10a

Shropshire and Wrekin Fire and Rescue Authority
25 April 2018

IRMP 1 - 4 Watch Optimum Crewing System

Report of the Chief Fire Officer

For further information about this report please contact Rod Hammerton
Chief Fire Officer, on 01743 260201 or Andy Johnson DCFO on 01743 260200

1 Purpose of Report

The purpose of this report is to provide Members with a 12 month update of the 4 Watch Optimum Crewing System, introduced as the new Wholetime shift system in January 2017.

2 Recommendations

Members are asked to note the contents of the report.

3 Background

In late 2014, Shropshire and Wrekin Fire and Rescue Authority (SWFRA) considered proposals for inclusion within the Shropshire Fire and Rescue Service Integrated Risk Management Plan (IRMP) 2015 – 2020. Within these was a proposal to consider changes to the shifts worked by Whole-time staff.

As a consequence, the Fire Authority required Officers to undertake a project to identify all possible options that could reduce the current Area Command staffing costs by approximately £400k per annum by 2020, whilst continuing to deliver a service matched to risk.

In March 2016 the Fire Authority agreed to the implementation of the 4 Watch Optimum Crewing System (4WOCS), and instructed the Service to make the necessary arrangements to implement the new duty system by 1 January 2017.

During the remainder of 2016 and into 2017, Area Command and the Fire Brigades Union (FBU) began the process of developing the 4WOCS into a functional system. This process was conducted through effective negotiations and contributions from workforce champions, supervisory officers and managers who would be required to administer the system.

4 Implementation of the new system

Introducing the 4WOCS created the opportunity to reduce wholetime staffing from the previous establishment figure of 136, thereby realising the savings required through IRMP 1. Research conducted in 2014/15, as part of the initial project, indicated that the absolute minimum level of staffing required to crew 5 appliances would be 124.4 staff. Reducing to this figure would leave minimal levels of resilience within the system, potentially resulting in an increase in the use of overtime (dependent on staff being available), or appliances on occasions being staffed with less than optimum crewing. The Service has therefore adopted a more prudent approach, ultimately aiming for a reduction of 8 staff, bringing the establishment by 2020 down to 128. Such a reduction will achieve the objectives set for this project. It should be noted that the budgeted establishment continues to run at the 136 figure until March 2019, enabling the Service to implement the changes using a gradual, inclusive and well managed approach. This approach also allows the Service to take advantage of any staff available over the 128 figure, during the period up to 2019, to be redeployed to projects and support of other departments. This not only ensures that the Service maintains a small resilience pool of staff, whilst it embeds the new processes and ways of working, but it also provides additional development opportunities for those staff involved in this work.

Through negotiation with the FBU and feedback from staff, a set of overarching rules were integrated into a comprehensive set of, "Guiding Principles" which formed the basis of the new shift system. These covered three main elements;

1. Reducing the occasions the Service had more than optimum staffing on duty, using a process called, "Rostering Off"
2. Preplanning to utilise the latent capacity created through “Rostering Off”, to bring levels up to optimum levels on those occasions where it is needed – through "Rostering On"
3. A means of ensuring Operational resilience, on the occasions the Service experiences short term absence, using two processes;
    a. "Resilience Post" – available up to 2 hours before the shift starts
    b. "Short Term Recall" – available at short notice, including during a shift

These were accompanied by additional guidance in the form of performance management tools and operational guidance, which supported the implementation of a consistent approach by all, as staff were becoming accustomed to the new system.

The system went live in January 2017 and during that year a number of amendments were introduced to refine the new system; for example;

1. The introduction of "Short Term Recall" to ensure the service has operational resilience outside that offered by the Resilience Post.

2. The lead in time for the Rostering Off process reduced from 2 months to the tour before (4 days), to provide staff with more certainty on the shifts they are to work.
3. Only allowing staff working additional shifts, above their contractual obligations, on those occasions it is required to maintain minimum crewing levels, reducing the occasions casual overtime is accrued.
4. The introduction of a "Frequently asked Questions" section to the guiding principles to ensure there is a consistent application of the overarching rules across watches and stations.

