

Cumbria Fire and Rescue Service
Risk Management Review
Barrow, Ulverston and Walney

November 2017

Contents

Introduction	1
Our Performance – Barrow, Ulverston & Walney	2
All Incidents.....	2
All Fires	3
Dwelling Fires	4
Injuries in Fires.....	5
Dwelling Fire Fatalities	6
Deliberate Fires –.....	7
Road Traffic Collisions (Fatalities)	8
Analysis of Risk.....	10
The Fire Risk Model.....	10
Cumbria Risk Profile	11
Barrow, Ulverston and Walney Risk Profile	12
Dwellings / response ‘zones’	13
Our Resources across Barrow, Ulverston and Walney	14
Barrow, Ulverston and Walney individual Fire Station analysis.....	16
Barrow Fire Station	16
Resources	16
Activity	16

Risk Profile	20
Next nearest Supporting Appliances.....	21
Other Contextual Information.....	21
Ulverston Fire Station	22
Resources	22
Appliance Availability 2016/17	22
Activity	23
Risk Profile	28
Next nearest Supporting Appliances.....	28
Other Contextual Information.....	29
Additional Risk Analysis: Activity by Time of Day	30
Walney Fire Station.....	32
Resources	32
Appliance Availability 2016/17	32
Activity	33
Individual Fire Appliance Activity	34
Risk Profile	35
Next nearest Supporting Appliances.....	36
Other contextual information.....	36
Additional Risk Analysis: Walney as Second Pump Response	37

Introduction

Our approach to responding to risk is well developed and in addition to assessing the overall risk of a local area, our resource and response requirements will continue to be determined by considering the following:

- Geographical cover – The area of service provision. This is driven by the geographical dispersion of potential incidents and the distance to travel by our response vehicles.
- Workload – The likely number of independent responses required, taking into account historical incident data.
- Type of response – The characteristics of the risk which determine the resource requirement within that area.
- Weight of attack – The amount of equipment and staff required to deal with an incident based on an analysis of the potential impact of each emergency situation.

Inevitably some of the above factors are intrinsically linked. There is dependency between 'type of response' and 'weight of attack'. Furthermore, other factors such as response time, Firefighter safety and local topology serve as constraints for defining the limits of these variables. We will continue to focus our efforts on risk reduction initiatives, however, fully understand that a modern Fire and Rescue Service should be governed by the following principles:

- Maintain public protection from fire and, if possible, enhance that protection by means of proactive prevention and protection activity
- Actively promote Firefighter safety
- Provide a primary focus of fire cover which continues to be directly addressed to life risk
- Continue to be cost effective and consistent with the principles of best value for public money

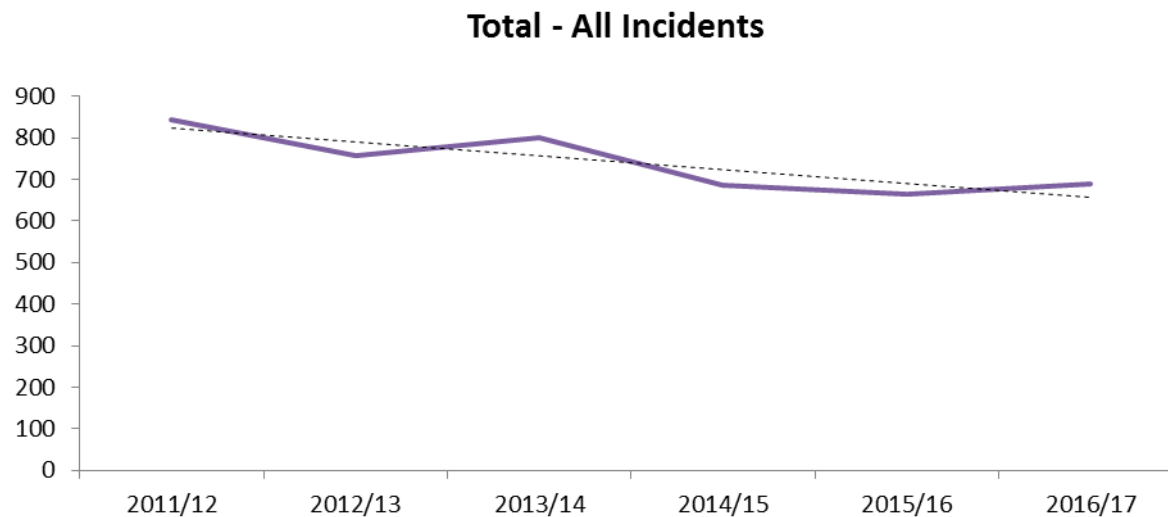
These four key principles were considered as part of the individual Station Risk Reviews completed in 2015 and have been used to underpin this focused review into fire cover provision across Barrow, Ulverston and Walney.

Our Performance – Barrow, Ulverston & Walney

In order to further develop an efficient, effective and economic risk plan for Barrow, Ulverston and Walney it is important to evaluate our performance. The following charts demonstrate our performance in recent years.

All Incidents – DECREASING RATE OF 33 INCIDENTS PER YEAR

We are extremely proud of the preventative and protection work we have done to reduce the total number of incidents we are called out to year on year across the Barrow, Ulverston and Walney.

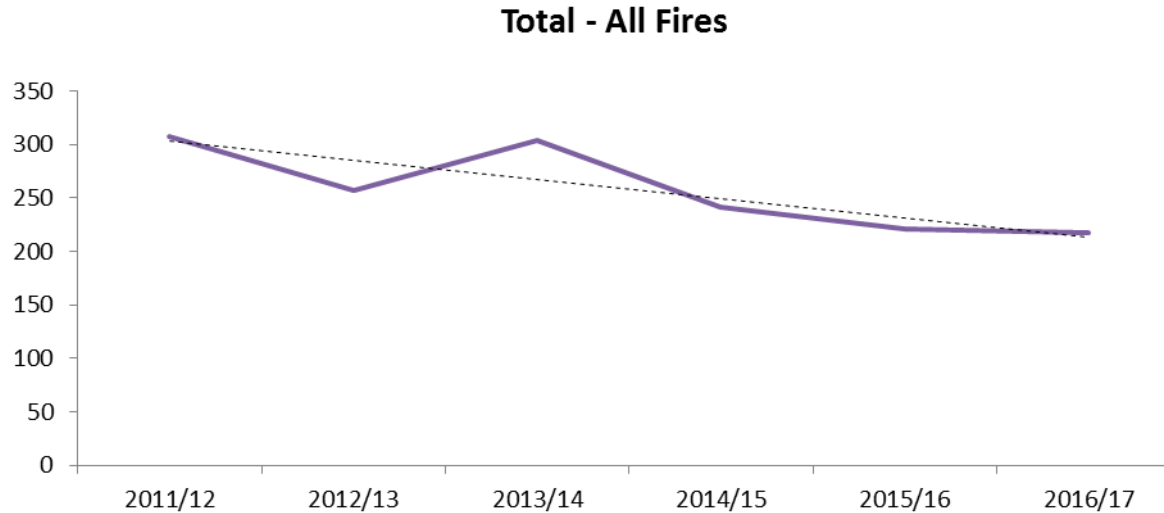


All Incidents

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% +/-	Rate pa
Total	844	758	800	685	664	690	-18.2	-33.34
Barrow	662	571	621	490	474	499	- 24.6	-35.3
Ulverston	121	137	133	143	142	129	+ 6.6	+1.9
Walney	61	50	46	52	48	62	+ 1.6	+0.1

All Fires – DECREASING RATE OF 18 FIRES PER YEAR

Successful prevention activities have enabled us to reduce the number of fires significantly, resulting in fewer risks to our communities and firefighters across the area.



