



Evaluation of the Impact of Changes to the Wholetime Duty System

2024



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Section 1: Summary

This report presents an evaluation of the impact of changes made to CFB's wholetime duty system after the 12-month implementation period. The report follows the interim 6-month update which provided a snapshot of any immediate differences evident from the change.

The evaluation focuses on three core questions:

1. Did changes to the wholetime duty system make the service more **effective** by improving **appliance availability**, and subsequently emergency response to fires and other emergencies?
2. Did changes to the wholetime duty system make the service more **efficient** through **improvements to productivity and capacity**, utilisation of a staff resilience pool, and subsequently a **reduction in overtime**?
3. Did changes to the wholetime duty system have an impact on CFB's **people**, evidenced by **reduced sickness absence and increased staff morale**?

Section 2: Introduction

2.1 Background

Local Agreement No.21 set out arrangements for Cleveland Fire Brigade's Wholetime Duty System for Grey Book Station Based Personnel and was agreed with the Fire Brigades Union in December 2023, coming into effect at 09:00 hours on 1st January 2024. Changes to the Duty System resulted from a strategic review of Brigade progress against Cleveland Fire Authority's Community Risk Management Plan 2022-2026, with the intention of:

- Increasing the efficiency of the existing duty system;
- Increasing the effectiveness including the resilience of the existing duty system;
- Increasing the productivity of the wholetime duty system Grey Book Station-based personnel;
- Improving morale and continuing to make Cleveland Fire Brigade a 'great place to work'.

The Duty System was agreed to run as a pilot for 12 months, after which time it would be evaluated to ensure it fulfilled the Brigade's strategic objectives, including increasing productivity and reducing gaps in appliance availability, the amount the Brigade pay in overtime and staff sickness. The agreement superseded Local Agreement No.12 and subsequently made the following changes:

Previous Duty System	New Duty System
<ul style="list-style-type: none">• Shift start times 0900 and 1930 hours.• Introduced annualised hours.	<ul style="list-style-type: none">• Shift start times 0900 and 1800 hours.• Removed annualised hours.• Introduced Resilience Pool

Procedure Note 36 outlines the specific operational approach to implementing the Duty System in further detail.

Alongside changes to the Duty System, the Brigade has continued its ongoing work to understand the Productivity and Capacity of wholetime Firefighters, as directed by data requirements from the Home Office. Subsequently, a new Productivity & Capacity system has been developed to record activities carried out by wholetime Firefighters each shift. It is intended that the data gathered will evidence service productivity and the Brigade's ability to direct resources in line with our Community Risk Management Plan.

2.1 About the Evaluation

The evaluation has utilised a quantitative approach to assess whether changes have been observed in three key areas, aligned to the following evaluation objectives:

1. Did changes to the wholetime duty system make the service more **effective** by improving **appliance availability**, and subsequently emergency response to fires and other emergencies?
2. Did changes to the wholetime duty system make the service more **efficient** through **improvements to productivity and capacity**, utilisation of a staff resilience pool, and subsequently a **reduction in overtime**?
3. Did changes to the wholetime duty system have an impact on CFB's **people**, evidenced by **reduced sickness absence and increased staff morale**?

To do this, review of data from the following sources/systems was analysed:

- Appliance Availability from Off the Run Data recorded by Fire Control
- Staffing Data recorded by Fire Control
- Response and Mobilisation Data from SEED and IRS
- Operational Productivity Data from the Productivity and Capacity 4.0 System
- Operational Staff Skill Data from Fire Service Rota
- Overtime Payments reported by Finance
- Staff Sickness for Wholetime Grey Book Staff

The following report examines the effect of the new duty system working hours for wholetime station staff in terms of overall morale, productivity, availability and related costs.

Section 3: Findings

3.1 Effectiveness








3.1.1 Effectiveness Summary

Did changes to the wholetime duty system make the service more effective by improving appliance availability and subsequently emergency response to fires and other emergencies?

Alterations to the wholetime duty system were implemented in January 2024 with the primary objectives of boosting staff morale by changing shift start and end times and improving wholetime availability and productivity. The day shift for wholetime station staff was altered to end at 1800hrs rather than 1930hrs to create a better home life balance. In doing so it was hoped that a happier workforce would improve areas such as appliance availability by reducing sickness, resulting in higher staff availability across the board.

The following section examines changes in appliance availability following the implementation of the new duty system by measuring the % of wholetime appliances between January and December 2023 when the original shift pattern was in place and January to December 2024 once the new duty system was introduced.

Key findings presented within this section are:

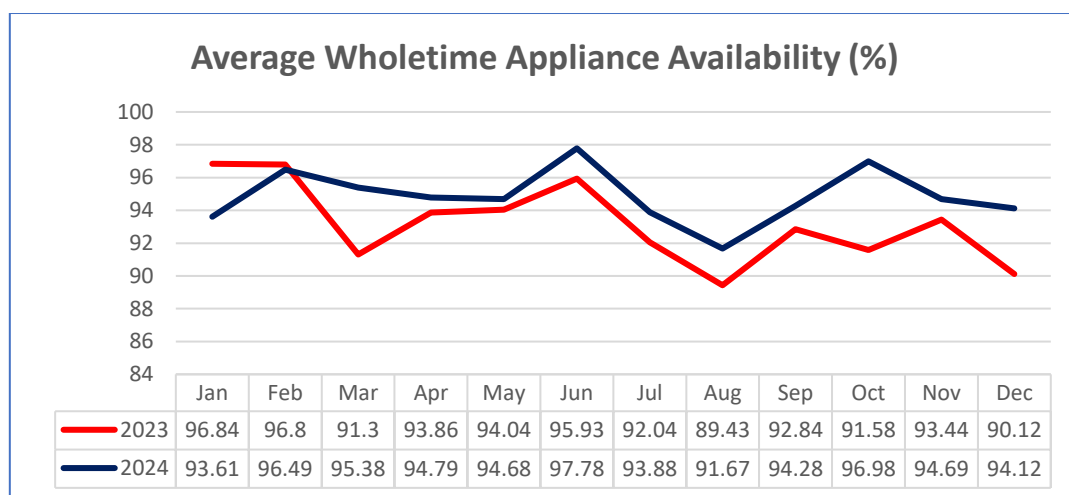
-  In 2023 there was an **average appliance availability** recorded of 93.18%, 2024 recorded an average of 94.87% across wholetime appliances which demonstrates an **increase of 1.69%**;
-  **All 13 wholetime appliances measured demonstrated an overall % availability increase** year on year from January to December when compared with 2023 before the duty system changes were implemented;
-  In 2024, **9 of the 13 wholetime appliances recorded % availability of 90% or more** with 7 recorded as 99% and above;
-  The average **number of pumps available in 2023 was 15, rising to 16 in 2024**;
-  There were 1013 occasions where an **appliance was recorded as off the run** in 2024, a **decrease of 355 (26%)** compared to 2023;
-  There was a **17% reduction in unavailability due to staff skill shortages** in 2024 compared to 2023;
-  In 2024 **unavailability of Firefighters with EFAD status had the greatest contribution to appliances off the run due to skills shortages**, with 2373 hours recorded in 2024 which accounts for 20% of the overall total. Overall the number of hours lost because of this has reduced by 1297 from 2023;

- Overall the **number of benchmark failures has decreased in 2024** with a reduction of 59 instances year on year. Location/distance from station remains the top cause for missing benchmarks.

3.1.2 Appliance Availability

The Brigade aim is to have 14-18 appliances available 100% of the time to ensure that crews are able to respond as quickly as possible with the closest resource.

The following illustration captures the average % availability for all wholtime appliances across the reporting period examining January to December 2023 and the same time period in 2024 when the duty system was implemented for comparison.



This demonstrates;

- The highest average wholtime appliance availability was recorded in June 2024 at 97.78%;
- August saw the lowest level of availability over the reporting period for both 2023 and 2024 which suggests a correlation between availability and summer holiday periods/cover;
- Both 2023 and 2024 follow a very similar pattern of availability across the year with the main exception of a significant dip in March 2023. During March 2023 20% of entries of appliance availability were recorded as insufficient staffing and 53% as redeployed out of a total of 127 entries;
- In 2023 there was an average of 93.18% availability, 2024 recorded an average of 94.87% across wholtime appliances which demonstrates an increase of 1.69%.

To determine whether this pattern is evident across all wholtime appliances analysis examines appliances individually to highlight any location specific trends.

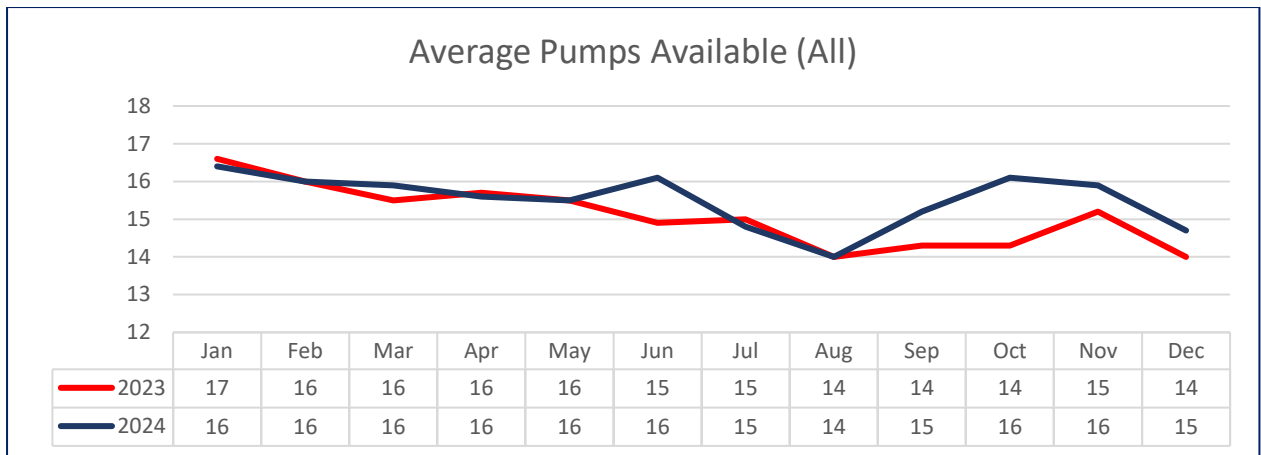
January to December % Wholetime Appliance Availability (Overall)			
	2023	2024	Variance
A1	99.32	99.90	0.57
A3	89.27	92.14	2.87
B1	99.41	99.80	0.39
B3	72.26	83.77	11.51
C1	99.58	99.88	0.29
C3	84.01	84.85	0.84
D1	97.74	99.52	1.78
E1	99.57	99.83	0.26
E3	88.71	89.99	1.28
G1	96.94	97.86	0.92
H1	98.84	99.31	0.47
I1	99.65	99.80	0.15
I3	86.09	86.68	0.59

As the above illustration shows;

- All 13 wholetime appliances measured demonstrated an overall % increase year on year from January to December when comparing 2023 before the duty system changes and 2024;
- B3 saw the largest % increase year on year of 11.51%. There appears to be overall some disparity in availability for B3 in 2023 with 9 of the 12 months showing availability below 80%. In 2024 there were just 3 occasions when availability dropped below 80%;
- In 2024, 9 of the 13 appliances recorded a % availability of 90% or more with 7 recorded as 99% and above.

CFB operate on a benchmark of a minimum 14 pumps available at a given time. The Brigade monitors instances in which appliance availability does not meet this benchmark. The current analysis of pump availability produced by the Brigade against the 14-18 benchmark accounts for both wholetime and on-call combined. Work has been ongoing outside of the scope of this evaluation to review the availability of on-call appliances, with data suggesting that a limited number of on-call appliances skew the data indicators which focus on overall appliance availability.

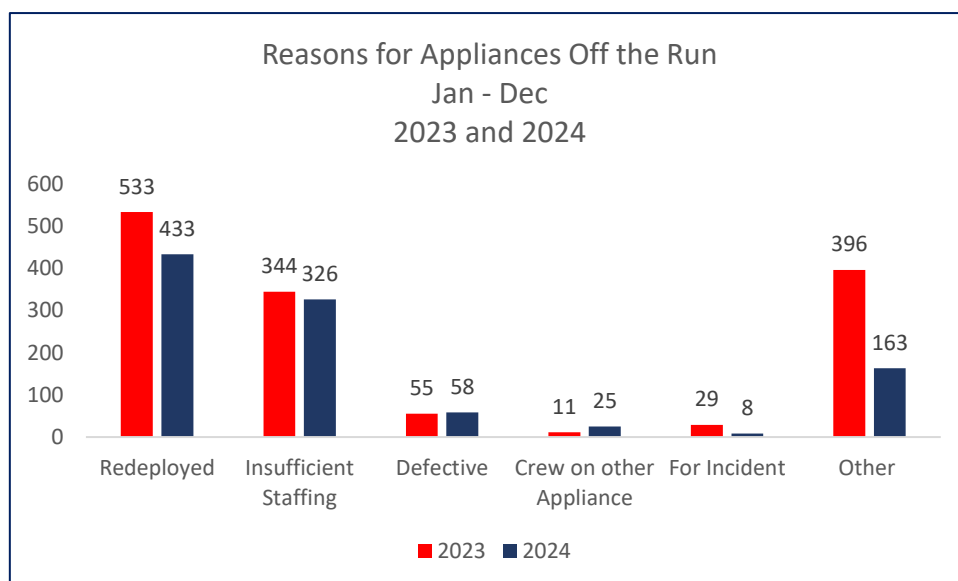
The average number of pumps available has been identified to examine the number of resources available in 2024 and determine if this number has improved since the implementation of the new duty system. Analysis of pump availability at this level relates to all pumps and therefore can be impacted by availability of on-call pumps.



