UK Civil Aviation Authority

# Air Traffic Controllers – Initial Training Objectives

CAP 794

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# Revision history

## 1st edition June 2016

CAP 794 - has been produced as a guidance document for air traffic controllers, air traffic control training organisations and ANSPs to assist in guiding them to the relevant requirements laid down in Commission Regulation (EU) 2015/340 pertaining to air traffic controller licensing and certification of training organisations.

CAP 1251 replaces CAP 744 Air Traffic Controllers – Licensing.

## 2nd edition November 2019

CAP 1251 Edition 2 – Significant rewrite, considering new and revised EU Legislation and encompassing Basic and Rating objectives together. Inclusion of UK minimum Terminal Objectives for the rating course practical STD elements, previously contained in CAP 584. Reference to creation of Adapted UEC following licence exchange. Includes the introduction of numerous editorial changes, several updated references with revised text concerning transfer of licences, and the removal of all references to gender. In addition, the introduction of (EU) 2017/373 requirements.

# The Regulatory Framework

## Introduction

Civil Aviation Authority Civil Aviation Publications (CAPs) are based upon national and EU legislation and non-legislative regulatory material, such as ICAO Standards and Recommended Practices. They are published in order to provide:

a) guidance and clarification on the means of achieving compliance with global, UK and European regulatory requirements, and where applicable:

b) details of UK 'Alternative Means of Compliance', and

c) details of any additional national requirements, including CAA administrative procedures.

Details of appropriate supporting administrative procedures are also included where necessary.

CAPs are subject to periodic revision to take account of changes to source regulatory material, feedback from industry, and recognised best practice. CAP 794 provides guidance and clarification relating to National training objectives – and is to be read in conjunction with (EU) 2015/340; legislation contained in the UK Air Navigation Order 2016 (as amended); CAP 584 Air Traffic Controllers – Training; and the regulatory material referenced below as applicable.

***Non-inclusion of source regulatory material within this CAP does not preclude the end user from either the need to be aware of, or the need to comply with, the requirements contained within the source materials unless otherwise exempted from those requirements.***

It is the policy of the UK government that, unless a difference or 'Alternative Means of Compliance' (AltMoc) has been established, compliance is with relevant international (i.e. ICAO and applicable equivalents such as International Telecommunications Union) and European regulatory material is required to the extent mandated in law. Additionally, compliance with national requirements that are not addressed by international or EU regulations is also required.

The words 'must', 'shall' and 'will' indicate that compliance with applicable regulatory requirements is necessary. In the case of AMC the word 'should' indicates that compliance is required, unless complying with an approved AltMoC.

## Regulatory References

CAP 794 Air Traffic Controllers – Training is published to assist Training Organisations and Air Navigation Service Providers in the understanding of, and compliance with the requirements pertaining to ATCO National Training requirements laid down in:

## European regulations:

**Regulation (EC) No. 2015/340** the air traffic controllers'(ATCO) licensing and certification regulation;

**Regulation (EC) No. 923/2012** – Standardised European Rules of the Air

## CAA Publications:

**CAP 393 –** Air Navigation Order 2016 and Regulations

**CAP 584 –** Air Traffic Controllers – Training

**CAP 1251 –** Air Traffic Controllers - Licensing

**ICAO:**

**Annex 1** – Personnel Licensing

**Annex 2** – Rules of the Air

**Annex 11** – Air Traffic Services

**DOC 4444** – PANS ATM

In view of the timescales involved in updating CAP 794, references in this CAP to EU Level Regulations & CAP's may not be up to date and it is advised that readers take note of any information promulgated via means such as CAP 794 Supplementary Amendments, CAA updates and EASA and CAA website information.

As the Regulatory Framework is being developed, the various CAPs will be amended to take into account the effects of these Regulations.

EASA was established by Commission Regulation (EC) No 1592/2002 and the Agency received further competences in accordance with Regulation (EC) No 216/2008 (Basic Regulation). This established an extension to EASA's competency to include safety and interoperability of ATM and ANS resulting in new EASA Implementing Regulations. The EASA website can be found at www.easa.eu.

**NOTE:** Regulation (EC) No 216/2008 has been repealed by EC Reg No. 2018/1139

# Foreword

## Introduction

1. The United Kingdom, as a member of the International Civil Aviation Organisation and signatory to the Chicago Convention, complies as far as possible with the standards published in the Annexes to the Convention on International Civil Aviation. The Civil Aviation Act empowers the United Kingdom to implement the Chicago Convention.

2. The United Kingdom as a member of the European Union, also complies with Community legislation in respect of the training and licensing of air traffic controllers, specifically Commission Regulation (EU) 2015/340. (Regarding BREXIT – details can be found on the CAA website)

3. The purpose of CAP794 is to provide UK required content and objectives which will complement courses created in accordance with Commission Regulation (EU) 2015/340 with subjects, topics and subtopics that are additional or specific to the UK national environment.

4. This document has been created to provide sufficient information to Training Organisations who have been certificated in accordance with Commission Regulation (EU) 2015/340, or are seeking to become certificated; to create either UK approved Initial training courses; APC's; or adapted unit endorsement courses (UEC) in the event of an exchange of licence in accordance with (EU) 2015/340 ATCO.D.060(f).

5. This document should be read in conjunction with the Commission Regulation (EU) 2015/340 and associated acceptable means of compliance (AMC) and the UK CAP 584. The subjects, topics and sub topics in this document are to be delivered in addition to (EU) 2015/340, AMC1 ATCO.D.010(a) and Appendices 2 to 8 of Annex 1.

6. If there is no International or EU specific content allocated to an objective in (EU) 2015/340, then examples specific to the UK national environment may be used.

7. The issue of a UK student licence following initial training or, additional rating, shall require that the subjects, topics and subtopics specific to the relevant rating in this document are incorporated into the UK initial training.

8. Following licence exchange from a member state, an adapted UEC shall be required that incorporates the subjects, topics and subtopics specific to the relevant rating in this document.

9. This document does not include the ACP rating as this is no longer utilised at initial training level or for the exchange of licence process in the UK.

10. An adapted UEC shall include theoretical examination(s) (written and/or oral) and practical assessment of the subjects, topics and subtopics described in this document. Provisions for theoretical examinations and assessments related to the adapted UEC shall follow the normal approval process.

11. In addition to the Initial training rating courses, when creating an APC, or an adapted UEC following licence exchange, the practical Terminal Objectives for UK initial training, contained within Appendix C of this document, should also be used to provide a minimum level of practical assessment traffic density and complexity.

## Format of this document

12. Within each Rating chapter, the table includes relevant national content applicable to the basic and rating course.

13. The first column of the table points to the relevant reference from Appendices 2 to 8 of Annex 1 of (EU) 2015/340.

14. The second column specifies when there is explicit content which needs to be taught. For corpus and taxonomy, see the relevant objective in AMC1 ATCO.D.010(a)(1).

15. The third column details the relevant content and/or source reference specific to UK national environment that needs to be taught.

16. Additional topics, subtopics and training objectives that are specific to the UK national environment have been added in a separate blue coloured table at the end of the relevant subject. This table has an additional column which shows the relevant taxonomy level for the training objective.

Chapter 1

# AERODROME CONTROL VISUAL (ADV) AND AERODROME CONTROL INSTRUMENT (ADI)

| **BASIC LAW *LAWB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1 | Optional content: national aviation law | National aviation law. CAP 393 |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Optional content: national authority | UK CAA |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.1 | Optional content: civil aviation administration agencies, government agencies | UK CAA, DfT |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1, 3.2.2 | ICAO Annex 15 | CAP393, ORS4, Skywise<br>UK AIP & AIC's |
| Topic 3<br>Subtopic 3.3<br>Training objective 3.3.1,3.3.2 | | UK CAA, CAP1251,<br>ATS & Aerodrome Inspectors |
| Topic 3<br>Subtopic 3.4<br>Training objective 3.4.1 | | UK aviation associations include GATCO, BALPA and Trade Unions (e.g.Prospect). |
| Topic 5<br>Subtopic 5.2<br>Training objective 5.2.1 | Regulation (EU) 2015/340 on ATCO Licensing, Approved training courses; ATCO licences, ratings and endorsements<br>Optional content: national processes | CAP1251 |
| Topic 5<br>Subtopic 5.4<br>Training objective 5.4.1 | Regulation (EU) No 923/2012<br>Optional content: national aviation law | UK aviation laws - ANO. Additional UK Rules of the Air.<br>CAP 493 Section 1 Ch 4 Para 15A Formation flights require different values for formation dimension from SERA.3135 in class F and G airspace, and allowance for different values to SERA if coordinated. |

| | | |
|---|---|---|
| Topic 5<br>Subtopic 5.6<br>Training objective 5.6.2 | Regulation (EU) No 923/2012, ICAO Doc 4444 | Additional - UK 'Booking out' system |

## UK additional training objectives for national standardisation in LAWB

| Topic and training objective | Remarks | Taxonomy level |
|---|---|---|
| **Topic A: Rules of the Air** | | |
| Recognise UK differences from ICAO Annex 2, Annex 11 and ICAO Doc 4444 | Not all UK differences from ICAO Doc 4444 are listed in the UK AIP. ICAO Doc 4444 has a 'recommended' status not requiring the lodging of differences with ICAO. | 1 |

## ADV/ADI LAW

| Appendix 2 to Annex 1 of 2015/340 | (EU) 2015/340 content | Content and/or source reference specific to UK national environment |
|---|---|---|
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1<br>1.1.2<br>1.1.3 | Regulation (EU) 2015/340 on ATCO Licensing<br>Optional content: national documents<br>Reporting culture, air traffic incident report, Regulation (EU) No 376/2014, Regulation (EU) 2015/1018<br>Optional content: breach of regulations, watchbook /logbook, records, voluntary reporting | CAP1251<br>Licensing process relevant to either ADV or ADI |
| Topic 2<br>Subtopic 2.1<br>Training Objective 2.1.1 & 2.1.2 | Air traffic incident report<br>Optional content: routine air-reports, breach of regulations, watchbook/logbook, records | ECCAIRS or local equivalent.<br>Reporting Procedures – inclusion of CAA forms<br>• CA939 – Alleged infringements of Air Navigation Legislation<br>• SRG1410 - Report of operational duty in excess of SRATCOH<br>• AIC – Pink 026/2016 – CHIRP<br>• Whistleblowing |

| | | |
|---|---|---|
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.1 | | MATZ, CMATZ, ATZ dimensions/timings. Class E+. |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.2 | Optional content: Regulation (EU) No 923/2012[1], international requirements, civil requirements, military requirements, areas of responsibility, sectorisation, national requirements | UK AIP – ENR charts – Military/Civilian airspace use. |

| **BASIC AIR TRAFFIC MANAGEMENT *ATMB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | Regulation (EU) No 923/2012 | Parts of CAP 413 different from Regulation (EU) No 923/2012 |
| Topic 6<br>Subtopic 6.2<br>Training objective 6.2.1 | Optional content: strip marking symbols, strip movement procedures, electronic data, label | Where applicable, data annotation and management (particularly Box M (Domestic box) as referred to for annotating Flight priority.<br>CAP 493 Appendix D or MATS Part 2 |
| Topic 7<br>Subtopic 7.2<br>Training Objective 7.2.1 | Departure separation<br>ICAO DOC 4444 | Longitudinal 'Departure' Separation Differences / additions<br>• 2 and 5 minutes separation requires filed TAS in UK<br>• Additional 5 minutes longitudinal separation for departures.<br>• 10 minutes separation is minima, not mentioned in ICAO.<br>• No use of 15 mins in UK.<br>• 3 mins same level same track differs – Must be CAA approved; transponders; radar monitored never less than 20 miles apart.<br><br>(ICAO 40kts required -<br>1) between aircraft that have departed from the same aerodrome;<br>2) between en-route aircraft that have reported over the same exact significant point;<br>3) between departing and en-route aircraft after the en-route aircraft has reported over a fix that is so located in relation to the departure point as to ensure that five-minute separation can be established at the point the departing aircraft will join the air route.) |
| Topic 7<br>Subtopic 7.4<br>Training Objective 7.4.1 | ICAO Reduced runway separations using CAT 1, 2 and 3 aircraft. | ICAO reduced runway separation not used in UK, UK adopt an anticipation method. |
| Topic 7<br>Subtopic 7.4<br>Training objective 7.4.1 | ICAO Doc 4444 - Visual departures | UK AIP 7030 EUR 6-4, 6.5.4 No visual departures in UK |
| Topic 7<br>Subtopic 7.6 | Wake Turbulence Separations and Categories – | CAP 493<br>AIC Pink 092/2017 – significant differences: |

| | | |
|---|---|---|
| Training objective 7.6.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: EASA SIB 2017-10 'En-route Wake Turbulence Encounters' | • UK Wake turbulence categories.<br>• Medium category split for arrivals.<br>• Arrival separation as a distance not a time.<br>• Wake turbulence minima shall be provided to pilots approaching visually where necessary.<br>• Time Based Separation included.<br>• Heavy/Heavy departure requirement. |

