

# MOD Armed Forces Personnel Statistics

## Report

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## UK Armed Forces Equal Pay Audit

This report details the findings of the first equal pay audit for the UK Armed Forces. It compares the average salaries of male and female, and white and black and minority ethnic personnel doing broadly equivalent work.

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## Key Findings

- When taking rank and pay scale as indicators of people doing broadly equivalent work, the equal pay audit for 2010/11 has found no differences in the average salaries of male and female personnel in the Armed Forces which fall outside the 3 per cent margin, when adjusted for time spent in rank.
- The equal pay audit found a number of gaps of between 3 and 5 per cent when comparing the pay of white and BME personnel, and in most cases it was not possible to adjust for time in rank. There were no gaps of more than 5 per cent.
- Where the effects of time spent in rank were measured, (i.e. in the most junior ranks), any differences in pay above 3 per cent can be explained by the differences in length of service (with two exceptions.) Seniority was found to be a significant contributory factor to any observed gaps.

## **SECTION 1 – Background and methods**

### **1.1 Armed Forces Salary structure**

Military salary can be broken down into 3 main components, base pay, X-factor and specialist pay. Basic pay is the standard salary that Military personnel receive which is at a level that is broadly comparable with those received by civilians doing jobs of a similar job evaluated weight. The X-factor is an additional percentage added to the base salary of regular Service personnel (and Reserve personnel depending on commitment level), reflecting the differences between conditions of service experienced by members of the Armed Forces over a full career and conditions in civilian life. <sup>1</sup>

Armed Forces personnel can be paid differently depending on their trade or profession. The majority of personnel will be on the Main pay scale. There is a single main pay scale for Officers. The Main pay scale for Other Ranks is split into Higher and Lower spines, and an individual's placement on these spines is determined by their rank, trade and JE score. Each trade has been evaluated for its relative difficulty, complexity, etc at each rank, and based on these factors is placed into the Higher or Lower spine. <sup>2</sup>

In order to recognise professional skills and career structures, a number of Armed Forces personnel are placed on specialist pay scales (for example, medical and dental Officers). Whilst they are considered, at various levels, equivalent in seniority to their main scale counterparts, with equivalent ranks, they are paid differently in recognition of their specialism.

### **1.2 Specialist pay and allowances**

Specialist Pay is paid to specific groups within the Armed Forces to assist with specific recruitment or retention requirements. It is paid in addition to the basic military salary.

Armed Forces personnel also receive various allowances under specific conditions. Examples include Operational Allowance which is paid whilst an individual is deployed on military operations, and Longer Separation Allowance, the purpose of which is to compensate a Service person for time spent away from family. <sup>3</sup> There are a number of allowances available, of which some are taxable and some not, and the data source does not allow them to be identified and calculated easily for individuals.

### **1.3 Data Sources**

Armed Forces personnel and salary data are sourced from the Joint Personnel Administration system, and as such are provisional and subject to review.

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<sup>1</sup> Salary rates below the NATO Equivalent rank OF-7 are recommended by the Armed Forces Pay Review Body (AFPRB) and approved by the Prime Minister each year. AFPRB reports are published annually by the Office of Manpower Economics and can be found at [http://www.ome.uk.com/AFPRB\\_Reports.aspx](http://www.ome.uk.com/AFPRB_Reports.aspx). These reports give more information on the structures and recommended rates of pay for the various pay scales.

Salaries for senior military officers (NATO Equivalent rank OF-7 and above) and Senior Civil Servants are recommended by the Senior Salaries Review Body (SSRB) and approved by the Prime Minister each year. SSRB reports are published annually by the Office of Manpower Economics and can be found at [http://www.ome.uk.com/SSRB\\_Reports.aspx](http://www.ome.uk.com/SSRB_Reports.aspx).

<sup>2</sup> See section 6 for table outlining the rank structures and equivalency in the three Services.

<sup>3</sup> More details on allowances rates can also be found at the OME website.

Salary is defined as gross base pay plus X-Factor. Salaries represent the annual rates of base pay that were introduced on 1 April 2010 and thus reflect what an individual would be paid in 2010/11 if they remained a full-time member of the Armed Forces for the entire year. Averages are derived from an annualisation of the gross salary of actual personnel paid during October 2011. This month was chosen as it is the mid point in the Financial Year. Any individuals not paid in this month for any reason are excluded from calculations. No adjustments are made for anticipated or actual promotions, salary increments or wastage subsequent to October 2011.

## **1.4 Data quality issues**

### *1.4a Length of Service*

Information relating to time served (length of service) as recorded on JPA is known to suffer data quality issues. Length of service is calculated using entry date. There are known problems with the entry date information extracted from JPA. If personnel have transferred between Services, have served under an alternative assignment type (e.g. reserve forces), are re-entrants or have transferred from Other Ranks to Officers, their entry date may correspond to any of these events. The resulting LoS may reflect their current period of service, include previous service, or it may be the time that has elapsed since they first joined the Armed Forces, irrespective of any break in service. It is not known how many records are inaccurate; length of service data are therefore considered estimates.

### *1.4b Time in rank*

Analysis by DASA has revealed that it is not possible to reliably calculate time spent in rank. There have been inconsistencies in the recording of dates when rank has changed, and also lots of information is missing.

