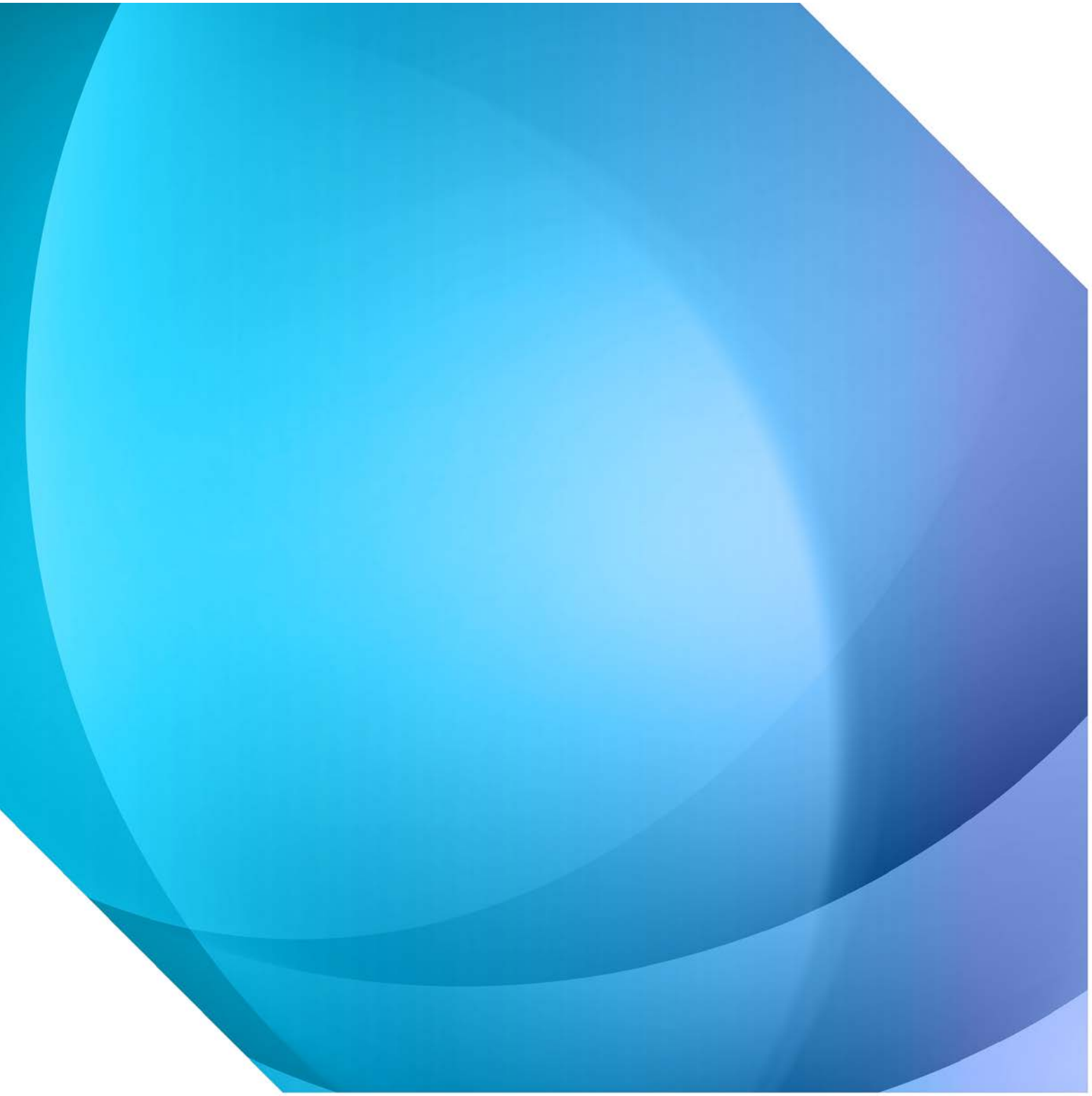
Civil Aviation Authority

Review of CAA policy on the training, qualification and licensing of Flight Information Service Officers

CAP 1669



Published by the Civil Aviation Authority, 2018

Civil Aviation Authority
Aviation House
Gatwick Airport South
West Sussex
RH6 0YR

First published 2018

The latest version of this document is available in electronic format at: www.caa.co.uk

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Abbreviations

A

ABES	Abnormal and emergency situations
ACC	Area control centre
AFI	Aerodrome flight information – Instrument rating
AFISO	Aerodrome flight information service officer
AFIS	Aerodrome flight information service
AFV	Aerodrome flight information – Visual rating
AGCS	Air ground communication service
ALARP	As low as reasonably practicable
AMS	Apron management service
ANS	Air navigation service
ANSP	Air navigation service provider
APC	Assessment of previous competence
ATC	Air traffic control
ATCO	Air traffic controller
ATM	Air traffic management
ATS	Air traffic services

C

CAA	Civil Aviation Authority
CAP	Civil aviation publication
CFIT	Controlled flight into terrain

D

DfT	Department for Transport

E

EASA	European Aviation Safety Agency

EU	European Union

F

FAS	Future Airspace Strategy
FIS	Flight information service
FIS	FIR Flight Information Service rating
FISO	Flight information service officer

G

GA	General aviation

H

HF	Human factors

I

IAP	Instrument approach procedure
ICAO	International Civil Aviation Organisation
IFISA	International Flight Information Service Association
IFR	Instrument flight rules

N

NPA	Notice of proposed amendment

O

OJT	On the job training
OJTI	On the job training instructor

P

PANS-ATM 4444)	Procedures for air navigation services – air traffic management (ICAO Doc
PBR	Performance based regulation
PPR	Prior permission required

R

RAF	Royal Air Force

RMT	Rulemaking task
RMZ	Radio mandatory zone
RN	Royal Navy
ROCC	Radio operator's certificate of competence

S

SARG	Safety and Airspace Regulation Group (of the CAA)
SARPS	Standards and recommended practices
SERA	Standardised European Rules of the Air
SSC	Shared Services Centre
STDI	Synthetic training device instructor
SUR	Surveillance rating endorsement

T

TMZ	Transponder mandatory zone

U

UCS	Unit competence scheme
UTP	Unit training plan

V

VFR	Visual flight rules

Executive Summary

Fundamentally, CAA policy on the training, qualification and licensing of flight information service officers (FISOs) has changed little since around 1979. Yet, by contrast, the arrangements for air traffic controllers (ATCOs) have been subject to continued evolution; seeing them adopt new technologies and ways of working in parallel with advances in the wider aviation industry they serve. This evolution in aviation is particularly evident in General Aviation (GA) – the primary user of air traffic services provided by FISOs – where major advances have been made in aircraft design, systems and products for the use of GA pilots.

Driven by a number of factors, not least requests from industry for change and the growing demand for widespread airspace modernisation, the CAA has undertaken a review of its FISO licensing arrangements. The primary objective of this 'FISO Review' has been to scrutinise CAA policy and, if necessary, to develop concepts for the future which we could consult upon with industry. The purpose of any future change would be to ensure that FISO licensing arrangements can adapt to the future needs of the UK's ATM system and facilitate UK airspace modernisation.

In this document, we make the argument for change and propose concepts that we believe could form the basis of future CAA policy. We believe that the potential benefits which would be afforded by adopting the concepts proposed herein reach far beyond the nature of the operational and administrative changes themselves. These concepts also need to be seen in the wider context of the opportunities and overall system benefits posed by airspace modernisation activity in the UK.

It is important to stress that, through this consultation, we are gathering information and opinions from our stakeholders that we will use in the next stage of policy development. These are not yet firm policy proposals and we are not yet committed to the kind of wholesale change that adoption of all the concepts described herein would represent.

Nor are these proposals about 'forcing' a wholesale change of processes and procedures on industry. The concepts that we propose in this document are there because we believe that they're appropriate, pragmatic and the right thing to do to achieve our objectives. The most important of these being to ensure that FISO licensing arrangements can adapt to the future needs of the UK's ATM system and facilitate UK airspace modernisation.

As such, we seek the views of our stakeholders in order to shape the future of FISO licensing policy in the UK and to determine our next steps in the development of that policy.

Chapter 1 - Introduction

Background

1. The CAA first issued policy on the licensing of flight information service officers (FISOs) in 1979 through CAP 427. Whilst CAA policy has been amended since 1979 – seeing CAP 427 replaced in May 2013 by CAP 1032 – the fundamental training, qualification and licensing criteria, systems, processes and procedures appear to have changed little over this time.

2. By contrast, the arrangements for air traffic controllers (ATCOs) have been subject to continued evolution; seeing them adopt new technologies and ways of working in parallel with advances in the wider aviation industry they serve. Adoption of new technology is equally evident in General Aviation (GA) – the primary user of air traffic services (ATS) provided by FISOs – where major advances have been made in aircraft design, systems and products for the use of GA pilots[1]. In a move reflected internationally, we have also seen a growth in ATS provision by FISOs in the UK, particularly at aerodromes. However, as stated, the training, qualification and licensing criteria, systems, processes and procedures which underpin this ATS provision have changed little since 1979.

3. The Government is clear about the importance of ensuring a long-term strategic vision for the GA sector that helps it to realise its full economic potential[2] and published its strategic rationale for the UK's plan to modernise its airspace[3]. In support of these, we need to ensure that those who provide ATS, particularly to the GA sector, need to have the right knowledge, skills and supporting processes and procedures to back this vision.

4. In early 2016, the Association of UK FISOs submitted their analysis[4] of CAA FISO licensing policy to the CAA. This provided the initial impetus for the CAA to undertake a more formal review of its policy relating to the training, qualification

[1] *UK GA Sector in crisis*, L Price FRAes, Royal Aeronautical Society, September 2017.

[2] *Beyond the horizon, the future of UK aviation, next steps towards an Aviation Strategy*, HMG, April 2018.

[3] *Upgrading UK airspace, strategic rationale, moving Britain ahead,* HMG, February 2017.

[4] The Association of UK FISOs conducted an in-depth review of CAP 1032 Aerodrome FISO Licensing in summer 2015, making a series of requests for change to the CAA including the standardisation, where practicable, of ATS licensing arrangements; the introduction of licence endorsements for language proficiency, assessors and on-the-job training instructors; the introduction of a requirement for a unit training plan and unit competence scheme; the provision of training and guidance material for instructors and assessors; the development of fatigue risk management policy applicable to FISOs; and, the introduction of training in human factors and abnormal and emergency situations.

and licensing of FISOs; with a number of other 'drivers for change' becoming evident.

Drivers for change

5. Demand for air travel has grown strongly in recent decades, and the Government expects that demand will continue to rise significantly between now and 2050[5]. Growth in demand for air travel means increasing pressure on our airspace which, in turn, is driving a need to undertake wide-ranging modernisation activity. We need to ensure that FISOs, air navigation service providers (ANSPs) and users of these services can operate within a modern air traffic management (ATM) system and exploit the opportunities posed by modernisation.

6. As the availability of new technology has improved and the associated costs reduced, demand for instrument approach procedures (IAPs) at aerodromes with non-instrument runways has increased. We need to ensure that FISOs are equipped with the knowledge and skills required to facilitate the conduct of such approach procedures.

7. European rulemaking activity on Implementing Regulation (EU) No 2017/373 (ATM/ANS Common Requirements Regulation) Annex IV 'Part-ATS' includes organisational and technical requirements on aerodrome FIS (AFIS) and has highlighted areas where UK airspace and ATS provision in Class G airspace has developed in a bespoke manner that differs from many parts of the world, including the rest of Europe. As such, implementation of 'Part-ATS', and the ICAO Standards and Recommended Practices on which it is based, presents significant implications for ATS provision and the application of the airspace classification system within the UK.

8. There is an international shortage of ATCOs and an emerging risk of a shortage of FISOs in the UK. As a career choice, ATC has limited visibility within the employment market[6] and, in the UK, a FISO much less so; NATS have identified that 85% of 16 to 25 year olds have never considered a career in aviation[7]. There is limited career progression available for FISOs due to the nature of the licensing structure and there being no recognition of their training and experience in the attainment of an ATCO's licence. FISOs will continue to play important roles in the future of the UK's ATM system and thus it is critical that ANSPs can attract and retain the right people with the right skills.

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[5] *Beyond the horizon, the future of UK aviation, next steps towards an Aviation Strategy*, HMG, April 2018.

