickly after attending an incident so that the IRS could be used to produce management information to monitor the impact of COVID-19 on FRSs capactiy.

To gain an understanding on the effect on lockdown on average response times an upper and lower range using the mean and standard variation of the 2015-2019 baseline figures, was calculated. Any figures beyond this range would fall outside of what would be expected, although these results could be explained by various factors such as bank holiday dates, the weather and not simply the lockdown.

The average response times to fires attended by FRSs during the COVID-19 lockdown showed two phases:

National summary:

- In the first 8 weeks between 22nd March and 16th May 2020, five weeks showed an average response below what was expected. This could be explained by lower traffic levels resulting in quicker drive times.

- In the following six weeks between 17th May and 27th June 2020, two weeks showed an average response time below what was expected, possibly reflecting the hot weather and an increased number of outdoor fires in these weeks.

- The average response times to secondary fires attended by FRSs during lockdown were in the range that would be expended for nine of the 14 weeks, however for five weeks (10th May to 13th June 2020) the response time was above what was expected, again possibly reflecting the hot weather and an increased number of outdoor fires in these weeks.

Figure 18 Average total response times to primary fires, England; 22nd March to 27th June 2020 compared with the 2015-2019 baseline

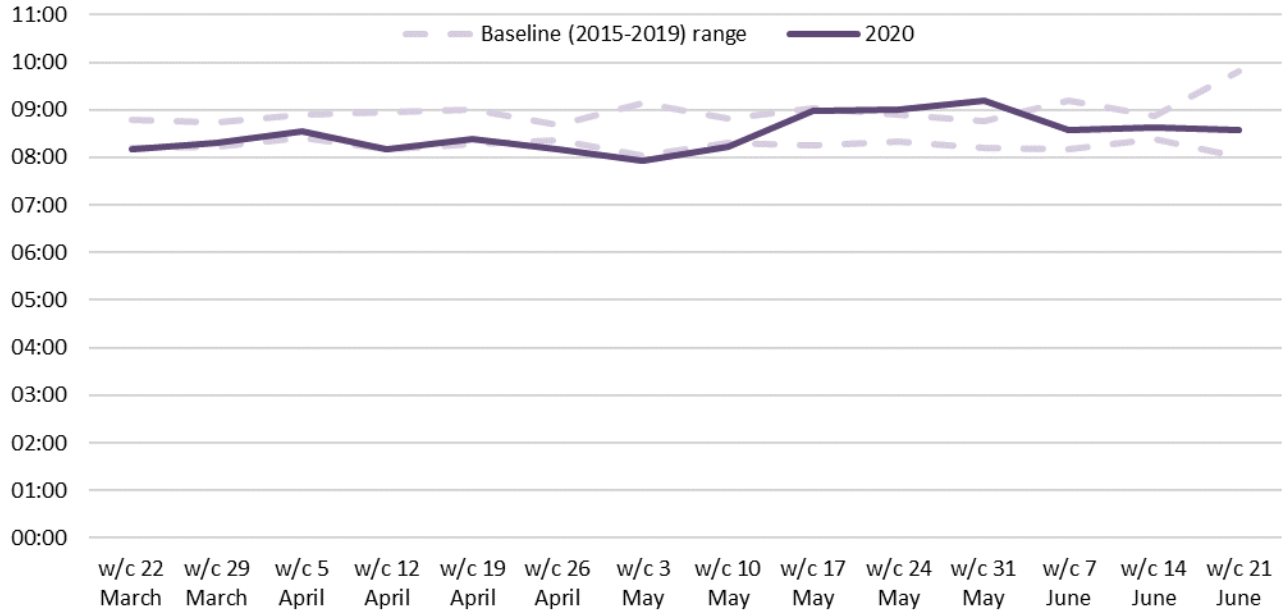
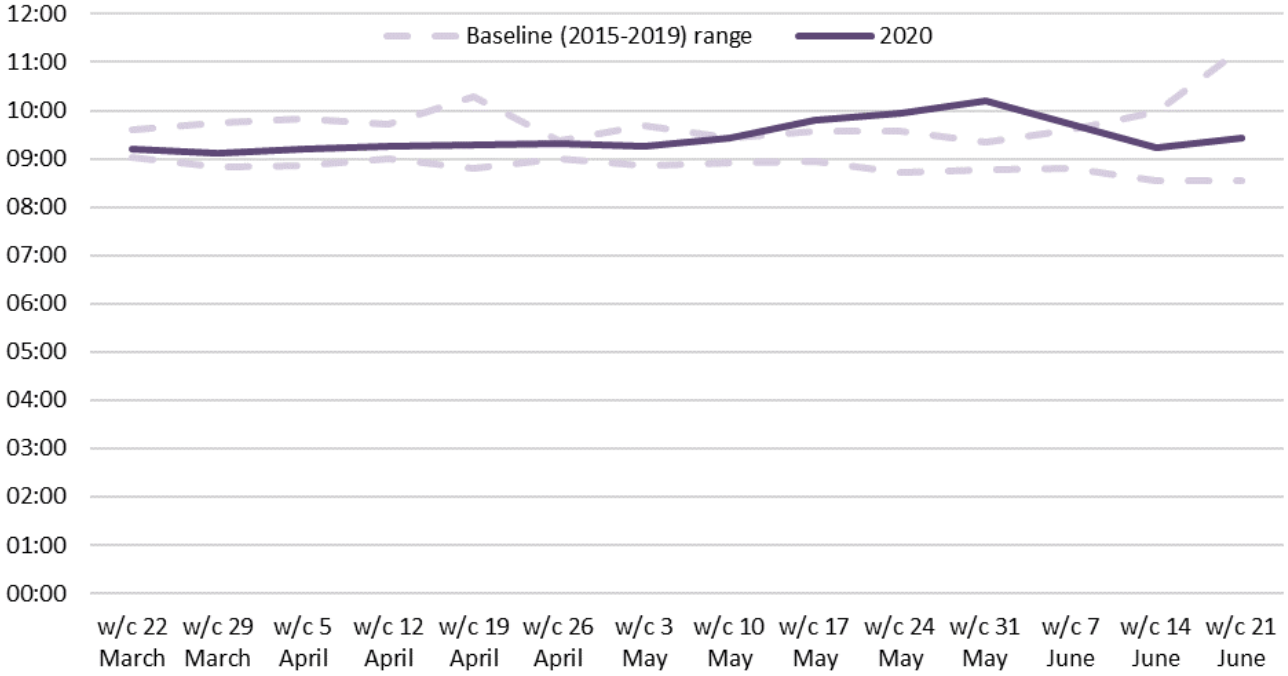


Figure 19 Average total response times to secondary fires, England; 22nd March to 27th June 2020 compared with the 2015-2019 baseline



Appendix F

Special Appliance Review

Department: Operations Dept.

Created by: GM Ken Corbett

FAO: AM Leach

Date

Tyne and Wear Fire and Rescue Service
Creating the Safest Community
www.twfire.gov.uk

Introduction

The provision of special rescue resources in TWFRS has evolved in an abstract manner over several decades. Up until the introduction of the 2004 FRS Act there was not even a statutory duty for FRS to attend road traffic collisions, let alone perform water rescues or deal with chemical incidents or building collapses. Where there is no statutory requirement, there is no funding, and the initial introduction of rescue equipment was achieved from within existing FRS budgets and with minimal guidance available in terms of the standardisation of equipment or capabilities to be achieved.

TWFRS delivers an emergency service within a complex framework of law, regulation and operational guidance. As the role of the fire service has developed over the years, beyond just firefighting, the range of activities undertaken has continued to expand and widen. Correspondingly, the range of equipment and skills training required to meet this developing role has increased greatly.

In reviewing the disposition and deployment of specialist resources, TWFRS recognises a statutory duty to reduce the risks to our communities whilst delivering Best Value; making certain that the communities we serve receive the best possible service, and at the same time providing the greatest possible value for money. The risk management approach ensures this. Under the heading of Integrated Risk Management Planning, we are required to identify the risks to the community, undertake a process to prioritise these risks, and ensure an appropriate blend and distribution of capabilities to address them.

Over recent years several interim reviews of the provision and function of Special Appliances have been undertaken to ensure the provision of specialist equipment to meet the changing risks within the Service area. The current provision of Special Appliances and equipment ensures that the Authority has the resources to meet a full range of operational incidents, up to and including major incidents. With consideration to changing risk profiles, including the complexity of planning for incidents such as those resulting from terrorist activities and environmental disasters. It is appropriate that the Service reviews the provision and location of specialist appliances, taking into account these developing risks over the next 5 - 10 years.

The review is linked in with the IRMP response review and is based on a number of key principles. These include:

- Looking at the current location of the Special Appliances and those incident types they predominantly attend.
- Recognition of the fact that the Service hosts a number of National Resilience assets, which must be retained, however, are open to be relocated.
- The resilience and interdependencies that exist between those stations which are currently linked through the provision of the Specials
- The ability of the Service to provide initial acquisition and maintenance of competencies for personnel who staff special appliances.
- The current level and positioning of fire stations which are suitable in terms of personnel, crewing arrangements and infrastructure.

- Being cognisant of neighbouring FRS's and whether they can provide resilience and support.
- Cost is also considered, there will be costs involved should special appliances be relocated due to training requirements and building works, costs will be difficult to calculate at this stage.

Current Capabilities and Disposition

Station	Pumping Appliance	Special Appliance	Capability	Linked Station
A	Cat 1 / Cat 2	A 07	C&C	
C	Cat 1/Cat 2	TRV X 2		
E	Cat 1	ALP / A12	Aerial / Welfare	
F	Cat 1/Cat 2	Fireboat	Water Rescue	
G	Cat 1		Mass Decontamination	
H	Cat 1			
J	Cat 1/Cat 2	MDU	Mass Decontamination	
K	Cat 1/Cat 2	K 06 / 4x4	Heavy Rescue Line Rescue	
M	Cat 1	ALP	Aerial	
N	Cat 1/Cat 2	TRV X 2		
Q	Cat 1/Cat 2		Mass D Support	
S	Cat 1	Hazmat	Mass D Support	
T	Cat 1		Heavy Rescue Line Rescue	
V	Cat 1/Cat 2	ALP / V 05	Aerial / Foam and Logistics	
W	Cat 1	HDIM		
Y	Cat 1	HVP / 4x4	High Volume Pump	
Z	Cat 2			

National Resilience Capabilities

At present TWFRS host the following NR capabilities:

USAR – BTC based with operators spread across the service
Mass D – Based at Stn J with support from Stations G, S and Q.
HDIM – Based at Stn W with operators from FDO's
HVP – Not NR asset but registered. Based at Stn Y
SRT – Based at Stn F
MTA – Operators spread throughout service, predominantly FDO's and BTC

Recommendations

A brief summary of the report's recommendations by capability, is as follows;

Command and Control

It is recommended that the Command and Control Appliance is retained at West Denton Fire Station

Targeted Response Vehicles

It is recommended that a Targeted Response vehicle is 'twinned' alongside an ALP at a location chosen by the IRMP group, it is also recommended that two of the TRV's are to expand their current capability.

Fireboat

It is recommended that the Service Fireboat capability and SRT capability is retained at Byker Fire Station.

Special Heavy Rescue

It is recommended that the Special Heavy Rescue Appliance is retained at South Shields Fire Station

ALP

It is recommended that the Service retains a minimum of 2 ALP's. Location to be decided by the IRMP group.

V 05 / S 04

It is recommended that these 2 appliances and their capabilities be consolidated into one appliance, to be positioned at a location as decided by the IRMP group.

Welfare Appliance

It is recommended that this capability be relocated to a station alternative to its current location. To be decided by IRMP group. One consideration for this is to utilize it as a mobile teaching unit to supplement P&E activities.

National Resilience Capabilities

Mass D capability to remain the same configuration
HDIM to be relocated to Washington Fire Station to enable closer training links with the BTC.
HVP to remain at Swalwell Fire Station.
SRT response model to remain the same.
USAR and **MTA** capability to remain the same at present. (A separate review of this capability would be required to amend the current response model).

Command and Control – Current Response Model

The Service currently has one vehicle that provides enhanced Command and Control (C&C) at incidents. This vehicle was purchased in 2018 and was a direct replacement for the existing vehicle. The vehicle is located at West Denton Fire Station and staffed by personnel who primary staff A01. Resilience and support around the staffing and provision of this capability, is supplied by personnel at Gosforth Fire Station.
Those personnel who provide this capability require additional driver training along with ongoing operator training on the vehicle.

Over the last 5 fiscal years, (1st April 2015 to 31st March 2020), A07 has booked in attendance at a total of 61 incidents. A large proportion of these incidents have been at Newcastle International Airport.

The recent trial introduction into the Service of A02 will provide further resilience of this capability and will lessen the burden placed on personnel at Gosforth Fire Station, as A01 and A02 will now provide the personnel needed to effectively staff the appliance. Should A02 be removed following the trial, personnel at Gosforth Fire Station will continue to provide resilience and support as is the current model.

Recommendation/Option

Following the introduction of A02 into the Service, it is recommended that this capability is retained at West Denton Fire Station. The additional personnel will provide resilience to this capability, and training on the operation of the vehicle can be cascaded down by existing personnel. There will be a requirement for driver training courses to be provided by the Vehicle Training School (VTS), however this can be managed in the medium term and should have minimal impact on the availability of the capability.

The distribution of incidents attended is spread across the Service area, and there are no tangebile benefits assocated with relocating this capability.

It is recognised that the vehicle and capability is underused, and there is scope for regional collaboration to increase its useage across the other regional FRS's.

Investigations around developing the capability of one of the TRV's into an additional smaller scale C&C are an option that should be explored and strongly considered.

There is an option to relocate the appliance to an alternative location however there would be no improvement on its effectiveness to respond, and would entail substantial training requirements.

Additional data and information is captured within **Appendix A**.

Targeted Response Vehicles – Current Response Model

TRV's are located at Stn Charlie and Station November, they have had various mobilising models since their inception, all of which were based on risk. They are staffed by 2 personnel and are deployed to the lower level 3 and 4 incidents types throughout the service area.

Their current response model is that at 18:00hrs, the category 2 appliances at Stn C and N are replaced by 2 TRV's, they remain available for fire cover until midnight when the category 2 appliances are then re staffed to provide pumping appliance cover through the night.

They are mobilised to level 3 and 4 ASB type incidents that can be attended within 12 minutes. This model ensures the pumping appliances are available for larger more complex incidents.

TRV's have proved to be a valuable addition to the Service response model, and have provided aspiring Officers the opportunity to take charge of an appliance that will only attend lower risk incidents. Due to these limited incident types that TRV's attend, they do have the operational capacity to attend other incident types to provide other roles and this should be explored.

One such role would be that of a welfare vehicle, and another smaller scale C&C vehicle. Through diversifying the role of TRV's it will provide increased support, resilience for existing special appliances along with opportunities to review alternative methods of providing the capabilities that other special appliances provide.

Driver training is required for the TRV's and any move in their locations would require the VTS to carry out such training.

Appendix B details the number of incidents and their location over the last 5 years.

Recommendation/Option

It is recommended that 2 TRV's are 'twinned' with ALP's at locations designated by the IRMP group. Due to the nature of the incidents attended by the 2 capabilities it is unlikely that both appliances would be required to attend the same incident. This model maximizes the effectiveness of the 2 operational personnel required to staff both appliances. It provides a dual capability at those locations without depleting pumping appliances.

There are an additional 2 TRV's in the Service, it is recommended that investigations are undertaken to assess if these vehicles can be adapted to undertake the roles of additional capabilities eg. Welfare, and command and control. Through an effective adaptation of the vehicles they will still be able to attend level 3 and 4 type incidents as their firefighting capability will be retained. The staffing of the appliances should

be reviewed to include an option to primary staff the appliance (dependent on demand), utilising available 'sector competent' personnel throughout the Service. There is an option to retain the current response model and not 'twin' the TRV's with ALP's however this will not optimize the effectiveness of either of these capabilities

Fireboat – Current Response Model

The current Fireboat and water based response capability is held at Byker Fire Station. (F). This capability consists of a fireboat which is permanently moored on the River Tyne, a permanently inflated RIB currently kept on a flatbed at the station, and an additional inflatable RIB which is stored and transported to incidents within a purpose built 4x4 transit van.

All personnel who are stationed at Byker Firestation have undertaken specialist SRT training with others also undertaking specialist coxswains courses. Regular maintenance of skills must be undertaken, including regular water dips. The SRT capability is also a National Resilience capability which can be mobilised nationally to assist with major incidents.

The Fireboat at Station F has recently undergone a full refurbishment with personnel undertaking training to familiarize themselves with the upgrades.
The fireboat response is primarily based around 'threats to jump' from the various bridges on the River Tyne and Wear. The response to the River Tyne is effective and efficient however the River Wear response is affected by travel times and suitable locations to launch the boat.

There are different areas of jurisdiction amongst the various Emergency Services, dependent on the incident type and location, and geographically, there are different areas of response. The variation in incident types and locations on the rivers results in a different response from the Fire Service. Details are contained with **Appendix C**.

Recommendation

It is recommended that the Fireboat, SRT capability and response model remains as is. This recommendation is due to a combination of various factors, including the existing highly skilled personnel which are already able to provide the response from Byker Fire station, as well as the location of the station and location of the vast majority of incidents the capability responds to.

The role the RNLI and HM Coastguard play, is a factor that contributes to this recommendation. Principal responsibility for the initiation and coordination of Search and Rescue (SAR) resources in response to Maritime incidents will rest with HM Coastguard at the following locations:

- On the River Tyne incidents which occur east of the Tyne Tunnel
- On the River Wear incidents which occur east of the Northern Spire Road Bridge

As most incidents occur on the City Centre bridges located on the River Tyne, the current response model is the most effective and efficient. Those incidents that occur around the bridges on the River Wear are coordinated by HM Coastguard. Those

incidents further upstream, tend to occur in shallower water, and can require a SRT response which is provided effectively by the current Fire Service response model. Details shown in **Appendix C (1)**

Special Heavy / Line Rescue – Current Response Model

The special heavy rescue capability was up until a couple of years ago provided by those personnel at Hebburn Fire station (T). In 2016 the category 2 appliance was removed from the fleet as part of the IRMP. This resulted in a need to incorporate South Shields Fire Station (K) into this response capability.

The South Tyneside District Stations now combine to host the heavy rescue capability along with the line rescue and bariatric capability. The appliance is stationed at (K) with personnel at Stn (T) providing support and resilience. The individuals at these stations are highly skilled and undergo specific training to be able to provide these capabilities. The appliances provide a crane capability which also allows for a heavy animal rescue capability to be provided.

Heavy rescue and animal rescues are spread across the Service area with transport links allowing for an effective response. As the appliance is not primary staffed any mobilization and attendance can be supported by personnel attending from either South Tyneside Station.

The line rescue capability is held at South Shields, with support and resilience provided by Hebburn Fire Station. This capability is utilized predominantly at suicide threats from the bridges located at Newcastle City Centre and Sunderland. There is also a number of incidents located at the cliffs within South Tyneside.

This appliance also provides a bariatric rescue capability which is used Service wide.

A full breakdown of heavy rescue incidents attended is contained within **Appendix D.**
A full breakdown of line rescue incidents attended is contained within **Appendix D (1)**

Recommendation

The heavy rescue capability held at Station K is one that provides an essential response capability, it provides the heavy rescue and animal rescue capability for the Service. Individuals at the locations undergo specific heavy rescue training and training on how to utlise the palfinger crane.

It is recommended that this capability be retained at South Shields Fire Station with support provided by personnel at Hebburn Fire Station. This will enable a 2 pump station to be able to provide sufficiently trained personnel to provide the capability, with resilience provided by Hebburn Fire Station. If in the future, there is a change to the configuration of appliances within South Tyneside, and a newly developed Hebburn Station acquires an additional appliance, it may present the opportunity to review the location of the appliance.

The capability should be retained in its current response model as there is no tangible evidence to support moving this capability. Those personnel who currently provide this capability are highly skilled and experience and to replicate this at an alternative location within the Service area would be both time consuming and costly.

Aerial Ladder Platforms – Current Response Model

The Service has 3 ALP's providing a response capability, these are located at Gateshead Fires Station, Gosforth Fire Station and Fulwell Fire Station. This spread of ALP's across the Service area provides the ability to mobilise this capability to any location within the Service area in an effective and efficient manner. Up until recently all ALP's were dual staffed with pumping appliances at their location, however a recent decision by the Service allowed for the ALP at Fulwell Fire Station to be primary staffed (which is part of a pilot).

Control will mobilise the closest available ALP to the incident when an ALP is requested, following the recent change to the staffing of the ALP at (M), an update to the Pre-determined Attendance (PDA) at high rise incidents now includes the immediate mobilization of the ALP from Fulwell Fire Station.

As a result of the current model for the other 2 ALP's every time an ALP is mobilized to an incident it results in a pumping appliance going off and 2 firefighters being left spare. This is an inefficient way of providing this capability. The 3 locations of the ALP's optimize the services response time but it can be argued that there is an over provision based on the data which shows the lack of incidents that require 3 ALP's to be in attendance at simultaneous incidents.

The IRMP group should review the number of ALP's and their location to ensure an effective, efficient response is continued. DDFRS does have an ALP which can be drawn on as part of the 13/16 agreement however due to its location in the south of the county there would be a long delay in its attendance at TWFRS incidents.

All personnel who staff the ALP's undergo additional driver and cage operator training.

Details around the ALP's mobilisations are found in **Appendix E**.

