Defence Statistics (Tri-Service)

Background Quality Report

for UK Armed Forces Personnel Statistics

This Background Quality Report (BQR) reports on the quality of all the Official Statistics, using UK Armed Forces personnel data and applications statistics, produced by Defence Statistics (Tri-Service).

This provides background information on our statistical outputs and indicates the level of quality of data used in our statistical outputs. Information is provided on the quality of the statistics used within our publications detailing the strengths, weaknesses and methods used.

Updated August 2015

Background Quality Report: *UK Full-time Armed Forces Statistics*

Introduction	*This section provides the context for the quality report.*
	Overview The Ministry of Defence publishes a wide range of Armed Forces personnel statistics. The main purpose of these statistics is; to inform policy and decision making within the Department, to measure the performance of the Ministry of Defence against Government and Parliament targets, and also to inform general debate in Government, Parliament and the wider public. These personnel statistics are primarily counts of the number of Service personnel in the Armed Forces (or 'strengths'), the number of personnel joining (intake) and numbers of personnel leaving (outflow) all of which are reported by various categories of interest and at differing levels of detail. 'Strength' counts are reported against requirement figures for the Trained UK Full-time Armed Forces, which enables surpluses and deficits to be calculated. This background quality report covers the primary military personnel statistics published on the Defence Statistics website on GOV.UK: gov.uk/government/organisations/ministry-of-defence/about/statistics The publications we produce which contain statistics on UK Full-time Armed Forces personnel are: **Service Personnel Statistics** (published monthly) **Diversity Statistics** (published biannually) **Location Statistics** (published quarterly) These reports are being introduced from mid-August 2015 following the outcome of the consultation on **Changes to MOD armed forces personnel statistics** which closed on 18 June 2015. The consultation document and response detailing the outcome can be found here: https://www.gov.uk/government/consultations/changes-to-mod-armed-forces-personnel-statistics Previous reports containing statistics on UK Full-time Armed Forces personnel, that have been replaced by the publications above following the outcome of the consultation are: UK Armed Forces Monthly Personnel Report (MPR) UK Armed Forces Quarterly Personnel Report (QPR) UK Armed Forces Annual Personnel Report (APR) UK Regular Forces Diversity Dashboard UK Defence Statistics Bulletin 2.01 (excluding reserve forces) UK Defence Statistics Bulletin 2.03 (excluding location, civilian and compensation statistics)

Prior to this, the MPR and QPR were introduced in 2009 to replace 5 Tri- Service publications (TSP 1 – TSP 5). The APR was introduced in 2011, to replace the following Tri- Service TSP 8, TSP 9 and TSP 10 publications.

These historic reports can be found on the archived Defence Statistics website on the National Archives site:
http://webarchive.nationalarchives.gov.uk/20140116142443/http://www.dasa.mod.uk/index.php/publications/

Methodology and Production

These statistics are primarily counts of strengths (numbers of personnel at the 1st of the month), intake and outflow of military personnel broken down into the following populations / characteristics of interest:

> Service (Royal Navy/Royal Marines, Army, and Royal Air Force)
> Officers and Other Ranks
> Gender
> Ethnic origin
> Training status
> Flow type and reason (exits by voluntary outflow and other reasons);
> Rank
> Age
> Religion
> Nationality

In addition to these categories, the Service Personnel Statistics reports military personnel by type of assignment, for example Regulars, Gurkhas, Military Provost Guard Service (MPGS), Locally Engaged Personnel (LEP), Volunteer Reserve, Serving Regular Reserve, and Sponsored Reserve. More background quality information on Reserves populations can be found in the report on Reserve Forces information:
https://www.gov.uk/government/statistics/uk-reserve-forces-and-mod-sponsored-cadets-strengths-background-quality-report

Personnel statistics are derived from the Department's **Joint Personnel Administration** (JPA) system, which is used for the administration of all Armed Forces personnel. Prior to the introduction of JPA in 2006/07, legacy single Service administration systems were used to produce statistics.

Extracts are taken from JPA each month and stored on a separate database to form a time series. The extracts are taken six calendar days after the end of the month and the situation as at the 1st of the month is calculated; this ensures most late-reporting is captured

The data goes through a series of automatic validation checks based on previous corrections. As a result of these checks, edits are made to the data to ensure the basic quality of the data and a series of derived fields are also calculated. A "flows" file is then created by comparing the current month's data to the previous month's data by low-level groupings and recording any changes in strengths.

The data is then made available to Defence Statistics' single Service manpower branches (Navy, Army, Air) where they undertake a wide range of validation checks and implement specialist editing rules using their expert knowledge and experience as well as data obtained from other sources within the Department.

Once the data is confirmed as being accurate the database is queried to produce the range of tables published. These tables undergo several rounds of checking and scrutiny to ensure the outputs are accurate and consistent.

Percentages are calculated from unrounded data and presented to one decimal place. Results are rounded to the nearest 10, though numbers ending in a "5" have been rounded to the nearest multiple of 20 to prevent the systematic bias caused by always rounding numbers upwards. For example; a value of '25' would be rounded down to '20' and a value of '15' would be rounded up to '20'.

