

► This RA has been substantially re-written; for clarity no change marks are presented – please read RA in its entirety ◀

## RA 1160 - The Defence Air Environment Operating Framework

### Rationale

*To provide Defence with the required flexibility over how capabilities are both procured and employed, Air Systems that qualify for military registration may be Military or Civilian-Owned and may be operated under an Aviation Duty Holder (ADH) / Accountable Manager (Military Flying) (AM(MF))<sup>1</sup>. Additionally, an Air System that is not being operated in MOD Interest, but has the wider interest of the UK Government, may be granted UK military registration. Without a clear understanding of the correct governance framework, there is a Risk that key responsibilities may be diluted or neglected entirely, with the result that the Risks associated with operation of the Air System are not adequately managed. This RA introduces a coherent and consistent operating framework which ensures that similar aviation activities within the Defence Air Environment (DAE) that result in a similar level of Risk exposure, attract the same level of Assurance and scrutiny, regardless of who owns or operates the Air System. All activities within the DAE will be assigned to an Operating Category which will define who is responsible for the execution and Assurance of key functions including, Risk to Life (RtL) management, Continuing Airworthiness (CAw) and flight operations, as well as the balance of accountability between the MOD and the Contractor for Type Airworthiness (TAw).*

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### Definitions

#### Definitions Relevant to this RA

1. **In-Service.** Activity related to a UK military registered Air System where the Air System itself and all Role Equipment and / or Equipment Not Basic to the Air System (ENBAS) are being used to deliver the capability for which they were intended, be that training or operations. This includes supporting activity, such as post-Maintenance test flying or crew training.
2. **Development.** Activity related to a UK military registered Air System where the Air System itself or any Role Equipment and / or ENBAS is being trialled, tested, evaluated or assessed. This may be for: Certification, flight clearance or other Safety evidence-gathering; post-production testing; or for experimentation, innovation or research purposes. Development activity may include essential enabling functions that directly support the trial activity itself, such as test crew training or positioning flights.
3. **DAE Operating Categories.** The DAE Operating Categories are defined as:
  - a. **Military Operated (Development).** All UK military registered Development Air Systems operated under an ADH. The operation of Development Air Systems by the Air and Space Warfare Centre or 700X NAS are examples which fall into this DAE Operating Category.
  - b. **Military Operated (In-Service).** All UK military registered In-Service Air Systems operated under an ADH. Activities undertaken by military front line units or training organizations utilizing In-Service Air Systems fall into this DAE Operating Category.
  - c. **Civilian Operated (Development).** All UK military registered Development Air Systems operated under an AM(MF)<sup>2</sup> in MOD Interest.

<sup>1</sup> The Remotely Piloted Air System (RPAS) Risk management construct varies dependent on which RPAS sub-category the RPAS is operating in; Refer to the RA 1600 Series – Remotely Piloted Air Systems.

<sup>2</sup> Refer to RA 1028 – Contractor Flying Approved Organization Scheme.

**Definitions**

Activities associated with Air Systems which are in production for the MOD by industry, or transferred to industry for Modification, will fall into this DAE Operating Category.

d. **Civilian Operated (In-Service).** All UK military registered In-Service Air Systems operated under an AM(MF)<sup>2</sup> in MOD Interest. Activities undertaken by Contractor Flying Approved Organization Scheme (CFAOS) organizations in MOD Interest, including post-Maintenance test flying of MOD Air Systems, provision of training for MOD Aircrew or the transport of MOD personnel or equipment are examples which fall into this DAE Operating Category.

e. **Special Case Flying.** All UK military registered Air Systems operated under an AM(MF)<sup>2</sup> which are not being operated in MOD Interest, but the activity is deemed in the interests of the wider UK Government. Special Case Flying may encompass both Development and In-Service activity. Air Systems destined for military export or being used to deliver a service to a third-party customer are examples which fall into this DAE Operating Category.

4. **MOD Interest.** An activity on a UK military registered Air System is defined as being operated in MOD Interest when any one of the following criteria is satisfied:

- a. There is a direct contract in place between the MOD and the Operator of the Aircraft for the provision of the activity.
- b. MOD personnel are required to fly on or fly the Air System, as either Aircrew, RPAS operators, Supernumerary Crew, Supernumerary Support Crew, or Passengers, in order to achieve the output from the activity.
- c. The MOD is liable for any losses associated with operation of the Air System whilst conducting the activity (including indemnification to sub-Contractors).
- d. The Air System is owned by the MOD.