### *1.4c Ethnic Background*

Not all Service personnel have a recorded Ethnic Background; through either choosing not to declare this information, or through the records not being completed. Coverage at October 2010 is 97.7%. Personnel with an unknown ethnic background are excluded from the pay gap analysis.

## **1.5 Methodology**

EHRC guidance suggests that an Audit should compare the pay of people doing equivalent work. The EHRC advocates that where a pay differential related to gender is less than 3%, no action is necessary. Where the difference is greater than 3% but less than 5%, the position should be regularly monitored and for gender pay gaps of more than 5%, action is needed to address the issue and close the gap. In this audit, where pay gaps of more than 3% are found when looking at individual ranks within pay scales, further analysis will be undertaken to explore possible explanations for the gaps. These will include factors such as length of service (where applicable and available) and pay spine point within rank.

In order to establish a basis for measuring any inequalities in pay in the Armed Forces, it is necessary to compare the pay of staff carrying out similar roles. Therefore the pay of personnel in the same service and at the same NATO rank on the same pay scale will be compared. It is suggested that this will effectively split the population into people doing broadly equivalent work.

The analysis is limited to Officers and Other Ranks on the Main pay scale. Personnel on all other pay scales have been excluded due to comparatively small numbers. Gurkhas and Royal Marines have been excluded from the gender comparisons as they only contain male personnel (apart from a small number in the band service in the Royal Marines) which may bias the results. Royal Marines are included in the ethnic background comparisons, however Gurkhas are excluded here too as they are all of Nepalese origin. Full Time Reserve Service personnel have also been excluded as the level of X-factor applied to their base pay rate differs due to the different balance between positive and negative factors of Service life that apply to this group. Part-time, including Volunteer Reservist personnel are excluded due to data quality issues.

As there are no female personnel above NATO rank OF-6, personnel above this rank have been excluded from the analysis so as to not bias the result. A table with the number of personnel in these ranks and their average pay can be found in the Appendix.

The Hutton Review of Fair Pay recommends considering all taxable earnings when looking at the fairness of pay. However, due to the complexity of the Armed Forces remuneration structure and the data itself, including data quality issues, specialist pay and allowances have been excluded from the analysis.

Where comparison groups contain fewer than 5 personnel, numbers and average salaries are suppressed, and no pay gap is calculated.

## **1.6 Symbols and conventions**

### *Symbols*

- \* not applicable
- .. not available, or figures suppressed due to small numbers
- zero

*Italic* figures are used for percentages and other rates, except where otherwise indicated.

### *Rounding*

Where rounding has been used, totals and sub-totals have been rounded separately and so may not equal the sums of their rounded parts.

When rounding to the nearest 10, numbers ending in 5 have been rounded to the nearest multiple of 20 to prevent systematic bias.

## SECTION 2 – The composition of the workforce

### 2.1 Gender

Women comprise 9.7% of the UK Regular Armed Forces, following a long-term trend of gradual increase. There are proportionally more female Officers (12.2%) than Other Ranks (9.1%). However, within both the Officer and Other Rank ranges, women tend to be represented more at the junior ranks.<sup>4</sup>

**Table 1 UK Regular Personnel by rank and gender, 1 Oct 2010**

	All Personnel				Female Personnel as a % of total			
	All Services	Naval Service	Army	RAF	All Services	Naval Service	Army	RAF
<b>Total</b>	<b>188,630</b>	<b>38,560</b>	<b>106,580</b>	<b>43,480</b>	<b>9.6%</b>	<b>9.5%</b>	<b>7.9%</b>	<b>13.7%</b>
<b>Officers</b>	<b>32,150</b>	<b>7,560</b>	<b>14,860</b>	<b>9,720</b>	<b>12.1%</b>	<b>9.6%</b>	<b>11.2%</b>	<b>15.4%</b>
OF-9	10	2	5	3	-	-	-	-
OF-8	29	8	12	9	-	-	-	-
OF-7	95	32	39	24	-	-	-	-
OF-6	350	80	170	90	1.4%	-	0.6%	4.4%
OF-5	1,220	290	600	340	3.4%	1.0%	3.5%	5.4%
OF-4	4,180	1,160	1,800	1,220	5.6%	3.0%	6.0%	7.5%
OF-3	9,590	2,180	4,860	2,550	11.6%	8.8%	11.2%	14.9%
OF-2	11,950	2,980	4,840	4,130	15.3%	13.4%	13.7%	18.5%
OF(D)/OF1	4,720	820	2,540	1,370	14.2%	12.1%	13.1%	17.7%
<b>Ranks</b>	<b>156,480</b>	<b>31,000</b>	<b>91,720</b>	<b>33,760</b>	<b>9.1%</b>	<b>9.4%</b>	<b>7.4%</b>	<b>13.1%</b>
OR-9	3,580	750	1,650	1,180	4.4%	3.7%	5.9%	2.9%
OR-8	5,500	780	4,720	*	4.5%	0.4%	5.2%	*
OR-7	13,140	3,860	6,100	3,180	5.7%	4.5%	6.8%	4.9%
OR-6	20,630	4,590	9,770	6,270	9.5%	7.6%	8.8%	12.0%
OR-4	29,990	6,260	15,330	8,400	11.8%	11.6%	9.5%	16.0%
OR-3	16,520	600	15,760	160	7.6%	-	8.0%	-
OR1/OR2	67,110	14,150	38,390	14,560	9.3%	11.6%	6.4%	14.8%

<sup>4</sup> Further details on the composition of the workforce by gender and ethnic background can be found in DASA's Annual Manning Report, available at [www.dasa.mod.uk](http://www.dasa.mod.uk)

## 2.2 Ethnic background

Black and Minority Ethnic (BME) personnel comprise 6.4% of the UK Regular Armed Forces. There are proportionally more Other Ranks (7.3%) than Officers (2.3%). While representation levels are low, the distribution of BMEs between ranks is more even than for women, with only the Army Other Ranks seeing a larger concentration of BMEs in the junior ranks.