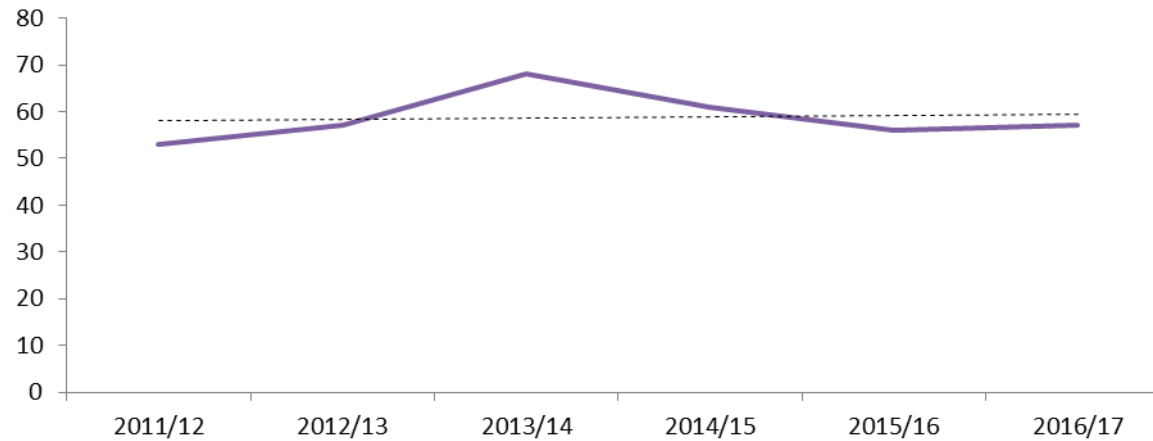
All Fires

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% +/-	Rate pa
Total	308	257	304	242	221	217	-29.5	-17.9
Barrow	234	204	255	168	156	153	- 34.6	-18.2
Ulverston	41	35	32	54	52	37	- 9.8	+1.5
Walney	33	18	17	20	13	27	-18.2	-1.2

Dwelling Fires – INCREASING RATE OF 0.3 DWELLING FIRES PER YEAR

The number of fires in dwellings across Barrow, Ulverston and Walney has remained relatively stable, with a slight increase over the past six years of 0.3 dwelling fires per annum. People are more aware of fire due to our significant investment in prevention initiatives and evidence indicates that most dwelling fires we attend are out on arrival or small and contained.

Total - All Dwelling Fires



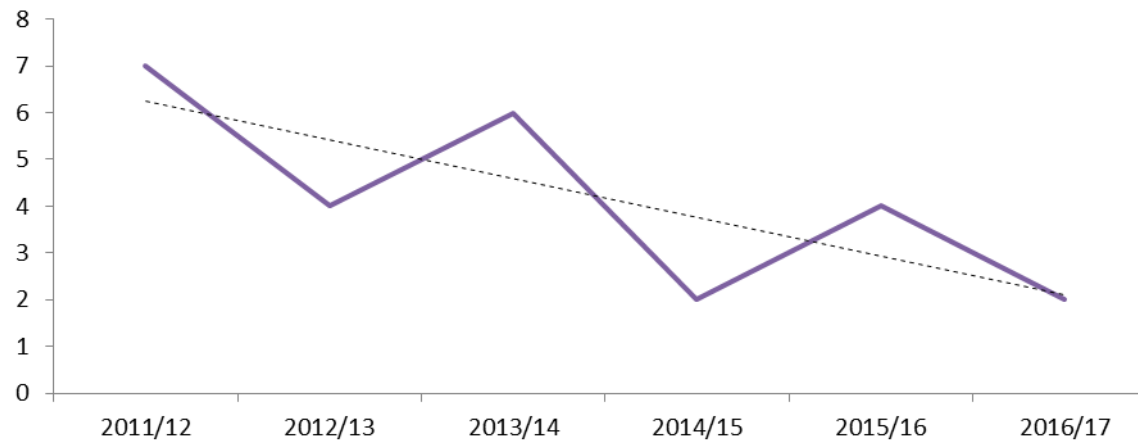
All Dwelling Fires

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% +/-	Rate pa
Total	53	57	68	61	56	57	+7.5	+0.3
Barrow	38	50	56	47	39	35	-7.9	-1.6
Ulverston	13	4	7	12	16	16	+23.1	+1.6
Walney	2	3	5	2	1	6	+200.0	+0.3

Injuries in Fires – DECREASING RATE OF 0.8 FIRE CASUALTIES PER YEAR

The number of people who have been injured in fires has significantly reduced over the past six years. Whilst the overall trend is reducing, we remain driven by a culture that wants to see fire injuries reduced to zero. We will continue to develop our staff to ensure we have the right resources, that these resources are available at the right times and in the correct locations, so that we can respond effectively and efficiently when the public are in need. The following graph highlights the reduction in fire related injuries across Barrow, Ulverston and Walney.

Total - injuries in Fires



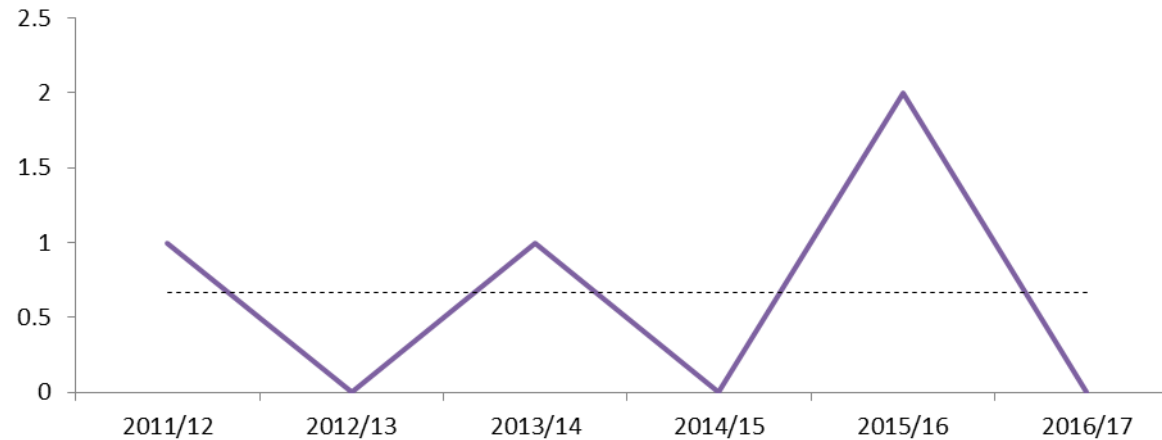
All Fire Related Casualties (Fatal, Severe, Slight & Precautionary Check)

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% +/-	Rate pa
Total	7	4	6	2	4	2	-71.4	-0.8
Barrow	3	2	4	2	4	1	-66.7	-0.2
Ulverston	2	1	2	0	0	1	-50.0	-0.3
Walney	2	1	0	0	0	0	-100.0	-0.4

Dwelling Fire Fatalities - **STABLE RATE OF 0 FIRE FATALITIES PER YEAR**

Dwelling fire fatalities remain low across the area, however one fire death is one too many. We will continue to deliver our prevention and protection strategies in order to reduce risk across Barrow, Ulverston and Walney.