Additionally, totals and sub-totals are rounded separately and so may not equal the sums of their rounded parts. This reflects the degree of confidence we have in the numbers and to ensure small numbers do not disclose information on individuals. Please see our rounding policy on the Defence Statistics policy page here: https://www.gov.uk/government/publications/defence-statistics-policies

Categories relating to religion and ethnicity, included in the Diversity Statistics publication, are **self-declared** by the individual on the Joint Personnel Administration (JPA) system. Nationality is presented as reported on JPA.

Contact details

The Defence Statistics (Tri-Service) Head of Branch is the Responsible Statistician for these statistics.

Contact details are:

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Relevance	*This section is about the degree to which the statistical product meets user needs in both coverage and content.*
	The principal stakeholders for Service personnel statistics are within the Chief of Defence Personnel area of the Ministry of Defence. The statistics are used to inform and measure Service personnel strategy in areas such as pay & allowances and equality & diversity. They are also used to answer parliamentary questions and Freedom of Information requests. The information is also used to inform the Defence Management Board performance report.

For detail on pre-release access to Defence Statistics publications please see the Defence Statistics pre-release access list webpage for the most up to date pre-release access list. https://www.gov.uk/government/statistics/defence-statistics-pre-release-access-list

People in the roles with access receive pre-release access to the publication up to 24 hours in advance of publication and an accompanying ministerial submission.

These statistics were originally developed in close consultation with stakeholders. The Quarterly, Monthly and Annual Personnel Reports and Bulletins were reviewed by the UK Statistics Authority (UKSA) in 2013 to ensure they met the requirements of a National Statistic. This review led to the inclusion of more commentary and where possible references to relevant policy to provide greater context to the figures reported.

The coverage of these statistics is close to, if not equal to, all Full-time Armed Forces personnel, Full-Time Reserve Service personnel and Gurkhas. The Service Personnel Statistics publication includes statistics on the Reserve Forces, more details of which are covered in in the report on Reserve Forces information. There are no known unmet user needs. |
| **Accuracy and Reliability** | *This section is about the differences between the estimates and the unknown true values.* |
| | All personnel in the Regular Armed Forces must be recorded on JPA in order for them to receive their pay. Therefore the overall strength figures are accurate. However, more detailed breakdowns relying on the information recorded for each individual can be less accurate due to variable quality of the data entered for these different fields.

The variation in quality is partly due to key information required for managing individuals being recorded and updated centrally, whereas other information is left to the individual to complete through a self-service tool. There is also a reasonable amount of late reporting which can adversely impact the statistics, particularly for exits and changes of individual's status from untrained to trained. Obtaining the extract on the sixth calendar day and then calculating the strength at the first of the month overcomes much of this late reporting. |

	The monthly datasets are passed through a range of automatic and manual validation and editing routines in order to make the key fields as accurate as possible, often drawing upon alternative data sources. A range of detailed breakdowns are produced and these are compared with previous month's outputs and discrepancies are examined. The detailed tables are used by the single Services (Navy, Army, RAF) to manage their personnel and inform policy and strategy. Regular feedback ensures Defence Statistics staff are kept abreast of any changes or potential issues with the data and statistics, which is fed into the data validation and editing process.
Timeliness and Punctuality	***This section reports on the time gap between publication and the reference period (timeliness) and the gap between planned and actual publication dates (punctuality).***
	The monthly extracts are taken on the sixth calendar day. The editing and production process usually takes under a month at the single Service level. It then takes a further two weeks to compile these data at a tri-Service level and publish as National Statistics in the Service Personnel Statistics publication.

Historic and planned publication dates can be found on the UK National Statistics Publication release list here:
https://www.gov.uk/government/statistics/announcements

There have been no delays to release dates since the introduction of the Joint Personnel Administration system in 2006-07. |
| **Accessibility and Clarity** | ***This section reports on: the ease with which users are able to access the data, the format in which the data are available, and the availability of supporting information (accessibility); and the quality and sufficiency of the metadata, illustrations and accompanying advice (clarity).*** |
| | Current publications consist of detailed Excel tables containing a historic time-series of statistics and a pdf report containing commentary, graphs and tables on trends in the statistics.

Previous Defence Statistics (Tri-Service) personnel reports are published on GOV.UK and are available as pdfs or Excel value copies. Other formats may be possible for Defence Statistics to produce on request.

All Defence Statistics (Tri-Service) publications can be found under the "Military" and "Combined military and civilian" sections under the "Personnel statistics" heading on the statistics by topic section of the MOD National and Official Statistics by topic webpage:
https://www.gov.uk/government/statistics/mod-national-and-official-statistics-by-topic

They can also be accessed via the Statistics release calendar on GOV.UK:
https://www.gov.uk/government/statistics/announcements

Copies of the reports are also placed in the House of Commons library.