**Table 2 UK Regular Personnel by rank and ethnic background, 1 Oct 2010**

	All Personnel				Black and Minority Ethnic Personnel as a % of total			
	All Services	Naval Service	Army	Royal Air Force	All Services	Naval Service	Army	Royal Air Force
<b>Total</b>	<b>188,630</b>	<b>38,560</b>	<b>106,580</b>	<b>43,480</b>	<b>6.4%</b>	<b>3.3%</b>	<b>9.4%</b>	<b>2.0%</b>
<b>Officers</b>	<b>32,150</b>	<b>7,560</b>	<b>14,860</b>	<b>9,720</b>	<b>2.3%</b>	<b>1.6%</b>	<b>2.7%</b>	<b>2.3%</b>
OF-9	10	2	5	3	-	-	-	-
OF-8	29	8	12	9	-	-	-	-
OF-7	95	32	39	24	2.1%	3.1%	-	4.2%
OF-6	350	80	170	90	1.7%	1.2%	2.3%	1.1%
OF-5	1,220	290	600	340	1.8%	1.0%	2.0%	2.1%
OF-4	4,180	1,160	1,800	1,220	2.1%	1.5%	1.9%	2.9%
OF-3	9,590	2,180	4,860	2,550	2.3%	1.3%	2.7%	2.4%
OF-2	11,950	2,980	4,840	4,130	2.5%	1.7%	3.4%	2.0%
OF(D)/OF1	4,720	820	2,540	1,370	2.2%	2.0%	2.1%	2.5%
<b>Ranks</b>	<b>156,480</b>	<b>31,000</b>	<b>91,720</b>	<b>33,760</b>	<b>7.3%</b>	<b>3.7%</b>	<b>10.5%</b>	<b>1.9%</b>
OR-9	3,580	750	1,650	1,180	1.9%	0.7%	2.5%	1.9%
OR-8	5,500	780	4,720	*	2.0%	1.1%	2.1%	*
OR-7	13,140	3,860	6,100	3,180	1.9%	1.3%	2.5%	1.6%
OR-6	20,630	4,590	9,770	6,270	2.5%	1.9%	3.3%	1.7%
OR-4	29,990	6,260	15,330	8,400	6.3%	3.9%	9.7%	1.8%
OR-3	16,520	600	15,760	160	14.0%	3.8%	14.5%	3.0%
OR1/OR2	67,110	14,150	38,390	14,560	9.3%	5.2%	13.6%	2.1%



## SECTION 3 – Equal Pay Audit results – gender

### 3.1 Comparison of average salaries

The following summary table shows the gaps in pay that are evident when looking at the Officer and Other Rank groups within each Service.

**Table 3 UK Regular personnel average salaries by gender and Service, 1 Oct 2010**

	Officers				Other Ranks			
	Headcount	Proportion	Average Basic Salary	Average Basic Salary	Headcount	Proportion	Average Basic Salary	Average Basic Salary
<b>All Services</b>								
<b>Gender</b>	<b>25 930</b>		<b>£49,837</b>	<b>-13.4%</b>	<b>147 080</b>		<b>£27,461</b>	<b>-3.1%</b>
<i>Male</i>	22 680	87.5%	£50,594		133 110	90.5%	£27,536	
<i>Female</i>	3 250	12.5%	£44,627		13 970	9.5%	£26,718	
<b>Royal Navy</b>								
<b>Gender</b>	<b>5 500</b>		<b>£51,548</b>	<b>-17.8%</b>	<b>23 500</b>		<b>£28,620</b>	<b>-13.0%</b>
<i>Male</i>	4 910	89.2%	£52,400		20 690	88.1%	£29,019	
<i>Female</i>	590	10.8%	£44,494		2 800	11.9%	£25,676	
<b>Gender</b>								
<b>Army</b>	<b>11 960</b>		<b>£49,714</b>	<b>-12.6%</b>	<b>90 340</b>		<b>£26,737</b>	<b>0.5%</b>
<i>Male</i>	10 640	89.0%	£50,336		83 590	92.5%	£26,728	
<i>Female</i>	1 320	11.0%	£44,702		6 750	7.5%	£26,850	
<b>RAF</b>								
<b>Gender</b>	<b>8 480</b>		<b>£48,899</b>	<b>-11.4%</b>	<b>33 240</b>		<b>£29,097</b>	<b>-7.9%</b>
<i>Male</i>	7 130	84.2%	£49,705		28 830	86.7%	£29,384	
<i>Female</i>	1 340	15.8%	£44,611		4 410	13.3%	£27,227	

However this is not a valid measure of equal pay; the Officers and Other Ranks split into 7 and 8 NATO-equivalent ranks respectively representing different levels of seniority and responsibility. The differences in average salary reflect the differences in the distributions of men and women between these ranks. A truer comparison can be made when the ranks are considered separately, and in the case of the Other Ranks, when further split into the Higher and Lower pay spines (see section on Armed Forces salary structure for more details.)