Total - Dwelling Fire Related Fatalities



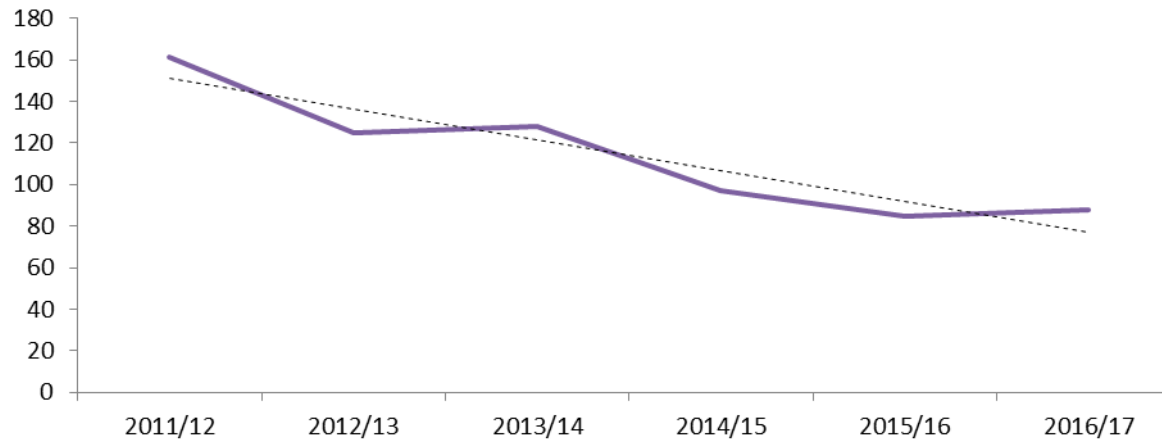
All Dwelling Fire Related Fatalities

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	Rate pa
Total	1	0	1	0	2	0	0.0
Barrow	0	0	0	0	2	0	+0.2
Ulverston	0	0	1	0	0	0	-0.0
Walney	1	0	0	0	0	0	-0.1

Deliberate Fires – DECREASING RATE OF 15 DELIBERATE FIRES PER YEAR

Our Firefighters are engaged with partners such as the Local Area Committees, local Health and Wellbeing Forums and the Barrow and South Lakeland Community Safety Partnerships and Police colleagues, and together we have reduced deliberate fires by almost a half since 2011/12. Targeted campaigns to address specific types of arson, such as deliberate vehicle fires, have seen a significant reduction in the number of incidents in this area.

Total - All Deliberate Fires



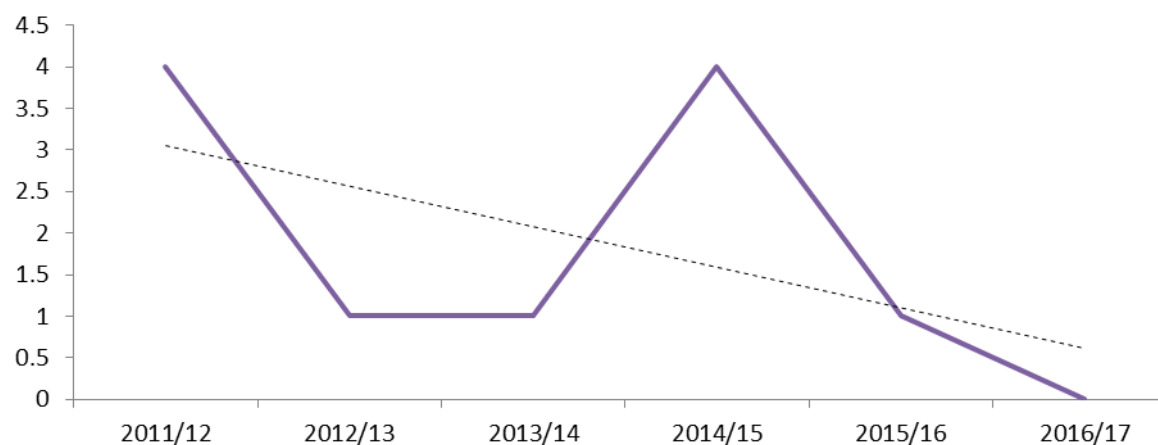
All Deliberate Fires

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% +/-	Rate pa
Total	161	125	128	97	85	88	-45.3	-14.7
Barrow	130	103	122	75	62	68	-47.7	-13.7
Ulverston	10	9	2	13	9	4	-60.0	-0.5
Walney	21	13	4	9	14	16	-23.8	-0.5

Road Traffic Collisions (Fatalities) – DECREASING RATE OF 0.5 RTC FATALITIES PER YEAR

The number of people who have died or been injured on the road has reduced. We continue to work with the Casualty Reduction and Safer Highways group, along with other key partners and deliver key road awareness training to reduce the number of road traffic collisions and associated injuries and deaths.

Total - Road Traffic Collision Fatalities



All RTC-Related Fatalities

Year	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% +/-	Rate pa
Total	4	1	1	4	1	0	-100	-0.5
Barrow	2	1	0	4	0	0	-100	-0.3
Ulverston	2	0	1	0	1	0	--100	-0.2
Walney	0	0	0	0	0	0	-	0.0

Statistics reference:

Incidents as recorded in Incident Recording System (IRS) and taking the Station ID recorded in the IRS record – the station completing the incident.

Summary:

We have highlighted some outstanding achievements in terms of risk reduction outcomes and demonstrated real improvements to the safety and wellbeing of our residents across Barrow, Ulverston and Walney. In order to deliver these results we have a dedicated and committed workforce who is employed on various duty systems. As part of this focused review we have analysed our operational capacity to ensure that we have the right resources and that these resources are strategically located across the area. This resource has a robust operational maintenance of skills framework, which underpins a competent and professional operational response., a response which can be deployed across the local area and countywide. We will always strive to provide the best service to the public we serve and where ever we can, we aim to achieve this outcome in the most efficient manner. This specific review into risk across Barrow, Ulverston and Walney enables Cumbria Fire and Rescue Service (CFRS) to review its position and ensure resource provision is appropriate in order to continue to deliver an efficient, effective and sustainable service to our communities. As a result of this review, service delivery changes are being considered and consulted upon within the 2018-19 IRMP Action Plan; these changes are centred on providing the right resource in the right place and at the right time to meet the changing risk and demand profile.

Analysis of Risk

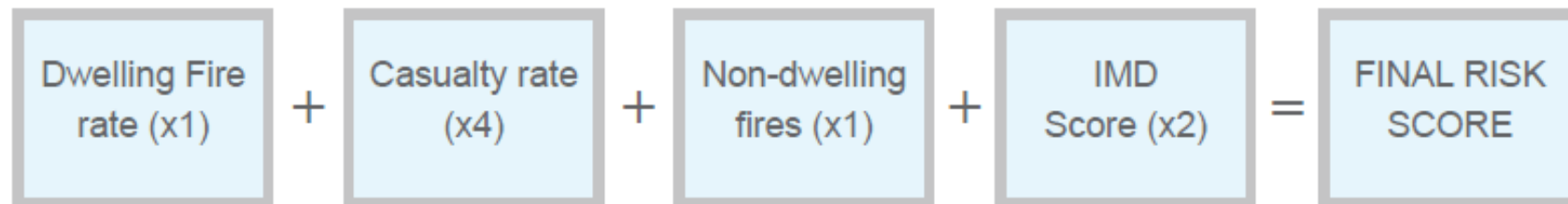
The Fire Risk Model

In order to be in a position where we can analyse risk in a way that allows us to determine whether our prevention and protection strategies are having the desired effect, CFRS introduced a new fire risk model as part of the 2011-14 IRMP. This revised approach was subjected to a detailed public and key stakeholder consultation at that time and the outcomes from that process were used to determine our final risk model.