[6] *Marc Baumgartner, President and CEO International Federation of Air Traffic Controllers' Association (IFATCA)*, International Airport Review, June 2005.

[7] https://twitter.com/i/web/status/1025480184647036930

9. The training and qualification of FISOs employed at the UK's area control centres (ACCs) – so called 'Area' FISOs – is managed and overseen by the CAA through the respective unit's training plan and competence schemes. Whilst the CAA issues licences to these FISOs based on evidence provided by the ANSP, criteria have not been established on which such licensing decisions are made; this is incorporated within the respective unit's management system. The CAA believes that this should be addressed.

10. There is significant complexity in the systems, processes and procedures in use within the CAA's Shared Services Centre (SSC) for the licensing of FISOs. This leads to confusion for FISOs, FIS ANSPs and CAA staff; can cause delays in the processing of licence applications; and make it difficult to search through the CAA's records of licence holders. FISOs, like ATCOs, provide ATS and it is reasonable to argue that the licensing arrangements for such personnel should be the same, except where a difference can be justified by a difference in their role. This mirrors the principle adopted elsewhere in the world, particularly in the rest of Europe and North America.

11. Other international activity is being undertaken that, to a greater and lesser extent, will affect FISOs in the UK. ICAO are in the final stages of developing a new Manual of AFIS which will see the withdrawal of the outdated[8] Circular 211 and will include guidance on training and competency requirements for FISOs. The European Aviation Safety Agency (EASA) has acknowledged a need to standardise adequate competence and training requirements for FISOs and that rulemaking on FISO licensing is likely in the future. Finally, the International Flight Information Service Association (IFISA) has stated that one of its objectives is to gain recognition of FISOs within ICAO Annex 1 Personnel Licensing, and has recently initiated a working group to facilitate this.

Objectives of the FISO Review

12. The objective of the CAA's review was to scrutinise policy on the training, assessment and licensing of FISOs and, if necessary, to develop concepts for the future direction of CAA policy on which we could consult with industry. The purpose of any future change to CAA policy should be to:

- contribute to the development of a fundamentally safer system, and/or maintain current levels of safety in order to deliver benefits in other areas;

[8] Circular 211-AN/128 was published in 1988 following the consideration by the Air Navigation Commission of a study undertaken by the Secretariat. This study had identified that AFIS was being provided "on a growing scale" and that "there was a definite need for a service between aerodrome control service and no service at all".

- ensure that FISO licensing arrangements facilitate UK airspace modernisation and can adapt to the future needs of the UK's ATM system; and,
- anticipate any future European rule making activity or development of ICAO Annex 1 'Personnel Licensing' with regards to FISO licensing.

Scope of the FISO Review

13. The scope of the CAA's review was all aspects of the training, qualification and licensing of FISOs and their regulatory oversight by the CAA. In addition, the following aspects have been considered:

- The limitations currently placed on the privileges associated with a FISO licence in the UK; specifically, that FISOs are limited to the provision of FIS in uncontrolled airspace alone and that the use of an ATS surveillance system to supplement the FIS is not permitted.
- In their review of CAA FISO licensing policy, the Association of UK FISOs requested that the CAA consider the development of fatigue risk management (FRM) policy for FISOs.
- Acknowledging that any potential changes to the FISO licensing structure would result in changes to the types of licence applications made, this would necessitate an amendment to the wording of the CAA Scheme of Charges to ensure that they are aligned.
    - It is our intention to propose the types of licence applications that may be established in the future, which would thus inform the wording of the scheme of charges, and to seek the views of industry on them. These views, alongside information gathered from focussed consultation questions, will be used to inform the next phase of policy development. In the future, we may also need to propose and consult upon corresponding changes to charges to ensure that full cost recovery is achieved in line with the requirements for the CAA under the Civil Aviation Act; however, this will be achieved through our routine consultative mechanism on statutory charges.

Why are we consulting?

14. Having undertaken its review of FISO licensing policy, the CAA has developed concepts which we believe address both the drivers for change and the issues identified in the review. These are not yet firm policy proposals – they should be seen more as a 'roadmap' or 'green paper' – and we are not yet committed to the kind of wholesale change that adoption of all the concepts described herein will represent. We now seek information and opinions from our stakeholders that we will use to inform the next stage of policy development.

Next steps

15. Subject to the outcome of this initial consultation, the project plan for the FISO Review anticipates a four-phase approach:

- Initial development – May 2017 to December 2018. Consists of stakeholder identification, literature review, concept development and discussion and consultation with industry on these future concepts for CAA policy.
- Detailed development – January 2019 to February 2020. Develop CAA consultation response document. Develop CAA policy options and supporting documentation to initiate formal consultation on the proposals.
- Implementation – March 2020 to January 2022. Development and publication of the consultation response document and CAA decision; finalisation and publication of policy documents; publication of revised Scheme of Charges; development and finalisation of any software support tools and licensing processes. A phased implementation is considered likely, with some elements extending beyond January 2022.
- Post-implementation review.

Chapter 2 - The FISO Review

Review of 'good practice'

16. The first stage of the review was to identify and analyse 'good practice' from around the world which related, either directly or indirectly, to the licensing of FISOs. Relevant provisions from ICAO, EUROCONTROL, the EU and a number of European states were examined. Whilst many of these provisions relate directly to the licensing of aerodrome FISOs, significant parallels also exist with the licensing of 'area' FISOs.

17. The next stage was to undertake a comparative analysis between these provisions and existing UK FISO licensing requirements. This analysis identified that UK licensing policy for aerodrome FISOs differs from ICAO and EUROCONTROL guidance in that the UK does not currently require:

- Applicants for a FISO licence to successfully complete an approved training course;
- The CAA to approve a formal course of training for aerodrome FISOs;
- 'On the job training' (OJT) at an AFIS unit to be based upon a unit training plan approved by the CAA;
- An ICAO Language Proficiency assessment for aerodrome FISOs, nor specify that Level 4 (Operational) is the minimum proficiency required;
- OJT to be conducted by a nominated OJT instructor (OJTI) who holds an OJTI licence endorsement;
- OJTIs to successfully complete an approved OJTI course; and
- a minimum level of operational experience of the OJTI at the unit where they will exercise the privilege of the OJTI qualification.

18. In undertaking this comparative analysis, it became apparent that whilst the CAA issues licences to FISOs employed at the ACCs based on evidence provided by the ANSP, criteria on which such licensing decisions are made has not been established; these arrangements are detailed within the respective unit's management system and approved by the CAA through its oversight of the ATS unit.

19. Whilst FISOs are outside the scope of ICAO Annex 1, the Standards and Recommended Practices (SARPs) therein represent 'good practice' in terms of personnel licensing. It states that the Licensing Authority, in this case the CAA, should specify the licensing criteria and other requirements for the issue of a

licence[9]. Therefore, the CAA should specify the criteria against which a licence is issued to 'area' FISOs. Moreover, the CAA sees benefits in prescribing licensing requirements and a licensing structure that is common to all FISOs which would provide clarity, parity across the 'specialisation' and, potentially, opportunities for movement within the employment market. As such, this has become one of the 'drivers for change' within the project.

20. The final stage in reviewing existing 'good practice' was a comparison of the licensing arrangements for UK ATS personnel (FISOs and ATCOs). This identified that significant differences exist between the processes associated with the two which are not justified by the differences between the role of a FISO and an ATCO. Key areas of difference are:

- **Licence format and terminology.** ATCO licences contain licence endorsements, ratings, rating endorsements and unit endorsements. FISO licences are issued to authorise the provision of FIS at either an aerodrome or an ACC – which is akin to a rating - and is then validated at a unit – akin to a unit endorsement. Given the different terminology, the format of the FISO licence differs significantly from that of the ATCO's licence. The use of different terminology and the different licence format causes confusion for Inspectors ATS and SSC personnel.
- **CAA licensing process.** Currently, the processes and systems used by the SSC to process and store FISO licence applications and ongoing licence 'maintenance' activity differ from that used to process ATCO licence applications. The system used to process and record FISO licence applications and ongoing 'validation' activity is considered by SSC staff to be onerous and confusing.
- **Validation Assessment and ongoing competence.**
  - The licence validation and arrangements for the ongoing assessment of competence of FISOs employed at the ACCs is addressed solely through the respective unit's competency schemes (UCS).

[9] ICAO Annex 1 paragraph 4.1.1 states that "before being issued with any licence or rating…[applicants other than flight crew members] shall meet such requirements in respect of age, knowledge, experience and where appropriate, medical fitness and skill, as are specified for that licence" and that "an applicant…shall demonstrate, in a manner determined by the Licensing Authority, such requirements of knowledge and skill as are specified for that licence or rating".

- The arrangements for the licence validation of aerodrome FISOs are detailed within CAP 1032, with initial validation assessments being undertaken by CAA Inspectors (ATS) and the biennial re-validation assessment being undertaken by local AFIS Assessors (where appointed) or by CAA Inspectors (ATS). However, currently, the CAA provides no guidance on the conduct of such assessments. AFIS Assessors are approved by the CAA subject to certain conditions specified in CAP 1032 Appendix C. There are similarities in these conditions to those specified for ATC assessors; however, there are fundamental differences. There is no requirement for AFIS Assessors to have successfully completed an approved assessor course, nor to hold an Assessor licence endorsement.

- **Availability of guidance material.** A significant volume of material[10] is published by the CAA relating to ATCO training but this is not the case for FISOs. CAP 1032 Aerodrome FISO Licensing includes a syllabus for the licensing examinations and validation assessment but does not stipulate performance criteria. CAP 653 Standards for FISOs Part A provides performance criteria for FISOs employed at ACCs; however, whilst listed as current on the CAA website[11], it has not been amended since its initial issue in September 1995 and is not considered up to date by industry.

- **Composition of Training.** ATCO licensing regulations contain requirements for the provision of 'continuation training' which is designed to maintain the validity of the endorsements of the licence[12] and consists of:

  - Refresher training which is designed to review, reinforce or enhance the existing knowledge and skills of the ATCO; and,

  - Conversion training which is designed to provide knowledge and skills appropriate to a change in the operational environment, when the safety assessment of the change concludes the need for such training.

  At all stages of ATCO training, there is a requirement to deliver training in abnormal and emergency situations (ABES) and human factors (HF). The purpose of ABES training is to prepare ATCOs to recognise specific emergency and abnormal situations and to react appropriately and manage their impact on the overall operation. The purpose of HF training is to

[10] CAP 1251 Air Traffic Controllers – Licensing; CAP 584 Air Traffic Controllers – Training; the CAP 624 series Air Traffic Controllers – Performance Objectives and CAP 794 Air Traffic Controllers – Initial Performance Objectives; CAP 745 Aircraft Emergencies: Considerations for Air Traffic Controllers.

[11] http://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=172

[12] Reg (EU) No 2015/340 Annex I Section 1 ATCO.D.005(a)(3).

develop the awareness and skills of the ATCO in relation to team resource management, fatigue management and stress management.

At present, there are no provisions requiring FISOs to undertake 'continuation training', or training in ABES and HF. The CAA considers that it would be appropriate to provide these types of training to FISOs.

- **Assessment of previous competence.** The CAA often receives licensing enquiries from holders of FISO licences who have not exercised the privileges of that licence for many years and are seeking advice on how they might re-validate that licence. CAA staff are then required to undertake an ad-hoc assessment of the individual's case to determine what requirements must be fulfilled. This issue is addressed in ATCO licensing through the conduct of an assessment of previous competence (APC)[13] which determines whether the holder of the licence continues to satisfy the requirements relevant to the rating/s held on that licence.

Comparison of existing FIS related operational provisions

21. The final stage of the FISO Review was to examine existing FIS related operational provisions in light of the concepts being developed as part of UK airspace modernisation activity.

UK limitations on the privileges associated with a FISO licence

22. From an ICAO perspective, an ATCO is an individual licensed and rated to provide an ATC service, alongside a FIS and an Alerting Service. Whilst the licensing of FISOs is outwith the scope of ICAO Annex 1, it follows that a FISO is an individual who provides a FIS and may be licensed to do so. Currently, UK FISOs are not permitted to provide a FIS in Class E airspace, nor to utilise an ATS Surveillance System to supplement the provision of FIS[14]. However, ICAO Doc 4444 PANS-ATM 8.11.1[15] states that the information presented on a situation display may be used to provide specific types of information to identified aircraft that are in receipt of a FIS.