The guiding principles relating to the management and operation of the 4WOCS form the contents of a draft Collective Agreement between the Service and the FBU and, when formally signed off, this will enshrine the details of the duty system moving into the future. As stated, the new system went live in January 2017 and is continuing to run through 2018, whilst the last negotiations are worked through on the final Collective Agreement.

5 Key Performance Indicators (KPI)

To measure the efficiency and effectiveness of the new shift system, a comprehensive set of metrics was established and agreed, with the support of the FBU. These provided accurate data covering a number of aspects of the new system and supported a direct comparison with the performance of the one it replaced. The results from this monitoring are provided in the appendix to this report.

6 Electronic software solution

The new shift system is facilitated through the use of a software solution provided by Fire Service Rota (FSR); a Dutch company with a wealth of experience of the Retained Duty System rostering market. In conjunction with the Service they have developed a rota application which meets the needs of the organisation and its staff through a system available online, anytime and anywhere.

On the Go Live date of 2 January 2017, the application was not available and the new shift system was facilitated by an in-house software solution based upon MS Excel, developed by a Firefighter from Area Command. Special mention should go to FF Steve Perks whose MS Excel software knowledge and understanding provided the means to switch over to the new shift system on the planned Go Live date and consequently ran until FSR was fully implemented in May 2017.

7 Results from first year

The introduction of the new 4WOCS has ensured all the Wholetime appliances have remained available for operational response throughout 2017. This was achieved despite a reduction of available staffing resources from 136 to 128.

Developing the Guiding Principles using an "Agile" approach, enabled the Service to adapt to the learning, changing circumstances and emerging issues associated with embedding a new shift system. This enabled managers, the FBU and staff champions to refine the system throughout the year, whilst maintaining a comprehensive suite of guidance.

The KPIs (see the appendix) have provided an overview of the new shift system and highlighted the following areas;

1. The optimum level of crewing evolved throughout 2017, from 25 to 23 on a day shift, which matched the levels of 2016;

2. Moving to the new shift system has enabled the Service to harvest shifts reducing overstaffing inefficiencies previously experienced;

3. Conversely, the Service has needed an additional 843 shift spaces to be filled, of which 603 (71.5%) have been filled using latent capacity harvested through staff Rostering Off;

4. Operational resilience was further assured through the introduction of the Resilience Post (RP), which is able to cover short term staffing deficiencies;

5. On those occasions when a person makes themselves available for RP cover but it is not required, they accrue a quarter of a shift which can be taken off the number of shifts they owe, or accrue overtime in the event that they have already fulfilled their annual contractual agreement. During 2017, of the 606 shifts covered by the RP, 538 (88%) were not required or any shortfall was filled prior to the shift using the short term recall process. This equates to 134.5 shifts either being cancelled out from the available banked shifts (16%) or accrued as overtime;

6. The number of shifts lost to sickness was significantly higher (by 348 shifts), than during the same period in 2016; rising from 1019 to 1382 shifts. This is in the main down to an increase of 283 shifts lost to long-term absence, including a single absence of 151 shifts. Evidence gained through the return to work interview process indicates that the increase in absence was not a consequence of the introduction of the new shift system;

7. There has been an overtime spend increase of 13% compared to the same period in 2016, resulting in the overtime budget being £1,700 overspent. The reasons for this increase can be attributed to a number of factors, such as;
    - Bedding in the new shift system and initially maintaining crewing levels above minimum;
    - Fluctuating establishment levels during the year between 128 and 120, reducing the occasions staff were able to Roster Off;
    - Resourcing the Resilience Post at a quarter of a shift when it was not utilised.

8. The actual spend on staff salaries in 2017 has fallen by 5.4% (£281,000.00) compared to the same period in 2016. An under-spend on this budget was also achieved during 2016, due to the Service already operating below normal establishment levels, supporting the known move towards the reduced numbers required in 2017;

9. Overall, the implementation of the 4WOCS realised a net saving of over £445,000 during 2017, against the current establishment budget. This is above the target set by the Fire Authority in 2014 and indicates that the targeted reduction, by 2020, is likely to be achieved.