Recommendation/Option

It is recommended that a review of the staffing model of ALP's is undertaken, a more efficient way of delivering the capability would be to 'twin' ALP's with TRV's. This response model would allow for the capability to continue to be provided, but also prevent the depletion of a pumping appliance and under utilisation of the 2 personnel who can be left on station when an ALP is mobilized.

Data and information suggests that 3 ALP's are an over provision due to there being no incident when all three ALP's were in use at the same time, however the ability to have three ALP's does provide resilience should ALP's be defective or more than two are required at any one time. The decision around the number of ALP's held

within the Service is one for the IRMP group as is the location of where ALP's should be kept.

There was an action from a previous IRMP which reduced the provision of ALP's in the Service from three to two, this action was never carried out and as a result the Service is now running with an ALP which is getting quite old in terms or expectancy.
.

The Specials group recommends retaining at least 2 ALP's, which would provide resilience to one another, there should also be a greater level of collaboration with DDFRS who are able to provide an additional ALP should that resilience need supplementing.

An option would be to invest in a new ALP and continue to maintain three ALP's, the cost of a new ALP would be in the region of £700k so this would require substantial investment from the Service.

V05/S04 Logistic Support – Current Response Model

The Service currently has 2 curtain sided flat beds c/w a moffet mounty. These appliances are essentially used for transporting various capabilities to the incident ground. Capabilities include:

Foam
Salvage
BA Sets
Pollution Equipment
Light/heavy rescue equipment

The appliances are currently stationed at Gateshead and Washington Fire Stations. Equipment is stowed on stillage's and these are removed at the incident giving access to the equipment. The provision of foam and associated equipment is the main capability provided by the Gateshead appliances and this is permanently kept on the appliances to enable an immediate response should foam be required.

The appliance at Washington Fire Station has struggled with its identity and was until recently stationed at Newcastle Central Fire Station. It currently provides a 'light / heavy' rescue capability which is somewhere between the heavy rescue capability provided by South Shields and the general rescue capability that all pumps provide. It also has an element of environmental and hazmat equipment and the appliance.

Additional training is provided to personnel at both locations including heavy rescue training and foam training, there is also a need for moffat mounty drivers and banks people.

Recommendation/Option

Given the purpose of the appliances, and their ability to provide logistical support through the delivery to the incident ground of different items of equipment, there is an element of duplication here. The system of loading equipment onto the appliance via stillage's allows for multiple pieces of equipment to be located at one location with one appliance, and depending on the requirements, that equipment can be loaded onto the appliance for transportation.

It is recommended that equipment be located within one location and only one appliance be retained to deliver that equipment to the incident ground. A full review of the equipment and capabilities will decide on what equipment is and isn't required as much of it is unused, and a legacy from previous appliances. It is specifically recommended to review the need to retain a light/heavy rescue capability as since this was originally created, the rescue equipment on all front line appliances has developed greatly.

Mobilisation data is contained within **Appendix F**

The consolidation of these 2 appliances into one will enable the other appliance to be repurposed by TSC. The location for this appliance and centralization of capabilities will be decided by the IRMP group.

Welfare Vehicle (Current Response Model)

The current welfare capability is provided by A12 which has recently moved location from station A to Station E. This vehicle was adapted from an existing 'Outreach Vehicle' in 2015 and provides a toilet and rest capability at larger scale incidents. It has also been recently upgraded to provide an alternative to the Service Command and Control appliance and provides resilience to this vehicle.

There is a requirement to undertake a driver conversion course to be able to transport this vehicle to the incident ground. Once in attendance it can be left in situ and its use managed by the Incident Commander. The provision of this vehicle is at the expense of a pumping appliance as it is not primary staffed and the mobilization of the vehicle is generally carried out by the driver of E 01.

The vehicle is used infrequently although it has proved to be extremely beneficial at protracted incidents. The provision of a suitable toilet on the incident ground is something the Service must strive to do on a regular basis, and this vehicle can do that.

Recommendation

It is recommended that this vehicle is retained for the purpose of providing a welfare capability, however it is also recommended that the vehicle be relocated away from its temporary location at Stn E. This will mitigate the risks associated with Stn E personnel already being in attendance at a large scale incident for the provision of command and control and as such not being immediately available to transport this vehicle to the incident. One possible solution is to relocate this vehicle to become a P&E resource to supplement the Safety Works facility, whereby the vehicle is fitted out with an interactive package which can be used to visit education locations whilst still maintaining its capability to respond as a welfare vehicle.
The alternative location to be designated by the IRMP Group.

In addition to this recommendation, it is also recommended that a TRV be adapted to be able to provide a welfare (toilet) capability that can be provided on the incident ground providing much needed resilience.

National Resilience Capabilities – Current Response Model

Mass Decontamination Unit (MDU)

The MD capability is located at Station J. This location was chosen as part of the early New Dimensions Project in 2003/04. The capability supplied by this project at this time was the Incident Response Unit (IRU).

The most likely reason for choosing this location is able to physically accommodate the size of the vehicle and the footprint available to set up the MD ‘footprint’ in the Station yard.

The MDU has become well established at Station J with all crews at this Station trained, including have one Mass Decontamination Instructor (MDi) per watch to offer specialist training.

The MD mobilising model requires 24 personnel to get the MD structures and ancillary equipment to work. This model is based on 6 pumping appliances crewed with 4 firefighters. The requirement is to have available 16 fully trained personnel supported by 8 un-trained personnel.

To support the two pumps at Station J, support is from the following appliances:

- G01-Wallsend
- Q01 and Q02-Farringdon
- S01-Washington

Recommendation

It is recommended that the current response model and provision remains the same. The support pumps should also remain the same as there is no benefits associated with changing this, as oppose to a number of issues should the MDMM change.

High Volume Pump (HVP)

National Resilience High Volume Pump (HVP) Capability is made up of Assets strategically located across England that have the ability to respond to a range of catastrophic incidents, including natural and deliberate events. The HVP Capability has defined risk based responses in the event of major water related events and major fires, at local, cross border and national level incidents.

The HVP Capability is made up of 46 assets, strategically located throughout the country. The fully trained teams are hosted across 38 different FRSs.

It should be noted that the HVP located in Tyne and Wear and based at Station Y, is NOT part of the assets outlined above and is an Authority owned asset (albeit identical in design and operation as all others in England and Wales and available on the national register for out of area deployment and support of the above). Therefore, any future replacement/end of life asset refresh will have to be financed by the Fire Authority.

The original model at Station Y was supported by two pumps (crew of 8). Since the removal of Y02, support is now provided from Station Q who have basic training in hose retrieval and hook lift operation. It should be noted that it requires 5 trained personnel to deploy the HVP with that 5th person either drawn from a member of personnel who is on duty at another location, or recall to duty.

Recommendation

This capability should remain as is, however moving forward the HVP is due for renewal in years 2024/25 and a full review of this capability should take place to ascertain whether or not it should be refreshed. A budget of £160k has been highlighted for captured for the replacement costs. National Resilience will need to be consulted to ascertain the national capability and response model going forward.

Detection Information and Monitoring (DIM)

The DIM Capability plays a pivotal role in the event of a terrorist incident involving Chemical, Biological or Radiological (CBR) materials, it is vital to obtain confirmation whether there are CBR materials present, where they are and which specific materials are present.

The DIM vehicle is staffed by specially trained Officers who work on the flexi-duty rota and supported by the pumping appliance at Station W.

The DIM vehicle is located at Station W. The legacy arrangement for choosing this location was most probably due to the support available from the Retained Appliance (W02). Since this time, support have been available from W01.

Recommendation

There is scope to consider re-locating the DIM vehicle from Station W to another location. Greater potential to train with the DIM Vehicle at the BTC on a more regular and convenient way, may give some weight to relocating the DIM vehicle to Washington Fire Station, this would require those personnel at Washington to receive training which would be provide by existing DIM Officers along with a training provider.

Data for all NR capabilities is found in **Appendix G**

USAR and MTA

The USAR and MTA response model and capability within the service, is outside the scope of this review due to their complex nature. The Head of Resilience will undertake a separate review of these two capabilities in the near future.

Financial Implications

As with pumping appliances, all specialist appliances are included within the appliance replacement programme. Any amendments to the specials fleet and capability will be reflected in this programme.

Below is a table showing when all special appliances are due for renewal and the estimated costs associated with that.

Ongoing revenue running costs of all appliances are also highlighted to give an overview of all those costs associated with managing special appliances.

Specialist Appliance	Capability	Replacement Date & Cost	Annual Running Costs
CAT 03	ALP	There has been a delay in the disposal of 1 of the three ALP's. As such no budget was set for this appliances replacement. The two other ALP's are as follows: **2025 - £750k** **2032 - £850k**	The average running cost of an ALP is: **£9863**
CAT 04/05	Logistics	As these appliances were bought at the same time they are due for replacement at the same time. **2027 - £220k x 2**	The average running cost of a logistics vehicle is: **£4187**
CAT 06	Heavy Rescue	**2027 - £300k**	**£7605**
CAT 07	Command & Control	**2033 - £850k**	**£2908**
CAT 08	Fireboat Carrier	This has been linked in with the replacement of F09 which is due to take place in 2028. **2028 - £130k**	**£2155**
CAT 09	Fireboat	Following a refurbishment the replacement date has been set at 2028. **2028 - £600K**	**£4461**
Cat 12	Welfare	Originally an Outreach Vehicle that was adopted as a welfare vehicle. **2023 - £120k**	**£2396**

When there is a requirement to relocate special appliances there is invariably indirect costs associated with the training implications. Conversion courses need to be delivered to allow EFAD drivers to transport the vehicles and where necessary operators need familiarization training. As a general rule all EFAD drivers would require a half day's conversion which would include familiarization in driving and general operation of the vehicle. On top of that would be a full initial course for those appliances which required specialist skills such as the ALP and Moffat Mounty.

Training

Implementation of those actions within the report that recommend a change in the location of an appliance will be dependent on the service's ability to deliver suitable and sufficient training to crews in an efficient and effective manner. It is acknowledged that this is the responsibility of colleagues in the Learning and Development Department, and close consultation will need to take place should the IRMP group choose to adopt any of the recommendations.

The delivery of any of the recommended changes will be relatively short with minimal training requirements needed. As all training requirements could be delivered internally the costs will also be minimal.

Those factors which may impact the ability to deliver any required training will include the capacity of the training instructors, along with the ability to release operational personnel to undertaken the identified training requirements. Driver familiarity courses delivered by instructors to existing EFAD drivers are normally undertaken in one afternoon with any further specialist training requirements delivered as per the agreed schedule.

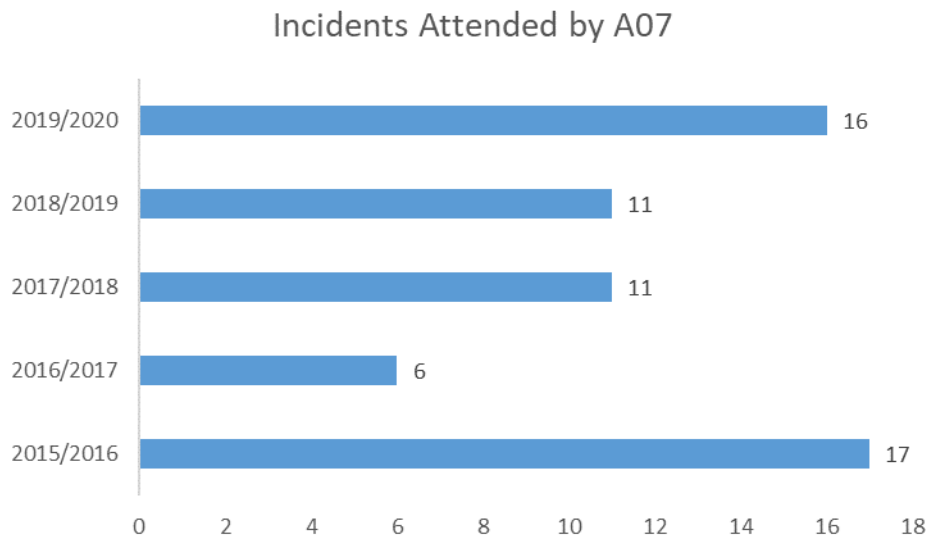
Appendix A

A07 Data

A07 Incidents over last 5 fiscal years

This is a report on the Command Support Unit (A07) over the last 5 fiscal years, (1st April 2015 to 31st March 2020).

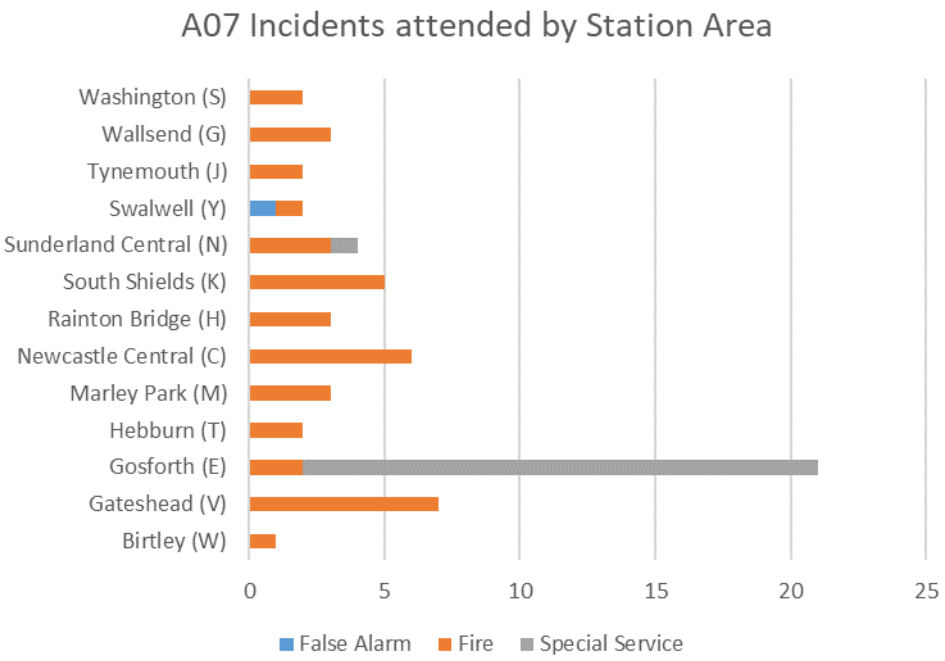
Over this time period A07 has booked in attendance at a total of 61 incidents.



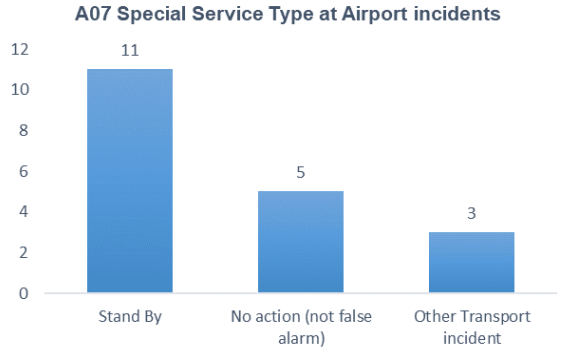
Two thirds of the incidents attended have been fires, with the remainder being special services plus one false alarm.

Fiscal Year	False Alarm	Fire	Special Service	Total
2015/2016		14	3	17
2016/2017		2	4	6
2017/2018		7	4	11
2018/2019		8	3	11
2019/2020	1	9	6	16
Total	**1**	**40**	**20**	**61**

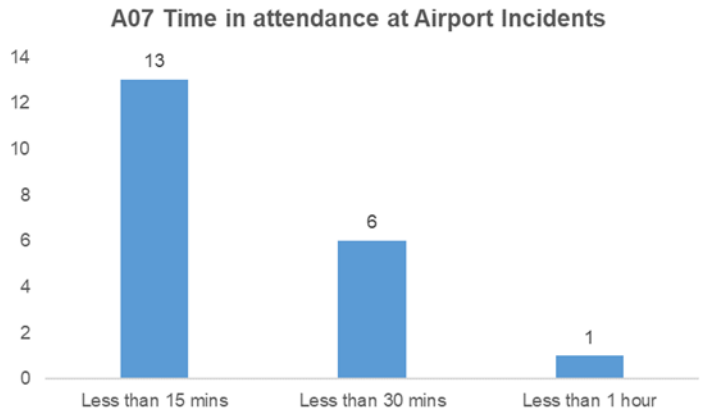
21 of the incidents attended by A07 have been in Station E area, all but one of which were to Newcastle Airport. The other was a fire at the Caledonian Hotel.



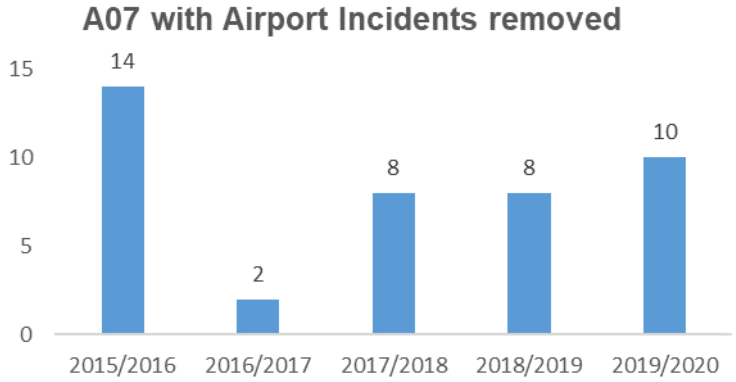
Over 5 years A07 has attended 19 Special Services and one fire at the airport. The Special Service types are displayed in the graph below.

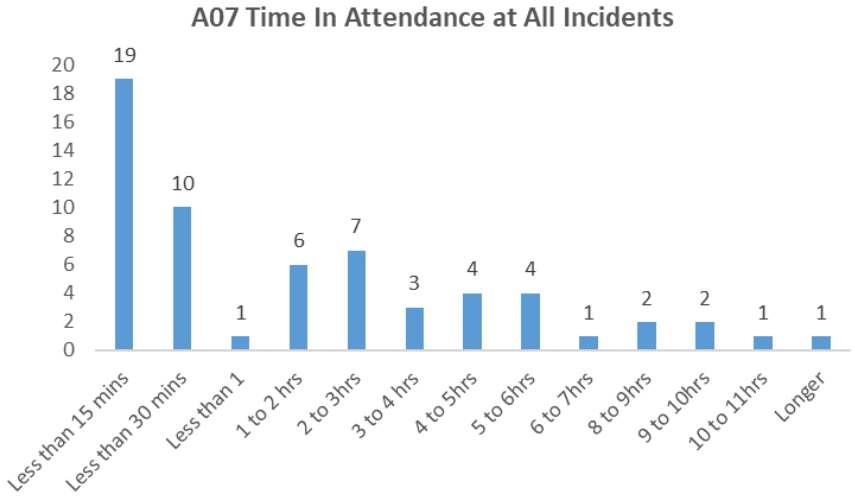


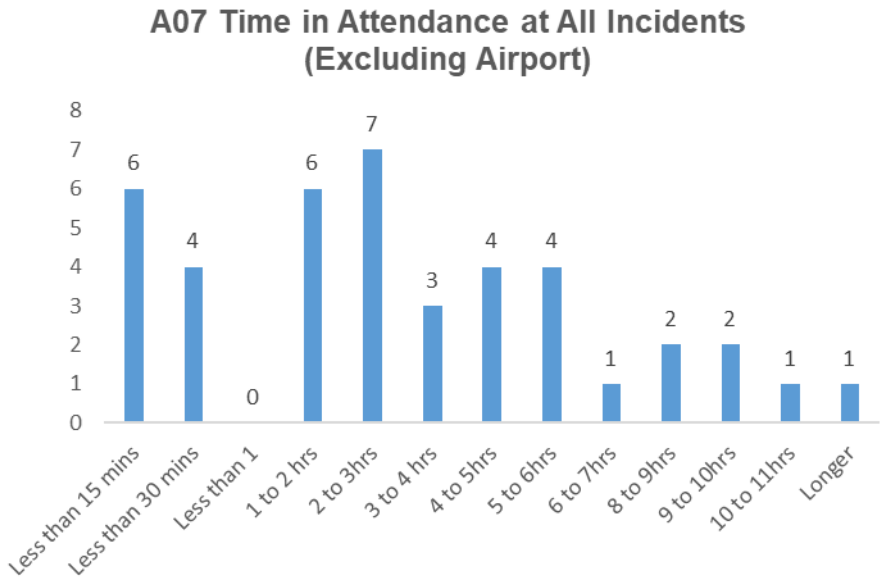
The fire was caused by a hydraulic leak on a 737 on the ground – undercarriage smoking. Dealt with by Airport Fire Service – A07 in attendance for 3mins 36 seconds. The longest time spent at the airport was 38 minutes.



With the airport incidents removed A07 has attended the following number per fiscal year.







A07 has been in attendance for more than an hour at 31 of the 61 incidents.
The longest was at Alex Smiles where the appliance was at the scene for a total of **107 hours.**

Appendix B

TRV Data

TRV Incidents over last 5 fiscal years

This is a report on the Targeted Response Vehicles over the last 5 fiscal years, (1st April 2015 to 31st March 2020). The tables below show the number of attendances at incidents on a monthly basis for each TRV callsign year by year.

