

## Response to CAP 553 Consultation

This response is made by the British Microlight Aircraft Association (BMAA)

The BMAA is a membership association formed to represent the interests of microlight pilots throughout the UK. The association has over 3800 members flying over 1600 regulated microlights operating on a Permit to Fly.

The BMAA was the first organisation to hold an A8-26 approval, issued in 2015, replacing its previous approvals held since the early 1980s.

In addition to the comments made in this portion of text we have commented on individual paragraphs in the later part of this document.

### **Authorisation and experience of airworthiness staff (A3-7 Para 11.5) (A8-26 Paras 2.2.6, 10.2.6, Appendix 2: Experience, Appendix 2: Continued Validity)**

The BMAA is a not-for-profit membership organisation. One of our aims is *“to encourage the continued maintenance of standards in the design, construction, upkeep of microlights and VLA category aircraft”*.

To ensure that we achieve that aim the BMAA employs engineers, management and quality oversight staff all with an interest, working knowledge and experience of owning, operating and flying microlight aircraft. We understand our sphere of aviation and our membership.

To assist with achieving our aims we have created an authorised group of aircraft inspectors who represent the BMAA and provide inspection oversight and advice to BMAA members who own aircraft. The inspectorate is supported by the employed staff members of the BMAA who provide information, training and oversight.

Every inspector is authorised by the BMAA based upon a thorough investigation into their knowledge and experience. Each Inspector authorisation follows an individual theoretical written examination and practical demonstration of inspection skills. Each new inspector must undergo a period of apprenticeship with a more experienced inspector before being authorised to work alone. Inspector performance is continuously monitored through scrutiny of applications and periodically through individual audit. Ongoing progression is achieved through seminars and coaching.

Only a few BMAA inspectors are employed full time or part time in an aviation industry role. Some of the minority run full time aviation support businesses; some are employed within an aviation supply or a support business. However, the vast majority of those appointed by the BMAA as inspectors are not employed within the industry, but give their time, knowledge and skills to supporting the membership to maintain a very high safety standard of airworthiness throughout the BMAA fleet.

We make clear the BMAA's level of selection, authorisation and involvement with the inspectorate to demonstrate the safety barriers that are in place to ensure that our inspectors, our airworthiness staff, are competent. The proposed section requirements (A3-7 Para 11.5) (A8-26 Paras 2.2.6, 10.2.6, Appendix 2: Experience, Appendix 2: Continued Validity) for airworthiness review staff are

completely disproportionate and are unworkable for our situation. In pre-consultation discussions the CAA was unable to demonstrate any safety case for the proposed requirements; we are surprised to see them still included at this stage. We cannot accept this proposed requirement.

### **A3-7**

We are concerned that the consultation does not address the whole of BCAR Section A3-7 as it prevents a true revision of that document and its contents. Despite the lack of opportunity to review the entirety of the document we will make comment on an additional area not covered by this consultation as we believe that it will significantly affect our members unless revised.

### **Permit Maintenance Release (PMR)**

Referred to above this section of A3-7 was not put forward as part of the consultation. We regret that the consultation is limited to proposed changes without the opportunity for industry, the users of these documents, to comment on the content of the whole document. We understood that both A3-7 and A8-26 were being reviewed, not that only isolated portions of the documents were considered for review. We see this as a missed opportunity.

We have spoken to CAA staff members in the past expressing our concerns regarding the effectiveness of the PMR system in the recreational aviation sector. The system calls for a second signature by an authorised airworthiness review staff member for many standard maintenance tasks. We have developed a system which, when such maintenance requires a second signature, enables a wider range of individuals to provide a second signature to achieve the same end. Many tasks requiring a second person's view of the correct outcome of a task use our definition of a qualified person, not only an approved airworthiness review staff member.

