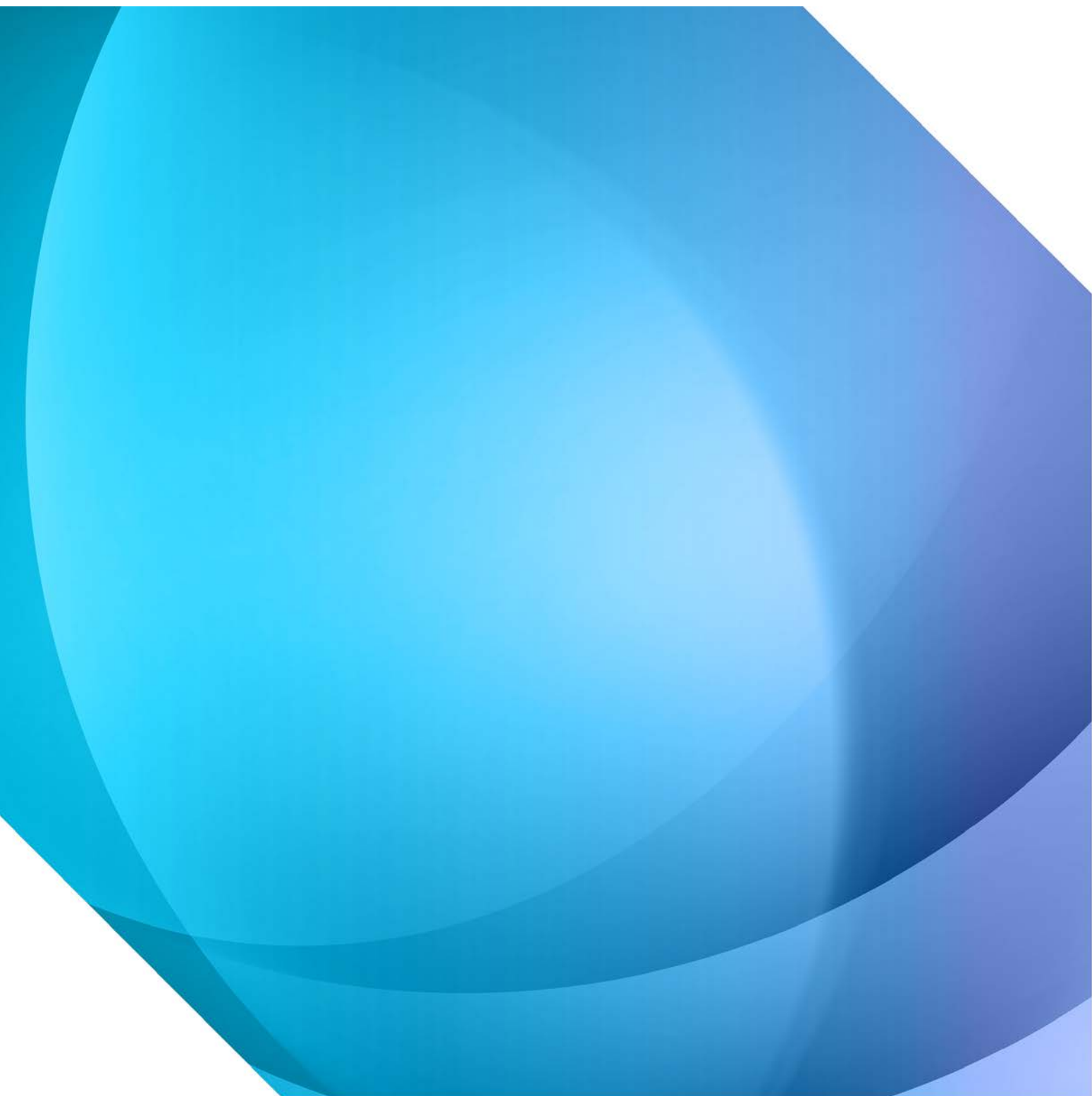


Consultation on the draft policy for the approval of aerodrome remote towers

CAP 1620



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Introduction

Advances in technology have enabled replication of the 'out of the window' (OOW) view from traditional aerodrome air traffic service (ATS) facilities on visual presentation systems at a site remote from the original facility. It is therefore necessary for the Civil Aviation Authority (CAA) to develop policy and supporting guidance to address the implementation and operation of such remote aerodrome ATS facilities in all of their forms. This is the first phase of policy and guidance development, which will be progressively developed as the technology, procedures and regulatory requirements associated with such facilities evolve.