## UK additional training objectives for national standardisation in BASIC ATMB

| Topic and training objective | Remarks | Taxonomy level |
|---|---|---|
| **Topic A: Royal Flights** | | |
| Royal Flights<br>Explain the purpose of CAS-T | CAP 493 | 2 |
| Royal Flights<br>Explain the processes associated with Royal Flights | CAP 493 | 2 |
| Royal Flights<br>Explain the use of RLLC | CAP 493 | 2 |
| **Topic B: Flight Priorities** | | |
| List the UK specific flight priorities | CAP 493 including Police, HELIMED operations and aircraft requesting D/F assistance. | 1 |

| ADV/ADI AIR TRAFFIC MANAGEMENT *ATM* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1 & 1.1.2 | Control zone, traffic circuit, manoeuvring area, movement area, vicinity<br>Optional content: ATZ<br><br>Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals | National procedures CAP 493 Sections 1 and 2, parts of Section 3 relating to coordination between ADI/APP and ADI/APS<br><br>ATC controls aircraft on apron in UK. |
| Topic 1<br>Subtopic 1.2<br>Training objective 1.2.2 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: national documents | CAP774<br>Basic service |
| Topic 2<br>Subtopic 2.1<br>Training objectives 2.1.1 | Regulation (EU) No 923/2012 | CAP 413 Phraseology |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | Regulation (EU) No 923/2012, ICAO Doc 4444<br>Optional content: national documents | CAP 493 |
| Topic 4<br>Subtopic 4.3<br>Training objective 4.3.5 | ICAO Doc 4444 | CAP774<br>Basic service |
| Topic 6<br>Subtopic 6.1<br>Training Objective 6.1.1 | Departure separations - ICAO DOC 4444 | UK Departure Separations as required. |
| Topic 6<br>Subtopic 6.1<br>Training Objective 6.2.1 | ICAO Doc 4444<br>(Reduced runway separations using CAT 1, 2 and 3 aircraft.) | ICAO reduced runway separation not used in UK.<br>CAP 493 - Land After Procedure available |
| Topic 6<br>Subtopic 6.4<br>Training objective 6.4.1 | ICAO Doc 4444, Regulation (EU) No 923/2012 | CAP 493<br>AIC Pink 092/2017<br>UK Wake turbulence categories.<br>Medium category split for arrivals.(Small/ Lower & Upper Medium)<br>Arrival separations as a distance not a time.<br>Wake turbulence minima shall be provided to pilots approaching visually where necessary. |

| | | |
|---|---|---|
| | | Time based separations (where applicable)<br>Heavy / Heavy Departure separation (where applicable) |
| Topic 8<br>Subtopic 8.1<br>Training objective 8.1.1 | Optional content: information displayed, strip-marking procedures, electronic information data displays, actions based on traffic display information, calculation of EETs | CAP 493 Flight Priority indicator. |
| Topic 9<br>Subtopic 9.2<br>Training objective 9.2.1 | Optional content: briefing, letters of agreement (LoAs), NOTAMs, AICs | CAP 493 Sec 8 Ch 1 Para 3.1 |
| Topic 9<br>Subtopic 9.3<br>Training objectives 9.3.1<br>9.3.2 | | CAP 493 Section 8 Chapter 1<br>Handover and takeover procedures |
| Topic 10<br>Subtopic 10.1<br>Training objective 10.1.4 | Regulation (EU) No 923/2012 | National procedure - CAP 493 and CAP 393 – release of balloons |
| Topic 10<br>Subtopic 10.7<br>Training objective 10.7.2 | ICAO DOC 4444 - Taxi instructions to include Taxi routes. Regulation (EU) No 923/2012, allocation of the order of priority, meteorological phenomena, wake turbulence, environmental factors | CAP 493 Section 1 Chapters 1, 6 and 12 and Section 3<br>CAP 774 |
| ADI Topic 11<br>Subtopic 11.1<br>Training objective 11.1.2 | ICAO Doc 4444 | CAP168 - LVP procedures |
| ADI Topic11<br>Subtopic 11.2<br>Training objective 11.2.1 | ICAO Doc 4444, Regulation (EU) No 923/2012, use of situation displays, wake turbulence, appropriate departure clearances, SIDs | No visual departures in UK |

## UK additional training objectives for national standardisation in ADI/ADV ATM

| Topic and training objective | Remarks | Taxonomy level |
|---|---|---|
| **Topic A: UK FIS** | | |
| Define UK FIS | CAP774 | 1 |

| | | |
|---|---|---|
| Describe the scope of the UK FIS | CAP774 | 2 |
| Explain the responsibility for the provision of the UK FIS | CAP774 | 2 |
| Issue information and deconfliction advice to aircraft | CAP774 | 3 |

## BASIC METEOROLOGY *METB*

| Appendix 2 to Annex 1 of 2015/340 | 2015/340 content | Content and/or source reference specific to UK national environment |
|---|---|---|
| Topic 1<br>Subtopic 1.3<br>Training objective 1.3.1, 1.3.2 | Optional content: WAFS, WAFC, MWO, VAAC, TCAC, SADIS | UK Met gathering and information sources including AIRMET and VOLMET<br>UK specific Altimeter setting regions (ASR's)<br>Regional forecasts |
| Topic 5<br>Subtopic 5.1<br>Training objective 5.1.1 | METAR, SPECI, TAF, SIGMET<br>Optional content: local reports | UK variance for CAVOK and SPECI (CAP 746)<br>Long term TAFs<br>Forms F214 and F215.<br>Different definition and annotation for prevailing visibility.(CAP 746)<br>RVR Trends not used in the UK. |

## BASIC NAVIGATION *NAVB*

| Appendix 2 to Annex 1 of 2015/340 | 2015/340 content | Content and/or source reference specific to UK national environment |
|---|---|---|
| Topic 3<br>Subtopic 3.2 | Optional content: topographical features, NAV aids, fixes, fly over and fly by waypoints, etc. | Aerodrome, Approach & En-Route charts and symbology used in the UK.<br>AIP – AD & ENR. |

## ADV/ADI NAVIGATION *NAV*

| Appendix 2 to Annex 1 of 2015/340 | 2015/340 content | Content and/or source reference specific to UK national environment |
|---|---|---|

| | | |
|---|---|---|
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.1 | | AIP GEN 3.7 SIDs difference from ICAO. |

| **BASIC AIRCRAFT *ACFTB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | ICAO Doc 4444 - Wake turbulence categories | CAP 493<br>UK Wake turbulence categories. |

| **ADV/ADI HUMAN FACTORS *HUM*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 2<br>Subtopic 2.1<br>Training objective 2.1.1 | Shift work<br>Optional content: night shifts and rosters, Regulation (EU) 2017/373, ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers | CAP670 Appendix D<br>Overview of SRATCOH |

| **BASIC PROFESSIONAL ENVIRONMENT *PENB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | | The UK having in excess of 60 certificated ANSPs which vary from large organisations providing services to multiple airports to single small organisations with 3 or 4 controllers. e.g. larger organisations, NATS, ANS, Serco, HIAL; smaller organisations, which maybe council run airports who provide their own ATC; or private limited companies.<br>NATS have the contract with the UK Government for the provision of area control service for the UK. |

| ADV/ADI ABNORMAL AND EMERGENCY SITUATIONS *ABES* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.3 | Bird strike, aborted take-off<br>Optional content: ICAO Doc 4444 | CAP 493, Section 5 |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.1 and 2.3.2 | Pilot workload<br>Optional content: instructions, information, support, human factors, etc. | The use of frequency 121.500MHz is monitored and operated by the Distress and Diversion cell (MoD). |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.1 | Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure | CAP 493 Section 5.<br>Emergency descent - ICAO Doc 7030/EUR states that an aircraft shall, if able, initiate a turn away from the assigned route or track before commencing the emergency descent. However, due to the complex and congested UK controlled airspace, pilots flying in UK FIRs have been instructed that they should, if able, remain on the assigned route or track whilst carrying out the emergency descent; unless to do so would endanger the aircraft.<br>CAP 493 10A.8 UK Procedure - The use of 'MAYDAY MAYDAY MAYDAY FUEL', becomes a CAT A flight priority. |
| Topic 3<br>Sub topic 3.2 | Regulation (EU) No 923/2012<br>Optional content: ICAO Doc 4444, military procedures | UK Radio Failure Procedures<br>UK AIP ENR & CAP 493 Section 5 |
| Topic 3<br>Sub topic 3.3 | Regulation (EU) No 923/2012 | CAP 493 Section 5<br>Bomb Warning / Unlawful interference - national procedures. |

| ADV/ADI AERODROMES *AGA* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.2<br>Training objective 1.2.1 | Aerodrome conditions, fire/rescue category, condition of ground equipment and NAVAIDs, AIRAC, Regulation (EU) No 139/2014 | UK RFFS Categories - based upon length of longest aircraft to be used at airport. |

| | | |
|---|---|---|
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.7 | Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes | In the UK, the use of flashing runway or taxiway lights has no meaning and is not used.<br><br>CAP 493<br><br>Aerodrome lighting shall be displayed from 15 minutes before any ETA and until 15 minutes after any ATD as follows:<br><br>(a) By day: High intensity systems, where installed on the runway to be used, whenever the visibility is less than 5 km and/or the cloud base is less than 700ft;<br><br>(b) By night: Irrespective of weather conditions. |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.8 | Optional content: AVASI, VASI, PAPI | Approach slope indicators -<br><br>UK requires only APAPI or PAPI. UK considers T- VASIS and ATVASIS are not acceptable for public transport operations. |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.11 | Braking action coefficient | CAP 493 - UK does not provide friction co-efficient values for measurements made on un-compacted snow or slush. The UK considers friction measurement is unreliable in such conditions. |

Chapter 2

# APPROACH CONTROL PROCEDURAL (APP)

| **BASIC LAW *LAWB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1 | Optional content: national aviation law | National aviation law CAP 393 |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Optional content: national authority | UK CAA |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.1 | Optional content: civil aviation administration agencies, government agencies | UK CAA, DfT |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1, 3.2.2 | ICAO Annex 15 | CAP393, ORS4, Skywise<br>UK AIP & AIC's |
| Topic 3<br>Subtopic 3.3<br>Training objective 3.3.1,3.3.2 | | UK CAA, CAP1251,<br>ATS & Aerodrome Inspectors |
| Topic 3<br>Subtopic 3.4<br>Training objective 3.4.1 | | UK aviation associations include GATCO, BALPA and Trade Unions (e.g.Prospect). |
| Topic 5<br>Subtopic 5.2<br>Training objective 5.2.1 | Regulation (EU) 2015/340 on ATCO Licensing, Approved training courses; ATCO licences, ratings and endorsements<br>Optional content: national processes | CAP1251 |
| Topic 5<br>Subtopic 5.4<br>Training objective 5.4.1 | Regulation (EU) No 923/2012<br>Optional content: national aviation law | National aviation laws - ANO. Additional UK Rules of the Air.<br>CAP 493 Section 1 Ch 4 Para 15A Formation flights require different values for formation dimension from SERA.3135 in class F and G airspace, and allowance for different values to SERA if coordinated. |
| | | |

| UK additional training objectives for national standardisation in LAWB | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Rules of the Air** | | |
| Recognise UK differences from ICAO Annex 2, Annex 11 and ICAO Doc 4444 | Not all UK differences from ICAO Doc 4444 are listed in the UK AIP. ICAO Doc 4444 has a 'recommended' status not requiring the lodging of differences with ICAO. | 1 |

| APP LAW | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1<br>1.1.2<br>1.1.3 | Regulation (EU) 2015/340 on ATCO Licensing<br>Optional content: national documents | CAP1251<br>Licensing process relevant to APP |
| Topic 2<br>Subtopic 2.1<br>Training Objective 2.1.1<br>2.1.2 | Air traffic incident report<br>Optional content: routine air-reports, breach of regulations, watchbook/logbook, records<br>Reporting culture, Regulation (EU) No 376/2014, Regulation (EU) 2015/1018<br>Optional content: voluntary reporting | ECCAIRS or local equivalent.<br>Reporting Procedures – inclusion of CAA forms<br>• CA939 – Alleged infringements of Air Navigation Legislation<br>• SRG1410 - Report of operational duty in excess of SRATCOH<br>• AIC – Pink 026/2016 – CHIRP<br>• Whistleblowing |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.1 | | MATZ, CMATZ, ATZ dimensions/timings. Class E+.<br>UK Class C airspace.<br>Glider operations TRA (G) |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.2 | Optional content: Regulation (EU) No 923/2012, international requirements, civil requirements, military requirements, areas of responsibility, sectorisation, national requirements | UK AIP – ENR charts – Military/Civilian airspace use. |
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| BASIC AIR TRAFFIC MANAGEMENT *ATMB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | Regulation (EU) No 923/2012 | Parts of CAP 413 different from Regulation (EU) No 923/2012 |
| Topic 6<br>Subtopic 6.2<br>Training objective 6.2.1 | Optional content: strip marking symbols, strip movement procedures, electronic data, label | Where applicable, data annotation and management (particularly Box M (Domestic box)) as referred to for annotating Flight priority.<br><br>CAP 493 Appendix D or MATS Part 2 |
| Topic 7<br>Subtopic 7.4<br>Training objective 7.4.1 & 7.4.2 | Separation ….for departing and arriving aircraft<br>ICAO Doc 4444 | Longitudinal 'Departure' Separation Differences / additions<br>• 2 and 5 minutes separation requires filed TAS in UK<br>• Additional 5 minutes longitudinal separation for departures.<br>• 10 minutes separation is minima, not mentioned in ICAO.<br>• No use of 15 mins in UK.<br>• 3 mins same level same track differs – Must be CAA approved; transponders; radar monitored never less than 20 miles apart.<br><br>(ICAO 40kts required -<br>1) between aircraft that have departed from the same aerodrome;<br>2) between en-route aircraft that have reported over the same exact significant point;<br>3) between departing and en-route aircraft after the en-route aircraft has reported over a fix that is so located in relation to the departure point as to ensure that five-minute separation can be established at the point the departing aircraft will join the air route.) |
| Topic 7<br>Subtopic 7.6<br>Training objective 7.6.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: EASA SIB 2017-10 'En-route Wake Turbulence Encounters' | CAP 493<br>AIC Pink 092/2017<br>• UK Wake turbulence categories.<br>• Medium category split for arrivals.<br>• Arrival separation as a distance not a time.<br>• Wake turbulence minima shall be provided to pilots approaching visually where necessary. |