### 3.2 Officers

There are no female Officers above OF-6 (Commodore/Brigadier/Air Commodore) so the ranks of OF-7 and above are excluded from the pay analysis. The numbers of female OF-6 Officers are too small to make meaningful comparisons (none in the Royal Navy, and fewer than five in the Army and RAF.)

**Table 4 UK Regular Officers average salaries by gender, rank and Service, 1 Oct 2010**

	Royal Navy			Army			Royal Air Force		
	Headcount	Ave. salary	% diff M/F	Headcount	Ave. salary	% diff M/F	Headcount	Ave. salary	% diff M/F
<b>Officers</b>	<b>5 500</b>	<b>£51,548</b>		<b>11 960</b>	<b>£49,714</b>		<b>8 480</b>	<b>£48,899</b>	
OF-6 Male	70	£98,724		160	£99,432	..	80	£99,043	..
Female	-			..	..		..	..	
OF-5 Male	220	£84,621		500	£84,870	0.3%	280	£84,448	0.4%
Female	-			10	£85,138		10	£84,755	
OF-4 Male	840	£72,693	-2.1%	1 520	£71,371	-1.2%	1 020	£71,768	-1.4%
Female	20	£71,202		80	£70,494		80	£70,766	
OF-3 Male	1 640	£53,616	-2.5%	3 980	£53,401	-1.0%	1 900	£52,861	-2.6%
Female	160	£52,293		460	£52,868		330	£51,530	
OF-2 Male	1 580	£42,105	0.1%	2 470	£40,218	0.8%	2 800	£42,359	-1.2%
Female	330	£42,128		500	£40,550		700	£41,863	
OF-1 Male	510	£30,375	0.2%	1 920	£28,817	0.5%	1 030	£29,892	-0.2%
Female	70	£30,440		250	£28,967		200	£29,828	
OF-D Male	50	£15,573	..	80	£15,557	0.1%	30	£15,573	..
Female	..	..		10	£15,573		..	..	

The above table shows that when splitting the Officers down into individual ranks, pay gaps almost disappear with no differences between average male and female salaries of 3% or more.

### 3.3 Other Ranks - Higher Scale

**Table 5 UK Regular Other Ranks (Higher) average salaries by gender, rank and Service, 1 Oct 2010**

	Royal Navy			Army			Royal Air Force		
	Headcount	Ave. salary	% diff M/F	Headcount	Ave. salary	% diff M/F	Headcount	Ave. salary	% diff M/F
<b>Other Ranks - Higher</b>	<b>11 730</b>			<b>42 470</b>			<b>19 760</b>		
OR-9 Male	410	£46,087	-0.7%	1 250	£44,639	-0.5%	670	£45,419	0.4%
Female	20	£45,759		50	£44,409		20	£45,598	
OR-8 Male	540	£43,165	..	3 290	£42,112	0.3%	*	*	
Female	..	..		190	£42,242		*	*	
OR-7 Male	2 390	£40,974	-0.9%	1 350	£38,891	0.3%	2 330	£41,130	-0.4%
Female	120	£40,614		50	£39,018		100	£40,979	
OR-6 Male	3 430	£35,516	0.3%	6 780	£35,297	-0.4%	4 660	£36,038	-0.2%
Female	310	£35,638		600	£35,173		580	£35,955	
OR-4 Male	3 600	£30,828	-0.2%	11 210	£31,260	-0.4%	5 760	£31,880	-2.0%
Female	520	£30,773		1 200	£31,148		890	£31,248	
OR-3 Male	*	*		11 920	£26,533	0.1%	160	£24,304	
Female	*	*		760	£26,563				
OR-2 Male	260	£23,419	-6.1%	3 650	£22,697	-2.0%	4 140	£27,259	-6.5%
Female	120	£22,080		170	£22,255		450	£25,596	
OR-1 Male	*	*		-			-		
Female	*	*		-			-		

#### 3.3a Gender pay gaps at OR-2 (Lower Scale)

The basic pay gap analysis by rank and pay scale shows that the only observable gaps above 3% sit within the OR-2 ranks in the Royal Navy and Royal Air Force. As OR-2 is the modal rank group in the Armed Forces, this warrants the further investigation of factors influencing their pay.

As noted in other equal pay analysis and on the EHRC website, the length of time served in a job is closely linked to pay, and many equal pay audits adjust for this factor in their analysis. And as noted elsewhere in this report, data on length of time spent in current rank are not available, and therefore it is not possible to make statistical adjustments for this factor for the whole population. However, estimates of total length of service are

available. Given that in the Royal Navy and Army, OR-2 is the lowest rank, and in the RAF, many personnel will start at OR-2 following completion of training, it is considered that total length of service is a valid proxy measure of time in rank for these groups. It is therefore possible to test and adjust for the effects of time in rank, in order to see if any differences between male and female salaries remain, regardless of length of time served.