The commentary in our reports identifies and analyses the key changes in the data and provide summary statistics and policy context. Graphs, tables and other data visualisation methods are used to further explain these trends. |

Coherence and Comparability	*This section examines: the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar (coherence); and the degree to which data can be compared over time and domain (comparability).*
	Defence Statistics published statistics on UK Armed Forces are the definitive personnel statistics in the MOD. There are no other publically available regular publications on the numbers of UK Armed Forces with which to ensure coherence. Within the MOD direct queries of the Joint Personnel Administration system will produce slightly different numbers due to timing and quality issues. The UK Armed Forces personnel statistics are not always directly comparable with other countries statistics due to definitional differences of what constitutes an Armed Force. In some countries, particularly in Europe, part of the domestic police force is included in the Armed Forces. Similarly, there are not always direct equivalents to the Royal Navy / Royal Marines, Army, and Royal Air Force in other countries. Annual editions of UK Defence Statistics compendium dating back to 1992, plus historic Tri-Service publications dating back to 2002, are available in the National Archives: http://webarchive.nationalarchives.gov.uk/20140116142443/http://www.dasa.mod.uk/index.php/publications/ The total number of Service personnel are comparable across time, however the breakdown of smaller categories are generally not comparable due to structural changes in the physical and financial structures of the MOD. The introduction of JPA in 2006/07 impacted on the availability of certain statistics, as some information (divorce rates for the RAF for instance) were available under the legacy system but not on JPA. This change led to a revision of what and how much can be published – for example some categories of outflow had to be combined.
Trade-offs between Output Quality Components	*This section reports the extent to which different aspects of quality are balanced against each other.*
	The main trade-off is between timeliness and quality. To ensure statistics are timely the editing and validation process is restricted to around two weeks and a significant amount of automatic editing is utilised. Spending more time investigating every suspect individual personnel record could marginally improve quality at a detailed trade/rank level but is unlikely to impact the aggregated statistics published in our reports.
Assessment of User Needs and Perceptions	*This section reports the processes for finding out about users and uses, and their views on the statistical products.*
	Defence Statistics (Tri-Service) frequently meets with customers within the Department to discuss data, results, interpretation and any changes to requirements. They also seek feedback from a wider range of internal and external customers.

We have made our own assessment of what these statistics could be used for using the categorisation in the UKSA paper *The Use Made of Statistics*.

We believe the statistics could be used as follows:-

    i. Informing the general public's choices:
        e. about the performance of government and public bodies
  ii. Government decision making about policies, and associated decisions about related programmes and projects:
        b. policy monitoring

The underlying data also allow for:

  ii. Government decision making about policies, and associated decisions about related programmes and projects:
        a. policy making
  vii. Facilitating academic research.

The MOD held a formal consultation on Changes to MOD armed forces personnel statistics which ran between 20 March to 16 April 2015 and 27 May to 18 June 2015. This was following an internal review of MOD tri-service publications content and sought further user views on proposed changes to publications. The consultation document and consultation response, detailing the outcome, can be found here:
https://www.gov.uk/government/consultations/changes-to-mod-armed-forces-personnel-statistics

In addition, there was a formal consultation for internal and external users on Defence Statistics Annual Manpower Publications between November 2010 and March 2011. Following this consultation DS received no feedback contrary to the proposals from external bodies regarding changes to the publications.

There was a formal consultation of both internal and external users in May 2009 over the proposal to replace the former Tri-Service publications 1-5 with the MPR and QPR and related issues. See Consultation on Reformatting the Armed Forces Statistics in the reports section of the Archived Defence Statistics webpage on for details.

Detailed information for these previous consultations can be found via the National Archives here:
http://webarchive.nationalarchives.gov.uk/20140116142443/http://www.dasa.mod.uk/index.php/policy_and_processes/consultations

Users are also encouraged to provide feedback on statistics produced by Defence Statistics and also to sign up to the mailing list for their publication of interest, to receive updates to the statistics or to be made aware of any changes:
DefStrat-Stat-Tri-Enquiries@mod.uk

Performance, Cost and Respondent Burden	*This section is about the effectiveness, efficiency and economy of the statistical output.*
	Defence Statistics has four branches dedicated to producing information relating to manpower and providing analysis and advice, the majority of time is spent on adding value through analysing, forecasting and answering ad-hoc enquiries as well as producing the National Statistics. There is very little respondent burden as the majority of the data is automatically obtained from administrative systems. However, this is supplemented with small amounts of data as well as input from other areas within the MOD.
Confidentiality, Transparency and Security	*This section is about the procedures and policy used to ensure sound confidentiality, security and transparent practices.*
	## Confidentiality All published outputs are counts of individuals in particular groupings. The outputs are rounded according to Defence Statistics' rounding policy, which reflects the degree of accuracy of the outputs and prevents disclosure of information on individuals. See the rounding policy on the Defence Statistics policies page here: https://www.gov.uk/government/publications/defence-statistics-policies ## Transparency The reports provide commentary on the key features of the outputs and identify any issues or caveats to the data. This quality report provides further information on the method, production process and quality of the output. ## Security All staff involved in the statistical production process adhere to all MOD, Civil Service and data protection regulations. The data is stored, accessed and analysed using the MOD's restricted network and IT systems, and access to raw data is password protected and approval for access is granted only by the Head of Personnel Statistics.