23. It is anticipated that the implementation of Regulation (EU) No 2017/373 and other work to modernise UK airspace will prompt changes in airspace design and

[13] ATCO.B.001(d), ATCO.B.005(e) and ATCO.B.010(b) and associated AMC refer.

[14] Flight Information Displays (FIDs) are used by FISOs at the London and Scottish ACCs to assist in the reduction and prevention of airspace infringements and as an additional resource tool for carrying out the FISOs task at these units. The use of FIDs is subject to CAA approval and locally derived procedures but is not used as an ATS surveillance system in its 'traditional' sense.

[15] It is anticipated that PANS-ATM 8.11.1 will be transposed into European Law through Annex IV 'Part-ATS' to the ATM/ANS Common Requirements Regulation on a date which is yet to be determined but is proposed as 27 January 2022.

classification and ATS provision within the UK, such that ATC service is provided only within controlled airspace and that greater use may be made of Class E airspace. This presents opportunities for FISOs to be utilised in the provision of FIS to a greater extent than today. In this document, we will present a concept of how the CAA considers that this may be achieved and we seek the views of our stakeholders in order to inform the next stage of policy development.

Chapter 3 - Approach to concept development

Introduction

24. The case for change is made earlier in this document and the requirements of airspace modernisation and harmonisation with international requirements are foremost amongst these. However, having conducted the review of 'good practice' and existing FIS related operational provisions, we needed to determine whether it would be appropriate or proportionate to develop proposals to address the issues identified.

25. The CAA determined that 2 courses of action were open to us in order to address the issues identified by the review; we could:

- Develop concepts which would seek to address only those requirements resulting from our international obligations, i.e. 'the essentials'; or,
- Develop concepts that would address all the drivers for change and those issues identified in the review of 'good practice' and existing FIS related operational provisions.

'The essentials'

26. The aviation industry is usually the bearer of costs when implementing change and thus change has a direct effect on business. Through its Better Regulation principles[16], the CAA is required to ensure that our policy proposals are prepared to take account of the value, costs and benefits of alternative options for all stakeholders. Moreover, the CAA is committed to developing policy proposals which do not exceed the requirements of our international obligations[17]. On that basis, the CAA could focus its attention on only 'the essentials' which stem from those international obligations.

27. In reality however, given that the licensing of FISOs is, currently, subject to national arrangements, this could mean that we make no change as there is no obligation that compels us to adopt the 'good practice' published by ICAO and EUROCONTROL. The CAA do not believe that this would be an appropriate course of action for the following reasons:

[16] CAA website Better-Regulation principles.

[17] *CAA response to the GA Red Tape Challenge CAP 1123*, CAA, November 2013.

- We need to ensure that FISOs and FIS providers are able to exploit the opportunities presented by a modernised air traffic management (ATM) system and the anticipated 'system wide' benefits which may be accrued through more fundamental change;
- The review has identified a significant number of differences between CAA FISO licensing policy and the 'good practice' recommended by ICAO and EUROCONTROL;
- There is a growing gap between the requirements of the users of the service provided by FISOs and the knowledge/skill requirements set by the CAA for UK FISOs; for example, in relation to IAPs. This contrast is also evident when we compare these requirements and the way in which UK FISOs are utilised with the licensing arrangements and utilisation of FISOs elsewhere in the world, particularly in the rest of Europe; and,
- importantly, the FISO industry is itself pressing for change to their licensing arrangements.

28. Change within FISO licensing arrangements provides a real opportunity to enable fundamental improvements to the way in which ATS are delivered within the UK in the future. The CAA seeks the views of its stakeholders on this course of action but it is not our preferred option.

The CAA's preferred option

29. The CAA's preferred option is to develop concepts which we can propose for the consideration of our stakeholders and that would address the drivers for change, and those issues identified in the review of 'good practice' and existing FIS related operational provisions. The rationale is clear. We wish to ensure that FISO licensing arrangements facilitate UK airspace modernisation, can better adapt to the future needs of the UK's ATM system and provide an infrastructure that supports industry, not least GA[18] and particularly recreational aviation as the prime customer of ATS from FIS providers.

In Chapter 4, we describe the concepts that the CAA has developed and, through the online consultation tool, we invite our stakeholders to comment on these. It is important to stress that, through this consultation, we are gathering information and opinions from our stakeholders that we will use in the next stage of project development. These are not yet firm policy proposals and we are not yet committed to the kind of wholesale change that adoption of all the concepts described in Chapter 4 will represent. That said, a number of the concepts are closely linked with each other and thus could not be implemented in isolation; for example, the concept of a form of 'credit' towards the attainment of an ATCOs

[18] *General Aviation Strategy*, HMG March 2015.

licence cannot be achieved without the introduction of a formal, approved course of initial training[19].

[19] Initial training comprises basic training and rating training.

Chapter 4 – Future concepts

Introduction

30. As stated in Chapter 3, the CAA's preferred option was to develop concepts which we could propose for the consideration of our stakeholders that would address the drivers for change, alongside those issues identified in the review of 'good practice' and existing FIS related operational provisions in Chapter 2.

31. The concepts proposed by the CAA are described below.

Training, qualification and licensing proposals

32. Based on the principle that the licensing arrangements for ATS personnel should be the same, except where a difference can be justified by a difference in their role, the CAA aspires to base its future FISO licensing policy on the processes and procedures relating to the training, qualification and licensing of ATCOs[20]. The concepts which support this aspiration are detailed within Annex A and include proposals to:

- adapt the structure of licence, ratings and endorsements and the format of licence used in ATCO licensing and apply these to FISOs;
- introduce a language proficiency requirement in order to meet the intent of ICAO requirements;
- bring the licensing of FISOs employed at the ACCs into the scope of CAA policy;
- introduce a requirement for ab-initio FISOs to successfully complete an approved course of initial training at a training organisation which satisfies the CAA's requirements, prior to undertaking on-the-job training (OJT) at a unit;
- introduce a requirement for FIS units to operate an approved unit training plan (UTP) and that OJT is provided by instructors (OJTIs) who have themselves successfully completed an approved training course;
- introduce a requirement for FIS units to operate an approved unit competence scheme (UCS) and that the assessment of competence is undertaken by individuals (Assessors) who have successfully completed an approved training course;

[20] As detailed within Implementing Regulation (EU) No 2015/340 the 'ATCO-IR' and 'Air Traffic Controllers – Licensing' CAP 1251.

- introduce requirements for FISOs to undertake 'continuation training' and to receive training in abnormal and emergency situations (ABES) and human factors (HF);
- develop provisions which introduce the concept of an assessment of previous competence (APC) into FISO licensing.

33. Increased parity between the training, qualification and licensing provisions for all ATS personnel provides an opportunity to develop a clear path for career progression both as a FISO and between the roles of FISO and ATCO, with FISOs being able to demonstrate the attainment of prior competence in key areas of basic ATCO training. This will increase the visibility of the role of FISOs in the employment market, encouraging individuals to enter the industry and may serve to address, in part, emerging issues regarding shortages of both ATCOs and FISOs.

34. Furthermore, by basing future FISO licensing policy on the processes and procedures relating to the training, qualification and licensing of ATCOs, the CAA could achieve efficiencies in the licensing administration process by removing complexity associated with the use of different terms, processes and systems.

Expansion of FISO licence privileges

35. Currently, FISOs in the UK are not permitted to provide an ATS to VFR flights in Class E airspace, nor to use the information from an ATS surveillance system to supplement FIS. However, these limitations of the FISO licence are as much a function of the way in which FISOs are currently trained as they are about the balance of roles between ATS personnel in the UK and the way in which they're currently utilised.

36. Annex B provides greater details on the CAA's concepts for an expansion of FISO licence privileges to permit FISOs to:

- provide an ATS to VFR flights in Class E airspace; and
- utilise the information from ATS surveillance systems to support the provision of FIS.

The latter is dependent upon and supported by the development of appropriate materials for inclusion within initial courses of training.

37. As indicated in Chapter 2, the CAA anticipates that the implementation of Reg (EU) 2017/373 and other work to modernise UK airspace may present opportunities for FISOs to be utilised in the provision of FIS to a greater extent than today. The concepts described in Annex B could see UK FISOs utilised in similar ways to their counterparts in Denmark and Germany and elsewhere in Europe who provide surveillance based FIS to VFR flights in Class E airspace.

38. Importantly, whilst the CAA propose to enable the use of ATS surveillance systems by FISOs, the employment of such systems in the provision of FIS will continue to be determined by industry, subject to CAA approval through our normal oversight mechanisms. It is envisaged that an industry identified need to utilise ATS surveillance systems will subsequently drive the development of the required rating endorsement and unit endorsement training courses.

Licence application types

39. If the revised training and licensing concepts are adopted, so licence applications would change which would, in turn, require the wording of the CAA's Scheme of Charges to be amended to ensure that they were aligned.

40. More significantly, the wording of the current CAA Scheme of Charges (as it relates to the licensing of FISOs) is a source of frustration to FIS providers, the CAA's licensing administration staff and ATS Inspectors alike. It is complex, which can lead to errors in processing by ANSP and CAA staff, and the types of applications – for example, "the naming of a place, or any additional place in a FISO licence" – differ significantly from those related to the licensing of ATCOs.

41. By adapting the structure of licence, ratings and endorsements used in ATCO licensing and applying these to FISOs, we can achieve efficiencies in the licensing administration process through the adoption of a common terminology. In turn, this would be reflected in licence applications and, consequently, the wording of the Scheme of Charges.

42. Annex C details the CAA's concepts for the licence application types that we believe could be established in the future and that would, in turn, necessitate an amendment to the wording of the Scheme of Charges. It is important to note that these proposals need to be read in the context of the licensing proposals in Annex A.

43. The charges associated with the licence application types are outside the scope of this project; our focus here is the proposals on future FISO training, qualification and licensing concepts. Any future engagement on the charges themselves would be conducted through the CAA's long-established practice of annual consultation which commences in mid-November, with the revised Scheme of Charges taking effect from the following 1 April.

Fatigue risk management

44. In their review of CAA FISO licensing policy, the Association of UK FISOs asked the CAA to consider the development of FRM policy for FISOs.

45. Fatigue is an inevitable hazard in the around-the clock aviation environment, naturally degrading various types of human performance[21]. FRM refers to the methods by which ATS providers and operational personnel address the safety implications of fatigue, and the needs of an FRM system (FRMS) differ between ATS providers. As such, an FRMS requires a performance based, rather than prescriptive approach to policy development. However, it is worth highlighting that future ICAO[22] and EU[23] requirements on FRMS are applicable to ATC service providers alone.

46. The CAA is of the view that, should it be determined that FRM policy for FIS providers is required, it is likely that the ICAO and EU provisions would form the basis of such a policy. We invite stakeholders to share with us their thoughts on the need for FRM policy for FIS providers and the potential content of such policy. This feedback will be used to inform any future phase of policy development.

[21] Fatigue Management Guide for Air Traffic Services Providers CANSO, ICAO and IFATCA, First Edition 2016 which supplements ICAO Doc 9966 Manual for the Oversight of Fatigue Management Approaches.

[22] Amendment 50 to ICAO Annex 11 applicable 5 November 2020, and ICAO Doc 9966 Manual for the Oversight of Fatigue Management Approaches Second Edition 2016.

[23] Reg (EU) No 2017/373 Annex IV ATS.OR.315 Fatigue and associated AMC/GM applicable 2 January 2020.

Chapter 5 - Conclusion

47. The fundamental training, qualification and licensing arrangements for FISOs have changed little since 1979. Yet, by contrast, those for ATCOs have evolved in parallel with advances in the wider aviation industry they serve. This evolution in aviation has included GA – the primary user of ATS provided by FISOs – where the adoption of new technology has become increasingly evident in the last 10 years.

48. The initial impetus for the CAA's review of FISO licensing arrangements came from work undertaken by the Association of UK FISOs but a number of other factors have combined that have indicated a need to undertake a fundamental overhaul of the training, qualification and licensing requirements for FISOs.