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| UK additional training objectives for national standardisation in BASIC ATM | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Royal Flights** | | |
| Royal Flights<br>Explain the purpose of CAS-T | CAP 493 | 2 |
| Royal Flights<br>Explain the processes associated with Royal Flights | CAP 493 | 2 |
| Royal Flights<br>Explain the use of RLLC | CAP 493 | 2 |
| **Topic B: Flight Priorities** | | |
| List the UK specific flight priorities | CAP 493 including Police, HELIMED operations and aircraft requesting D/F assistance. | 1 |

| APP AIR TRAFFIC MANAGEMENT *ATM* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals | CAP 493, CAP 774. Provision of APC in Class G<br><br>National procedures CAP 493 Sections 1 and 3, parts of Sections 2 and 4 relating to coordination between ADI/APP and APP/ACS |
| Topic 1<br>Subtopic 1.2<br>Training objective 1.2.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: national documents | CAP774 UK FIS |
| Topic 2<br>Subtopic 2.1 | Regulation (EU) No 923/2012 | CAP 413 Phraseology |

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|---|---|---|
| Training objectives 2.1.1 | | |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | Regulation (EU) No 923/2012, ICAO Doc 4444<br>Optional content: national documents | CAP 493 / CAP774.<br>Provision of ATC instructions in Class G ATZ. |
| Topic 4<br>Subtopic 4.3<br>Training objective 4.3.5 | ICAO Doc 4444 | CAP 493<br>CAP774 |
| Topic 6<br>Subtopic 6.1<br>Training Objectives 6.1.1 6.1.2 | Regulation (EU) No 923/2012, level allocation, during climb/descent, rate of climb/descent, holding pattern<br><br>ICAO Doc 4444; **5.3.4 Vertical separation during climb or descent**<br>5.3.4.1 An aircraft may be cleared to a level previously occupied by another aircraft after the latter has reported vacating it, except when:<br>a) severe turbulence is known to exist;<br>b) the higher aircraft is effecting a cruise climb; or<br>c) the difference in aircraft performance is such that less than the applicable separation minimum may result;<br>in which case such clearance shall be withheld until the aircraft vacating the level has reported at or passing another level separated by the required minimum<br>Vacating/passing a level - Use of 'more than 300ft' from the level for vacation reports | CAP 493 generally follows ICAO except:<br><br>Vertical separation-<br>Vacating/Passing a level - UK procedure for climb to a previously occupied level if 400ft or more observed and continuing; or pilot reports leaving level. Differs from ICAO Doc 4444 5.3.4.1<br><br>CAP 493 Section 1 Chapter 3 paragraph 5B.4<br>- Consideration given to markedly different rates but no statement that 1000ft must be maintained during climb/descent. |
| Topic 6<br>Subtopic 6.2<br>Training Objective 6.2.1 | Based on time, based on distance (DME and/or GNSS, RNAV) | CAP 493<br>**Different or additional Lateral separations**<br>• VOR separation UK 20 degrees, ICAO 15.<br>• Additional UK in/outbound and two inbound aircraft separations added for VOR/DME.<br>• 45 degree VOR separation available from overhead. (Non-ICAO)<br>• UK limitation - DME not to be used within 15 miles of facility for separation. |

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|---|---|---|
| Topic 6<br>Subtopic 6.2<br>Training objective 6.2.3 | | CAP 493<br>Climbing or descending same track – 5 minutes at time levels are crossed. – Difference - use of same exact reporting point – no reference to CPDLC as in ICAO. |
| Topic 6<br>Subtopic 6.3<br>Training objective 6.3.2 | ICAO Doc 4444 -<br>VMC Climb and descent | CAP 493<br>UK Restriction: VMC Climb/descent cannot be undertaken in CAS (T).<br>Authorised additionally in Class F & G airspace. |
| Topic 8<br>Subtopic 8.1<br>Training objective 8.1.1 | Optional content: information displayed, strip-marking procedures, electronic information data displays, actions based on traffic display information, calculation of EETs; | CAP 493 Data Display – where utilised |
| Topic 9<br>Subtopic 9.2<br>Training objective 9.2.1 | Optional content: briefing, letters of agreement (LoAs), NOTAMs, AICs | UK procedures - CAP 493 Section 8 Chapter 1 para 4. |
| Topic 9<br>Subtopic 9.3<br>Training objectives 9.3.1<br>9.3.2 | | CAP 493 Section 8 Chapter 1<br>Handover and takeover watch |
| Topic 10<br>Subtopic 10.1<br>Training objective 10.1.2 | ICAO Doc 4444<br>Optional content: ICAO Doc 9554 | National procedures - CAP 493 Section 1 chapter 4 para 15 |
| Topic 10<br>Subtopic 10.1<br>Training objective 10.1.3 | Regulation (EU) No 923/2012 | National procedures - CAP 493 Section 1 chapter 4 para 19;<br>CAP 393 – release of balloons. |
| Topic 10<br>Subtopic 10.2<br>Training objective 10.2.1 | ICAO Doc 4444, ICAO Annex 11, local operation manuals | CAP 493 Section 1 Chapters 1, 6 and 12 and Section 3<br>CAP 774 |

## UK additional training objectives for national standardisation in APP ATM

| Topic and training objective | Remarks | Taxonomy level |
|---|---|---|

| **Topic A: UK FIS** | | |
|---|---|---|
| Define UK FIS | CAP774 | 1 |
| Describe the scope of the UK FIS | CAP774 | 2 |
| Explain the responsibility for the provision of the UK FIS | CAP774 | 2 |
| Issue information and deconfliction advice to aircraft | CAP774 | 3 |

## BASIC METEOROLOGY *METB*

| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
|---|---|---|
| Topic 1<br>Subtopic 1.3<br>Training objective 1.3.1, 1.3.2 | Optional content: WAFS, WAFC, MWO, VAAC, TCAC, SADIS | UK Met gathering and information sources including AIRMET and VOLMET<br>UK specific Altimeter setting regions (ASR)<br>regional forecasts |
| Topic 5<br>Subtopic 5.1<br>Training objective 5.1.1 | METAR, SPECI, TAF, SIGMET<br>Optional content: local reports | UK variance for CAVOK and SPECI (CAP 746)<br>Long term TAFs<br>Forms F214 and F215.<br>Different definition and annotation for prevailing visibility. (CAP 746)<br>RVR Trends not used in the UK. |

## BASIC NAVIGATION *NAVB*

| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
|---|---|---|
| Topic 3<br>Subtopic 3.2 | Optional content: topographical features, NAV aids, fixes, fly over and fly by waypoints, etc. | Aerodrome, Approach & En-Route charts and symbology used in the UK.<br>AIP – AD & ENR. |

| APP NAVIGATION *NAV* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.1 | | AIP GEN 3.7 SIDs difference from ICAO. |

| BASIC AIRCRAFT *ACFTB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | ICAO Doc 4444 | CAP 493<br>UK Wake turbulence categories. |

| APP HUMAN FACTORS *HUM* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 2<br>Subtopic 2.1<br>Training objective 2.1.1 | Shift work<br>Optional content: night shifts and rosters, Regulation (EU) 2017/373[1], ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers | CAP670 Appendix D<br>SRATCOH |

| UK additional training objectives for national standardisation in BASIC EQUIPMENT *EQPS* | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Aeronautical ground based stations** | | |
| DVOR<br>Recognise the limitations of the rationalised VOR system utilised in the UK. | NERL | 1 |

| BASIC PROFESSIONAL ENVIRONMENT *PENB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | | The UK having in excess of 60 certificated ANSPs which vary from large organisations providing services to multiple airports to single small organisations with 3 or 4 controllers. e.g. larger organisations, NATS, ANS, Serco, HIAL; smaller organisations, which maybe council run airports who provide their own ATC; or private limited companies.<br>NATS have the contract with the UK Government for the provision of area control service for the UK. |

| APP ABNORMAL AND EMERGENCY SITUATIONS *ABES* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.3 | ICAO Doc 4444 | CAP 493<br>Distress and Diversion (D&D) |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.1 and 2.3.2 | Pilot workload<br>Optional content: instructions, information, support, human factors, etc. | UK Difference - The use of frequency 121.500MHz is monitored and operated by D&D (MOD). |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.1 | Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure | CAP 493 Section 5.<br>CAP 493 10A.8 UK Procedure - The use of ‘MAYDAY MAYDAY MAYDAY FUEL’, becomes a CAT A flight priority.<br>AIC Pink - P138/2012 & CAP 493 section 1 ch 5 para 11E<br>ICAO Doc 7030/EUR states that an aircraft shall, if able, initiate a turn away from the assigned route or track before commencing the emergency descent. However, due to the complex and congested UK controlled airspace, pilots flying in UK FIRs have been instructed that they should, if able, remain on the assigned route or track whilst carrying out the emergency descent; unless to do so would endanger the aircraft. |
| Topic 3<br>Sub topic 3.2 | Regulation (EU) No 923/2012<br>Optional content: ICAO Doc 4444, military | UK AIP ENR 1.1 para 3.4 and CAP 493 differ significantly. |

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|---|---|---|
| Training objective 3.2.1, 3.2.2 | procedures; prolonged loss of communication | |
| Topic 3<br>Sub topic 3.3<br>Training objectives 3.3.1 | Regulation (EU) No 923/2012 | CAP 493<br>Bomb Warning / Unlawful interference national procedures.<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.4<br>Training objectives 3.4.1 3.4.2 | Strayed aircraft -<br>Regulation (EU) No 923/2012<br>Optional content: inside controlled airspace, outside controlled airspace | CAP 493<br>National procedures<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.5<br>Training objective 3.5.1 | Track/heading, distance, other navigational assistance<br>Optional content: nearest most suitable aerodrome | CAP 493<br>National procedures<br>Distress and Diversion (D&D) |

Chapter 3

# APPROACH SERVICE SURVEILLANCE (APS)

| **BASIC LAW *LAWB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1 | Optional content: national aviation law | National aviation law CAP 393 |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Optional content: national authority | UK CAA |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.1 | Optional content: civil aviation administration agencies, government agencies | UK CAA, DfT |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1, 3.2.2 | ICAO Annex 15 | CAP393, ORS4, Skywise<br>UK AIP & AIC's |
| Topic 3<br>Subtopic 3.3<br>Training objective 3.3.1, 3.3.2 | | UK CAA, CAP1251,<br>ATS & Aerodrome Inspectors |
| Topic 3<br>Subtopic 3.4<br>Training objective 3.4.1 | | UK aviation associations include GATCO, BALPA and Trade Unions (e.g.Prospect). |
| Topic 5<br>Subtopic 5.2<br>Training objective 5.2.1 | Regulation (EU) 2015/340 on ATCO Licensing, Approved training courses; ATCO licences, ratings and endorsements<br>Optional content: national processes | CAP1251 |
| Topic 5<br>Subtopic 5.4<br>Training objective 5.4.1 | Regulation (EU) No 923/2012<br>Optional content: national aviation law | National aviation laws - ANO. Additional UK Rules of the Air applicable to APS. CAP 493 Section 1 Ch 4 Para 15A Formation flights require different values for formation dimension from SERA.3135 in class F and G airspace, and allowance for different values to SERA if coordinated. |

| UK additional training objectives for national standardisation in LAWB | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Rules of the Air** | | |
| Recognise UK differences from ICAO Annex 2, Annex 11 and ICAO Doc 4444 | Not all UK differences from ICAO Doc 4444 are listed in the UK AIP. ICAO Doc 4444 has a 'recommended' status not requiring the lodging of differences with ICAO. | 1 |