Definition: BMAA Til 044 QUALIFIED PERSON *Qualified Person is someone the Owner considers to have sufficient knowledge and experience to inspect work done against a published requirement e.g. BMAA Inspector, Licenced Microlight Pilot, Manufacturer, etc.*

Our guidance to owners is very clear on what does or does not need a second inspection and who can carry it out. For example:

Maintenance by Replacement of Primary Structures \* Two inspections in this case by Owner / Trustee and a Qualified Person

Duplicate inspection must be by a Person who is not the Assembler. \*Manufacturers may perform both activities.

Where an inspector is not required for the second inspection in many cases it makes it less difficult for the owner to find a person to review the work, this is important. We have anecdotal knowledge that in a system where an inspector is required for fairly minor work, owners have continued to fly their aircraft with no second signature if it is anything more than simple and convenient to arrange the inspection. This results in a flawed system where unless inspectors are easily available many second inspections just don't occur, and aircraft are flown without the benefit of a second set of eyes until an inspector becomes available, often not until it is time for an annual inspection, at which point all previous maintenance is signed off retrospectively. We believe that a system which

encourages a second review, and has proved effective throughout the BMAA fleet for many years, is far safer than one which encourages it to be flouted ultimately discouraging safe operation.

Our opinion is that the consultation on A3-7 must be halted at this point and that a proper review of the whole chapter is conducted by those using the procedures as well as the CAA.

### Line-by-Line response to the consultation

Item A3-7	Text	Response
3	<p><b>3. Application for Initial Permit to Fly</b></p> <p>3.1 An application for a National Permit to Fly shall be made in a form and manner established by the CAA, completed at an early stage of the project and returned with the appropriate fee.</p> <p>3.2 The charges are prescribed in the CAA Scheme of Charges contained in Official Record Series 5, available via the CAA website at <a href="http://www.caa.co.uk/ORS5">www.caa.co.uk/ORS5</a>. The Applicant shall pay charges equal to the cost of the investigation, but not exceeding the amount prescribed in the CAA Scheme of Charges. During the course of the investigation the CAA will normally render accounts at monthly intervals.</p> <p>3.3 During the investigation, if it is necessary for a CAA Surveyor to travel outside the United Kingdom, the CAA will require the Applicant to meet the additional costs involved.</p>	<p>The text in section 3 (3.1, 3.2, 3.3) refers to applications for an initial Permit to Fly made through the CAA. The details within these paragraphs apparently do not recognise that the BMAA, an A8-26 Approval holder, may also be authorised to issue an initial Permit to Fly.</p> <p>We request that the section 3 is reviewed with a mind to recognising the potential scope of A8-26 Approval holders.</p>
8.1	<p><b>8. Evaluation Flights</b></p> <p>8.1 Every aircraft shall be the subject of a satisfactory flight evaluation programme before the first issue of a National Permit to Fly granted under sub-paragraph 2.3 a), b), c) or d). The programme shall be agreed by the CAA, as specified in BCAR Chapter A3-3.</p>	<p>Does this prevent the BMAA approving a flight schedule for amateur built types? We think this may prevent our current activity.</p> <p>Should this include “or a person approved by the CAA”?</p>
10.4	<p>10.4 The Permit to Fly for the first of type-approved aircraft, aircraft conforming to a new Type Approval Data Sheets (TADS), can only be issued by the CAA or a person</p>	<p>This paragraph appears to be superfluous, stating the obvious.</p> <p>Is there a reason for including this statement</p>