### 3.3b Adjusting for length of service (Time in Rank)

The univariate ANCOVA technique was used to adjust the differences between male and female salaries for the effects of time in rank. For the OR-2 group, length of service was found to have a significant effect on the differences in male and female salaries ( $F(1, 9180) = 15308.6, p < .05$ ) but even when taking this factor into account, there was still a difference between male and female salaries overall.

### 3.3c Adjusting for length of service among the Royal Navy OR-2s (Higher)

Repeating the analysis for each Service separately, it was found that within the Royal Navy, part of the difference in male and female salaries can be explained by differences in length of service ( $F(1,370) = 323.6, p < .01$ ), with an adjusted mean gap of 3.3% remaining.

### 3.3d Adjusting for length of service among the Royal Air Force OR-2s (Higher)

The ANCOVA analysis found that length of service was significantly related to pay ( $F(1,4575) = 7185.8, p < .01$ ) and when taking length of service into account, gender was not related to pay ( $F(1,4575) = 34.3, p < .01$ ). The adjusted gap in salaries between male and female personnel among the RAF OR-2s was -2.7%.

## 3.4 Other Ranks - Lower Scale

Table 6 UK Regular Other Ranks (Lower) average salaries by gender, rank and Service, 1 Oct 2010

	Royal Navy			Army			Royal Air Force		
	Headcount	Ave. salary	% diff M/F	Headcount	Ave. salary	% diff M/F	Headcount	Ave. salary	% diff M/F
<b>Other Ranks - Lower</b>	<b>11 770</b>			<b>47 860</b>			<b>13 480</b>		
OR-9 Male	220	£43,178	-0.2%	250	£43,635	-0.8%	220	£42,705	-0.9%
OR-9 Female	10	£43,070		50	£43,287		10	£42,343	
OR-8 Male	10	£43,502		1 070	£39,297	-0.6%	*	*	
OR-8 Female	-			60	£39,060		*	*	
OR-7 Male	860	£38,946	-1.0%	4 220	£37,174	-0.8%	590	£38,452	-1.2%
OR-7 Female	50	£38,544		360	£36,865		50	£37,983	
OR-6 Male	170	£32,792	2.7%	2 230	£32,979	-0.7%	860	£33,291	-1.2%
OR-6 Female	40	£33,698		270	£32,761		190	£32,910	
OR-4 Male	590	£28,614	0.0%	2 530	£28,789	-0.1%	1 300	£28,989	-0.5%
OR-4 Female	190	£28,626		260	£28,767		460	£28,857	
OR-3 Male	*	*		2 700	£23,101	1.1%	20	£20,995	
OR-3 Female	*	*		490	£23,361		-		
OR-2 Male	8 210	£18,933	1.2%	31 140	£18,622	-1.7%	6 820	£19,520	4.0%
OR-2 Female	1 420	£19,167		2 240	£18,307		1 500	£20,324	
OR-1 Male	*	*		-			1 290	£15,634	-3.2%
OR-1 Female	*	*		-			160	£15,147	

The above table shows that when splitting the Other Ranks (Lower) down into individual ranks, pay gaps almost disappear in the majority of cases. There are two gaps above the

3% threshold, at RAF ranks OR-1 and OR-2. As these are at the bottom of the range, length of service can be used to adjust the salaries.

#### *3.4a Adjusting for length of service (Time in Rank)*

After adjusting for length of service, the gap at OR-2 has decreased to 1.8%. The adjusted OR-1 gap is -2.7%. Therefore when taking length of service into account, there are no gender pay gaps above the 3% threshold among the Other Ranks (Lower) group.

## SECTION 4 – Equal Pay Audit results – ethnic background

### 4.1 Comparison of average salaries

The following summary table shows the gaps in pay that are evident when looking at the Officer and Other Rank groups within each Service. However as noted in section 3, this is not a valid measure of equal pay.

**Table 7 UK Regular personnel average salaries by ethnic background and Service, 1 Oct 2010**

	Officers				Other Ranks			
	Headcount	Proportion <sup>1</sup>	Average Basic Salary	Average Basic Salary diff %	Headcount	Proportion <sup>1</sup>	Average Basic Salary	Average Basic Salary diff %
<b>All Services</b>								
<b>Ethnic Background</b>	<b>26 670</b>		<b>£49,837</b>	<b>-4.1%</b>	<b>154 020</b>		<b>£27,461</b>	<b>-15.2%</b>
<i>White</i>	25 040	97.9%	£49,950		139 730	92.5%	£27,684	
<i>BME</i>	530	2.1%	£47,983		11 340	7.5%	£24,034	
<i>Not known</i>	1 100		£48,863		2 940		£30,087	
<b>Royal Navy</b>								
<b>Ethnic Background</b>	<b>5 500</b>		<b>£51,548</b>	<b>-6.6%</b>	<b>23 500</b>		<b>£28,620</b>	<b>-19.8%</b>
<i>White</i>	5 200	98.4%	£51,720		22 010	95.8%	£28,763	
<i>BME</i>	80	1.6%	£48,509		960	4.2%	£24,017	
<i>Not known</i>	210		£48,527		520		£31,051	
<b>Marines</b>								
<b>Ethnic Background</b>	<b>740</b>		<b>£50,884</b>	<b>0.2%</b>	<b>6 940</b>		<b>£25,123</b>	<b>-5.6%</b>
<i>White</i>	690	99.1%	£50,829		6 200	97.2%	£25,345	
<i>BME</i>	10	0.9%	£50,909		180	2.8%	£23,992	
<i>Not known</i>	40		£51,824		560		£23,022	
<b>Army</b>								
<b>Ethnic Background</b>	<b>11 960</b>		<b>£49,714</b>	<b>-4.7%</b>	<b>90 340</b>		<b>£26,737</b>	<b>-13.9%</b>
<i>White</i>	11 490	97.7%	£49,752		80 270	89.4%	£27,080	
<i>BME</i>	270	2.3%	£47,519		9 560	10.6%	£23,772	
<i>Not known</i>	190		£50,532		500		£28,474	
<b>RAF</b>								
<b>Ethnic Background</b>	<b>8 480</b>		<b>£48,899</b>	<b>-1.3%</b>	<b>33 240</b>		<b>£29,097</b>	<b>-3.3%</b>
<i>White</i>	7 650	97.8%	£48,963		31 240	98.0%	£28,941	
<i>BME</i>	170	2.2%	£48,358		640	2.0%	£28,010	
<i>Not known</i>	660		£48,302		1 360		£33,202	