49. The need for airspace modernisation in the UK and the international ATM requirements which underpin this has highlighted areas where UK airspace and ATS provision in Class G airspace has developed in a bespoke manner that differs from many parts of the world and now needs to converge with international practise. We need to ensure that FISOs, FIS providers and users of these services can operate within, and exploit the opportunities posed by, a modernised ATM system. FISOs will continue to play important roles in that future system and thus it is critical that ANSPs can attract and retain the right people with the right skills.

50. If accepted, the implementation of the concepts proposed represents a significant shift in UK FISO licensing arrangements and may pose some challenges in their implementation. However, the potential benefits afforded by such changes reach beyond the nature of the operational and administrative changes themselves and may have positive socio-economic effects. They also need to be seen in the wider context of the opportunities posed by the UK airspace modernisation programme and the overall system benefits that may be accrued.

51. The CAA perceives that the opportunities and benefits that can be realised through the adoption of the proposed training, qualification and licensing concepts would allow us to:

- develop FIS provision, particularly at aerodromes, which in turn will facilitate the aims of the DfT's GA Strategy;
- provide opportunities to increase the utilisation of FISOs which may, over time, permit the focus of ATCO resource on controlled airspace tasks;

- recognise elements of FISO basic training as attainment of previous competence towards obtaining an ATCOs licence;
- develop arrangements for the recognition of FISO licences from other States, thus mitigating the emerging risk regarding shortages of FISOs;
- increase our level of harmonisation with international 'good practice';
- assist in the establishment of a clear distinction between ATC service, FIS and the 'sub-FIS' environment;
- provide opportunities for FIS providers to offer additional services;
- remove the requirement for FISOs to successfully complete the written examination and practical assessment for the issue of an Air-Ground Communication Service (AGCS) Radio Operator's Certificate of Competence (ROCC) and thus remove the associated negative learning;
- increase efficiency and reduce complexity within CAA ATS licensing processes through:
    - the withdrawal of CAA FISO licensing examinations;
    - the introduction of common ATS licensing processes, procedures and terminology; and
- respond to industry requests for change.

52. These proposals are not about 'forcing' a wholesale change of processes and procedures on industry. The concepts that we propose in this document are there because we believe that they're appropriate, pragmatic and the right thing to do to achieve our objectives. The most important of these being to ensure that FISO licensing arrangements facilitate UK airspace modernisation and can adapt to the future needs of the UK's ATM system.

53. As such, we seek feedback from our stakeholders in order to shape the future of FISO licensing policy in the UK and to determine our next steps in the project. We invite and welcome the views of industry in answering the questions posed in the online consultation tool.

Annexes and appendices

Annex

A. FISO Training, Qualification and Licensing Concepts.
B. Limitations on the privileges associated with a FISO licence.
C. Licence application types.

Appendices to Annex A

1. Proposed licensing structure for FISOs.
2. Discussion on the proposal for ab-initio FISOs to undertake an approved course of initial training.
3. Overview of proposed technical subjects and topics for FISO basic training course.
4. Overview of proposed technical subjects and topics for FISO rating training phase.
5. Language proficiency endorsement.
6. Unit training.
7. Proposed transitional arrangements.

Annex A: FISO training, qualification and licensing concepts

Introduction

A1 In Chapter 2, we identified and analysed 'good practice' from around the world which related, either directly or indirectly, to the licensing of FISOs. Noting the differences between this 'good practice' and UK FISO licensing arrangements, in Chapter 4, we proposed outline concepts which could form the basis of future CAA policy. In doing so, we highlighted our aspiration to base future FISO licensing arrangements on those for ATCOs and the benefits that could be achieved from doing this. In this Annex and its associated appendices, we will describe these concepts in greater detail.

Concepts

A2 The CAA invites the views of and comments from stakeholders on the following concepts:

Licensing

A3 The current format of the FISO licence cannot support the development of additional 'qualifications' associated with the licence and is thus unable to adapt to the future needs of the UK's ATM system. We propose to adapt the ATCO licence format and structure and apply these to FISOs through the development of licence endorsements, ratings and rating endorsements which are specific to the provision of FIS; an explanation of the proposed structure is contained in Appendix 1 to this annex.

A4 In order to maintain the alignment with the ATCO licence structure and to facilitate other proposals relating to the training of FISOs, the CAA proposes to introduce a student FISO licence and a FISO licence.

a. **Student FISO licence.** Holders of a student FISO licence will be authorised to provide FIS in accordance with the rating(s) and rating endorsement(s) contained in their licence under the supervision of an OJTI and to undertake training for rating endorsement(s). The student FISO licence will contain the language endorsement(s) and at least one rating and, if applicable, one rating endorsement. In order to be granted a student FISO licence, unless the applicant holds an acceptable exempting qualification (see paragraph A5 below), they would need to provide evidence that they:

- are at least 18 years of age;

- have successfully completed an approved course of initial training (comprising basic and rating training) at a training organisation which satisfies the CAA's requirements. A discussion on the proposal for applicants for a student FISO licence to undertake an approved course of initial training is contained in Appendix 2 to this annex;
- hold a valid medical declaration (see paragraph A6 below);
- have demonstrated proficiency in the English Language to at least Level 4 (see paragraph A7 below).

b. **FISO licence.** In addition to the privileges of a student FISO licence, holders of a FISO licence would be authorised to provide FIS in accordance with the ratings and rating endorsements of their licence, and to exercise the privileges of the endorsements contained therein. The FISO licence will be validated by the inclusion of one or more ratings and the relevant rating, unit and language proficiency endorsements for which the training was successful. Applicants for the first issue of a FISO licence would need to:

- hold a student FISO licence;
- have completed a unit endorsement course and successfully passed the appropriate examinations and assessments associated with that unit endorsement;
- hold a valid medical declaration;
- have demonstrated proficiency in the English Language to at least Level 4.

A5 At present, the CAA recognise exempting qualifications against specific aerodrome FISO licensing requirements for holders of an ATCO's licence, the holder of an RAF or RN air traffic control certificate of competence and the holders of a valid flight crew licence issued or recognised by the UK CAA. The CAA will develop proposals relating to licence exemptions during the detailed development phase of the project.

A6 In order to inform the detailed development phase of the project, the CAA invites its stakeholders to provide their views on medical requirements for FISOs through the online consultation tool.

A7 The assessment of English language proficiency is proposed to be undertaken as an element of the approved course of initial training. More detailed proposals relating to English language proficiency are contained in Appendix 5 to this annex.

A8 As stated in Chapter 2, the CAA often receives licensing enquiries which lead staff to undertake ad-hoc assessments of individual cases to determine what requirements should be fulfilled by the licence holder. In order to provide clarity on the process, to align with ATCO licensing principles[24] and, importantly, to complement the development of the scheme for FISOs to gain competence towards specific elements of basic ATCO training, the CAA will develop proposals to introduce an assessment of previous competence (APC) during the next phase of the project.

Training

A9 Appendix 2 describes the CAA's proposal and rationale for applicants for a student FISO licence to undertake an approved course of initial training. This course of initial training would establish a foundation of knowledge and skills which the student FISOs can build upon in the OJT phase, in order to ensure that FISOs are equipped with the knowledge and skills required to operate in the future. However, we then need to consider the delivery and consistency of this 'follow-on' OJT, to ensure that an individual's knowledge and skills remain current and that the individuals delivering training to FISOs are similarly equipped.

A10 In Chapter 2, we identified that there are differences between the current UK arrangements and international 'good practice' and this is reflected in industry's perception that deficiencies exist within the policies which guide unit training. Industry have identified a need to:

- provide formal training to and recognition of those individuals who deliver OJT to, and assess the practical skills of FISOs;
- require units to develop and maintain an approved unit training plan (UTP) and unit competence scheme (UCS); and,
- introduce requirements for FISOs to undertake continuation training and to receive training in ABES and HF.

A11 The CAA believes that it would be appropriate to introduce requirements to address these areas and greater detail on these proposals is contained in Appendix 6 to this annex. This will include details of the proposals to introduce:

- requirements for FIS units to develop and maintain a UTP and UCS;
- OJTI and Assessor licence endorsements;
- an approved course of training for OJTI and Assessor candidates; and
- introduce continuation training for FISOs.

[24] ATCO.B.001(d), ATCO.B.005(e) and ATCO.B.010(b) and associated AMC refer.

Transitional arrangements

A12 In order to facilitate stakeholder consideration of the proposed training, qualification and licensing concepts, we considered that it would be useful to describe the process by which the CAA may replace those FISO licences that were issued in accordance with the current arrangements[25]; this is contained in Appendix 7 to this Annex.

[25] CAP 1032 Aerodrome Flight Information Service Officer Licensing (as amended).

Appendix 1 to Annex A

Proposed licensing structure for FISOs

A.A1.1 The revised FISO licence may contain:

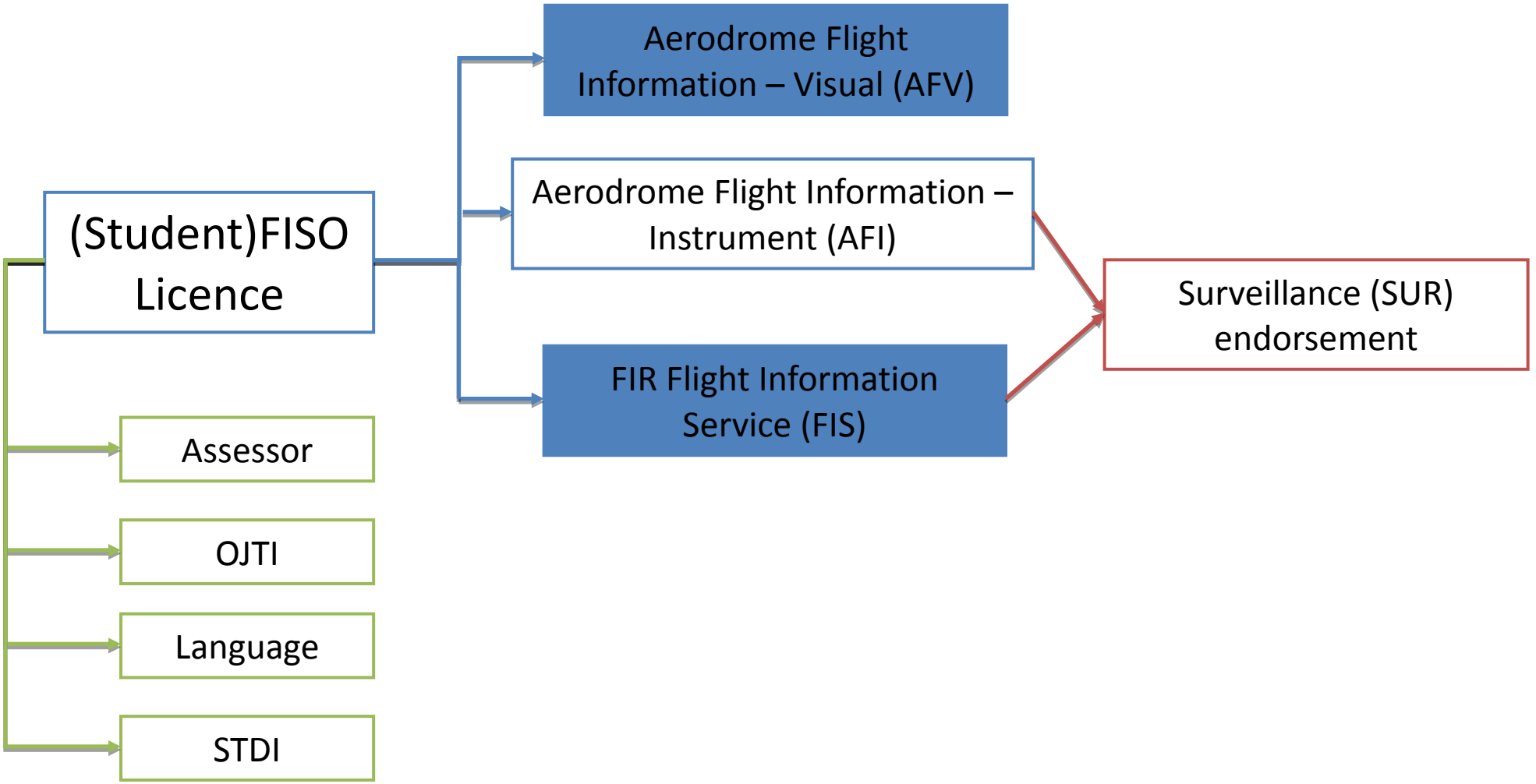
- **Flight information ratings.**
  - **Aerodrome Flight Information – Visual (AFV) rating.** Would entitle the holder to provide aerodrome flight information service in Class G airspace to transiting, arriving or departing aircraft at an aerodrome that has no associated published instrument approach or departure procedures.