TRVs	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Total
C17						134	122	104	73	55	77	118	683
N17						71	82	99	50	31	70	80	483
S171	34	28	64	55	62	28	34	24	14	4	16	27	390
S172		24	69	45	70	31	40	36	8	11	24	22	380
Total	**34**	**52**	**133**	**100**	**132**	**264**	**278**	**263**	**145**	**101**	**187**	**247**	**1936**

TRVs	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Total
C17	111	147	102	127	108	130	177	144	91	98	75	115	1425
N17	55	67	62	82	114	121	110	105	92	75	63	128	1074
S171	20	38	23	18	26	42	51	50	25	21	11	14	339
S172	21	29	25	17	19	39	49	38	31	25	21	20	334
Total	**207**	**281**	**212**	**244**	**267**	**332**	**387**	**337**	**239**	**219**	**170**	**277**	**3172**

TRV's	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Total
C17	215	173	133	105	181	112	170	199	86	77	96	95	1642
N17	157	121	112	91	158	77	108	151	47	46	53	57	1178
S171	51	58	33	19	48	25	45	62	21	10	12	16	400
S172	57	35	16	26	47	21	32	73	20	17	13	22	379
Z17					2	2		4					8
Total	**480**	**387**	**294**	**241**	**436**	**237**	**355**	**489**	**174**	**150**	**174**	**190**	**3607**

TRV	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Total
C17	116	193	169	259	119	142	173	106	86	109	115	151	1738
N17	67	128	93	144	83	90	104	90	51	92	80	116	1138
S171	23	36	36	56	26	25	28	39	13	28	19	31	360
S172	38	28	43	53	30	41	39	36	8	20	22	28	386
Z17			1										1
Total	**244**	**385**	**342**	**512**	**258**	**298**	**344**	**271**	**158**	**249**	**236**	**326**	**3623**

TRV	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Total
C17	7												7
C171	107	64	29	61	47	57	65	34	24	28	30	50	596
C172	69	44	26	33	24	55	46	23	13	13	23	35	404
N17	5												5
N171	80	59	30	42	39	51	75	41	30	32	14	73	566
N172	49	48	10	27	26	30	28	22	16	21	17	44	338
S171	3												3
S172	6												6
Total	**326**	**215**	**95**	**163**	**136**	**193**	**214**	**120**	**83**	**94**	**84**	**202**	**1925**

Fiscal year incidents attended for each TRV call sign. TRV's made 14,263 attendances at 14,190 separate incidents. Most of the multiple attendances occurred in 2018/19 at the large Alex Smiles incidents.

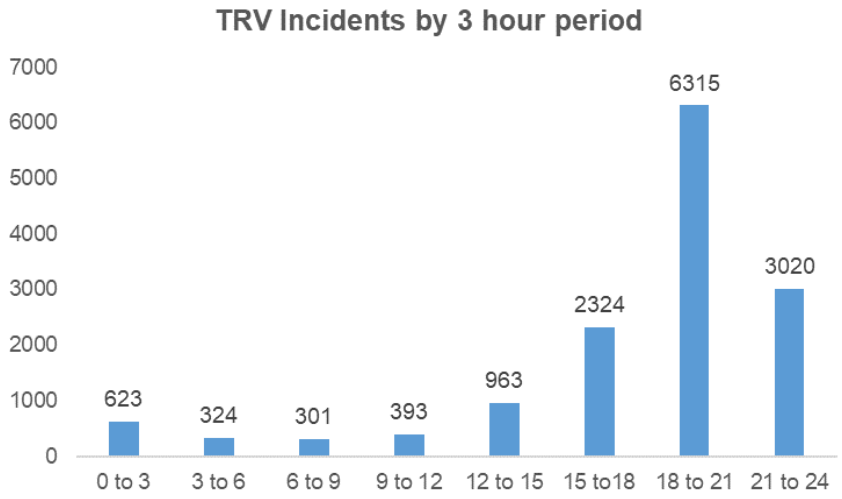
Call Sign	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
C17	683	1425	1642	1738	7	**5495**
N17	483	1074	1178	1138	5	**3878**
S171	390	339	400	360	3	**1492**
S172	380	334	379	386	6	**1485**
C171					596	**596**
N171					566	**566**
C172					404	**404**
N172					338	**338**
Z17			8	1		**9**
Total	**1936**	**3172**	**3607**	**3623**	**1925**	**14263**

TRV attendances by incident type over the last 5 fiscal years

Incident Type	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
False Alarm	396	557	706	686	418	2763
Primary Fire	64	77	69	68	37	315
Secondary Fire	1463	2518	2796	2766	1455	10998
Special Service	13	20	36	31	14	114
Total	**1936**	**3172**	**3607**	**3551**	**1924**	**14190**

The graph below shows TRV TOC totals grouped into 3 hour time periods.

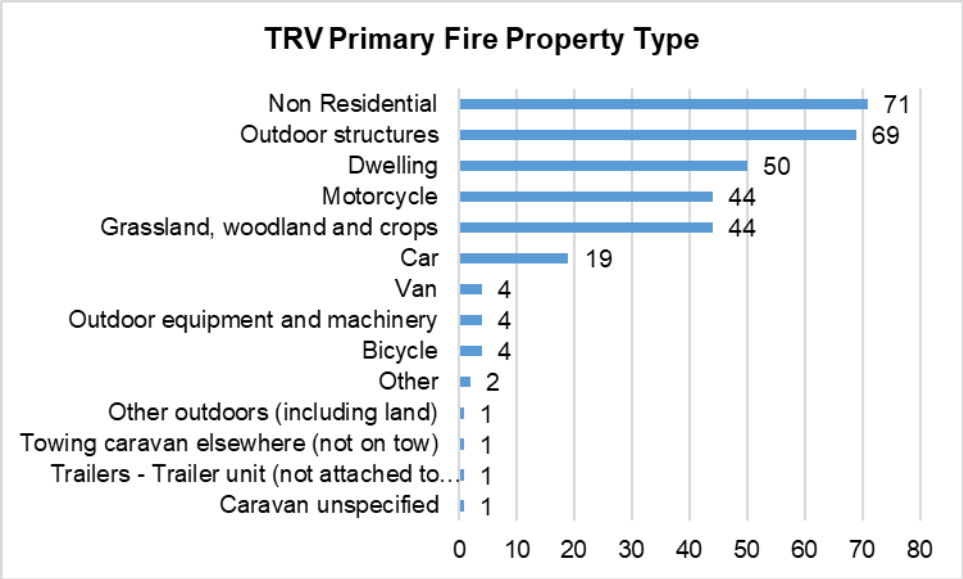
6,315 of the 14,263 attendances by TRV's occurred between 6pm and 9pm (44.3%).



TRV calls by the Station Area of all incidents.

Stn Area	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
Gateshead (V)	194	413	422	414	175	1618
West Denton (A)	165	302	426	372	205	1470
Newcastle Central (C)	191	339	392	357	174	1453
Sunderland Central (N)	164	255	339	361	195	1314
Marley Park (M)	154	286	296	287	207	1230
Byker (F)	135	209	280	349	153	1126
Washington (S)	195	237	253	226	123	1034
South Shields (K)	127	188	207	242	146	910
Farringdon (Q)	158	195	211	220	116	900
Gosforth (E)	87	165	214	171	103	740
Hebburn (T)	100	169	168	145	66	648
Wallsend (G)	72	94	97	132	81	476
Swalwell (Y)	50	91	95	100	49	385
Rainton Bridge (H)	41	79	82	51	72	325
Birtley (W)	44	94	67	79	23	307
Tynemouth (J)	59	56	53	45	36	249
Chopwell (Z)			5			5
Total	**1936**	**3172**	**3607**	**3551**	**1924**	**14190**

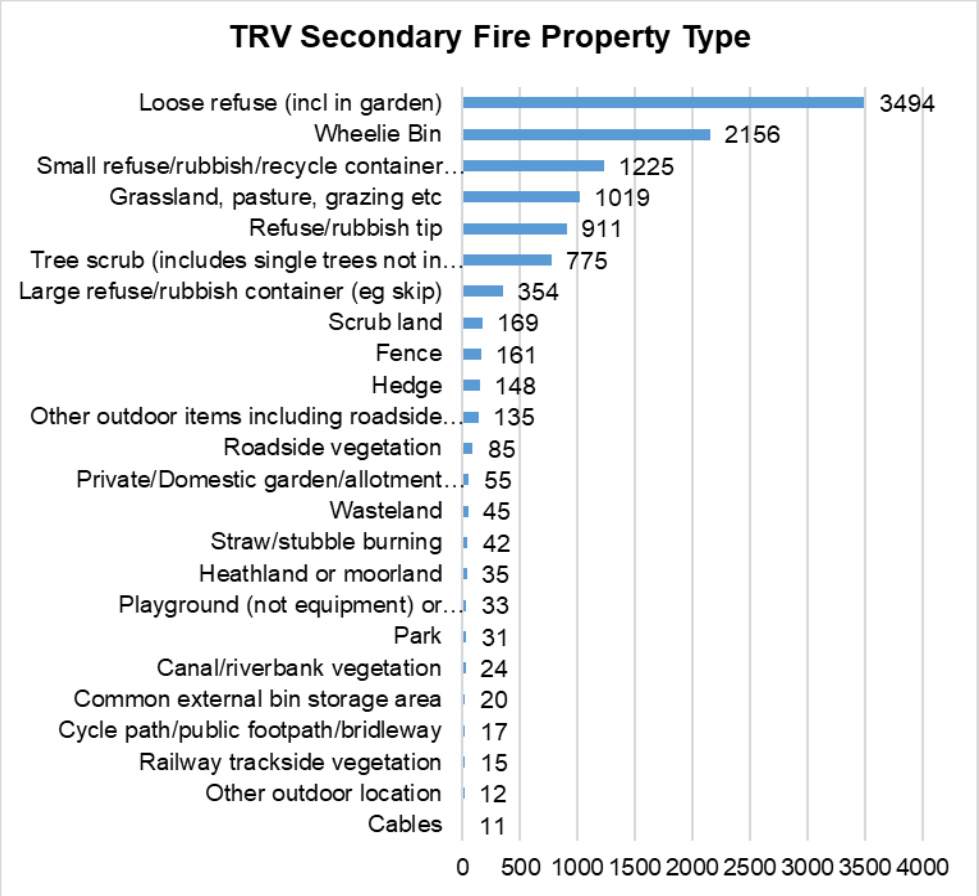
Over the 5 year period, TRV's attended 315 Primary Fires broken down into the following property types.



The table below shows the number of primary fires where a TRV was first in attendance and made up. For example two of the three 5 pump incidents started as secondary fires and spread to buildings. The third was for difficult access to a large refuse fire and made up for hose.

Number of Pumps	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
2	21	17	19	12	7	**76**
3	3	5	4	3	8	**23**
4	1		2	1		**4**
5			2	1		**3**
Total	**25**	**22**	**27**	**17**	**15**	**106**

The most common property type for secondary fires attended by TRV's.



Secondary Fires attended by TRV's by Station Area.

Stn Area	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
Gateshead (V)	144	339	343	333	134	**1293**
Newcastle Central (C)	154	295	315	303	141	**1208**
West Denton (A)	126	254	364	297	156	**1197**
Sunderland Central (N)	132	209	261	281	158	**1041**
Marley Park (M)	111	231	222	222	160	**946**
Byker (F)	99	179	219	291	125	**913**
Washington (S)	154	174	192	173	93	**786**
Farringdon (Q)	121	155	161	156	79	**672**
South Shields (K)	97	133	149	177	96	**652**
Gosforth (E)	66	117	156	139	76	**554**
Hebburn (T)	66	121	130	112	48	**477**
Wallsend (G)	49	65	64	81	55	**314**
Swalwell (Y)	30	67	67	75	37	**276**
Rainton Bridge (H)	34	60	60	35	58	**247**
Birtley (W)	35	77	51	59	12	**234**
Tynemouth (J)	45	42	37	35	28	**187**
Chopwell (Z)			5			**5**
Total	**1463**	**2518**	**2796**	**2769**	**1456**	**11002**

Comparison of September 2018 to September 2019

In September 2018 TRV's attended a total of 298 incidents while the following September they only attended 193. When special services and false alarms were removed, and the fires were limited to risk level 4 only, TRV's attended 214 in 2018 and 125 in 2019.

The table below shows a comparison of risk level 4 fires attended by TRV's compared to all risk level 4 fires. Despite TRV's attending 89 fewer fires in September 2019, there were actually 40 more incidents of this type.

Month	TRV's	All Risk Level 4 Fires	% by TRV's
Sep-18	214	366	58.47%
Sep-19	125	406	30.79%

Percentage of Risk Level 4 Fires attended by TRV's

Stn Area	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Stn Average
Gateshead (V)	46.15%	82.28%	70.97%	69.23%	38.05%	**61.34%**
Newcastle Central (C)	44.87%	79.94%	72.07%	67.72%	37.09%	**60.34%**
Sunderland Central (N)	45.04%	79.37%	72.59%	68.85%	30.74%	**59.32%**
Marley Park (M)	45.70%	70.99%	68.73%	69.73%	40.88%	**59.21%**
Washington (S)	50.00%	74.57%	65.96%	59.55%	33.86%	**56.79%**
Farringdon (Q)	50.97%	75.84%	61.47%	66.51%	28.57%	**56.67%**
West Denton (A)	39.53%	74.92%	64.05%	55.26%	38.97%	**54.55%**
Byker (F)	35.58%	73.36%	66.24%	61.69%	34.65%	**54.31%**
Gosforth (E)	33.52%	59.16%	63.04%	55.02%	30.77%	**48.30%**
Hebburn (T)	41.29%	57.98%	56.19%	45.98%	26.19%	**45.53%**
Birtley (W)	33.00%	60.17%	44.23%	55.34%	15.71%	**41.69%**
South Shields (K)	34.66%	50.60%	45.86%	48.86%	25.98%	**41.19%**
Swalwell (Y)	29.73%	59.81%	42.76%	41.25%	23.08%	**39.33%**
Wallsend (G)	27.95%	44.83%	45.45%	41.92%	25.23%	**37.08%**
Rainton Bridge (H)	27.43%	28.25%	24.09%	17.93%	18.38%	**23.22%**
Tynemouth (J)	22.61%	21.24%	17.59%	16.33%	13.16%	**18.19%**
Chopwell (Z)	0.00%	0.00%	8.00%	0.00%	0.00%	**1.60%**
Annual Average*	**38.00%**	**62.08%**	**55.08%**	**52.57%**	**28.83%**	

**Excluding Chopwell*

Appendix C

Fireboat Data

This is a report on the usage of the Fireboats (F09, F091, F092, F093, F094 and F13) over the last 5 fiscal years, (1st April 2015 to 31st March 2020).

Over this time period F09 was the most utilised special with 313 incidents attended. The vast majority of these incidents were Special Services with only 17 fires attended.

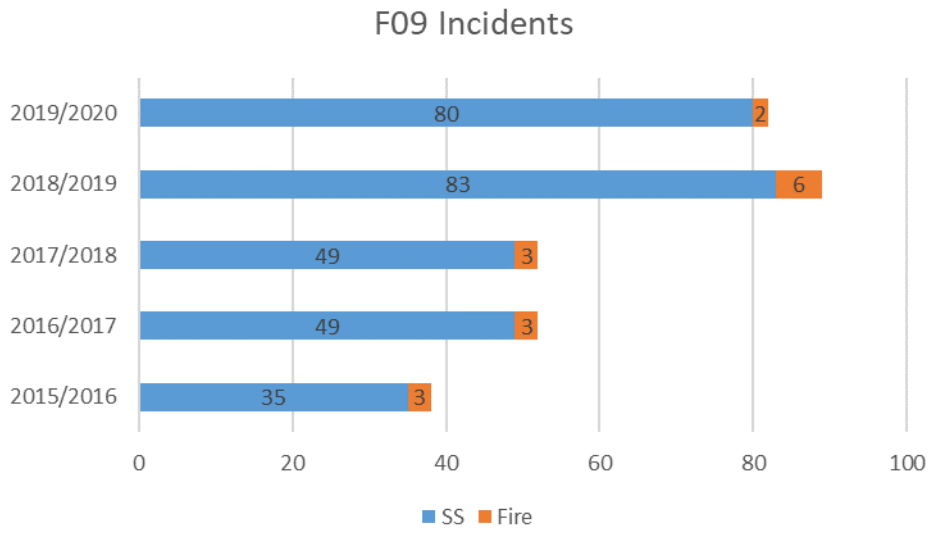
Listed below are the property types for the 296 Special Services and the 17 Fires attended on the river Tyne.

Special Service Property Type	Total
Bridge	162
River/canal	108
Other water craft	9
Other outdoor structures	5
Motor yacht	4
Car	3
Fishing boat	2
Canal/riverbank vegetation	1
Cycle path/public footpath/bridleway	1
Railings	1
Total	**296**

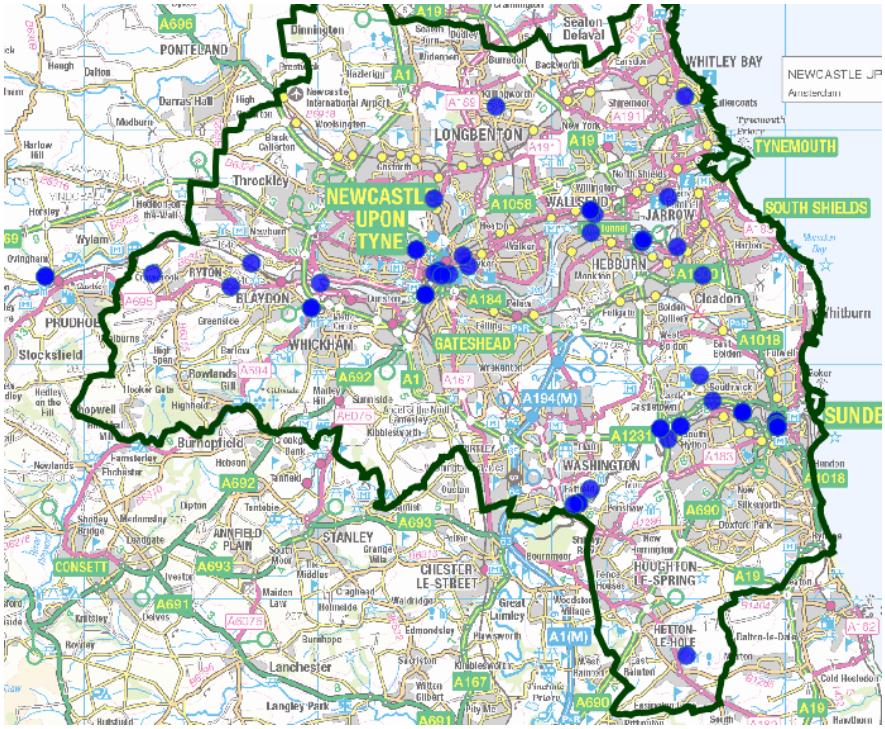
Fire Property Type	Total

Bridge	6
Other outdoor structures	4
Grassland, pasture, grazing etc	1
Other merchant vessel	1
Other outdoor items including roadside furniture	1
Other private non-residential building	1
Other water craft	1
Tree scrub (includes single trees not in garden)	1
Wasteland	1
Grand Total	**17**

By fiscal the number of incidents attended are shown in this graph.
There has been an increase in the use of F09 over the last two fiscal years.



F13, F091, F092 and F094 deployments over the last 5 fiscal years



Call Sign	GATESHEAD	NEWCASTLE	NORTH TYNESIDE	OVINGHAM	SOUTH TYNESIDE	SUNDERLAND	Total
F091	4	12				1	17
F092						1	1
F094	2	1	1	1	1	9	15
F13	7	9	5	1	5	38	65
Total	**13**	**22**	**6**	**2**	**6**	**49**	**98**

Boats have been sent to four incidents outside of Tyne and Wear over the report period.

Call sign	Inc_Number	fiscal year	Location	Station Area	AL_TIME	EventSubtypeCodeDesc
F094	201506931	2015/2016	OVINGHAM	PRUDHOE	06/12/2015 04:16	FLOODING INTERNAL
F13	201506931	2015/2016	OVINGHAM	PRUDHOE	06/12/2015 04:16	FLOODING INTERNAL
F13	OA201500455	2015/2016	NYORKS	NULL	31/12/2015 15:15	ASSISTANCE TO
F091	OA201500455	2015/2016	NYORKS	NULL	31/12/2015 15:15	ASSISTANCE TO
F13	201902616	2019/2020	BEDLINGTON	NFRS HQ - WEST HARTFORD	04/05/2019 19:01	WATER RELATED INCIDENT
F13	202000750	2019/2020	NULL	PRUDHOE	09/02/2020 15:15	WATER RELATED INCIDENT

Wearside incidents

Over the 5 year period there were 241 river/water/bridge based incidents in Sunderland District area.

38 of these were Special Service incidents attended by 49 Station Foxtrot based boats/appliances, (plus one fire).