The fire risk model involves an analysis of fires and associated casualties, along with a consideration of the deprivation within each Lower Super Output Area (LSOA) by use of the Index of Multiple Deprivation (IMD) score. The Index of Multiple Deprivation (IMD) 2007 is a measure of multiple deprivations and is made up of seven domain indices. These are:

- Income
- Employment
- Health Deprivation and Disability
- Education, Skills and Training
- Barriers to Housing and Services
- Crime
- Living Environment

We have maintained societal risk as a valid predictor of fire but at the same time focused on fires resulting in casualties and by applying the following weighting factors we are able to identify those areas within Cumbria that are more likely to suffer a fire resulting in injury:



The formula is weighted to provide emphasis on casualties and deprivation as if it was incorrectly structured, it would tend to disproportionately reflect an increase in calls as evidence of increasing risk, which is not always the case. In practice, even if the

number of reported fires increases in a given area, due to the structure of the formula as long as casualty rates decrease, then so too will overall levels of risk in that area (both in reality and within the final risk score). The full detail regarding the methodology is available within CFRS Intervention Standards Review document.

Cumbria Risk Profile

Using the above methodology the Service is in a position to assess each Lower Super Output Area and classify the risk as high, medium or low. CFRS have adopted this approach since the start of the 2011 IRMP and can determine that overall risk has reduced by circa 24% when comparing the latest 5 years of statistics with those used in 2017/18.

The county now only has 1 small area that is classified by CFRS as 'high fire risk' and a summary of the risk profile is provided below:

Cumbria Risk Profile		Incidents 2007/8 - 11/12		Incidents 2008/9 - 12/13		Incidents 2009/10 - 13/14		Incidents 2010/11 - 14/15		Incidents 2011/12 - 15/16		Incidents 2012/13 - 16/17	
		2012/13 Risk		2013/14 Risk		2014/15 Risk		2015/16 Risk		2016/17 Risk		2017/18 Risk	
Score	Risk Grade	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs
76 and above	High	956	12	474	6	230	3	78	1	78	1	78	1
35 to 75	Medium	5526	116	5328	116	5006	108	4618	101	4364	97	4284	96
34 and below	Low	4520	193	4580	199	4818	210	5132	219	5272	223	5306	224
		11002	321	10382	321	10054	321	9828	321	9714	321	9668	321
Total Risk Score		11002		10382		10054		9828		9714		9668	
Risk Score Increase/Reduction over the period		0.00%		-18.74%		-21.31%		-23.07%		-23.97%		-24.33%	

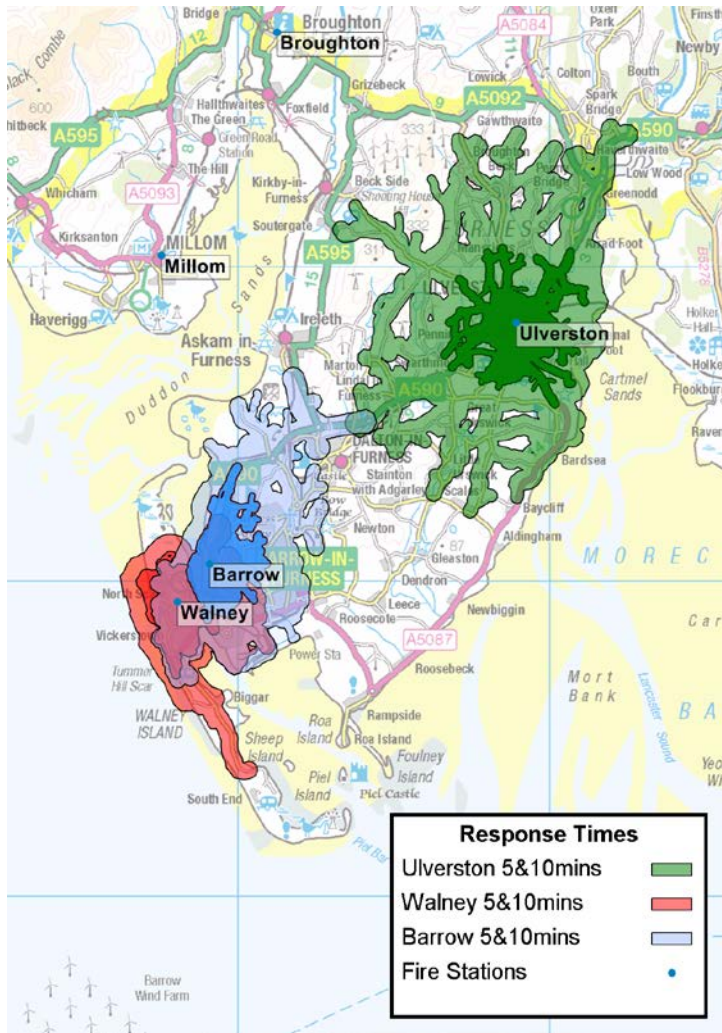
Barrow, Ulverston and Walney Risk Profile

Overall fire risk is continuing to reduce across the Barrow, Ulverston and Walney. The number of incidents is declining and due to our very proactive prevention and protection activities our communities are much safer. The following chart highlights the current position across the area, with no areas of 'high' fire risk.

Barrow, Ulverston & Walney Risk Profile		Incidents 2007/8 - 11/12		Incidents 2008/9 - 12/13		Incidents 2009/10 - 13/14		Incidents 2010/11 - 14/15		Incidents 2011/12 - 15/16		Incidents 2012/13 - 16/17	
		2012/13 Risk		2013/14 Risk		2014/15 Risk		2015/16 Risk		2016/17 Risk		2017/18 Risk	
Score	Risk Score	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs
76 and above	High	152	2	78	1	0	0	0	0	0	0	0	0
35 to 75	Medium	1576	32	1510	34	1400	32	1180	27	1150	26	1046	24
34 and below	Low	586	25	536	24	618	27	754	32	782	33	830	35
		2314	59	2124	59	2018	59	1934	59	1932	59	1876	59
Total Risk Score		2314		2124		2018		1934		1932		1876	
Risk Score Increase/Reduction over the period		0.00%		-8.21%		-12.79%		-16.42%		-16.51%		-18.93%	

Dwellings / response 'zones'

This section provides details of Fire Appliance response / travel zones across Barrow, Ulverston and Walney. The maps provide a simple graphic representation of the Station ground that can be covered by Fire Appliances within certain time parameters.



Ulverston:

- Light green shows a 10 minute fire engine travel zone
- Dark green shows a 5 minute fire engine travel zone

Barrow:

- Light Blue shows a 10 minute fire engine travel zone
- Dark Blue shows a 5 minute fire engine travel zone

Walney:

- Light red shows a 10 minute fire engine travel zone
- Dark red shows a 5 minute fire engine travel zone

NOTE: An On-Call Fire Appliance cannot meet any of the dark zones within 5 minutes from time of call due to the nature of their duty system. It generally takes an initial 5 minutes for the Fire-fighters to respond to the fire station before being able to mobilise.

5 and 10 minute Appliance response zones from Barrow, Ulverston and Walney Fire Stations

Our Resources across Barrow, Ulverston and Walney

CFRS provides a comprehensive prevention, protection and response Fire Service for Cumbria, the second largest county in England. The Service provides emergency cover for Cumbria on a 24 hour, 365 day a year basis. Across Barrow, Ulverston and Walney the existing fire cover arrangements are:

Fire Stations

There are three Fire Stations across Barrow, Ulverston and Walney, all within an 8 mile radius. These Fire Stations are located in Barrow, Walney Island and Ulverston. Barrow and Ulverston Stations are currently crewed by full-time Firefighters and Walney is operated by Firefighters working our on-call duty system. The next nearest Fire Appliances to the area are located at Broughton (9 miles from Ulverston) and Grange-Over-Sands (14 miles from Ulverston).