	approved by the CAA.	that we haven't recognised?
10.5	10.5 An organisation holding a privilege to issue a Permit to Fly shall develop procedures to ensure an independent assessment of aircraft eligible for Permit to Fly and issuance of the Certificate. A copy of authorised Permit to Fly Certificate and associated documentation shall be forwarded to the CAA no later than 10 working days of the issue.	The requirement for a copy of "associated documentation" is vague. Will there be further detail published of exact expectations / requirements?
11.5	<p>11.5 To be approved to carry out airworthiness reviews, an approved organisation shall have appropriate airworthiness review staff to issue Certificates of Validity, or to make recommendations.</p> <p>a) The staff shall have acquired:</p> <p>i) four years of relevant maintenance/continuing airworthiness experience; or</p> <p>ii) two years if the applicant has satisfactorily completed an appropriate aeronautical maintenance training course.</p> <p>b) For the issue of a restricted Authorisation, a period of time agreed by the CAA or a person approved by the CAA that will enable a level of competency equivalent to that required by a) to be obtained, provided that this is not less than two years.</p>	<p>We challenge the validity of these requirements as inadequately defined, difficult to demonstrate and impossible to audit. Even for a properly- defined requirement, there must be a demonstrated safety case based on existing data to support it.</p> <p>The BMAA authorises Inspectors to carry out airworthiness reviews of aircraft within the BMAA "fleet". Our process for authorising inspectors does not comply with the requirements of 11.5) a i) or ii) which we consider disproportionate and unworkable for our Association.</p> <p>The BMAA fleet has been served well by the practice that is used today which has been accepted since our approval in 2015 and was based upon a process that has been in use since inception in 1984.</p> <p>The process that the BMAA uses for authorisation and oversight of inspectors who are authorised to carry out airworthiness reviews is published in our document Til 044.</p> <p>It would be impossible for us as an organisation to continue to oversee the airworthiness of our fleet if inspectors had to comply with paragraph 11.5.</p>
12.1	<p><b>12. Aircraft Airworthiness Reviews</b></p> <p>12.1 To satisfy the requirement for an airworthiness review of the aircraft as specified in paragraph 11.2 and 11.3 of this Chapter A3-7, a documented review of the aircraft records and a physical survey of the aircraft shall be carried out by the CAA or</p>	<p>Clarification sought.</p> <p>How is a flight cycle defined in this context?</p> <p>Does this passage require all flights to be individually recorded? (associated flight cycles have been properly recorded)</p>

	the approved organisation, in order to be satisfied that: a) airframe, engine, and propeller flying hours and associated flight cycles have been properly recorded;	Or does this refer to flight cycles related to propeller flying hours?
18.2	<b>18. Aircraft Continuing Airworthiness Record System</b> 18.2 The aircraft type and registration mark, the date, together with total flight time and/or flight cycles and/or landings, as appropriate, is required to be entered in the aircraft logbooks.	Clarification sought.  How is a flight cycle defined in this context?
<b>Item A8-26</b>	<b>Text</b>	<b>Response</b>
1.3	<b>1. Introduction</b> 1.3 An Organisation may, when in compliance with the requirements of this Chapter A8– 26, be approved to provide oversight, design, continuing airworthiness management, maintenance of aircraft and issue a National Permit to Fly as agreed by the CAA in respect of the aircraft groups defined in paragraph 5.4.	Suggest that the reference to paragraph 5.4 is in error and should be paragraph 1.4.
2.1.2 c	<b>2. Extent of Approval</b> 2.1.2 c) Submit reports, which may include a recommendation, to the CAA with regard to the oversight and audit of the Organisations in respect of design, manufacture and assembly of aircraft and their components;	Clarify the use of “Organisations” within this paragraph. The introduction to CAP533, at 1.1, defines Organisation as: “An Organisation for supporting Recreational Aviation (hereinafter referred to as the Organisation)”. 2.1.2, on the left, does not reflect the intended meaning.
2.1.2. e	<b>2. Extent of Approval</b> 2.1.2 e) Be responsible for the tasks related to management of aircraft design approvals, such as data sheets for homebuilt and type accepted aircraft (Type Acceptance Data Sheets and Homebuilt Aircraft Data Sheets), including annual reviews, maintenance and data conformity validation and management of proposed changes to the relevant documents;	We consider that the wording is too prescriptive as it stands. Suggest the wording be changed to:  Be responsible for the tasks related to management of aircraft design approvals, such as data sheets for homebuilt and type accepted aircraft (Type Acceptance Data Sheets and Homebuilt Aircraft Data Sheets).  There is no need for the subsequent detail as this is implicit in the wording.  <b>Note:</b> In our current approval we are hindered by lack of information on types not initially approved by the BMAA which even now prevents full compliance with the intent of this paragraph.
2.1.3	<b>2. Extent of Approval</b> 2.1.3 As part of the oversight privilege, the	The BMAA already promotes safety related