Inc No	Date/Time	Call Sign	Mobilise Type	Property Type
43009255	20/05/2015 21:05	F094	Rescues - Suicide attempt	Bridge
43010582	07/06/2015 19:51	F091	Rescues - Rescue from entrapment	Fishing boat
43010582	07/06/2015 19:51	F094	Rescues - Rescue from entrapment	Fishing boat
43010582	07/06/2015 19:51	F13	Rescues - Rescue from entrapment	Fishing boat
43011104	15/06/2015 19:16	F13	Rescues - Suicide attempt	Bridge
43011943	28/06/2015 04:49	F13	Rescues - Suicide attempt	Bridge
43012679	07/07/2015 16:19	F13	Rescues - Suicide attempt	Bridge
43016147	28/08/2015 20:13	F13	Rescues - Suicide attempt	Bridge
44000859	17/01/2016 15:47	F13	Rescues - Animal rescue small	Lake/pond/reservoir
44007952	05/05/2016 18:19	F13	Rescues - Suicide attempt	Bridge
44008580	14/05/2016 04:18	F13	Rescues - Suicide attempt	Bridge
44009710	30/05/2016 19:32	F13	Rescues - Suicide attempt	Bridge
44017113	14/09/2016 20:22	F094	Rescues - Suicide attempt	Bridge
44021113	05/11/2016 11:25	F13	Rescues - Animal rescue small	Lake/pond/reservoir
44024820	24/12/2016 09:27	F094	Rescues - Rescue from water	River/canal
44024820	24/12/2016 09:27	F13	Rescues - Rescue from water	River/canal
44025032	27/12/2016 18:08	F094	Rescues - Rescue from water	Bridge
44025032	27/12/2016 18:08	F13	Rescues - Rescue from water	Bridge
44025056	28/12/2016 03:41	F094	Rescues - Suicide attempt	Bridge
44025056	28/12/2016 03:41	F13	Rescues - Suicide attempt	Bridge
46001174	22/01/2018 08:36	F13	Rescues - Suicide attempt	Bridge
46010342	30/05/2018 22:27	F13	Rescues - Suicide attempt	Bridge
46010358	31/05/2018 08:29	F13	Rescues - Rescue from water	Car
46016803	27/07/2018 22:04	F13	Rescues - Suicide attempt	Bridge
46020130	08/09/2018 20:52	F13	Rescues - Suicide attempt	Bridge
46020145	09/09/2018 05:43	F094	Fire - Boat	Fishing boat
46020145	09/09/2018 05:43	F13	Fire - Boat	Fishing boat
47003836	21/02/2019 04:18	F13	Rescues - Suicide attempt	Bridge
47007950	06/04/2019 22:44	F13	Rescues - Suicide attempt	Bridge
47010368	01/05/2019 05:18	F13	Rescues - Suicide attempt	Bridge
47013670	09/06/2019 05:58	F094	Rescues - Suicide attempt	Bridge
47013670	09/06/2019 05:58	F13	Rescues - Suicide attempt	Bridge
47013717	09/06/2019 22:29	F13	Rescues - Rescue from water	River/canal
47013966	13/06/2019 10:23	F094	Rescues - Suicide attempt	Bridge
47013966	13/06/2019 10:23	F13	Rescues - Suicide attempt	Bridge
47014798	24/06/2019 20:32	F13	Rescues - Suicide attempt	Bridge
47016393	14/07/2019 05:04	F13	Rescues - Suicide attempt	Bridge
47017435	25/07/2019 17:34	F13	Rescues - Suicide attempt	Bridge
47018302	05/08/2019 00:47	F13	Rescues - Suicide attempt	Bridge

47019072	15/08/2019 21:50	F13	Rescues - Suicide attempt	Bridge
47019543	21/08/2019 10:12	F092	Rescues - Suicide attempt	Bridge
47019543	21/08/2019 10:12	F13	Rescues - Suicide attempt	Bridge
47019749	23/08/2019 19:59	F13	Rescues - Suicide attempt	Bridge
47020560	01/09/2019 16:29	F13	Rescues - Suicide attempt	Bridge
47023210	28/09/2019 20:38	F13	Rescues - Suicide attempt	Bridge
47024087	09/10/2019 02:42	F13	Rescues - Suicide attempt	Bridge
48001551	22/01/2020 23:33	F13	Rescues - Suicide attempt	Bridge
48004329	26/02/2020 06:09	F13	Rescues - Rescue from water	River/canal
48005404	09/03/2020 22:00	F13	Rescues - Suicide attempt	Bridge

Of the other 203 incidents F01 and/or F02 booked in attendance at 34 incidents but there is no mention of a fireboat in attendance in the IRS.

Of the rest there is no easy way of ascertaining if the RNLI responded instead of or as well as the fire service.

AN ACTION PLAN FOR THE COORDINATION OF EMERGENCIES ON THE RIVERS TYNE, and WEAR.

Jurisdiction:

HM Coastguard is responsible for the initiation and coordination of civil maritime search and rescue (SAR) within the UK search and rescue region. This includes the mobilisation, organisation and tasking of adequate resources to respond to persons either in distress at sea or to persons at risk of injury or death on the cliffs or shoreline.

Fire and Rescue Services are responsible for extinguishing fires and protecting life and property in the event of fires as well as providing a rescue service in the event of emergencies other than fire.

Northumbria Police is responsible for the initiation and coordination of search and rescue operations on land within the force area including inland waterways.

The arrangements set out in this action plan are not intended to, nor should, cut across or dilute in any way the primacy of any organisation in their respective areas of responsibility. The arrangements are intended to ensure that proper provision is made to deal with incidents involving people and vessels on the region's major rivers which otherwise may be subject to operational confliction, potential confusion and delayed response. It is also important to recognise that operational dogma must be avoided if the best interests of those at risk are to be served.

Operational Protocol and Demarcation Lines:

Principal responsibility for the initiation and coordination of SAR resources in response to Maritime incidents will rest with HM Coastguard at the following locations: See O/S Maps..

On the River **Tyne** incidents which occur **east of the Tyne Tunnel**

On the River **Wear** incidents which occur **east of the Northern Spire Road Bridge**.

If information is received by any organisation is should be immediately forwarded to Humber Coastguard Operations Centre (CGOC)

Maritime incidents which occur to the west of the locations above will principally be the responsibility of Northumbria Police. If information is received by the Coastguard then this should be immediately passed to Northumbria Police Control Room for action. For the purposes of this action plan, such maritime incidents will be called **River Incidents**.

If a Silver Command has not been established, the control centres of individual organisations are to provide regular operational updates and situation reports to other involved agencies.

Response:

The coordinating authority will decide upon and task appropriate resources to emergencies in their area of responsibility.

It is unhelpful and operationally inefficient to proscribe a definitive response to emergencies in River or Maritime domains. The following tables show which organisation has primacy for incidents and which additional authorities must be notified.

These tables are not exhaustive and coordinating authorities or those receiving the initial alert should alert other responders as required. This especially applies in the vicinity of the demarcation points between 'River' and 'Maritime' incidents where casualties may be carried by tidal currents or river flow either east or west of the demarcation points.

Maritime Incidents

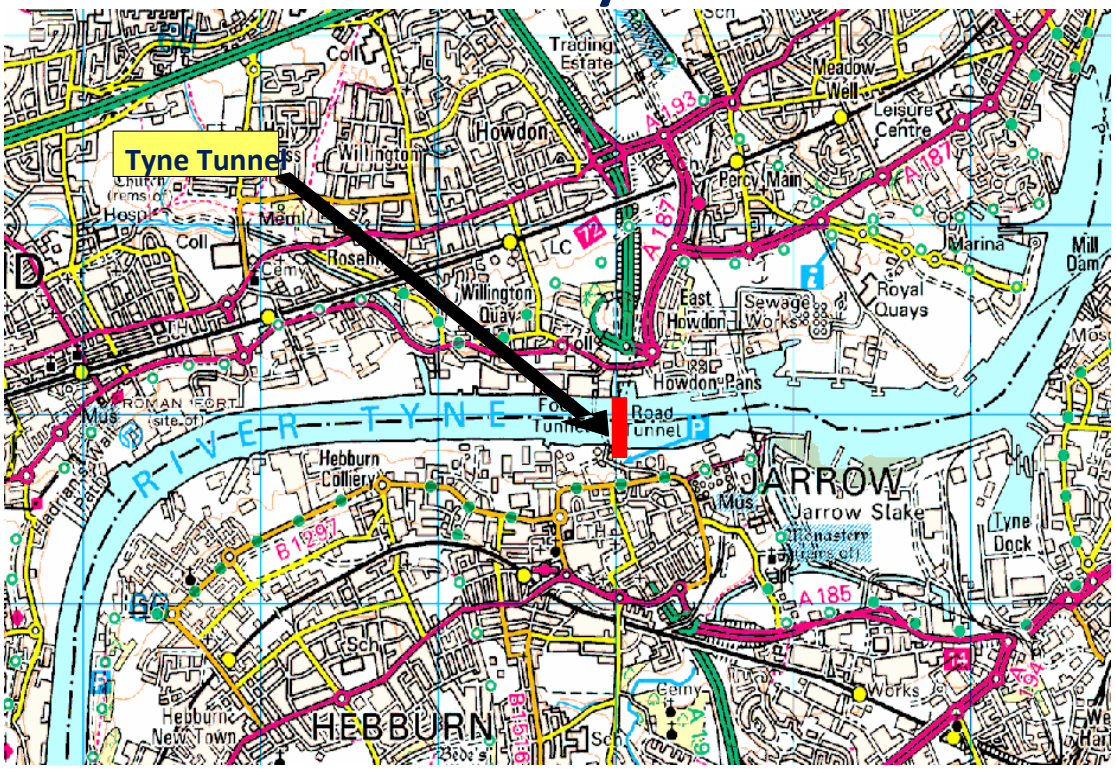
Incident Types	Primacy of Control	Must Notify
Fire on a vessel adrift	Coastguard	HM/FRS/Police/NEAS
Fire on a vessel alongside	FRS	Coastguard/Police/HM/NEAS
Fire on a vessel moored mid-stream	Coastguard	FRS/Police/HM/NEAS
Fire at a riverside location	FRS	Coastguard/Police/HM/NEAS
Swimmer / casualty in distress in the water	Coastguard	FRS/NEAS/Police/HM
Body recovery	Police	NEAS/Coastguard
Potential jumper from bridge	Police	Coastguard/FRS/NEAS
Vessel adrift, persons on board	Coastguard	HM
Vessel adrift	Coastguard	HM
Vessel sinking/sunk	Coastguard	HM/NEAS/Police

River Incidents

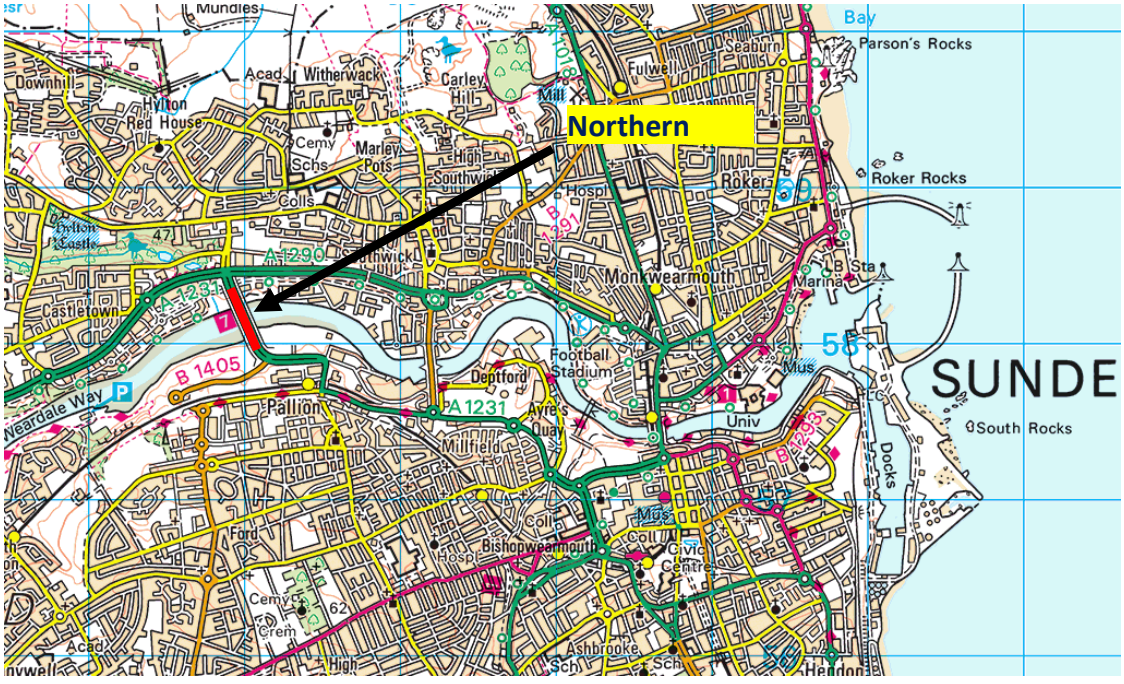
Incident Types	Primacy of Control	Must Notify
Fire on a vessel adrift	Police	HM/FRS/NEAS
Fire on a vessel alongside	FRS	HM/Police/NEAS
Fire on a vessel moored mid-stream	Police	HM/FRS/NEAS
Fire at a riverside location	FRS	Police/HM/NEAS
Swimmer / casualty in distress in the water	Police	Coastguard/FRS/NEAS/HM
Body recovery	Police	NEAS
Potential Jumper from bridge	Police	FRS/Coastguard/NEAS/HM
Vessel adrift, persons on board	Police	HM
Vessel adrift	Police	HM
Vessel sinking/sunk	Police	FRS/HM/NEAS/Coastguard

HM – Harbour Master

River Tyne



River Wear



Principles for Bridge incidents on the River Wear

The following will not be hard and fast rules for responders but rather principles to help guide the conversations with officers in charge/ control rooms at the early onset of an incident with the bridges of the River Wear. The Joint emergency Services Interoperability Principles are the guiding influence behind this need to establish something specific for the bridges on the River Wear and as such the following will work alongside.

The main reason for establishing agreed principles for bridges on the River Wear is the added dynamic of HM Coastguard and RNLI attending incidents in comparison to bridges on the Tyne.

- Ensure appropriate emergency services are aware of the incident and establish what resources are being sent and time scale for attendance. See river action plan of whom to inform.

- Consider communicating early RV point to other services. Queen Alexander Bridge to have RV point off the bridge for traffic to continue to flow.

- Police to close one lane on the Wearmouth Bridge to allow emergency service access and safe system of work.

- Landing point for casualties entering the water to be Sunderland Marina as default unless agreed otherwise by all officers in charge on scene.

- Early discussion by officers in charge to review assets on scene and if any can/could be stood down if not required.

- Location of assets – collectively and consciously ensure that assets are in the appropriate location. For example if a casualty is over water Fireboat/SWRT/ RNLI – under the bridge, in the water standing off at discrete distance , Coastguard – on bridge for comms or Rope Rescue, Police on bridge but also on foot paths if casualty is over land, NEAS HART – on bridge for co-location and at Sunderland Marina for casualty reception.

- If the incident is protracted, consider swapping out assets with another service with similar capability. Ie – RNLI lifeboat with FRS fireboat / FRS rope rescue team with HM Coastguard rope team. This would be under the provision that if any casualty were to enter the water the lifeboat would be re-launched.

Appendix D

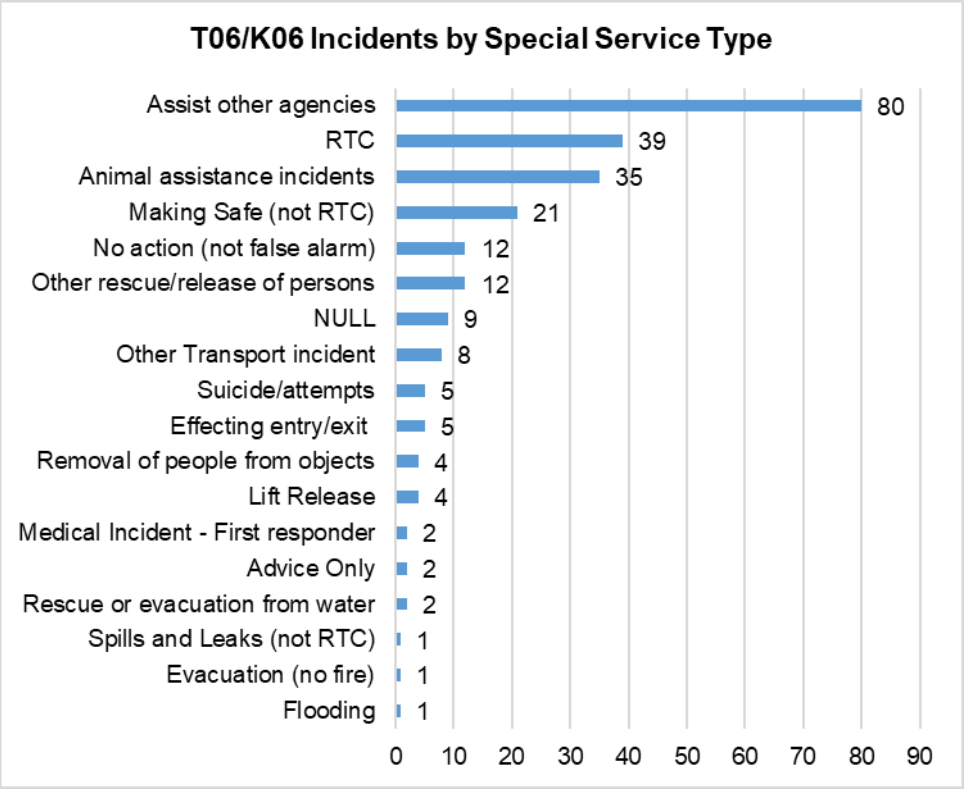
Heavy Rescue Data

T06/K06 Incidents over last 5 fiscal years

This is a report on the Heavy/Special Rescue Unit (T06/K06) over the last 5 fiscal years, (1st April 2015 to 31st March 2020).

Over this time period this special appliance has booked in attendance at a total of 243 incidents. The majority of these were Special Services, (8 fires and one false alarm). This also includes 2 over the border incidents – one in Northumberland and one in Durham).

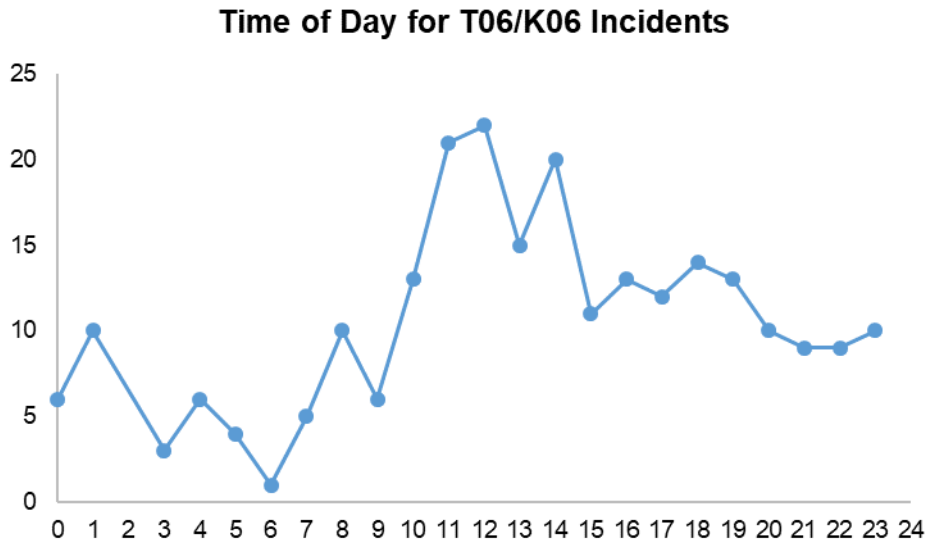
Call Sign	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
K06					40	40
T06	48	63	49	41	2	203
Total	**48**	**63**	**49**	**41**	**42**	**243**



78 of the 80 assist other agencies incidents in the above chart were to assist in moving/rescuing bariatric persons.

Heavy Rescue incidents by Station area

Stn Area of Incident	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
South Shields (K)	7	8	6	6	9	**36**
Marley Park (M)	5	6	4	3	3	**21**
Swalwell (Y)	4	8	3	3	3	**21**
Wallsend (G)	5	4	3	4	5	**21**
Gateshead (V)	2	5	8	1	2	**18**
Washington (S)	3	2	4	4	3	**16**
Hebburn (T)	7	2	3	1	2	**15**
Newcastle Central (C)		9	1	4	1	**15**
West Denton (A)	2	3	5	4		**14**
Byker (F)	1	5	2	1	3	**12**
Gosforth (E)	5	3	1	3		**12**
Farringdon (Q)	1	2	3	1	3	**10**
Tynemouth (J)	1	2		1	5	**9**
Sunderland Central (N)	4	1	1	1		**7**
Birtley (W)			3	2	1	**6**
Rainton Bridge (H)	1	1	1	1	2	**6**
Chopwell (Z)		1		1		**2**
High Handenhold		1				**1**
Prudhoe			1			**1**
Total	**48**	**63**	**49**	**41**	**42**	**243**



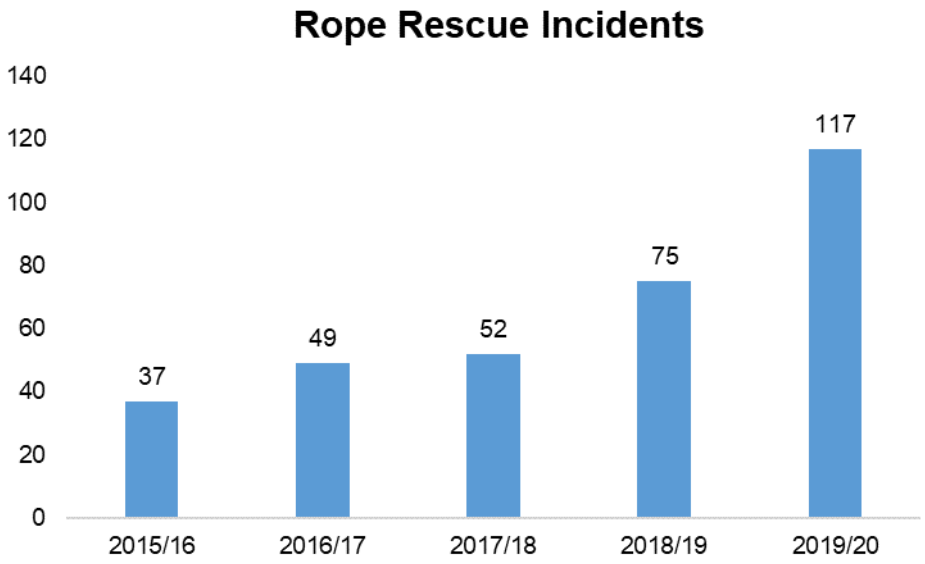
Appendix D (1)

Line Rescue Data

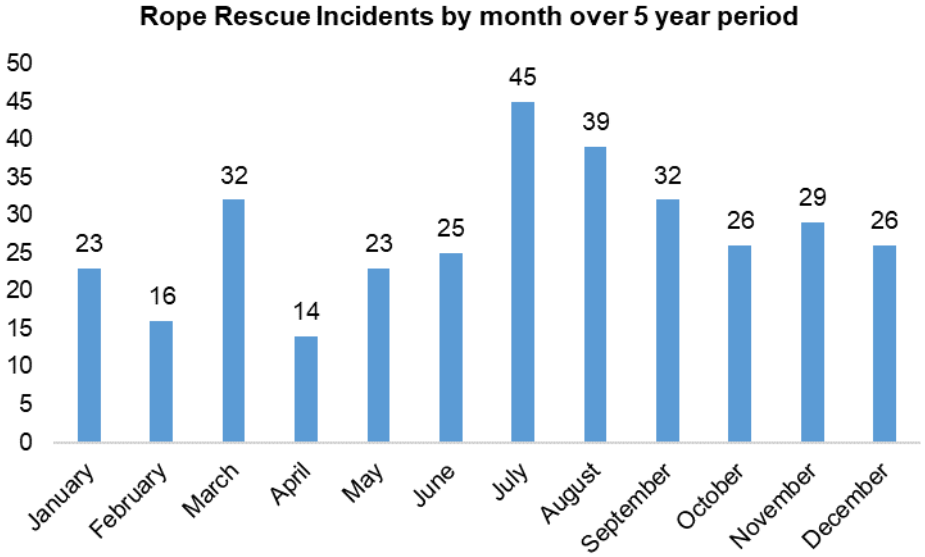
Rope Rescue Incidents over last 5 fiscal years

This is a report on Rope Rescue incidents over the last 5 fiscal years,
(1st April 2015 to 31st March 2020).