Where an activity on a UK military registered Air System does not satisfy any of the above criteria, the activity is defined as not being in MOD Interest.

5. **Direct Contract.** The criteria specified at Para 4.a relates to a direct contract between the MOD and the Operator for the provision of the activity itself (ie the MOD requires the capability delivered by the operation of the Air System); this does not relate to arrangements whereby the operation of the Air System is inconsequential to the MOD, but there is a contract in place for the provision of some enablers by the MOD to the Contractor (eg use of MOD facilities, provision of fuel, documentation etc).

6. **MOD Personnel.** The criteria specified at Para 4.b relates to situations where MOD personnel are required to fly an Air System, to fly on the Air System or operate the Air System either as part of the operating crew to deliver the required capability, or to receive the service being provided (eg training or transportation); this does not include bespoke arrangement for MOD personnel to fly on 'one-off' flights, for example to allow the Contractor to demonstrate a capability to the MOD, or for the Contractor to utilize MOD instructors / Standards Evaluation personnel as part of their Assurance activity. Whilst the MOD retains a duty of care for its personnel, such 'one-off' flights would not make the whole operation subject to MOD Interest.

**Applicability****Applicability of this RA**

7. This RA applies to all Air Systems operating, and intending to operate, within the DAE.

**Regulation  
1160(1)****Defence Air Environment Operating Categories**

1160(1) ADHs, and Sponsors of Civilian-Owned Air Systems or Civilian Operated Air Systems, **shall** assign the Air Systems within their Area of Responsibility to appropriate Operating Category / Categories.

**Acceptable  
Means of  
Compliance  
1160(1)**

**Defence Air Environment Operating Categories**

8. ADHs, and Sponsors<sup>3</sup> of Civilian-Owned Air Systems or Civilian Operated Air Systems, **should** assign the operation of each Air System into the appropriate DAE Operating Category / Categories:

- a. Military Operated (Development).
- b. Military Operated (In-Service).
- c. Civilian Operated (Development).
- d. Civilian Operated (In-Service).
- e. Special Case Flying.

**Guidance  
Material  
1160(1)**

**Defence Air Environment Operating Categories**

9. The five DAE Operating Categories are summarised at Figure A-1 at Annex A.

10. The Air Safety governance arrangements as defined for a specific DAE Operating Category determine how the management of RtL, TAw, CAw and flight operations are to be discharged and assured. The key responsibilities for the ensurance and Assurance of these functions are summarised within Table A-1 at Annex A. Explicit responsibilities for Civilian Operated (Development) and (In-Service) Air Systems are detailed within RA 1162<sup>4</sup>. Explicit responsibilities for Special Case Flying are detailed within RA 1163<sup>5</sup>. There is no bespoke RA for Military Operated Air Systems as the ADH's responsibilities for Air Safety Governance are as defined within the MAA Regulatory Publications (MRP). The structure of the RA 1160 series, and how the RAs apply to the DAE Operating Categories, is depicted in Figure B-1 at Annex B.

11. The transfer of Air Systems between DAE Operating Categories may require formal transfer of Air Safety management arrangements as detailed in RA 1164<sup>6, 7</sup>.

12. It may be possible for an Air System to operate across multiple DAE Operating Categories (eg a Civilian Operated Air System delivering to a Special Case Flying contract during one series of flights and then to a Civilian Operated (In-Service) contract during another series of flights). For further advice and guidance, the MAA can be consulted<sup>8</sup>.

13. Throughout this RA and the wider MRP, references are made to Air Systems that are Civilian-Owned and / or Civilian Operated. For clarity, the phraseology below is used to denote which combinations of ownership and operation apply to any given regulatory requirement:

- a. **Civilian-Owned Civilian Operated Air Systems.** Air Systems that meet both criteria of being Civilian-Owned Civilian Operated. This includes Special Case Flying.
- b. **Civilian-Owned Air Systems or Civilian Operated Air Systems.** Air Systems that meet either criteria of being Civilian-Owned or Civilian Operated. This includes Special Case Flying.
- c. **Civilian-Owned Civilian Operated (Development) or (In-Service) Air Systems.** Air Systems that meet both criteria of being Civilian-Owned Civilian Operated, but not Special Case Flying.

<sup>3</sup> Refer to RA 1019 – Sponsor of Military Registered Civilian-Owned Air Systems or Civilian Operated Air Systems - Air Safety Responsibilities.