	<p>Organisation shall:</p> <p>a) Issue and promote safety related information, educate and make recommendations to the whole aviation community for the aircraft types for which it is approved.</p> <p>NOTE: Such information includes non-mandatory safety information aimed to guide the community on the pertinent issues. The Organisation shall monitor sources of fleet relevant safety information including those issued by a foreign State of Design.</p>	<p>information, both general and type specific, to members. There is always a resource consideration to the non-specific information gathering and dissemination which must be taken into account.</p> <p>As this is a requirement we would like clarification on how it will be audited.</p>
2.2.6	<p><b>2. Extent of Approval</b></p> <p>2.2.6 The Organisation shall report to the CAA immediately if it has reasonable grounds to believe or receives evidence that the aircraft issued with a National Permit to Fly is no longer in compliance with the Permit conditions or has been determined as unsafe to fly. The CAA may then revoke, suspend or vary the Permit in accordance with Article 253 of ANO.</p>	<p>We believe that this is unworkable as written in that minor defects would be included if the exact wording is followed.</p> <p>For example, if a BMAA inspector sees a cracked exhaust during an annual inspection, it would fail the inspection because it is technically unairworthy, but does the CAA really want to be informed of the fault?</p> <p>If so the CAA will be swamped with reports. What resources will the CAA put to managing the reports and what use will be made of the information gathered? There is little point in reporting if the reports are not productive.</p> <p>We suggest that wording is reviewed to reflect that only significant defects are reported i.e. defects which, in the view of the BMAA, could affect the rest of its fleet.</p>
2.3.2	<p><b>2.3 Design</b></p> <p>2.3.2 a) To submit reports in relation to assessment of amateur built or type accepted aircraft designs, in support of a standard agreed with the CAA, for the issue of a National Permit to Fly;</p>	<p>As we have already a demonstrated ability to perform the privilege in 2.3.2 a) we would like to have the opportunity to add a similar privilege to do the same for commercially built type approved aircraft.</p>
5.2	<p><b>5. Continuing Airworthiness Management System</b></p> <p>5.2 The continuing airworthiness management function shall ensure that the airworthiness of each aircraft is managed by the Organisation and:</p>	<p>This paragraph must be rewritten to reflect the true chain of responsibility in the airworthiness management of each aircraft.</p> <p>The continuing airworthiness management is the responsibility of the owner /operator.</p> <p>The approval holder's function is to monitor by periodic airworthiness oversight / review that the airworthiness of each aircraft is</p>