As the above illustration shows;

- The highest average number of pumps available was in January 2023 with 17 recorded;
- In 2023 the number of pumps available fell to 14 on 4 (33%) of the 12 occasions. In comparison there was only 1 occasion where the number fell to 14 in 2024;
- The average number of pumps available in 2023 was 15. The average number in 2024 rose to 16 demonstrating an overall annual improvement.

The following graph examines the reasons provided for appliances being recorded as off the run to demonstrate whether the cause of unavailability has changed following the inset of the new duty system.



	Redeployed	Insufficient Staffing	Defective	Crew on other Appliance	For Incident	Other	Total
2023	533	344	55	11	29	396	1368
2024	433	326	58	25	8	163	1013

As the above illustration shows;

- There were 1013 occasions where an appliance was recorded as off the run in 2024, this is a decrease of 355 which equates to a 26% drop when compared to the same period in 2023;

- Both 2023 and 2024 recorded redeployment as the highest cause of an appliance being taken off the run, however, there were 100 fewer instances of this in 2024;
- Insufficient staffing remains the second highest cause of an appliance recorded as off the run with 326 incidences recorded in 2024 which is a 5.2% reduction on the previous year;
- The amount of reasons recorded as 'other' has fallen significantly from 396 in 2023 to 163 in 2024 a reduction of 58.8% which highlights an increase in accuracy of recording reasons since January 2024.

Therefore, it can be determined that although the overall number of occasions has decreased annually in 2024 the reasons provided remain the same.

This data is based upon data recorded and compiled by Fire Control and should be regarded with caution as it has been noted in other analyses to have gaps and instances in which timing is not correctly recorded. As a result, the following section examines staffing related appliances off the run scrutinising Fire Service Rota as an alternative data source to evaluate the impact of staff shortages on appliance availability.

3.1.3 Staffing shortages

CFB's Fire Service Rota System has been analysed to determine when appliances have been taken off the run due to staff shortages and its impact on availability figures. The following table illustrates the number of hours by appliance when appliances were recorded as off the run due to staff skill shortages in 2023 and 2024.

Appliance	2023	2024	% Difference
A1/A3	1431	1296	-9%
B1/B3	2835	1953	-31%
C1/C3	2039	2095	3%
D1	926	525	-43%
E1/E3	2021	2011	-0.4%
G1	1311	875	-33%
H1	1078	647	-40%
I1/I3	2853	2638	-8%
Total	14493	12040	-17%

As the above illustration shows:

- There was a 17% reduction in unavailability due to staff skill shortages in 2024 compared to 2023;
- D1 saw the largest annual improvement of 43% closely followed by H1 with 40%;
- The only station appliances not to see an improvement were C1/C3 where there was a slight increase of 3% rising from 2041 to 2096 hours.

During the evaluation process it was identified that new ways of working around CM to WM deputization may have contributed to the positive impact observed in this area. The evaluation is not able to separate impact of these two procedural changes.

Breakdown of appliance unavailability is a complex picture as members of a crew can occupy multiple roles. For example, an appliance may have a driver (EFAD) who is also the Crew Manager, if this member of staff were to be absent there would be a lack of both a driver and a CM, therefore representing a skills shortage across two categories.

As a consequence of this, the following analysis portrays hours of appliance unavailability due to skills shortages in relation to distinct and overlapping skills categories, comparing data from 2023 to 2024.

Skills combination	Number of Hours 2023	Number of Hours 2024
FireFighter	3274	2796
Watch Manager	300	2757
FireFighter/EFAD	3670	2373
FireFighter/Crew Manager	2829	1761
Watch Manager/ FireFighter	1280	572
EFAD	408	558
FireFighter/Crew Manager/ EFAD	1782	530
Crew Manager	394	261
Watch Manager/FireFighter/EFAD	442	237
Crew Manager/EFAD	0	128
Watch Manager/EFAD	0	27
Watch Manager/FireFighter/Crew Manager/EFAD	75	24
Watch Manager/FireFighter/Crew Manager	41	18
Total	14495	12042

As the above table shows:

- In 2024 firefighter as the sole skills gap was unavailable for 2796 hours recorded which is 23% of the total. Overall, the number of hours where firefighter skills were involved equates to 8311 hours, 69% of the total,
- In 2024 the highest combination of skills shortage was due to unavailability of firefighters who are also EFADs with 2373 hours recorded in 2024 which accounts for 20% of the overall total. This combination was also the highest for unavailability in 2023 with 3670 hours accounting for 25%. Overall, the number of hours has reduced annually by 1297;
- EFAD was highlighted across all combinations with 3877 hours in 2024, 32% of the total. In 2023 there were 6377 hours where EFAD were highlighted as one of the skills shortages which equates to 44%. Therefore, year on year there has been a reduction of 2,500 hours lost due to the lack of an EFAD;
- Firefighter/Crew Manager accounted for 1761 hours, which equates to 15% of the total in 2024 and crew managers were included in various combinations covering 2722 hours over

- The absence of a watch manager both as a sole reason and in combination with other skills accounts for 3635 hours or 30% of the total in 2024 and 15% of all combinations in 2023 with 2138 hours recorded. Therefore, year on year watch manager absence has increased by 1497 hours over all combinations.

[illegible][illegible]

Key: BA (Firefighter), CM (Crew Manager), WM (Watch Manager), EFAD (Driver), CE (CM & EFAD), BC (FF & CM), BCE (FF, CM & EFAD), BE (FF & EFAD), WE (WM & EFAD), WCE (WM, CM & EFAD), WM (WM & CM), WBC (WM, FF & CM), WB (WM & FF), WBE (WM, FF & EFAD), WBCE (WM, FF, CM & EFAD).

During the process of the evaluation, it was identified that this data is limited in that operational staff do not update Fire Service Rota to account for staff changes which enable appliance availability. This means the data views difference in skill gaps from the point of initial staffing on a given shift and does not account for CM to WM deputisation or utilisation of staff from the resilience pool to fill a skills gap which would prevent an appliance being on the run.

In summary, whilst the data may be useful in evidencing direction of change against skills shortages, data in this area presents a challenge in evidencing the impact of the duty system, and specifically the resilience pool, on periods of appliance unavailability due to skills gaps.

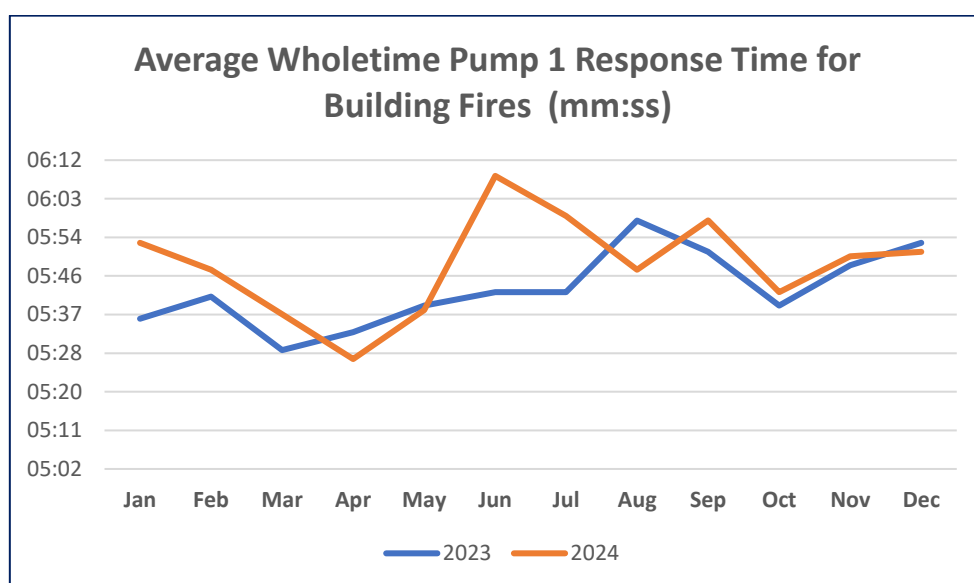
The Brigade should consider how Fire Service Rota could be utilised more effectively as a central system to provide accurate staffing and availability data.

3.1.4 Emergency Response Times

Improvements in appliance availability may theoretically result in improved response benchmarks to incidents as less crews should be waiting on individuals to fully staff an appliance or having to deploy appliances further away due to station staffing levels.

The following section examines average attendance times for wholetime appliances during 2024 with 2023 as a means of comparison to see if the average attendance times are improving with the new system of working. The graph below shows the average attendance times for wholetime 1st pump appliances January to December 2024 and the same period during 2023.

The Brigade response targets state that the 1st wholetime pump should arrive within 7 minutes to a building fire. The following section examines response benchmarks and how they have increased/decreased across the reporting period. It should be noted that due to our dynamic approach to mobilising, response times may vary due to location of the appliance when mobilised to an incident, as the home station appliance may not be mobilised in every instance.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023	05:36	05:41	05:29	05:33	05:39	05:42	05:42	05:58	05:51	05:39	05:48	05:53
2024	05:53	05:47	05:37	05:27	05:38	06:08	05:59	05:47	05:58	05:42	05:50	05:51
Difference	00:17	00:06	00:08	00:06	00:01	00:26	00:17	00:11	00:07	00:03	00:02	00:02

As the above illustrations show:

- 4 of the 12 months in 2024 saw a reduction in the average length of time it took the wholetime 1st pump to arrive at a building fire when compared to 2023;
- June 2024 saw the longest average response time of 06:08 which is an increase of 00:30 seconds measured against May 2024 and 00:26 when compared to June 2023;
- When examining the full 12-month period year on year there was a small increase of 00:05 rising from an overall average of 05:43 in 2023 to 05:48 in 2024;

- Despite this increase as the benchmark is 7 minutes across the reporting period the average % attendance times remained under target. For those incidents where times exceeded this benchmark failures have been examined in the next section of the report.

The recording of reasons for a delay in attending an incident are restricted to incidents where the response benchmark was not met therefore analysis of why response times in general have risen is not possible. However, work could be done outside of this evaluation to review time taken to mobilise to determine whether this is having an impact on attendance times.

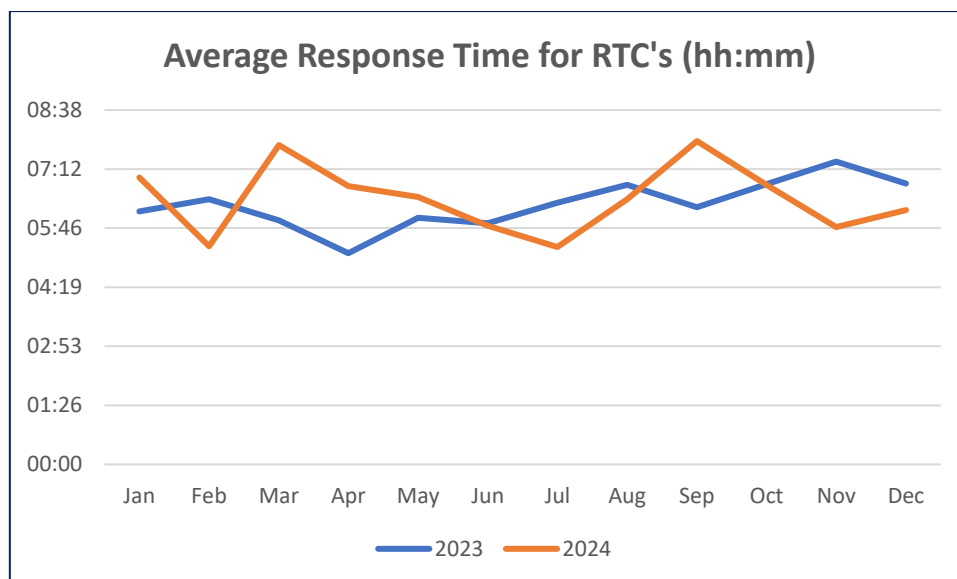
The following table examines the number of mobilisations where a wholetime appliance attended a building fire in 7 minutes.