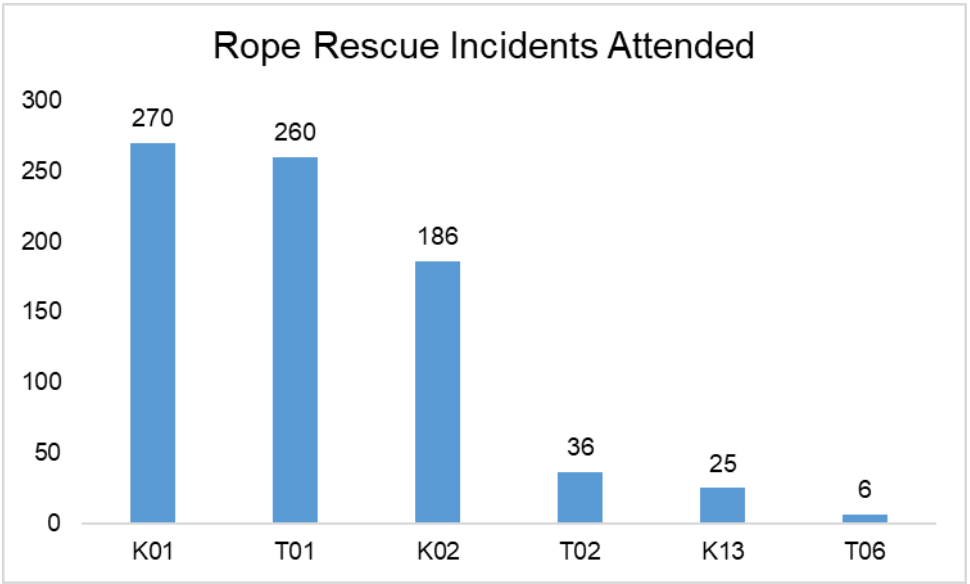
Over the report period there have been 330 incidents where line rescue is recorded in the IRS equipment and Tango and/or Kilo appliances attended.



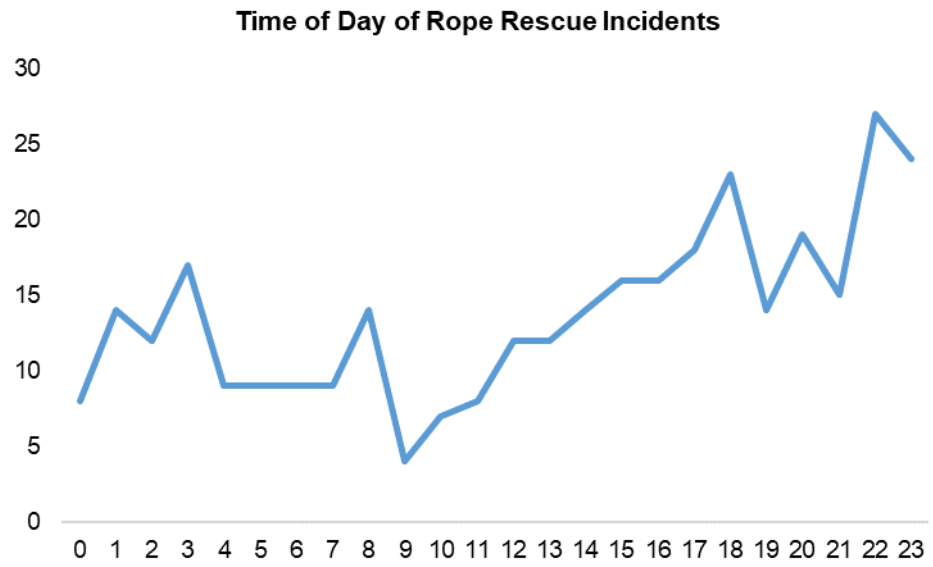
July and August were the busiest months over the 5 year period.



Stn Ground of Incident	2015/16	2016/17	2017/18	2018/19	2019/20	Total
South Shields (K)	2	15	7	16	24	64
Sunderland Central (N)	8	11	7	11	26	63
Gateshead (V)	6	6	15	15	21	63
Newcastle Central (C)	5	8	6	15	13	47
Byker (F)	4	3	8	9	12	36
Marley Park (M)	4	3	1	4	8	20
Hebburn (T)	2		2	3		7
Swalwell (Y)	1	1		1	3	6
Tynemouth (J)	1		3		2	6
Washington (S)			1		4	5
West Denton (A)	2		1	1		4
Birtley (W)	1				2	3
Wallsend (G)			1		1	2
Farringdon (Q)					1	1
Gosforth (E)		1				1
Rainton Bridge (H)	1					1
Chopwell (Z)		1				1
Grand Total	**37**	**49**	**52**	**75**	**117**	**330**



Special Service Reason	Total
Threat of/attempted suicide	252
Domestic e.g. Cat, Dog, Rodents, Horse, Bird, etc.	20
From height e.g. pylon crane, roof or ledge.	19
Service not required	10
Assistance to other agencies	5
Other	5
Suicide	5
Person in river, canal, loch (open to the sea), sea or estuary or other waterway (moving water).	3
From below ground, e.g shaft, cave, tunnel, sewer,well.	2
Confined space - atmosphere not noxious, e.g. silo, grain store.	1
Extrication of person/s	1
For person in distress	1
Livestock e.g. Horse, Cow, Sheep, Goat, Pig, Poultry, Fish, Exotic (Llama/Ostrich), Deer, etc.	1
Other stand by	1
Person in or on top of vehicle that is surrounded by moving or rising water greater than (2) foot deep	1
Removal/retrieval of dead body	1
Remove object / obstruction from pedestrian area	1
Wild e.g. Horse, Deer, Wildfowl, Game, Aquatic, Exotic, etc.	1
Grand Total	**330**

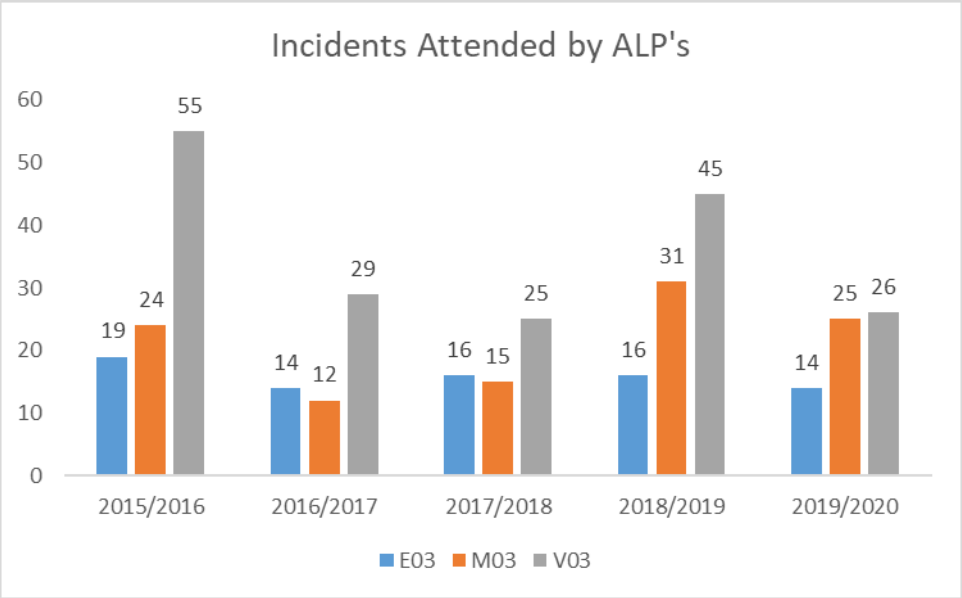


Appendix E

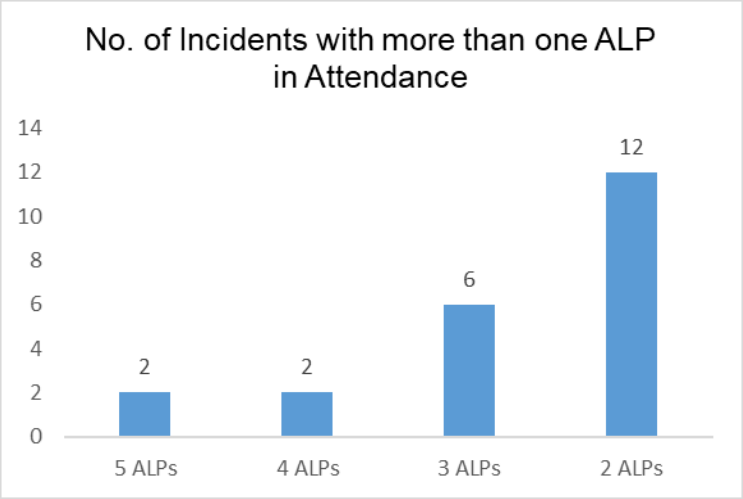
This is a report on the usage of Arial Ladder Platforms (ALPs) over the last 5 fiscal years, (1st April 2015 to 31st March 2020).

Over this time period the three ALP's have booked in attendance 366 times at 328 separate incidents.

The graph below shows the number of attendances per ALP per year to incidents within Tyne and Wear.



Of the 328 incidents, 22 were attended by more than one ALP.



The two incidents with five ALP attendances were the Kard Bar in 2015 and Alex Smiles in 2018.

Of the 22 incidents above , 13 involved 2 ALPs being in attendance at the same time, however one of these was for only 10 minutes and another for 16 minutes.

Incident Ref	Date	Incident	ALPS	Time when both IA
43022522	01/12/2015	Kard Bar	M03 & V03	4hrs 47 mins
43022522	02/12/2015	Kard Bar	V03 & M03	18 mins
44011340	25/06/2016	Swalwell Social Club	V03 & M03	58 mins
45002108	03/02/2017	The Green, Southwick	V03 & E03	4hrs 5 mins
45007718	19/04/2017	Junglerama	V03 & E03	1hr 59 min
45009208	06/05/2017	Trinity Church Hall	E03 & V03	48 mins
46008864	14/05/2018	Alex Smiles, Deptford	V03 & E03	9hrs 58 mins
46008864	14/05/2018	Alex Smiles, Deptford	Plus M03	15 mins with 3 ALPs
46016845	28/07/2018	Thornbeck Colege	E03 & M03	3hrs 19 mins
47001760	23/01/2019	Peacocks	M03 & V03	2hrs 58 mins
47001760	24/01/2019	Peacocks	V03 & M03	1hr 25 mins
47005836	16/03/2019	Mascot Services	E03 & M03	4hrs 47 mins
47016315	13/07/2019	Golden Lion	E03 & M03	16 mins
47023684	04/10/2019	Caledonian Hotel	E03 & M03	2hrs 6 mins
48002054	28/01/2020	Simpson St School	V03 & E03	10 mins
48004662	01/03/2020	Backworth Primary School	E03 & V03	4 mins
48004662	01/03/2020	Backworth Primary School	V03 & M03	28 mins

Over the five year period there were also 8 occasions when ALP's were required at separate incidents at the same time.

Inc No.	Date Created	Stn Area	Call Sign	ALP IA	ALP MA	Inc Type
43022836	05/12/2015 21:42	C	V03	05/12/2015 22:15	05/12/2015 23:18	Special Service
43022844	05/12/2015 22:46	V	E03	05/12/2015 23:15	05/12/2015 23:39	Special Service
44001462	29/01/2016 09:35	M	M03	29/01/2016 09:44	29/01/2016 14:14	Special Service
44001479	29/01/2016 12:11	K	V03	29/01/2016 12:56	29/01/2016 14:02	Special Service
44022389	19/11/2016 12:30	J	V03	19/11/2016 13:05	19/11/2016 14:00	Special Service
44022390	19/11/2016 12:31	H	M03	19/11/2016 13:40	19/11/2016 14:45	Special Service
45012471	17/06/2017 00:25	V	M03	17/06/2017 01:00	17/06/2017 05:10	Fire
45012488	17/06/2017 01:40	N	E03	17/06/2017 02:56	17/06/2017 03:28	Special Service
45026597	24/11/2017 02:39	T	V03	24/11/2017 03:13	24/11/2017 15:20	Fire
45026604	24/11/2017 06:52	M	M03	24/11/2017 07:41	24/11/2017 08:01	Special Service
46012358	23/06/2018 18:56	V	V03	23/06/2018 19:23	24/06/2018 02:49	Special Service
46012427	24/06/2018 02:13	M	M03	24/06/2018 02:33	24/06/2018 03:00	Special Service
46021101	19/09/2018 14:29	C	E03	19/09/2018 15:31	19/09/2018 16:08	Special Service
46021102	19/09/2018 14:31	J	M03	19/09/2018 15:42	19/09/2018 16:10	Special Service
47013901	12/06/2019 17:03	T	V03	12/06/2019 17:36	13/06/2019 04:55	Fire
47013925	12/06/2019 19:50	F	E03	12/06/2019 20:13	12/06/2019 20:33	Fire

The table below shows attendances by Station Area of the incident. (Incidents in home station area are highlighted).

Stn Area of Inc	E03	M03	V03	Total
Newcastle Central (C)	13	3	46	**62**
Sunderland Central (N)	4	32	18	**54**
Gateshead (V)	9	5	26	**40**
Byker (F)	13	1	23	**37**
South Shields (K)	0	18	11	**29**
Marley Park (M)	1	15	12	**28**
Tynemouth (J)	7	2	12	**21**
Gosforth (E)	11	1	4	**16**
Rainton Bridge (H)	0	13	1	**14**
Hebburn (T)	2	3	8	**13**
Wallsend (G)	5	2	6	**13**
Swalwell (Y)	5	1	6	**12**
Farringdon (Q)	2	5	1	**8**
Washington (S)	1	4	3	**8**
West Denton (A)	4	1	2	**7**
Birtley (W)	2	1	1	**4**
Grand Total	**79**	**107**	**180**	**367**

Of the three ALP's V03 is the busiest with 180 attendances over the 5 years, and E03 the least with 79. However, there were also 28 Over The Border attendances into Northumberland which are not in our IRS.

E03 attended 22 of these increasing it's overall total to 101 attendances – 21.8% of them OTB.

M03 Attended 4 OTB incidents – 2 in Northumberland and 2 in Durham.

V03 Attended 2 OTB incidents in Northumberland.

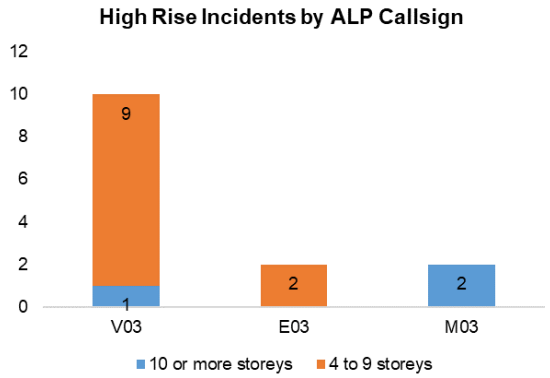
OTB Incidents Attended by ALP's

Call Sign	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
E03	4	6	5	3	4	22
M03	3		1			4
V03	1			1		2
Total	**8**	**6**	**6**	**4**	**4**	**28**

ALP's at High Rise Incidents

Over the report period ALP's attended 14 incidents where the building property type recorded in the IRS was 4 to 9 storeys or 10 plus storeys. The one fire was at Regent Court in Gateshead.

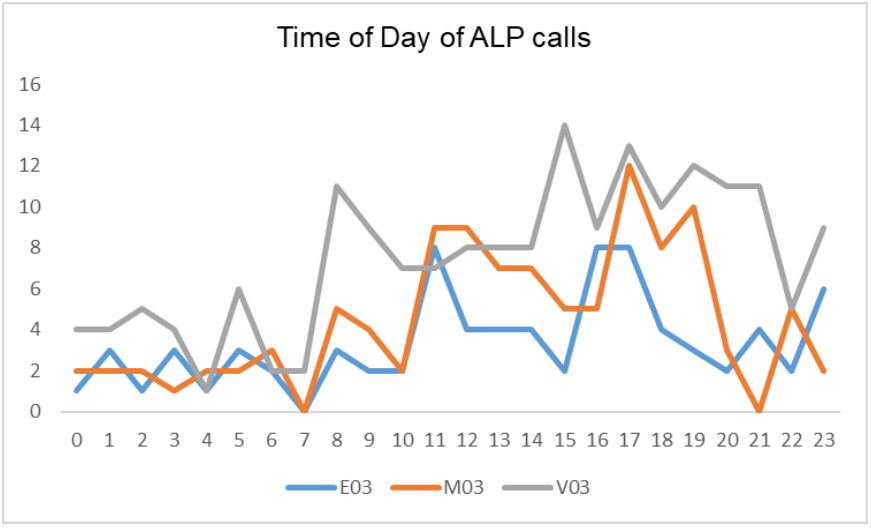
Incident Type	10 or more storeys	4 to 9 storeys	Total
Fire	1		1
Special Service	2	11	13
Total	**3**	**11**	**14**



The 13 Special Service incidents involving high rises were for the following reasons:-

Reason	Total
Animal Assistance	4
Making Safe	3
Suicide attempt	3
SS No Action	3

Time of day of all ALP incidents by Callsign over the 5 year period.



Appendix F

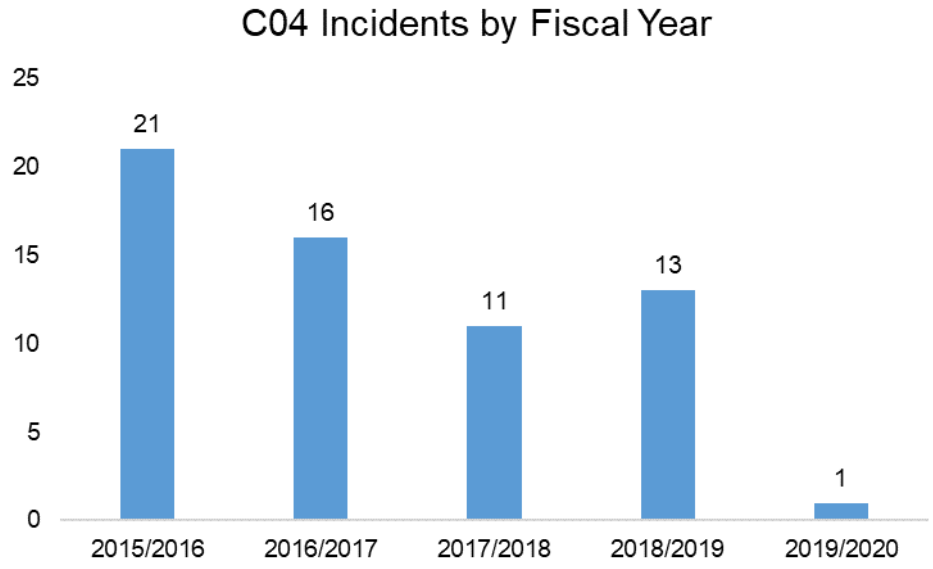
C04/S04 Incidents over last 5 fiscal years

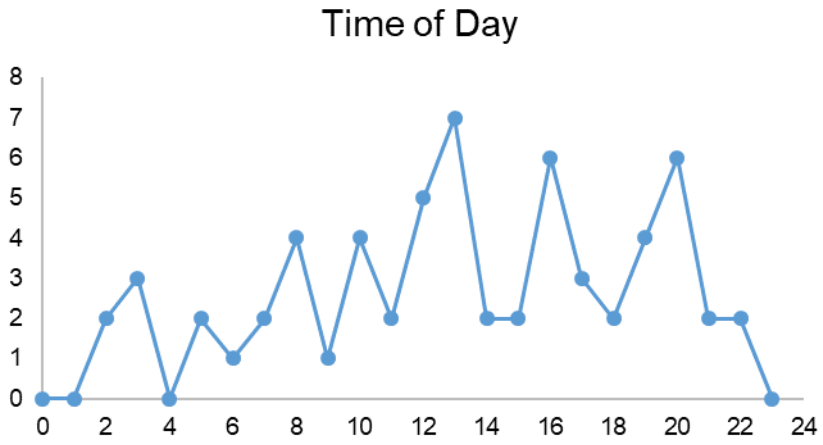
This is a report on the Haz Mats/Heavy Rescue Unit (C04/S04) over the last 5 fiscal years, (1st April 2015 to 31st March 2020).