Regular Firefighters

Barrow and Ulverston Fire Stations are currently crewed by Firefighters working on the regular duty system (full time Firefighters). Regular shift based Firefighters at Barrow and Ulverston currently work a standard 42 hours per week on a traditional 2-2-4 duty system. A full 'tour of duty' is therefore based on 2 x 9 hour 'day shifts', followed by 2 x 15 hour 'night shifts' and then 4 days off duty.

The Fire crews at both Barrow and Ulverston are highly professional in their approach when responding to emergencies and carrying out community safety activities. However in the Ulverston area the risk and call out rate is low. At Ulverston in 2016/17, between the hours of 5pm and 9am there were no incidents / callouts for 217 nights out of 365. Between midnight and 7am there were 336 nights where there were no incidents / call outs. The current duty system is not considered to be the most efficient against the backdrop of demand and risk and therefore the Service is proposing to make changes to the duty system at Ulverston Fire Station.

Reviewing duty systems and changing working shift models is not something new, the Service has already made some changes to a number of duty systems at other Fire Stations across the county, where crews now work either 8 hour or 12 hour day shifts, thereby providing improved efficiency and value for money.

On-Call Firefighters

On-Call Firefighters are a vital part of CFRS. Nationwide, approximately 18,000 On-Call Firefighters provide efficient, cost effective and reliable Fire and Rescue cover to around 60% of the UK and across Cumbria they provide cover at 36 of our 38 Fire Stations.

On-Call crews will be called upon to attend the full range of incidents including fires, floods, road traffic collisions, chemical spills and more, and work alongside their full-time colleagues at many incidents.

Apart from a few hours a week for training sessions and to carry out other pre-arranged duties, On-Call Firefighters only attend the Fire Station when they have received an emergency callout. For much of the time, an On-Call Fire Station is not staffed. Each On-Call Firefighter carries a pocket alerter, which is activated when they are needed and they subsequently report to the Fire Station and mobilise the necessary appliance(s). On-Call Firefighters often have other occupations, but when the call comes they stop whatever they are doing and become part of a team who responds to the 999 call.

Barrow, Ulverston and Walney individual Fire Station analysis

Barrow Fire Station

Resources

Barrow's Phoenix Road Fire Station was opened in 1996 replacing the old central Fire Station in Abbey Road. Covering the coastal town of Barrow with a population of circa 57,000 in some 26,000 households, the Station was the first new one to be built by CFRS since the Service's formation in 1974. Barrow has five bays housing two Fire Appliances (one Wholetime and one Resilience crew), an Aerial Ladder Platform (ALP), a Mass Decontamination Unit (MDU) and a COBRA Wildfire Landrover. The Station is crewed by 20 regular Firefighters working the conventional 2/2/4 duty system.

Activity

The following table shows the number of incidents per incident category that occurred within the Lower Super Output Areas (LSOA) nominally attached to Barrow Fire Station. Therefore, the data does not necessarily mean that appliances from Barrow Fire Station responded to the incident, however, in the main that would be the case.

Incident Type	2013-14	2014-15	2015-16	2016-17
Barrow Total	476	407	393	418
FA-Malicious	11	8	8	6
FA-Apparatus	169	160	165	163
FA-Good Intent	55	66	65	82
Fire-Chimney Dwelling	8	4	9	7
Fire-Chimney Non-Residential				
Fire-Chimney Other Residential				
Fire-Primary Boat	1	2	3	
Fire-Primary Dwelling	56	47	39	35
Fire-Primary Non-residential	40	24	22	16
Fire-Primary Other Residential		3	1	
Fire-Primary Outdoor		1		2
Fire-Primary Outdoor Structure	1	3	2	2

Fire-Primary Road Vehicle	15	9	7	16
SSC-Other	112	76	72	83
SSC-RTC	19	12	8	12

Barrow (40P1)

In the 5 years from 2012/13 to 2016/17 (fiscal years), the Barrow Fire Appliance (40P1) was turned out to and booked in attendance at the following incidents.

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C40P1 TOTAL	342	582	436	478	499
FBC04 - Cockermouth				1	
FBC09 - Seascale	1				
FBC40 - Barrow	294	502	370	427	443
FBC42 - Broughton	1	1		1	2
FBC43 - Coniston	1			2	
FBC44 – Dalton*	20	33	23		
FBC45 - Grange		1	1		1
FBC46 - Millom	3	1	1	1	3
FBC47 - Ulverston	2	13	11	17	21
FBC48 - Walney	18	30	28	24	29
FBC60 - Kendal	1	1	2	1	
FBC70 - Windermere	1			1	

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one pump' calls (i.e. the incident was dealt with by the one Fire Appliance that was initially mobilised):

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C40P1 TOTAL	176	356	272	306	370
FBC04 - Cockermouth					
FBC09 - Seascale					
FBC40 - Barrow	154	319	237	289	345
FBC42 - Broughton				1	1
FBC43 - Coniston					
FBC44 – Dalton*	10	15	14		
FBC45 - Grange					
FBC46 - Millom					
FBC47 - Ulverston		1	3	3	5
FBC48 - Walney	12	20	17	11	19
FBC60 - Kendal		1	1	1	
FBC70 - Windermere					

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one pump' calls by type (i.e. the incident was dealt with by the one Fire Appliance that was initially mobilised):

C40P1	Year / No of incidents			
	13/14	14/15	15/16	16/17
All incidents	356	272	306	370
Primary Fires	33	34	21	35
Chimney	8	1	9	5
False Alarms	132	133	158	199
SSC - RTC	10	6	5	6
SSC - Other	56	39	54	62

Barrow (40P2)

In the same period, the 'second' Barrow Fire Appliance (40P2) was turned out to and booked in attendance at the following incidents. In 2014/15 Barrow Appliance C40P2 moved to Ulverston to become C47P1.

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C40P2 Total	313	284	70	0	0
FBC40 - Barrow	276	249	62		
FBC42 - Broughton	1				
FBC44 – Dalton*	16	24	3		
FBC45 - Grange	1				
FBC47 - Ulverston	2	1	1		
FBC48 - Walney	16	10	3		
FBC70 - Windermere	1		1		

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one pump' calls (i.e. the incident was dealt with by the one Fire Appliance that was initially mobilised):

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C40P2 Total	141	76	17	0	0
FBC40 - Barrow	124	68	15		
FBC42 - Broughton					
FBC44 – Dalton*	7	6	1		
FBC45 - Grange					
FBC47 - Ulverston					
FBC48 - Walney	10	2	1		
FBC70 - Windermere					

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one pump' calls by type (i.e. the incident was dealt with by the one Fire Appliance that was initially mobilised):

C40P2	Year / No of incidents			
	13/14	14/15	15/16	16/17
All incidents	76	17	0	0
Primary Fires	5	2	0	0
Chimney	1	1	0	0
False Alarms	31	7	0	0
SSC - RTC	2	1	0	0
SSC - Other	16	5	0	0

Risk Profile

The Fire Risk model clearly shows that the risk across Barrow is reducing, with no SOAs now classified as 'high' risk (part of Barrow Island).

Barrow Risk Profile		Incidents 2007/8 - 11/12		Incidents 2008/9 - 12/13		Incidents 2009/10 - 13/14		Incidents 2010/11 - 14/15		Incidents 2011/12 - 15/16		Incidents 2012/13 - 16/17	
		2012/13 Risk		2013/14 Risk		2014/15 Risk		2015/16 Risk		2016/17 Risk		2017/18 Risk	
Score	Risk Score	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs
76 and above	High	152	2	78	1	0	0	0	0	0	0	0	0
35 to 75	Medium	1162	23	1106	24	1120	25	1018	23	988	22	956	22
34 and below	Low	342	15	334	15	336	15	376	17	400	18	408	18
		1656	40	1518	40	1456	40	1394	40	1388	40	1364	40
Total Risk Score		1656		1518		1456		1394		1388		1364	
Risk Score Increase/Reduction over the period		0.00%		-8.33%		-12.08%		-15.82%		-16.18%		-17.63%	

Next nearest Supporting Appliances

The following table indicates the travel distance in miles from Barrow Fire Station to the next nearest two Fire Stations.