% Building Fires Attended by Wholetime in 7 Minutes												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023	80%	81%	83%	80%	81%	79%	81%	80%	77%	80%	78%	79%
	189 mobs	172 mobs	199 mobs	193 mobs	186 mobs	200 mobs	231 mobs	218 mobs	216 mobs	253 mobs	225 mobs	192 mobs
2024	72%	75%	77%	79%	81%	73%	79%	77%	76%	79%	80%	81%
	166 mobs	159 mobs	187 mobs	215 mobs	190 mobs	194 mobs	179 mobs	194 mobs	207 mobs	218 mobs	201 mobs	213 mobs

As the above table shows:

- In 2023 there were 8 months where % attendance within 7 minutes equated to 80% of building fires or above, which fell to 3 of the 12 months in 2024;
- The largest number of mobilisations attended by wholetime pumps were in October 2023 with 253 of which 80% met the 7-minute benchmark;
- There were a total of 2445 mobilisations recorded which meet this criteria in 2023 and 2323 in 2024 which is a decrease of 122.

The Brigade response standards state that they will respond to Road Traffic Collisions within an average of 8 minutes for the first appliance to rescues and immediate life-threatening calls.



Average Response Time for RTC's (hh:mm)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023	06:10	06:28	05:57	05:09	06:01	05:53	06:23	06:49	06:16	06:50	07:23	06:51
2024	07:00	05:19	07:47	06:47	06:31	05:49	05:18	06:28	07:53	06:49	05:47	06:12
Difference	00:50	01:09	01:50	01:38	00:30	00:04	01:05	00:21	01:37	00:01	01:36	00:39

As the above illustration demonstrates:

- 58% of response times for RTC incidents increased year on year with 7 of the 12 months rising;
- The longest average response time was seen in September 2024 which was 01:37 above the response time for the same period in 2023;
- However as with building fire response times the average response time did not exceed 8 minutes during the reporting period. For those occasions where times were not met benchmark failures have been examined in the next section.

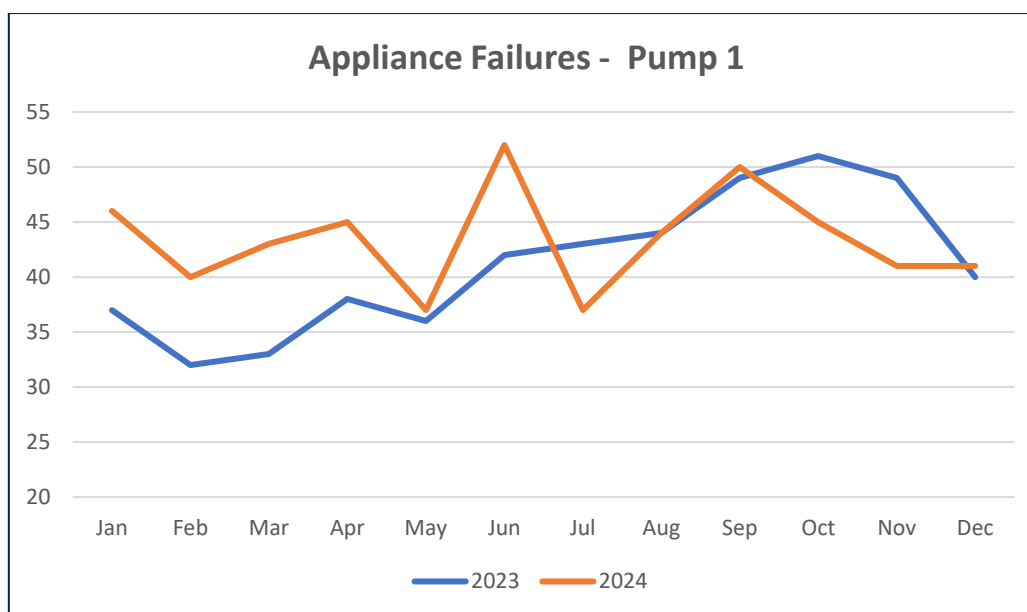
3.1.5 Appliance Benchmark Failures

If the new duty system increases staff and appliance availability there is scope to suggest a positive impact on attendance times to incidents across the Brigade area. An increase in successful attendance times improves community safety by ensuring incidents are less able to escalate or become a life risk. Specific benchmarks to building fires and RTC incidents were created by the Brigade to measure attendance times and failures to respond within the targets set are analysed for the cause of any delay.

'Appliance failure' refers to instances where an appliance did not meet the specified service response benchmarks. These benchmarks are:

- We will respond to all Building Fires (Dwellings, Industrial and Other Buildings) within an average of 7 minutes for the attendance of the first appliance, with 90% receiving an attendance within 10 minutes.
- We will respond to all Building Fires (Dwellings, Industrial and Other Buildings) within an average of ten minutes for the attendance of the support appliance.
- We will respond to Road Traffic Collisions within an average of 8 minutes for the first appliance to rescues and immediate life-threatening calls.

This section demonstrates the appliance failures for the 1st pump to building fires in 2023 compared to the same period since the implementation of the new duty system in 2024.

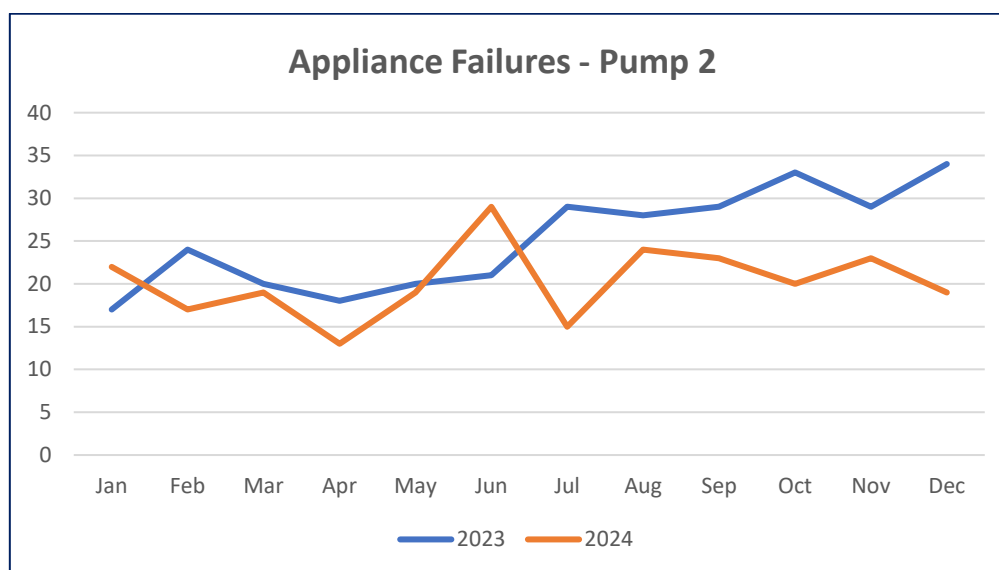


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2023	37	32	33	38	36	42	43	44	49	51	49	40	494
2024	46	40	43	45	37	52	37	44	50	45	41	41	521

As the 1st appliance graph and table shows:

- Appliance failures to a building fire with the first pump in 7 minutes were at the highest in June 2024 with 52 recorded. Upon further inspection of these failures 26 (50%) were recorded as distance from station as the reason the attendance time was missed. 11 of the 26 involved Thornaby appliances;
- 7 of the 12 months in 2024 were higher than the same time period in 2023;
- The overall total number of benchmark failures has risen in 2024 when measuring the 1st appliance by 27 instances. Although it is difficult to directly compare failures as reasons provided can vary and in 2023 there was less governance over providing reasons making a direct comparison difficult.

The next section examines appliance failures for the 2nd pump in attendance to a building fire in 2023 compared to 2024.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2023	17	24	20	18	20	21	29	28	29	33	29	34	302
2024	22	17	19	13	19	29	15	24	23	20	23	19	243

As the above table shows:

- The highest number of failures for the 2nd pump were in December 2023 with 34 instances recorded;
- The lowest amount of monthly failures was seen in April 2023 with 13;
- Overall there were 302 failures recorded in 2023 and 243 in 2024 which demonstrates an annual reduction of 59 instances.

The table below highlights the reasons provided for both 1st and 2nd appliance failures to building fires in 2023 and 2024 for comparison.

Reason Provided	2023	2024
Incident out of appliance station area	195	191
Distance from station	93	132
OIC forgot to book in attendance	75	128
Time taken to turn out (PPE dressing procedure)	84	100
Blank	223	75
Amount of traffic en-route to incident	50	46
OIC pressed in att, but MDT did not register	39	42
Other	10	27
Confusion on exact location	19	12
MDT issue	7	9
Appliance was a make-up	1	2
Total	796	764

As the table of reasons for benchmark failures to building fires shows:

- Distance was the largest factor when recording why crews could not reach an incident within the building fire attendance times of 7 minutes for the 1st or 10 minutes for the 2nd appliance. In 2024, 323 (42%) were recorded as out of station area or provided distance from station as the reason. There is a suggestion with distance that as a Brigade these incidents could never have been reached within the benchmarks. However, it is important to also note that the Brigade uses a dynamic mobilising system (SEED) that sends the nearest available appliance. It is not clear at this point whether the appliance sent would have always be the closest geographically or if the appliance was the closest due to appliance unavailability elsewhere. Therefore, it is unclear as to whether the duty system impacts benchmark failures;
- Distance from station/out of station area, OIC forgot to book in attendance and time taken to adorn PPE were the top 3 causes of attendance failures in both 2023 and 2024 accounting for 56% and 72% respectively;
- It is difficult to accurately measure any change in benchmark failure reasons provided year on year as there are a large amount of instances left blank particularly in 2023 when (28%) of failures have no reason given. Scrutiny of attendance benchmark failures has been tightened in 2024 and reasons left blank have now become infrequent but at present historically there remain a high number of gaps making analysis difficult.

Further work is required to reduce the number of non-completions for reasons for appliance failure, to provide a better quality data set. Additionally, further analysis is required in this area to understand how issues with on-call appliance availability impact on wholetime response. Following review of the information contained within this report, relevant Officers should decide whether work outside of the scope of this evaluation is sufficient to understand the impact of on-call availability on other Brigade indicators.

3.2 Efficiency

3.2.1 Efficiency Summary






Did changes to the wholetime duty system make the service more efficient through improvements to productivity and capacity, utilisation of a staff resilience pool, and subsequently a reduction in overtime?

Alterations to the wholetime duty system were implemented in January 2024 with the intention of improving staff morale, increasing staff availability and as a result reducing costs associated with bridging the gaps in personnel. The following section examines changes recorded in productivity by measuring the percentage of time spent on productive and non-productive tasks and the changes in activities since the implementation of the new duty system. Please note that for consistency with previous reporting the evaluation has taken definitions of productive and non-productive from direction provided by the Home Office prior to changes published in 2025 relating to Productivity and Efficiency reporting. Additionally, whilst internal reporting currently splits 'Enabling' and 'Other' activities into two distinct categories, they have been combined in this evaluation to enable comparison with 2023 data, where this distinction was built into recording systems.

Examination of staffing levels in relation to the available resilience pool and overtime spent has also been included to verify any cost savings in line with staffing levels year on year.

N.B. The Home Office categorises 'operational activity', 'prevention' and 'protection', and 'training', as productive activities, 'other' are classified as non-productive. Based on this categorisation, a higher proportion of productive activity was reported since the introduction of the new duty system.

Key findings presented within this section are

-  Productivity and capacity is affected by the ability to carry out certain tasks during different times of the day. The overall number of **hours categorised as productive has increased from 47,976 in 2023 to 63,070 in 2024 an increase of 31.5% year on year for the 4-month period (September to December);**
-  There has been a **reduction in average time per month spent on 'Other' activities of 12.0%** which equates to a decrease of 11,055 hours;
-  **Average productive activity per month increased from 34% in 2023 to 44% in 2024, a 10% increase year on year for the 4-month period available;**
-  The number of **Safer Homes Visits completed by wholetime stations increased by 2959 (18.2%),** from 16219 in 2023 to 19178 in 2024;
-  1,929 entries for the Resilience Pool were logged in the Brigade's Productivity & Capacity System between January 1st and 31st December 2024, accounting for **21,861 hours of staff time in the resilience pool;**

🕒 **12,781 hours for resilience staff were recorded as ‘other’** which the Home Office categorises as non-productive activities;

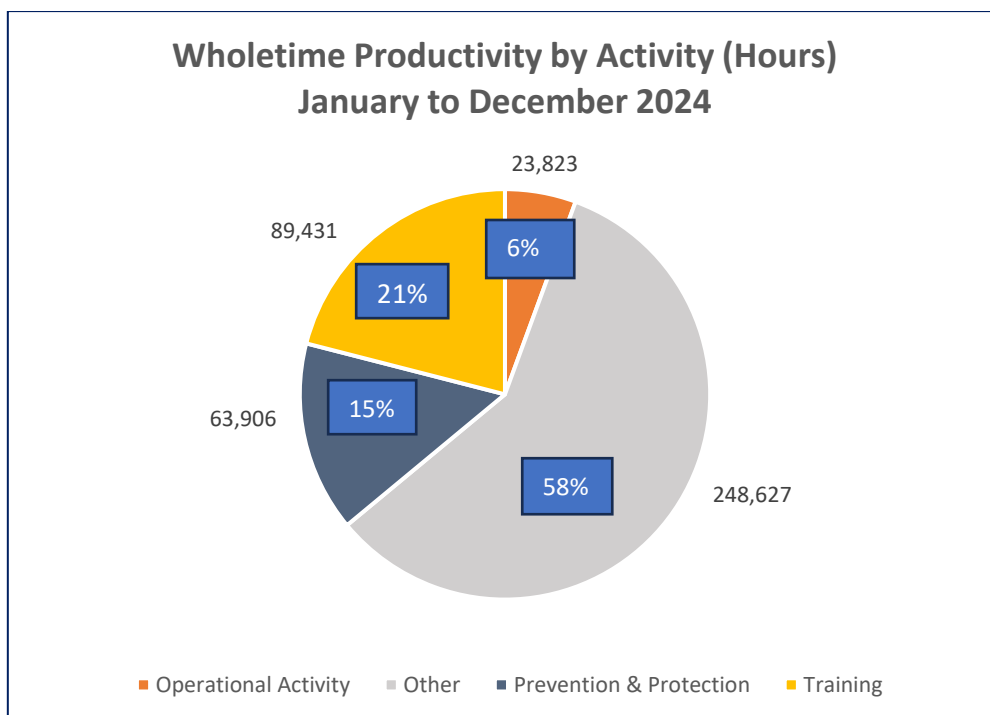
🕒 **£491,007.32 was spent on overtime to wholetime personnel in 2024 a saving of £10,017.39 compared to 2023**, which is a reduction of 2%.