Over this time period this appliance has booked in attendance at a total of 61 incidents as C04 and one as S04. The majority of these were Special Services, (8 fires and 2 false alarm).

Inc Type	Total
False Alarm	2
Fire	8
Special Service	52
Total	**62**

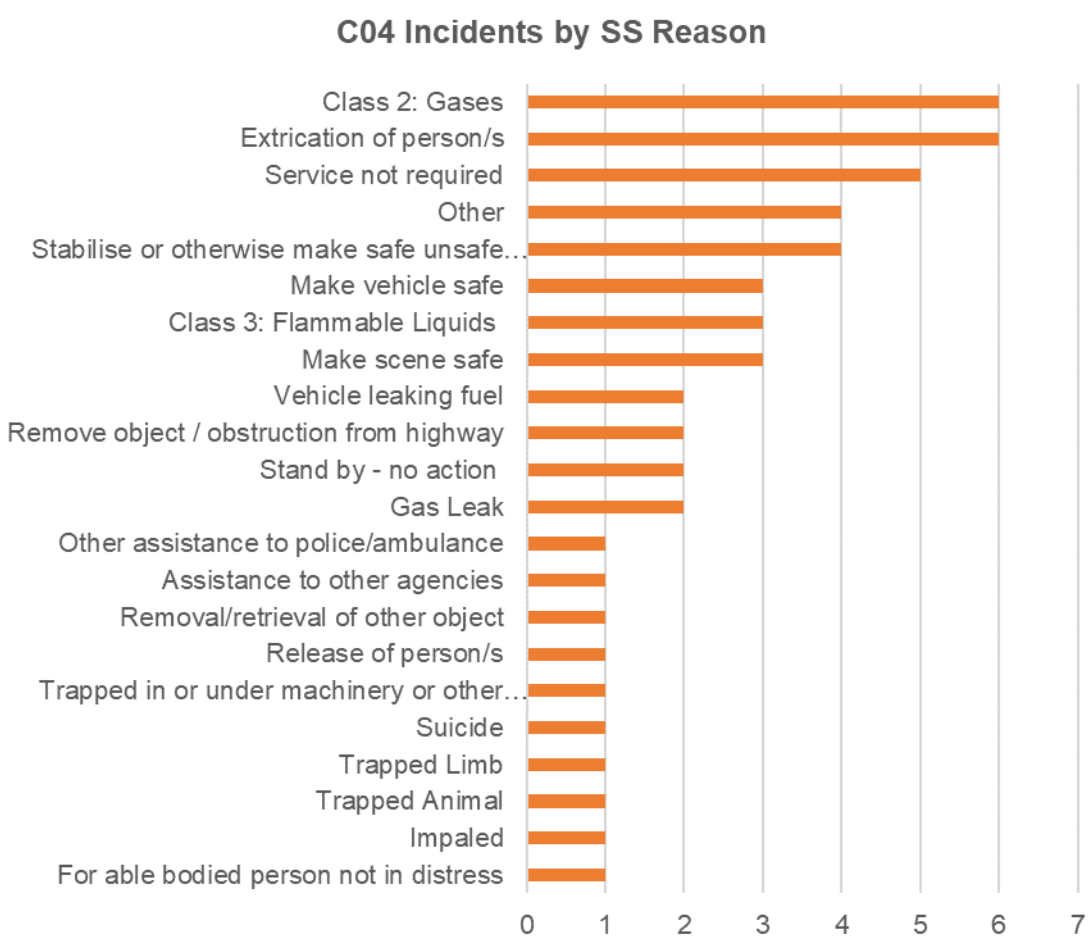
By fiscal year the usage of this appliance has generally decreased year on year (apart from 2018/19). The one incident in 2019/20 was after the appliance was re-located from Newcastle Central to Washington (S04), and is a false alarm call.





Haz Mat/Heavy Rescue incidents by Station area

Station Area	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
Newcastle Central (C)	5	3	3	2		13
Swalwell (Y)	5	2	2	3		12
West Denton (A)	1	1	2	2		6
Birtley (W)	1	3	1			5
Byker (F)	1		1	2		4
Gateshead (V)		4				4
Wallsend (G)				2	1	3
Farringdon (Q)	2					2
Gosforth (E)	1		1			2
Rainton Bridge (H)	1			1		2
Sunderland Central (N)		2				2
Tynemouth (J)	1			1		2
Washington (S)	1	1				2
Hebburn (T)	1					1
Marley Park (M)			1			1
South Shields (K)	1					1
Total	**21**	**16**	**11**	**13**	**1**	**62**


C04 Incidents by SS Reason
Class 2: Gases
Extrication of person/s
Service not required
Other
Stabilise or otherwise make safe unsafe…
Make vehicle safe
Class 3: Flammable Liquids
Make scene safe
Vehicle leaking fuel
Remove object / obstruction from highway
Stand by - no action
Gas Leak
Other assistance to police/ambulance
Assistance to other agencies
Removal/retrieval of other object
Release of person/s
Trapped in or under machinery or other…
Suicide
Trapped Limb
Trapped Animal
Impaled
For able bodied person not in distress
0
1
2
3
4
5
6
7

Appendix G

Workload Modelling
September 2020
Scenario A

Data & Information Department

Confidential

Data and Information Audit	
Data compiled by:	KR
Checked by:	
Data valid at:	22/09/2020
Approved for Publication	
Approved by:	
Date Approved by:	

Contents

Background

Workload Modelling uses the resources provided in the various scenarios to simulate an emergency appliance turnout response to incidents that have occurred historically over three years (2017/18, 2018/19 and 2019/20). These scenarios are then compared to a Base Case to establish the emergency appliance turnout response using the current resources.

The Workload Modeller uses the Ordnance Survey (OS) Integrated Transport Network (ITN) road network and speeds assigned to those roads to determine the time taken to travel to each incident using the nearest available and appropriate resource.

The road speeds used are:

Road Type	Road Speed (MPH)
Motorway	60
A Road	50
B Road	25
Minor Road	20
Local Street	20
Pedestrianised Street	5
Alley	5
Private Road	20

Notes on Data

Within the station based tables, the workload modeller treats reduced callout numbers (-) as a positive and colour codes them green, however reduced target achievement (-) is thought of as a negative and coloured red.

Scenario A1

- 16 whole-time cat 01 appliances based at Stn A, Stn C, Stn E, Stn F, Stn G, Stn H, Stn J, Stn K, Stn M, Stn N, Stn Q, Stn S, Stn T, Stn V, Stn W, and Stn Y.
- 6 whole-time cat 02 appliances based at Stn A, Stn F, Stn J, Stn K, Stn Q and Stn V.
- 2 whole-time cat 02 appliances based at Stn C and Stn N shall dual staff 4 TRVS. TRVs will be available between 18:00hr and 00:00hr resulting in C02 and N02 being unavailable.
- 1 on-call cat 02 appliance based at Stn Z to be available on a 5 min recall to duty.

Service Impact

Scenario A1 would result in 80 additional callouts within target time. The average attendance time for the Service for all callouts would reduce by 2 seconds.

Service	Scenario A1	Callouts	In Target	% of Callouts in Target	Average Attendance Time
All Risk Levels	Base Case	67255	64361	95.70%	00:04:38
	Scenario A1	67255	64441	95.82%	00:04:36
	Difference	0	80	0.12%	00:00:02

Service Impact by Risk Level

The average attendance time for the 2nd appliance at a Risk Level 1 and Risk Level 2 incident would reduce by 4 seconds.

Scenario A1 – Service Comparison						
Risk Level	**Arrival Order**	**Scenario**	**Callouts**	**In Target**	**% of Callouts in Target**	**Average Attendance Time**
Risk Level 1	1st Appliance	Base case	9983	8499	85.13%	00:04:19
		Scenario A1	9983	8504	85.18%	00:04:19
		Difference	0	5	0.05%	00:00:00
	2nd Appliance	Base case	7424	6787	91.42%	00:05:04
		Scenario A1	7424	6841	92.15%	00:05:00
		Difference	0	54	0.73%	00:00:04
Risk Level 2	1st Appliance	Base case	2947	2584	87.68%	00:04:12
		Scenario A1	2947	2586	87.75%	00:04:12
		Difference	0	2	0.07%	00:00:00
		Base case	1562	1437	92.00%	00:04:56
		Scenario A1	1562	1455	93.15%	00:04:52

	2nd Appliance	Difference	0	18	1.15%	00:00:04

Scenario A1 - Station Impact

Station Overview – Scenario A1 - All Risk Levels				
Station	**Scenario**	**Callouts**	**In Target**	**%**
Birtley (W)	Base case	1757	1646	93.68%
	Scenario A1	1753	1646	93.90%
	Difference	-4	0	0.21%
Byker (F)	Base case	6867	6735	98.08%
	Scenario A1	6701	6576	98.13%
	Difference	-166	-159	0.06%
Chopwell (Z)	Base case	276	72	26.09%
	Scenario A1	276	72	26.09%
	Difference	0	0	0.00%
Farringdon (Q)	Base case	4025	3793	94.24%
	Scenario A1	3982	3756	94.32%
	Difference	-43	-37	0.09%
Gateshead (V)	Base case	7103	6962	98.01%
	Scenario A1	6844	6739	98.47%
	Difference	-259	-223	0.45%
Gosforth (E)	Base case	3449	3084	89.42%
	Scenario A1	3330	2971	89.22%
	Difference	-119	-113	-0.20%
Hebburn (T)	Base case	2303	2239	97.22%
	Scenario A1	2285	2226	97.42%
	Difference	-18	-13	0.20%
Marley Park (M)	Base case	1844	1746	94.69%
	Scenario A1	1839	1741	94.67%
	Difference	-5	-5	-0.01%
Newcastle Central (C)	Base case	10216	10049	98.37%
	Scenario A1	10006	9852	98.46%
	Difference	-210	-197	0.10%
Rainton Bridge (H)	Base case	1823	1679	92.10%
	Scenario A1	1826	1676	91.79%
	Difference	3	-3	-0.32%
South Shields (K)	Base case	5488	5337	97.25%
	Scenario A1	5375	5240	97.49%
	Difference	-113	-97	0.24%
Sunderland Central (N)	Base case	7046	6915	98.14%

	Scenario A1	7050	6922	98.18%
	Difference	4	7	0.04%
Swalwell (Y)	Base case	2540	2184	85.98%
	Scenario A1	2293	1993	86.92%
	Difference	-247	-191	0.93%
Tynemouth (J)	Base case	4407	4285	97.23%
	Scenario A1	4401	4288	97.43%
	Difference	-6	3	0.20%
Wallsend (G)	Base case	2666	2596	97.37%
	Scenario A1	2651	2581	97.36%
	Difference	-15	-15	-0.01%
Washington (S)	Base case	2653	2469	93.06%
	Scenario A1	2644	2462	93.12%
	Difference	-9	-7	0.05%
West Denton (A)	Base case	2792	2570	92.05%
	Scenario A1	3999	3700	92.52%
	Difference	1207	1130	0.47%

Average Attendance Times by Station

Station	Scenario	All Risk Levels	RL1 1st Appliance	RL1 2nd Appliance	RL2 1st Appliance	RL2 2nd Appliance
Birtley (W)	Base case	00:05:12	00:04:36	00:07:02	00:04:03	00:06:53
	Scenario A1	00:05:11	00:04:35	00:07:00	00:04:03	00:06:53
	Difference	00:00:01	00:00:01	00:00:02	00:00:00	00:00:00
Byker (F)	Base case	00:04:04	00:03:31	00:04:28	00:03:31	00:04:17
	Scenario A1	00:04:02	00:03:29	00:04:27	00:03:30	00:04:15
	Difference	00:00:02	00:00:02	00:00:01	00:00:01	00:00:02
Chopwell (Z)	Base case	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Scenario A1	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Farringdon (Q)	Base case	00:05:06	00:04:52	00:05:19	00:05:09	00:05:20
	Scenario A1	00:05:06	00:04:49	00:05:20	00:05:12	00:05:15
	Difference	00:00:00	00:00:03	00:00:01	00:00:03	00:00:05
Gateshead (V)	Base case	00:04:28	00:03:51	00:04:47	00:03:44	00:05:02
	Scenario A1	00:04:24	00:03:47	00:04:42	00:03:36	00:05:00
	Difference	00:00:04	00:00:04	00:00:05	00:00:08	00:00:02
Gosforth (E)	Base case	00:05:49	00:05:58	00:06:54	00:05:30	00:06:55
	Scenario A1	00:05:44	00:05:59	00:06:46	00:05:29	00:06:47
	Difference	00:00:05	00:00:01	00:00:08	00:00:01	00:00:08
Hebburn (T)	Base case	00:04:42	00:04:14	00:07:18	00:04:20	00:06:51
	Scenario A1	00:04:41	00:04:14	00:07:10	00:04:21	00:06:35
	Difference	00:00:01	00:00:00	00:00:08	00:00:01	00:00:16
Marley Park (M)	Base case	00:05:00	00:04:20	00:05:28	00:04:33	00:05:23
	Scenario A1	00:05:00	00:04:21	00:05:29	00:04:32	00:05:24
	Difference	00:00:00	00:00:01	00:00:01	00:00:01	00:00:01
Newcastle Central (C)	Base case	00:03:54	00:03:31	00:04:31	00:03:28	00:04:33
	Scenario A1	00:03:50	00:03:30	00:04:25	00:03:28	00:04:26
	Difference	00:00:04	00:00:01	00:00:06	00:00:00	00:00:07
Rainton Bridge (H)	Base case	00:05:35	00:05:21	00:06:06	00:05:19	00:05:39

	Scenario A1	00:05:35	00:05:25	00:05:45	00:05:16	00:05:53
	Difference	00:00:00	00:00:04	00:00:21	00:00:03	00:00:14
South Shields (K)	Base case	00:04:25	00:04:17	00:04:56	00:04:14	00:04:58
	Scenario A1	00:04:24	00:04:16	00:04:54	00:04:10	00:04:56
	Difference	00:00:01	00:00:01	00:00:02	00:00:04	00:00:02
Sunderland Central (N)	Base case	00:03:59	00:03:39	00:04:15	00:03:31	00:04:03
	Scenario A1	00:03:59	00:03:39	00:04:14	00:03:30	00:04:02
	Difference	00:00:00	00:00:00	00:00:01	00:00:01	00:00:01
Swalwell (Y)	Base case	00:06:14	00:06:14	00:06:57	00:06:25	00:07:21
	Scenario A1	00:06:07	00:06:12	00:06:40	00:06:25	00:07:06
	Difference	00:00:07	00:00:02	00:00:17	00:00:00	00:00:15
Tynemouth (J)	Base case	00:04:18	00:04:06	00:04:34	00:03:56	00:04:14
	Scenario A1	00:04:17	00:04:04	00:04:32	00:03:58	00:04:13
	Difference	00:00:01	00:00:02	00:00:02	00:00:02	00:00:01
Wallsend (G)	Base case	00:04:19	00:03:50	00:06:31	00:03:45	00:06:12
	Scenario A1	00:04:19	00:03:50	00:06:34	00:03:46	00:06:07
	Difference	00:00:00	00:00:00	00:00:03	00:00:01	00:00:05
Washington (S)	Base case	00:05:09	00:04:51	00:06:46	00:04:47	00:07:09
	Scenario A1	00:05:08	00:04:51	00:06:45	00:04:47	00:07:06
	Difference	00:00:01	00:00:00	00:00:01	00:00:00	00:00:03
West Denton (A)	Base case	00:05:24	00:04:51	00:08:16	00:04:48	00:08:58
	Scenario A1	00:05:26	00:05:00	00:06:22	00:04:53	00:06:43
	Difference	00:00:02	00:00:09	**00:01:54**	00:00:05	**00:02:15**

Scenario A2

- 16 whole-time cat 01 appliances based at Stn A, Stn C, Stn E, Stn F, Stn G, Stn H, Stn J, Stn K, Stn M, Stn N, Stn Q, Stn S, Stn T, Stn V, Stn W, and Stn Y.
- 6 whole-time cat 02 appliances based at Stn E, Stn F, Stn J, Stn K, Stn Q and Stn V.
- 2 whole-time cat 02 appliances based at Stn C and Stn N shall dual staff 4 TRVS. TRVs will be available between 18:00hr and 00:00hr resulting in C02 and N02 being unavailable.
- 1 on-call cat 02 appliance based at Stn Z to be available on a 5 min recall to duty.

Service Impact

Scenario A2 would result in 189 additional callouts within target time. The average attendance time for the Service for all callouts would reduce by 3 seconds.

Service	Scenario A2	Callouts	In Target	% of Callouts in Target	Average Attendance Time
	Base Case	67255	64361	95.70%	00:04:38

All Risk Levels	Scenario A2	67255	64550	95.98%	00:04:35
	Difference	0	189	0.28%	00:00:03

Service Impact by Risk Level

The average attendance time for the 2nd appliance at a Risk Level 1 incident would reduce by 8 seconds and the 2nd appliance at a Risk Level 2 incident would reduce by 12 seconds.
.

Scenario A2 – Service Comparison						
Risk Level	**Arrival Order**	**Scenario**	**Callouts**	**In Target**	**% of Callouts in Target**	**Average Attendance Time**
Risk Level 1	1st Appliance	Base case	9983	8499	85.13%	00:04:19
		Scenario A2	9983	8504	85.18%	00:04:19
		Difference	0	5	0.05%	00:00:00
	2nd Appliance	Base case	7424	6787	91.42%	00:05:04
		Scenario A2	7424	6922	93.24%	00:04:56
		Difference	0	135	1.82%	00:00:08
Risk Level 2	1st Appliance	Base case	2947	2584	87.68%	00:04:12
		Scenario A2	2947	2586	87.75%	00:04:12
		Difference	0	2	0.07%	00:00:00
	2nd Appliance	Base case	1562	1437	92.00%	00:04:56
		Scenario A2	1562	1480	94.75%	00:04:44
		Difference	0	43	2.75%	00:00:12

Scenario A2 - Station Impact

Station Overview – Scenario A2 - All Risk Levels				
Station	**Scenario**	**Callouts**	**In Target**	**%**
Birtley (W)	Base case	1757	1646	93.68%
	Scenario A2	1753	1645	93.84%
	Difference	-4	-1	0.16%
Byker (F)	Base case	6867	6735	98.08%
	Scenario A2	6307	6266	99.35%
	Difference	-560	-469	1.27%
Chopwell (Z)	Base case	276	72	26.09%
	Scenario A2	276	72	26.09%
	Difference	0	0	0.00%
Farringdon (Q)	Base case	4025	3793	94.24%
	Scenario A2	3976	3744	94.16%
	Difference	-49	-49	-0.07%

Gateshead (V)	Base case	7103	6962	98.01%
	Scenario A2	7011	6879	98.12%
	Difference	-92	-83	0.10%
Gosforth (E)	Base case	3449	3084	89.42%
	Scenario A2	5195	4675	89.99%
	Difference	1746	1591	0.57%
Hebburn (T)	Base case	2303	2239	97.22%
	Scenario A2	2287	2228	97.42%
	Difference	-16	-11	0.20%
Marley Park (M)	Base case	1844	1746	94.69%
	Scenario A2	1839	1741	94.67%
	Difference	-5	-5	-0.01%
Newcastle Central (C)	Base case	10216	10049	98.37%
	Scenario A2	9714	9637	99.21%
	Difference	-502	-412	0.84%
Rainton Bridge (H)	Base case	1823	1679	92.10%
	Scenario A2	1827	1684	92.17%
	Difference	4	5	0.07%
South Shields (K)	Base case	5488	5337	97.25%
	Scenario A2	5383	5251	97.55%
	Difference	-105	-86	0.30%
Sunderland Central (N)	Base case	7046	6915	98.14%
	Scenario A2	7057	6925	98.13%
	Difference	11	10	-0.01%
Swalwell (Y)	Base case	2540	2184	85.98%
	Scenario A2	2495	2142	85.85%
	Difference	-45	-42	-0.13%
Tynemouth (J)	Base case	4407	4285	97.23%
	Scenario A2	4369	4261	97.53%
	Difference	-38	-24	0.30%
Wallsend (G)	Base case	2666	2596	97.37%
	Scenario A2	2584	2518	97.45%
	Difference	-82	-78	0.07%
Washington (S)	Base case	2653	2469	93.06%
	Scenario A2	2644	2463	93.15%
	Difference	-9	-6	0.09%
West Denton (A)	Base case	2792	2570	92.05%
	Scenario A2	2538	2419	95.31%
	Difference	-254	-151	3.26%

