

Title:	Balloon Working Group Recommendations Paper Work Strand 1: Commercial Balloon Pilot Licensing
Version Author:	Richard Allen and Laurence Baxter
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Purpose:	To set out a consolidated working group viewpoint regarding pilot licences/ratings for commercial ballooning, especially commercial passenger-carrying operations, including possible amendments to the UK Part-BFCL regulations. This paper would form the basis of a chapter on this topic in the CAA Phase 2 balloon public consultation.
NOTE:	The content of this paper is draft material for discussion purposes only. While it constitutes the views of the Balloon Working Group, it does not represent, in whole or in part, the corporate views/policies of the Civil Aviation Authority.

Background

1. The consultation response document committed us in Phase 2 to review the requirements for the Commercial Operation Rating for the Balloon Pilot Licence (BPL) as set out in UK Part-BFCL.215. Of particular focus is ensuring that the unique needs of commercial ballooning especially Commercial Passenger Ballooning (CPB) are adequately reflected. Requiring all pilots to hold a BPL under Part-BFCL in order to operate Part-21 balloons (and therefore for all commercial ballooning) was a regulatory decision taken before this licensing project initiated in 2021. This project aims to ensure that these UK Part-BFCL regulations encapsulate the best aspects of the existing Commercial Pilot Licence (Balloons) that it will replace by September 2025, and where necessary upgrade this regime so that it provides the best outcome for both safety and maintaining a viable ballooning community.
2. A working group of balloon subject matter experts has been formed to put forward proposals in areas related to CPB and other aspects of commercial non-CPB (formerly known as 'aerial work') ballooning. The group comprised experts in the British Balloon & Airship Club, the Panel of Balloon Examiners, the Commercial Ballooning Association, and experts on instructing and examining of balloon pilots across the available licences and ratings.
3. The purpose of this paper is to summarise key areas relating to commercial balloon pilot licensing where the provisions in UK Part-BFCL can be reviewed and amended.

Regulatory context

4. Licensing and training for commercial ballooning in the UK is one of the most important aspects of this overall licensing and training project. The UK enjoys a well-developed commercial ballooning sector comprising CPB and non-passenger elements.

Commercial non-passenger ballooning

5. This comprises commercial work not involving the carriage of fare paying passengers, predominantly aerial advertising but also some other activities. (The CAA do not hold data on the scale of commercial non-fare paying passenger flying operations.)
6. The risk characteristics of this flying is different to both private ballooning and CPB. The probability of fatal or serious injury accidents (FOSIA) is very low (there have been no such accidents in the last 10 years). The severity is also low, with the pilot occupant, occasional non-fare paying passengers, and relatively low uninvolved third-party risk.

Commercial passenger ballooning

7. This comprises flights typically carrying 2-16 fare-paying passengers. In the UK, 22 Declared Balloon Operators (DBOs) operate approximately 75 balloons flown by 65 pilots holding a licence with commercial privileges, flying approximately 2,500 flights and 30,000 passengers

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per year.¹

8. The risk characteristics of CPB operations are significantly different compared to non-passenger commercial ballooning. Although the *probability* of fatal or serious injury accidents (FOSIAs) is very low (there have been no such accidents in the last 10 years), the *severity* is medium-high in terms of not just fatalities or serious injuries but also the effect this would have on public confidence in the sector as a whole.

Regulatory approach

9. The objective of this part of this licensing project is to, where necessary, propose amendments to UK Part-BFCL, taking inspiration where relevant from the ANO system as well as potential new ideas, so that it best serves UK commercial ballooning while delivering an appropriate level of safety assurance, especially to the fare-paying public.
10. While other regulations exist covering the airworthiness and operations of balloons, including the conduct of DBOs, this part of the project focuses on licences and ratings for commercial balloon pilots.
11. **Important note on scope:** this consultation focuses on amendments to *the current BPL licence and ratings*, with a view to updating the Part-BFCL regulation. We will describe transitional considerations facing pilots in implementing these proposed changes in a separate paper. However, while we do mention differences between the existing BFCL requirements and those of the ANO balloon licence system, it is *not* meant to describe the transition process from ANO licences to their equivalents in Part-BFCL which is already being managed by the CAA under an existing conversion process.

Topics

12. The working group discussed and recommended proposals for changes to the Part-BFCL regulations across the following topics:
 - A. Introducing a separate CPB rating.
 - B. Qualifying experience to attain a commercial rating with CPB privileges.
 - C. Training for a commercial rating (including with CPB privileges).
 - D. Maintaining CPB privileges.
13. Participants tabled to the group written submissions across each of these areas, which were discussed in turn resulting in the positions set out in this paper. For each of these thematic headings, this paper summarises the context and current situation, details proposed amendments, offers benefits and disadvantages reflecting discussions and submissions within the working group, presents a finalised recommendation for consultation reflecting where possible a consolidated position within the working group, and where necessary sets out the wording for possible consultation questions.
14. A separate paper covers the related Workstream 2 on Instructors and Examiners, which should be read in conjunction with this paper.

A. Introducing a separate CPB rating

Context/current situation

15. We committed in the consultation paper to explore the merits of creating a separate rating within Part-BFCL dedicated to CPB, as distinct from the existing Commercial Operation Rating.
16. Part-BFCL Sub-part ADD section BFCL.215 provides a single rating for commercial

¹ Data from CAA records and Operator returns for 2022.

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operations, with some specific provisions setting out requirements for rating holders conducting CPB which we are looking to reform as part of this project.

17. A view expressed within the working group is that it is currently not clear whether the holder is legally able to undertake CPB flights. The only way of knowing this is through evidence of logbook endorsement by instructors and examiners indicating that the prerequisite training has been completed, experience developed, and the demonstration of maintenance of competence through refresher training and proficiency checks.

Proposals

18. There was significant disagreement on this particular topic within the working group, with effectively an equal split around two viewpoints, and for this reason we will reflect those viewpoints as options within this section, and pose those to consultation:

- Option 1: Maintain the existing commercial operation rating.
- Option 2: Introduce a separate CPB rating.