Chapter 1

Consultation

Purpose and scope of the consultation

- 1.1 The purpose of this consultation is to seek comment on the CAA's draft policy on the implementation of remote towers in the UK. The policy's scope is limited to the technical aspects of remote tower implementation and operations; 'environmental' issues such as the impact of remotely-provided aerodrome ATS provision upon ATS personnel are issues to be considered by affected service providers as part of their change management processes.

Conduct of the consultation

- 1.2 The CAA is required by Government to demonstrate that the best balance possible has been achieved between conflicting demands and objectives and that as a consequence of a change in UK policy, benefits will accrue or overall impact will be neutral. The responses provided to this consultation will help to inform a better understanding of the likely impact of the proposed changes.

Consultation period

- 1.3 The consultation runs from 13 December 2017 to 26 January 2018. This is considered appropriate given that the proposed Policy Statement is Guidance Material for those looking to implement a remote tower project. This is consistent with the Government's 'Consultation Principles'.¹ No new UK legislative provisions are being proposed.

Consultation responses

- 1.4 Stakeholders are invited to comment on the draft policy at Enclosure 1. In doing so they are asked to consider how the policy will affect their introduction and operation of a remote tower facility, the benefits the policy will bring to these, and any costs which may be incurred as a result.
- 1.5 Respondents are requested to use the Consultation Response Form at Enclosure 2. Responses should indicate whether they support or object to any aspect of the proposed policy and comment accordingly. In the event that a respondent objects to an aspect of the proposed policy, alternative solutions (or solutions) are to be submitted which should be supported by appropriate justification.

¹ <https://www.gov.uk/government/publications/consultation-principles-guidance>

- 1.6 Comments are to be returned to the Consultation Focal Point by 26 January 2018. Where possible an early response would be appreciated so that any issues arising may be addressed in a timely manner.
- 1.7 This consultation will be primarily managed by email; however, postal responses will be accorded identical status and processed in the same way. .

Conclusion of the consultation

- 1.8 Following conclusion of the consultation, responses will be collated and analysed. The CAA will subsequently publish a Consultation Report summarising the responses along with its final proposals concerning implementation of the Policy.
- 1.9 The Consultation Report will be placed on the CAA website and stakeholders will be notified of its publication by email and via a Skywise alert.
- 1.10 Any update to CAA produced material will be notified by means of timely CAA Skywise alerts.

Confidentiality

- 1.11 All responses will be available for scrutiny under the Freedom of Information (FOI) Act 2000. Consultees are to note that requests for responses to be kept confidential will only be possible if these are consistent with the CAA's obligations under the FOI and Data Protection Acts.

Consultation focal point and oversight

- 1.12 Consultation responses, any queries on the technical aspects of the proposals or queries or complaints concerning the conduct of this consultation should be addressed, preferably by e-mail, to the following:
- 1.13 Email: remotetowers@caa.co.uk
- ISP Airspace/ATM Policy
Civil Aviation Authority
Aviation House
Gatwick Airport South
West Sussex
RH6 0YR
- 1.14 The CAA maintains oversight of the conduct of the consultation in accordance with Government's Guidance on Consultation.