    Note. *Subject to conditions specified locally and further concept development, this rating would also entitle the holder to provide aerodrome flight information service to aircraft operating within local flying areas of aerodromes contained within or adjacent to a control zone in accordance with extant arrangements.*
  - **Aerodrome Flight Information – Instrument (AFI) rating.** In addition to the privileges of the AFV rating, the holder of an AFI rating would be entitled to provide aerodrome flight information service at an aerodrome in Class G airspace that has associated published instrument approach or departure procedures.
  - **FIR Flight Information Service (FIS) rating.** Would entitle the holder to provide flight information service within a FIR, or part thereof, to aircraft flying in accordance with the Instrument Flight Rules or Visual Flight Rules in Class G airspace, or the Visual Flight Rules alone in Class E airspace.
- **Flight information rating endorsements.**
  - **Surveillance (SUR) endorsement.** The Surveillance (SUR) endorsement may be held with the AFI or FFV rating and would entitle the holder to utilise an ATS surveillance system to supplement the provision of a flight information service.
- **Licence endorsements.**
  - Assessor.
  - On-the-job training instructor (OJTI).
  - Synthetic training device instructor (STDI).
  - Language proficiency.

A.A1.2 **Validity Periods.**

- The Assessor, OJTI and STDI endorsements would be valid for a period of three years.
- Unit endorsements would be valid for a period defined in the unit competence scheme but does not exceed three years.
- Validity periods for the language proficiency endorsement(s) are detailed in Appendix 5 to this Annex.

A.A1.3 The proposed licence structure is represented diagrammatically below.



Appendix 2 to Annex A

Discussion on the proposal for ab-initio FISOs to undertake an approved course of initial training

Introduction

A.A2.1 Notwithstanding that FISOs are not recognised within ICAO Annex I Personnel Licensing and that the development of appropriate licensing provisions falls to the individual Contracting State, Annex 1 represents 'good practice' on which such national provisions should be based. Further examples of 'good practice' which relate to the training and qualification of FISOs exist within ICAO Circular 211 and the EUROCONTROL Manual of AFIS.

Background

A.A2.2 A review of current practise within other European and international states indicates that all require ab-initio FISOs to undertake some form of approved course of initial training prior to undertaking OJT. These range from, a 13-week course of initial training available from, for example, Entry Point North in Malmo, Sweden[26], to some states requiring ab-initio FISOs to undertake the entirety of the basic ATCO training course[27], prior to undertaking FISO specific rating training.

A.A2.3 Within the UK, 3 different 'models' currently exist for the training of ab-initio FISOs, prior to undertaking OJT at a unit.

- Ab-initios employed at the Swanwick and Prestwick ACCs undertake a 3-week course of initial training which includes:
  - Teaching and assessment relating to core subjects; Air Law, navigation, meteorology and FIS procedures;
  - Teaching and assessment of principles and delivery of radiotelephony; and
  - Practical teaching and assessment of FIS in a simulated environment.

[26] Training at Entry Point North includes 2 courses – basic training (8 weeks) and rating training of 5 weeks; details can be found here.

[27] As an example, the duration of the basic ATCO course at Global ATS Ltd is 9 weeks; at Entry Point North, it is 13 weeks.

- Ab-initios employed at aerodromes may self-study prior to undertaking the aerodrome FISO licensing examinations[28] set by the CAA and the written examination and practical assessment for the issue of an Air-Ground Communication Service (AGCS) Radio Operator's Certificate of Competence (ROCC).
- Some AFIS providers have determined that the self-study route is insufficient and their ab-initio FISOs undertake an aerodrome FISO training course[29] at an initial training organisation. The course is designed to meet both the syllabus objectives for the aerodrome FISO licensing examinations and the examination and assessment for an AGCS ROCC. Practical training on a simulator is also provided to 'bridge the gap' between AGCS and aerodrome FISO phraseology & procedures.

A.A2.4 Whilst the self-study model has proven successful in the past for aerodrome FISOs in the UK, a combination of factors is emerging which the CAA believes necessitate a requirement for ab-initio FISOs to attend an approved course of training. These include:

- Industry requests to incorporate HF and ABES training which can, realistically, only be delivered by subject matter experts in an appropriate setting, rather than through self-study.
- The introduction of CAA policy[30] relating to the establishment of IAPs to runways which do not meet instrument runway criteria and/or at certain aerodromes which do not provide an Approach Control service has created a 'training gap' for aerodrome FISOs.
- The UK airspace modernisation programme seeks increased harmonisation with globally agreed ICAO provisions which will include airspace and ATS[31]. Albeit at an early stage of concept development, the CAA believes that this may provide opportunities to expand the utilisation of FISOs within the UK. However, in order to exploit these opportunities, in future, FISOs will require a broader understanding of FIS within the context of ATS and ATM more generally.

[28] Air Law and Licensing Policy, AFISO Procedures, Navigation and Meteorology

[29] Global ATS Ltd are an approved initial training organisation, albeit that their aerodrome FISO course is not currently approved by the CAA; the course listing on the company website is here.

[30] CAP 1122 Application for instrument approach procedures to aerodromes without an instrument runway and/or approach control.

[31] The UK airspace modernisation programme will be the 'vehicle' to implement in the UK those elements of Annex IV 'Part-ATS' to Reg (EU) No 2017/373 (ATM/ANS Common Requirements Regulation) proposed within EASA Opinion 03/2018.

- The future ICAO Manual of AFIS will retain the guidance contained in ICAO Circular 211 and the EUROCONTROL Manual of AFIS that ab-initio FISOs should attend an approved course of training.
- Given the development of Organisation and Technical Requirements relating to AFIS within the EU Regulatory Framework[32], a potential next step is a rulemaking task which lays down technical requirements and administrative procedures relating to FISO licences. By adopting this proposal, the UK will be better placed to inform any such rulemaking.

Proposal

A.A2.5 The CAA invites comments from stakeholders on the proposal that ab-initio FISOs should successfully complete an approved course of initial training at a training organisation which satisfies the CAA's requirements, prior to undertaking OJT.

A.A2.6 Initial training comprises basic and rating training which may be provided as separate or integrated courses[33]. Technical subjects and topics which are proposed to comprise the basic training course are contained within Appendix 3.

A.A2.7 Technical subjects and topics which are proposed to comprise the rating training phase for FISOs are at Appendix 4. It is anticipated that rating training for the proposed Aerodrome Flight Information – Visual (AFV) and Aerodrome Flight Information – Instrument (AFI) ratings[34] will be delivered concurrently. Aerodrome FISOs who successfully complete rating training will be issued with both AFI and AFV ratings on their licence and will validate one or other of those ratings through successful completion of unit training.

Further discussion

A.A2.8 Notwithstanding that such a proposal would address industry requests for change, the CAA believes that the implementation of this proposal would introduce significant benefits for airspace users, ANSPs and, importantly, individual FISOs.

A.A2.9 Significantly, the CAA has agreement in principle with EASA that FISOs who have successfully completed the approved course of basic training will be considered to have gained 'previous competence' towards specific elements of the basic ATCO training course. As such, this will:

[32] Reg (EU) No 923/2012 (SERA) and Annex IV 'Part-ATS' to Reg (EU) No 2017/373 (ATM/ANS Common Requirements Regulation).

[33] Reg (EU) No 2015/340 ATCO.D.020(a).

[34] See Appendix 4 to Annex A.

- reduce the burden on individuals who may seek to attain an ATCOs licence;
- begin to increase the visibility of FISOs within the employment market;
- provide another form of career progression for FISOs within the wider ATS employment market; and,
- may serve, in part, to address the shortage of ATCOs.

A.A2.10 Other benefits and opportunities posed by the proposed introduction of an approved course of initial training are that:

- evidence indicates that the qualifications required for the issue of personnel licences can be more readily and speedily acquired by applicants who undergo closely supervised and continuous courses of training which conform to a planned syllabus or curriculum;
- it would see the removal of the requirement to successfully complete the written examination and practical assessment for the issue of an AGCS ROCC. Training and assessment in radiotelephony would now be achieved through the approved course of initial training.
- increased theoretical and practical training of ab-initio FISOs may provide greater assurance to ATS providers that the ab-initio will be more likely to be successful in OJT.
- increased theoretical and practical training of ab-initio FISOs may result in an increased level of safety assurance to the CAA.
- adoption of the proposed course of initial training leading to the proposed AFI rating would address the training gap for aerodrome FISOs employed at those aerodromes with IAPs, or seeking to introduce IAPs.

A.A2.11 That said, a 'training course' is defined as a "theoretical and/or practical instruction developed within a structured framework and delivered within a defined duration"[35]. As such, whilst ICAO Circular 211 and the EUROCONTROL Manual of AFIS recommend that ab-initio FISOs should satisfactorily complete an approved course of training, it does not necessarily follow that this should be undertaken within a 'traditional', already established initial training organisation.

AA2.9 The CAA is open to the idea that ATS providers could be approved to provide a course of initial training which would be detailed within the UTP. However, there are a number of issues with this approach that stakeholders should consider when developing their views.

[35] Reg (EU) No. 2015/340 Article 4(28)

A.A2.9 In order to realise many of the opportunities described in Chapter 5 and, specifically, the recognition of previous competence towards the attainment of an ATCO licence, ATS providers delivering courses of initial training would need to be certificated as an initial ATCO training organisation. As such, they would be required to, inter alia:

- fulfil the requirements for initial ATCO training organisation detailed in Reg (EC) No 216/2008 'Basic Regulation' and Reg (EU) No. 2015/340 'ATCO-IR' Annex III. These requirements include, inter alia, the utilisation of approved instructional staff, provision of appropriate facilities and equipment and sufficient funding and insurances; and,
- follow the syllabus and course structure for initial training defined by the CAA.

A.A2.10 As such, given the resources that would need to be committed to develop and deliver a course of initial training and meet the requirements of an initial training organisation, the CAA considers that this may represent a burden beyond the capabilities of most FIS providers.

Appendix 3 to Annex A

Overview of proposed technical subjects and topics for basic FISO training

Note. The FISO basic training course requirements have been mapped against the syllabus for the EU basic ATCO course.