3.2.2 Productivity & Capacity (Non-Resilience Pool)

The following section examines the level of productivity recorded for wholetime crew after the implementation of the new duty system with a split for day and night shifts to illustrate activity levels through the 24hr period.

Information for 2023 is not available until September therefore any comparisons will only focus on the data between September and December when both years figures are available.

The following illustration shows the levels of overall productivity for wholetime station crews January to December 2024 to provide the annual picture before the time period is shortened to allow for direct comparison.



Wholetime (All) January to December 2024 (Hours)		
	2024	% of total
Operational Activity	23,823	6
Other	248,627	58
Prevention & Protection	63,906	15
Training	89,431	21
Total	425,787	

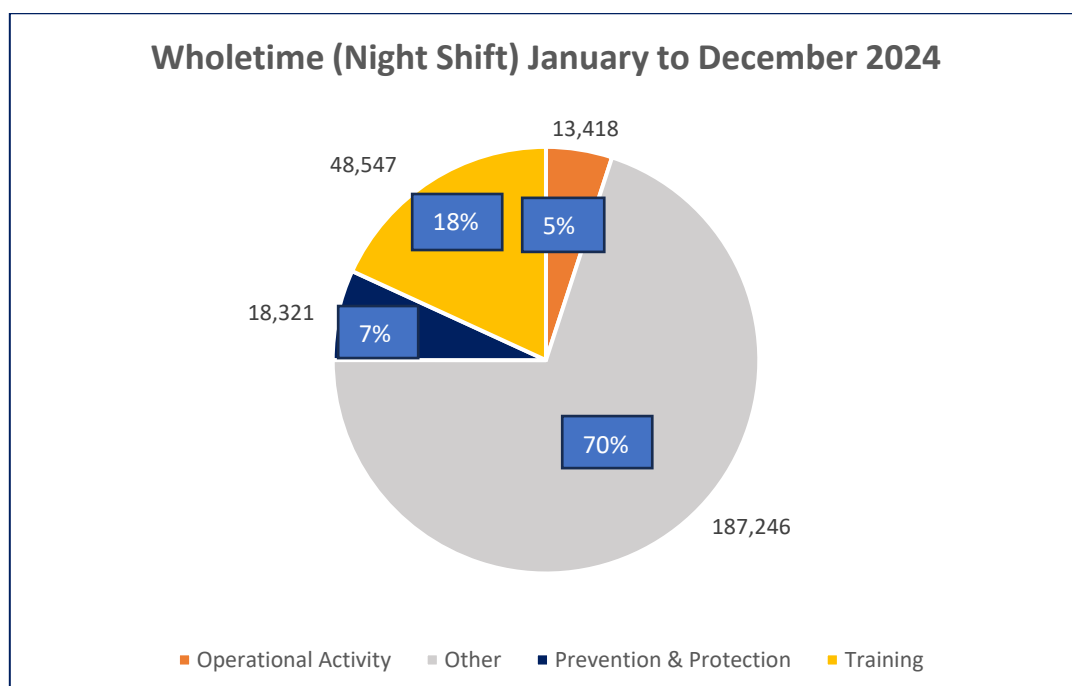
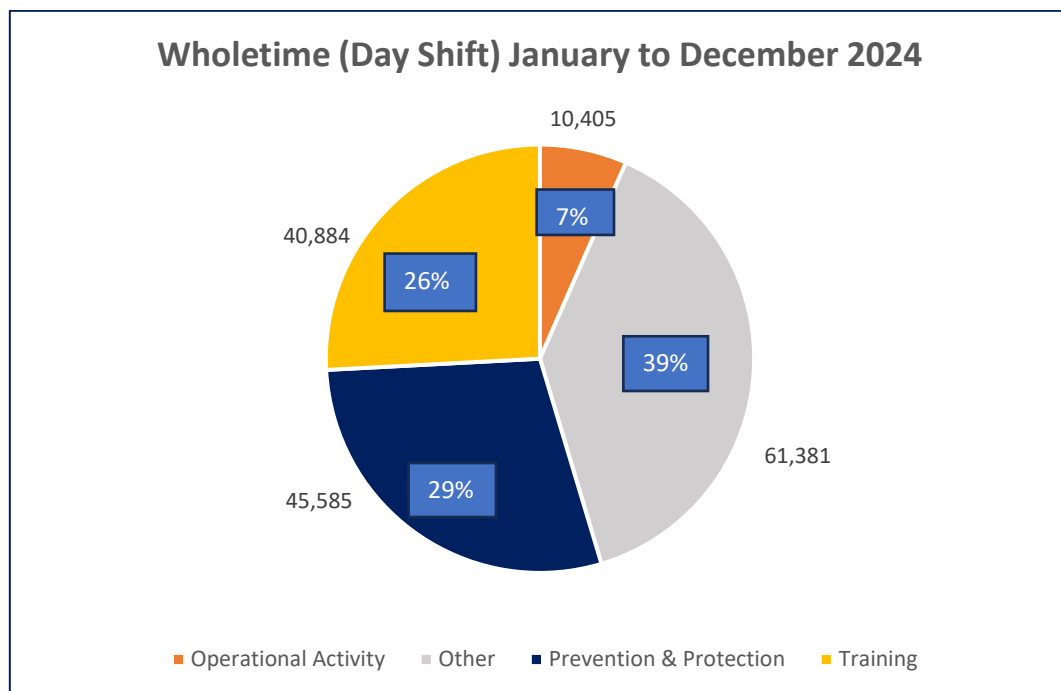
As the above illustrations show:

- 6% of hours between January and December 2024 were spent on operational activity;
- 42% of overall hours were spent on either operational activities, prevention or training leaving 58% recorded as 'other'.

A full outline of activities within each category is included in Appendix A.

This section examines the split of productivity for wholetime station staff taking into consideration the differences between day and night shift activities.

Data for productivity overall is slightly skewed by shift length, in which the night shift is longer but less able to carry out Prevention and Protection activities.



As the productivity illustrations show;

- The overall picture of productivity is affected by the ability to carry out certain tasks during different times of the day. For example, prevention is 7% of all activities during the night rising to 29% during the day when activities of this nature including Safer Homes Visits are predominantly able to take place;
- 26% of training took place during the day shift reducing to 18% on a night shift;
- Unproductive time was significantly higher on a night shift recorded as 70% in 2024 in comparison to 39% during the day.

To fully assess the impact of the new duty system on productivity it is necessary to examine levels prior to the new duty system however as productivity data was not gathered until September 2023 it is necessary to examine a smaller range of dates to provide a fair comparison.

The following analysis examines the 4 months of recorded data available from September 2023 to December 2023 compared to the same time period in 2024 when the new duty system was in place.

Productive Time (Prevention & Protection, Training, Operational)	Month of Year	2023	2024	% change
	Sep	11,939	15,929	33.4
	Oct	12,741	16,691	31.0
	Nov	12,093	15,286	26.4
	Dec	11,203	15,164	35.4
	Total	47,976	63,070	31.5

As the above table shows:

- The overall number of hours categorised as productive has increased from 47,976 to 63,070 an increase of 31.5% year on year for the 4-month period (September to December);
- The largest increase in productivity was seen in December 2024 when figures rose from 11,203 to 15,164 a rise of 35.4%.

Non-Productive Time (Enabling & Other)	Month of Year	2023	2024	% change
	Sep	22,388	19,183	-14.3
	Oct	23,142	20,891	-9.7
	Nov	22,278	19,733	-11.4
	Dec	24,027	20,973	-12.7
	Total	91,835	80,780	-12.0

As the above table shows:

- Overall, there has been a reduction in average time per month spent on 'Other' activities of 12.0% which equates to a decrease of 11,055 hours.

As a result, when examining both productive and non-productive levels in 2023 and 2024 for the months available for comparison it is evident that there has been a shift towards more productive activity.

In 2023 there was an average of 34% of time attributed to productive activity whereas 44% was recorded in 2024 an increase of 10% year on year for the 4-month period available.

Outputs

The goal of shifting more staff time to productive activities is to achieve a greater number of outputs with the same resource. For prevention and protection activities this is quantified through the number of activities such as Safer Homes Visits and Fire Safety Audits completed by operational crews.

The following table examines the level of Safer Homes Visits in 2023 and 2024 across wholetime station areas.

Safer Homes Visits by Station January to December 2023 and 2024

Completed Safer Homes	2023	2024	% Year on Year
Middlesbrough	2602	2897	11.3
Stockton	2165	3060	41.3
Grangetown	2555	2905	13.7
Redcar	1395	1505	7.9
Thornaby	2366	2933	24.0
Billingham	1220	1451	18.9
Coulby	1462	1510	3.3
Stranton	2454	2917	18.9
Total	16219	19178	18.2

As the above table shows:

- The number of Safer Homes Visits completed during 2024 across wholetime stations increased from 16219 to 19178 a rise of 2959 (18.2%);
- Stockton station saw the largest increase in visits with a rise of 41.3%;
- All 8 wholetime stations saw an increase in productivity in relation to Safer Homes Visits completed.

Subsequent impact of Safer Homes Visits is assessed as part of the Brigade's ongoing evaluation in this area.

At the time of reporting there are concerns about the quality of data relating to Fire Safety Audit, the Risk & Performance team plan to work with Fire Engineering to resolve this but for this reason have not presented figures in this report.

Additionally, there are no suitable indicators relating to training that were able to be included in the evaluation to evidence changes to outputs related to more time spent in this area.

Currently the Brigade have scope to improve recording across all activities to gain a more accurate understanding of the outputs resulting from staff productivity and capacity, this is essential in evidencing that the Brigade is becoming more efficient and subsequently able to provide higher level of outputs and outcomes using the same amount of resources. Implications for changes to systems to enable this should be considered moving forward.

3.2.3 Productivity & Capacity (Resilience Pool)

Optimum staffing levels for emergency response is 52 individuals, with the aim of staffing at least 14 appliances at all times. Within this number there is also the requirement for the right mixture of skills including but not exclusively drivers and watch managers for each appliance and shift.

Staffing officers use Fire Service Rota to monitor the number of station staff available for each shift and the skill sets accessible. If a shift is missing vital skills to staff an appliance the pump will then become unavailable and remaining staff for that appliance are reassigned to other duties during this period and become known as the resilience pool.

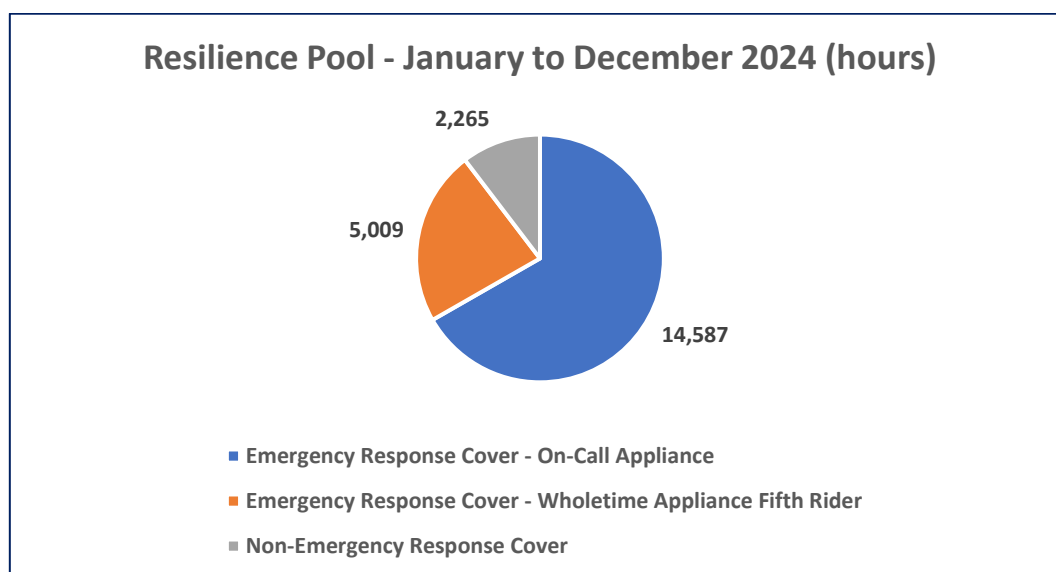
The resilience pool can be utilised in a number of ways including the support of prevention activities by carrying out tasks such as Safer Homes Visits, may be detached as the 5th rider on some wholetime appliances or drafted to an on-call station.