1. Percentages are based on those with known ethnic background. 'Not known' includes both unrecorded and those who choose not to declare.

### 4.2 Officers

There are no Black and Minority Ethnic (BME) Officers above OF-6 (Commodore/Brigadier/Air Commodore) so the ranks of OF-7 and above are excluded from the pay analysis. The numbers of BME OF-6 and OF-5 Officers are too small to make meaningful comparisons in most cases. As BME representation overall is quite low, there are a number of groups, including all Royal Marine Officer ranks, where the numbers are too small. These are represented by '..' in the table.

**Table 8 UK Regular Officers average salaries by ethnic background, rank and Service, 1 Oct 2010**

	Royal Navy			Royal Marines		
	Headcount	Ave. salary	% diff W/BME	Headcount	Ave. salary	% diff W/BME
<b>Officers</b>	<b>5 290</b>	<b>£51,668</b>		<b>700</b>	<b>£50,830</b>	
OF-6 White	70	£98,745	..	10	£98,638	
BME	..	..		-		
OF-5 White	220	£84,621	..	30	£84,346	
BME	..	..		-		
OF-4 White	830	£72,679	-0.7%	110	£71,194	..
BME	10	£72,148		..	..	
OF-3 White	1 700	£53,519	-0.4%	230	£53,152	..
BME	20	£53,322		..	..	
OF-2 White	1 780	£42,107	0.8%	200	£40,752	..
BME	40	£42,452		..	..	
OF-1 White	560	£30,373	0.0%	90	£30,753	..
BME	10	£30,367		..	..	
OF-D White	50	£15,573	..	20	£15,573	
BME	..	..		-		
	Army			Royal Air Force		
	Headcount	Ave. salary	% diff W/BME	Headcount	Ave. salary	% diff W/BME
<b>Officers</b>	<b>11 760</b>	<b>£49,701</b>		<b>7 820</b>	<b>£48,950</b>	
OF-6 White	160	£99,424	..	80	£99,066	
BME	..	..		-		
OF-5 White	500	£84,908	..	280	£84,432	1.9%
BME	..	..		10	£86,033	
OF-4 White	1 550	£71,331	-0.4%	1 000	£71,761	-0.2%
BME	20	£71,017		20	£71,622	
OF-3 White	4 260	£53,357	0.4%	2 010	£52,764	-1.8%
BME	100	£53,546		50	£51,812	
OF-2 White	2 840	£40,267	-0.6%	3 070	£42,210	0.4%
BME	100	£40,020		60	£42,361	
OF-1 White	2 100	£28,801	3.4%	1 170	£29,804	2.1%
BME	40	£29,810		30	£30,453	
OF-D White	90	£15,558	..	40	£15,573	
BME	..	..		-		

The above table shows that when splitting the Officers down into individual ranks, pay gaps almost disappear in the majority of cases. The one gap of concern is within the Army OF-1 (2<sup>nd</sup> Lieutenant), where the BME personnel earn on average 3.4% more than the white personnel.

It is not possible to adjust the OF-1 Officer salaries for length of service as it is for the lowest Other Ranks. An Officer's length of service may include time served as an Other Rank or an Officer Designate, so it is not a valid measure of time served in that particular rank.

### 4.3 Other Ranks - Higher Scale

Table 9 UK Regular Other Ranks (Higher) average salaries by ethnic background, rank and Service, 1 Oct 2010

Other Ranks - Higher	Royal Navy			Royal Marines		
	Headcount	Ave. salary	% diff W/BME	Headcount	Ave. salary	% diff W/BME
OR-9 White	420	£46,077	..	70	£45,200	..
BME	..	..		..	..	
OR-8 White	520	£43,166		200	£42,024	
BME	10	£43,050		..	..	
OR-7 White	2 400	£40,937	1.6%	60	£39,961	
BME	30	£41,623		-		
OR-6 White	3 580	£35,536	-0.9%	470	£35,505	-0.8%
BME	70	£35,236		10	£35,212	
OR-4 White	3 860	£30,848	-2.1%	1 160	£31,034	-1.8%
BME	150	£30,208		20	£30,475	
OR-3 White	*	*		50	£28,004	..
BME	*	*		..	..	
OR-2 White	350	£23,043	-5.0%	350	£25,982	
BME	10	£21,936		20	£26,779	