The IT application used for the administration and management of the new shift system, Fire Service Rota (FSR), made a significant contribution to the success of the first year. This is an evolving product and the Service is continuing to invest in its development, which will bring further cost benefits and support the staff working this system.

Over the last 12 months both the Service and the FBU have worked together to gain a full understanding of the 4WOCS. They have jointly developed and agreed the associated guidance documents and performance management framework, resulting in the draft Collective Agreement being close to formal sign off.

8 Conclusions

Having considered the results from the first year, during its meeting on 28 March 2017, the Service Management Team agreed that the 4WOCS was the right system for Shropshire's Wholetime system going forward.

The Service is confident that the requirements placed on this project, specified by the Fire Authority in its 2015-20 Service Plan, will be achieved. The success of the first year was achieved through a reduction in the number of staff available and a change in the way staff work. Over the last 2 years, the FBU and the Wholetime workforce have been very supportive during the protracted negotiation and implementation phases of this project, thereby ensuring a successful transition from a historical system that had been in place for over 30 years.

9 Collaboration

The Service is sharing the outcomes of this work with other Fire and Rescue Services who have expressed an interest including, London Fire Brigade, Kent Fire and Rescue Service and Gloucestershire Fire and Rescue Service.

10 Financial Implications

Following implementation of the duty system, financial savings within Area Command will be in line with £400K set within IRMP 1 with a target date of 2020.

11 Legal Comment

There are no legal implications arising from this report.

12 Initial Impact Assessment

This report contains merely statements of fact / historical data. An Initial Impact Assessment is not, therefore, required.

13 Equality Impact Assessment

There are no equality or diversity implications arising from this report. An e-EQIA is not, therefore, required.

14 Appendix

IRMP 1 – 4 Watch Optimum Crewing System Annual Review 2017

15 Background Papers

There are no background papers associated with this report.

IRMP 1 Project

4 Watch Optimum Crewing System

Annual Review 2017

Performance Indicator	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year to date Total	Change	Comments
The total number of shifts at the optimum level (25/24-2017 & 23/24-2016) (Shifts which utilise staffing numbers with the most efficiency).	2016	D – 03 N - 03	D – 46 N - 46	D – 52 N - 66	D-36 N-42	**289**		The new shift system provided minimum crewing on all appliances across the whole year. The reason for the reduction in staffing to optimum crewing levels is two fold. Firstly, the optimum crewing numbers for 2017 (24/25) were set higher than those required for 2016 (23/24), to support resilience through the first year of implementation. Secondly, the Service allowed watches to overstaff at certain periods in order to support the training required to upskill in IEC/Rope Rescue. For this reason it is difficult to compare the two years, but it is possible to say that the new system delivered against all operational and training expectations in its first year.
	2017	D - 16 N - 74	D - 20 N - 70	D – 03 N - 56	D-03 N-10	**262**	↓ -09%	
The total number of 'rostered off' shifts banked by the Service (Shifts where staff are scheduled to work but are rostered off as staffing exceeds optimum numbers. These shifts are banked by the Service. Staff then "roster on" on an alternative date where crewing levels are scheduled to be below optimum).	2016	N/A	N/A	N/A	N/A	**000**		All of these 603 banked shifts would have resulted in inefficiencies under the 'old' duty system (ie. over staffing). This alone can be seen as delivering another 3.5% additional efficiency from the new system.
	2017	447	047	007	109	**603**		
The total number of 'rostered on' banked shifts used by the Service (Shifts staff elect to work on what would have been a non-working day, normally these are on a different Watch, to balance off the number of "rostered off" shifts they have banked)	2016	N/A	N/A	N/A	N/A	**000**		This demonstrates that the Service benefited from making more flexible use of the 603 shifts mentioned above, ensuring they were used where there was a need to cover shortages – e.g. sickness and other unplanned events. The additional 240 shifts used (i.e. 843-603) will have been delivered through overtime.
	2017	166	215	254	208	**843**		
The total number of shifts supplemented by organisational resilience (Shifts, which have been at minimum crewing levels, and needed to be supplemented by the "Resilience Post").	2016	N/A	N/A	N/A	N/A	**000**		This shows that the 'Resilience Post' function, which covers shortages down to two hours prior to the start of shift, secured operational resilience.
	2017	039	013	008	008	**068**		
Percentage of shifts where the Resilience Post was available to the Service	2016	N/A	N/A	N/A	N/A	00%		The staff uptake for the Resilience Post positions improved as the year progressed and as staff became more confident with its operation.
	2017	70%	80%	84%	95%	**83%**		