| APS LAW | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1<br>1.1.2<br>1.1.3 | Regulation (EU) 2015/340 on ATCO Licensing<br>Optional content: national documents | CAP1251<br>Licensing process relevant to APS |
| Topic 2<br>Subtopic 2.1<br>Training Objective 2.1.1<br>2.1.2 | Regulation (EU) No 376/2014; No.2015/1018<br>Air traffic incident report, Reporting culture,<br>Optional content: routine air-reports, breach of regulations, watchbook/logbook, records; voluntary reporting | ECCAIRS or local equivalent.<br>Reporting Procedures – inclusion of CAA forms<br>• CA939 – Alleged infringements of Air Navigation Legislation<br>• SRG1410 - Report of operational duty in excess of SRATCOH<br>• AIC – Pink 026/2016 – CHIRP<br>• Whistleblowing |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.1 | | MATZ, CMATZ, ATZ dimensions/timings. Class E+.<br>UK Class C airspace.<br>Glider operations TRA(G) |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.2 | Optional content: Regulation (EU) No 923/2012[1], international requirements, civil requirements, military requirements, areas of responsibility, sectorisation, national requirements | UK AIP – ENR charts – Military/Civilian airspace use.<br>CAP 493 |

| **BASIC AIR TRAFFIC MANAGEMENT *ATMB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | Parts of the following documents relevant to the Basic course: ICAO Doc 4444, ICAO Doc 9432 RTF manual — standard words and phrases, ICAO Annex 10, Vol. 2 | Parts of CAP 413 different from ICAO DOC 4444 & Annex 10, Vol.2 |
| Topic 6<br>Subtopic 6.2<br>Training objective 6.2.1 | Data display | Where Applicable, data annotation and management (particularly Box M (Domestic box)) as referred to for annotating Flight priority.<br><br>CAP 493 Appendix D or MATS Part 2 |
| Topic 7<br>Subtopic 7.1<br>Training objectives 7.1.1 and 7.1.2 | Separations ICAO Doc 4444<br>Vertical separation<br>**ICAO Doc 4444 (5.3.4 Vertical separation during climb or descent**<br><br>5.3.4.1 An aircraft may be cleared to a level previously occupied by another aircraft after the latter has reported vacating it, except when:<br>a) severe turbulence is known to exist;<br><br>b) the higher aircraft is effecting a cruise climb; or<br><br>c) the difference in aircraft performance is such that less than the applicable separation minimum may result;<br><br>in which case such clearance shall be withheld until the aircraft vacating the level has reported at or passing another level separated by the required minimum) | CAP 493 follows ICAO, under the following allowance<br><br>Note 1. Nothing in the provisions detailed in Sections 5.4.1 and 5.4.2 hereunder precludes a State from establishing:<br><br>a) other minima for use in circumstances not prescribed; or<br><br>b) additional conditions to those prescribed for the use of a given minimum;<br><br>provided that the level of safety inherent in the provisions detailed in Sections 5.4.1 and 5.4.2 hereunder is at all times assured.<br><br>Consideration given to markedly different rates, but no reference to maintaining 1000ft separation. |
| Topic 7<br>Subtopic 7.2 | ICAO Doc 4444 | ‘Exact reporting point’ specifically defined in CAP 493. Not used in Doc 4444 |

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| Training objective 7.2.1 | | 3 mins same level same track differs –<br><br>Must be CAA approved; transponders; radar monitored never less than 20 miles apart.<br>(ICAO -40kts required -<br>1) between aircraft that have departed from the same aerodrome;<br>2) between en-route aircraft that have reported over the same exact significant point;<br>3) between departing and en-route aircraft after the en-route aircraft has reported over a fix that is so located in relation to the departure point as to ensure that five-minute separation can be established at the point the departing aircraft will join the air route.) |
| Topic 7<br>Subtopic 7.2<br>Training objective 7.2.2 | ICAO Doc 4444 Lateral Separations | • DME not to be used within 15 miles of facility for separation. |
| Topic 7<br>Subtopic 7.3<br>Training objective 7.3.1 | VMC climb descent – as per 923/2012 | CAP 493<br><br>UK Restriction: VMC Climb/descent cannot be undertaken in CAS (T). Authorised additionally in Class F & G airspace.<br><br>The application of VMC climb and descent could result in TCAS RA being triggered. Therefore, in class D airspace when surveillance services are being provided, VMC climb and descent shall only be used where authorised and in accordance with any conditions specified in MATS Pt 2. |
| Topic 7<br>Subtopic 7.4<br>Training objective 7.4.1 & 7.4.2 | Separation ….for departing and arriving aircraft<br>ICAO Doc 4444 | Longitudinal ‘Departure’ Separation Differences / additions<br>• 2 and 5 minutes separation requires filed TAS in UK<br>• Additional 5 minutes longitudinal separation for departures.<br>• 10 minutes separation is minima, not mentioned in ICAO.<br>• No use of 15 mins in UK.<br>• 3 mins same level same track differs – Must be CAA approved; transponders; radar monitored never less than 20 miles apart.<br><br>(ICAO 40kts required -<br>1) between aircraft that have departed from the same aerodrome;<br>2) between en-route aircraft that have reported over the same exact significant point; |

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|---|---|---|
| | | 3) between departing and en-route aircraft after the en-route aircraft has reported over a fix that is so located in relation to the departure point as to ensure that five-minute separation can be established at the point the departing aircraft will join the air route.) |
| Topic 7<br>Subtopic 7.5<br>Training objective 7.5.1 | Vacating/passing a level - Use of 'more than 300ft' from the level for vacation reports. | Vacating/Passing a level - UK procedure for climb to a previously occupied level if 400ft or more and continuing; or pilot reports leaving level. |
| Topic 7<br>Subtopic 7.6<br>Training objective 7.6.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: EASA SIB 2017-10 'En-route Wake Turbulence Encounters' | CAP 493<br>AIC Pink 092/2017<br>• UK Wake turbulence categories.<br>• Medium category split for arrivals.<br>• Arrival separation as a distance not a time.<br>• Wake turbulence minima shall be provided to pilots approaching visually where necessary.<br>• Time Based Separation |

| **UK additional training objectives for national standardisation in BASIC ATM** | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Royal Flights** | | |
| Royal Flights<br>Explain the purpose of CAS-T | CAP 493 | 2 |
| Royal Flights<br>Explain the processes associated with Royal Flights | CAP 493 | 2 |
| Royal Flights<br>Explain the use of RLLC | CAP 493 | 2 |
| **Topic B: Flight Priorities** | | |
| List the UK specific flight priorities | CAP 493 including Police, HELIMED operations and aircraft requesting D/F assistance. | 1 |

| APS AIR TRAFFIC MANAGEMENT *ATM* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals | CAP 493, CAP 774. Provision of APC in Class G<br><br>National procedures CAP 493 Sections 1 and 3, parts of Sections 2 and 4 relating to coordination between ADI/APS and APS/ACS |
| Topic 1<br>Subtopic 1.2<br>Training objective 1.2.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: national documents | CAP774 UK FIS |
| Topic 2<br>Subtopic 2.1<br>Training objectives 2.1.1 | Regulation (EU) No 923/2012 | CAP 413 Phraseology |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | Regulation (EU) No 923/2012, ICAO Doc 4444<br>Optional content: national documents | CAP 493 / CAP774.<br>Provision of ATC instructions in Class G ATZ. |
| Topic 4<br>Subtopic 4.3<br>Training objective 4.3.5 | ICAO Doc 4444 | CAP 493<br>CAP 774 UK FIS |
| Topic 6<br>Subtopic 6.1<br>Training Objectives 6.1.1<br>6.1.2<br>6.1.4 | ICAO Doc 4444, Regulation (EU) No 923/2012, level allocation, during climb/descent, rate of climb/descent, holding pattern<br><br>ICAO Doc 4444; **5.3.4 Vertical separation during climb or descent**<br>5.3.4.1 An aircraft may be cleared to a level previously occupied by another aircraft after the latter has reported vacating it, except when:<br>a) severe turbulence is known to exist;<br>b) the higher aircraft is effecting a cruise climb; or<br>c) the difference in aircraft performance is such that less than the applicable separation minimum may result; | CAP 493 generally follows ICAO except:<br><br>Vertical separation-<br>Vacating/Passing a level - UK procedure for climb to a previously occupied level if 400ft or more observed and continuing; or pilot reports leaving level.<br>Differs from ICAO Doc 4444 5.3.4.1<br><br>CAP 493 Section 1 Chapter 3 paragraph 5B.4<br>Consideration given to markedly different rates but no statement that 1000ft must be maintained during climb/descent. |

| | | |
|---|---|---|
| | in which case such clearance shall be withheld until the aircraft vacating the level has reported at or passing another level separated by the required minimum<br>Vacating/passing a level - Use of 'more than 300ft' from the level for vacation reports | |
| Topic 6<br>Subtopic 6.2<br>Training Objective 6.2.1 | Successive departures, successive arrivals, overflights, speed control, silent transfer, ICAO Doc 4444 | CAP 493<br>Different or additional Longitudinal separations as appropriate. |
| Topic 6<br>Subtopic 6.4<br>Training objective 6.4.1 | ICAO Doc 4444 | CAP 493<br>UK Wake turbulence categories.<br>Medium category split for arrivals.<br>Arrival separation specified as a distance not a time.<br>Wake turbulence minima shall be provided to pilots approaching visually where necessary.<br>Time Based Separation. (Where available.) |
| Topic 6<br>Subtopic 6.5<br>Training objective 6.5.4 | Adjacent sectors, restricted, prohibited and danger areas, TSAs | Difference - ICAO Doc 4444 8.6.5.1(c) states<br>'except when transfer of control is to be effected, aircraft shall not be vectored closer than 4.6 km (2.5 NM) or, where the minimum permissible separation is greater than 9.3 km (5 NM), a distance equivalent to one-half of the prescribed separation minimum, from the limit of the airspace for which the controller is responsible, unless local arrangements have been made to ensure that separation will exist with aircraft operating in adjoining areas;'<br><br>CAP 493 Section 1 Chapter 6 13A.4<br>…controllers should aim to keep the aircraft under their control at least two miles within the boundary. [of controlled airspace.] |
| Topic 9<br>Subtopic 9.2<br>Training objective 9.2.1 | Optional content: briefing, letters of agreement (LoAs), NOTAMs, AICs | UK procedures - CAP 493 Section 8 Chapter 1 para 4. |
| Topic 9<br>Subtopic 9.3<br>Training objectives 9.3.1<br>9.3.2 | | CAP 493 Section 8 Chapter 1<br>Handover and takeover watch |

| | | |
|---|---|---|
| Topic 10<br>Subtopic 10.1<br>Training objective 10.1.3 | Regulation (EU) No 923/2012 | National procedures - CAP 493 Section 1 chapter 4 para 19;<br>CAP 393 – release of balloons. |
| Topic 10<br>Subtopic 10.2<br>Training objective 10.2.1<br>10.2.2 | ICAO Doc 4444, ICAO Annex 11, local operation manuals | CAP 493 Section 1 Chapters 1, 6 and 12 and Section 3<br>CAP 774 |

| **UK additional training objectives for national standardisation in APS ATM** | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: UK FIS** | | |
| Define UK FIS | CAP774 | 1 |
| Describe the scope of the UK FIS | CAP774 | 2 |
| Explain the responsibility for the provision of the UK FIS | CAP774 | 2 |
| Issue information and deconfliction advice to aircraft | CAP774 | 3 |
| List the UK specific flight priorities | CAP 493 including Police, HELIMED operations and aircraft requesting D/F assistance. | 1 |

| BASIC METEOROLOGY *METB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.3<br>Training objective 1.3.1, 1.3.2 | Optional content: WAFS, WAFC, MWO, VAAC, TCAC, SADIS | UK Met gathering and information sources including AIRMET and VOLMET<br>UK specific Altimeter setting regions;<br>Regional forecasts |
| Topic 5<br>Subtopic 5.1<br>Training objective 5.1.1 | METAR, SPECI, TAF, SIGMET<br>Optional content: local reports | UK variance for CAVOK and SPECI (CAP 746)<br>Long term TAFs<br>Forms F214 and F215.<br>Different definition and annotation for prevailing visibility.<br>(CAP 746)<br>RVR Trends not used in the UK. |

| BASIC NAVIGATION *NAVB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1; 3.2.2; 3.2.3 | Optional content: topographical features, NAV aids, fixes, fly over and fly by waypoints, etc. | Aerodrome, Approach & En-Route charts and symbology used in the UK.<br>AIP – AD & ENR. |

| APS NAVIGATION | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.1 | | AIP GEN 3.7 SIDs difference from ICAO. |

| BASIC AIRCRAFT *ACFTB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | ICAO Doc 4444 | CAP 493<br>UK Wake turbulence categories. |

| HUMAN FACTORS *HUM* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 2<br>Subtopic 2.1<br>Training objective 2.1.1 | Shift work<br>Optional content: night shifts and rosters, Regulation (EU) 2017/373, ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers | CAP670 Appendix D<br>Overview of SRATCOH |

| BASIC PROFESSIONAL ENVIRONMENT *PENB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | | The UK having in excess of 60 certificated ANSPs which vary from large organisations providing services to multiple airports to single small organisations with 3 or 4 controllers. e.g. larger organisations, NATS, ANS, Serco, HIAL; smaller organisations, which maybe council run airports who provide their own ATC; or private limited companies.<br>NATS have the contract with the UK Government for the provision of area control service for the UK. |