Other Ranks - Higher	Army			Royal Air Force		
	Headcount	Ave. salary	% diff W/BME	Headcount	Ave. salary	% diff W/BME
OR-9 White	1 250	£44,633	-0.2%	660	£45,427	-0.5%
BME	30	£44,529		10	£45,215	
OR-8 White	3 400	£42,115	0.5%	*	*	
BME	70	£42,321		*	*	
OR-7 White	1 340	£38,899	-0.5%	2 270	£41,137	0.2%
BME	40	£38,719		40	£41,237	
OR-6 White	7 090	£35,300	-1.2%	4 790	£36,028	0.2%
BME	250	£34,880		80	£36,112	
OR-4 White	11 250	£31,297	-2.0%	6 060	£31,776	-0.5%
BME	1 080	£30,693		110	£31,629	
OR-3 White	11 110	£26,498	1.2%	140	£24,287	..
BME	1 520	£26,814		..	..	
OR-2 White	3 470	£22,670	0.4%	4 420	£27,062	1.4%
BME	350	£22,753		60	£27,434	

Within the Other Ranks (Higher), most pay gaps disappear when looking at individual ranks, apart from OR-2 in the Royal Navy, where BMEs are paid on average 5% less than white personnel.

#### 4.3a Adjusting for length of service among the Royal Navy OR-2s (Higher)

The ANCOVA analysis found that length of service was significantly related to pay ( $F(1,357) = 658.5, p < .01$ ) and when taking length of service into account, ethnic background was not related to pay. The adjusted gap in salaries between white and BME personnel among the Royal Navy OR-2s was -2.5%.

## 4.4 Other Ranks - Lower Scale

**Table 10 UK Regular Other Ranks (Lower) average salaries by ethnic background, rank and Service, 1 Oct 2010**

	Royal Navy			Royal Marines		
	Headcount	Ave. salary	% diff W/BME	Headcount	Ave. salary	% diff W/BME
<b>Other Ranks - Lower</b>	<b>11 570</b>	<b>£21,852</b>		<b>3 980</b>	<b>£20,840</b>	
OR-9 White	220	£43,154	..	-		
BME	..	..		-		
OR-8 White	10	£43,502		10	£38,457	
BME	-			-		
OR-7 White	880	£38,922	-1.3%	290	£37,984	-0.3%
BME	10	£38,417		10	£37,888	
OR-6 White	200	£33,021	-3.5%	50	£34,238	
BME	10	£31,916		-		
OR-4 White	700	£28,655	-1.7%	..	..	
BME	60	£28,184				
OR-3 White	*	*		470	£22,921	4.4%
BME	*	*		20	£23,983	
OR-2 White	8 880	£18,933	0.7%	3 030	£18,621	3.2%
BME	600	£19,071		100	£19,233	
OR-1 White	*	*		*	*	
BME	*	*		*	*	
	Army			Royal Air Force		
	Headcount	Ave. salary	% diff W/BME	Headcount	Ave. salary	% diff W/BME
<b>Other Ranks - Lower</b>	<b>47 590</b>	<b>£22,657</b>		<b>13 220</b>	<b>£22,681</b>	
OR-9 White	290	£43,577	0.4%	220	£42,742	-1.5%
BME	10	£43,768		10	£42,130	
OR-8 White	1 080	£39,275	0.8%	*	*	
BME	30	£39,606		*	*	
OR-7 White	4 420	£37,152	-0.3%	610	£38,435	-0.5%
BME	120	£37,039		10	£38,248	
OR-6 White	2 370	£32,975	-1.4%	970	£33,204	0.8%
BME	100	£32,534		30	£33,476	
OR-4 White	2 370	£28,840	-1.4%	1 620	£28,949	-0.2%
BME	410	£28,453		40	£28,899	
OR-3 White	2 400	£23,074	1.2%	20	£20,995	
BME	770	£23,352		-		
OR-2 White	28 420	£18,499	3.9%	8 020	£19,639	-0.1%
BME	4 790	£19,244		210	£19,616	
OR-1 White	-			1 420	£15,567	3.9%
BME	-			30	£16,201	

Within the Other Ranks (Lower), most pay gaps disappear when looking at individual ranks, apart from OR-6 in the Royal Navy, OR-2 and OR-3 in the Royal Marines, OR-2 in the Army and OR-1 in the RAF.

As stated above, no data on time in rank are available so it is not possible to adjust salaries to take this into account. Length of service can be used instead for those at the lowest ranks, (see section 3.3) however this leaves the RN OR-6 and Marine OR-3 categories. It is not possible to adjust their salaries so in line with EHRC guidance, these groups should be monitored at future points to check whether the gaps are persistent or systematic.

### 4.4a Adjusting for length of service among the Royal Marine OR-2s (Lower)

The pay gap for the Royal Marine OR-2s was 3.2% (BMEs earning on average 3.2% more than white personnel.) The ANCOVA analysis found that length of service was



significantly related to pay ( $F(1,3132) = 4543.5, p < .01$ ) and when taking length of service into account, ethnic background was not related to pay. The adjusted mean gap in salaries between white and BME personnel among the Royal Marine OR-2s was 1.1%.