<sup>4</sup> Refer to RA 1162 – Air Safety Governance Arrangements for Civilian Operated (Development) and (In-Service) Air Systems.

<sup>5</sup> Refer to RA 1163 – Air Safety Governance Arrangements for Special Case Flying Air Systems.

<sup>6</sup> Refer to RA 1164 – Transfer of UK Military Registered Air Systems.

<sup>7</sup> Open Category and Specific S1 sub-category RPAS are required to apply the Air Safety intent of RA 1164.

<sup>8</sup> Via [DSA-MAA-MRPEnquiries@mod.gov.uk](mailto:DSA-MAA-MRPEnquiries@mod.gov.uk).

**Guidance  
Material  
1160(1)**

- d. **Civilian-Owned Air Systems or Civilian Operated (Development) or (In-Service) Air Systems.** Air Systems that meet either criteria of being Civilian-Owned or Civilian Operated, but not Special Case Flying.

**Regulation  
1160(2)**

**Responsibilities of the Sponsor of Civilian-Owned Air Systems or Civilian Operated Military Registered Air Systems**

- 1160(2) Withdrawn – Incorporated into RA 1019, RA 1162, and RA 1163.

**Acceptable  
Means of  
Compliance  
1160(2)**

**Responsibilities of the Sponsor of Civilian-Owned Air Systems or Civilian Operated Military Registered Air Systems**

14. Withdrawn – Incorporated into RA 1019, RA 1162, and RA 1163.

**Guidance  
Material  
1160(2)**

**Responsibilities of the Sponsor of Civilian-Owned Air Systems or Civilian Operated Military Registered Air Systems**

15. Withdrawn – Incorporated into RA 1019, RA 1162, and RA 1163.

**Regulation  
1160(3)**

**Certificate of Usage**

- 1160(3) For all UK Military Registered Civilian-Owned Air Systems the Sponsor **shall** ensure there is a valid Certificate of Usage (CofU).

**Acceptable  
Means of  
Compliance  
1160(3)**

**Certificate of Usage**

16. The CofU **should** be based upon the template hosted on the MAA's website.
17. The CofU **should** be produced by the Sponsor, on acceptance of the applicant's Application for Approval in Principle (AAiP)<sup>9</sup>, and **should** state the following:
- a. The designated type and mark of the Air System.
  - b. The unique serial number of the specific airframe(s).
  - c. The agreed DAE Operating Category / Categories that the Air System is to be operated within.
  - d. A description of the proposed scope of activity to be conducted.
  - e. A description of the proposed ownership and management of RtL, Operations, TAw and CAw.
  - f. The agreed RPAS operating category (where applicable).
18. The CofU **should** only be signed by the Sponsor when they are satisfied that the proposed Air Safety governance arrangements for the Air System are appropriate for the intended DAE Operating Category / Categories.
19. The Sponsor **should** present the CofU to the MAA<sup>10</sup> for review under the following circumstances:
- a. When applying for UK military registration accompanying the AAiP.
  - b. When requesting activation of the Air System on the UK MAR.

<sup>9</sup> Refer to RA 1161 – Military Registration of Aircraft Operating within the Defence Air Environment.

<sup>10</sup> Via [DSA-MAA-OpAssure-MAR@mod.gov.uk](mailto:DSA-MAA-OpAssure-MAR@mod.gov.uk).