Average Attendance Times by Station

Station	Scenario	All Risk Levels	RL1 1st Appliance	RL1 2nd Appliance	RL2 1st Appliance	RL2 2nd Appliance
Birtley (W)	Base case	00:05:12	00:04:36	00:07:02	00:04:03	00:06:53
	Scenario A2	00:05:11	00:04:36	00:07:02	00:04:03	00:06:53
	Difference	00:00:01	00:00:00	00:00:00	00:00:00	00:00:00
Byker (F)	Base case	00:04:04	00:03:31	00:04:28	00:03:31	00:04:17
	Scenario A2	00:03:47	00:03:28	00:03:59	00:03:26	00:03:55
	Difference	00:00:17	00:00:03	00:00:29	00:00:05	00:00:22
Chopwell (Z)	Base case	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Scenario A2	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43

	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Farringdon (Q)	Base case	00:05:06	00:04:52	00:05:19	00:05:09	00:05:20
	Scenario A2	00:05:05	00:04:49	00:05:20	00:05:11	00:05:16
	Difference	00:00:01	00:00:03	00:00:01	00:00:02	00:00:04
Gateshead (V)	Base case	00:04:28	00:03:51	00:04:47	00:03:44	00:05:02
	Scenario A2	00:04:27	00:03:49	00:04:46	00:03:41	00:05:01
	Difference	00:00:01	00:00:02	00:00:01	00:00:03	00:00:01
Gosforth (E)	Base case	00:05:49	00:05:58	00:06:54	00:05:30	00:06:55
	Scenario A2	00:05:45	00:05:59	00:06:05	00:05:32	00:05:44
	Difference	00:00:04	00:00:01	00:00:49	00:00:02	**00:01:11**
Hebburn (T)	Base case	00:04:42	00:04:14	00:07:18	00:04:20	00:06:51
	Scenario A2	00:04:41	00:04:14	00:07:11	00:04:21	00:06:23
	Difference	00:00:01	00:00:00	00:00:07	00:00:01	00:00:28
Marley Park (M)	Base case	00:05:00	00:04:20	00:05:28	00:04:33	00:05:23
	Scenario A2	00:05:00	00:04:21	00:05:29	00:04:34	00:05:21
	Difference	00:00:00	00:00:01	00:00:01	00:00:01	00:00:02
Newcastle Central (C)	Base case	00:03:54	00:03:31	00:04:31	00:03:28	00:04:33
	Scenario A2	00:03:43	00:03:30	00:04:01	00:03:26	00:03:56
	Difference	00:00:11	00:00:01	00:00:30	00:00:02	00:00:37
Rainton Bridge (H)	Base case	00:05:35	00:05:21	00:06:06	00:05:19	00:05:39
	Scenario A2	00:05:34	00:05:25	00:05:37	00:05:19	00:05:33
	Difference	00:00:01	00:00:04	00:00:29	00:00:00	00:00:06
South Shields (K)	Base case	00:04:25	00:04:17	00:04:56	00:04:14	00:04:58
	Scenario A2	00:04:24	00:04:15	00:04:54	00:04:10	00:04:57
	Difference	00:00:01	00:00:02	00:00:02	00:00:04	00:00:01
Sunderland Central (N)	Base case	00:03:59	00:03:39	00:04:15	00:03:31	00:04:03
	Scenario A2	00:04:00	00:03:39	00:04:16	00:03:30	00:04:04
	Difference	00:00:01	00:00:00	00:00:01	00:00:01	00:00:01
Swalwell (Y)	Base case	00:06:14	00:06:14	00:06:57	00:06:25	00:07:21
	Scenario A2	00:06:13	00:06:10	00:07:12	00:06:24	00:07:10
	Difference	00:00:01	00:00:04	00:00:15	00:00:01	00:00:11
Tynemouth (J)	Base case	00:04:18	00:04:06	00:04:34	00:03:56	00:04:14
	Scenario A2	00:04:16	00:04:04	00:04:29	00:03:57	00:04:15
	Difference	00:00:02	00:00:02	00:00:05	00:00:01	00:00:01
Wallsend (G)	Base case	00:04:19	00:03:50	00:06:31	00:03:45	00:06:12
	Scenario A2	00:04:14	00:03:50	00:06:23	00:03:45	00:06:08
	Difference	00:00:05	00:00:00	00:00:08	00:00:00	00:00:04
Washington (S)	Base case	00:05:09	00:04:51	00:06:46	00:04:47	00:07:09
	Scenario A2	00:05:08	00:04:51	00:06:43	00:04:47	00:07:06
	Difference	00:00:01	00:00:00	00:00:03	00:00:00	00:00:03
West Denton (A)	Base case	00:05:24	00:04:51	00:08:16	00:04:48	00:08:58
	Scenario A2	00:05:01	00:04:50	00:06:24	00:04:48	00:05:51
	Difference	00:00:23	00:00:01	**00:01:52**	00:00:00	**00:03:07**

Scenario A3

- 16 whole-time cat 01 appliances based at Stn A, Stn C, Stn E, Stn F, Stn G, Stn H, Stn J, Stn K, Stn M, Stn N, Stn Q, Stn S, Stn T, Stn V, Stn W, and Stn Y.
- 6 whole-time cat 02 appliances based at Stn F, Stn J, Stn K, Stn Q, Stn V and Stn Y.
- 2 whole-time cat 02 appliances based at Stn C and Stn N shall dual staff 4 TRVS. TRVs will be available between 18:00hr and 00:00hr resulting in C02 and N02 being unavailable.
- 1 on-call cat 02 appliance based at Stn Z to be available on a 5 min recall to duty.

Service Impact

Scenario A3 would result in 24 additional callouts within target time. The average attendance time for the Service for all callouts would reduce by 1 second.

Service	Scenario A3	Callouts	In Target	% of Callouts in Target	Average Attendance Time
All Risk Levels	Base Case	67255	64361	95.70%	00:04:38
	Scenario A3	67255	64385	95.73%	00:04:37
	Difference	0	24	0.04%	00:00:01

Service Impact by Risk Level

- The average attendance time for the 2nd appliance at a Risk Level 1 and Risk incident 2 would reduce by 1 second.

Scenario A3 – Service Comparison						
Risk Level	**Arrival Order**	**Scenario**	**Callouts**	**In Target**	**% of Callouts in Target**	**Average Attendance Time**
Risk Level 1	1st Appliance	Base case	9983	8499	85.13%	00:04:19
		Scenario A3	9983	8505	85.19%	00:04:19
		Difference	0	6	0.06%	00:00:00
	2nd Appliance	Base case	7424	6787	91.42%	00:05:04
		Scenario A3	7424	6796	91.54%	00:05:03
		Difference	0	9	0.12%	00:00:01
Risk Level 2	1st Appliance	Base case	2947	2584	87.68%	00:04:12
		Scenario A3	2947	2587	87.78%	00:04:12
		Difference	0	3	0.10%	00:00:00
	2nd Appliance	Base case	1562	1437	92.00%	00:04:56
		Scenario A3	1562	1442	92.32%	00:04:55
		Difference	0	5	0.32%	00:00:01

Scenario A3 - Station Impact

Station Overview – Scenario A3 - All Risk Levels				
Station	**Scenario**	**Callouts**	**In Target**	**%**
Birtley (W)	Base case	1757	1646	93.68%
	Scenario A3	1748	1641	93.88%
	Difference	-9	-5	0.20%
Byker (F)	Base case	6867	6735	98.08%
	Scenario A3	6750	6618	98.04%
	Difference	-117	-117	-0.03%
Chopwell (Z)	Base case	276	72	26.09%
	Scenario A3	275	72	26.18%
	Difference	-1	0	0.09%
Farringdon (Q)	Base case	4025	3793	94.24%
	Scenario A3	3978	3749	94.24%
	Difference	-47	-44	0.01%
Gateshead (V)	Base case	7103	6962	98.01%
	Scenario A3	6813	6710	98.49%
	Difference	-290	-252	0.47%
Gosforth (E)	Base case	3449	3084	89.42%
	Scenario A3	3453	3088	89.43%
	Difference	4	4	0.01%
Hebburn (T)	Base case	2303	2239	97.22%
	Scenario A3	2282	2223	97.41%
	Difference	-21	-16	0.19%
Marley Park (M)	Base case	1844	1746	94.69%
	Scenario A3	1841	1743	94.68%
	Difference	-3	-3	-0.01%
Newcastle Central (C)	Base case	10216	10049	98.37%
	Scenario A3	9984	9854	98.70%
	Difference	-232	-195	0.33%
Rainton Bridge (H)	Base case	1823	1679	92.10%
	Scenario A3	1827	1684	92.17%
	Difference	4	5	0.07%
South Shields (K)	Base case	5488	5337	97.25%
	Scenario A3	5372	5241	97.56%
	Difference	-116	-96	0.31%
Sunderland Central (N)	Base case	7046	6915	98.14%
	Scenario A3	7050	6919	98.14%
	Difference	4	4	0.00%
Swalwell (Y)	Base case	2540	2184	85.98%
	Scenario A3	3402	2944	86.54%
	Difference	862	760	0.55%
Tynemouth (J)	Base case	4407	4285	97.23%

	Scenario A3	4394	4283	97.47%
	Difference	-13	-2	0.24%
Wallsend (G)	Base case	2666	2596	97.37%
	Scenario A3	2648	2578	97.36%
	Difference	-18	-18	-0.02%
Washington (S)	Base case	2653	2469	93.06%
	Scenario A3	2643	2461	93.11%
	Difference	-10	-8	0.05%
West Denton (A)	Base case	2792	2570	92.05%
	Scenario A3	2795	2577	92.20%
	Difference	3	7	0.15%

Average Attendance Times by Station

Station	Scenario	All Risk Levels	RL1 1st Appliance	RL1 2nd Appliance	RL2 1st Appliance	RL2 2nd Appliance
Birtley (W)	Base case	00:05:12	00:04:36	00:07:02	00:04:03	00:06:53
	Scenario A3	00:05:11	00:04:35	00:07:00	00:04:03	00:06:53
	Difference	00:00:01	00:00:01	00:00:02	00:00:00	00:00:00
Byker (F)	Base case	00:04:04	00:03:31	00:04:28	00:03:31	00:04:17
	Scenario A3	00:04:03	00:03:31	00:04:27	00:03:30	00:04:17
	Difference	00:00:01	00:00:00	00:00:01	00:00:01	00:00:00
Chopwell (Z)	Base case	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Scenario A3	00:14:16	00:13:17	00:16:17	00:13:36	00:16:43
	Difference	00:00:01	00:00:00	00:00:00	00:00:00	00:00:00
Farringdon (Q)	Base case	00:05:06	00:04:52	00:05:19	00:05:09	00:05:20
	Scenario A3	00:05:06	00:04:50	00:05:21	00:05:09	00:05:19
	Difference	00:00:00	00:00:02	00:00:02	00:00:00	00:00:01
Gateshead (V)	Base case	00:04:28	00:03:51	00:04:47	00:03:44	00:05:02
	Scenario A3	00:04:24	00:03:45	00:04:40	00:03:36	00:04:58
	Difference	00:00:04	00:00:06	00:00:07	00:00:08	00:00:04
Gosforth (E)	Base case	00:05:49	00:05:58	00:06:54	00:05:30	00:06:55
	Scenario A3	00:05:49	00:05:58	00:06:55	00:05:31	00:06:56
	Difference	00:00:00	00:00:00	00:00:01	00:00:01	00:00:01
Hebburn (T)	Base case	00:04:42	00:04:14	00:07:18	00:04:20	00:06:51
	Scenario A3	00:04:40	00:04:14	00:07:12	00:04:21	00:06:33
	Difference	00:00:02	00:00:00	00:00:06	00:00:01	00:00:18
Marley Park (M)	Base case	00:05:00	00:04:20	00:05:28	00:04:33	00:05:23
	Scenario A3	00:05:00	00:04:20	00:05:30	00:04:34	00:05:21
	Difference	00:00:00	00:00:00	00:00:02	00:00:01	00:00:02
Newcastle Central (C)	Base case	00:03:54	00:03:31	00:04:31	00:03:28	00:04:33
	Scenario A3	00:03:50	00:03:27	00:04:19	00:03:26	00:04:27
	Difference	00:00:04	00:00:04	00:00:12	00:00:02	00:00:06
Rainton Bridge (H)	Base case	00:05:35	00:05:21	00:06:06	00:05:19	00:05:39
	Scenario A3	00:05:34	00:05:22	00:06:02	00:05:20	00:05:27
	Difference	00:00:01	00:00:01	00:00:04	00:00:01	00:00:12
South Shields (K)	Base case	00:04:25	00:04:17	00:04:56	00:04:14	00:04:58
	Scenario A3	00:04:24	00:04:15	00:04:54	00:04:10	00:04:58

	Difference	00:00:01	00:00:02	00:00:02	00:00:04	00:00:00
Sunderland Central (N)	Base case	00:03:59	00:03:39	00:04:15	00:03:31	00:04:03
	Scenario A3	00:03:59	00:03:38	00:04:15	00:03:31	00:04:01
	Difference	00:00:00	00:00:01	00:00:00	00:00:00	00:00:02
Swalwell (Y)	Base case	00:06:14	00:06:14	00:06:57	00:06:25	00:07:21
	Scenario A3	00:06:11	00:06:06	00:06:29	00:06:22	00:06:42
	Difference	00:00:03	00:00:08	00:00:28	00:00:03	00:00:39
Tynemouth (J)	Base case	00:04:18	00:04:06	00:04:34	00:03:56	00:04:14
	Scenario A3	00:04:17	00:04:04	00:04:31	00:03:58	00:04:14
	Difference	00:00:01	00:00:02	00:00:03	00:00:02	00:00:00
Wallsend (G)	Base case	00:04:19	00:03:50	00:06:31	00:03:45	00:06:12
	Scenario A3	00:04:19	00:03:50	00:06:33	00:03:46	00:06:12
	Difference	00:00:00	00:00:00	00:00:02	00:00:01	00:00:00
Washington (S)	Base case	00:05:09	00:04:51	00:06:46	00:04:47	00:07:09
	Scenario A3	00:05:08	00:04:51	00:06:43	00:04:47	00:07:06
	Difference	00:00:01	00:00:00	00:00:03	00:00:00	00:00:03
West Denton (A)	Base case	00:05:24	00:04:51	00:08:16	00:04:48	00:08:58
	Scenario A3	00:05:23	00:04:51	00:08:18	00:04:47	00:08:58
	Difference	00:00:01	00:00:00	00:00:02	00:00:01	00:00:00

Workload Modelling
September 2020
Scenario B

Data & Information Department

Confidential

Data and Information Audit	
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Tyne and Wear Fire and Rescue Service
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Contents

Background

Workload Modelling uses the resources provided in the various scenarios to simulate an emergency appliance turnout response to incidents that have occurred historically over three years (2017/18, 2018/19 and 2019/20). These scenarios are then compared to a Base Case to establish the emergency appliance turnout response using the current resources.

The Workload Modeller uses the Ordnance Survey (OS) Integrated Transport Network (ITN) road network and speeds assigned to those roads to determine the time taken to travel to each incident using the nearest available and appropriate resource.

The road speeds used are:

Road Type	Road Speed (MPH)
Motorway	60
A Road	50
B Road	25
Minor Road	20
Local Street	20
Pedestrianised Street	5
Alley	5
Private Road	20

Notes on Data

Within the station based tables, the workload modeller treats reduced callout numbers (-) as a positive and colour codes them green, however reduced target achievement (-) is thought of as a negative and coloured red.

Scenario B1

- 16 whole-time cat 01 appliances based at Stn A, Stn C, Stn E, Stn F, Stn G, Stn H, Stn J, Stn K, Stn M, Stn N, Stn Q, Stn S, Stn T, Stn V, Stn W and Stn Y.
- 8 whole-time cat 02 appliances based at Stn A, Stn C, Stn F, Stn J, Stn K, Stn Q, Stn N and Stn V.
- 1 on-call cat 02 appliance based at Stn Z to be available on a 5 min recall to duty.

Service Impact

Scenario B1 would result in 70 additional callouts within target time. The average attendance time for the Service for all callouts would reduce by 2 seconds.

Service	Scenario B1	Callouts	In Target	% of Callouts in Target	Average Attendance Time
All Risk Levels	Base Case	67255	64416	95.78%	00:04:35
	Scenario B1	67255	64486	95.88%	00:04:33
	Difference	0	70	0.10%	00:00:02

Service Impact by Risk Level

The average attendance time for the 2nd appliance at a Risk Level 1 and Risk Level 2 incident would reduce by 4 seconds.

Scenario B1 – Service Comparison						
Risk Level	**Arrival Order**	**Scenario**	**Callouts**	**In Target**	**% of Callouts in Target**	**Average Attendance Time**
Risk Level 1	1st Appliance	Base case	9983	8524	85.39%	00:04:18
		Scenario B1	9983	8531	85.46%	00:04:18
		Difference	0	7	0.07%	00:00:00
	2nd Appliance	Base case	7424	6806	91.68%	00:04:55
		Scenario B1	7424	6853	92.31%	00:04:51
		Difference	0	47	0.63%	00:00:04
Risk Level 2	1st Appliance	Base case	2947	2590	87.89%	00:04:11
		Scenario B1	2947	2592	87.95%	00:04:11
		Difference	0	2	0.07%	00:00:00
	2nd Appliance	Base case	1562	1442	92.32%	00:04:48
		Scenario B1	1562	1452	92.96%	00:04:44
		Difference	0	10	0.64%	00:00:04

Scenario B1 - Station Impact

Station Overview – Scenario B1 - All Risk Levels				
Station	**Scenario**	**Callouts**	**In Target**	**%**
Birtley (W)	Base case	1745	1639	93.93%
	Scenario B1	1735	1630	93.95%
	Difference	-10	-9	0.02%
Byker (F)	Base case	6636	6508	98.07%
	Scenario B1	6523	6405	98.19%
	Difference	-113	-103	0.12%
Chopwell (Z)	Base case	276	72	26.09%
	Scenario B1	276	72	26.09%
	Difference	0	0	0.00%
Farringdon (Q)	Base case	3696	3485	94.29%
	Scenario B1	3678	3470	94.34%
	Difference	-18	-15	0.05%
Gateshead (V)	Base case	6425	6313	98.26%
	Scenario B1	6182	6096	98.61%
	Difference	-243	-217	0.35%
Gosforth (E)	Base case	3442	3078	89.42%
	Scenario B1	3314	2956	89.20%
	Difference	-128	-122	-0.23%
Hebburn (T)	Base case	2290	2230	97.38%
	Scenario B1	2280	2221	97.41%
	Difference	-10	-9	0.03%
Marley Park (M)	Base case	1628	1531	94.04%
	Scenario B1	1631	1535	94.11%
	Difference	3	4	0.07%
Newcastle Central (C)	Base case	11373	11166	98.18%
	Scenario B1	11140	10963	98.41%
	Difference	-233	-203	0.23%
Rainton Bridge (H)	Base case	1822	1675	91.93%
	Scenario B1	1822	1675	91.93%
	Difference	0	0	0.00%
South Shields (K)	Base case	5353	5227	97.65%
	Scenario B1	5355	5230	97.67%
	Difference	2	3	0.02%
Sunderland Central (N)	Base case	7660	7517	98.13%
	Scenario B1	7648	7503	98.10%
	Difference	-12	-14	-0.03%
Swalwell (Y)	Base case	2511	2158	85.94%
	Scenario B1	2263	1954	86.35%
	Difference	-248	-204	0.40%
Tynemouth (J)	Base case	4383	4266	97.33%
	Scenario B1	4316	4206	97.45%
	Difference	-67	-60	0.12%
Wallsend (G)	Base case	2656	2589	97.48%

	Scenario B1	2638	2571	97.46%
	Difference	-18	-18	-0.02%
Washington (S)	Base case	2647	2469	93.28%
	Scenario B1	2641	2464	93.30%
	Difference	-6	-5	0.02%
West Denton (A)	Base case	2712	2493	91.92%
	Scenario B1	3813	3535	92.71%
	Difference	1101	1042	0.78%

Average Attendance Times by Station

Station	Scenario	All Risk Levels	RL1 1st Appliance	RL1 2nd Appliance	RL2 1st Appliance	RL2 2nd Appliance
Birtley (W)	Base case	00:05:11	00:04:35	00:06:57	00:04:02	00:06:48
	Scenario B1	00:05:10	00:04:35	00:06:58	00:04:03	00:06:53
	Difference	00:00:01	00:00:00	00:00:01	00:00:01	00:00:05
Byker (F)	Base case	00:04:02	00:03:29	00:04:27	00:03:29	00:04:16
	Scenario B1	00:04:00	00:03:28	00:04:25	00:03:28	00:04:18
	Difference	00:00:02	00:00:01	00:00:02	00:00:01	00:00:02
Chopwell (Z)	Base case	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Scenario B1	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Farringdon (Q)	Base case	00:05:02	00:04:49	00:05:11	00:05:07	00:05:18
	Scenario B1	00:05:02	00:04:48	00:05:10	00:05:04	00:05:21
	Difference	00:00:00	00:00:01	00:00:01	00:00:03	00:00:03
Gateshead (V)	Base case	00:04:23	00:03:47	00:04:41	00:03:40	00:05:01
	Scenario B1	00:04:19	00:03:41	00:04:38	00:03:34	00:04:57
	Difference	00:00:04	00:00:06	00:00:03	00:00:06	00:00:04
Gosforth (E)	Base case	00:05:48	00:05:58	00:07:04	00:05:29	00:07:23
	Scenario B1	00:05:44	00:05:59	00:07:14	00:05:30	00:06:51
	Difference	00:00:04	00:00:01	00:00:10	00:00:01	00:00:32
Hebburn (T)	Base case	00:04:42	00:04:15	00:07:10	00:04:19	00:06:34
	Scenario B1	00:04:40	00:04:14	00:07:07	00:04:20	00:06:30
	Difference	00:00:02	00:00:01	00:00:03	00:00:01	00:00:04
Marley Park (M)	Base case	00:04:58	00:04:20	00:06:09	00:04:33	00:05:45
	Scenario B1	00:04:57	00:04:20	00:06:07	00:04:33	00:05:45
	Difference	00:00:01	00:00:00	00:00:02	00:00:00	00:00:00
Newcastle Central (C)	Base case	00:03:56	00:03:33	00:04:20	00:03:30	00:04:21
	Scenario B1	00:03:51	00:03:30	00:04:16	00:03:27	00:04:17
	Difference	00:00:05	00:00:03	00:00:04	00:00:03	00:00:04
Rainton Bridge (H)	Base case	00:05:34	00:05:25	00:05:48	00:05:17	00:05:58
	Scenario B1	00:05:34	00:05:25	00:05:47	00:05:20	00:05:45
	Difference	00:00:00	00:00:00	00:00:01	00:00:03	00:00:13
South Shields (K)	Base case	00:04:23	00:04:14	00:04:54	00:04:12	00:04:58
	Scenario B1	00:04:22	00:04:13	00:04:52	00:04:12	00:04:58
	Difference	00:00:01	00:00:01	00:00:02	00:00:00	00:00:00
Sunderland Central (N)	Base case	00:03:58	00:03:39	00:04:04	00:03:31	00:03:52
	Scenario B1	00:03:58	00:03:39	00:04:04	00:03:32	00:03:50