Chapter 2

Policy proposals

The emergence of remote tower technology

- 2.1 Recent technological advancements enable the replication of ‘out of the window’ (OOW) views from aerodrome visual control rooms at remote sites by electronic means.
- 2.2 The CAA is of the view that the development and deployment of remote tower technology will enable the following types of operations:
1. Replication of current on-site ‘single mode’ aerodrome remote tower including non-Air Traffic Services (ATS) surveillance-derived information. Examples of non-ATS surveillance-derived information include permanent or temporary mapping such as Work in Progress or surface markings.
 2. ‘Replication Plus’ – enhancement of ‘replicated’ displays by means of overlays of ATS surveillance-derived information, e.g. Secondary Surveillance Radar (SSR) data.
 3. Remote Tower Centre (RTC) – multiple single mode applications.
 4. RTC – multi-site control at single work station.

Policy options

- 2.3 Two options have been identified:
1. **Option 1** – Do Nothing;
 2. **Option 2** – Introduce policy for the approval of remote towers technology in the UK.
- 2.4 **Option 1** is considered inappropriate. The UK is among the world leaders in innovation and technological advances in the area of ATM. To not have a policy position would fail to provide clarity for industry on the approvals process for the implementation of remote tower technology UK .
- 2.5 **Option 2** to introduce policy which would facilitate the implementation and subsequent oversight of aerodrome remote towers technology in the UK .

Chapter 3

Impacts of the preferred option

Overview

Legislative impacts.

3.1 No impacts upon legislation have been identified.

Non-Legislative regulatory impacts.

3.2 It will be necessary for material contained within Civil Aviation Publication (CAPS) to be revised.

1. **CAPs.** A preliminary assessment of UK Aerodrome Remote Tower Policy indicates a need to amend CAP 413, CAP 493, CAP 670 and CAP 1430. Amendments to these and any other affected CAPs will be in accordance with extant CAA procedures.
2. **UK AIP.** It is anticipated that the introduction of an aerodrome remote tower will require changes to the UK AIP entry for the affected aerodrome.

QUESTION: Stakeholders are asked to consider the proposed method of marking the remote tower mast on the Aerodrome chart and highlighting the remote provision of ATS in the text as annotated in para 6.3.i of the policy statement.

QUESTION: 56-day notice of the introduction any aerodrome remote tower related AIP change is foreseen; alternatively, stakeholders are asked to comment on the appropriateness of a 28-day notification period.

3. **Industry Documents.** ANSPs will need to consider the impact on their MATS 2's to reflect any changes as a result of implementing a remote tower project.
4. **Training requirements.** ANSPs will need to ensure their personnel are appropriately trained to use the new facility. Aerodrome operators will need to ensure that on-site staff are appropriately trained to assume responsibility for ancillary services vacated by the departing ATS staff.
5. **Systems changes.** This is a change to the ATS functional system and the ANSPs involved will need to submit the appropriate approvals for their individual projects.

Impacts on UK Air Traffic Services

- 3.3 As aerodrome remote towers replicate existing on-site aerodrome towers, there is no anticipated impact on UK ATS provision.

Policy for the approval of aerodrome remote towers

- 3.4 Draft Policy for the Approval of Aerodrome Remote Towers policy is at Enclosure 1.
- 3.5 Policy statement Annex B refines ED Decision 2015/014/R EASA definitions of 'minimum' and 'enhanced' equipage. The CAA has identified that a 'basic' equipped system could still include some non-surveillance based overlays on the OOW screens while determining that any surveillance derived overlays would constitute an 'enhanced' equipage.

QUESTION: Stakeholders are invited to comment on this refinement of the equipage.

- 3.6 At policy statement Annex F, the CAA has identified a number of ancillary services which may be affected by the process of implementing an aerodrome remote tower.

QUESTION: Stakeholders are invited to comment on these services and are further invited to consider any other ancillary services which need to be considered.

Regulatory and Guidance Material

- 3.7 Regulatory and Guidance Material relating to the implementation of a remote tower facility is listed in the draft policy statement under References.

Chapter 4

Safety Principles

Methodology

- 4.1 The CAA will follow a formalised safety approach in managing the UK implementation of Aerodrome Remote Tower Policy.
1. In doing this we will apply an explicit and pro-active approach to safety for the changes to UK policy and procedures.
 2. Safety is of paramount importance and will be explicitly considered by all project personnel.