| APS ABNORMAL AND EMERGENCY SITUATIONS *ABES* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.3 | Optional content: ICAO Doc 4444 | CAP 493<br>Distress and Diversion (D&D) |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.1 and 2.3.2 | Pilot workload<br>Optional content: instructions, information, support, human factors, etc. | The use of frequency 121.500MHz is monitored and operated by D & D (MOD). |
| Topic 3<br>Subtopic 3.1 | Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure | CAP 493 Section 5.<br>CAP 493 10A.8 UK Procedure - The use of 'MAYDAY MAYDAY MAYDAY FUEL', becomes a CAT A flight priority.<br>AIC Pink - P138/2012 & CAP 493 section 1 ch 5 para 11E<br>ICAO Doc 7030/EUR states that an aircraft shall, if able, initiate a turn away from the assigned route or track before commencing the emergency descent. However, due to the complex and congested UK controlled airspace, pilots flying in UK FIRs have been instructed that they should, if able, remain on the assigned route or track whilst carrying out the emergency descent; unless to do so would endanger the aircraft. |
| Topic 3<br>Sub topic 3.2<br>Training objective 3.2.1, 3.2.2 | Regulation (EU) No 923/2012<br>Optional content: ICAO Doc 4444, military procedures; prolonged loss of communication | UK AIP ENR 1.1 para 3.4 and CAP 493 differ significantly. |
| Topic 3<br>Sub topic 3.3 | Unlawful interference and aircraft bomb threat -<br>Regulation (EU) No 923/2012 | CAP 493<br>National procedures.<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.4<br>Training objectives 3.4.1 3.4.2 | Strayed or unidentified aircraft -<br>Regulation (EU) No 923/2012<br>Optional content: inside controlled airspace, outside controlled airspace | CAP 493<br>National procedures<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.5<br>Training objective 3.5.1 | Diversions -<br>Track/heading, distance, other navigational assistance | CAP 493<br>National procedures<br>Distress and Diversion (D&D) |

| | | |
|---|---|---|
| | Optional content: nearest most suitable aerodrome | |

| **APS AERODROMES *AGA*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.2<br>Training objective 1.2.1 | Aerodrome conditions, fire/rescue category, condition of ground equipment and NAVAIDs, AIRAC, Regulation (EU) No 139/2014 | UK RFFS Cat based upon length of longest aircraft to used airport. |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.7 | Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes | Difference - (ICAO Doc 4444 7.6.3.2.3.3)<br>In the UK, the use of flashing runway or taxiway lights has no meaning and is not used.<br>Difference - (ICAO Doc 4444 7.15)<br>CAP 493<br>Aerodrome lighting shall be displayed from 15 minutes before any ETA and until 15 minutes after any ATD as follows:<br>(a) By day: High intensity systems, where installed on the runway to be used, whenever the visibility is less than 5 km and/or the cloud base is less than 700ft;<br>(b) By night: Irrespective of weather conditions. |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.8 | Optional content: AVASI, VASI, PAPI | Approach slope indicators -<br>UK requires only APAPI or PAPI. UK considers T- VASIS and ATVASIS are not acceptable for public transport operations |
| Topic 2<br>Subtopic 2.3<br>Training objective 2.3.11 | Braking action coefficient | CAP 493 - UK does not provide friction co-efficient values for measurements made on un-compacted snow or slush. The UK considers friction measurement is unreliable in such conditions. |

Chapter 4

# AREA CONTROL SURVEILLANCE (ACS)

| BASIC LAW (LAWB) | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1 | Optional content: ICAO Annex 2, national aviation law | National aviation law ANO & CAP 393 |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Optional content: ICAO, ECAC, EASA, EUROCONTROL, national authority | UK CAA |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.1 | Optional content: civil aviation administration agencies, government agencies | UK CAA, DfT |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1, 3.2.2 | ICAO Annex 15 | CAP393, ORS4, Skywise<br>UK AIP & AIC's |
| Topic 3<br>Subtopic 3.3<br>Training objective 3.3.1, 3.3.2 | | UK CAA, CAP1251,<br>ATS & Aerodrome Inspectors |
| Topic 3<br>Subtopic 3.4<br>Training objective 3.4.1 | | UK aviation associations include GATCO, BALPA and Trade Unions (e.g. Prospect). |
| Topic 5<br>Subtopic 5.2<br>Training objective 5.2.1 | Regulation (EU) 2015/340 on ATCO Licensing, Approved training courses; ATCO licences, ratings and endorsements<br>Optional content: national processes | CAP1251 |
| Topic 5<br>Subtopic 5.4<br>Training objective 5.4.1 | Regulation (EU) No 923/2012<br>Optional content: national aviation law | National aviation laws - ANO. Additional UK Rules of the Air.<br>CAP 493 Section 1 Ch 4 Para 15A Formation flights require different values for formation dimension from SERA.3135 in class F and G airspace, and allowance for different values to SERA if coordinated. |

| UK additional training objectives for national standardisation in LAWB | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Rules of the Air** | | |
| Recognise UK differences from ICAO Annex 2, Annex 11 and ICAO Doc 444 | Not all UK differences from ICAO Doc 4444 are listed in the UK AIP. ICAO Doc 4444 has a 'recommended' status not requiring the lodging of differences with ICAO. | 1 |

| ACS LAW | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.1<br>1.1.2<br>1.1.3 | National documents | CAP1251<br>Licensing process relevant to ACS |
| Topic 2<br>Subtopic 2.1<br>Training Objective 2.1.1<br>2.1.2 | Air traffic incident report (MOR) | ECCAIRS or local equivalent.<br>Reporting Procedures – inclusion of CAA forms<br>• CA939 – Alleged infringements of Air Navigation Legislation<br>• SRG1410 - Report of operational duty in excess of SRATCOH<br>• AIC – Pink 026/2016 – CHIRP<br>• Whistleblowing |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.1 | | MATZ, CMATZ, Class E+.<br>UK Class C airspace.<br>Glider operations TRA(G) |
| Topic 2<br>Subtopic 2.2<br>Training objective 2.2.2 | Optional content: Regulation (EU) No 923/2012, international requirements, civil requirements, military requirements, areas of responsibility, sectorisation, national requirements | UK AIP – ENR charts – Military/Civilian airspace use. |

| BASIC AIR TRAFFIC MANAGEMENT (ATMB) | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | Regulation (EU) No 923/2012 | Parts of CAP 413 different from Regulation (EU) No 923/2012 |
| Topic 7<br>Subtopic 7.2<br>Training Objective 7.2.1 | ICAO Doc 4444<br>(Longitudinal Separation) | CAP 493<br>• 3 mins same level same track differs –<br>Must be CAA approved; transponders; radar monitored never less than 20 miles apart. |
| Topic 7<br>Subtopic 7.6<br>Training objective 7.6.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: EASA SIB 2017-10 'En-route Wake Turbulence Encounters' | CAP 493<br>AIC Pink 092/2017<br>• UK Wake turbulence categories.<br>• Time Based Separation |

| UK additional training objectives for national standardisation in BASIC ATM | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: Royal Flights** | | |
| Royal Flights<br>Explain the purpose of CAS-T | CAP 493 | 2 |
| Royal Flights<br>Explain the processes associated with Royal Flights | CAP 493 | 2 |
| Royal Flights<br>Explain the use of RLLC | CAP 493 | 2 |
| **Topic B: Flight Priorities** | | |
| List the UK specific flight priorities | CAP 493 including Police, HELIMED operations and aircraft requesting D/F assistance. | 1 |

| ACS AIR TRAFFIC MANAGEMENT *ATM* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.2 | Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals | National procedures CAP 493 Sections 1 and 3, parts of Sections 2 and 4 relating to coordination between APP/ACS and APS/ACS |
| Topic 1<br>Subtopic 1.2<br>Training objective 1.2.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: national documents | CAP774 UK FIS |
| Topic 2<br>Subtopic 2.1<br>Training objectives 2.1.1 | Regulation (EU) No 923/2012 | CAP 413 Phraseology |
| Topic 4<br>Subtopic 4.3<br>Training objective 4.3.5 | ICAO Doc 4444 | CAP 493<br>CAP774 |
| Topic 6<br>Subtopic 6.1<br>Training Objectives 6.1.1<br>6.1.2<br>6.1.4 | ICAO Doc 4444, Regulation (EU) No 923/2012, level allocation, during climb/descent, rate of climb/descent, holding pattern<br><br>ICAO Doc 4444; **5.3.4 Vertical separation during climb or descent**<br>5.3.4.1 An aircraft may be cleared to a level previously occupied by another aircraft after the latter has reported vacating it, except when:<br>a) severe turbulence is known to exist;<br>b) the higher aircraft is effecting a cruise climb; or<br>c) the difference in aircraft performance is such that less than the applicable separation minimum may result;<br>in which case such clearance shall be withheld until the aircraft vacating the level has reported at or passing another level separated by the required minimum | CAP 493 generally follows ICAO except:<br><br>Vertical separation-<br>Vacating/Passing a level - UK procedure for climb to a previously occupied level if 400ft or more observed and continuing; or pilot reports leaving level.<br>Differs from ICAO Doc 4444 5.3.4.1<br><br>CAP 493 Section 1 Chapter 3 paragraph 5B.4<br>Consideration given to markedly different rates but no statement that 1000ft must be maintained during climb/descent. |

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|---|---|---|
| | Vacating/passing a level - Use of 'more than 300ft' from the level for vacation reports | |
| Topic 6<br>Subtopic 6.3<br>Training objective 6.3.1 | ICAO Doc 4444, Regulation (EU) No 923/2012<br>Optional content: EASA SIB 2017-10 'En-route Wake Turbulence Encounters', national documents | UK Wake turbulence categories CAP 493<br>Arrival separation specified as a distance not a time.<br>Wake turbulence minima shall be provided to pilots approaching visually where necessary.<br>Time Based Separation. (Where available.) |
| Topic 6<br>Subtopic 6.4<br>Training objective 6.4.4 | Adjacent sectors, restricted, prohibited and danger areas, TSAs | Difference - ICAO Doc 4444 8.6.5.1(c) states<br>except when transfer of control is to be effected, aircraft shall not be vectored closer than 4.6 km (2.5 NM) or, where the minimum permissible separation is greater than 9.3 km (5 NM), a distance equivalent to one-half of the prescribed separation minimum, from the limit of the airspace for which the controller is responsible, unless local arrangements have been made to ensure that separation will exist with aircraft operating in adjoining areas;<br><br>CAP 493 Section 1 Chapter 6 13A.4<br>…controllers should aim to keep the aircraft under their control at least two miles within the boundary. [of controlled airspace.] |
| Topic 9<br>Subtopic 9.2<br>Training objective 9.2.1 | Optional content: briefing, letters of agreement (LoAs), NOTAMs, AICs | CAP 493, Section 8 – Control Room Administration, where applicable |
| Topic 9<br>Subtopic 9.3<br>Training objectives 9.3.1 9.3.2 | | CAP 493 Handover and takeover, where applicable<br>National annotations and management, where applicable |
| Topic 10<br>Subtopic 10.1<br>Training objective 10.1.3 | Regulation (EU) No 923/2012<br>(Unmanned free balloons) | National procedure - CAP 493 and CAP 393 – release of balloons |
| Topic 10<br>Subtopic 10.2<br>Training objective 10.2.1 10.2.2 | ICAO Doc 4444, Regulation (EU) No 923/2012,<br>ICAO Annex 11, local operation manuals | CAP 493 Section 1 Chapters 1, 6 and 12 and Section 3<br>CAP 774 |

| UK additional training objectives for national standardisation in BASIC ATM | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy level** |
| **Topic A: UK FIS** | | |
| Define UK FIS | CAP774 | 1 |
| Describe the scope of the UK FIS | CAP774 | 2 |
| Explain the responsibility for the provision of the UK FIS | CAP774 | 2 |
| Issue information and deconfliction advice to aircraft | CAP774 | 3 |

| BASIC METEOROLOGY *METB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.3<br>Training objective 1.3.1, 1.3.2 | Optional content: WAFS, WAFC, MWO, VAAC, TCAC, SADIS | UK Met gathering and information sources including AIRMET and VOLMET<br>UK specific Altimeter setting regions;<br>regional forecasts |
| Topic 5<br>Subtopic 5.1<br>Training objective 5.1.1 | METAR, SPECI, TAF, SIGMET<br>Optional content: local reports | UK variance for CAVOK and SPECI (CAP 746)<br>Long term TAFs<br>Forms F214 and F215.<br>Different definition and annotation for prevailing visibility.<br>(CAP 746)<br>RVR Trends not used in the UK. |

| BASIC NAVIGATION *NAVB* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |

| | | |
|---|---|---|
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1<br>3.2.2, 3.2.3 | Optional content: topographical features, NAV aids, fixes, fly over and fly by waypoints, etc. | Approach & En-Route charts and symbology used in the UK.<br>AIP – AD & ENR. |

| **BASIC AIRCRAFT *ACFTB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.2<br>Training objective 3.2.1 | ICAO Doc 4444 | CAP 493<br>UK Wake turbulence categories. |

| **HUMAN FACTORS *HUM*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 2<br>Subtopic 2.1<br>Training objective 2.1.1 | Shift work<br>Optional content: night shifts and rosters, Regulation (EU) 2017/373[1], ICAO/IFATCA/CANSO's Fatigue Management Guide | CAP670 Appendix D<br>Overview of SRATCOH |