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
Aviation Law	Introduction to Aviation Law	Relevance of aviation law	LAWB 1.1	Subject to successful completion of the FISO Aviation Law module and a subsequent conversion course module which addresses ATC/FIS differences (LAWB 2.3.1, 3.4.1, 5.2, 5.4.3, 5.8 and 5.9) holders of a UK FISO licence will be credited with completion of Subject 2 of the ATCO Basic Training Course.
	International Organisations	ICAO	LAWB 2.1	
		European and other agencies	LAWB 2.2	
		Aviation associations	LAWB 2.3	
	National Organisations	Purpose and function	LAWB 3.1	
		National legislative procedures	LAWB 3.2	
		Competent authority	LAWB 3.3	
		National aviation associations	LAWB 3.4	
	ATS Safety Management	Safety Regulation	LAWB 4.1	
		Safety management system	LAWB 4.2	
	Rules and Regulations	Units of measurement	LAWB 5.1	
		FISO licensing	Not applicable	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
		Overview of ANS and ATS	LAWB 5.3	
		Rules of the air	LAWB 5.4	
		UK Air Navigation Order	Not applicable	
		Airspace and ATS routes	LAWB 5.5	
		Flight plan	LAWB 5.6	
		Aerodromes	LAWB 5.7	
Air Traffic Management	Air Traffic Management	Application of units of measurement	ATMB 1.1	Due to the nature of this module and its counterpart within the ATCO Basic Training Course, FISOs who successfully complete the FISO Air Traffic Management module will not be awarded any credit towards the completion of Subject 3 of the ATCO Basic Training Course.
		Air traffic control (ATC) service	ATMB 1.2.1 and 1.2.2	
		Flight Information Service (FIS)	ATMB 1.3	
		UK Flight Information Services	Not applicable	
		Alerting Service	ATMB 1.4	
		ATS system capacity and air traffic flow management	ATMB 1.6	
	Altimetry and level allocation	Altimetry	ATMB 2.1	
		Transition level	ATMB 2.2	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
	Radiotelephony	RTF general operating procedures	ATMB 3.1	
	ATC Clearances	Define ATC clearance	ATMB 4.1	
		Relay ATC clearance	Not applicable	
	Coordination	Principles, types and content of coordination	ATMB 5.1	
		Necessity for coordination	ATMB 5.2	
		Means of coordination	ATMB 5.3	
	Data display	Data extraction	ATMB 6.1	
		Data management	ATMB 6.2	
	Wake Turbulence	Wake turbulence warnings	Not applicable	
	Airborne Collision Avoidance Systems	Airborne Collision Avoidance Systems	ATMB 8.1	
	Basic practical skills	Traffic management process	ATMB 9.1	
		Basic practical skills applicable to all ratings	Not applicable	
		Basic practical skills applicable to AFIS	Not applicable	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
Meteorology	Introduction to Meteorology	Application of units of measurement	METB 1.1	Subject to successful completion of the FISO Meteorology module, holders of a UK FISO licence will be credited with completion of Subject 4 of the ATCO Basic Training Course.
		Aviation and meteorology	METB 1.2	
		Organisation of meteorological service	METB 1.3	
	Atmosphere	Composition and structure	METB 2.1	
		Standard atmosphere	METB 2.2	
		Heat and temperature	METB 2.3	
		Water in the atmosphere	METB 2.4	
		Air pressure	METB 2.5	
	Atmospheric circulation	General air circulation	METB 3.1	
		Air masses and frontal systems	METB 3.2	
		Mesoscale systems	METB 3.3	
		Wind	METB 3.4	
	Meteorological phenomena	Clouds	METB 4.1	
		Types of precipitation	METB 4.2	
		Visibility	METB 4.3	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
		Meteorological hazards	METB 4.4	
	Meteorological Information for pilots	Messages and reports	METB 5.1	
Navigation	Introduction to navigation	Application of units of measurement	NAVB 1.1	Subject to successful completion of the FISO Navigation module and a subsequent conversion course module which addresses ATC/FIS differences (NAVB 4.2.2 and 7.1) holders of a UK FISO licence will be credited with completion of Subject 5 of the ATCO Basic Training Course.
		Purpose and use of navigation	NAVB 1.2	
	The Earth	Place and movement of the Earth	NAVB 2.1	
		System of coordinates, direction and distance	NAVB 2.2	
		Magnetism	NAVB 2.3	
	Maps and aeronautical charts	Map making and projections	NAVB 3.1	
		Maps and charts used in aviation	NAVB 3.2	
	Navigational basics	Influence of wind	NAVB 4.1	
		Speed	NAVB 4.2.1	
		Visual navigation	NAVB 4.3	
		Navigational aspects of flight	NAVB 4.4	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
		planning		
	Instrument navigation	Ground-based systems	NAVB 5.1	
		Inertial navigation systems	NAVB 5.2	
		Satellite-based systems	NAVB 5.3	
		Instrument approach procedures	NAVB 5.4	
		Principles and benefits of area navigation	NAVB 6.1	
		Introduction to PBN	NAVB 6.2	
		PBN applications	NAVB 6.3	
Aircraft	Introduction to aircraft	Application of units of measurement	ACFTB 1.1	Subject to successful completion of the FISO Aircraft module and a subsequent conversion course module which addresses ATC/FIS differences (ACFTB 4.2, 5.1, 5.2, 5.3, 5.4, 6.2, 6.3, 6.4, 7.4.2 and 7.6) holders of a UK FISO licence will be credited with completion of Subject 6 of the ATCO Basic Training Course.
		Aviation and aircraft	ACFTB 1.2	
	Principles of flight	Forces acting on aircraft	ACFTB 2.1	
		Structural components and control of an aircraft	ACFTB 2.2	
		Flight envelope	ACFTB 2.3	
	Aircraft categories	Aircraft categories	ACFTB 3.1	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
		Wake turbulence categories	ACFTB 3.2	
		ICAO approach categories	ACFTB 3.3	
		Environmental categories	ACFTB 3.4	
	Aircraft data	Recognition	ACFTB 4.1	
	Aircraft systems and instruments	Flight instruments	ACFTB 6.1	
	Factors affecting aircraft performance	Take-off factors	ACFTB 7.1	
		Climb factors	ACFTB 7.2	
		Cruise factors	ACFTB 7.3	
		Descent and initial approach factors	ACFTB 7.4.1	
		Final approach and landing factors	ACFTB 7.5	
		Environmental factors	ACFTB 7.7	
Human Factors	Introduction to human factors	Learning techniques	HUMB 1.1	Subject to successful completion of the FISO Human Factors module and a subsequent conversion course module which addresses ATC/FIS differences
		Relevance of human factors for ATS	HUMB 1.2	
		Human factors and ATS	HUMB 1.3.1, 1.3.2, 1.3.3,	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
			1.3.4, 1.3.5, 1.3.6, 1.3.9	(HUMB 1.3.7, 1.3.8, 2.2 and 4.1) holders of a UK FISO licence will be credited with completion of Subject 7 of the ATCO Basic Training Course.
	Human performance	Individual behaviour	HUMB 2.1	
		Safety Culture and professional conduct	HUMB 2.2.3	
		Health and well-being	HUMB 2.3	
		Teamwork	HUMB 2.4	
		Basic needs of people at work	HUMB 2.5	
		Stress	HUMB 2.6	
	Human error	Dangers of error	HUMB 3.1	
		Definition of human error	HUMB 3.2	
		Classification of human error	HUMB 3.3	
		Risk analysis and risk management	HUMB 3.4	
	Communication	Importance of good communications in ATS	Not applicable	
		Communication process	HUMB 4.2	
		Communication modes	HUMB 4.3	
	The work environment	Ergonomics and the need for	HUMB 5.1	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
		good design		
		Equipment and tools	HUMB 5.2	
		Automation	HUMB 5.3	
Equipment and Systems	ATS Equipment	Main types of ATS equipment	EQPSB 1.1	Due to the nature of this module and its counterpart within the ATCO Basic Training Course, FISOs who successfully complete the FISO Equipment and Systems module will not be awarded any credit towards the completion of Subject 8 of the ATCO Basic Training Course.
	Radio	Radio Theory	EQPSB 2.1	
	Communication equipment	Radio communications	EQPSB 3.1	
		Voice communication between ATS units/positions	EQPSB 3.2	
	Automation in ATS	Principles of automation	EQPSB 10.1	
		Aeronautical fixed telecommunication network	EQPSB 10.2	
		Systems used for the automatic dissemination of information	EQPSB 10.4	
	Working positions	Working position equipment	Not applicable	
		AFIS	Not applicable	
		Area FIS	Not applicable	

Subject	Topic	Sub-Topic	Subject and Topic Reference from AMC1 ATCO.D.010(a)	Notes
Professional environment	Familiarisation	ATS and aerodrome facilities	PENB 1.1	Due to the nature of this module and its counterpart within the ATCO Basic Training Course, FISOs who successfully complete the FISO Professional Environment module will not be awarded any credit towards the completion of Subject 9 of the ATCO Basic Training Course.
	Airspace users	Civil aviation	PENB 2.1	
		Military	PENB 2.2	
		Expectations and requirements of pilots	PENB 2.3	
	Environmental protection	Environmental protection	PENB 4.1.1, PENB 4.1.3	

Appendix 4 to Annex A

Overview of proposed technical subjects and topics for FISO rating training phase

Note. This appendix provides an overview of the proposed technical subjects and topics for the following aspects of FISO rating training:

- AFV and AFI rating training course;
- FIS rating training course; and,
- SUR rating endorsement course.

AFV and AFI Rating Training Course

Subject	Topic	Sub-Topic	Notes
Aviation Law	FISO Licensing	Privileges and conditions	
	Rules and Regulations	Reports	
		Airspace	
	ATS Safety Management	Feedback process	
		Safety investigation	
Air Traffic Management	Provision of Services	Aerodrome flight information service	
		Alerting service	
		ATS system capacity and air traffic flow management	

Subject	Topic	Sub-Topic	Notes
	Communication	Effective communication	
	ATC clearances and instructions	ATC clearances and AFIS	
		ATC instructions and AFIS	
	Coordination	Necessity for coordination	
		Tools and methods for coordination	
		Coordination procedures	
	Altimetry	Awareness of vertical conflict	
		Awareness of terrain clearance	
	Airborne conflict	Awareness of vertical conflict	
		Awareness of horizontal conflict	
		Awareness of risk of wake turbulence to aircraft	
	Airborne Collision Avoidance Systems and Safety Nets	Airborne Collision Avoidance Systems	
		Safety Nets	
	Data Display	Data management	
	Operational Environment (simulated)	Integrity of the operational environment	
		Verification of the currency of operational procedures	

Subject	Topic	Sub-Topic	Notes
		Handover-takeover	
	Provision of an aerodrome flight information service	Responsibility for the provision	
		Functions of AFIS unit	
		Traffic management process	
		Aeronautical ground lights	
		Information to aircraft by AFIS unit	
		Manage aerodrome traffic	
		AFIS to traffic in the traffic circuit	
		Runway in-use	
	Provision of aerodrome flight information service – instrument	Holding procedures for IFR flights	Content based on AMC1 ATCO.D.010(a)(1) LAWB 5.8
		Low visibility operations	
		Departing traffic	
		Arriving traffic	
Meteorology	Meteorological phenomena	Meteorological phenomena	
		Meteorological instruments	
		Other sources of meteorological data	

Subject	Topic	Sub-Topic	Notes
Navigation	Maps and aeronautical charts	Maps and charts	
	Instrument navigation	Navigational systems.	
		Stabilised approach	
		Instrument departures and arrivals	
		Satellite-based systems	
		PBN applications	
Aircraft	Aircraft instruments	Aircraft instruments	
	Aircraft categories	Wake turbulence	
	Factors affecting aircraft performance	Take-off factors	
		Climb factors	
		Final approach and landing factors	
		Economic factors	Optional content
		Environmental factors	
	Aircraft data	Recognition of aircraft types	
		Performance data	
Human Factors	Physiological factors	Cognitive	

Subject	Topic	Sub-Topic	Notes
	Medical and physiological factors	Fatigue	
		Fitness	
	Social and organisational factors	Team resource management (TRM)	
		Teamwork and team roles	
		Responsible behaviour	
	Stress	Stress	
		Stress management	
	Human error	Human error	
		Violation of rules	
	Collaborative work	Communication	
		Collaborative work within the same area of responsibility	
		Collaborative work between different areas of responsibility	
		AFISO/pilot cooperation	
Equipment and systems	Voice communications	Radio communications	
		Other voice communications	

Subject	Topic	Sub-Topic	Notes
	Automation in ATS	Aeronautical fixed telecommunication network (AFTN)	
	AFISO working position	Operation and monitoring of equipment	
		Situation displays and information systems	
		Flight data systems	
	Equipment and systems limitations and degradation	Reaction to limitations	
		Communication equipment degradation	
		Navigational equipment degradation	
Professional environment	Familiarisation	Study visit to aerodrome	Optional content
Abnormal and emergency situations	Abnormal and emergency situations (ABES)	Overview of ABES	
	Skills improvement	Communication effectiveness	
		Avoidance of mental overload	
		Air/ground cooperation	
	Procedures for ABES	Application of procedures for ABES	
		Radio failure	

Subject	Topic	Sub-Topic	Notes
		Unlawful interference and aircraft bomb threat	
		Strayed or unidentified aircraft	
		Runway incursion	
Aerodromes	Aerodrome data, layout and coordination	Definitions	
		Coordination	
	Movement area	Movement area	
		Manoeuvring area	
		Runways	
	Obstacles	Obstacle-free airspace around aerodromes	
	Miscellaneous equipment	Location	

FIS Rating Training Course

Subject	Topic	Sub-Topic	Notes
Aviation Law	FISO Licensing	Privileges and conditions	
	Rules and Regulations	Reports	
		Airspace	
	ATS Safety Management	Feedback process	
		Safety investigation	
Air Traffic Management	Provision of Services	Flight information service	
		Alerting service	
		ATS system capacity and air traffic flow management	
		Airspace management	
	Communication	Effective communication	
	ATC clearances and instructions	ATC clearances and FIS	
		ATC instructions and FIS	
	Coordination	Necessity for coordination	
		Tools and methods for coordination	
		Coordination procedures	