Station Name	Distance by Road (MILES)
Walney 48P1	2.13
Ulverston 47P1	8.60

Other Contextual Information

Although Barrow remains predominantly a shipbuilding town with the BAE Systems shipyard specialising in submarine construction, crews from the Station also train regularly on the more diversified risk sites such as the gas terminals, other large commercial premises, acute care facilities, engineering establishments and vessels in the complex dock system.

Barrow:	Risk in Station Area:
World Heritage	The Lake District was awarded World Heritage site status by UNESCO in July 2017
Heritage	There are a number of key heritage risks within the town and full details are contained in the Strategic Risk Review
Environment	No significant Environmental Risk Sites identified within the Station area SSSI Roanhead
Site Specific Risks	British Gas PLC, BAE Systems, Laporte Wood Protection Ltd, Partylite Manufacturing, Sovereign Chemical Industries Ltd, INS Terminal, Lakeland Power, Urofoam Ltd, Advanced Roofing Supplies, Centrica South, Centrica North, Furness General Hospital, Robert McBride Group, United Utilities (Electricity) Depot, Shanks Waste Solutions, CCW Manufacturing Ltd
Flooding	Flood Risk: Barrow is at risk of tidal flooding but on a low scale with a return period of approximately 1:200 years. Surface water flooding causes some localised risk to some properties.

Ulverston Fire Station

Resources

The original Fire Station was built in 1886, and is still in use by Ulverston St. John's Ambulance Brigade. The current Station was opened in 1974 and is staffed by 20 FTE Regular Firefighters and 12 FTE employed on the On-Call duty system and has two Fire Appliances.

Appliance Availability 2016/17

During 2016/17 the Ulverston On-Call Appliance had been off the run of the following occasions:

Ulverston P2 appliance performance 2017	Mon - Fri (08:00 - 18:00)	Mon - Thu (18:00 - 08:00)	Weekend (Fri 18:00 - Mon 08:00)	Total
Total Hours 47P2 OFF	376.75	13.5	225.5	615.75
Total Hours 47P2 Available	2233.25	2898.5	3012.5	8144.25
% 47P2 OFF	14.43%	0.46%	6.96%	7.03%
% 47P2 Available	85.57%	99.54%	93.04%	92.97%

Activity

The following table shows the number of incidents per incident category that occurred within the Lower Super Output Areas (LSOA) nominally attached to Ulverston Fire Station. Therefore, the data does not necessarily mean that appliances from Ulverston Fire Station responded to the incident, however, in the main that would be the case.

Incident Type	Year / Number of incidents			
	2013-14	2014-15	2015-16	2016-17
Ulverston Total	129	116	127	119
FA-Malicious			1	1
FA-Apparatus	54	50	33	37
FA-Good Intent	15	16	21	24
Fire-Chimney Dwelling	11	6	3	4
Fire-Chimney Non-Residential	1	1		
Fire-Chimney Other Residential				
Fire-Primary Boat				
Fire-Primary Dwelling	7	12	16	15
Fire-Primary Non-residential	2	2	8	4
Fire-Primary Other Residential	1	1		1
Fire-Primary Outdoor		1		1
Fire-Primary Outdoor Structure	2		2	
Fire-Primary Road Vehicle	4	4	9	3
SSC-Other	17	10	20	19
SSC-RTC	15	13	15	11

Ulverston 1 (47P1) Appliance responses

In the 5 years from 2012/13 to 2016/17 (fiscal years), the Ulverston Fire Appliance (47P1) was turned out to and booked in attendance at the following incidents.

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C47P1 Total	118	140	248	254	207
FBC26 - Patterdale				1	
FBC40 - Barrow	8	7	73	74	62
FBC42 - Broughton	2	2	3	3	7
FBC43 - Coniston			2	13	9
FBC44 – Dalton*	3	2	23		
FBC45 - Grange	2	2	14	21	14
FBC46 - Millom		1	1	2	3
FBC47 - Ulverston	102	124	123	125	107
FBC48 - Walney	1	2	8	6	3
FBC60 - Kendal			1	4	1
FBC66 - Milnthorpe				1	1
FBC69 - Staveley				1	

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one Pump' calls (i.e. the incident was dealt with by one Fire Appliance):

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C47P1 Total	84	85	140	118	97
FBC26 - Patterdale				1	
FBC40 - Barrow	5		35	15	13
FBC42 - Broughton					1
FBC43 - Coniston				8	2
FBC44 – Dalton*	1		13	1	
FBC45 - Grange			4	7	7
FBC46 - Millom					
FBC47 - Ulverston	77	85	86	83	74
FBC48 - Walney	1		2		
FBC60 - Kendal				2	
FBC66 - Milnthorpe					
FBC69 - Staveley				1	

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one Pump' calls by type (i.e. the incident was dealt with by one Fire Appliance):

C47P1	Year / No of incidents			
	13/14	14/15	15/16	16/17
All incidents	85	140	118	97
Primary Fires	5	14	20	7
Chimney	10	6	4	2
False Alarms	52	68	50	56
SSC - RTC	3	6	10	7
SSC - Other	11	16	17	12

Ulverston 2 (47P2) Appliance Responses

In the same period, the 'second' Ulverston Fire Appliance (47P2) was turned out and booked in attendance at the following number of incidents:

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C47P2 Total	25	29	69	69	59
FBC40 - Barrow		3	15	12	11
FBC43 - Coniston			1	4	3
FBC44 – Dalton*			6	1	
FBC45 - Grange			4	3	4
FBC46 - Millom					2
FBC47 - Ulverston	25	26	41	47	38
FBC48 - Walney			2	1	
FBC60 - Kendal				1	1

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one Pump' calls (i.e. the incident was dealt with by one Fire Appliance):

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C47P2 Total	8	4	13	16	13
FBC40 - Barrow		2	2	1	1
FBC43 - Coniston					
FBC44 – Dalton*			1		
FBC45 - Grange				1	
FBC46 - Millom					1
FBC47 - Ulverston	8	2	10	13	11
FBC48 - Walney				1	
FBC60 - Kendal					

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one pump' calls by type (i.e. the incident was dealt with by one Fire Appliance):

C47P2	Year / No of incidents			
	13/14	14/15	15/16	16/17
All incidents	4	13	16	13
Primary Fires		1	1	1
Chimney		1		2
False Alarms		7	9	7
SSC - RTC		1	1	
SSC - Other	3		4	2

Risk Profile

The Fire Risk model shows that the risk across Ulverston is reducing. There are no high risk areas and the town is designated as medium and low risk.

Ulverston Risk Profile		Incidents 2007/8 - 11/12		Incidents 2008/9 - 12/13		Incidents 2009/10 - 13/14		Incidents 2010/11 - 14/15		Incidents 2011/12 - 15/16		Incidents 2012/13 - 16/17	
		2012/13 Risk		2013/14 Risk		2014/15 Risk		2015/16 Risk		2016/17 Risk		2017/18 Risk	
Score	Risk Score	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs
76 and above	High	0	0	0	0	0	0	0	0	0	0	0	0
35 to 75	Medium	220	5	162	4	132	3	124	3	124	3	52	1
34 and below	Low	156	7	174	8	194	9	202	9	208	9	262	11
		376	12	336	12	326	12	326	12	332	12	314	12
Total Risk Score		376		336		326		326		332		314	
Risk Score Increase/Reduction over the period		0.00%		-10.64%		-13.30%		-13.30%		-11.70%		-16.49%	

Next nearest Supporting Appliances

The following table indicates the travel distance in miles from Ulverston Fire Station to the next nearest two Fire Stations.