		<p>being managed correctly by the owner / operator. It is not the approval holder's responsibility to directly manage the airworthiness of each aircraft at all times. This would be impossible and not something that the CAA does now for the CofA fleet.</p> <p>The process is referred to in paragraph 5.3 below:</p> <p>5.3 The Organisation shall establish a process to conduct the airworthiness review in accordance with the criteria specified in Chapter A3-7.</p>
6.3.2	<p><b>6. Flight Test Functions</b></p> <p>6.3.2 For the head of the flight test function and all flight test aircrew, the following additional particulars are required:</p> <ul style="list-style-type: none"> <li>a) A valid licence;</li> <li>b) Particulars of flight training;</li> <li>c) Recency of aircraft types;</li> <li>d) Total hours on each aircraft type;</li> <li>e) Test flying qualifications and experience.</li> </ul>	<p>Suggestion. The head of the flight test function may not be an active pilot, but able to fulfil the role. Therefore we suggest changing the initial wording from: For the <del>head of the flight test function</del> to: For the Chief Test Pilot/s</p> <p>Question, does "all flight test aircrew," include Observers?</p> <p>If so, there should be no need for them to hold the qualification or experience asked for. If the intention is not to include Observers this should be made clear.</p> <p>Observation. It can be extremely onerous for an experienced pilot to record flight hour experience by individual type. For microlight aircraft we suggest this is limited to control type, three axis, weightshift, powered parachute, rather than specific models. For non-microlight types by weight / engine category.</p>
9.3	<p><b>9. Personnel Requirements</b></p> <p>9.3 The Accountable Manager shall have the ultimate responsibility for the areas of approval and ensure that the oversight activities are conducted in accordance with the principles of Better Regulation Framework, such as proportionality, accountability, consistency, transparency and targeting.</p>	<p>We question the applicability of this paragraph to an A8-26 holder. The text appears to be applicable to regulatory authorities, which A8-26 holders are not. Our working practices do not differentiate between individuals or work streams in our approach to provide a safe, timely and satisfactory quality of service. We do not feel that we need to be bound by a non-applicable set of requirements.</p>
9.5	<p><b>9. Personnel Requirements</b></p>	<p>Suggest wording change to paragraph 9.5.</p>

	<p>9.5 The Organisation shall establish and control the competence of all personnel in accordance with a procedure as specified in the Exposition.</p>	<p>The Organisation shall establish and ensure continued competence of all personnel in accordance with a procedure as specified in the Exposition.</p>
10.2.6	<p><b>10. Authorisation Systems for Inspecting Personnel</b>  10.2.6 The Organisation shall ensure that all Authorised Staff are involved in an actual relevant aircraft or component activity for at least six months cumulatively in any consecutive two year period.</p> <p>NOTE: For the purpose of this paragraph ‘involved in actual relevant aircraft or component activity’ means that the person has worked in an aircraft or component maintenance or design environment, as applicable to their role, and has either exercised the privileges of the Authorisation and/or has actually carried out relevant maintenance or design activities, as applicable to their role, on at least some of the aircraft type systems specified in their certification Authorisation.</p>	<p>We challenge the validity of these requirements as difficult to demonstrate and impossible to audit. For such a change we need to see a demonstrated safety case based on existing data to support it.</p> <p>The BMAA authorises Inspectors to carry out airworthiness reviews of aircraft within the BMAA “fleet”. Does this paragraph include them?  If so, our process for authorising inspectors does not comply with the requirements of 10.2.6 which we consider disproportionate and unworkable for our Association.</p> <p>The BMAA fleet has been served well by the practice that is used today which has been accepted since our approval in 2015 and was based upon a process that has been in use since inception in 1984.</p> <p>The process that the BMAA uses for authorisation and oversight of inspectors who are authorised to carry out airworthiness reviews is published in our document Til 044.</p> <p>It would be impossible for us as an organisation to continue to oversee the airworthiness of our fleet if inspectors had to comply with paragraph 10.2.6.</p>
10.2.16	<p><b>10. Authorisation Systems for Inspecting Personnel</b>  10.2.16 The Authorised Staff shall be given access on request to their personal records as detailed above.</p>	<p>Delete this paragraph.  This is an unnecessary inclusion in A8-26. Employment law allows anyone to view any personal information held on them.</p>
10.2.18	<p><b>10. Authorisation Systems for Inspecting Personnel</b>  10.2.18 Upon request, Authorised Staff shall produce their Authorisation to any person approved by the CAA within 24 hours.</p>	<p>We consider that 24 hours may be impractical in some cases. We suggest increase to 72 hours.</p> <p>Upon request, Authorised Staff shall produce their Authorisation to any person approved by the CAA within 72 hours.</p>
10.2.19	<p><b>10. Authorisation Systems for Inspecting Personnel</b>  10.2.19 The minimum age for Authorisation</p>	<p>Is this an error? Should the paragraph read: The minimum age for Authorised Staff is 18 years of age.</p>