Option 1: Maintain the existing commercial operation rating:

19. In this option there would be no change to the Part-BFCL Commercial Operation Rating and the existing format within Part-BFCL Subpart ADD, thereby including CPB requirements within the existing Commercial operation rating to adequately meet the needs of the community without the need for duplication or granularity.

Option 2: Introduce a separate CPB rating:

20. It was argued that given the unique risk characteristics of passenger carrying compared to other types of commercial operations that a separate rating for CPB should be created, entitled a 'Commercial Passenger Ballooning Rating' [or something similar]. This would be distinct from the existing commercial rating, which would be re-titled as a 'Commercial Non-Passenger Rating' [or something similar] and be specifically for non-CPB operations such as aerial advertising. This would result in two ratings that could be added to a BPL depending on the type of privileges sought:
- CPB Rating: holders would be deemed qualified to conduct all types of commercial balloon operations including CPB operations, subject to fulfilling recency requirements.
 - Commercial Non-Passenger Rating: holders would be deemed qualified to conduct any commercial operations except those involving CPB, subject to fulfilling recency requirements.
21. This would entail introducing a new rating in Part-BFCL Sub-Part ADD. This would duplicate the content from BFCL.215 'Commercial operation rating', including the specific existing provisions in BFCL.215 concerning passenger operations, such as BFCL.215(d), and any additional provisions we create or amend in the proposals below. All AMC/GM related to this new section, such as training syllabus and Theoretical Knowledge requirements would be set out separately.
22. The existing Commercial Operation Rating in BFCL.215 would be amended in name and revised to remove all requirements related to CPB such as sub-paragraph (d).

Issues and discussion

23. There was significant disagreement within the working group over whether to split the commercial rating in this way.
24. **Clarity and regulatory certainty for aviation practitioners:** those in favour of the CPB Rating argued that it would be consistent with this project objective of improving simplicity of balloon pilot licensing for pilots, operators and instructors/examiners.

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- A separate CPB Rating would provide a clear and definitive location for the CPB requirements for holders, which could also be referred to more easily by instructors and examiners involved in CPB privileges. It would also ease the introduction of more tailored requirements specific to CPB operations, such as specific training and experience, while removing these from the Commercial Non-Passenger Rating that does not require them.
 - It would provide more clarity in the licence of the holder's specific line pilot privileges, reducing the risk of misinterpretation. Although users would still need to refer to logbook endorsements to assess their continued validity, having a clear indication of privileges attained would also benefit the operator.
 - Those against the creation of this distinction argued that there is already sufficient clarity in the regulations around CPB requirements for those who need to understand them, namely pilots and operators.
25. **Clarity for public/passengers:** those supporting the CPB rating argued that this would provide additional clarity for the public and passengers. However it is important to highlight that this is regarded as less relevant because under aviation public transport regulation, the public should not need to rely on their own knowledge/understanding of pilot competence to assure passenger safety. Instead, their safety is assured for them by the CAA through the compliance/oversight of the operators themselves, which includes provisions to ensure pilots are sufficiently competent (both initially and on an ongoing basis) to undertake CPB operations.
26. **Cost and administrative burden:** it was argued that introducing a separate CPB rating would impose complications and complexity that do not exist in the single combined commercial rating:
- Currently, holders seeking CPB qualification only need to obtain and pay the CAA fee for the commercial rating and then can use commercial non-passenger ballooning operations to help recover the cost of amassing the required qualifying experience for CPB. Then they undertake the necessary training and obtain examiner endorsement before being cleared to act as Pilot in Command of CPB operations.
 - With a new CPB Rating, unless a pilot proceeded straight to this from the base BPL, a separate rating would impose a delay and cost in their journey to CPB.
 - Those in favour of the CPB Rating argued that the clarity and regulatory certainty benefits described above would outweigh these drawbacks. Moreover, the additional cost of obtaining the CPB Rating would be recovered from undertaking commercial operations anyway.
27. **Transitional complexities:** introducing a separate rating would impose additional complexity for existing commercial rating holders in transitioning to the new rating architecture.
- Existing holders would have to be distinguished between CPB and Non-CPB, and issued a new licence containing the appropriate new rating added. It would also impose additional administrative processing burden on the CAA which would have to be recovered through an administration fee.
 - Those in favour of a separate CPB Rating argued that this could be covered through a process similar to what is already being done for the CPL(B) to BPL/Commercial Rating conversion report, whereby those holders demonstrating the appropriate logbook evidence could be deemed valid for a period of time.

Recommendation

28. On balance, given the split in views in the working group, it was difficult to draw a final recommendation on the preferred course of action.
29. Introducing this proposal would have considerable implications on the other reforms described in the sections below and in other Work Strand papers (such as Instructor/Examiner requirements). For this reason, we have not reflected the introduction of a separate CPB Rating when describing those reforms. However we provide a summary of all the proposed

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reforms in Table 4 at the end of this paper, and in that we have introduced a column reflecting the adoption of separate CPB/Non-CPB ratings.

Dissenting views?

30. Because the opinions effectively split the working group into two viewpoints, there were no individual members with dissenting views beyond those two viewpoints. Therefore those two different views have been presented as options in the discussion above.

Possible consultation question

The CPL(B) as a licence will cease to exist on full transition to Part-BFCL and commercial activities will be covered by a rating on the BPL. As regards the future of the Commercial Rating that could be added to the BPL, which is your preferred option?

- A. A single Commercial Rating in Part-BFCL as is currently in place. All commercial operations can be undertaken with that one rating and there remain appropriate requirements for CPB privileges within the rating.

OR

- B. Two separate commercial ratings as follows:

- i. Commercial Passenger Ballooning (CPB) rating; the holders of which would be able to conduct CPB and any other commercial operations; and
- ii. Commercial non-passenger operation rating; the holders of which would be able to conduct commercial operations except those involving CPB.