Data from the Brigade's Productivity & Capacity System shows that 1,929 entries for the Resilience Pool were logged between January 1st and 31st December 2024. These entries accounted for 21,861 hours of staff time.

Prior to 2024 the shift system complied of all staff being expected to work a certain number of hours each year within a shift pattern that could leave staff members short of hours. This resulted in the possibility of staff being called into shifts to increase hours owed at short notice to cover low staffing periods due to sickness or skills shortage. This at times could result in certain staff being called on multiple occasions if they were the only person with a certain set of skills available.

The short notice involved in the shift system prior to the resilience pool implementation was not conducive to a healthy work/life balance. The resilience pool was instigated to alleviate the pressure placed on staff and to ensure a uniform shift system.

The following section examines the use of the resilience pool in 2024, how staff were split due to its utilisation and the effect of this system on overall staffing duties.



As the above illustration shows:

- There were a total of 21,861 hours of resilience pool allocation during 2024;
- 5,009 hours were attributed to wholetime appliance fifth riders which accounts for 23% of overall entries;
- 14,587 were recorded as using staff to cover an on-all appliance;

As with the expectation of non-resilience pool staff, station routines are in place to maximise productivity.

The following table shows how resilience hours were split between operational, training and other activities to show productivity levels for staff who were reassigned. A full outline of activities within each category is included in Appendix A.

Resilience Hours by Activity 2024

Resilience Activity Hours (All)		
	2024	%
Operational Activity	760	3
Other	12,781	58
Prevention & Protection	3,658	17
Training	4,662	21
Total	21,861	

As the above table shows:

- 12,781 hours for resilience staff were recorded as 'other' which the Home Office categorises as non-productive activities;
- 21% of hours recorded were attributed to training;
- 3% of resilience hours were recorded as operational activity;

- As is expected the level of hours recorded in each category fluctuates across the day and night shifts with more hours attributed to training and prevention during the day.

The following table highlights any variations in what staff were utilised to do across the 3 main areas of the resilience pool, on call appliance, fifth rider and non-emergency response.

Resilience hours by activity 2024 (On Call, Fifth Rider and Non-Emergency Response)

Resilience Hours Activity (all) %			
	On-Call Appliance Cover	Fifth Rider	Non-Emergency Response Cover
Operational Activity	4%	1%	2%
Other	59%	66%	37%
Prevention & Protection	15%	12%	39%
Training	22%	20%	21%
Total	100.00%	100.00%	100.00%

As the above table shows:

- Staff acting as a fifth rider on a wholetime pump had the largest proportion of hours spent on 'other' activity across all three categories. Further work is required to understand how more efficient use of resilience pool staff acting as a fifth rider can be realised, however if resilience pool staff are detached this results in a financial implication for the Brigade which has been difficult to quantify in this evaluation;
- Non-emergency response cover saw the largest % of time spent on prevention and protection work whereas fifth ride and on-call cover had the highest % of time spent on 'other' which as previously stated is deemed as unproductive hours.

Relevant Managers should consider:

- If the proportional split in activities for staff in the resilience pool across the three categories aligns with the Brigade's expectations
- How the Brigade can begin to evidence whether the resilience pool is supporting improvements to wholetime appliance availability by filling gaps in staffing.
- How the Brigade can begin to evidence the level of wholetime and on-call appliance availability without utilisation of the resilience pool.

In terms of outputs, there is not currently a reliable data source for outputs of staff operating within the resilience pool, for the following reasons:

- No category for resilience pool has been established on the Community Safety System, subsequently a figure for visits attempted and completed cannot be reported. It has been identified that resilience pool visits may be being logged under the 'Not Stated' category relating to watch, however as there is no way to quality assure this and ensure that this number does not also include visits completed by wholetime stations, this has not been included in this evaluation. In some cases, individual members of the resilience pool have carried out Safer Homes Visits alongside Home Fire Safety Officers. However, as Home Fire

Safety Teams are able to carry out visits individually, this does not necessarily equal added value, although the presence of an additional staff member may support reduced visit time (as a result of one person installing smoke alarms whilst the other speaks to the occupant) and there may be benefits in terms of learning between the two roles (which is not quantified);

- The Productivity & Capacity system collects input of units against prevention and protection activities, however prior to training being delivered to station-based staff in July 2024 it became apparent that there was not a consistent understanding of what a 'unit' referred to. The data collected prior to training is therefore likely to not be of acceptable quality and has not been included.

3.2.4 Overtime

If the implementation of the new duty system improved availability of staff across wholetime stations it should theoretically lead to a reduction in overtime required for cover. The following section examines the cost implications of overtime paid to wholetime station staff since the introduction of the new duty system with 2023 as a comparison.

Data for overtime is recorded against the station the individual is usually based at, therefore if a member of staff was working overtime at another station this context is not reflected in the analysis. Without being able to track where the overtime occurred and why it is not possible to confidently state whether the duty system had any impact on the overtime required. It is recommended that changes be implemented into the system to claim overtime hours which enables the Brigade to undertake a comprehensive analysis in future (see Section 4.2).

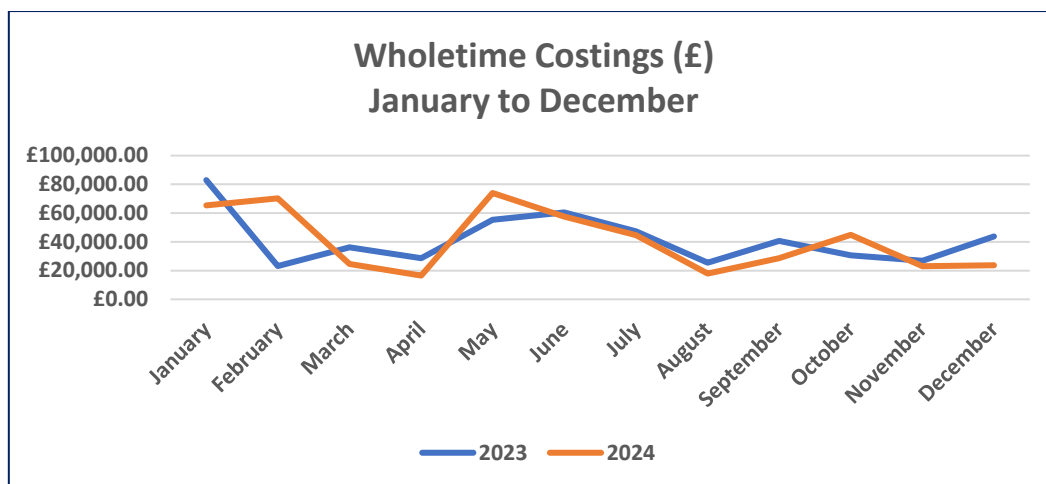
The following table shows the costs associated with overtime paid for wholetime station staff in 2023 compared to 2024.

Wholetime Stations	January to December		
	2023	2024	Difference
Middlesborough Station- A	£77,864.95	£73,342.52	-£4,522.43
Stockton Station- B	£76,211.70	£76,615.36	£403.66
Grangetown Station- C	£63,911.65	£82,023.64	£18,111.99
Redcar Station- D	£39,316.25	£30,009.53	-£9,306.72
Thornaby Station- E	£91,390.21	£86,146.44	-£5,243.77
Billingham Station- G	£41,318.67	£33,607.87	-£7,710.80
Coulby Newham Station- H	£50,566.47	£51,369.77	£803.30
Stranton Station- I	£60,444.81	£57,892.19	-£2,552.62
Total	£501,024.71	£491,007.32	-£10,017.39

Data for on-call costs have not been provided within this data set.

As the above table shows:

- £491,007.32 was spent on overtime to wholetime personnel in 2024 a saving of £10,017.39 year on year which is a reduction of 2%;
- 3 stations saw increases in overtime costs with the largest in Grangetown of £18,111.99;
- In contrast Redcar saw the largest decrease of -£9,306.72.



Wholetime Costings	2023	2024	Difference
January	£82943.41	£65451.27	-£17492.1
February	£23145.69	£70263.58	£47117.89
March	£36137.34	£24508.88	-£11628.5
April	£28546.7	£16512.86	-£12033.8
May	£55385.77	£73988.44	£18602.67
June	£60447.18	£57482.26	-£2964.92
July	£47283.87	£44665.26	-£2618.61
August	£25406.47	£17933.79	-£7472.68
September	£40584.14	£28710.86	-£11873.3
October	£30508.86	£44791.72	£14282.86
November	£26910.92	£22993.75	-£3917.17
December	£43724.36	£23704.65	-£20019.7
Total	£501024.7	£491007.3	-£10017.4

As the overtime illustrations by month of year show:

- January 2023 saw the highest level of overtime paid with £82943.41 recorded during this month;
- In 2024 the 2 highest month for overtime was May with £73988.44;
- In 2024, 6 (50%) of the 12 months, paid overtime of under £30000, in comparison there were 4 months during 2023 when levels were below this figure;
- The lowest level of overtime paid across the 2 years was during April 2024 with £16512.86;
- In December there was a 46% reduction year on year in 2024 which is the largest year on year monthly decrease recorded across the reporting period.

Most data relating to overtime is collated manually which hinders analysis and efficiency in understanding the Brigade's current position in relation to overtime. Additionally, reductions in overtime spend may be offset by an increase in detachments, however data in this area was not consistent enough between 2023 and 2024 to be valid enough for inclusion in this evaluation and this issue should be considered carefully in the implementation of recommendations. This is further detailed in data limitations and recommendations in Section 4.

3.3 People

3.3.1 People Summary

Did changes to the wholetime duty system have an impact on CFB's people, evidenced by reduced sickness absence and increased staff morale?

One of the main objectives of altering the wholetime duty system in January 2024 was to improve staff morale creating a better working environment with improved staff availability.





If changes in the duty system were effective this should be reflected in a measurable increase in staff morale and subsequently a reduction in staff sickness improving staff and appliance availability.

A happier workforce where a home/work balance is easier to achieve benefits the Brigade and its staff greatly.




The following section examines the effect of the new duty system on people working within the system by measuring staff sickness levels and perhaps most importantly staff feedback in the form of results from a staff questionnaire which aimed to gather feelings on how changes to the system have effected personnel.

Key findings within this section include:



All Staff Feedback:

-  **84% recorded a positive impact to work-life balance;**
-  **76% recorded improvement in job satisfaction and 79% recorded improved morale;**
-  **78% of respondents felt that productivity had improved** due to the new duty system with the largest positive impact recorded against community engagement with 75%;
-  **88%, stated that the new duty system is an improvement;**

Staffing Officer Feedback:

-  **55% stated that the new duty system is of benefit to daily staffing.** Skills shortages have been highlighted as a continuing problem however the respondents believe that overall availability has improved;
-  **Wholetime cover to on-call stations remains a problem** with 82% believing this issue has become worse since the implementation of the new duty system;
-  **63.6% of respondents believe that the resilience pool helps to maintain optimum appliance levels,** however, **54.6% of respondents believe that the Brigade are not utilising the resilience pool efficiently.** One commented suggested this was due to confusion around the hierarchy of staff activity in the resilience pool;

Sickness Absence:

-  The overall **number of shifts lost to work related mental health sickness has fallen by 28.8% (591 days)** in 2024 compared to the previous year;
-  The **lowest level of sickness recorded as work related mental health across the reporting period was recorded in April 2024.**

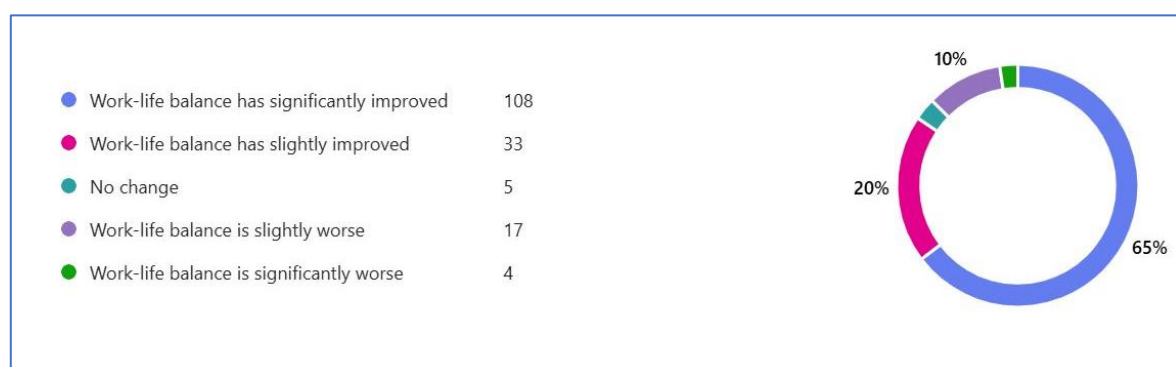
3.3.2 Wholetime Staff Survey

It has been hypothesised by the Brigade that changes to the duty system would have a positive impact on the morale of the operational workforce. To understand whether this is the case, a workforce consultation aimed at all wholetime operational staff who entered the Brigade prior to the implementation of the new duty system was carried out in December 2024. The survey measured domains including wellbeing, morale and job satisfaction.