Subject	Topic	Sub-Topic	Notes
	Altimetry	Awareness of vertical conflict	
		Awareness of terrain clearance	
	Airborne conflict	Awareness of vertical conflict	
		Awareness of horizontal conflict	
		Awareness of risk of wake turbulence to aircraft	
	Airborne Collision Avoidance Systems and Safety Nets	Airborne Collision Avoidance Systems	
		Ground-based safety nets	
	Data Display	Data management	
	Operational Environment (simulated)	Integrity of the operational environment	
		Verification of the currency of operational procedures	
		Handover-takeover	
	Provision of flight information service	Responsibility and processing of information	
		Functions of FIR FIS at ACC	
		Traffic management process	
		Handling traffic	

Subject	Topic	Sub-Topic	Notes
Meteorology	Meteorological phenomena	Meteorological phenomena	
	Sources of meteorological data	Sources of meteorological data	
Navigation	Maps and aeronautical charts	Maps and charts	
	Instrument navigation	Navigational systems.	
		Navigational assistance	
		PBN applications	
Aircraft	Aircraft instruments	Aircraft instruments	
	Aircraft categories	Wake turbulence	
	Factors affecting aircraft performance	Climb factors	
		Cruise factors	
		Descent factors	
		Economic factors	Optional content
		Environmental factors	
	Aircraft data	Performance data	
Human Factors	Physiological factors	Cognitive	

Subject	Topic	Sub-Topic	Notes
	Medical and physiological factors	Fatigue	
		Fitness	
	Social and organisational factors	Team resource management (TRM)	
		Teamwork and team roles	
		Responsible behaviour	
	Stress	Stress	
		Stress management	
	Human error	Human error	
		Violation of rules	
	Collaborative work	Communication	
		Collaborative work within the same area of responsibility	
		Collaborative work between different areas of responsibility	
		FISO/pilot cooperation	
Equipment and systems	Voice communications	Radio communications	
		Other voice communications	
	Automation in ATS	Aeronautical fixed telecommunication	

Subject	Topic	Sub-Topic	Notes
		network (AFTN)	
		Automatic data interchange	
	FISO working position	Operation and monitoring of equipment	
		Situation displays and information systems	
		Flight data systems	
	Future equipment	New developments	Optional content
	Equipment and systems limitations and degradation	Reaction to limitations	
		Communication equipment degradation	
		Navigational equipment degradation	
Professional environment	Familiarisation	Study visit to ACC and aerodrome	
	Airspace users	Contributors to civil ATS operations	
		Contributors to military ATS operations	
Abnormal and emergency situations	Abnormal and emergency situations (ABES)	Overview of ABES	
	Skills improvement	Communication effectiveness	
		Avoidance of mental overload	

Subject	Topic	Sub-Topic	Notes
		Air/ground cooperation	
	Procedures for ABES	Application of procedures for ABES	
		Radio failure	
		Unlawful interference and aircraft bomb threat	
		Strayed or unidentified aircraft	
		Diversions	

SUR Rating Endorsement Training Course

Subject	Topic	Sub-Topic	Notes
Aviation Law	FISO Licensing	Privileges and conditions	
Air Traffic Management	Provision of Services	Flight information service	
		Alerting service	
		ATS system capacity and air traffic flow management	
		Airspace management	
	Communication	Effective communication	
	Coordination	Necessity for coordination	
		Tools and methods for coordination	
		Coordination procedures	
	Altimetry	Awareness of vertical conflict	
		Awareness of terrain clearance	
	Airborne conflict – ATS surveillance system	Awareness of vertical conflict	
		Awareness of horizontal conflict	
		Awareness of risk of wake turbulence to aircraft	
	Airborne Collision Avoidance	Ground-based safety nets	

Subject	Topic	Sub-Topic	Notes
	Systems and Safety Nets		
	Data Display	Data management	
	Operational Environment (simulated)	Integrity of the operational environment	
		Handover-takeover	
	Provision of flight information service – ATS surveillance system	Responsibility and processing of information	
		ATS surveillance service	
		Traffic management process	
		Handling traffic	
	Identification	Establishment of identification	
		Maintenance of identification	
		Loss of identity	
		Position Information	
		Transfer of identity	
Navigation	Instrument navigation	Navigational assistance	
Aircraft	Aircraft data	Performance data	

Subject	Topic	Sub-Topic	Notes
Human factors	Collaborative work	Communication	
		Collaborative work within the same area of responsibility	
		Collaborative work between different areas of responsibility	
		FISO/pilot cooperation	
Equipment and systems	Automation in ATS	Automatic data interchange	
	FISO working position	Operation and monitoring of equipment	
		Situation displays and information systems	
		Flight data systems	
		Use of ATS surveillance system	
	Future equipment	New developments	Optional content
	Equipment and systems limitations and degradation	Reaction to limitations	
		Surveillance equipment degradation	
		ATS processing system degradation	
Abnormal and emergency	Abnormal and emergency situations (ABES)	Overview of ABES	

Subject	Topic	Sub-Topic	Notes
situations	Skills improvement	Communication effectiveness	
		Avoidance of mental overload	
		Air/ground cooperation	
	Procedures for ABES	Application of procedures for ABES	
		Radio failure	
		Unlawful interference and aircraft bomb threat	
		Strayed or unidentified aircraft	
		Diversions	
		Transponder failure	

Appendix 5 to Annex A

Language proficiency endorsement

Introduction

A.A5.1 ICAO Annex 1 requires ATCOs and aeronautical station operators to demonstrate the ability to speak and understand the language used for radiotelephony communications to a specified level. However, whilst it is reasonable to argue that clear parallels exist between the functions of a FISO and that of ATCOs and aeronautical station operators, FISOs are not defined within Annex 1.

A.A5.2 Annex 1 does reference ICAO Circular 211 and, in future, the forthcoming ICAO Manual of AFIS; this latter document establishing a link between FISOs and the language proficiency requirements within Annex 1. We've already discussed the existence of international 'good practice' which could be used as the basis for UK FISO licensing arrangements and, as stated previously, the need for a language proficiency requirement has been recognised by industry.

Proposal

A.A5.3 The CAA invites stakeholders to comment on a proposal for FISOs to be required to have a valid English language proficiency endorsement appended to their licence.

A.A5.4 Specifically, the CAA proposes that:

- FISOs would not be permitted to exercise the privileges of their licences unless they have a valid language proficiency endorsement in English;
- The language proficiency level would reflect the rating scale set out in ICAO Annex 1 Appendix 1 (as replicated within Appendix 1 of Annex I to Regulation (EU) No 2015/340);
- FISOs would need to demonstrate, in accordance with the rating scale referred to above, at least Level 4 (Operational Level) of language proficiency;

- Where the operational circumstances of the particular rating or rating endorsement warranted a higher level of language proficiency for imperative reasons of safety, ANSPs would be permitted to stipulate a requirement for FISOs to hold Level 5 (Extended Level) language proficiency. However, such a requirement would need to be non-discriminatory, proportionate, transparent, and objectively justified by the ANSP wishing to apply the higher level of proficiency and be approved by the CAA;
- The language proficiency of FISOs who demonstrate proficiency below the Level 6 (Expert Level) would be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level, as follows:
    - o those demonstrating language proficiency at Level 4 (Operational Level) should be evaluated at least once every three years; and
    - o those demonstrating language proficiency at Level 5 (Extended Level) should be evaluated at least once every six years.
- Formal evaluation would not be required for applicants who demonstrate Level 6 (Expert Level) language proficiency, e.g. native and very proficient non-native speakers with a dialect or accent intelligible to the international aeronautical community;
    - o Ab-initio FISOs undertaking a course of initial training would be assessed by the training organisation during the progress of the course and a determination made as to whether a formal evaluation is required.
    - o A description of the potential transitional arrangements relating to the language proficiency of existing FISO licence holders is included in Appendix 7 to this Annex.

A.A5.5 Cognisant that these are outline proposals, subject to the outcome of this consultation, the CAA is minded to propose additional requirements and guidance material which will be based upon Annex 1 to Reg (EU) No 2015/340 (specifically, ATCO.B.035, ATCO.B.040 and ATCO.B.045) and will be subject to a future, more detailed consultation as described in the FISO Review project plan.

Appendix 6 to Annex A

Unit training

Unit training plans and unit competence schemes

A.A6.1 Aspects of aerodrome FISO licensing policy are still defined by what is known as 'compliance based regulation', where the CAA defines specific targets which should be accomplished. A good example of this is the requirement for ab-initio aerodrome FISOs to complete a 'minimum of 40 hours of service provision under supervision…before the licence holder can undertake the validity assessment at an aerodrome'. However, elsewhere in the aviation industry, we are moving towards performance based regulation (PBR) where the CAA lays down the objective to be achieved and industry determines how it will achieve it.

A.A6.2 In an ATM context, we can see a PBR approach in the training and assessment of ATCOs, through the requirement to develop UTP[36] and UCS[37] which are approved by the CAA. These define the unit's own requirements for the training and assessment of its ATCOs, based upon the objectives set for it through Regulation, as it is the unit which is best placed to determine how to achieve those objectives, not the CAA.

A.A6.3 As was stated in Appendix 2[38], it is reasonable to argue that the EUROCONTROL Manual of AFIS represents 'good practice' in terms of personnel licensing arrangements, on which such national provisions should be based. This states that following initial training, the student FISO undertakes OJT at the unit and that this training is:

- approved by the competent authority;
- conducted by OJT instructors (OJTIs); and
- that such OJTIs must have satisfied specific criteria including the successful completion of an appropriate OJTI course.

A.A6.4 Notwithstanding the existence of such 'good practice' and the overly simplistic argument that we should accept and implement it, importantly, FIS providers in the UK already recognise its value. A significant majority of AFIS units already have a UTP and have been recommended to adopt this 'good practise' by CAA Inspectors ATS. For FISOs employed at the Swanwick and Prestwick ACCs,

[36] Reg (EU) No. 2015/340 ATCO.D.055.

[37] Reg (EU) No. 2015/340 ATCO.B.025.

[38] Paragraph A.A2.1.

initial training and OJT is already incorporated within the respective UTP and as such is approved by the CAA. Therefore, the CAA's proposal to introduce a requirement for FIS units to maintain an approved UTP will, in reality, have little effect on the industry and would essentially formalise existing practice.

A.A6.5 The introduction of a UCS is a natural consequence of from the introduction of a UTP and the same arguments apply; it represents accepted 'good practice' and the unit is best placed to determine how to manage the ongoing competence of its FISOs and how to achieve the objectives placed upon it by the CAA. Indeed, FISOs are already incorporated within the UCS of the Swanwick and Prestwick ACCs and elements of a UCS are already both explicit and implied requirements placed upon AFIS units; it is just that they are not described as being part of a UCS.

A.A6.6 The CAA invites comments from stakeholders on the concept of introducing a requirement for FISO units to establish and maintain a UTP and UCS; these being based on the requirements contained in Regulation (EU) No 2015/340[39].

OJTI and assessor endorsements

A.A6.7 Notwithstanding the existence of 'good practice' in relation to the use of OJTIs and their successful completion of an appropriate OJTI training course, it is important to note that this is recognised by industry. In their review of aerodrome FISO licensing undertaken in summer 2015, the Association of UK FISOs perceived a risk associated with the delivery of OJT by an individual who was not trained in instructional techniques and requested that the CAA develop an OJTI licence endorsement. In order to deliver on such a request and to ensure that OJTIs are equipped with the knowledge, skills and tools to deliver effective OJT which permits FISOs to progress efficiently through OJT, it is reasonable to argue that this drives an associated requirement for an OJTI training course. Indeed, FISOs delivering OJT at the Prestwick and Swanwick ACCs are already required to attend OJTI training courses through their respective UTP.

A.A6.8 Given the proposal to introduce a UTP and UCS and the links between the UTP and OJTIs, it is also necessary to examine the links between the UCS and assessors and how competency assessments are undertaken now at FIS units.