OR

- C. No view/don't know

Do you have any comments?

B. Qualifying experience to attain a commercial rating with CPB privileges

Context/current situation

31. Under BFCL.215(b)(2), the current qualifying experience requirement for a pilot wishing to obtain privileges for *any* commercial operations is 50 hours PIC, which is broadly similar to the requirement for 60 hours PIC to obtain an unrestricted CPL(B).
32. There was a strong view among the commercial ballooning experts within the working group that these experience requirements, while appropriate for non-passenger commercial operations, do not provide a sufficient level of safety assurance for CPB. Most CPB operators require 100 hours PIC. Specifically, they were concerned that:
- There is no specific experience prerequisite for CPB flying beyond the 50 hours required for general commercial operations. The experience needed for CPB operations should reflect its distinctive risk profile (see regulatory context section above), demanding greater pilot competence compared to non-passenger commercial activity.
 - The requirements for experience in progressive hot-air group sizes are not adequately covered in a CPB context. Under current regulations, a pilot could qualify in larger balloons in accordance with BFCL.150(b), but have limited demonstrable experience carrying passengers in those larger sizes.
33. There was also a concern that under current licensing regulations it is possible (albeit unlikely) that a pilot could gain all their CPB experience in a small group size of balloon, prior to progressing to a large group size of balloon (moving from just a few passengers to 16+ with limited graduated experience or training).

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Proposal and rationale

34. To address these problems in turn, the group proposed:
- Introducing a minimum of 100-hour PIC experience gateway for CPB. This is consistent with what is already required by most CPB operators.
 - Introducing a stepped minimum number of PIC hours of CPB flying experience in the previous hot-air balloon size group before progressing to the next group, in addition to the current general experience requirements under BFCL.150(b).
35. A pilot would gain their commercial rating including CPB privilege in Group A and then have to record 10 hours of CPB flying in Group A, in addition to the 100 hours (or more) of general Group A flying they have already undertaken, before they may carry passengers in Group B (noting that they would have to gain the group B rating and pass a commercial operation rating proficiency check in a group B balloon). To progress to Group C, the pilot would have to record at least 200 hours general experience in Groups A and B combined of which at least 20 hours of CPB flying in Groups A and B (with at least 10 in Group B). To progress to Group D, similar applies, record at least 300 hours general experience in Groups A, B and C combined of which at least 30 hours of CPB flying in Groups A, B and C (with at least 10 in Group C).
36. This would be achieved by the following amendment to BFCL.215(d):
- “(d) A pilot who holds a commercial operation rating shall exercise the privileges of that rating in commercial passenger ballooning only if he or she has completed:

(1)

(i) for commercial passenger ballooning in a hot air balloon group A or gas balloon or mixed balloon or hot air airship: 100 hours as PIC in balloons.

(ii) for commercial passenger ballooning in a hot air balloon group B: 110 hours as PIC in balloons of which at least 10 hours commercial passenger ballooning flights in hot air balloons in group A.

(iii) for commercial passenger ballooning in a hot air balloon group C: 200 hours as PIC in balloons of which at least 20 hours commercial passenger ballooning flights in hot air balloons in groups A and B combined, of which at least 10 hours in group B.

(iv) for commercial passenger ballooning in a hot air balloon group D: 300 hours as PIC in balloons of which at least 30 hours commercial passenger ballooning flights in hot air balloons in groups A, B and C combined, of which at least 10 hours in group C.

~~(4)~~**(2)** within the 180 days preceding the planned flight...”

37. There was an argument that this 100-hour minimum could be met by operators through the Operations Manual requirements, thereby removing the need to use regulation to deliver this standard. However, it was felt that for consistency across operators (i.e. regulatory certainty) that this requirement would be best included as regulation.
38. The implications of this could be summarised as follows:

Table 1: Group progression for pilots: existing and proposed

Stage	Existing BFCL	Existing ANO	Proposed BFCL
Group progression	[Addition of group not linked to commercial operation rating: may do this before/after issue of commercial rating]	PIC hour-building but no specific gates or training. Commercial General Flight Test with Examiner	[Addition of group not linked to commercial operation rating: may do this before/after issue of commercial rating]

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	<p>PIC hour-building to gate of 100hr in Group A for Group B (with or without passengers) Subsequently:</p> <ul style="list-style-type: none"> ▪ gate of 200hr in Groups A/B for Group C; and ▪ gate of 300hr in Groups A/B/C for Group D <p>2x training flights with FI(B) for each Group progression Licence reissue with additional group privilege</p> <p>Pilot can now exercise private privileges in additional Group</p> <p>Operator training and Licence and Operator Proficiency Check (with an examiner) before release by operator to line flying in that Group</p> <p>Pilot can now exercise CPB privileges in additional Group</p>	<p>for each Group progressed CPL(B) re-issue Group B and subsequently Group C</p> <p>Operator training and Operator Proficiency Check (with examiner) before release by operator to line flying in that Group</p>	<p>New: PIC hour-building to gate of 110hr total/10hr CPB flying in Group A for Group B Subsequently:</p> <ul style="list-style-type: none"> ▪ gate of 200hr total/20hr CPB in Groups A/B (of which at least 10hr in B) for Group C; and ▪ gate of 300hr total/30hr CPB in Groups A/B/C (of which at least 10hr in C) for Group D. <p>2x training flights with FI(B) for each Group progression Licence reissue with additional group privilege</p> <p>Pilot can now exercise private privileges in additional Group</p> <p>Operator training and Licence and Operator Proficiency Check (with an examiner) before release by operator to line flying in that Group</p> <p>Pilot can now exercise CPB privileges in additional Group</p>
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Issues and discussion

39. While many operators do stipulate additional experience requirements on pilots, the argument was that by introducing this into the licensing regulation, a specific and unambiguous minimum requirement for all CPB regardless of the type of operator would produce a balanced approach to assuring passenger safety.