The Defence Statistics website can be accessed here:
https://www.gov.uk/government/organisations/ministry-of-defence/about/statistics

Updated: August 2015

Background Quality Report: *UK Reserve Forces Statistics*

Introduction	***This section provides the context for the quality report.***
	Overview
	Defence Statistics (DS) publishes a large range of Armed Forces personnel statistics, mainly to inform policy and decision making within the Department. The statistics are also used to measure performance against MOD, Government and Parliament targets and to inform general debate in government, parliament and the wider public. The statistics form part of that portfolio of service personnel and report on the UK Reserve Forces, including regular reserves, volunteer reserves, sponsored reserves and the University Service Units. They are counts of personnel numbers broken down by various categories.
	This background quality report covers the principal military personnel statistics published on the Statistics at MOD website on gov.uk: Statistics at MOD - Ministry of Defence - GOV.UK
	- Service Personnel Statistics (Reserve Forces Statistics) - TSP 7 UK Reserve Forces - Quarterly Personnel Report (Reserve Forces statistics)
	Methodology and Production
	The statistics are counts of military reserve personnel by a range of categories, including breakdowns by: Navy, Army and RAF; regular and volunteer reserves; officer and other ranks; trained and untrained. There are also counts of personnel leaving and joining certain parts of the reserve forces.
	The statistics are principally derived from the Department's Joint Personnel Administration (JPA) system, which is used for the administration of all Armed Forces personnel, supplemented by information from single Services' management systems and other centrally managed databases. Prior to the introduction of JPA in 2006/07, legacy single Service administration systems were used to produce the statistics.
	Extracts are taken from JPA each month and stored on separate databases to form a time series. The extracts are taken six calendar days after the end of the month and the situation as at the first of the month is calculated. This ensures most late-reporting is captured.
	Data goes through a series of automatic validation checks and edits to ensure the basic quality of the data and a series of derived fields are calculated.
	The data is then made available to DS' single Service manpower branches. They undertake a wide range of validation checks and implement specialist editing rules using their expert knowledge and experience as well as data obtained from other sources within the Department.
	Once the data is confirmed as being accurate the database is queried to produce the range of tables published. These tables undergo several layers of scrutiny to ensure the outputs are accurate and consistent. The results are generally rounded to the nearest 10 to be consistent with our other publications and to ensure small numbers do not disclose information on individuals.

Between 2007 and 2012, Naval Service volunteer reserve data were provided direct to DS Tri-Service by the unit responsible for administering those forces. In 2012 this database was closed and records were transferred on to JPA, however the JPA data were not considered robust enough in time for April 2012 publication and therefore the information was again sourced from the administration unit. Following work to assess the quality of the JPA data, the data processing and reporting methods were brought into line with those in the other Services (and other Defence Statistics personnel data.) As a result, Defence Statistics has been able to retain monthly extracts for statistical purposes since October 2012 and can now report from this source.

Contact details

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www.gov.uk/government/organisations/ministry-of-defence/about/statistics

We welcome feedback on this Background Quality Report or any of the statistics mentioned.

Relevance	***This section is about the degree to which the statistical product meets user needs in both coverage and content.***
	The principal customers for the Tri-Service publications are within the People area of the Ministry of Defence. They are used to inform and measure Service personnel strategy in areas such as pay & allowances and overall troop numbers, and in particular the Future Reserves 2020 Programme (FR20). This product is also used to answer parliamentary questions and Freedom of Information requests. The publications are also used to inform the monthly Defence Board Management Information.

From 2013, reserve strengths and FR20 population strengths and flows information were added to the Quarterly Personnel Report due to the increased attention on reserve personnel in the media and public.

In 2013 TSP7 was re-developed in consultation with internal users and suppliers to ensure that it reflected the correct force structures and therefore could be used to monitor the Department's progress against FR20. Information on the population most relevant to the FR20 key personnel targets was added – including the definition of that population and information on how many have completed training. In addition, a greater range of detail on reserve personnel was added, including age and ethnicity, to provide further background information on these forces to help inform policy.

From 2015 Reserves statistics are being reported on a monthly basis in the Service Personnel Report. This increase in frequency further reflects the increased public focus on the reserve forces. |

	Data availability is not complete for dates prior to April 2012, due to the necessary changes made to reflect modern force structures, and the fact that the Department has not retained some information (i.e. Naval Service reserves data and some ex-Regular reserves data), there is no possibility of restoring the whole time series.
Accuracy and Reliability	***This section is about the differences between the estimates and the unknown true values.***
	All personnel in the Regular Armed Forces must be recorded on JPA in order for them to receive their pay, and this is also the case for the vast majority of volunteer reserves. (Although for a small number this may not the case). There is anecdotal evidence that records can take some time to be updated, although the Department has committed resource to ensuring that JPA is brought and kept up to date in each of the three Services. The data on the overall numbers on volunteer reserves is therefore considered to be reasonably accurate.

The Department has devoted resource at various levels to improving the quality and coverage of volunteer reserves data on JPA over the previous few years. This work has resulted in greater confidence in the statistics published in this report, and in its expansion to include information that was not published before 2013 (e.g. Trained Status for volunteer reserves.)

Monthly datasets are passed through a range of automatic and manual validation and editing routines in order to make the key fields as accurate as possible, often drawing upon alternative data sources. However the JPA data for volunteer reservists requires varying amounts of post-hoc correction and amendment, including manual corrections which take some time to filter back into the system. This introduces some potential for error in the recording and reporting of reserve data, however processes are documented and personnel have good corporate knowledge. DS' dedicated reserve forces analysts have worked with producers to ensure that information is recorded and processed in line with agreed rules and definitions, and that data are retained and stored appropriately for statistical purposes. DS monitors data and outputs and will query apparent anomalies with producers.