A.A6.9 Aerodrome FISO licensing policy already includes provision for competency assessors who are approved by the CAA to undertake licence validity assessments. Successful candidates are provided with a letter of appointment and authorisation by the CAA but no formal qualification in the form of a licence endorsement is available. Critically, no training is available to candidates to equip them with the skills and knowledge necessary to conduct assessments and examinations. The only requirement placed upon applicants in terms of

[39] Reg (EU) No. 2015/340 ATCO.B.025 and ATCO.D.055.

their ability to undertake an assessment is that they shall have satisfactorily conducted a minimum of two supervised validation assessments with an Inspector ATS. Given the proposal to introduce an OJTI endorsement and requirement to attend an OJTI training course, the CAA is of the view that the same process and qualification is applied to assessors. Particularly as assessors are responsible for ensuring – through the examination of theoretical competence and assessment of practical performance and skill –the competence of the FISOs at their unit.

A.A6.10 The CAA invites comments from stakeholders on the concept of introducing OJTI and Assessor licence endorsements and the attendant courses of training.

Continuation Training

A.A6.11 Reg (EU) 2015/340 states that that continuation training for ATCOs is designed to maintain the validity of the endorsements of the licence and consists of:

- Refresher training is designed to review, reinforce or enhance the existing knowledge and skills of ATCOs to provide a safe, orderly and expeditious flow of air traffic and shall contain at least:
  - standard practices and procedures training, using approved phraseology and effective communication;
  - abnormal and emergency situations training, using approved phraseology and effective communication; and
  - human factors training.
- Conversion training (when relevant) is designed to provide knowledge and skills appropriate to a change in the operational environment and shall be provided by training organisations when the safety assessment of the change concludes the need for such training.

A.A6.12 Research undertaken at the International Flight Information Service Association Seminar in 2017[40] identified that the UK was internationally unique in having no requirement for FISOs to undertake any form of refresher training. Given that the purpose of refresher training is to provide an opportunity to maintain and enhance individual performance and thus enhance safety, the CAA believes that a requirement for FISOs to undertake such training should be introduced. Particularly given the potential for the UK airspace modernisation programme[41] to provide opportunities to expand the utilisation of FISOs within the UK.

A.A6.13 The concept of conversion training and the need to ensure that personnel have knowledge of revised operational processes and procedures is not new in

[40] Held in Warsaw 5-7 September 2017 – notes from the seminar workshop on refresher training are here.

[41] The UK airspace modernisation programme will be the 'vehicle' to implement Annex IV 'Part-ATS' to Reg (EU) No 2017/373 (ATM/ANS Common Requirements Regulation) within the UK.

aviation. A requirement already exists for all ATS providers to ensure that 'personnel are adequately trained and competent for the job they are required to do'[42]. However, there is no guidance material available to expand upon this requirement for FIS providers.

A.A6.14 Continuation training gives us an opportunity to provide already competent FISOs with the opportunity to review, update and reinforce their knowledge and skills, in order to maintain and enhance their performance. As such, the CAA invites comments from its stakeholders on the concept of introducing continuation training for FISOs.

[42] Reg (EU) No. 1035/2011 (ANS Common Requirements Regulation) Annex II 3.1.2(a).

Appendix 7 to Annex A

Proposed transitional arrangements

Introduction

A.A7.1 In order to facilitate stakeholder consideration of the training, qualification and licensing concepts, it was considered that it might be useful to describe how the transition of licensing arrangements could be managed.

A.A7.2 Stakeholders are invited to comment on these proposals which will be subject to more detailed development in the next phase of the project.

Proposed transitional arrangements

A.A7.3 The proposed requirement to undertake an approved course of initial training will be for ab-initio FISOs alone; it would not apply retrospectively to individuals holding a FISO licence on the date of transition[43].

A.A7.4 Applicants for an aerodrome FISO licence who have not satisfied the criteria for the grant of an aerodrome FISO licence in accordance with the extant arrangements prior to the date of transition, would be required to undertake an approved course of training and would not receive any credit for prior learning/experience.

A.A7.3 In order to ease the implementation task, the CAA would cease processing applications for new FISO licences made in accordance with the extant arrangements in advance of the date of transition.

A.A7.3 Aerodrome FISOs with a licence which is valid in accordance with the conditions detailed within CAP 1032 paragraph 1.4 would be issued a replacement FISO licence in the new format, with an Aerodrome Flight Information Service – Visual (AFV) rating. Except where evidence exists that a different level of language proficiency has been attained, an English Level 6 language proficiency endorsement will be entered on the licence. A unit endorsement would be entered on the replacement licence with an expiry date that matches that of the validation expiry entered on the licence being replaced.

A.A7.4 Aerodrome FISOs with a licence which is not valid in accordance with the conditions detailed within CAP 1032 paragraph 1.4 would be issued a replacement FISO licence in the new format, with an Aerodrome Flight Information Service – Visual (AFV) rating. Except where evidence exists that a

[43] The selected date of transition will be the date on which the new FISO Licensing policy arrangements take effect.

different level of language proficiency has been attained, an English Level 6 language proficiency endorsement will be entered on the licence.

- Where the licence had previously been valid, a unit endorsement would be entered on the replacement licence with an expiry date matching that of the expired validation entered on the licence being replaced.
- Where the aerodrome FISO is under training for their initial validation, they would be issued with a Student FISO licence in the new format with an Aerodrome Flight Information Service – Visual (AFV) rating.

A.A7.5 FISOs employed at Swanwick and Prestwick ACCs with a licence which is considered to be valid would be issued a replacement FISO licence, in the new format, with an FIR Flight Information Service (FIS) rating. Except where evidence exists that a different level of language proficiency has been attained, an English Level 6 language proficiency endorsement will be entered on the licence. A unit endorsement would be entered on the replacement licence with an expiry date that matches that of the validation entered on the licence being replaced.

A.A7.6 FISOs either employed or previously employed at Swanwick and Prestwick ACCs, with a licence which is not considered to be valid will be issued a replacement FISO licence in the new format, with an FIR Flight Information Service (FIS) rating. Except where evidence exists that a different level of language proficiency has been attained, an English Level 6 language proficiency endorsement will be entered on the licence.

- Where the licence had previously been valid, a unit endorsement would be entered on the replacement licence with an expiry date matching that of the expired validation entered on the licence being replaced.
- Where the FISO is under training for their initial validation, they will be issued with a Student FISO licence in the new format with an FIR Flight Information Service (FIS) rating.

A.A7.7 FISOs currently authorised by the CAA as Assessors would have an ‘Assessor’ licence endorsement entered on the replacement licence. The expiry date of the endorsement would reflect the day and month of their initial appointment as Assessors and 3 years after the licensing changes come into effect.

A.A7.8 FISOs who can demonstrate to the CAA’s satisfaction that they have acted as an OJTI at their unit within the 3-years preceding the date of transition and that have been specifically recommended by the ANSP[44], will have an ‘OJTI’ licence

[44] Note. Reg (EU) No 1035/2011 Annex 1(5) states that “Air navigation service providers shall employ appropriately skilled personnel to ensure the provision of air navigation services in a safe, efficient, continuous and sustainable manner. In this context, they shall establish policies for the recruitment and training of personnel”.

endorsement entered on the replacement licence. The expiry date of the endorsement would reflect the day and month of their initial appointment as instructors and 3 years after the licensing changes come into effect.

A.A7.9 FISOs who can demonstrate to the CAA's satisfaction that they have acted as synthetic training device instructors (STDI) providing training for a period of at least 12-months prior to the introduction of the proposed licensing system will have an 'STDI' licence endorsement entered on the replacement licence. The expiry date of the endorsement would reflect the day and month of their initial appointment as synthetic training device instructors and 3 years after the licensing changes come into effect.

Annex B: Limitations on the privileges associated with a FISO licence

Discussion

B1 Currently within the UK, FISOs are not permitted to provide a FIS in Class E airspace, nor to utilise ATS surveillance systems to supplement the provision of FIS or enter into tactical coordination with other ATS units regarding aircraft receiving an ATS. However, these are limitations that are placed upon the privileges associated with a UK FISO licence because of the mechanism by which FISOs are currently trained, qualified and licensed in the UK.

B2 SERA.6001(a)(5)[45] states that VFR flights in Class E airspace receive traffic information, as far as practical and do not require an ATC clearance – and are thus not required to be in receipt of an ATS – which is interpreted as meaning that participating VFR flights will receive FIS. ICAO and SERA provide no differentiation on the type of ATS personnel providing FIS. Given that a VFR aircraft can operate within Class E airspace without being in receipt of an ATS, the premise that a FISO may not provide FIS to that VFR aircraft appears flawed.

B3 Moreover, ICAO Doc 4444 PANS-ATM 8.11.1[46] states that the information presented on a situation display may be used to provide identified aircraft that are in receipt of a FIS with:

a. information regarding any aircraft observed to be on a conflicting path with the identified aircraft and suggestions or advice regarding avoiding action;

b. information on the position of significant weather and, as practicable, advice to the aircraft on how best to circumnavigate any such areas of adverse weather; and,

c. information to assist the aircraft in its navigation.

B4 As stated, currently in the UK FISOs are not permitted to utilise an ATS surveillance system to supplement the provision of FIS. In part, this is as a result of the UK's ATS provision model in that ATCOs widely use ATS surveillance systems to supplement the provision of the UK FIS in uncontrolled airspace.

B5 Given the changes that may occur in the future, subject to the successful completion of an appropriate and approved course of training, the CAA believes that it would be

[45] Transposed from ICAO Annex 11 2.6.1.

[46] It is anticipated that PANS-ATM 8.11.1 will be transposed into European Law through Annex IV (Part-ATS) to the ATM/ANS Common Requirements Regulation on a date yet to be determined but not before 2 January 2020.

appropriate for FISOs to be permitted to utilise ATS surveillance systems. As such, this poses opportunities for FISOs to be utilised to provide ATS to a greater extent than today. As an example, in many other European states,

- FISOs may provide surveillance-based FIS to VFR flights operating in Class E airspace, alongside ATCOs providing ATC service to IFR flights; and
- AFIS aerodromes have published IAPs and departure profiles and designated volumes of Class G airspace from the surface to a specified upper limit which are notified as radio mandatory zones (RMZ) and/or transponder mandatory zones (TMZ).

These concepts are the CAA's vision for the future utilisation of FISOs within the UK's ATM structure.

B6 The CAA invites the views of its stakeholders on expanding the privileges associated with a FISO licence to:

- provide an ATS to VFR flights in Class E airspace; and
- utilise the information from an ATS surveillance system to support the provision of FIS.

Annex C: Licence application types

Introduction

C1 As indicated previously, any revisions that may occur to the FISO licensing structure in the future, would result in changes to the types of licence applications made. In turn, this would necessitate amendment to the wording of the CAAs scheme of charges to ensure that they're aligned. In the future, we may also need to propose and consult upon corresponding changes to charges. However, this will be achieved through our routine consultative mechanism on statutory charges and is outside the scope of this project.

C2 It is our intention to propose a concept of the types of charges that may be established in the future and to seek the views of industry on them. These views, alongside information gathered from focussed consultation questions, will be used to inform the next phase of project development.

Concepts

Individual licence applications

C3 The CAA proposes the following licence application types to support the FISO training and licensing concepts described herein:

- The issue of a student FISO's licence;
- The issue or reissue of a FISO's licence;
- The conduct by a CAA inspector of an assessment of a FISO for the issue, revalidation or renewal of a licence endorsement (unit, assessor or OJTI);
- The renewal of a unit endorsement carried out by an Assessor based at the unit, as this would require a new licence to be issued; and
- The issue, revalidation and renewal of an Assessor, OJTI, STDI or language proficiency endorsement, as this would require a new licence to be issued.

Initial training organisation application

C4 As stated in Appendix 2 to Annex A, the CAA is open to the idea that ATS providers could be approved to provide a course of initial training which would be detailed within the UTP. However, in order to realise many of the opportunities described in Chapter 5 and, specifically, the recognition of previous competence towards the attainment of an ATCO licence, such ATS providers would need to be certificated as an initial ATCO training organisation. If the concept is adopted, this would necessitate an amendment to the wording of the Scheme of Charges to reflect the

need to approve training organisations to conduct initial training of both ATCOs and FISOs.

C5 Where the organisation already holds a valid certificate issued by the CAA to provide courses for the initial training of ATCOs, the CAA believes that the additional provision of courses for the initial training of FISOs would only necessitate a change to the existing certificate and would address this through existing administrative arrangements.