Recommendation

40. The working group recommends introducing these requirements for 100-hour minimum experience, plus the minimum experience as PIC of CPB operations, using the drafting suggestion above. (Guidance Material (GM) could be added for examiners to confirm that these minima have been met prior to undertaking a proficiency check.)

Dissenting views?

41. There remained some discomfort about the low number CPB hours suggested to move up to a larger Group, recommending that the skill required on larger balloons is significantly higher, and that a full UK season (year) as an active CPB pilot on one Group should be required prior to moving up to a larger Group.

Possible consultation question

42. Do you agree with our approach of introducing into the licensing regulation a 100-hour PIC experience requirement as a prerequisite for CPB privileges?
43. Possible answers:
- Yes
 - No, prefer Part-BFCL to remain unchanged at 50 hours.
44. Do you have any comments?
45. Do you agree with our proposal to introduce a stepped minimum number of PIC hours of CPB

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flying experience in the previous hot-air balloon size group before conducting CPB flights in the next group, in addition to the requirements for progression to the group under BFCL.150(b)?

46. Possible answers:

- Yes
- No, prefer Part-BFCL to remain unchanged

47. Do you have any comments?

C. Training for a commercial rating (including with CPB privileges)

Context/current situation:

48. Pilots currently wishing to attain a commercial operation rating (whether with CPB privileges or otherwise) are required under BFCL.215(b)(4) to pass a skills test with a balloon flight examiner [FE(B)] to demonstrate the competence required for commercial operations.
49. Under BFCL, alongside the Group qualifications (i.e. base licence), the commercial operation rating is valid for both CPB and commercial non-CPB. Although a syllabus for “refresher training” exists covering care of passengers (which is tested in operator proficiency checks), there is no prescribed syllabus for training for the BPL commercial operation rating, and there are no formal theoretical knowledge exams.
50. The commercial operation rating skill test provided under BFCL.215(b)(4), with a syllabus set out in AMC1 BFCL.215(b)(4), is based on a “more precise flying” version of the base licence skill test. Matters related to passenger handling are only covered on a subsequent operator proficiency check before any line flying can start. This is similarly the case for commercial non-CPB: specific activities such as tethering or flying are left to the operator to improve pilot competence.
51. Under the ANO licensing system, the situation is broadly similar, however the requirements are not clearly documented. While there is a general flight test with an examiner, there is no structure of initial training provision. Moreover, the lack of documented requirements could lead to regulatory uncertainty. Operators may have additional stipulations, however these are not for licensing, rather to meet operational requirements.

Proposal and rationale

52. The commercial ballooning experts in the working group, in consultation with their wider communities, held the strong view towards strengthening these requirements. Their main concerns were that:
- In both the BFCL and the ANO regimes, there is no formal training for the issue of a commercial rating/licence prior to the skills test.
 - Too much emphasis is placed on the operator to conduct training or verify specific aspects of commercial flying, both passenger and non-passenger. This may be appropriate for larger operators, but for smaller ones this might be less than optimal, especially in the case of a single pilot operator.
 - The number of flights under training or assessment prior to CPB flying is seen as rather low.
53. The group discussed introducing an appropriate structure for initial practical training and instructor/examiner intervention at the appropriate stages, set out as follows:
- a) A mandatory training course at an ATO/DTO prior to the commercial operation skill test. This could comprise a ground school course of two modules: a core element that all candidates seeking a commercial rating would take, covering all non-CPB commercial activities but also an introduction to CPB operations; and a CPB-specific module only for

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- candidates seeking a CPB qualification (or the CPB Rating as proposed in Section A of this document was implemented) providing in-depth content on CPB operations.
- b) The mandatory training course at an ATO/DTO to include an appropriate number of training flights with an FI(B) who holds a commercial operation rating and who has received instructor training to deliver such training flights in a CPB context;
 - c) This new ATO/DTO mandatory training course would be designed to cover both CPB and non-passenger commercial ballooning, to provide an introduction to those topics and adequately prepare the pilot for the skills test with the FE(B) that follows. A syllabus would be created later using a new AMC, but it would draw upon some material from the existing skills test syllabus currently provided under AMC1 BFCL.215(b)(4), elements from the existing CPB refresher training course syllabus set out in AMC1 BFCL.215(d)(2)(ii)(a), and add new learning objectives covering non-passenger ballooning.
54. There was considerable discussion on the appropriate number of FI(B) training flights that should be required, and what would be gained by these. The argument centred around guarding against one or two flights undertaken in benign conditions (conceivably on the same day) that are hardly indicative of actual situations that could be encountered with passengers on board. However, the counterargument was that multiple instructional flights could just as easily be undertaken on different days in the same benign conditions. It should be noted that other areas of Part-BFCL default to 2 for such requirements. Also, the figure would be a minimum number of required flights with a FI(B) prior to a commercial operation rating skill test flight with a FE(B) (an ATO/DTO, FI(B) or FE(B) may decide that a candidate requires more than this minimum).
55. Between these amendments and those described earlier in this paper, the journey of a pilot new to CPB compared to the existing systems is loosely depicted in Table 2.