There remain variations in quality which are partly due to differences in the recording of information - some key information is required for managing individuals, whereas other information is left to the individual to complete through a self-service tool. This is believed to be a particular problem for reservists, whose attendance at ongoing training is intermittent, and in many cases at locations where access to the system is difficult. This may impact the coverage of certain fields such as ethnic identity and nationality. DS monitors coverage in these fields and will only publish figures where coverage is above a certain threshold, generally 80%.

There is also a reasonable amount of late reporting which can adversely impact the statistics, especially for areas such as exits and changes to trained status. Obtaining the extract on the sixth calendar day and then calculating the strength at the first of the month overcomes some of this late reporting.

Another source of variation in data quality is the development and use of standalone systems (i.e. outside the JPA system), and manual recording of personnel data within some units particularly affecting the data between 2007 and 2012. For this reason, Naval Service Volunteer Reserve data up |

	to and including April 2012 are considered estimates and are likely to remain so as there is no alternative data source. During 2013, considerable effort was made to use JPA as the primary source of personnel management information with the result that all data for volunteer and regular reserve personnel are now primarily sourced from JPA.
Timeliness and Punctuality	***This section reports on the time gap between publication and the reference period (timeliness) and the gap between planned and actual publication dates (punctuality).***
	The monthly extracts are taken on the sixth calendar day. The editing and production process usually takes around 2 week at the single Service level. It then takes a further 2 weeks to compile these data at a tri-Service level. In addition we need to check and validate the manual feeders before we can publish as a National Statistic.

The following table provides an example of the timeline for 1 April 2015 Statistics.

Publication	Situation Date	Publication Date
Service Personnel Statistics	1 Apr 15	14 May 15

Historic and planned publication dates can be found on the Publication Release Dates section of the gov.uk Statistics at MOD webpage and on the UK National Statistics Publication Hub |
| **Accessibility and Clarity** | ***This section reports on the: ease with which users are able to access the data and the format in which the data are available and the availability of supporting information (accessibility); and the quality and sufficiency of the metadata, illustrations and accompanying advice (clarity).*** |
| | The reports are published on Statistics at MOD - Ministry of Defence - GOV.UK and are available as Excel spreadsheets or pdfs. They can be found by first following the "statistics by topic" link and then under the "Personnel statistics" heading. They can also be accessed via the UK National Statistics Publication Hub or through an internet search engine such as Google.

Service Personnel Statistics covers all the different types of reserves in the UK Reserve Forces. There is an overall commentary and graphs provided. The commentary identifies and analyses the key changes in the data and summary statistics. It discusses the quality of the underlying data and identifies specific issues and estimates their impact. Each table has a number of footnotes clarifying what is included/excluded, and provides appropriate caveats. Graphs are used to aid comparison of strengths and illustrate comparisons between the Services, and to ensure trends can be easily identified. In 2013, the commentary and metadata were updated and enhanced and a glossary added. |
| **Coherence and Comparability** | ***This section examines: the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar (coherence); and the degree to which data can be compared over time and domain (comparability).*** |

The DS statistics on UK Reserve Forces are the definitive personnel statistics in the MOD. Volunteer reserve statistics broken down by reserve type, trained status and officer / other rank are published monthly in the Service Personnel Report. There are no other publically available regular publications on the numbers of UK Reserve Forces with which to ensure coherence. Within the MOD direct queries of the Joint Personnel Administration system will produce markedly different numbers due to timing and quality issues.

The UK Reserve Forces personnel statistics are not always directly comparable with other countries' statistics due to definitional differences in what constitutes a Reserve Force.

Annual editions of UK Defence Statistics since 1992 and historic Tri-Service publications back to 2001 are available on Statistics at MOD - Ministry of Defence - GOV.UK by following the link to "archived statistics" The total number of Service personnel are comparable across time but the breakdowns are generally not comparable due to structural changes to the physical and financial structures of the MOD. The introduction of JPA across 2006/07 also impacted the statistics, reducing availability, accuracy and coverage due to a lack of investment in JPA for reserve personnel, as the Regular forces were prioritised. Work during 2012 and 13, as outlined above, resulted in changes to the statistics, both in data processing and definitions. DS has endeavoured to match historical data to the current definitions; where this has not been possible the tables are marked with a break in series.

Trade-offs between Output Quality Components	***This section reports the extent to which different aspects of quality are balanced against each other.***
	The main trade-off is between timeliness and quality. To ensure statistics are timely the editing and validation process is restricted to around three weeks. We do not have the resource to investigate further so we publish to a level that we feel is appropriate. Self-reported data are most often published as-is. Due to the nature of the reserve forces as outlined above, the data are unlikely to be as robust as that for their regular counterparts. For example, information on whether individuals are considered trained or not is wholly reliant on Unit Admins updating the relevant data in a correct and timely fashion. Great effort has been made by the Department to educate Unit Admin staff, however they are often volunteer reservists themselves and subject to time and access pressures. The information is published acknowledging that it may never be 100% accurate but it represents the best information available, and there has been considerable improvement since 2012.
Assessment of User Needs and Perceptions	***The section reports the processes for finding out about users and uses, and their views on the statistical products.***
	DS Tri-Service frequently meet with customers within the Department to discuss data, results, interpretation and any changes to requirements. They also seek feedback from a wider range of internal and external customers. A key use of these statistics is to allow the Department and the public to assess how the Department is progressing under FR20, which is a top level Departmental programme. We have made our own assessment of what these statistics could be used for using the categorisation in the UKSA paper *The Use Made of Statistics*.