| **BASIC PROFESSIONAL ENVIRONMENT *PENB*** | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 3<br>Subtopic 3.1<br>Training objective 3.1.2 | | The UK having in excess of 60 certificated ANSPs which vary from large organisations providing services to multiple airports to single small organisations with 3 or 4 controllers. e.g. larger organisations, NATS, ANS, Serco, HIAL; smaller organisations, which maybe council run airports who provide their own ATC; or private limited companies.<br>NATS have the contract with the UK Government for the provision of area |

| | | |
|---|---|---|
| | | control service for the UK. |

| ACS ABNORMAL AND EMERGENCY SITUATIONS *ABES* | | |
|---|---|---|
| **Appendix 2 to Annex 1 of 2015/340** | **2015/340 content** | **Content and/or source reference specific to UK national environment** |
| Topic 1<br>Subtopic 1.1<br>Training objective 1.1.3 | Optional content: ICAO Doc 4444 | CAP 493<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.1 | Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure | CAP 493 Section 5.<br>CAP 493 10A.8 UK Procedure - The use of 'MAYDAY MAYDAY MAYDAY FUEL', becomes a CAT A flight priority.<br>AIC Pink - P138/2012 & CAP 493 section 1 ch 5 para 11E<br>ICAO Doc 7030/EUR states that an aircraft shall, if able, initiate a turn away from the assigned route or track before commencing the emergency descent. However, due to the complex and congested UK controlled airspace, pilots flying in UK FIRs have been instructed that they should, if able, remain on the assigned route or track whilst carrying out the emergency descent; unless to do so would endanger the aircraft. |
| Topic 3<br>Sub topic 3.2<br>Training objective 3.2.1, 3.2.2 | Regulation (EU) No 923/2012<br>Optional content: ICAO Doc 4444, military procedures; prolonged loss of communication | UK AIP ENR 1.1 para 3.4 and CAP 493 differ significantly. |
| Topic 3<br>Sub topic 3.3<br>Training objective 3.3.1 | Bomb Warning / Unlawful interference -<br>Regulation (EU) No 923/2012 | CAP 493<br>National procedures.<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.4<br>Training objectives 3.4.1 3.4.2 | Strayed and unidentified aircraft. –<br>Regulation (EU) No 923/2012<br>Optional content: inside controlled airspace, outside controlled airspace | CAP 493<br>CAP774<br>National procedures<br>Distress and Diversion (D&D) |
| Topic 3<br>Subtopic 3.5<br>Training objective 3.5.1 | Diversions –<br>Track/heading, distance, other navigational assistance.<br>Optional content: nearest most suitable aerodrome | CAP 493<br>National procedures<br>Distress and Diversion (D&D) |

**APPENDIX A**

# Phraseology

| UK identified specific phraseologies to be used for initial and exchange of licence training | Source |
|---|---|
| **Level Allocation**<br>ICAO Doc 4444 12.3.1.2 (a) For level changes and reports: 'TO' shall only be used to describe altitude or height, e.g. 'DESCEND TO ALTITUDE 1 3000 ft'. It is not used when describing Flight Levels, e.g. 'CLIMB FL 250'. | AIP GEN 1.7, CAP 413 |
| The provision of an instruction to Climb/descend to a ‘height’ or ‘altitude’ shall include those words as appropriate. e.g. 'DESCEND TO ALTITUDE 3000 ft. | AIP GEN 1.7, CAP 413 |
| ICAO Doc 4444 12.3.2.4 (c) 'CRUISE CLIMB' is not used in the UK. | AIP GEN 1.7, CAP 413 |
| **Avoidance of aerial collision**<br>ICAO Doc 4444 12.4.1.8 For avoiding action the following phraseology will be used:<br>AVOIDING ACTION. Turn left (or right) immediately heading (three digits). Traffic (bearing by clock reference and distance). | AIP GEN 1.7, CAP 413 |
| **Clearances**<br>ICAO Doc 4444 12.3.2.1 (c) RECLEARED is to be used only when it relates to an ATC & (d) route clearance, airways, reporting points and waypoints, but NOT for instructions to climb and descend. | AIP GEN 1.7, CAP 413 |
| The phrase 'CONTINUE AS CLEARED' is not to be used in the UK. | AIP GEN 1.7 |
| ICAO Doc 4444, 4.5.7.2.1 The phraseology 'Cleared via flight plan route' is not used in the UK. | AIP GEN 1.7 |
| The UK variation from ICAO Doc 4444, when an aircraft on a SID is required to climb directly to the cleared level, without reference to the vertical profile of the SID, controllers are to include the word ‘now’. | CAP 493 Sec 1, Ch 4 para 7 |

| | |
|---|---|
| **Student Pilots**: In the UK, pilots may hear the use of 'STUDENT' as part of the RTF callsign. The use of this term has been introduced to increase the awareness of controllers and other airspace users to the presence of student pilots flying solo. | AIP & CAP 413, 2.33 |
| **Reduced runway separations**: When using ICAO reduced runway separation procedures, the phraseology 'LAND AFTER THE (aircraft type)' will be used. Full details of these procedures are notified in AIP GEN 3.3.3. | CAP 413, 4.57 |
| **Unlawful interference**:<br><br>It may be considered expedient by Government to withhold an ATC clearance to aircraft particularly if the aircraft has not entered UK national airspace. When authorised the following RTF phraseology is to be used:<br>(1) "(Callsign) I am instructed by Her Majesty's Government to refuse entry into United Kingdom airspace. What are your intentions?";<br>(2) "(Callsign) I am instructed by Her Majesty's Government to inform you that landing clearance has been refused for any airfield within the United Kingdom.";<br>(3) "(Callsign) I am instructed by Her Majesty's Government that you are to hold at (e.g. exact reporting point, or latitude/longitude) at (level). Acknowledge.". | AIP, CAP 493 Section 5. |
| **Approach delays**:<br>If, for reasons other than weather, e.g. an obstruction on the runway, the extent of approach delays are not known, aircraft will be advised 'DELAY NOT DETERMINED'. As soon as it is possible for aircraft to recommence approach procedures, EATs will be issued. | CAP 493 Sec 1 Ch 4 para 13A |
| **Helicopter phraseology**<br>The UK has developed specific phraseology for use in helicopter operations.<br>http://www.caa.co.uk/cap413<br>e.g. 'Taxi'. – **NOTE:** The use of 'taxi' indicates the pilot is free to air taxi or ground taxi at his/her discretion | CAP 413 |
| **Numerals**<br>UK Allow whole hundreds and thousands, but not 'Double/Triple". | AIP GEN 1.7 |
| Traffic information allows 12 hour clock code use. | AIP GEN 1.7 |
| Flight level 'one hundred' used etc to distinguish from 'one one zero' | AIP GEN 1.7 |

| | |
|---|---|
| CAP 413 due to be amended to Regulation EU 923/2012 requirement for QNH 1000 and Squawk 7000 to be pronounced as 'tousand'. Until this time, SERA is the mandatory regulation to be complied with. | CAP 413. para 4.103 |
| When providing a pressure setting less than 1000 hPa, the word 'hectopascals' shall be added to distinguish the figure from inches of mercury. | CAP 413 4.84 Table 1 |
| **Meanings of words**<br>'CONTACT' shall have the meaning 'Establish communications with...(your details have been passed)'... Shortens a pilots initial call on the next ATS unit/frequency as they do not have to pass full details. | CAP 413 2.18 Table 8 |
| Additional word – 'FREECALL' shall have the meaning 'Call (unit)..(your details have not been passed)'. Informs the pilot that they will have to pass full details to the next ATS unit | |
| Additional term 'PASS YOUR MESSAGE' may be used on first contact. | |
| **Station Identification**<br>Approach control radar arrivals = DIRECTOR/ARRIVAL (when approved).<br>Precision approach radar = TALKDOWN HOMER (not used in UK).<br>Ground movement planning = DELIVERY. | CAP 413, 2.19 Table 9 |
| **Aerodrome phraseology**<br>Difference - Cancelling take-off clearance – use of A/c callsign twice; and speed consideration (CAP 493 16.4). | CAP 413 para 4.41 |
| Taxi 'to' holding point not used in UK. | CAP 413 |
| **SSR Allocation**<br>'Stop squawk altitude' used in UK (ICAO 'Stop Squawk Charlie') | CAP 413, 5.8 Table 2 |

**APPENDIX B**

# Surveillance Radar Approach Training Objectives

| **UK additional training objectives for national standardisation in APS** | | |
|---|---|---|
| **Topic and training objective** | **Remarks** | **Taxonomy** |
| **A: Surveillance Radar Approach** | | |
| A.1.1. Describe the criteria for a Surveillance Radar Approach (SRA) | CAP 493 | 2 |
| A.1.2. Apply vectoring techniques to correctly position and maintain the FAT | CAP 493 | 3 |
| A.1.3 Issue advisory levels | CAP 493 | 3 |
| A.1.4 Appreciate the limitations of providing an SRA | CAP 493 | 3 |

**APPENDIX C**

# Rating Terminal Objectives

## 1 Conditions and Terminal Objectives for the Aerodrome Control Visual (ADV) Initial Rating Course

### 1A Objective

1A.1 The general objective is:

Trainees shall apply operational procedures to ensure a safe, orderly and expeditious service. Such procedures shall be as specified in CAP 493 and MATS Part 2.

1A.2 In an aerodrome control STD, trainees shall:

1. demonstrate the ability to manage the workload in the tower control position within the specified aerodrome control area of responsibility; and
2. apply operational control and planning techniques and procedures to ensure a safe, orderly and expeditious service to aerodrome traffic.

### 1B General Responsibilities of the Aerodrome Controller

1. Check and operate communications equipment.
2. Communicate from an aerodrome control unit.
3. Correlate flight data into appropriate pro-forma for display.
4. Maintain a representative flight data display for aerodrome control.
5. Obtain, interpret and disseminate meteorological information.
6. Obtain, interpret and disseminate aeronautical information.
7. Select the runway-in-use and appropriate visual aids.
8. Manage flights operating in the vicinity of the aerodrome.
9. Manage aerodrome surface movements.
10. Co-ordinate with other ATC operational positions.
11. Effect liaison with other agencies.

12. Manage diversions.

13. Work as a team member on the aerodrome control operational position.

14. Manage developed emergencies from the aerodrome control unit.

**NOTE**: Full details of the requirements for the above topics are contained in 2015/340 and CAP 794 - ADV.

## 1C Specific Responsibilities of the Aerodrome Control Visual Controller

### 1C1 Arrivals

1C1.1 Manage inbound aircraft, providing an appropriate service, from the point at which they are transferred by approach control or have established contact with aerodrome control and advised of their intention to land. Utilise arrival routes, as appropriate, and apply appropriate spacing (expect aircraft transferred to be in accordance with approach control unit to aerodrome control unit agreements).

1C1.2 Manage the aerodrome traffic circuit, integrating traffic in the circuit with arriving VFR flights and arriving IFR flights flying a visual approach. When necessary, provide VFR flights with appropriate traffic information.

1C1.3 Co-ordinate with adjacent units, as required.

### 1C2 Departures

1C2.1 Manage departing flights to the point where they are clear of the aerodrome control area of responsibility or until they are transferred to approach control.

1C2.2 Co-ordinate with adjacent units, as required.

### 1C3 Overflights

1C3.1 Manage aircraft transiting through the aerodrome traffic circuit, co-ordinating with approach control, as appropriate.

### 1C4 Surface Traffic

1C4.1 Provide advice and instructions to assist in preventing collisions between aircraft moving on the apron and the manoeuvring area and between aircraft and obstructions on the manoeuvring area.

## 1D Airspace

1D.1 The features of a locally used training airspace should enable the generation of the type of traffic situations and the type of tasks similar to those in the following table:

| | |
|---|---|
| Airspace structure | As specified in MATS Part 2. |
| Airspace classification | Class G ATZ |
| Aerodrome layout | Main runway length 1300m minimum; Crossing runway;<br>A taxiway system of sufficient complexity to enable surface problems to be taught and assessed;<br>Helicopter arrival/departure position;<br>Main apron;<br>An airside road network<br>Separate maintenance area;<br>Separate general aviation apron;<br>Terminal;<br>Control tower;<br>Rescue and Fire Fighting Services. |
| Navigation facilities | Nil |
| Control room layout | Normal operation will be for a single tower controller. |
| Zones/Areas/Restricted | None. |
| Letters of Agreement | These will be specified in MATS Part 2. |
| Operating procedures | Aerodrome traffic procedures will be applied according to requirements specified in CAP 493 and MATS Part 2, as applicable. No instrument approaches available. |
| Aircraft types | Helicopters;<br>Military aircraft;<br>Single/twin piston GA aircraft;<br>Executive jet aircraft. |

## 1E Performance

1E.1 A series of assessed practical summative exercises shall determine the learner's performance. Teamwork should be considered an essential element in the overall assessment of learner performance.

1E.2 The procedure shall include the assessment of the performance of each trainee during the summative assessment on normal traffic situations and include objectives on abnormal and emergency situations, as specified in 2015/340 and CAP 794 – ADV.

