



# Ministry of Defence

Ref: FOI2019/04420

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9 April 2019

[REDACTED]

Dear [REDACTED]

Thank you for your email of 8 April requesting the following information:

*"Please can I have copies of the Defence Air Safety Annual Reports produced by the Military Aviation Authority, since August 2014, the last one available on the website"*

I am treating your correspondence as a request for information under the Freedom of Information Act 2000 (FOIA).

A search for the information has now been completed within the Ministry of Defence, and I can confirm that some of the information in scope of your request is held.

The Military Aviation Authority (MAA) Air Safety Annual Report for Sep 2014 – Mar 2015 is available and can be found enclosed, but some of the information falls entirely within the scope of the absolute exemption provided for at Section 40 (Personal Data).

Section 40(2) has been applied to some of the information in order to protect personal information as governed by the Data Protection Act 1998. Section 40 is an absolute exemption and there is therefore no requirement to consider the public interest in making a decision to withhold the information.

This report covers the period Sep 2014 – Mar 2015; this was to align the production schedule with that of the Defence Safety Authority (DSA) which produces its Annual Assurance Report Apr – Mar, in line with standard Defence reporting convention.

Under Section 16 of the Act (Advice and Assistance) you may find it helpful to note that since the formation of the DSA on 1 Apr 2015 the MAA no longer produces a stand-alone Air Safety Annual Report. Instead, the MAA provides domain specific information to inform the compilation and content of the DSA Annual Assurance Reports which are pro-actively published via the Gov.uk website and can be found at the link below:-

<https://www.gov.uk/government/collections/dsa-annual-assurance-reports>

If you are not satisfied with this response or you wish to complain about any aspect of the handling of your request, then you should contact us in the first instance at the address above. If informal resolution is not possible and you are still dissatisfied then you may apply for an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail [CIO-FOI-IR@mod.uk](mailto:CIO-FOI-IR@mod.uk)). Please note that any request for an internal review must be made within 40 working days of the date on which the attempt to reach informal resolution has come to an end.

If you remain dissatisfied following an internal review, you may take your complaint to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal review process has been completed. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website, <http://www.ico.org.uk>.

Yours sincerely

DSA Secretariat

**DIRECTOR MILITARY AVIATION AUTHORITY  
DEFENCE AIR SAFETY ANNUAL REPORT - 1 SEP 14 TO 31 MAR 15**

**INTRODUCTION**

1. This report builds on the Military Aviation Authority (MAA) report that DG MAA wrote in Aug 14 and covers the period from then through to 31 Mar 15. The reduced reporting period reflects the requirement to align with the other Regulators across the Defence Safety Authority (DSA).
2. **Overall Assessment of the Defence Air Environment (DAE).** Whilst on a positive vector with much good work done, I can only provide Limited Assurance of Air Safety (AS) across the DAE. This is consistent with the assessment made previously by DG MAA, and is due to the strategic AS risks faced by the DAE and the significant challenge encountered by some elements of the Regulated Community (RC); although the picture remains mixed. Many areas have reached a maturity level where Substantial Assurance can be justified, but continuing shortfalls in Suitably Qualified and Experienced Personnel (SQEP), for example, have resulted in some organizations remaining on targeted or enhanced assurance regimes.
3. **Audit of the MAA.** As required by MAA Charter, in Nov 14 an MAA External Audit Panel (MEAP) assessment found the MAA to be an effective, fit for purpose Regulator. Key recommendations of the MEAP report are being considered and will influence the development of the MAA as part of the new DSA construct.