	We believe the statistics could be used as follows:-
	
	    i. Informing the general public's choices:
	        e. about the performance of government and public bodies
	
	    ii. Government decision making about policies, and associated decisions about related programmes and projects:
	        b. policy monitoring
	
	The underlying data also allow for:
	
	    ii. Government decision making about policies, and associated decisions about related programmes and projects:
	        a. policy making
	
	    vii. Facilitating academic research.
	
	The Service Personnel Report should be used as the authoritative source of reserves strengths and flows statistics.

Performance, Cost and Respondent Burden	***This section is about the effectiveness, efficiency and economy of the statistical output.*** DS has four branches dedicated to producing information relating to personnel and providing analysis and advice. However, the majority of time is spent on adding value through analysing, forecasting and answering ad hoc queries rather than producing the National Statistics per se. Some of DS' other branches (there are approximately 15) provide support to the manpower branches. 3x FTE statistical officers (1 of which is Army-focused) are currently dedicated to producing and compiling reserve forces information. There is some respondent burden as not all data are automatically obtained from administrative systems.
Confidentiality, Transparency and Security	***This section is about the procedures and policy used to ensure sound confidentiality, security and transparent practices.*** **Security** All staff involved in the production process have signed the Data Protection Act; all MOD, Civil Service and data protection regulations are adhered to. The data is stored, accessed and analysed using the MOD's restricted network and IT systems, and the access to raw data is password protected. **Confidentiality** All published outputs are counts of individuals in particular groupings. The outputs are rounded according to DS' rounding policy, which reflects the degree of accuracy of the outputs and prevents disclosure of information on individuals. **Transparency** The Service Personnel Report provides commentary on the key features of the outputs and identifies any issues or caveats to the data. This quality report provides further information on the method, production process and quality of the output.

References

Reference	Website Location
Tri-Service Personnel 7 – UK Reserve Forces	https://www.gov.uk/government/collections/strength-of-the-uk-reserve-forces-index
Tri-Service Personnel Bulletin	https://www.gov.uk/government/collections/tri-service-personnel-bulletin-statistics-index
Quarterly Personnel Report	UK armed forces quarterly personnel report: index - GOV.UK
Publication Release Dates	https://www.gov.uk/government/statistics/announcements?utf8=%E2%9C%93&keywords=&topics%5B%5D=&organisations%5B%5D=ministry-of-defence&from_date=&to_date=&commit=Refresh+results
UK National Statistics Publication Hub	https://www.gov.uk/government/statistics/announcements

The Defence Statistics website can be accessed here:
https://www.gov.uk/government/organisations/ministry-of-defence/about/statistics

Updated: August 2015

Background Quality Report: *Armed Forces Application Statistics*

Introduction	***This section provides the context for the quality report.***
	Overview Defence Statistics (DS) publishes a large range of Armed Forces (AF) personnel statistics, mainly to inform policy and decision making within the Department. The statistics are also used to measure performance against MOD, Government and Parliament targets and to inform general debate in Government, Parliament and the wider public. This background quality report covers the Official Statistics specifically concerning the number of applications to serve in the AF received by each of the three Services. Application statistics are being published as Official Statistics for the first time as part of the 01 July 2015 Service Personnel Statistics publication, released on 13 August 2015. They will be published on a quarterly basis thereafter. **Methodology and Production** The statistics are counts of the number of applications to serve in the AF received by each of the three Services; providing a breakdown by Service, Regular and Volunteer Reserve Forces, and by Officer and Other Rank. The application is the first formal submission for scrutiny and it differs from "applicant" since an applicant may submit more than one application. It should be noted that, due to the differences in the recruitment application processes, the definition of an application is not directly aligned across the three Services and application numbers should not be aggregated to show AF totals. This will be discussed in more detail later in this section. Recruitment and training data is currently held on the Training Administration and Financial Management Information System (TAFMIS) suite of management information systems; Recruitment Harmonised Joint (TRHJ) is the application concerned with recruitment[1]. Record level data is provided on a quarterly basis to DS by the single Services' (sS) recruitment teams from TRHJ. These are stored separately from the live database to provide a time series of historical data. DS verifies, processes and collates the data into the format required for publication in accordance with UK Statistics Authority (UKSA) guidelines. TAFMIS is an administrative data source since the data it holds were not primarily collected with statistical purposes in mind. The National Statistician's Office (NSO) provides guiding principles around the use of administrative data for statistical purposes[2], with a particular focus on the statistician's role in assuring and communicating the quality of administrative data used to produce official statistics. The guidance aims to ensure the requirements of the Code of Practice for Official Statistics, and the expectations of users, are met. It references the requirements of Protocol 3 of the Code of Practice, which specifically addresses the use of administrative sources for statistical purposes. NSO guidance has been adhered to in the assessment of the data, and in subsequent work with data suppliers with regard to data validation. Further details regarding the work conducted can be found in the "Accuracy and Reliability" section below.