The total number of shifts lost to Sickness	2016	268	262	230	259	**1019**	+35%	There was an increase of 348 shifts lost to sickness. However, 283 of these shifts were due to an increase in long-term sickness absence, this includes an individual absence of 151 shifts. The increase in short-term sickness equates to 65 shifts, Evidence seen through return to work interviews show that this increase is not as a result of the change in duty system...
	2017	376	369	288	349	**1382**		
The total number of shifts lost to Modified Duties (Shifts lost from the operational rota, whilst staff are retraining or regaining their fitness due to injury and long-term absence).	2016	071	078	030	060	**239**	-69%	Area Command remain very proactive at bringing staff back into the workplace on modified duties as soon as is practically possible. This year, the nature of some of the absences, including mental health issues, have not been suitable for an early return on modified duties. (This includes a single absence of 151 shifts)
	2017	024	037	012	020	**093**		
The total number of shifts operated above optimum crewing (25/24-2017 & 23/24-2016)	2016	124	083	051	086	**344**	-79%	This reduction has been achieved even with the deliberate overstaffing to support the training required to upskill in IEC/Rope Rescue
	2017	052	001	011	008	**072**		
The total number of shifts whole time crewing below minimum requirements of 23/24 (When crewing levels fall below 23, the service will potentially lose the availability of an operational appliance or it may have to be maintained at a reduced crewing level).	2016	003	003	002	010	**018**		The new system reduced the number of occasions when the Service's preferred optimum crewing model was not achieved, by 62% on that achieved by the 'old system'.
	2017	001	000	001	003	**005**		
Annual Overtime Costs incurred (£)	2016	28,904.21	*13,532.47*	*46,726.18*	46,207.06	£135,369.06	+13%	During the first year bedding in period, SFRS raised the optimum crewing level to 24/25 - which is one above preferred optimum crewing numbers. This meant personnel were often attending work on OT to reach this figure when in real terms only 23/24 personnel were actually required. Now, having the experience from the first year, this has been adjusted back down to 23/24 for 2018, which is likely to result in a reduction in overtime for 2018. It should be noted that the overtime budget has been historically set at £152k. It should also be noted that the overtime spend incurred, especially during the first two quarters, is likely to be carry over from the old system. The profile and quantum spend for this year's overtime claims is more likely to demonstrate future expected trends.
	2017	20,339.70	11,877.64	39,188.55	82,358.85	**£153,763.85**		

Total WT Staff Salary Spend (£) (Not including Overtime)	2016	1,299,895	1,250,649	1,344,457	1,357,634	**£5.252m**		The actual budget spend difference between the two years was a reduction of £281k. This figure is below the establishment budget saving shown below, as the Service was known to be running below establishment in 2016, hence the recruitment in 2017.
	2017	1,207,983	1,216,920	1,259,595	1,286,635	**£4.971m**		
Staff Spend (£) – Staff salaries compared to current establishment budget allocation (Not including Overtime)	2017 Budget	1,354,710	1,354,710	1,354,710	1,354,710	**£5,418m**		This year an overall saving of £447,706 has been achieved. However an increased spend on the overtime budget of nearly £2k reduces this figure to a net total of £445k. This is on track to achieve the target set by the Fire Authority for April 2020.
	2017 Spend	1,207,983	1,216,921	1,259,595	1,286,635	**£4,971m**		
	2017 Saving	146,727	137,789	95,115	68,075	**£447,706**		