Table 2: CPB new pilot journey: existing and proposed

Stage	Existing BFCL	Existing ANO	Proposed BFCL
Private flying	Pilot issued base BPL for private operations in hot-air Group A	Pilot issued PPL(BA) in hot-air balloons	No change: pilot issued base BPL for private operations in hot-air Group A
Experience-building Training for commercial operations	PIC hour-building to 50hr gate Training at own initiative or with operator	PIC hour-building to 20hr gate for restricted CPL(B) 60hr gate for full CPL(B) Training at own initiative or with operator	PIC hour-building to 50hr gate New: Pilot undertakes ATO/DTO commercial operations training course which includes 2x training flights with FI(B)
Evaluation for commercial operations	Commercial operation rating skills test with FE(B) Re-issue of BPL with Commercial Operation Rating at hot-air Group A (no CPB flights if licence & operator proficiency check not passed)	CPL(B) Group A General Flight Test with Examiner and TK exams CPL(B) issue with Group A rating (restricted or full based on experience)	Commercial operation rating skills test with FE(B) (TK assessed in ATO/DTO course) Re-issue of BPL with Commercial Operation Rating at Group A (no CPB flights if less than 100 hours PIC and no licence / operator proficiency check)
Experience-building for CPB	No specific hour-building or gateway specified in licensing regulations.	No specific hour-building or gateway specified in licensing regulations.	New: PIC hour-building to 100hr gate in hot-air group A (this could include commercial non-passenger ballooning flights).
Evaluation for CPB	<i>Either</i> proficiency check with FE(B) <i>or</i> refresher course ATO/DTO followed by 1x flight with FI(B)	Operator training and Operator Proficiency Check with Examiner before release to passenger line flying	New: Proficiency check required with FE(B) prior to clearance to line flying (no longer optional and

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Stage	Existing BFCL	Existing ANO	Proposed BFCL
	Pilot can now exercise CPB privileges in hot-air Group A		no refresher course/Fl(B) flight as alternative). Pilot can now exercise CPB privileges in hot-air Group A

Issues and discussion

56. The working group considered the proportionality and appropriateness of requiring candidates for all commercial flying to undertake training that included content on passenger operations. However, the view was that everyone applying for the commercial operation rating should be required to undertake this course. This avoids having to manage a lower grade of rating for pilots who do not initially think they want to do CPB and to manage the complexity of having to do the course later when they decide that, after all, they do want to do CPB. Taking into account the pilot journey described above, this is a single course at the ATO/DTO, with two or more Fl(B) flights and the ground training course followed by a skill test with a FE(B), and if they wish to maintain privileges in CPB, a 2-yearly proficiency check and 5-yearly refresher course.

57. There was some discussion as to whether the ATO/DTO regime was necessary to deliver this mandatory training. The argument followed that the ANO has been able to deliver an effective training regime absent of an ATO/DTO-type detailed regime overseen by the CAA. In response to this point:
 - all formal training in aviation requires some degree of oversight by the CAA to assure the accountability of training providers, and the integrity of their internal systems and controls. To remove any requirement for a training organisation to be either an ATO or a DTO would require significant amendments to the regulations which is beyond the scope of this project.
 - the DTO provides the lightest-touch training organisation with a recognised structure, and is aimed at minimising complexity and costs while maintaining full compliance with the regulations. Although the BBAC is currently the only DTO for ballooning, any other organisation could apply for the same status.
 - In terms of impact to pilots themselves, the additional cost of this required ground school instruction would be minimal considering in many cases it formalises activity that is already being undertaken. On the other hand, the benefits include pilots having a better and standardised understanding of balloon operations, better preparation for the skills test, and safety benefits to commercial operators and the public.

58. The group discussed the adoption of the ANO CPL(B) requirement of written theoretical knowledge (TK) exams. Some participants ruled this out believing it was considered less practical than actual ground school training, combined with periodic refresher training covering actual CPB situations. However, others argued that some form of formal verification was necessary for the proposed ground school training, and TK exams are the most appropriate way of delivering this. There are two options for addressing this issue:
 - Option 1: formal TK exam delivered against the training syllabus provided in AMC. This would require developing an additional AMC setting out the requirement for TK, requiring an appropriate number of questions against each of the learning objectives in the syllabus. The CAA would then have to create the required e-exams which would be administered by examiners as invigilators. It would not be possible to simply adopt the existing CPL(B) TK exams as these cover a different range of learning objectives than would be considered necessary for the ground school training proposed above.
 - Option 2: creating a provision in the AMC training syllabus requiring the ATO/DTO to undertake testing to verify the candidate’s understanding of the training course, and to hold administrative records of the candidate’s successful completion of this test (through for example a course completion certificate). This option would effectively delegate candidate verification of training to the ATO/DTO.

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While Option 1 would be broadly similar to what CPL(B) pilots already have to undergo, it would require considerable steps to implement and give rise to transitional issues for pilots currently undertaking training. It is also questionable whether formal TK is the most appropriate method of delivering the policy objective of ensuring candidate understanding of the ground school training content. Option 2 on the other hand does provide a much more tailored and proportionate verification mechanism for the course content and would be easier to implement.

Recommendation

59. The group recommends the changes described above, which in their totality could be drafted as follows:

BFCL.215 Commercial operation rating

(a) A BPL holder shall exercise the privileges of his or her licence during commercial operations with balloons only if he or she holds a commercial operation rating in accordance with this point.

(b) An applicant for a commercial operation rating shall:

- (1) have attained the age of 18 years;
- (2) have completed 50 hours of flight time and 50 take-offs and landings as PIC on balloons;
- (3) have the privileges for the class of balloon in which the privileges of the commercial operation rating will be exercised; and
- (4) have completed a commercial operation rating training course at an ATO or DTO, which shall include at least two flights with a FI(B) who holds the commercial operation rating and a ground course which shall include at least the content of the refresher course of BFCL.215(d)(2)(ii); and
- (5) have passed a skill test on the relevant class of balloon during which he or she shall demonstrate to an FE(B) the competence required for commercial balloon operations.

(c) The privileges of the commercial operation rating shall be limited to the class of balloon in which the skill test in accordance with paragraph (b)(3) and (4) has been completed. The privileges shall be extended upon application to another class of balloon if, in that other class, the applicant complies with paragraph (b)(3) and (b)(4) and (5).

(d) A pilot who holds a commercial operation rating shall exercise the privileges of that rating in commercial passenger ballooning only if he or she has completed:

- (1) (i) for commercial passenger ballooning in a hot air balloon group A or gas balloon or mixed balloon or hot air airship: 100 hours as PIC in balloons.
- (ii) for commercial passenger ballooning in a hot air balloon group B: 110 hours as PIC in balloons of which at least 10 hours commercial passenger ballooning flights in hot air balloons in group A.
- (iii) for commercial passenger ballooning in a hot air balloon group C: 200 hours as PIC in balloons of which at least 20 hours commercial passenger ballooning flights in hot air balloons in groups A and B combined, of which at least 10 hours in group B.
- (iv) for commercial passenger ballooning in a hot air balloon group D: 300 hours as PIC in balloons of which at least 30 hours commercial passenger ballooning flights in hot air balloons in groups A, B and C combined, of which at least 10 hours in group C.