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[1] Recruiting Partnering Project (PRR) will deliver a Tri service recruiting MIS which will replace TRHJ.

[2] National Statistician's Office (2014). Using Administrative Data: Good Practice Guidance for Statisticians, https://gss.civilservice.gov.uk/wp-content/uploads/2012/12/Interim-Admin-Data-guidance.pdf

UK Statistics Authority (2009). (2012) Principles to guide the Statistics Authority's assessment of quality assurance practices relating to statistics produced from administrative data https://gss.civilservice.gov.uk/wp-content/uploads/2012/12/Admin-data-QA-principles.pdf

Due to the differences in the recruitment application processes, the three Services do not adopt the same definition of what constitutes an application, therefore sS numbers should not be aggregated to show total AF applications. The table below sets out the differences in the three Service's approach:

Service	Definition
RN /RM	An application equates to a candidate who has submitted an AF Career Office (AFCO) Form 4 and sat the Recruit Test (RT), whether this was passed or failed. Historically, electronic registrations have not been counted, however, since May 2014 an on-line version of the AFCO 4 application form was introduced and once submitted this is counted as an application.
Army	Processed and cleansed on-line applications, which represent the start of the eligibility phase of the recruiting process.
RAF	A gated application system is operated, whereby individuals whom register their interest with the Careers Information Line are sent a link to submit their application once branches / trades open their recruitment gateway. Submitted on-line and hard copy applications are counted.

Contact details
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We welcome feedback on this Background Quality Report or any of the statistics mentioned.

Relevance	***This section is about the degree to which the statistical product meets user needs in both coverage and content.***
	The Secretary of State (S of S) for Defence committed to publishing quarterly Volunteer Reserve Forces recruitment and retention figures on 25 February 2013. He reaffirmed his intent to inform Parliament on a quarterly basis of the strength and recruitment performance of the Volunteer Reserve Forces during the launch of the White Paper on 03 July 2013.

Frequently, Parliamentary Questions and requests made under the Freedom of Information Act, ask for recruitment information (including relevant statistics) pertaining to the Regular and Volunteer Reserve Forces. Additionally, there is currently a high level of media and public interest in recruitment, particularly in relation to the Volunteer Reserve Forces, following the announcement in July 2012 that the Army would fully integrate Regulars and Reserves within a whole force, consisting of circa 82,000 trained Regular personnel and 30,000 trained Reserves, for the first time. |

	The MOD Official Statistics Review, conducted during 2013/14, identified the need for the Department to release statistics on recruitment into the Regular and Volunteer Reserve Forces in a consistent, regular and controlled manner.

Principle customers for this information are far ranging. It is used to inform policy and measure strategic performance, they are of interest to the Department internally, the Government, and to the wider public.

The statistics have been developed in close consultation with the sS recruitment teams and the S of S for Defence to ensure they meet the requirements of both internal and external customers. They cover all applications to serve in the AF received by each of the three Services. |
| **Accuracy and Reliability** | ***This section is about the differences between the estimates and the unknown true values.***

Initially, three stages of recruitment were identified during the recruitment process and data scoping phase. These were: initial "contacts" made by individuals wishing to garner information about joining the AF; formal "applications" submitted to join the AF; and "potential entrants", whom have passed the selection criteria to join the AF, and have received an offer of employment.

Subsequently it was recognised that there is often no distinct contact step since candidates may go directly to the application stage, and applications submitted on-line cannot be linked back to a contact records. It is, therefore, not possible to identify a complete cohort of "contacts". Also information pertaining to a potential entrants is not generally collected by the sS. However, gathering applications data remained a feasible and appropriate recommendation, however.

The quality of application data was assessed in terms of fitness for purpose and whether the conditions required to be produced as Official Statistics were met.

Data are collected on TAFMIS to manage the recruitment and training of the AF. All new entrants are required to formally apply and complete various stages of the recruitment process, and TAFMIS is the live system which collates this information. The overall number of applications received is, therefore, judged to be fairly accurate, although in some circumstances manual input is required, and some time-lags are apparent.

Data is supplied by each of the sS using a standard reporting template. Those responsible for data entry into TAFMIS have to undergo relevant training as set out in the ARTD (2014) TAFMIS Training Policy. There are some data auditing processes and checks carried out by the sS, though it is noted that there are insufficient resources available for regular routine validation of the data at the record level and some known errors remain in the data. Some examples of the types of checks carried out by the sS include monitoring and checking of irregular trends where resources permit, and the removal of obviously erroneous entries. Recent cost and headcount reductions have reduced the number of clerical support staff in the training delivery organisations and there is an associated risk that this could have a detrimental affect on the quality of the data.

A reconciliation exercise has been conducted by DS to compare the TAFMIS data with the intake to untrained strength data held on the AF Joint Personnel Administration system. These data sources should not necessarily match since not all applications result in an intake to untrained strength, and not all intake to untrained strength are the result of such an |

| | application (for example, Officer intake comprises an element of promotions from the Other Ranks). Other differences identified appear to be the result of definitional differences or late reporting, and a reasonable match is achieved when the correct parameters are set and late reporting issues are considered.