Station Name	Distance by Road (MILES)
Barrow 40P1	8.60
Broughton 42P1	9.32

Other Contextual Information

The market town of Ulverston is situated on the busy A590 trunk road in the centre of the Furness Peninsula in the south of the county. The population of the Station area is approximately 17,500 people, with 8,000 households.

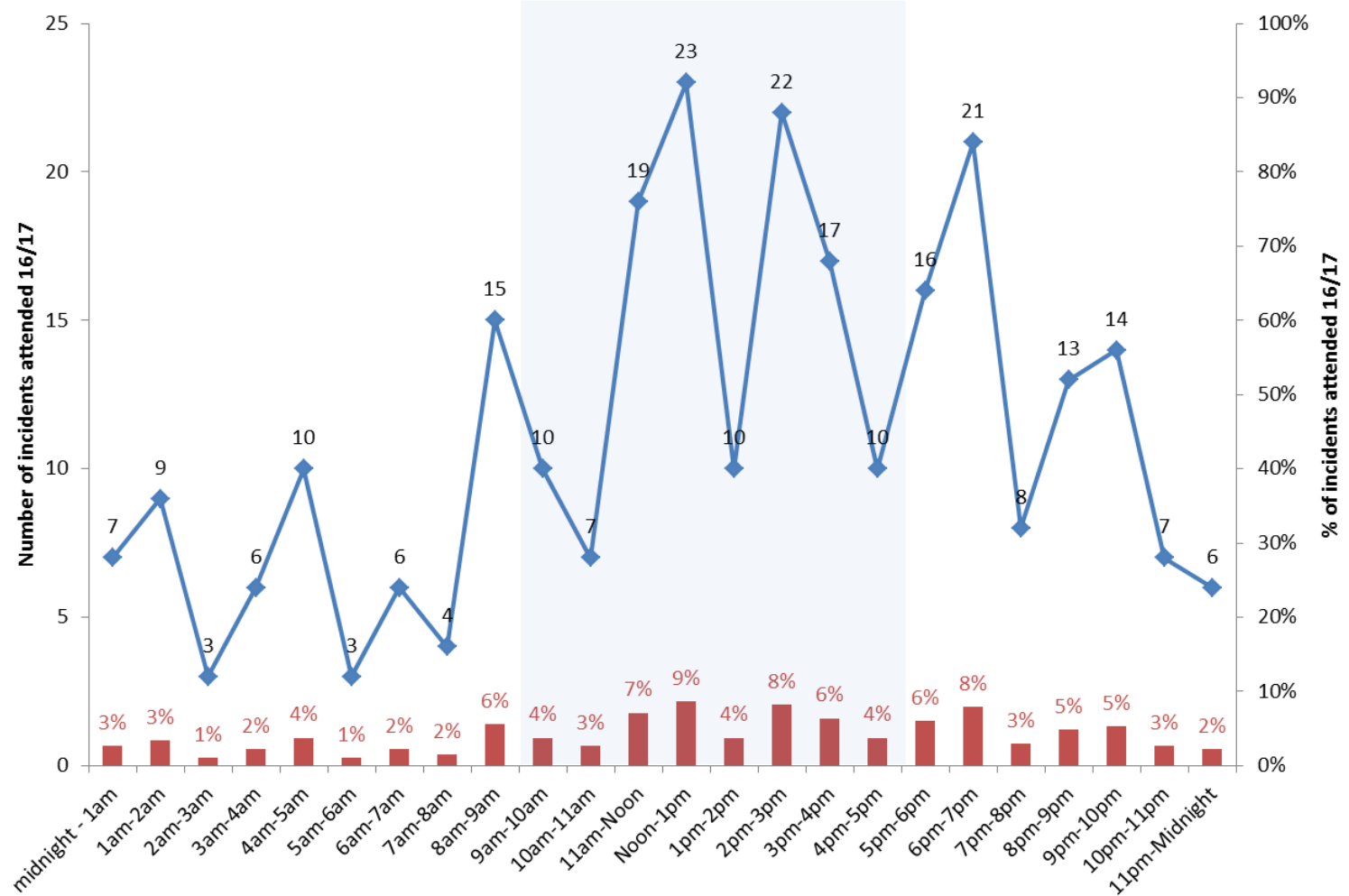
The Station provides fire cover to the town and parts of High and Low Furness, a rural area of approximately 10,000 hectares, and is bounded by fells to the north and west, farmland to the south and Morecambe Bay to the east. The main industry in the town is the GlaxoSmithKline pharmaceutical production plant. There are a number of electronic, light engineering and specialist engineering factories in the town together with hotels, guest houses and other types of holiday accommodation throughout the area. Other industries include farming (the Agricultural and Livestock Market is held every Thursday) and forestry. Rescue of large animals, farm and barn fires are a part of the Station workload. Firefighters have also been involved with the RNLI, Coastguard and other agencies in rescues from the sand and mud flats of Morecambe Bay and also attending some severe flooding incidents in recent years. Firefighters attend a large number of road traffic collisions, mainly on the busy A590, the main route into south Cumbria.

Ulverston:	Risk in the station area
World Heritage	The Lake District was awarded World Heritage site status by UNESCO in July 2017
Heritage	There are a number of key heritage risks within the town and full details are contained in the Strategic Risk Review
Environment	4 Sites of Specific Scientific Interest
Site Specific Risks	Ashley & Rock, George Barker & Sons Ltd; GlaxoSmithKline; Marl International Ltd; Oxley Developments Co Ltd; Tronic Electronic Services Ltd
Flooding	Dragley Beck runs through parts of Ulverston and has caused localised flooding to parts of the town, mainly around the North Road and Steel Street areas.

Additional Risk Analysis: Activity by Time of Day

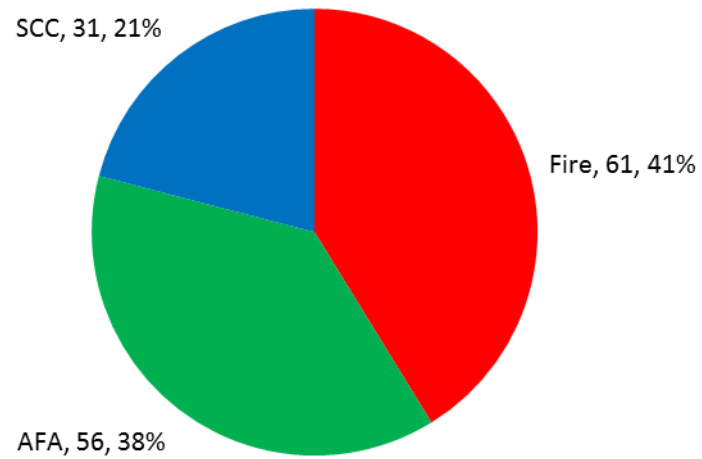
The following graph shows the number of incidents attended by the two appliances from Ulverston Station (C47P1 and C47P2) by hour and as a percentage of all incidents that occurred during that 24 hour period for 2016/17.

Graph: Number of all incident attended per hour



The graph below shows these incidents by type that occurred between 5pm and 9am.

Graph: Breakdown of Incidents between 5pm and 9am



Presently 56, 38% of incidents are automatic fire alarm calls, which represents a large percentage of overall incidents. However the Service have developed a robust 'call challenge' policy which will assist in reducing these numbers further, thus reducing operational demand in the future.