167 responses were received from the duty system questionnaire out of a possible 272 which equates to 61% of eligible staff. All questionnaires were completed anonymously therefore it is not possible to track where response rates were greater or lower than expected to a particular station area.

The following section examines responses received to determine the levels of satisfaction or otherwise recorded. Key questions have been highlighted and analysed to provide insight into any potential impact of the new duty system.

How have the changes to the duty system impacted your work-life balance?



The question on work-life balance highlights:

- 108 respondents, 65%, believe that work-life balance has significantly improved and overall 141, 84%, recorded a positive impact;
- 5, 3%, of respondents were unaffected by the change in the duty system with regard to their work-life balance;

- 21 responses, 13%, stated that the duty system implementation had a negative impact with 4 responses stating it was significantly worse. When examining the 4 responses stating a significant negative impact the comments provided suggest that a 6pm start impacted on family time with loss of family meals or family activities that normally take place during this period.

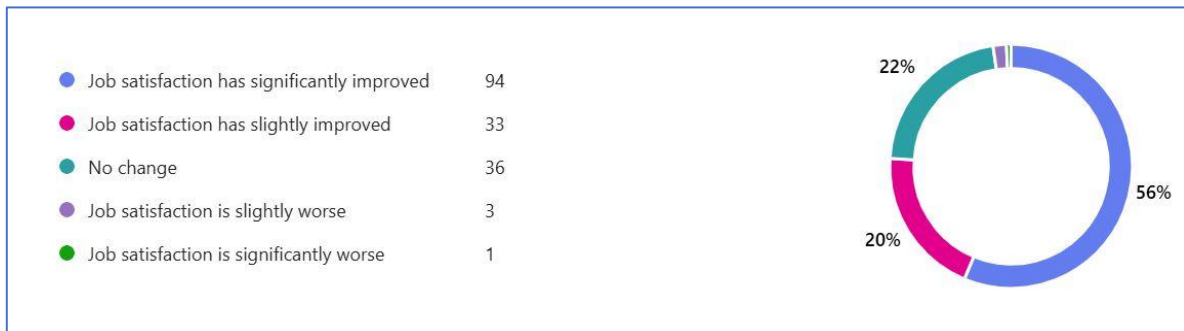
In summary the response to this question is predominantly positive with only 13% of respondents perceiving a negative impact on work life balance.

“Great shifts allowing family time after day shifts”

“I have found that my work-life balance has improved massively with the changes made”

“I feel the new duty system has a positive effect on employees with children and families”

How have the changes to the duty system impacted on your level of job satisfaction?



The question on job satisfaction highlights:

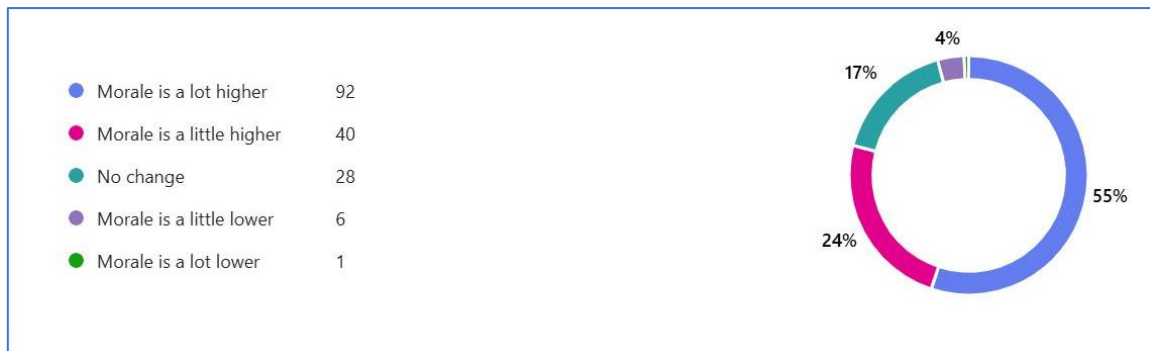
- 94 respondents, 56%, recorded job satisfaction as significantly improved;
- 127, 76%, recorded either a slight or significant improvement in job satisfaction;
- There was no impact on job satisfaction for 36 respondents, 22%;
- 4 respondents believed the new duty system had a negative impact on job satisfaction. However, only 1 response was recorded as significantly worse. Upon inspection the reasons for dissatisfaction appear to be related to balancing work and homelife.

In conclusion a large number of responses stated that job satisfaction had improved with 76% recording a positive impact which is pleasing to see.

“I believe the new duty system has been a brilliant step forward for CFB. I personally feel with the new shifts that operational crews are more productive, happier and more content in the workplace...”

“I really enjoy the new shift pattern. The day shift goes really fast and I get more time at home in the evening with the family. Nights we get to do more community activities and do drills that we missed out on during the day. It works for me”

How have the changes to the duty system impacted on your morale at work?



The question on impact on morale highlights:

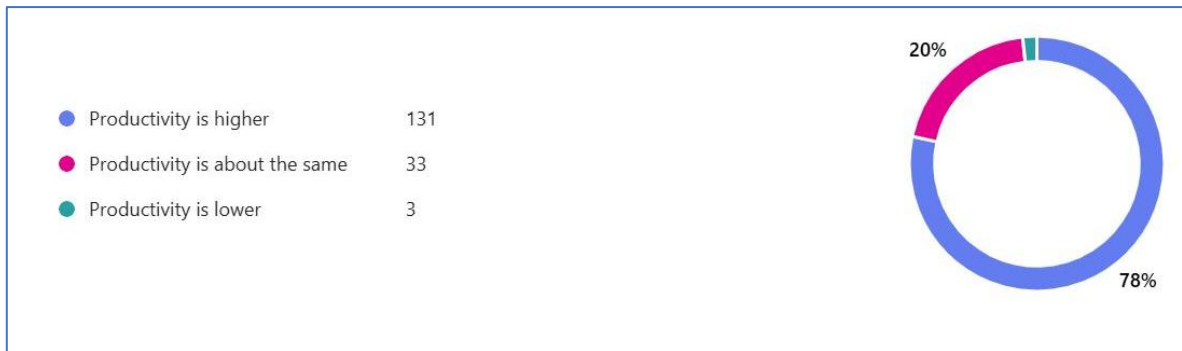
- 92, 55%, of respondents believe that morale is a lot higher since the implementation of the new duty system;
- 132, 79%, of answers recorded a positive impact on morale at work;
- 28, 17%, of respondents felt their morale was unaffected;
- 7, 4%, believed that morale had lowered. When examining any supporting comments it appears that once again the link is family time and conflicting schedules.

In conclusion, overall, morale has been recorded as boosted by the new duty system with 79% stating that it had improved.

“We are able to have meals together on a night which helps morale especially on a watch that has changed significantly. I am able to spend time with my family when I get home and feel like I am able to plan things after work now as I have more time.”

“The new Whole time duty system has had a positive effect not only on the morale at work and within the workforce, this has also improved the work life balance for nearly every individual and their families.”

How have the changes to the duty system impacted the productivity on your watch?



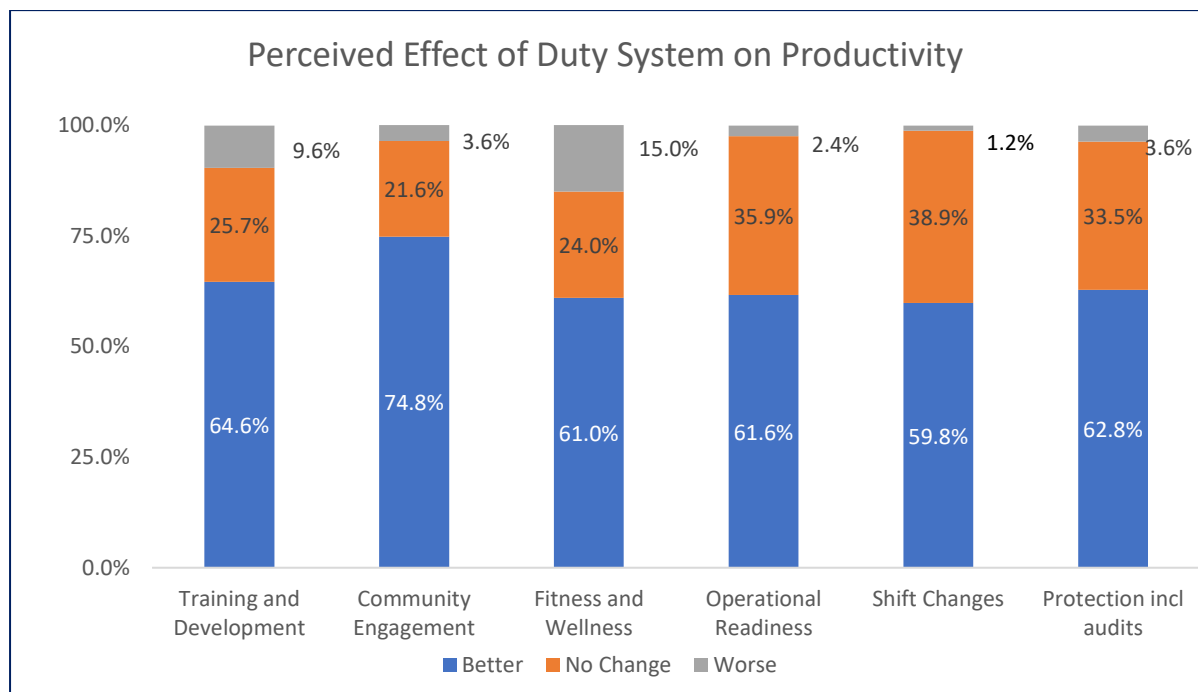
The question on impact on productivity highlights:

- 131, 78%, of respondents felt that productivity had improved due to the new duty system;
- 33, 20%, were unaffected and 3, 2%, believed productivity had declined.

To measure productivity effectively respondents were asked to rate various areas of activity separately including training and prevention.

The following section examines responses to the new duty system on productivity levels broken into better, no change and worse which amalgamates slight and significant effect to provide an overall impression of responses.

Perceived impact of the duty system on levels of productivity by type of activity



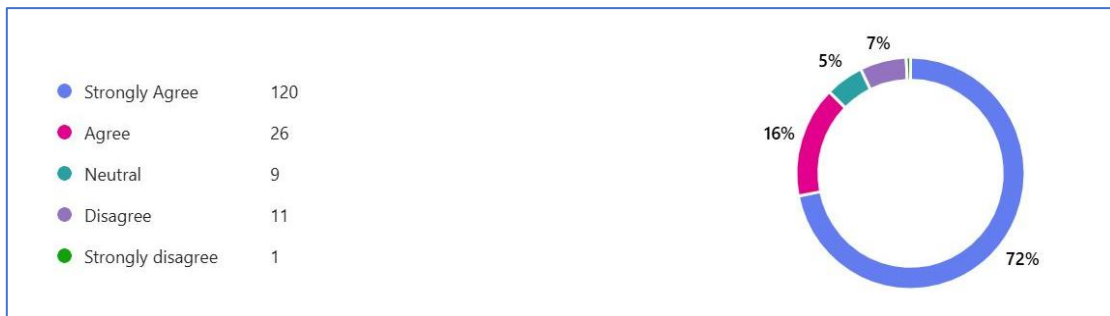
As the productivity graph shows:

- The largest positive impact on productivity was recorded against community engagement where 74.8% felt this area had improved;
- 15% of respondents stated a negative impact on fitness and wellness, however the questionnaire does not expand on this area so the reasons for this viewpoint are unclear;
- 9.6% felt that training and development had been made worse by the new duty system;
- 59.8% of respondents felt that shift changes had improved;
- 61.6% believe that operational readiness had become better.

Perhaps the most important question to examine from this questionnaire is whether the new duty system has provided benefits to staff.

The following section examines the overall perception of the new system in direct comparison with old ways of working in the Brigade.