**Acceptable  
Means of  
Compliance  
1160(3)**

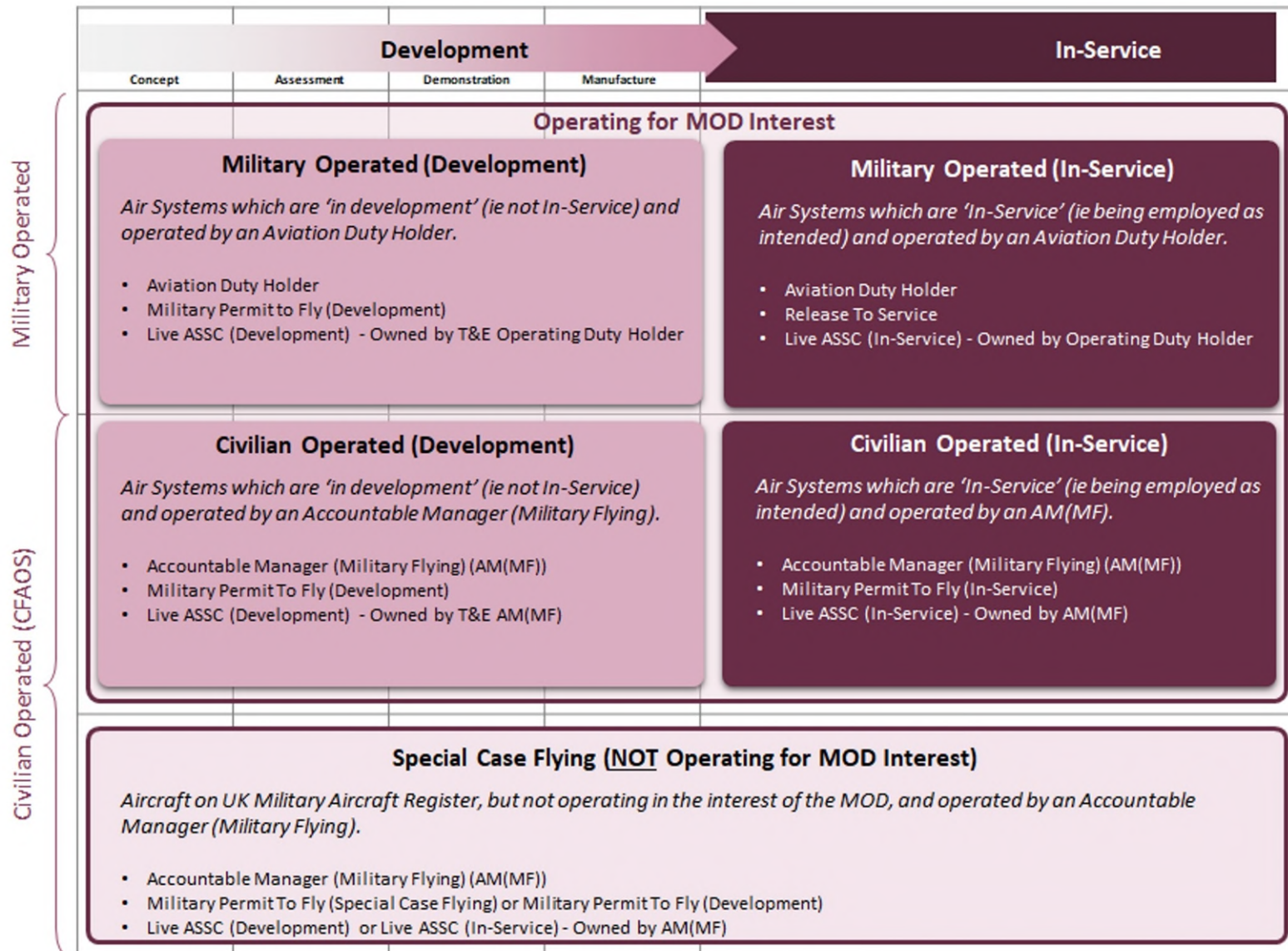
20. The Sponsor **should**:
- a. Conduct regular reviews of the CofU to confirm that the scope of operation remains appropriate for UK military registration and confirm that the Air Safety governance arrangements for that Air System remain appropriate as defined by the agreed DAE Operating Category.
  - b. Revoke the CofU if not satisfied with the Air Safety governance arrangements for that Air System as defined by the agreed DAE Operating Category / Categories.
  - c. Inform the MAA<sup>10</sup> immediately when the CofU is revoked or withdrawn for any reason.
  - d. Inform the MAA<sup>10</sup> immediately when the CofU is changed as a result of governance arrangements and / or DAE Operating Categories changing.
  - e. Forward amended CofU documentation to the MAA<sup>10</sup>.

**Guidance  
Material  
1160(3)****Certificate of Usage**

21. The Air Navigation Order (ANO) requires that the military status of Military Registered Civilian-Owned Air Systems is recognized by the issue of a certificate signed on behalf of the Secretary of State (SofS); this is the CofU.
22. The CofU is signed on behalf of the SofS by the Sponsor and serves to legally declare that the operation of the Air System does not have to comply with the ANO. Whilst the CofU will bound the type of activity for which military registration is deemed appropriate by the Sponsor, the CofU will not be used as a TAW release document or to articulate specific flight limitations; these will be contained within either the Release To Service (RTS) or Military Permit To Fly (MPTF) (In-Service), MPTF (Development) or MPTF (Special Case Flying) as appropriate. As such, the application for, and signature of, a CofU for military registration of a Civilian-Owned Air System will occur at the start of the registration process and will be included in the AAiP<sup>9</sup>.
23. When submitted as part of the AAiP, the CofU will reference the former civilian or non-UK military registration number, or the Manufacturer's Serial Number. Once a provisional UK military registration tail number has been allocated to the airframe the CofU will reference this tail number.
24. The CofU can refer to more than one airframe of an Air System type, providing that the scope of activity, DAE Operating Category, and Air Safety governance arrangements are common for all airframes to which the CofU refers.