**STRATEGIC AIR SAFETY RISKS**

4. The DAE continues to face some key strategic risks, specifically SQEP shortfalls, Mid-Air Collision (MAC) and the Return to Contingency. I am aware of the potential increase to AS risk in other areas and maintain additional focus on the following issues: Certification, particularly new or novel technologies and platforms where legacy data is difficult to access, e.g. UK Rivet Joint; the risk of Controlled Flight Into Terrain (CFIT); and the cumulative effects of wider Defence change. Emerging AS risk themes under review include proliferation of civilian operated recreational Remotely Piloted Air Systems (RPAS), lack of embarked experience<sup>1</sup> amongst operators and the effective governance of Air Test and Evaluation (T&E). I also wish to review and understand better the capability and effectiveness of the 2<sup>nd</sup> Party Assurance activities being conducted by both Duty Holders (DH) and DH-Facing organizations, as well as reviewing any gap in AS cultures between these two facets of the RC. My view of the situation with the key strategic risks is as follows:

- a. **Suitably Qualified and Experienced Personnel Shortfall.** My previous reporting highlighted significant concerns in this area. Despite much activity from Chief of Material (Air) (CofM (Air)) and the Aviation Operating Duty Holders (ODH), the provision of SQEP across the DAE continues to cause much concern. The lack of SQEP is increasingly being noted across the operator community, for example with Qualified Helicopter Instructors, personnel in AS roles, as well as in the engineering arena. Recently, Air Officer Commanding No 22 (Training) Group elevated the provision of engineering SQEP in Defence Equipment & Support (DE&S) to his top risk. Against the backdrop of a national shortage of engineers and technicians, and compounded by a challenging age demographic<sup>2</sup>, this will be a very difficult problem to resolve and must remain a collective DAE focus. Given the likelihood of small annual improvements in SQEP provision in the round, I see addressing this challenge as more of a campaign than an in-year battle. As such, it is critical that all should understand where they are now in meeting their SQEP requirement, and review routinely progress against delivering their manning plan,

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<sup>1</sup> Risks associated with the operation of aircraft from Maritime Platforms.

<sup>2</sup> Defence Economic Paper on External Factors Affecting UK Armed Forces Engineers and Future Prospects dated 9 May 14, notes that the UK 16-24 year old population is falling and estimates that 25% of UK engineers will retire in the next 10 years.

in order to understand any shortcomings and to mitigate them accordingly. I am hopeful that the Chief of Defence Personnel's people and training strategy<sup>3</sup>, whilst yet to bear fruit, will lead to overall improvements in this area.

b. **Mid-Air Collision.** Aviation ODHs remain focused on the MAC risk and it features in the top 3 risks for all, with this position supported by the number of military reported airprox for 2014 exceeding those for 2013<sup>4</sup>. MAC remains a significant Risk to Life (RtL) and whilst there are no new trends, military airprox with civilian gliders have again been recorded with some regularity<sup>5</sup>. This is possibly due to the lack of conspicuity of most gliders, both visual and electronic, and the absence of other barriers such as effective communications. Following a well supported MAA MAC conference in Nov 14, DG MAA agreed<sup>6</sup> with the CAA to investigate collaboratively several themes in more depth. One theme was the issue surrounding the understanding and use of UK Flight Information Services by both military and civil crews, given their pre-eminence in UK Airprox Board reports<sup>7</sup>. I seek to break down some of the barriers that appear to make elements of the General Aviation community reluctant to engage with military Air Traffic Controllers and promote a more flexible use of certain segments of military airspace. This may also assist in reducing some of the funnelling effects that can occur if traffic routinely seeks to route around, rather than through, military controlled airspace. A by-product of this will also be an improvement in the situational awareness of both controllers and aircrew since more users will be operating on the same frequencies in the affected areas.

c. **Collision Avoidance Systems.** DG MAA wrote in Aug 14 that not fitting a collision avoidance system to Typhoon was, in his view, an unsustainable position. I continue to recommend this issue be pursued with haste and I note that ownership of the Typhoon Commercial Air Transport MAC risk is now held by the Chief of the Air Staff. As Senior Duty Holder for the RAF, he assesses this risk to be both tolerable and as low as reasonably practicable (ALARP), while recognizing the societal concern<sup>8</sup>. I note that the integration of a Traffic Collision Avoidance System on Tornado has encountered technical difficulties, with consequential delays to the Certification programme, although Initial Operating Capability is planned to be achieved in Apr 15. The MAA granted a Certification Waiver to allow the early introduction of a limited capability on safety grounds (Traffic Alert only initially) pending submission of the necessary evidence to allow full Certification.