[Remaining sub-paragraphs to be covered in Section D below]

60. The training course referred to in BFCL.215(b)(4) would be created later using a new AMC, but it would draw upon some material from the existing skills test syllabus currently provided under AMC1 BFCL.215(b)(4), elements from the existing CPB refresher training course syllabus set out in AMC1 BFCL.215(d)(2)(ii)(a), and add new learning objectives covering non-passenger commercial ballooning.

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61. Some of the group felt that formal TK should be required following this ground school training, whilst most felt that a more informal testing approach via the ATO/DTO should be followed. The latter would require candidate understanding of course content and could be verified through a more informal requirement under the AMC for the ATO/DTO to undertake its own testing and successful completion recording/administration.
62. The members argued that CPB pilots must have the necessary skills, experience and competence to be entrusted to carry passengers in commercial fare-paying operations. Ostensibly what is being proposed takes the best elements of the existing ANO and BFCL systems, and addresses drawbacks in both to create an appropriate accountability regime that assures continued public confidence in passenger ballooning as well as legal and regulatory certainty for pilots and operators alike.

Dissenting views

63. A group member felt that a minimum hours training requirement for the larger groups should be greater, suggesting a minimum of five training hours on groups C and D prior to examiner check flight.
64. Also suggested was the possibility of a ‘fast track’ route to the larger groups requiring a significant level of focused and appropriate training in the larger group, with potential alleviation to some of the smaller group requirements.

Possible consultation questions

65. Do you agree with our proposal to introduce mandatory commercial operations ground school training covering elements of both CPB and non-passenger commercial ballooning, ahead of the skills test?
66. Possible answers:
- Yes
 - No, prefer Part-BFCL to remain unchanged in this respect.
67. Do you have any comments?
68. Do you agree with our proposal to retain the stepped minimum number of hours for each hot-air balloon group size, and introduce an additional minimum number of hours in CPB operations stepped for subsequent groups, as described above?
69. Possible answers:
- Yes
 - No, prefer Part-BFCL to remain unchanged in this respect.
70. Do you have any comments?

D. Maintaining CPB privileges***Context/current situation***

71. Currently under BFCL.215(d), pilots wishing to maintain a commercial operation rating with CPB privileges must have completed:
- Every 6 months: *either* at least three flights as PIC in balloons, of which one is in the relevant class; *or* a single flight under the supervision of a balloon flight instructor [FI(B)]; and
 - Every 2 years: *either* a proficiency check with an FE(B) *or* a refresher course at an ATO/DTO tailored to commercial ballooning, comprising at least six hours of TK instruction and one training flight with an FI(B).

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72. Under the ANO system, the situation is broadly similar, including a proficiency check with an examiner, but there is no structure of training provision.

Proposal and rationale

73. The commercial ballooning experts in the working group, in consultation with their wider communities, held the strong view towards strengthening these requirements. Their main concerns were that:
- Too much emphasis is placed on the operator to conduct training or verify specific aspects of commercial flying, both passenger and non-passenger. This may be appropriate to larger operators, but for smaller ones this might be less than optimal, especially in the case of a single pilot operator.
 - There is currently a legislated route where, via a training course, pilots conducting CPB are able to bypass examiner scrutiny by undertaking training flights with an instructor. This ignores the fundamental limitations of an instructor's role which is to provide training not conduct assessment. They are not empowered to act as examiners and make assessments/decisions as to whether a pilot is ready to undertake CPB operations. (While such courses have not been run to date, there is concern that they could be in the future.)
74. The most workable solution to this would be to remove the optional nature of the 24-month requirement for a proficiency check with an FE(B) to verify competence in CPB operations, thus making this mandatory for all CPB pilots.
75. New CPB pilots commencing CPB line flying, having passed their commercial rating skills test within the previous 24 months, would have this FE(B) proficiency check within 13 months of that commencement. This would introduce an additional check for those with low CPB experience, and ensure the correct application of skills in a manner that can be monitored.
76. We also propose removing the optional nature of the ATO/DTO ground refresher course, and making this mandatory for all CPB pilots every five years. This would be based on the existing CPB refresher training provided under AMC1 BFCL.215(d)(2)(ii)(a), and broadly similar to the initial training that we proposed above that would be required before first issue of the commercial rating, only with greater CPB content that might add the following topics:
- Passenger-handling with large numbers
 - Commercial and operator influences on pilot decision-making
 - Human performance factors with particular emphasis on emotional distractions and fatigue.
77. These requirements would ensure that the pilot underwent a check with an examiner rather than an FI(B) to confirm competence to undertake CPB, with the 24-month limit to prevent any skill fade.

Recommendation

78. The group recommends the changes as set out above, which could be drafted as follows:

BFCL.215 Commercial operation rating

(d) A pilot who holds a commercial operation rating shall exercise the privileges of that rating in commercial passenger ballooning only if he or she has completed:

[sub-paragraph (1) as described in Section C above]

(2) within the 180 days preceding the planned flight:

(i) at least three flights as PIC in balloons, of which at least one shall be in a balloon of the relevant class; or

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(ii) one flight as PIC in a balloon of the relevant class under the supervision of an FI(B) who is qualified in accordance with this point; and

~~(3 2)~~

~~(i) for pilots who passed the BFCL.215(b)(5) commercial operation skill test within 24 months before the planned flight: within 13 months preceding the planned flight, a proficiency check, in a balloon of the relevant class, during which he or she shall demonstrate to an FE(B) the competence required for commercial passenger ballooning; and~~

~~(ii) for pilots who passed the BFCL.215(b)(5) commercial operation skill test more than 24 months before the planned flight: within the 24 months preceding the planned flight: a proficiency check, in a balloon of the relevant class, during which he or she shall demonstrate to an FE(B) the competence required for commercial passenger ballooning; or and~~

~~(4) within the 60 months preceding the planned flight: a refresher course at an ATO or a DTO, tailored to the competence required for commercial balloon operations, including at least six hours of theoretical knowledge instruction and one training flight in a balloon of the relevant class with an FI(B) who is qualified for commercial balloon operations in accordance with this point.~~

(e) To maintain the privileges of the commercial operation rating for all balloon classes, a pilot who holds a commercial operation rating with privileges extended to more than one class of balloons shall comply with the requirements in paragraph (d)~~(3 2)~~ in at least one class of balloons.