At the macro level, the existence and potential for data errors is currently assessed as not having a disproportionate impact on the quality of the resulting statistics.

With regard to incentive and opportunity for distorting the data supplied; since TAFMIS is maintained for operational purposes, with the statistical use a secondary benefit; and the data is extracted directly from TAFMIS via management information interfaces, this is considered to be minimal.

Once the sS recruitment teams have applied their specialist knowledge to extract the data in accordance with their specific definitions of an application, DS independently processes and collates the data into the format required for publication in accordance with UKSA guidelines.

To avoid the inference of a spurious level of accuracy, to improve the clarity of the tabulated data, and to prevent the disclosure of personal information, the numbers presented are rounded to the nearest 10 in accordance with DS' rounding policy. |
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| **Timeliness and Punctuality** | ***This section reports on the time gap between publication and the reference period (timeliness) and the gap between planned and actual publication dates (punctuality).***

The sS provide record level data to DS on a quarterly basis, and as close to seven days after the end of the quarter as is practicable. Seven days provides an opportunity for late reporting to be captured. The verification, processing and collating exercise takes DS approximately two weeks to complete. The statistics are published in the Service Personnel Statistics publication at the quarterly points.

The following table provides release dates for the next three publications:

Publication	Data Extract Date	Publication Date
Service Personnel Statistics	Circa 7th October 2015	12th November 2015
Service Personnel Statistics	Circa 7th January 2016	11th February 2016
Service Personnel Statistics	Circa 7th April 2016	12th May 2016
Accessibility and Clarity	***This section reports on the: ease with which users are able to access the data and the format in which the data are available and the availability of supporting information (accessibility); and the quality and sufficiency of the metadata, illustrations and accompanying advice (clarity).***

The commentary reports are first published on 13th August 2015 and are available in pdf format; detailed tables of time series data in Excel format can be found via the same link. |

Coherence and Comparability	*This section examines: the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar (coherence); and the degree to which data can be compared over time and domain (comparability).*
	DS is the definitive source of UK AF statistics in the MOD. There are no other publically available regular publications on the numbers of applications to serve in the AF received by each of the three Services with which to ensure coherence.

Due to the differences in the recruitment application processes, the three Services do not adopt the same definition of what constitutes an application, therefore single Service numbers should not be aggregated to show total AF applications. Further details about the different definitions can be found in the "Methodology and Production" section above.

In addition, the number of applications received does not directly relate to the intake figures DS compiles since there is a time-lag between an application being received and an individual successfully being taken onto untrained strength. |
| **Trade-offs between Output Quality Components** | *This section reports the extent to which different aspects of quality are balanced against each other.* |
| | Trade-offs exist between timeliness and quality, plus resource constraints in the training delivery organisations mean it is not always possible to correct known data issues.

To ensure statistics are timely, the editing and validation process is restricted to around two weeks. Spending more time investigating every suspect individual personnel record could marginally improve quality at a detailed trade/rank level but is unlikely to impact the aggregated statistics published. |
| **Assessment of User Needs and Perceptions** | *The section reports the processes for finding out about users and uses, and their views on the statistical products.* |
| | DS frequently meets with customers within the Department to discuss data, results, interpretation and any changes to requirements. They also seek feedback from a wider range of internal and external customers.

Users are also encouraged to provide feedback on DS through the annual consultation meetings.

Due to the high-profile nature of application statistics, this information serves the need of the Department to have consistent, reliable Official Statistics on which to base its press releases and other queries.

We have made our own assessment of what these statistics could be used for using the categorisation in the UKSA paper *The Use Made of Statistics*. We believe the statistics could be used as follows:-

      i. Informing the general public's choices:
            e. about the performance of government and public bodies

      ii. Government decision making about policies, and associated decisions about related programmes and projects:
            b. policy monitoring

The underlying data also allow for: |

	ii. Government decision making about policies, and associated decisions about related programmes and projects: a. policy making vii. Facilitating academic research.
Performance, Cost and Respondent Burden	***This section is about the effectiveness, efficiency and economy of the statistical output.*** DS has four branches dedicated to producing information relating to AF personnel and providing analysis and advice. However, the majority of time is spent on adding value through analysing, forecasting and answering ad hoc requests for information rather than producing the Official Statistics. There is very little respondent burden since the data is automatically obtained from administrative systems. However, this is supplemented with small amounts of data and input from other areas within the MOD.
Confidentiality, Transparency and Security	***This section is about the procedures and policy used to ensure sound confidentiality, security and transparent practices.*** **Confidentiality** All published outputs are counts of individuals in particular groupings. The outputs are rounded according to Defence Statistics rounding policy, which reflects the degree of accuracy of the outputs and prevents disclosure of information on individuals. **Transparency** This quality report provides further information on the method, production process and quality of the output. **Security** All staff involved in the production process have signed the Data Protection Act; all MOD, Civil Service and data protection regulations are adhered to. The data is stored, accessed and analysed using the MOD's restricted network and IT systems, and the access to raw data is password protected.

The Defence Statistics website can be accessed here:
https://www.gov.uk/government/organisations/ministry-of-defence/about/statistics

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