#### *4.4b Adjusting for length of service among the Army OR-2s (Lower)*

The pay gap for the Army OR-2s was 3.9% (BMEs earning on average 3.9% more than white personnel.) The ANCOVA analysis found that length of service was significantly related to pay ( $F(1,33212) = 66321.8, p < .01$ ) but when taking length of service into account, ethnic background was found to be related to pay ( $F(1,33212) = 11.8, p < .01$ ). However the adjusted mean gap in salaries between white and BME personnel among the Army OR-2s was 0.4%, well within the 3% threshold.

#### *4.4c Adjusting for length of service among the Royal Air Force OR-1s (Lower)*

The pay gap for the Royal Air Force OR-1s was 3.9% (BMEs earning on average 3.9% more than white personnel.) The ANCOVA analysis found that length of service was significantly related to pay ( $F(1,1444) = 369.9, p < .01$ ) but when taking length of service into account, ethnic background was found to be related to pay ( $F(1,1444) = 4.8, p < .05$ ). However the adjusted mean gap in salaries between white and BME personnel among the RAF OR-1s was 3.8%.

## **SECTION 5 - Conclusion**

Observed pay gaps in the populations within the Armed Forces (e.g. Officers as a whole, Other Ranks as a whole, each Service, etc) can be explained by structural factors – men and women and white and BME personnel have different distributions among the rank structure, with a higher proportion of women and BMEs at the lower ends of the rank ranges and therefore earning less.

When taking rank and pay scale as indicators of people doing broadly equivalent work, the equal pay audit for 2010/11 has found no differences in the average salaries of male and female personnel in the Armed Forces which fall outside the 3 per cent margin, when adjusted for length of service.

The equal pay audit found a number of gaps of between 3 and 5 per cent when comparing the pay of white and BME personnel. There were no gaps of more than 5 per cent.

Due to data quality issues it was not possible to test for the effects on pay of seniority (time spent in rank) for all rank groups. However where such tests were performed (i.e. in the most junior ranks), the differences can be explained by the differences in the length of service. Seniority was found to be a significant contributory factor to any observed gaps.

When adjusting the salaries for length of service, most of the gaps were brought under the 3% threshold. There were two gaps remaining after adjustment. One was at the Royal Air Force rank of OR-1, where BME personnel were found to earn on average 3.8% more than their white counterparts. Another was in the Royal Navy rank of OR-2 where female personnel are paid on average 3.3% less than males. There was no obvious structural explanation for these and the gaps, along with the gaps present at ranks where adjustment is not possible, should be monitored.

## SECTION 6 - Appendices

### 6.1 NATO Rank codes and UK Service ranks

NATO Code	Royal Navy	Royal Marines	Army	Royal Air Force
<b>Officers</b>				
OF-10	Admiral of the Fleet	-	Field Marshal	Marshal of the RAF
OF-9	Admiral	General	General	Air Chief Marshal
OF-8	Vice Admiral	Lieutenant General	Lieutenant General	Air Marshal
OF-7	Rear Admiral	Major General	Major General	Air Vice-Marshal
OF-6	Commodore	Brigadier	Brigadier	Air Commodore
OF-5	Captain	Colonel	Colonel	Group Captain
OF-4	Commander	Lieutenant Colonel	Lieutenant Colonel	Wing Commander
OF-3	Lieutenant Commander	Major	Major	Squadron Leader
OF-2	Lieutenant	Captain	Captain	Flight Lieutenant
OF-1	Sub-Lieutenant	Lieutenant/2nd Lieutenant	Lieutenant/2nd Lieutenant	Flying Officer/Pilot Officer
OF(D)	Midshipman	-	Officer Designate	Officer Designate
<b>Other Ranks</b>				
OR-9	Warrant Officer Class 1	Warrant Officer Class 1	Warrant Officer Class 1	Warrant Officer
OR-8	Warrant Officer Class 2	Warrant Officer Class 2	Warrant Officer Class 2	-
OR-7	Chief Petty Officer	Colour Sergeant	Staff Sergeant	Flight Sergeant/ Chief Technician
OR-6	Petty Officer	Sergeant	Sergeant	Sergeant
OR-4	Leading Rate	Corporal	Corporal	Corporal
OR-3	-	Lance Corporal	Lance Corporal	Lance Corporal
OR-2	Able Rating	Marine	Private (Classes 1 to 3)	Junior Technician/ Leading Aircraftman/ Senior Aircraftman
OR-1	-	-	Private (Class 4)/Junior	Aircraftman

## 6.2 Links to relevant MOD statistical publications

UK Defence Statistics (compendium publication containing a wide range of statistics)

<http://www.dasa.mod.uk/applications/newWeb/www/index.php?page=48&pubType=1&thiscontent=10&PublishTime=09:30:00&date=2011-09-28&disText=2011&from=listing&topDate=2011-09-28>

Annual Manning Report (Analysis by rank and age)

<http://www.dasa.mod.uk/applications/newWeb/www/index.php?page=48&pubType=1&thiscontent=180&PublishTime=09:30:00&date=2011-05-26&disText=2011&from=listing&topDate=2011-05-26>

Quarterly Manning Report (Overall personnel statistics, details and trends of gender and ethnicity)

<http://www.dasa.mod.uk/index.php?pub=QMR>

Monthly Manning Report (Monthly snapshot of personnel statistics)

<http://www.dasa.mod.uk/index.php?pub=MMR>