(f) A pilot who complies with paragraph (d) and holds a commercial operation rating for the hot-air balloon class shall exercise the privileges of that rating in the hot-air balloon class only on balloons that represent:

(i) the same group of the hot-air balloon in which the proficiency check as specified in paragraph (d)~~(3)(2)(i) or the training flight as specified in paragraph (d)(2)(ii), have been completed;~~ or

(ii) a hot-air balloon group with a smaller envelope size.

(g) The completion of the flight under supervision as specified in paragraph (d)~~(2 4)(ii)~~, the proficiency check as specified in paragraph (d)~~(3 2)(ii)~~ and the refresher training course as specified in paragraph (d)~~(4 2)(iii)~~ shall be entered in the logbook of the pilot and shall be signed by the head of training of the ATO or the DTO, or the FI(B) or the FE(B) that is responsible for the training course, the supervision or the proficiency check, as applicable.

- (h) A pilot who has completed an operator proficiency check in accordance with point BOP.ADD.315 of Annex II (Part- BOP) to this Regulation shall be deemed to comply with paragraph (d)~~(3 2)(i)~~.

79. Between these amendments, the currency requirements for a pilot wishing to maintain their CPB privileges is loosely depicted in Table 3:

Table 3: CPB pilot privilege maintenance: existing and proposed

Stage	Existing BFCL	Existing ANO	Proposed BFCL
Maintaining privileges	6 months prior to flight: <i>Either</i> 3x flights in balloons <i>or</i> 1x flight under supervision of FI(B). 2 years prior to flight: <i>Either</i> proficiency check with FE(B) <i>or</i> refresher course ATO/DTO followed by 1x flight with FI(B)	3 months prior to flight: 3x flights in balloons. 13 months prior to flight: Licence and Operator Proficiency Checks with Examiner before release to passenger line flying	6 months prior to flight: <i>Either</i> 3x flights in balloons <i>or</i> 1x flight under supervision of FI(B). 2 years prior to flight: Proficiency check with FE(B) prior to clearance to line flying (13 months prior to flight if commercial operation rating skill test passed within previous 24 months).

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			5 years prior to flight: CPB ground refresher training with ATO/DTO.
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Dissenting views?

80. There were no dissenting views from any working group member to this recommendation.

Possible consultation questions

81. Do you agree with our proposal to remove for CPB pilots the optional nature of a proficiency check with an FE(B) every 2 years (the proficiency check becomes mandatory)?

82. Possible answers:

- Yes
- No, prefer Part-BFCL to remain unchanged in this respect.

83. Do you have any comments?

84. Do you agree with our proposal to introduce a requirement for CPB pilots to undertake ground refresher training every 5 years?

85. Possible answers:

- Yes
- No, prefer Part-BFCL to remain unchanged in this respect.

86. Do you have any comments?

Pilot journey summary

87. Table 4 depicts the entire pilot journey, comparing the existing and proposed requirements.

Table 4: Entire pilot journey: existing and proposed

Stage	Existing BFCL	Existing ANO	Proposed BFCL Single Commercial Rating with CPB/Non-CPB elements	Proposed BFCL Separate CPB and Commercial Non- Passenger Ratings
Private flying	Pilot issued base BPL for private operations in hot-air Group A	Pilot issued PPL(BA) in hot-air balloons	No change: pilot issued base BPL for private operations in hot-air Group A	No change: pilot issued base BPL for private operations in hot-air Group A
Experience-building Training for commercial operations	PIC hour-building to 50hr gate Training at own initiative or with operator	PIC hour-building to 20hr gate for restricted CPL(B) 60hr gate for full CPL(B) Training at own initiative or with operator	PIC hour-building to 50hr gate New: Pilot undertakes ATO/DTO training in commercial operations and 2x training flights with FI(B).	PIC hour-building to 50hr gate New: Pilot undertakes ATO/DTO commercial operations training course of least the basic module (CPB module optional).
Evaluation for commercial operations	Commercial operation rating skills test with FE(B) Re-issue of BPL with Commercial Operation Rating at hot-air Group A (no CPB flights if licence & operator proficiency check not passed)	CPL(B) Group A General Flight Test with Examiner and TK exams CPL(B) issue with Group A rating (restricted or full based on experience)	Commercial operation rating skill test with FE(B) (no TK) Re-issue of BPL with Commercial Operation Rating at Group A (no CPB flights if less than 100 hours PIC and no licence / operator proficiency check)	Commercial Non-CPB Rating skill test with FE(B) (TK assessed in ATO/DTO course) Re-issue of BPL with Commercial Non-CPB Rating at Group A (no CPB flights)
Experience-building to conduct CPB operations	No specific hour-building or gateway specified in licensing regulations.	No specific hour-building or gateway specified in licensing regulations.	New: PIC hour-building to 100hr gate in hot-air group A	New: PIC hour-building to 100hr gate in hot-air group A
Evaluation for CPB	<i>Either</i> proficiency check with FE(B) <i>or</i> refresher course ATO/DTO followed by 1x flight with FI(B) Pilot can now exercise CPB privileges in hot-air Group A	Operator training and Operator Proficiency Check with Examiner before release to passenger line flying	New: Proficiency check required with FE(B) prior to clearance to line flying (no longer optional and no refresher course/FI(B) flight as alternative). Pilot now qualified to undertake CPB operations in hot-air Group A	New: if not already done so, pilot undertakes ATO/DTO CPB training module, which includes 2x training flights with FI(B). Proficiency check required with FE(B) prior to issue of CPB Rating (no longer optional and no refresher course/FI(B) flight as alternative). Re-issue of BPL with CPB Rating privileges in hot-air Group A Clearance to line flying by operator.