d. **Return To Contingency.** Op HERRICK redeployment was well managed under PJHQ. As mindsets and training attitudes adapt to the post HERRICK era, the management of post operational normalization appears to be progressing effectively. Commanders at all levels must remain alive to any negative trends in the areas of operator errors, authorizations and supervision issues as these continue to present significant potential RtL as the RC transitions. At the same time DHs must now prepare for future operations as circumstances may conspire to test the RC in new conflict areas, where the appetite and tolerance of risk may be quite different from our recent experiences. I emphasize the importance of providing SQEP and ensuring the effective integration of AS in a coalition environment, as these are also enduring themes. Assistance in the rebuilding of a robust and resilient contingent capability remains a task for the MAA to support.

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<sup>3</sup> Chief of Defence Personnel's The Defence People and Training Strategy 2014 dated Sep 14.

<sup>4</sup> Total of 82 UK Military airprox in 2013 versus 94 in 2014.

<sup>5</sup> Accounting for 17.5% of all Airprox and 23% of Risk bearing Airprox over the reporting period summer months of 2014.

<sup>6</sup> MAA/Exec/DG/Comms/Armed Forces letter written by DG MAA to Director of the Safety and Airspace Regulation Group, CAA dated 28 Jan 15.

<sup>7</sup> Letter in the above footnote contained the wording "The 2013 UKAB report highlighted several causal themes related to ATC/aircrew interaction and of the 171 Airprox incidents examined, at least 10% were considered to be directly attributable to a lack of understanding, with many others citing a lack of understanding of responsibilities in general as an implied cause."

<sup>8</sup> CAS/16 Areas of Societal Concern within the RAF dated 21 Oct 14.

## VIEW OF THE REGULATED COMMUNITY

5. Whilst I believe DAE AS is on a positive vector, the picture remains mixed; some organizations have improved, some have regressed and others have not progressed as far as I would have expected. This suggests that cultures and behaviours are not consistent and that there is still much to do to establish performance at a consistent level.

6. **Operating Duty Holders.** The 5 ODHs continue to display a high degree of AS maturity, as evidenced by their strong safety leadership. Whilst an enhanced understanding of AS has improved the situation, across all the ODHs the provision of SQEP for AS roles continues to be a cause for concern and clearly diminishes their ability to mitigate risk. Given our collective focus on Return to Contingency, Assistant Chief of Naval Staff (Aviation & Carriers) (ACNS (A&C)) has identified lack of embarked experience amongst operators as his primary risk. This also features in Commander Joint Helicopter Command's (JHC) top level risks. ACNS (A&C) remains concerned, as do I, about the proliferation of civilian recreational RPAS that are operating in the same airspace as military users. ODHs are encouraging reporting of occurrences involving RPAS to highlight any trends and I will continue to monitor this issue. In other areas, the complex governance of Air T&E remains an area of ongoing work, as is the AS management of ISTAR platforms and, in particular, the route to regulatory compliance for the design safety argument of UK Rivet Joint. Secretary of State agreed an alternative approach to demonstrating this, and work is underway to develop the evidence of design safety necessary to support extending the Release to Service further. Overall the key condition for success is for ODHs to continue to be focused on RtL and to remain engaged in active mitigation to ensure that risks are at least tolerable and ALARP. To help further embed this risk management culture, the MAA recently introduced a bespoke risk management training course.

7. **Delivery Duty Holders (DDH)s.** MAA assurance visits continue to confirm that, in general, DDHs across the DAE have Air Safety Management Systems (ASMS) that are compliant with MAA Regulatory Publications (MRP) and that are becoming more effective as they mature. An improved understanding of the DDH collective risk picture has been achieved through engagement with their respective ODHs and DH-Facing organizations, resulting in more appropriate decisions being made, with more favourable outcomes; risk management for DDHs remains key. One area for improvement is the engagement between platform DDHs where more than one DDH exists for a given type (e.g. Hawk T1). Regarding the establishment and ongoing approval of Continuing Airworthiness Management Organizations (CAMOs)<sup>9</sup>, progress has been slower than expected in some areas, with some ODHs having to overcome a number of challenges, including SQEP manpower levels in particular within the quality roles (resulting on occasion in immature Quality Management Systems (QMS)). This was the case for some JHC CAMOs, where a low level of quality assurance maturity; brought about by the lack of SQEP resulted in the issue of an Advisory Letter. This has had the desired effect with additional resources being made available; albeit in part through the use of manpower substitution<sup>10</sup>.