Annex A

Figure A-1: The Defence Air Environment Operating Framework



**Table A-1: Defence Air Environment Operating Categories – Key responsibilities**

Operating Category	ASSC and RtL Management	TAW Management	CAW Management	Flight Release and Limitations Document
<b>Military Operated (Development)</b>	An <b>ADH</b> chain will be responsible for managing the RtL associated with the activity, with the ODH required to own and manage a Live ASSC for T&E flying.	The Type Airworthiness Authority (TAA) will be fully accountable for ensuring TAW.	<b>Delivery Duty Holder (DDH) through Military Continuing Airworthiness Manager (Mil CAM)</b>  The DDH is accountable for ensuring that CAW is managed by a MAA approved Military Continuing Airworthiness Management Organization (Mil CAMO).	<b>MPTF (Development) / RTS<sup>11</sup></b> Flights will be conducted iaw a MPTF (Development), which will be signed by the Operator, Design Organization (DO) <sup>12</sup> and the TAA (or privileged DO).
<b>Military Operated (In-Service)</b>	An <b>ADH</b> chain will be responsible for managing the RtL associated with the activity, with the ODH required to own and manage a Live ASSC for the In-Service flying.			<b>RTS</b> Flights will be conducted iaw an RTS.
<b>Civilian Operated (Development)</b>	The <b>AM(MF)</b> will be responsible for managing the RtL associated with the activity and will be required to own and manage a Live ASSC for the T&E flying.	<b>UK MOD-Owned Air Systems.</b> The TAA will be fully accountable for ensuring TAW. <b>Not UK MOD-Owned Air Systems.</b> Dependent upon the Sponsor's chosen TAW management model, either a: 1. TAA is fully accountable for ensuring TAW or, 2. TAA and Type Airworthiness Manager (TAM) share Accountability for ensuring TAW; a. The TAA is, as a minimum, accountable for the mandated non-delegable TAW responsibilities, alongside a; b. MAA approved DO with a TAW management supplement and a nominated TAM, who is accountable for ensuring the remaining TAW responsibilities.	<b>AM(MF) through Mil CAM</b> The AM(MF) is accountable for ensuring that CAW is managed by a MAA approved Mil CAMO.	<b>MPTF (Development)<sup>13</sup></b> Flights will be conducted iaw a MPTF (Development), which will be signed by the, Operator, TAA / TAM (or privileged DO).
<b>Civilian Operated (In-Service)</b>	The <b>AM(MF)</b> will be responsible for managing the RtL associated with the activity and will be required to own and manage a Live ASSC for the In-Service flying.			<b>MPTF (In-Service)<sup>14</sup></b> Flights will be conducted iaw a MPTF (In-Service), which will be signed by the, Operator, TAA / TAM, and the Sponsor as a final signatory.
<b>Special Case Flying</b>	The <b>AM(MF)</b> will be responsible for managing the RtL associated with the activity and will be required to own and manage a Live ASSC for either the T&E or In-Service flying as appropriate.			An <b>MAA approved DO</b> , with a TAW Management Supplement and a nominated TAM, will be accountable for TAW.

<sup>11</sup> This could be conducted using an RTS iaw RA 5880 – Military Permit to Fly (Development) (MRP Part 21 Subpart P).

<sup>12</sup> Where the term Design Organization (DO) is used this can be read as DO, Co-ordinating Design Organization (CDO) or Air System CDO as appropriate.

<sup>13</sup> This could be conducted using an MPTF (In-Service) iaw RA 5880.

<sup>14</sup> A Civilian Operated (In-Service) Air System on temporary Allotment may be operated under an RTS when specifically approved iaw RA 1164.

Annex B

Figure B-1: RA 1160 Series structure, superimposed on the framework of Defence Air Environment Operating Categories (See Annex A)