Stage	Existing BFCL	Existing ANO	Proposed BFCL Single Commercial Rating with CPB/Non-CPB elements	Proposed BFCL Separate CPB and Commercial Non- Passenger Ratings
Group progression	<p>[Addition of group not linked to commercial operation rating: may do this before/after issue of commercial rating]</p> <p>PIC hour-building to gate of 100hr in Group A for Group B (with or without passengers)</p> <p>Subsequently:</p> <ul style="list-style-type: none"> ▪ gate of 200hr in Groups A/B for Group C; and ▪ gate of 300hr in Groups A/B/C for Group D] <p>2x training flights with FI(B) for each Group progression</p> <p>Licence reissue with additional group privilege</p> <p>Pilot can now exercise private privileges in additional Group</p> <p>Operator training and Licence and Operator Proficiency Check (with an examiner) before release by operator to line flying in that Group</p> <p>Pilot can now exercise CPB privileges in additional Group</p>	<p>PIC hour-building but no specific gates or training.</p> <p>Commercial General Flight Test with Examiner for each Group progressed</p> <p>CPL(B) re-issue Group B and subsequently Group C</p> <p>Operator training and Operator Proficiency Check (with examiner) before release by operator to line flying in that Group</p>	<p>[Addition of group not linked to commercial operation ratings: may do this before/after issue of commercial rating]</p> <p>New: PIC hour-building to gate of 110hr total/10hr CPB flying in Group A for Group B</p> <p>Subsequently:</p> <ul style="list-style-type: none"> ▪ gate of 200hr total/20hr CPB in Groups A/B (of which at least 10hr in B) for Group C; and ▪ gate of 300hr total/30hr CPB in Groups A/B/C (of which at least 10hr in C) for Group D]. <p>2x training flights with FI(B) for each Group progression</p> <p>Licence reissue with additional group privilege</p> <p>Pilot now qualified to undertake private operations in additional Group</p> <p>Operator training and Licence and Operator Proficiency Check (with an examiner) before release by operator to line flying in that Group</p> <p>Pilot now qualified to undertake CPB operations in additional Group</p>	<p>[Addition of group not linked to commercial operation ratings: may do this before/after issue of commercial rating]</p> <p>New: PIC hour-building to gate of 110hr total/10hr CPB flying in Group A for Group B</p> <p>Subsequently:</p> <ul style="list-style-type: none"> ▪ gate of 200hr total/20hr CPB in Groups A/B (of which at least 10hr in B) for Group C; and ▪ gate of 300hr total/30hr CPB in Groups A/B/C (of which at least 10hr in C) for Group D]. <p>2x training flights with FI(B) for each Group progression</p> <p>Licence reissue with additional group privilege</p> <p>Pilot now qualified to exercise private privileges in additional Group</p> <p>Operator training and Licence and Operator Proficiency Check (with an examiner) before release by operator to line flying in that Group</p> <p>Pilot now qualified to undertake CPB operations in additional Group</p>
Maintaining privileges to conduct non-CPB operations	<p>24 months prior to flight, at least 6 hours of flight time including 10 take-offs and landings and</p> <p>Within the last 48 months prior to flight, at least 1x training flight with FI(B)</p>	<p>Either:</p> <p>13 months prior to flight: Licence Proficiency Check with Examiner; or</p> <p>While rating is still valid, examiner endorsement of logbook evidence of 3 hours and 5x flights and 1x tethered flight in balloons in previous 13 months.</p>	<p>[No change]</p> <p>24 months prior to flight, at least 6 hours of flight time including 10 take-offs and landings and</p> <p>Within the last 48 months prior to flight, at least 1x training flight with FI(B)</p>	<p>[No change]</p> <p>24 months prior to flight, at least 6 hours of flight time including 10 take-offs and landings and</p> <p>Within the last 48 months prior to flight, at least 1x training flight with FI(B)</p>

Stage	Existing BFCL	Existing ANO	Proposed BFCL Single Commercial Rating with CPB/Non-CPB elements	Proposed BFCL Separate CPB and Commercial Non- Passenger Ratings
Maintaining privileges to conduct CPB operations	<p>6 months prior to flight: <i>Either</i> 3x flights in balloons <i>or</i> 1x flight under supervision of FI(B).</p> <p>2 years prior to flight: <i>Either</i> proficiency check with FE(B) <i>or</i> refresher course ATO/DTO followed by 1x flight with FI(B)</p>	<p>3 months prior to flight: 3x flights in balloons.</p> <p>13 months prior to flight: Licence and Operator Proficiency Checks with Examiner before release to passenger line flying</p>	<p>6 months prior to flight: <i>Either</i> 3x flights in balloons <i>or</i> 1x flight under supervision of FI(B).</p> <p>2 years prior to flight: Proficiency check with FE(B) prior to clearance to line flying (13 months prior to flight if commercial operation rating skill test passed within previous 24 months).</p> <p>5 years prior to flight: CPB ground refresher training with ATO/DTO.</p>	<p>6 months prior to flight: <i>Either</i> 3x flights in balloons <i>or</i> 1x flight under supervision of FI(B).</p> <p>2 years prior to flight: Proficiency check with FE(B) prior to clearance to line flying (13 months prior to flight if CPB Rating skill test passed within previous 24 months).</p> <p>5 years prior to flight: CPB ground refresher training with ATO/DTO.</p>