## 1F Duration of the typical Practical Summative assessment

1F.1 The summative assessment exercises shall be planned to last for a minimum of 30 minutes. If these are longer than the minimum, the exercise will require additional traffic loadings and must be proportionate for the additional time allowed. Structured

briefing and debriefing shall be planned outside the practical summative assessments.

## 1G Workload of the typical Practical Summative assessment

### 1G1 Traffic types and loadings

1G1.1 The traffic types and minimum loadings required to be assessed, during summative assessments on the tower control position, shall be as follows:

| | | |
|---|---|---|
| 1. | IFR inbounds: | 1 per 30 minutes |
| 2. | IFR outbounds: | 1 per 30 minutes |
| 3. | VFR inbounds: | 2 per 30 minutes |
| 4. | VFR outbounds: | 2 per 30 minutes |
| 5. | Helicopter inbound/outbound: | 2 per 30 minutes |
| 6. | Circuit aircraft: | 2 active at any time |
| 7. | Circuit Helicopter: | 1 active at any time |
| 8. | Vehicles: | 1 per 30 minutes |

## 1H Assessment Process

1H.1 The assessment process shall be based on the rating training performance objectives described in 2015/340 ATCO.D.040, CAP 794 – ADV and these terminal objectives.

# 2 Conditions and Terminal Objectives for the Aerodrome Control Instrument (ADI) Initial Rating Course

## 2A Objective

2A.1 The general objective is:

Trainees shall apply operational procedures to ensure a safe, orderly and expeditious service. Such procedures shall be as specified in CAP 493 and MATS Part 2.

2A.2 In an aerodrome control STD, trainees shall:

1. demonstrate the ability to manage the workload in the tower control position within the specified aerodrome control area of responsibility; and
2. apply operational control and planning techniques and procedures to ensure a safe, orderly and expeditious service to aerodrome traffic.

## 2B General Responsibilities of the Aerodrome Controller

1. Check and operate communications equipment.
2. Communicate from an aerodrome control unit.
3. Correlate flight data into appropriate pro-forma for display.
4. Maintain a representative flight data display for aerodrome control.
5. Obtain, interpret and disseminate meteorological information.
6. Obtain, interpret and disseminate aeronautical information.
7. Select the runway-in-use and appropriate visual aids.
8. Manage flights operating in the vicinity of the aerodrome.
9. Use aerodrome traffic monitor.
10. Manage aerodrome surface movements.
11. Co-ordinate with other ATC operational positions.
12. Effect liaison with other agencies.
13. Manage diversions.
14. Work as a team member on the aerodrome control operational position.
15. Manage developed emergencies from the aerodrome control unit.

**NOTE**: Full details of the requirements for the above topics are contained in the 2015/340 and CAP 794 ADI.

## 2C Specific Responsibilities of the Aerodrome Control Instrument Controller

### 2C.1 Arrivals

2C.1.1 Manage inbound aircraft, providing an appropriate service, from the point at which they are transferred by approach control until touchdown. Utilise arrival routes, as appropriate, and apply appropriate spacing (expect aircraft transferred to be in accordance with approach control unit to aerodrome control unit agreements).

2C.1.2 Manage the aerodrome traffic circuit, integrating traffic in the circuit with arriving VFR flights and arriving IFR flights flying a visual approach. When necessary, provide flights with appropriate traffic information.

2C.1.3 Co-ordinate with adjacent units, as required.

### 2C2 Departures

2C2.1 Manage departing IFR flights to the point where aircraft they are transferred to approach control or area control.

2C2.2 Manage departing VFR flights to the point where they are clear of the aerodrome control area of responsibility or until they are transferred to approach control.

2C2.3 Co-ordinate with adjacent units as required.

2C2.4 Ensure departing flights comply with flow control restrictions.

### 2C3 Overflights

2C.3.1 Manage aircraft transiting through the aerodrome traffic circuit, co-ordinating with approach control, as appropriate.

### 2C4 Surface traffic

2C4.1 Provide advice and instructions to assist in preventing collisions between aircraft moving on the apron and the manoeuvring area and between aircraft and obstructions on the manoeuvring area.

## 2D Airspace

2D.1 The features of a locally used training airspace should enable the generation of the type of traffic situations and the type of tasks similar those in the following table:

| | |
|---|---|
| Airspace structure | As specified in MATS Part 2. |
| Airspace classification | Class D |
| Aerodrome layout | Main runway length 2200m minimum;<br>Crossing non-precision approach runway;<br>A taxiway system of sufficient complexity to enable surface problems to be taught and assessed;<br>Helicopter arrival/departure position;<br>Main apron with nose in parking and self-parking stands;<br>An airside road network;<br>Separate maintenance area;<br>Separate general aviation apron;<br>Terminal;<br>Control tower;<br>Rescue and Fire Fighting services. |
| Lighting and approach facilities | PAPIs;<br>Approach, runway and taxiway lighting to support CAT 2/3;<br>Day/night and low visibility operations;<br>IRVR.<br>Stopbars (optional) |
| Control room layout | Normal operation will be for a single position controller and an Aerodrome Traffic Monitor. (ATM) |
| Zones/Areas/Restricted | None. |
| Letters of Agreement | These will be specified in MATS Part 2. |
| Operating procedures | Aerodrome traffic procedures will be applied according to requirements specified in MATS Parts 1 and 2, as applicable. |
| Aircraft types | Helicopters;<br>Military aircraft;<br>Airline/commuter prop and jet aircraft;<br>Single/twin piston GA aircraft;<br>Executive jet aircraft. |

## 2E Performance

2E.1 A series of practical summative assessments shall determine the learner's performance. Teamwork should be considered an essential element in the overall assessment of learner performance.

2E.2 The procedure shall include the assessment of the performance of each trainee during the summative assessments on normal traffic situations and include objectives on abnormal and emergency situations, as specified in the 2015/340 and CAP 794 – ADI.

## 2F Duration of the typical Practical Summative assessment

2F.1 The practical summative assessments shall be planned to last for a minimum of 30 minutes. If these are longer than the minimum 30 minutes, the exercise will require additional traffic loadings and must be proportionate for the additional time allowed. Structured briefing and debriefing shall be planned outside the practical summative assessments.

## 2G Workload of the typical Practical Summative assessment

### 2G1 Traffic types and loadings

2G1.1 The traffic types and minimum loadings required to be assessed, during summative exercises on the tower control position, shall be as follows:

| | | |
|---|---|---|
| 1. | IFR inbounds: | 2 per 30 minutes |
| 2. | VFR inbounds: | 2 per 30 minutes |
| 3. | IFR outbounds to airways: | 1 per 30 minutes |
| 4. | IFR outbounds to class G:: | 1per 30 minutes |
| 5. | VFR outbounds: | 2 per 30 minutes |
| 6. | Circuit aircraft: | 1 active at any time |
| 7. | VFR overflights: | 1 per 30 minutes |
| 8. | Helicopter inbound/outbound | 2 per 30 minutes |
| 9. | Vehicles: | 1 per 30 minutes |

## 2H Assessment Process

2H.1 The assessment process shall be based on the rating training performance objectives described in 2015/340 ATCO.D.040, CAP 794 – ADI and these terminal objectives.

# 3 Conditions and Terminal Objectives for the Approach Control Procedural (APP) Rating Course

## 3A Objective

3A.1 The general objective is:

Trainees shall apply operational procedures to ensure a safe, orderly and expeditious service. Such procedures shall be specified in CAP 493 and MATS Part 2.

3A.2 In an approach control procedural STD, trainees shall:

1. demonstrate the ability to manage the workload within the specified approach control procedural area of responsibility; and
2. apply operational control and planning techniques and procedures to ensure a safe, orderly and expeditious service to arriving, holding, departing and transiting aircraft.

## 3B General Responsibilities of the Approach Control Procedural Unit Controller

1. Check and operate communications equipment.
2. Communicate from an approach control procedural unit.
3. Correlate flight data into appropriate pro-forma for display, according to requirements specified in MATS Part 2.
4. Maintain an appropriate approach control procedural flight data display, according to requirements specified in MATS Part 2.
5. Obtain, interpret and disseminate meteorological information.
6. Obtain, interpret and disseminate aeronautical information.
7. Provide approach control procedural service.
8. Co-ordinate with other agencies, according to requirements specified in MATS Part 2.
9. Manage diversions and holding situations.
10. Work as a team member on the approach control procedural operational position, according to requirements specified in MATS Part 2.
11. Manage developed emergencies from the approach control unit.

**NOTE**: Full details of the requirements for the above topics are contained in the 2015/340 and CAP794 - APP.

## 3C Specific Responsibilities for the Approach Control Procedural Controller

### 3C1 Arrivals

3C1.1 Manage inbound aircraft approaching from outside controlled airspace, providing an appropriate service.

3C1.2 Manage inbound aircraft from the release point with the area control unit to touchdown. Utilise arrival routes, STARs and approach procedures, as appropriate, and apply appropriate separation; expect aircraft transferred to be in accordance with area control unit to approach control unit agreements.

3C1.3 Manage inbound aircraft established in the appropriate holding area at the initial approach fix. Anticipate the need to hold, use holding levels effectively, establish and co-ordinate the landing interval, calculate and issue EATs when required.

3C1.4 Co-ordinate with adjacent units, as required.

### 3C2 Departures

3C2.1 Manage outbound aircraft from aerodrome control to the point where aircraft are transferred to the area control unit. Utilise published departure routes and/or SIDs to expedite departing aircraft, apply appropriate separation prior to transferring aircraft to the area control unit.

3C2.2 Manage aircraft leaving controlled airspace, providing an appropriate service.

3C2.3 Approve the departure sequence.

3C2.4 Co-ordinate with adjacent units, as required.

### 3C3 Overflights

3C3.1 Manage overflying aircraft and provide an appropriate service.

3C3.2 Co-ordinate with adjacent units, as required.

### 3C4 Flow management

3C4.1 Apply tactical flow management to arriving/departing aircraft when necessary.

3C4.2 Co-ordinate with adjacent units, as required.

## 3D Airspace

3D.1 The features of a locally used STD training sector shall enable the generation of the type of traffic situations and the type of tasks similar to those in the following table:

| | |
|---|---|
| Airspace structure | As specified in MATS Part 2 |
| Airspace classification | Class G<br>Procedures applicable to the provision of approach control procedural in airspace Class D (CTR) shall be demonstrated during the course. |
| Zones/Areas/Restricted | Restricted airspace in the vicinity to be activated during the course. |
| Letters of Agreement | As specified in MATS Part 2. |
| Aerodrome details | Main runway served by ILS/DME/NDB & VOR approach procedure. ILS/DME/NDB is preferred approach procedure;<br>GNSS approach procedure.<br>Radar is not available at the aerodrome but will be available at one adjacent/parent unit, at least;<br>Procedures will be specified in MATS Part 2. |
| Operating procedures | SID available during CAS operations.<br>Arrival, departure and transit traffic procedures will be applied according to requirements specified in MATS Parts 1 and 2, as applicable. |
| Adjacent areas | Class D operations in CTR;<br>Airway(s) adjacent to aerodrome;<br>Class E route incorporated in the training area. |
| Types of separation | Vertical separation;<br>Lateral separation based on VOR/DME and NDB;<br>Longitudinal separation based on time;<br>Deemed separation based on common operational practice, i.e. sector (track), vertical and geographical;<br>Details will be specified in MATS Part 2. |
| Aircraft types | Helicopters;<br>Military aircraft;<br>Airline/commuter prop and jet aircraft;<br>Single/twin piston GA aircraft;<br>Executive jet aircraft. |

## 3E Performance

3E.1 A series of assessed practical summative exercises shall determine the learner's performance. Teamwork should be considered an essential element in the overall assessment of learner performance.

3E.2 The procedure shall include the assessment of the performance of each trainee during the summative assessments on normal traffic situations and include objectives on abnormal and emergencysituations, as specified in 2015/340 and CAP 794 - APP.

## 3F Duration of the typical Practical Summative assessment

3F.1 The practical summative assessments shall be planned to last for a minimum of 30 minutes. If these are longer than the minimum 30 minutes, the exercise will require additional traffic loadings and must be proportionate for the additional time allowed. Structured briefing and debriefing shall be planned outside the practical summative assessments.

## 3G Workload of the Typical Practical Summative assessment

### 3G1 Traffic Types and Loadings

3G1.1 The traffic types and minimum loadings required to be assessed during summative exercises shall be as follows:

1. IFR inbounds, including at least one from controlled airspace – 3 per half- hour or 2 per half-hour plus one IFR flight carrying out training (multiple approaches or following a training route);
2. Transiting IFR flight via the holding facility – 1 per half-hour;
3. IFR outbounds of which at least one joins or crosses controlled airspace – 3 per half hour;
4. VFR inbound, outbound, transiting and circuit traffic to require traffic information to be passed in respect of IFR traffic and VFR traffic – a minimum of 2 to a maximum of 5 per half hour. Two of the five summative exercises must contain the maximum traffic loading.

## 3H Assessment Process

3H.1 The assessment process shall be based on the rating training performance objectives described in 2015/340 ATCO.D.040, CAP 794 – APP and these terminal objectives.