Chapter 5

Costs and benefits

Sectors and groups affected.

- 5.1 The implementation of Aerodrome Remote Tower in the UK will affect all associated ATS providers and aerodrome operators.

Benefits of the preferred option.

- 5.2 Having a policy for the approval of remote tower projects will provide clarity for organisations on the process required to achieve regulatory approval for their respective applications.
- 5.3 The policy for the approval of remote tower projects will clearly delineate the requirements for each potential 'mode' of operation and allow the applicant better opportunity to assess which would be most beneficial to them and how approval can be achieved.

Compliance costs

- 5.4 While it is not anticipated that this policy will, in itself, generate cost, stakeholders considering introducing remote tower facilities are invited to comment on any costs they feel may be incurred by having to comply with the policy.

Chapter 6

Implementation plan

6.1 The following project milestones have been identified:

- 13 December 2017 - 26 January 2018 – Policy plus Annexes A/B/C/F Consultation.
- 29 January 2018 – 07 February 2018 - Policy plus Annexes A/B/C/F consultation report and final policy refinement.
- 26 February 2018 - Policy plus Annexes A/B/C/F published.
- 26 February 2018 - Policy plus Annexes A/B/C/F takes effect.
- TBC 2018 - Draft Annexes D & E policy objectives and potential milestones.

Remote tower awareness material and education activities

6.2 The CAA is in the process of developing remote tower-related web content which will be available in due course.

Chapter 7

Miscellaneous

- 7.1 Stakeholders are asked to indicate whether they will consider introducing an aerodrome remote tower in the foreseeable future.
- 7.2 EASA is expected to launch consultation to further develop their AMC/GM regarding aerodrome remote towers. Although UK policy for remote towers will be influenced by this NPA the current consultation should be considered separately from the EASA consultation and stakeholders should respond to both.

Chapter 8

Summary

- 8.1 It is the CAA's intent to introduce policy related to the approval of aerodrome remote tower facilities in the UK in early 2018. The CAA will publish the outcome of the consultation on conclusion and will further develop web related content on the subject matter for affected stakeholders.
- 8.2 Affected stakeholders are invited to comment on the draft policy by 26 January 2018.

APPENDIX A**CAP 670 Approval and Technical Requirement Changes**

CAP 670 will be amended as follows:

A. Part B Section 2 ATC 04: Remote Tower Operations

- a. ATC04.1 ANSPs considering the implementation of Remote Tower operations are reminded of the requirements within Part A paragraphs A88-A92 for Change Notification, in particular A90 in regard to major changes.
- b. ATC04.2 ANSPs shall consider the guidance included within: [ED Decision 2015/014/R of 3 July 2015 Guidance Material on the implementation of the remote tower concept for single mode of operation.](#)

B. Part C Section 6: Remote Tower Optical Systems (RTOS)

- a. RTOS01.1 ANSPs employing optical systems shall specify System Performance Requirements including Detection and Recognition Range Performance, Video latency, Video Update Rate, Video Failure Detection time, Point Tilt Zoom (PTZ) Function Control Latency, PTZ Function Movement Speed, and Time Synchronisation.
- b. RTOS01.2 EUROCAE Document ED-240 'Minimum Aviation System Performance Specification for Remote Tower Optical Systems' provides guidance in developing these requirements and in verifying compliance.
- c. RTOS01.3 ANSPs should consider Point and Zoom (PTZ) functionality using guidance from the EASA 'Guidance Material on the Implementation of the Remote Tower Concept for Single Mode Of operation'.
- d. RTOS01.4 The recording of the Visual Presentation Screens and aerodrome ambient audio is recommended. Where the overlay and/or integration of surveillance data is used (in Replication Plus mode) the recording of the screens shall comply with the requirements for At-The-Glass (ATG) Surveillance data contained in CAP 670 SUR10.

C. Part C Section 1: COM 02

- a. COM02.36 will be updated to include data communications equipment used for links between VHF radio systems and the Voice Switch equipments (for example as part of remote tower modules) within the definitions of main, contingency and emergency equipment.