	Staff is 18 years of age.	
		We should like included in A8-26, the right / option for an A8-26-approved organisation to refuse an authorisation if it has reason to believe that an individual, although meeting technical requirements, is not a suitable person to hold the authority by reason of character.
Appendix 2	<p><b>Experience</b></p> <p>An applicant for an Authorisation shall have had the following minimum experience in the design, build, inspection, servicing and maintenance of aircraft, as appropriate:</p> <p>a) For the issue of Authorisation privileges, at least:</p> <p>i) four years of relevant maintenance/design/build experience; or</p> <p>ii) two years if the applicant has satisfactorily completed an approved training course.</p>	<p>Not agreed.</p> <p>We challenge the validity of these requirements as inadequately defined, difficult to demonstrate and impossible to audit. Even for a properly- defined requirement, there must be a demonstrated safety case based on existing data to support it.</p> <p>The BMAA authorises Inspectors to carry out airworthiness reviews of aircraft within the BMAA “fleet”. Does this paragraph include them?</p> <p>If so, our process for authorising inspectors does not comply with the requirements of this paragraph which we consider disproportionate and unworkable for our Association.</p> <p>The BMAA fleet has been served well by the practice that is used today which has been accepted since our approval in 2015 and was based upon a process that has been in use since inception in 1984.</p> <p>The process that the BMAA uses for authorisation and oversight of inspectors who are authorised to carry out airworthiness reviews is published in our document Til 044.</p> <p>It would be impossible for us as an organisation to continue to oversee the airworthiness of our fleet if inspectors had to comply with this paragraph.</p>
Appendix 2	<p><b>Continued Validity</b></p> <p>The Organisation shall ensure that all Inspecting Staff are involved in at least six months of actual relevant experience in any consecutive two year period. For these purposes ‘actual relevant experience’ means that the person has worked in a particular environment and has exercised the</p>	<p>Not agreed.</p> <p>We challenge the validity of these requirements as inadequately defined, difficult to demonstrate and impossible to audit. Even for a properly- defined requirement, there must be a demonstrated safety case based on existing data to support it.</p>

	<p>privileges of the Authorisation and/or has actually carried out tasks on at least some of the type systems specified in the particular Authorisation</p>	<p>The BMAA authorises Inspectors to carry out airworthiness reviews of aircraft within the BMAA “fleet”. Does this paragraph include them?</p> <p>If so, our process for authorising inspectors does not comply with the requirements of this paragraph which we consider disproportionate and unworkable for our Association.</p> <p>The BMAA fleet has been served well by the practice that is used today which has been accepted since our approval in 2015 and was based upon a process that has been in use since inception in 1984.</p> <p>The process that the BMAA uses for authorisation and oversight of inspectors who are authorised to carry out airworthiness reviews is published in our document Til 044.</p> <p>It would be impossible for us as an organisation to continue to oversee the airworthiness of our fleet if inspectors had to comply with this paragraph.</p>
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### Summary

- 1) We challenge the proposed requirements for authorisation and experience of airworthiness staff as listed in the following parts of CAP553 (A3-7 Para 11.5) (A8-26 Paras 2.2.6, 10.2.6, Appendix 2: Experience, Appendix 2: Continued Validity) as inadequately defined, difficult to demonstrate and impossible to audit. Even for a properly defined requirement, there must be a demonstrated safety case based on existing data to support it. Unless our view on this is accepted we believe that the consultation on A8-26 must be halted at this point and that a proper review of the whole chapter is conducted in cooperation by those with practical experience of using the procedures as well as the CAA.
- 2) On the basis that BCAR Chapter A3-7 contains requirements that we consider encourage a less safe practice of airworthiness inspection procedures than are currently in use by the BMAA, we believe that the consultation on A3-7 must be halted at this point and that a proper review of the whole chapter is conducted in cooperation by those with practical experience of using the procedures as well as the CAA.
- 3) Detailed line-by-line comments are included within the table above.

**Response submitted by** Geoff Weighell CE BMAA and AM A8-26 Approval