Do you feel that overall the new duty system is an improvement compared to the old duty system?



The question on improvement highlights:

- 146 respondents (88%) stated that the new duty system is an improvement;
- 9 (5%) of responses are neutral;
- Adding together both the positive and neutral responses equates to 93%;
- 7% of respondents disagree that the new duty system is an improvement.

Summary of Findings

Overall, when examining the results of the duty system questionnaire, it is encouraging to see the positive impact that has been recorded by a high number of respondents stating that the duty system has resulted in improved ways of working.

78% felt that productivity had improved and 79% recorded increased morale. Overall, 88% of respondents stated that the new duty system is an improvement on old ways of working.

3.3.3 Duty System Staffing Officer Survey

The Duty System Staffing Officer Feedback Survey was launched in December 2024 with the aim of collecting views on the impact of the new duty system on managing staffing. Only officers who worked prior to the new duty system were asked to complete the questionnaire to enable the Brigade to generate opinions based on valid comparisons.

11 responses were received from staffing officers. All questionnaires were completed anonymously therefore it is not possible to track where response rates were greater or lower than expected to a particular station or district area.

The following section examines responses received to determine the levels of satisfaction or otherwise recorded. Key questions have been highlighted and analysed to provide insight into any potential impact of the new duty system.

As a Staffing Officer, what impact do you think the changes to the duty system have had on daily staffing?

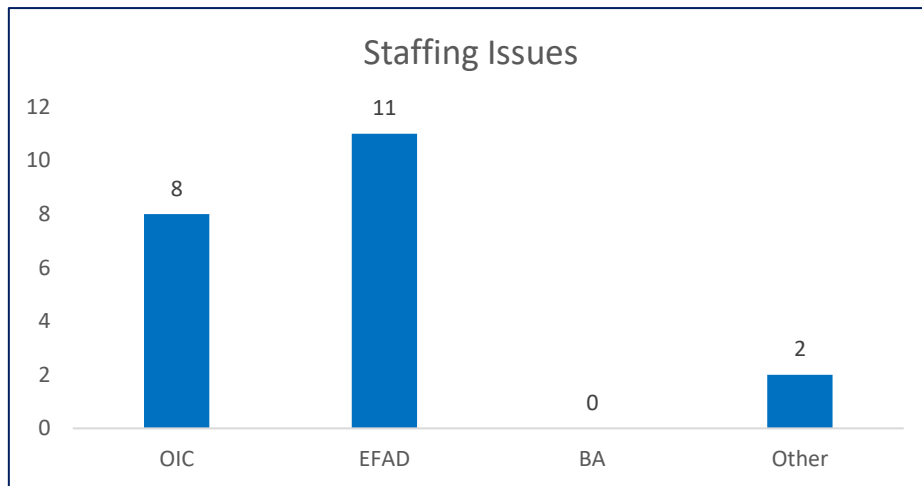


The question on daily staffing highlights:

- 6 of the 11 respondents, 55%, believe that daily staffing is easier with the new duty system;
- 5, 45%, stated that there had been no change;
- There were no negative responses to this question.

The questionnaire asks if staffing is currently an issue to which all 11 respondents stated it is. The following question examines the specific current issues perceived by staffing officers.

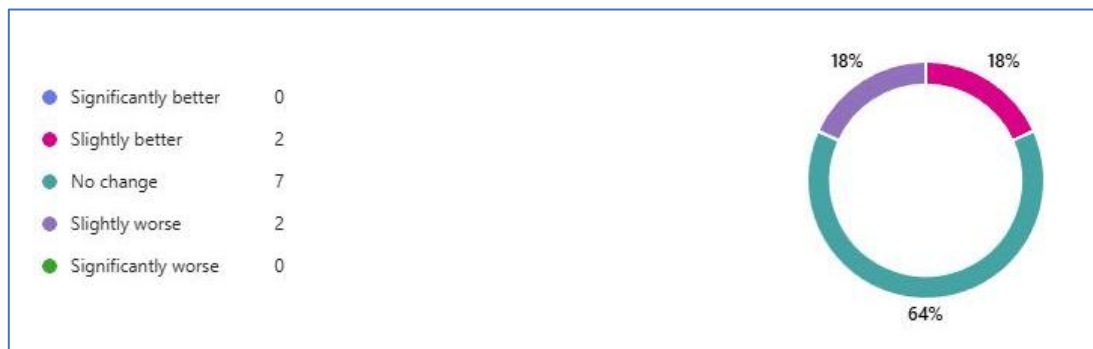
What specific skills do you experience consistent issues with when acting as Staffing Officer?



The question on consistent issues highlights:

- A continued problem with availability of EFAD staff with all recipients stating the lack of drivers as a problem. Work to alleviate this issue is being addressed as a separate project;
- OIC was the 2nd highest deficiency with 8 of the 11 respondents selecting this as an issue.

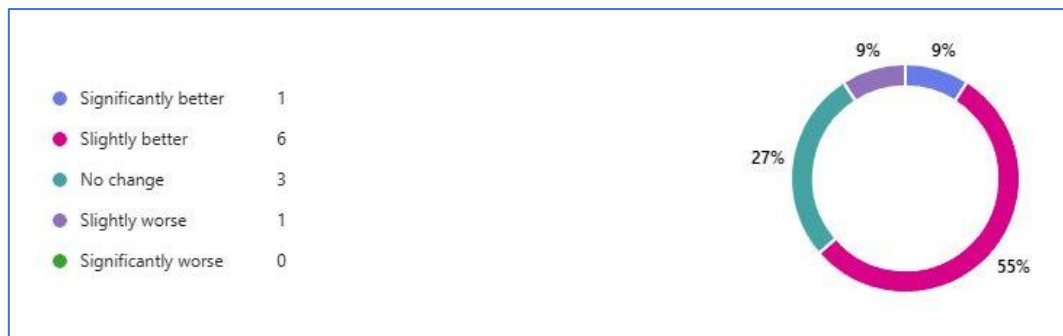
How has availability of staff with specific skills changed since the implementation of the new duty system?



The question on availability of specific skills highlights:

- The majority of respondents, 64%, believe that there has been no change in availability of skills since the implementation of the new duty system;
- 2, 18%, believe that this has improved since the new system;
- 2, 18%, believe that the availability of skilled staff has become slightly worse;
- In the follow up question 100% of respondents believed availability of particular skills is currently an issue.

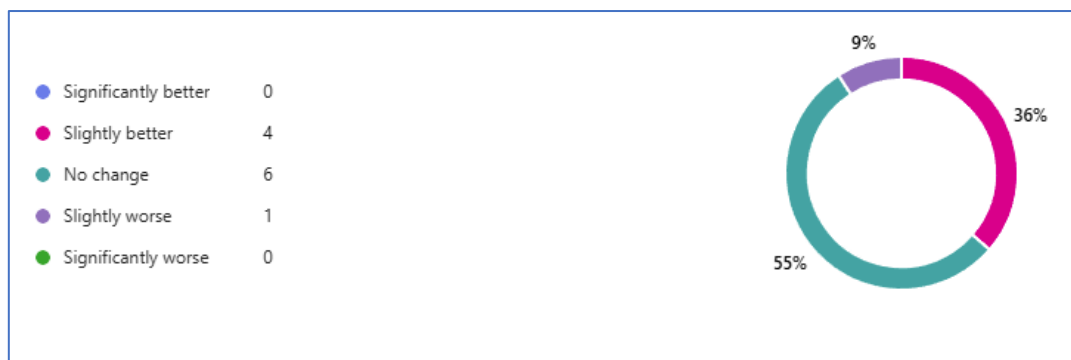
How has overall staff availability changed since the implementation of the new duty system?



The question on overall staff availability:

- 7, 64%, of respondents stated that the availability of all staff has seen an improvement selecting either significantly or slightly better;
- 3, 27%, stated there was no change in overall staff availability;
- Only 1 person stated staffing had become worse since the new duty system.

How has availability of vehicles changed since the implementation of the new duty system?

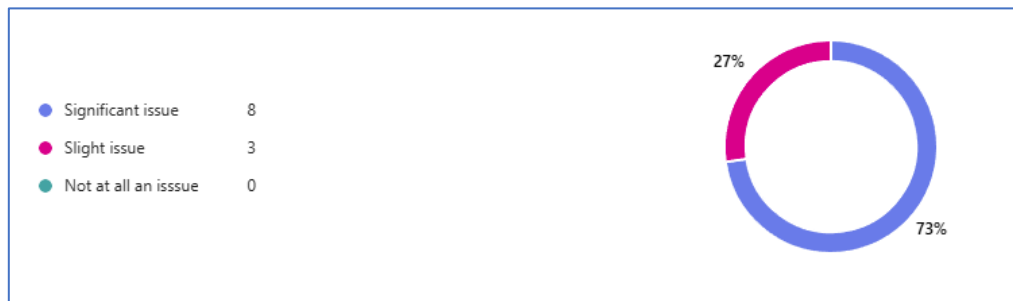


The question on availability of vehicles highlights:

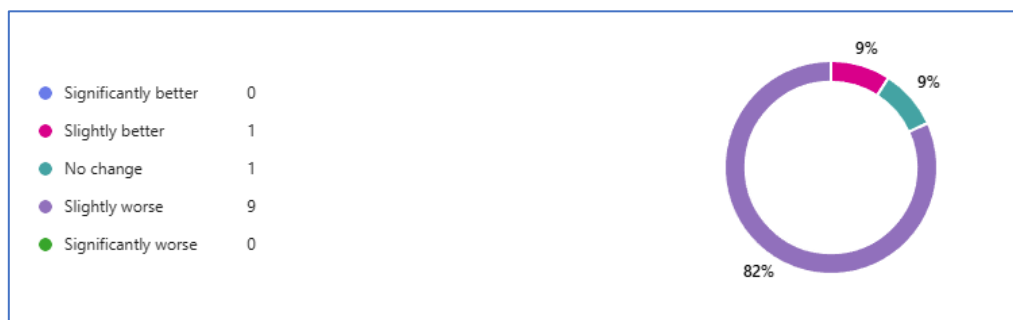
- 4, 36%, of respondents believe that availability of vehicles has improved since the introduction of the new duty system;
- 6, 55%, believe there has been no change;
- 1, 9%, stated that the availability of vehicles has become slight worse.

The following 2 questions examine the impact of the duty system on wholetime cover for on-call stations.

To what extent do you think use of wholetime crews/appliances to cover on-call stations is currently an issue?



How has wholetime crews/appliances being required to cover on-call stations changed since the implementation of the new duty system?



The questions on wholetime staff covering on-call stations highlights:

- All respondents believe that on-call cover is currently an issue with 8, 73%, selecting a significant issue;
- 9, 82%, believe that since the implementation of the new duty system the impact of on-call cover has become worse although there is no way to track why staff believe this to be the case.

The final section of the questionnaire examines the role of the resilience pool which as mentioned earlier in the report is used to reassign staff across stations and increase ability to complete activities such as community safety or training activities.

The following table shows the perception of staffing officers on the resilience pool and the effect of its utilisation alongside the new duty system.

Resilience Pool Questions

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have clear guidance around the use of the resilience pool	36.4%	54.5%	0%	9.1%	0%
The Resilience pool helps us to maintain our optimum levels of appliances (14-18)	9.1%	54.5%	18.2%	18.2%	0%
We use the resilience pool in the most efficient way	9.1%	36.4%	18.2%	36.4%	0%
The resilience pool is always utilised efficiently before offers of overtime are made	36.4%	54.5%	9.1%	0%	0%

As the above table shows:

- 63.6% of respondents believe that the resilience pool helps to maintain optimum appliance levels,
- However, 54.6% of respondents believe that the Brigade are not utilising the resilience pool in the most efficient way;
- 90.9% of respondents stated that the resilience pool is utilised before overtime is considered suggesting a more cost-effective method.

Summary of Findings

Overall, when examining the results of the staffing officer feedback questionnaires just over half (55%) believe the new duty system is of benefit to daily staffing. Skills shortages have been highlighted as a continuing problem however the respondents believe that overall availability has improved.

Wholetime cover to on-call stations remains a problem with 82% believing this issue has become worse since the implementation of the new duty system.

63.6% of respondents believe that the resilience pool helps to maintain optimum appliance levels, however, 54.6% of respondents stated that the Brigade are not utilising the resilience pool efficiently. Whilst comments received were limited, one comment suggested that there is some confusion about the hierarchy of activities to be completed by resilience pool staff.

It is possible to conclude through the results of this questionnaire that the new duty system has seen some benefits to staffing and availability but shortages around staff skills and on-call cover arrangements remain an issue.

“Still some confusion on the hierarchy of what the resilience pool staff should be used for as it has been changed a number of times.”

“Overall the new system does seem to provide a greater level of resilience and cover, however issues with the specific skills of OiC and EFAD still have an impact on staffing and will continue to negatively impact staffing not matter what the system used until more personnel are trained in these areas. ..”