Walney Fire Station

Resources

Walney has a two-bay Fire Station that was built in 1974 and was staffed as a 'day crewed' Station until 1991 when it became crewed by Firefighters working the On-call duty system. The Station is currently staffed with 5.8 FTE On-Call Firefighters who crew one Fire Appliance.

Appliance Availability 2016/17

During 2016/17 the Walney On-Call Appliance had been off the run of the following occasions:

Walney Appliance Performance 2016/17	Mon - Fri (08:00 - 18:00)	Mon - Thu (18:00 - 08:00)	Weekend (Fri 18:00 - Mon 08:00)	Total
Total Hours C48 OFF	1510.5	358.25	927	2795.75
Total Hours C48 Available	1099.5	2553.75	2311	5964.25
% C48 OFF	57.87%	12.30%	28.63%	31.91%
% C48 Available	42.13%	87.70%	71.37%	68.09%

In contextual terms the above information means that during the week day the Fire Appliance at Walney was unavailable to respond to incidents 58% of the year; and also unavailable on circa 12% of occasions during the week evening. Walney was also unavailable to attend for around 29% of the weekends. Overall, Walney's Fire Appliance has been unable to respond to incidents for almost 32% of the year. Availability within Walney is limited due to a restricted recruitment pool and access restrictions due to Jubilee Bridge, however it is important to ensure that its capacity to respond as second Appliance to larger incidents is not impacted. To best manage this risk, an On-Call pump is being introduced at Barrow Fire Station.

Furthermore, Walney Fire Station has now taken receipt of a Joint Incident Command Unit (JICU). This specialist Appliance carries the capability to provide a vigorous command support function to any operational incident within the south of the county. Currently at any protracted operational incident a Fire Appliance and a number of operational staff would have to facilitate this vitally important duty.

However the JICU negates the need to utilise a full Fire Appliance and its crew. This significant change of operational working also supports the proposed changes within the Integrated Risk Management Plan (IRMP).

Activity

The following table shows the number of incidents per incident category that occurred within the Lower Super Output Areas (LSOA) nominally attached to Walney Fire Station. Therefore, the data does not necessarily mean that appliances from Walney Fire Station responded to the incident, and due to the significant amount of time that their Fire Appliance was 'off the run', many of these incidents would have been responded to with crews from Barrow;

Incident Type	Year / Number of incidents			
	2013-14	2014-15	2015-16	2016-17
Walney Total	39	41	39	45
FA-Malicious				
FA-Apparatus	8		7	14
FA-Good Intent	5	16	7	5
Fire-Chimney Dwelling	2	4		2
Fire-Chimney Non-Residential		2		
Fire-Chimney Other Residential				
Fire-Primary Boat				
Fire-Primary Dwelling	5		1	6
Fire-Primary Non-residential		2		1
Fire-Primary Other Residential		3		
Fire-Primary Outdoor			1	
Fire-Primary Outdoor Structure	3		2	1
Fire-Primary Road Vehicle				
SSC-Other	16	3	19	14
SSC-RTC		11	2	2

Individual Fire Appliance Activity

In the 5 years from 2012/13 to 2016/17 (fiscal years), the Walney Fire Appliance (48P1) was turned out and booked in attendance at the following number of incidents:

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C48P1 Total	25	30	119	124	109
FBC40 - Barrow	16	20	88	98	67
FBC44 – Dalton*			3	1	
FBC47 - Ulverston				1	2
FBC48 - Walney	9	10	28	24	40

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one Pump' calls (i.e. the incident was dealt with by one Fire Appliance):

Incident Location	Year / Number of incidents				
	12/13	13/14	14/15	15/16	16/17
C48P1 Total	12	9	39	27	44
FBC40 - Barrow	3	2	18	13	11
FBC44 – Dalton*			1		
FBC47 - Ulverston					
FBC48 - Walney	9	7	20	14	33

*Dalton closed in 2014

The following table demonstrates how many of the above incidents were 'one Pump' calls by type (i.e. the incident was dealt with by one Fire Appliance):

C48P1	Year / No of incidents			
	13/14	14/15	15/16	16/17
All incidents	9	39	27	44
Primary Fires	1	4		3
Chimney		2	1	1
False Alarms	4	21	10	18
SSC - RTC				2
SSC - Other	2	2	6	5

Risk Profile

The Fire Risk model shows that the risk across Walney is reducing, although remains fairly static in recent years. There are no high risk areas and the island is designated as medium and low risk.

Walney Risk Profile		Incidents 2007/8 - 11/12		Incidents 2008/9 - 12/13		Incidents 2009/10 - 13/14		Incidents 2010/11 - 14/15		Incidents 2011/12 - 15/16		Incidents 2012/13 - 16/17	
		2012/13 Risk		2013/14 Risk		2014/15 Risk		2015/16 Risk		2016/17 Risk		2017/18 Risk	
Score	Risk Score	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs	Risk Score	No. Of LSOAs
76 and above	High	0	0	0	0	0	0	0	0	0	0	0	0
35 to 75	Medium	194	4	242	6	148	4	38	1	38	1	38	1
34 and below	Low	88	3	28	1	88	3	176	6	174	6	160	6
		282	7	270	7	236	7	214	7	212	7	198	7
Total Risk Score		282		270		236		214		212		198	
Risk Score Increase/Reduction over the period		0.00%		-4.26%		-16.31%		-24.11%		-24.82%		-29.79%	

Next nearest Supporting Appliances

The following table indicates the travel distance in miles from Walney Fire Station to the next nearest two fire stations.

Station Name	Distance by Road (MILES)
Barrow 40P1	2.13
Ulverston 47P1	10.64

Other contextual information

Walney is situated on an island in the Irish Sea off the Cumbrian coast. The island is 11 miles long and 1 mile across at its widest point and is linked to the mainland at Barrow in Furness by Jubilee Bridge that spans Walney Channel. The station area has a population of approximately 10,500 with 8,000 households.

Walney	Risk in station area
World Heritage	The Lake District was awarded World Heritage site status by UNESCO in July 2017
Heritage	Grade II* listed: <ul style="list-style-type: none"> Walney Lighthouse with two attached cottages and outbuildings.
Environment	1 Site of Specific Scientific Interest
Site Specific Risks	No Site Specific Risks identified within the Station area
Flooding	No significant Flood Risk identified within the Station area

Jubilee Bridge

Walney Island is served by Jubilee Road Bridge that can be raised to allow the passage of boats through the channel. In recent years the bridge has been raised between 30 to 40 times per annum. On average, during each bridge lift the road becomes inaccessible for approximately 10 minutes. In an emergency situation the bridge can be lowered in approximately 3 to 4 minutes.

The bridge is 'staffed' from the beginning of May until the end of October each year in accordance with the requirement of the Cumbria Act 1982. Shifts are worked in line with high water times and occur two hours before high water and two hours after (4

Hour Shifts). Shifts will not occur before 18:59 hours on Friday in any week and expiration of two hours after high water last occurring before 03:01 hours on the next following Monday unless that day is a bank holiday.

The bridge may be lifted at any time between times given above but only after the staff have contacted and had agreement by the three emergency services (Fire, Ambulance and Police).

When the bridge lift occurs Walney Island always have a strategic available asset on the island, just in the event an incident occurs. This will either be the crew at Walney Fire Station, or when they are not available a strategic reinforcing move is made with another operational Fire Appliance.

Additional Risk Analysis: Walney as Second Pump Response

The chart below shows the impact on the service-wide average response time for second Appliances if the named Appliance was removed. Walney is the On-Call Station with the biggest impact on second Appliance response time if it was removed, increasing the average service-wide response time of 13 minutes and 51 seconds by an additional 27 seconds.

Individual Appliance Removal Modelling

Service-Wide Impact on Average 2nd Response Time to All Incidents