8. **Duty Holder Facing Organizations.** Whilst much has been done, MAA assurance reports continue to comment on the lack of effectiveness of DH-Facing organizations' ASMS, coupled with organizational understanding and awareness of AS in general. There is continued dialogue between DH and DH-Facing organizations to understand their respective roles and constraints. With current resource levels any solutions will not be quick. For example, I am aware of a Corrective Action Requirement (CAR) (for fire training) at RAF Akrotiri that will remain open for the foreseeable future, as a fire training facility cannot be funded until 2021. If the gap in cultures between DH and DH-Facing organizations is to be reduced, we need to have confirmation that DH-Facing organizations

<sup>9</sup> The CAMO approval scheme comprises of 46 organizations. Of these, 30 have gained Sub Part G approval, whilst the remainder are undergoing an MAA assessment and are expected to gain approval by Aug 15.

<sup>10</sup> JHC/01/02/14 letter written by Comd JHC to DG MAA dated 5 Feb 15.

are developing appropriate AS awareness. I will make this an area of MAA focus in the coming year, to provide assurance that DH-Facing organizations are developing to an acceptable level. MAA engagement with Joint Forces Command (JFC) to progress Permanent Joint Operating Base Gibraltar's and British Forces South Atlantic Islands' AS related issues is such an example and this will be reviewed again in Jun 15. Two DH-Facing organizations merit specific mention:

a. **Defence Infrastructure Organisation (DIO).** An inaugural advisory visit was carried out in Dec 14 which noted that the DIO is currently some way from achieving a satisfactory level of compliance with MAA regulations. This I believe is caused mainly by under-resourcing which has slowed down decision-making, much to the frustration of the DHs that the DIO supports. To comply with the MRP, the DIO needs to identify appropriate people who support aviation activity, and instil an AS culture whereby individual and organizational roles and responsibilities are understood. To improve the position, closer engagement is required between DHs and Infrastructure Managers. This situation is recognized by the DIO Senior Leadership Team and I will work with the Chief Executive of the DIO to ensure that AS is well embedded within their organizational culture.

b. **Defence Equipment & Support.** SQEP shortages within the DE&S are well known. Recent MAA audits have noted examples of where the DE&S has had difficulty in matching resources to task, resulting inevitably in Industry outsourcing. Prioritizing resources remains a challenge whilst a number of incentives to improve the overall SQEP position have yet to deliver fully. Gaps at the Band C level create a large backlog of routine work, directly impacting DH risk management, with an example being the slow progress made by UKMFTS PT against its "Get Well Plan"; although improvement has been achieved the Warning Notice issued in Mar 14 remains in force. I do encourage early engagement between DE&S Project Teams and their respective DHs to improve safety management. I also note that the CoFM (Air) strategic challenge initiatives should lead to AS improvements. DG MAA commented in his Aug 14 report on the number of organizations that are still required to comply contractually with military regulations that pre-date the issue of the MRP, although audit evidence now suggests that this number is reducing because of the effort applied by DE&S. I am particularly heartened that the Long Term Partnering Agreement between the MOD and QinetiQ has been amended to require MRP compliance. I understand the introduction of a Recruitment and Retention Allowance (RRA) for DE&S personnel in air domain safety critical posts has been approved. I am, however, concerned about the detrimental effect this might have on the MAA's ability to recruit and retain civilian staff and I am engaged in work with HO&CS to gain approval for a similar RRA to be applied to the MAA.