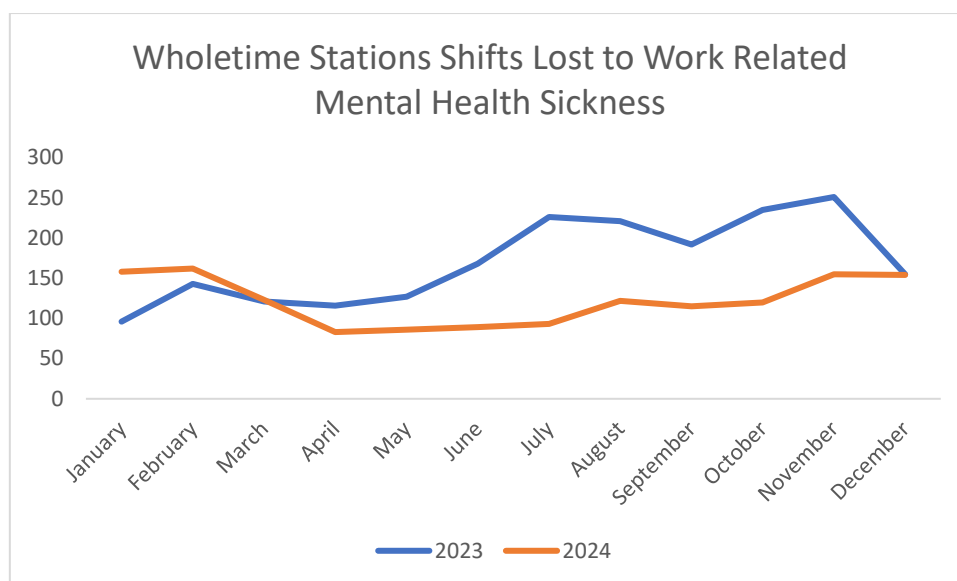
“Many staff find themselves in the resilience pool even when deficiencies are still present across the workforce. This is usually due to a mismatch of skills required. Utilising the 5th rider position is beneficial for watches (in terms of productivity & morale), and for the Brigade (in terms of improved attendances at courses, cost effective)”

3.3.5 Staff Sickness

The following section examines the reporting period in more detail to investigate any monthly fluctuations and direction of travel. Sickness is an ongoing concern across the Brigade area which is currently subject to intense scrutiny.

For the purpose of this evaluation work related mental health sickness pertaining specifically to wholetime station staff has been analysed to see if an increase in morale following implementation of the new duty system has had any impact on sickness levels.

The following graph shows the number of shifts lost by month in 2024 with 2023 as a means for comparison to examine levels prior to and after the new duty system was put in place.



Shifts Lost

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2023	96	143	121	116	127	168	226	221	192	235	251	155	2051
2024	158	162	123	83	86	89	93	122	115	120	155	154	1460

Note that data does not include sickness for on-call staff at wholetime stations.

Due to potential identifiability of staff, this data has been produced and reported as a top-level overview and not broken down to Station or Watch. The data shows that:

- The overall **number of shifts lost to work related mental health sickness has fallen by 28.8% (591 days)** in 2024 compared to the previous year;
- The **lowest level of sickness recorded as work related mental health across the reporting period was recorded in April 2024.**

Section 4: Conclusion

4.1 Discussion of Findings

The aim of this evaluation was to investigate the effect of the implementation of the new duty system for wholetime station staff. At the outset it was stated that the main objectives of the move to new working hours and conditions were to boost morale, improve availability and subsequently productivity.

As part of the analysis indicators measuring staff levels including sickness and overtime were examined to evaluate the direction of travel for wholetime station staff and highlighted a number of positives including reduced sickness and increased appliance availability. Perhaps the main indicator of success from this evaluation is the positive feedback from staff. It is difficult to confidently say that factors such as appliance availability are as a direct correlation of the new duty system alone and there remain areas to work on such as staffing skills shortages, despite this, the direction of travel is positive.





As with any new way of working there has been a learning curve particularly with regard to areas such as the resilience pool and how this can be used to greatest effect with some staff feedback stating that the Brigade are not utilising the resilience pool effectively. Some challenges such as staff skills shortages and on-call cover continue to effect staffing however, staff feedback is encouraging and suggests that the new duty system is favourable to previous ways of working.


There has been a vast amount of scrutiny on the new duty system and its effect on moral, availability and productivity. However, one very important factor to consider alongside the predominantly positive results is the high amount of data concerns which have been addressed throughout this report. Great care has been made to ensure that all data is as accurate as possible but due to current processes and gaps there remain a high number of risks and efficiency drains if current processes are not addressed. Recommendations due to data gaps have been made in the 'recommendations' section.

Revisiting the initial three questions posed as a framework for the evaluation:

Q1. Did changes to the wholetime duty system make the service more effective by improving appliance availability, and subsequently emergency response to fires and other emergencies?





The answer appears to be **yes** with the following observations:

-  An **average availability increase of 1.69%** in 2024 compared to 2023 (from 93.18% to 94.87%)
-  **All 13 wholetime appliances measured demonstrated an overall % availability increase** year on year and the average number of appliances available rose to 16;
-  A **decrease of 26% in appliances off the run** in 2024 compared to 2023;
-  A **17% reduction in appliance unavailability due to staff skill shortages** in 2024 compared to 2023;

-  A **decrease in the number of benchmark failures** has decreased in 2024 (-59 instances year on year). Location/distance from station remains the top cause for missing benchmarks.








Q2. Did changes to the wholetime duty system make the service more efficient through improvements to productivity and capacity, utilisation of a staff resilience pool, and subsequently a reduction in overtime?

The answer appears to be **yes** with the following observations:

-  A **31.5% increase in hours categorised as productive** (47,976 to 63,070) year on year for the 4-month period (September to December);
-  A **12% reduction in average time per month spent on 'Other' activities** (equating to a decrease of 11,055 hours);
-  An **increase of 10% average monthly time attributed to productive activity** (44% compared to 33%) for the 4-month period;
-  **Reduction of 2% spent on wholetime personnel overtime** (a saving of £10,017.39) with overtime in 2024 totalling £491,007.32,

Q3. Did changes to the wholetime duty system have an impact on CFB's people, evidenced by reduced sickness absence and increased staff morale?

The answer appears to be **yes** with the following observations:

-  **88% of wholetime staff stated that the new duty system is an improvement;**
-  **55% of staffing officer respondents stated that the new duty system is of benefit to daily staffing.** Skills shortages have been highlighted as a continuing problem however the respondents believe that overall availability has improved;
-  **63.6% of staffing officer respondents believe that the resilience pool helps to maintain optimum appliance levels,** however, **54.6% of respondents believe that the Brigade are not utilising the resilience pool efficiently;**
-  A **5% reduction in the number of shifts lost to sickness** (-208 shifts lost compared to the previous year);
-  **5 of the 8 wholetime stations saw a reduction in sickness** annually with the lowest reduction in Stockton of 483 shifts equating to a 49% decrease;
-  An annual **22% reduction in mental health sickness** recorded to wholetime station staff (-386 shifts lost).
-  **5 of the 8 wholetime stations saw a reduction in sickness attributed to mental health** with Coulby recording no instances in 2024.

4.2 Limitations/Data Quality

As highlighted throughout the report there are areas where data quality is lacking due to current processes or gaps in information available. The following section summarises key problems and limitations.

Data Quality Limitation Area	Details
<i>Productivity and Capacity</i>	There is a lack of sufficient baseline data to enable full comparison between data pre and post duty system change implementation. This is due to Version 3 of the Brigade's Productivity & Capacity system being launched in September 2023 and therefore there is not a full calendar year of data available. Inconsistent and inaccurate recording of productivity and capacity in the initial months of implementation of the new duty system have impacted on the quality and reliability of data. Quality of recording was impacted by lack of training on use of the system in the initial months of implementation, which led to a lack of standardisation in submission of entries. Training was delivered to staff in July 2024 following system improvements and it is expected that this will improve quality of recording moving forward.
<i>Overtime</i>	Data relating to overtime is collated manually hindering analysis. It is recommended that relevant managers decide, with support from CFB's Finance Department, the specific data they require in this area to make this data accessible for future analysis. It is recommended that changes be implemented into the system to claim overtime hours which enables the Brigade to undertake a comprehensive analysis of overtime by station (both where staff originate from and where they complete overtime), reasons for overtime, financial implication based on role/competence, number of staff/shifts claimed.
<i>Efficiency</i>	The evaluation has had difficulty evidencing the impact of the resilience pool due to lack of baseline data and lack of quality indicators. Overall, further work is needed to determine and refine indicators of efficiency.
<i>Skills and Availability Data</i>	The evaluation utilised Fire Service Rota to provide more detailed data relating to instances where appliances were unavailable due to skills shortages. Whilst reporting in this area is possible, it was noted during the evaluation process that Fire Service Rota was not updated to reflect operational changes to cover gaps in staffing which would return an appliance to being on the run. Data in this area presents a challenge in evidencing the impact of the duty system, and specifically the resilience pool, on periods of appliance unavailability due to skills gaps. Skills information does not link to other CFB systems to keep it up to date. The Brigade would be able to ensure a more joined up approach to data by incorporating areas of data collection into the Fire Service Rota system, which are currently being completed on spreadsheets and hinder evaluation and analysis. Exploration of expanding the scope of Fire Service Rota to include appliance availability and staffing analysis is governed by the Digital Transformation Programme and Board.
<i>Detachments</i>	Calculations of the disturbance allowance changed in April 2024. Discussions with the Finance Department highlighted that year-on-year comparison of detachments would not be helpful and therefore this has not been included in this evaluation.

4.3 Recommendations

The following recommendations would aid in creating more effective and efficient data collection and validity resulting in a number of benefits including cost and time benefits.

1. Continue operating under the new duty system working arrangements

As indicators presented under the three evaluation questions have returned positive results, it is recommended that the current duty system be maintained, unless future evidence demonstrates reductions in effectiveness and efficiency, or the Brigade are not able to resource to changes to risk under the arrangements.

2. Implement improvements to Brigade systems to ensure the service is equipped with accurate data to inform operational and strategic decision making

It is recommended that changes be made to address the data limitations and quality issues identified in section 4.2. This includes:

- a. Utilise Fire Service Rota more effectively as a central system for staffing analysis and availability to increase validity and reliability of data relating to overtime, staff skills and availability
- b. Deciding whether work outside of the scope of this evaluation is required to understand how issues with on-call appliance availability impact wholetime response. This would likely require work to embed improved data recording procedures.
- c. Improve reporting around outputs such as Fire Safety Audits and Training activity to enable links to be made between capacity and operational outputs, thus evidencing productivity
- d. Improve reporting of appliance availability and 'off the run' data, exploring improved utilisation of existing systems and the role of new system developments (eg implementation of the new mobilising system)

3. Reconsider procedure for utilisation of Resilience Pool staff

Whilst there has been a small decrease in overtime costs, the evaluation has not been able to contextualise this against an anecdotal increase in detachment costs due to an absence of comparable data. However, Staffing Officer feedback suggested the resilience pool is not utilised effectively. The following should therefore be considered and/or implemented:

- a. Improve our recording of data which helps the service evidence whether the resilience pool is supporting improvements to appliance availability and other operational outputs
- b. Consider whether our procedure regarding detachment of single resilience pool staff should be amended to ensure the most efficient use of resources. For example, if detachment of an individual is not being done to fill a staffing gap which results in an appliance switching from unavailable to available, is the detachment cost incurred worth the outputs gained, or is it more efficient to not detach and keep an individual as a fifth rider.

Section 5: Appendices

Appendix 1: List of Productivity and Capacity Activities

Prevention	<ul style="list-style-type: none"> Community Deliverables Community Events Other Prevention RTC Engagement Safe Place Scheme Safeguarding Referrals Safer Homes Visit – Completion Safer Homes Visit – Generation Schools Engagement Water Safety Engagement
Protection	<ul style="list-style-type: none"> Familiarisation Visits Fire Safety Audits OPS-Intel Inspections Other Protection Other Risk Information Premises Risk Register Inspection
Training	<ul style="list-style-type: none"> Additional Skills Training Assessment & Verification Cross Service Exercises E-Learning External/Multi-Agency Exercises Fitness Training LDC Hosted Training National Resilience Training Operational Audits Organisational Input Other Training PDR-Pro Completion Practical Training Station Specialism Training Station Specific Exercises Theoretical Training
Other	<ul style="list-style-type: none"> Appliance Off the Run – Staffing Meal Breaks Other Response Cover (Wholetime) Standby-Staffing/Other Stand-down Travel Time
Enabling	<ul style="list-style-type: none"> Admin Appliance Change-Over Appliance Off the Run – Defect Appliance/Equipment Checks & Testing Appliance/Vehicle 'B' Routine Brigade Medicals

	Crew Planning District/ELT Meetings Health & Safety Audits IRS/Incident Admin Meetings/Investigations Station Tests
Operational	Incident Travel Incidents Resilience Incidents Response Cover (On-Call) Standby-Incidents