# 4 Conditions and Terminal Objectives for the Approach Control Surveillance (APS) Rating Course

## 4A Objective

4A.1 The general objective is:

Trainees shall apply operational procedures to ensure a safe, orderly and expeditious service. Such procedures shall be specified in CAP 493 and MATS Part 2.

4A.2 In an approach control surveillance STD, trainees shall:

1. demonstrate the ability to manage the workload within the specified approach control surveillance area of responsibility; and
2. apply operational control and planning techniques and procedures to ensure a safe, orderly and expeditious service to arriving, holding, departing and transiting aircraft.

## 4B General Responsibilities of the Approach Control Surveillance Unit Controller

1. Check and operate communications equipment.
2. Communicate from an approach control surveillance unit.
3. Correlate flight data into appropriate pro-forma for display, according to requirements specified in MATS Part 2.
4. Maintain a representative approach control surveillance flight data display, according to requirements specified in MATS Part 2.
5. Obtain, interpret and disseminate meteorological information.
6. Obtain, interpret and disseminate aeronautical information.
7. Select and set up surveillance radar equipment.
8. Use primary radar.
9. Use secondary radar.
10. Provide approach control service with the use of surveillance radar.
11. Co-ordinate with other agencies, according to requirements specified in MATS Part 2.
12. With the aid of surveillance radar, manage diversions and holding situations.

13. Work as a team member on the approach control radar operational position, according to requirements specified in MATS Part 2.

14. Manage developed emergencies from the radar-equipped approach control unit.

**NOTE**: Full details of the requirements for the above topics are contained in the 2015/340 and CAP794 - APS.

## 4C Specific Responsibilities for the Approach Control Surveillance Controller

### 4C1 Arrivals

4C1.1 Manage inbound aircraft approaching from outside controlled airspace, providing an appropriate service.

4C1.2 Manage inbound aircraft from the release point with the area control unit to touchdown. Utilise arrival routes, STARs and approach control surveillance procedures, as appropriate. Apply appropriate separation. Aircraft transferred will be in accordance with area control and approach control unit agreements.

4C1.3 Manage inbound aircraft established in the appropriate holding area at the initial approach fix. Anticipate the need to hold, use holding levels effectively, establish and co-ordinate the landing interval, calculate and issue EATs when required.

4C1.4 Co-ordinate with adjacent units, as required.

### 4C2 Departures

4C2.1 Manage outbound aircraft from aerodrome control to the point where aircraft are transferred to the area control unit. Utilise published departure routes, SIDs and/or radar techniques to expedite departing aircraft, apply appropriate separation prior to transferring aircraft to the area control unit.

4C2.2 Manage aircraft leaving controlled airspace, providing an appropriate service.

4C2.3 Approve the departure sequence.

4C2.4 Co-ordinate with adjacent units, as required.

### 4C3 Overflights and traffic operating outside controlled airspace

4C3.1 Manage overflying aircraft and provide an appropriate service.

4C3.2 Provide appropriate services to aircraft operating outside controlled airspace.

4C3.3 Co-ordinate with adjacent units, as required.

## 4D Airspace

4D.1 The features of a locally used training sector should enable the generation of the type of traffic situations and the type of tasks similar to those in the following table:

| | |
|---|---|
| Airspace structure | As specified in MATS Part 2. |
| Airspace classification | Control zone: Class D<br>Airways: Class A/C |
| Zones/Areas/Restricted | Minimum of one which will require traffic to avoid. |
| Letters of Agreement | As specified in MATS Part 2. |
| Aerodrome details | The airfield runway configuration shall comprise a main runway and a secondary runway;<br>Main runway is a precision approach runway, CAT I on one end and CAT III on the other;<br>Non-precision approach available;<br>Primary and secondary radar data is available;<br>IRVR data available. |
| Operating procedures | Arrival, departure and transit traffic procedures will be applied according to requirements specified in MATS Parts 1 and 2, as applicable;<br>Approval is given for Surveillance Radar Approaches to 2NM from touchdown on each runway;<br>Radar will be available at one adjacent/parent unit, at least -<br>Procedures will be specified in MATS Part 2;<br>The CAA has approved the application of radar separation between departing aircraft and previously departing traffic, or other radar- controlled traffic;<br>Surface wind not to exceed 25 kt within 45 degrees of the runway QDM;<br>Realistic upper winds shall be simulated, including at least one wind velocity change during an instrument or surveillance radar approach. |
| Adjacent areas | The aerodrome CTR shall be contiguous with the airways system |

| | |
|---|---|
| Types of separation | Vertical separation;<br>Radar separation, 3NM radar separation is approved for use;<br>Lateral separation;<br>Longitudinal separation based on time;<br>Wake turbulence separation minima as specified in CAP 493. |
| Aircraft types | Airline/commuter prop and jet aircraft of all wake turbulence categories;<br>Executive jet aircraft;<br>Single/twin piston GA aircraft;<br>Military aircraft. |
| Displayed information | Instrument approach procedures;<br>Local airspace restrictions;<br>ATCSMAC;<br>SIDs/STARs;<br>Wake turbulence separation minima;<br>SRA heights/altitudes and MDH/MDA information;<br>Noise Preferential routes. |

## 4E Performance

4E.1 A series of assessed practical summative exercises shall determine the learner's performance. Teamwork should be considered an essential element in the overall assessment of learner performance.

4E.2 The procedure shall include the assessment of the performance of each trainee during the summative assessments on normal traffic situations and include objectives on abnormal and emergency situations, as specified in 2015/340 and CAP 794 – APS.

## 4F Duration of the typical Practical Summative assessments

4F.1 The practical summative assessments shall be planned to last for a minimum of 30 minutes. If the practical summative assessments are longer than the minimum 30 minutes, the exercise will require additional traffic loadings and must be proportionate for the additional time allowed. Structured briefing and debriefing shall be planned outside the practical summative assessments.

## 4G Workload of the typical Practical Summative assessment

### 4G1 Traffic types and loadings

4G1.1 The traffic types and minimum loadings required to be assessed during summative assessments shall be as follows:

| | | |
|---|---|---|
| 1. | IFR inbounds from airways: | 7 per 30 minutes |
| 2. | IFR inbounds from class G: | 1 per 30 minutes |
| 3. | VFR/SVFR inbounds from class G : | 1 per 30 minutes |
| 4. | Outbound IFR flights to airways: | 3 per 30 minutes |
| 5. | Outbound IFR flights to class G: | 1 per 30 minutes |
| 6. | Outbound VFR/SVFR flights to class G: | 1 per 30 minutes |
| 7. | IFR transits crossing the zone to join/ cross airways at levels controlled by approach radar | 1 per 30 minutes |

For the Surveillance Degradation/Failure Phase of assessment, the overall traffic loading will be 5 inbound and 4 outbound or transit IFR flights per 30 minutes.

## 4H Assessment Process

4H.1 The assessment process shall be based on the rating training performance objectives described in 2015/340 ATCO.D.040, CAP 794 – APS and these terminal objectives.

## 4I Surveillance System Degradation/Failure Phase

### 4I1 Objective

4I1.1 Application of the objectives above including:

To contain and manage a safe ATC environment during the degradation of the surveillance system.

### 4I2 General responsibilities of the approach control surveillance unit controller

4I2.1 All the responsibilities listed above including:

Provide an air traffic control service during a surveillance system failure until the situation has been managed and contained (i.e the traffic situation will allow the release of departures).

### 4I3 Specific responsibilities for the approach control surveillance controller during the degradation phase

4I3.1 To include all the specific responsibilities above including:

1. Recognise that the surveillance system is degrading or that a failure has taken place.
2. Establish separation and, when practicable, issue essential traffic information.
3. Restrict departures and issues EATs to arriving aircraft.
4. Terminate radar services and co-ordinate with other ATCUs.

### 4I4 Assessment Process

4I4.1 The assessment process shall be based on the rating training performance objectives described in 2015/340 ATCO.D.040, CAP 794 – APS and these terminal objectives.

4I4.2 During this assessment process, there shall be at least either a degradation of the surveillance system or a complete failure of either PSR, SSR or both at a scripted point. Any scenario shall only continue until a point where a safe approach procedural environment has been established and that departures can be released. (Once the situation is contained).

# 5 Conditions and Terminal Objectives for the Area Control Surveillance (ACS) Rating

## 5A Objective

5A.1 The general objective is:

learners shall apply operational procedures to ensure a safe, orderly and expeditious service. Such procedures shall be specified in CAP 493 and MATS Part 2.

5A.2 In an area control surveillance STD, learners shall:

1. demonstrate the ability to manage the workload within the specified area of responsibility; and
2. apply operational control and planning techniques and procedures to ensure a safe, orderly and expeditious service to arriving, holding, departing and transiting aircraft.

## 5B General responsibilities of the area control surveillance unit controller

1. Check and operate communications equipment.
2. Communicate from an area radar control unit.
3. Correlate flight data into appropriate pro-forma for display, according to requirements specified in CAP 493 and MATS Part 2.
4. Maintain a representative flight data display for area radar control, according to requirements specified in MATS Part 2.
5. Obtain, interpret and disseminate meteorological information.
6. Obtain, interpret and disseminate aeronautical information.
7. Select and set up surveillance radar equipment.
8. Use primary radar.
9. Use secondary radar.
10. Provide an area control service with the use of surveillance radar.
11. Co-ordinate with other agencies, according to requirements specified in MATS Part 2.
12. Manage diversions and holding situations (Practical delivered at the units).

13. Work as a team member on the area radar control operational position.

**NOTE**: Full details of the requirements for the above topics are contained in the 2015/340 and CAP 794 - ACS.

## 5C Specific Responsibilities for the area control surveillance controller

### 5C1 En-route aircraft

5C1.1 Manage en-route aircraft and provide an appropriate service (Class E practical delivered at the units).

5C1.2 Manage aircraft joining, leaving or crossing controlled airspace and provide an appropriate service.

5C1.3 Co-ordinate with adjacent units, as required.

### 5C2 Arrivals

5C2.1 Manage arriving aircraft, providing an appropriate service, until the release point agreed with the appropriate approach control unit. Utilise arrival routes and STARs, as appropriate, and apply appropriate separation; ensure that aircraft transferred are in accordance with area control unit to approach control unit agreements.

5C2.2 Co-ordinate with adjacent units, as required.

### 5C3 Departures

5C3.1 Manage outbound aircraft from aerodrome or approach surveillance control to the point where aircraft are transferred to the area control unit. Utilise published departure routes and/or SIDs to expedite departing aircraft, apply appropriate separation prior to transferring aircraft to the adjacent sector in accordance with sector agreements unit.

5C3.2 Co-ordinate with adjacent units, as required.

### 5C4 Flow management (practical delivered at the units)

5C4.1 Apply tactical flow management to arriving/departing aircraft, when necessary.

5C4.2 Co-ordinate with adjacent units, as required.

## 5D Airspace

5D.1 The features of a locally used training airspace should enable the generation of the type of traffic situations and the types of tasks similar to those shown in the following table:

| | |
|---|---|
| Airspace structure | As specified in MATS Part 2. |
| Airspace classification | Classes A and C airways,<br>Control Area(s),<br>Control zone(s): Class D, with boundaries extending to base of airway system. |
| Zones/Areas/Restricted | One restricted airspace should exist outside controlled airspace, activated as required. |
| Letters of Agreement | These will be specified in MATS Part 2. |
| Aerodrome details | The training area must contain one airfield having airspace contiguous with the airway system and at least one airfield in an adjacent area controlled by a TMA sector with which Standing Agreements exist. |
| Operating procedures | Operational procedures will be applied according to requirements specified in MATS Parts 1 and 2, as applicable;<br>Upper wind will be utilised |
| Adjacent areas | Military ATC provided outside controlled airspace.<br>Appropriate co-ordination procedures will be specified in MATS Part 2. |
| Types of separation | Vertical separation;<br>Radar separation. |
| Aircraft types | Military fighter and transport aircraft;<br>Airline/commuter prop and jet aircraft;<br>Single/twin piston GA aircraft;<br>Executive jet aircraft;<br>All wake turbulence categories shall be included. |

5E.1 A series of assessed practical summative exercises shall determine the learner's performance. Teamwork should be considered an essential element in the overall assessment of learner performance.

5E.2 The procedure shall include the assessment of the performance of each trainee during the STD training on normal traffic situations and during STD summative exercises that include objectives on abnormal and emergency situations, as specified in 2015/340 and CAP 794 - ACS.

## 5F Duration of the typical Practical Summative assessment

5F.1 The practical summative assessments shall be planned to last for a minimum of 35 minutes. Structured briefing and debriefing shall be planned outside the practical summative assessments.

## 5G Workload of the typical Practical Summative assessment

### 5G1 Traffic types and loadings

5G1.1 The traffic types and loadings required to be assessed during STD summative exercises shall be as follows:

Practical summative assessments shall be designed to build to having a maximum of 11 aircraft on frequency, with 4 conflictions at least once during each summative assessment. A variable mix of traffic types will be used throughout the assessment exercises.

## 5H Assessment Process

5H.1 The assessment process shall be based on the rating training performance objectives described in 2015/340 ATCO.D.040, CAP 794 – ACS and these terminal objectives.