9. **Industry.** Our relationship with Industry continues to develop positively. That said, certain MAA approved contractor flying, design and maintenance organizations remain on enhanced or targeted assurance regimes. MAA audits are raising CARs demonstrating shortcomings in Industry Safety Management Systems (SMS) and QMS. Analysis of the supporting evidence suggests that a trend is developing and I encourage Industry to focus on this worrying area over coming months, allocating the appropriate resources to ensure timely closure of CARs. By way of an example, one company is currently on a targeted assurance regime following a number of findings and unsatisfactory performance in closing corrective actions.

10. **Number of Sanctions.** Over the period 1 Apr 14 to 31 Mar 15 the MAA has issued 2 Warning Notices and 2 Advisory Letters. Lack of CAMO resources and ineffective SMS/QMS were mentioned, providing further supporting evidence of the need for all, where appropriate, to focus on these topics.

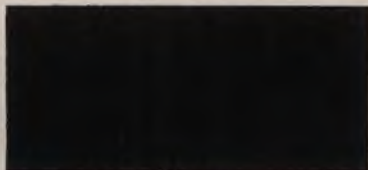
## WAY FORWARD

11. **The DAE.** I reiterate that the DAE has made much progress towards improving AS. The DH organizations continue to mature and we are seeing excellent examples of risk management. The focus for this next year is for all to improve against SQEP shortfalls, continue to embed AS cultures and to improve 2<sup>nd</sup> Party DAE assurance; key conditions for success remain increased dialogue and transparency. Encouragingly I note a healthy reporting culture with over 1000 DASORs<sup>11</sup> per month now being received, including an increasing number of hazard observations which I believe is an indication of rising maturity levels. The next step is for all to consider how data can be shared, analysed and exploited more effectively, both internally and externally. Improved identification of causal and contributory factors is fundamental in the proactive management of AS.

12. **The MAA.** Human Factors remains the principal causal factor in aviation accidents. Recently the MAA reviewed and re-issued AS Training regulation and continues to develop this area through engagement with both the RC and Industry/academic subject matter experts. The focus this year will be on the implementation of key MEAP 14 recommendations, maintaining outputs to the RC, while also contributing to DSA maturity. Some MEAP recommendations require deeper consideration, such as enhancing the processes for the evaluation of Regulatory actions, while others are being worked on now, such as enhancing the focus on strategic planning. The MAA must continue to demonstrate its value to Defence through engagement with key stakeholders. An example is international engagement and mutual recognition of national military airworthiness authorities, with the associated potential benefits in terms of reduced cost and time for a variety of equipment procurements. Internal manning is a risk for all, including the MAA, with the potential loss of SQEP to organizations that offer better terms and conditions, specifically a RRA. Areas identified for future MAA activity and focus include the governance of T&E and the review of DAE 2<sup>nd</sup> Party Assurance, noting the MAA's intent to maximise its 3<sup>rd</sup> Party assurance and oversight resources. Pleasingly, the RC, both military and contractor, is now realising the benefits afforded through independent 3<sup>rd</sup> Party oversight and assurance by the MAA. Finally I commend the recently delivered MAA risk course, helping to standardise risk management; a critical condition for the DAE's continuing success.

## SUMMARY

13. In the period covered by this report, and following on from DG MAA's assessment previously, I can only give Limited Assurance of AS, due in the main to SQEP shortfalls across the DAE. I remain of the opinion that AS is on a positive vector, but the picture is mixed and AS culture is still not yet consistent. As understanding builds, the DH risk picture is becoming clearer and my focus is now shifting to ensuring that DH-Facing organizations continue to develop their AS behaviours to an appropriate level. My overall view is that the RC, supported and regulated by the MAA, continues to make Defence aviation safer, undoubtedly reducing RtL. The inclusion of the MAA within the DSA should see minimal changes, with all staff remaining focused on maintaining outputs and the enhancement of the delivery of operational capability. The formation of the DSA also affords the opportunity to take a more joined up approach towards regulation and assurance, providing the ability to share good practice across the Regulators.



P A Atherton  
Air Vice-Marshal  
Director Military Aviation Authority

<sup>11</sup> 13,186 Defence Aviation Safety Occurrence Reports (DASOR)s raised in 2014 with 11,862 raised in 2013.