	Difference	00:00:00	00:00:00	00:00:00	00:00:01	00:00:02
Swalwell (Y)	Base case	00:06:14	00:06:11	00:07:17	00:06:29	00:07:09
	Scenario B1	00:06:06	00:06:10	00:07:02	00:06:29	00:06:45
	Difference	00:00:08	00:00:01	00:00:15	00:00:00	00:00:24
Tynemouth (J)	Base case	00:04:18	00:04:04	00:04:33	00:03:57	00:04:16
	Scenario B1	00:04:17	00:04:03	00:04:32	00:03:56	00:04:13
	Difference	00:00:01	00:00:01	00:00:01	00:00:01	00:00:03
Wallsend (G)	Base case	00:04:19	00:03:49	00:06:35	00:03:46	00:06:19
	Scenario B1	00:04:18	00:03:49	00:06:37	00:03:46	00:06:13
	Difference	00:00:01	00:00:00	00:00:02	00:00:00	00:00:06
Washington (S)	Base case	00:05:08	00:04:51	00:06:42	00:04:47	00:07:02
	Scenario B1	00:05:08	00:04:51	00:06:42	00:04:47	00:07:02
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
West Denton (A)	Base case	00:05:23	00:04:50	00:08:43	00:04:47	00:09:07
	Scenario B1	00:05:24	00:05:00	00:06:23	00:04:52	00:06:44
	Difference	00:00:01	00:00:10	**00:02:20**	00:00:05	**00:02:23**

Scenario B2

- 16 whole-time cat 01 appliances based at Stn A, Stn C, Stn E, Stn F, Stn G, Stn H, Stn J, Stn K, Stn M, Stn N, Stn Q, Stn S, Stn T, Stn V, Stn W and Stn Y.
- 8 whole-time cat 02 appliances based at Stn C, Stn E, Stn F, Stn J, Stn K, Stn Q, Stn N and Stn V.
- 1 on-call cat 02 appliance based at Stn Z to be available on a 5 min recall to duty.

Service Impact

Scenario B2 would result in 185 additional callouts within target time. The average attendance time for the Service for all callouts would reduce by 3 seconds.

Service	Scenario B2	Callouts	In Target	% of Callouts in Target	Average Attendance Time
All Risk Levels	Base Case	67255	64416	95.78%	00:04:35
	Scenario B2	67255	64601	96.05%	00:04:32
	Difference	0	185	0.28%	00:00:03

Service Impact by Risk Level

The average attendance time for the 2nd appliance at a Risk Level 1 incident would reduce by 8 seconds and the 2nd appliance at a Risk Level 2 incident would reduce by 12 seconds.
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Scenario B2 – Service Comparison

Risk Level	Arrival Order	Scenario	Callouts	In Target	% of Callouts in Target	Average Attendance Time
Risk Level 1	1st Appliance	Base case	9983	8524	85.39%	00:04:18
		Scenario B2	9983	8532	85.47%	00:04:18
		Difference	0	8	0.08%	00:00:00
	2nd Appliance	Base case	7424	6806	91.68%	00:04:55
		Scenario B2	7424	6935	93.41%	00:04:47
		Difference	0	129	1.74%	00:00:08
Risk Level 2	1st Appliance	Base case	2947	2590	87.89%	00:04:11
		Scenario B2	2947	2593	87.99%	00:04:11
		Difference	0	3	0.10%	00:00:00
	2nd Appliance	Base case	1562	1442	92.32%	00:04:48
		Scenario B2	1562	1479	94.69%	00:04:36
		Difference	0	37	2.37%	00:00:12

Scenario B2 - Station Impact

Station Overview – Scenario B2 - All Risk Levels				
Station	**Scenario**	**Callouts**	**In Target**	**%**
Birtley (W)	Base case	1745	1639	93.93%
	Scenario B2	1739	1634	93.96%
	Difference	-6	-5	0.04%
Byker (F)	Base case	6636	6508	98.07%
	Scenario B2	6127	6086	99.33%
	Difference	-509	-422	1.26%
Chopwell (Z)	Base case	276	72	26.09%
	Scenario B2	276	72	26.09%
	Difference	0	0	0.00%
Farringdon (Q)	Base case	3696	3485	94.29%
	Scenario B2	3684	3466	94.08%
	Difference	-12	-19	-0.21%
Gateshead (V)	Base case	6425	6313	98.26%
	Scenario B2	6299	6191	98.29%
	Difference	-126	-122	0.03%
Gosforth (E)	Base case	3442	3078	89.42%
	Scenario B2	5095	4588	90.05%
	Difference	1653	1510	0.62%
Hebburn (T)	Base case	2290	2230	97.38%
	Scenario B2	2278	2221	97.50%
	Difference	-12	-9	0.12%
Marley Park (M)	Base case	1628	1531	94.04%

	Scenario B2	1628	1532	94.10%
	Difference	0	1	0.06%
Newcastle Central (C)	Base case	11373	11166	98.18%
	Scenario B2	10824	10719	99.03%
	Difference	-549	-447	0.85%
Rainton Bridge (H)	Base case	1822	1675	91.93%
	Scenario B2	1823	1683	92.32%
	Difference	1	8	0.39%
South Shields (K)	Base case	5353	5227	97.65%
	Scenario B2	5353	5226	97.63%
	Difference	0	-1	-0.02%
Sunderland Central (N)	Base case	7660	7517	98.13%
	Scenario B2	7654	7508	98.09%
	Difference	-6	-9	-0.04%
Swalwell (Y)	Base case	2511	2158	85.94%
	Scenario B2	2466	2123	86.09%
	Difference	-45	-35	0.15%
Tynemouth (J)	Base case	4383	4266	97.33%
	Scenario B2	4299	4195	97.58%
	Difference	-84	-71	0.25%
Wallsend (G)	Base case	2656	2589	97.48%
	Scenario B2	2573	2510	97.55%
	Difference	-83	-79	0.07%
Washington (S)	Base case	2647	2469	93.28%
	Scenario B2	2642	2466	93.34%
	Difference	-5	-3	0.06%
West Denton (A)	Base case	2712	2493	91.92%
	Scenario B2	2495	2381	95.43%
	Difference	-217	-112	3.51%

Average Attendance Times by Station

Station	Scenario	All Risk Levels	RL1 1st Appliance	RL1 2nd Appliance	RL2 1st Appliance	RL2 2nd Appliance
Birtley (W)	Base case	00:05:11	00:04:35	00:06:57	00:04:02	00:06:48
	Scenario B2	00:05:10	00:04:35	00:06:57	00:04:03	00:06:53
	Difference	00:00:01	00:00:00	00:00:00	00:00:01	00:00:05
Byker (F)	Base case	00:04:02	00:03:29	00:04:27	00:03:29	00:04:16
	Scenario B2	00:03:45	00:03:28	00:03:56	00:03:25	00:03:54
	Difference	00:00:17	00:00:01	00:00:31	00:00:04	00:00:22
Chopwell (Z)	Base case	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Scenario B2	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Farringdon (Q)	Base case	00:05:02	00:04:49	00:05:11	00:05:07	00:05:18
	Scenario B2	00:05:02	00:04:50	00:05:08	00:05:07	00:05:15
	Difference	00:00:00	00:00:01	00:00:03	00:00:00	00:00:03
Gateshead (V)	Base case	00:04:23	00:03:47	00:04:41	00:03:40	00:05:01
	Scenario B2	00:04:21	00:03:46	00:04:41	00:03:37	00:04:59
	Difference	00:00:02	00:00:01	00:00:00	00:00:03	00:00:02
Gosforth (E)	Base case	00:05:48	00:05:58	00:07:04	00:05:29	00:07:23
	Scenario B2	00:05:44	00:05:59	00:06:04	00:05:29	00:05:44

	Difference	00:00:04	00:00:01	**00:01:00**	00:00:00	**00:01:39**
Hebburn (T)	Base case	00:04:42	00:04:15	00:07:10	00:04:19	00:06:34
	Scenario B2	00:04:40	00:04:14	00:07:07	00:04:20	00:06:25
	Difference	00:00:02	00:00:01	00:00:03	00:00:01	00:00:09
Marley Park (M)	Base case	00:04:58	00:04:20	00:06:09	00:04:33	00:05:45
	Scenario B2	00:04:57	00:04:20	00:06:09	00:04:33	00:05:45
	Difference	00:00:01	00:00:00	00:00:00	00:00:00	00:00:00
Newcastle Central (C)	Base case	00:03:56	00:03:33	00:04:20	00:03:30	00:04:21
	Scenario B2	00:03:45	00:03:31	00:03:58	00:03:27	00:03:52
	Difference	00:00:11	00:00:02	00:00:22	00:00:03	00:00:29
Rainton Bridge (H)	Base case	00:05:34	00:05:25	00:05:48	00:05:17	00:05:58
	Scenario B2	00:05:34	00:05:22	00:05:51	00:05:19	00:05:31
	Difference	00:00:00	00:00:03	00:00:03	00:00:02	00:00:27
South Shields (K)	Base case	00:04:23	00:04:14	00:04:54	00:04:12	00:04:58
	Scenario B2	00:04:22	00:04:13	00:04:52	00:04:11	00:05:00
	Difference	00:00:01	00:00:01	00:00:02	00:00:01	00:00:02
Sunderland Central (N)	Base case	00:03:58	00:03:39	00:04:04	00:03:31	00:03:52
	Scenario B2	00:03:58	00:03:39	00:04:04	00:03:31	00:03:53
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:01
Swalwell (Y)	Base case	00:06:14	00:06:11	00:07:17	00:06:29	00:07:09
	Scenario B2	00:06:12	00:06:11	00:07:13	00:06:30	00:07:07
	Difference	00:00:02	00:00:00	00:00:04	00:00:01	00:00:02
Tynemouth (J)	Base case	00:04:18	00:04:04	00:04:33	00:03:57	00:04:16
	Scenario B2	00:04:15	00:04:03	00:04:29	00:03:56	00:04:14
	Difference	00:00:03	00:00:01	00:00:04	00:00:01	00:00:02
Wallsend (G)	Base case	00:04:19	00:03:49	00:06:35	00:03:46	00:06:19
	Scenario B2	00:04:13	00:03:49	00:06:25	00:03:44	00:06:17
	Difference	00:00:06	00:00:00	00:00:10	00:00:02	00:00:02
Washington (S)	Base case	00:05:08	00:04:51	00:06:42	00:04:47	00:07:02
	Scenario B2	00:05:08	00:04:51	00:06:42	00:04:47	00:07:09
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:07
West Denton (A)	Base case	00:05:23	00:04:50	00:08:43	00:04:47	00:09:07
	Scenario B2	00:05:00	00:04:49	00:06:47	00:04:47	00:05:57
	Difference	00:00:23	00:00:01	**00:01:56**	00:00:00	**00:03:10**

Scenario B3

- 16 whole-time cat 01 appliances based at Stn A, Stn C, Stn E, Stn F, Stn G, Stn H, Stn J, Stn K, Stn M, Stn N, Stn Q, Stn S, Stn T, Stn V, Stn W and Stn Y.
- 8 whole-time cat 02 appliances based at Stn C, Stn F, Stn J, Stn K, Stn Q, Stn N, Stn V and Stn Y.
- 1 on-call cat 02 appliance based at Stn Z to be available on a 5 min recall to duty.

Service Impact

Scenario B3 would result in 11 additional callouts within target time. The average attendance time for the Service for all callouts would not change.

Service	Scenario B3	Callouts	In Target	% of Callouts in Target	Average Attendance Time
All Risk Levels	Base Case	67255	64416	95.78%	00:04:35
	Scenario B3	67255	64427	95.80%	00:04:35
	Difference	0	11	0.02%	00:00:00

Service Impact by Risk Level

- The average attendance time for the 2nd appliance at a Risk Level 1 and Risk incident 2 would reduce by 1 second.

Scenario B3 – Service Comparison						
Risk Level	**Arrival Order**	**Scenario**	**Callouts**	**In Target**	**% of Callouts in Target**	**Average Attendance Time**
Risk Level 1	1st Appliance	Base case	9983	8524	85.39%	00:04:18
		Scenario B3	9983	8529	85.44%	00:04:18
		Difference	0	5	0.05%	00:00:00
	2nd Appliance	Base case	7424	6806	91.68%	00:04:55
		Scenario B3	7424	6809	91.72%	00:04:54
		Difference	0	3	0.04%	00:00:01
Risk Level 2	1st Appliance	Base case	2947	2590	87.89%	00:04:11
		Scenario B3	2947	2592	87.95%	00:04:11
		Difference	0	2	0.07%	00:00:00
	2nd Appliance	Base case	1562	1442	92.32%	00:04:48
		Scenario B3	1562	1441	92.25%	00:04:47
		Difference	0	-1	-0.06%	00:00:01

Scenario B3 - Station Impact

Station Overview – Scenario B3 - All Risk Levels				
Station	**Scenario**	**Callouts**	**In Target**	**%**
Birtley (W)	Base case	1745	1639	93.93%
	Scenario B3	1732	1627	93.94%
	Difference	-13	-12	0.01%

Byker (F)	Base case	6636	6508	98.07%
	Scenario B3	6525	6405	98.16%
	Difference	-111	-103	0.09%
Chopwell (Z)	Base case	276	72	26.09%
	Scenario B3	275	72	26.18%
	Difference	-1	0	0.09%
Farringdon (Q)	Base case	3696	3485	94.29%
	Scenario B3	3676	3465	94.26%
	Difference	-20	-20	-0.03%
Gateshead (V)	Base case	6425	6313	98.26%
	Scenario B3	6137	6050	98.58%
	Difference	-288	-263	0.33%
Gosforth (E)	Base case	3442	3078	89.42%
	Scenario B3	3449	3085	89.45%
	Difference	7	7	0.02%
Hebburn (T)	Base case	2290	2230	97.38%
	Scenario B3	2277	2219	97.45%
	Difference	-13	-11	0.07%
Marley Park (M)	Base case	1628	1531	94.04%
	Scenario B3	1629	1533	94.11%
	Difference	1	2	0.07%
Newcastle Central (C)	Base case	11373	11166	98.18%
	Scenario B3	11049	10904	98.69%
	Difference	-324	-262	0.51%
Rainton Bridge (H)	Base case	1822	1675	91.93%
	Scenario B3	1822	1680	92.21%
	Difference	0	5	0.27%
South Shields (K)	Base case	5353	5227	97.65%
	Scenario B3	5361	5234	97.63%
	Difference	8	7	-0.02%
Sunderland Central (N)	Base case	7660	7517	98.13%
	Scenario B3	7649	7503	98.09%
	Difference	-11	-14	-0.04%
Swalwell (Y)	Base case	2511	2158	85.94%
	Scenario B3	3349	2897	86.50%
	Difference	838	739	0.56%
Tynemouth (J)	Base case	4383	4266	97.33%
	Scenario B3	4315	4206	97.47%
	Difference	-68	-60	0.14%
Wallsend (G)	Base case	2656	2589	97.48%
	Scenario B3	2635	2567	97.42%
	Difference	-21	-22	-0.06%
Washington (S)	Base case	2647	2469	93.28%
	Scenario B3	2642	2466	93.34%
	Difference	-5	-3	0.06%
West Denton (A)	Base case	2712	2493	91.92%

Scenario B3	2733	2514	91.99%	
Difference	21	21	0.06%	

Average Attendance Times by Station

Station	Scenario	All Risk Levels	RL1 1st Appliance	RL1 2nd Appliance	RL2 1st Appliance	RL2 2nd Appliance
Birtley (W)	Base case	00:05:11	00:04:35	00:06:57	00:04:02	00:06:48
	Scenario B3	00:05:10	00:04:35	00:06:57	00:04:02	00:06:48
	Difference	00:00:01	00:00:00	00:00:00	00:00:00	00:00:00
Byker (F)	Base case	00:04:02	00:03:29	00:04:27	00:03:29	00:04:16
	Scenario B3	00:04:00	00:03:28	00:04:27	00:03:28	00:04:17
	Difference	00:00:02	00:00:01	00:00:00	00:00:01	00:00:01
Chopwell (Z)	Base case	00:14:17	00:13:17	00:16:17	00:13:36	00:16:43
	Scenario B3	00:14:16	00:13:17	00:16:17	00:13:36	00:16:43
	Difference	00:00:01	00:00:00	00:00:00	00:00:00	00:00:00
Farringdon (Q)	Base case	00:05:02	00:04:49	00:05:11	00:05:07	00:05:18
	Scenario B3	00:05:01	00:04:50	00:05:07	00:05:06	00:05:17
	Difference	00:00:01	00:00:01	00:00:04	00:00:01	00:00:01
Gateshead (V)	Base case	00:04:23	00:03:47	00:04:41	00:03:40	00:05:01
	Scenario B3	00:04:19	00:03:42	00:04:37	00:03:34	00:04:57
	Difference	00:00:04	00:00:05	00:00:04	00:00:06	00:00:04
Gosforth (E)	Base case	00:05:48	00:05:58	00:07:04	00:05:29	00:07:23
	Scenario B3	00:05:48	00:05:58	00:07:04	00:05:30	00:07:14
	Difference	00:00:00	00:00:00	00:00:00	00:00:01	00:00:09
Hebburn (T)	Base case	00:04:42	00:04:15	00:07:10	00:04:19	00:06:34
	Scenario B3	00:04:39	00:04:14	00:07:10	00:04:20	00:06:30
	Difference	00:00:03	00:00:01	00:00:00	00:00:01	00:00:04
Marley Park (M)	Base case	00:04:58	00:04:20	00:06:09	00:04:33	00:05:45
	Scenario B3	00:04:57	00:04:20	00:06:07	00:04:33	00:05:45
	Difference	00:00:01	00:00:00	00:00:02	00:00:00	00:00:00
Newcastle Central (C)	Base case	00:03:56	00:03:33	00:04:20	00:03:30	00:04:21
	Scenario B3	00:03:50	00:03:28	00:04:08	00:03:26	00:04:16
	Difference	00:00:06	00:00:05	00:00:12	00:00:04	00:00:05
Rainton Bridge (H)	Base case	00:05:34	00:05:25	00:05:48	00:05:17	00:05:58
	Scenario B3	00:05:33	00:05:23	00:05:49	00:05:20	00:05:28
	Difference	00:00:01	00:00:02	00:00:01	00:00:03	00:00:30
South Shields (K)	Base case	00:04:23	00:04:14	00:04:54	00:04:12	00:04:58
	Scenario B3	00:04:23	00:04:13	00:04:53	00:04:12	00:04:59
	Difference	00:00:00	00:00:01	00:00:01	00:00:00	00:00:01
Sunderland Central (N)	Base case	00:03:58	00:03:39	00:04:04	00:03:31	00:03:52
	Scenario B3	00:03:58	00:03:39	00:04:05	00:03:31	00:03:52
	Difference	00:00:00	00:00:00	00:00:01	00:00:00	00:00:00
Swalwell (Y)	Base case	00:06:14	00:06:11	00:07:17	00:06:29	00:07:09
	Scenario B3	00:06:09	00:06:06	00:06:25	00:06:24	00:06:42
	Difference	00:00:05	00:00:05	00:00:52	00:00:05	00:00:27
Tynemouth (J)	Base case	00:04:18	00:04:04	00:04:33	00:03:57	00:04:16
	Scenario B3	00:04:17	00:04:03	00:04:32	00:03:56	00:04:13

	Difference	00:00:01	00:00:01	00:00:01	00:00:01	00:00:03
Wallsend (G)	Base case	00:04:19	00:03:49	00:06:35	00:03:46	00:06:19
	Scenario B3	00:04:18	00:03:49	00:06:38	00:03:45	00:06:22
	Difference	00:00:01	00:00:00	00:00:03	00:00:01	00:00:03
Washington (S)	Base case	00:05:08	00:04:51	00:06:42	00:04:47	00:07:02
	Scenario B3	00:05:08	00:04:51	00:06:42	00:04:47	00:07:02
	Difference	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
West Denton (A)	Base case	00:05:23	00:04:50	00:08:43	00:04:47	00:09:07
	Scenario B3	00:05:22	00:04:50	00:08:44	00:04:47	00:09:12
	Difference	00:00:01	00:00:00	00:00:01	00:00:00	00:00:05