

# Parachuting

## Edition 5: Draft for consultation

CAP 660

A large, abstract graphic composed of overlapping, semi-transparent blue shapes in various shades, ranging from light cyan to deep navy blue. The shapes are curved and layered, creating a sense of depth and movement. The graphic occupies the lower two-thirds of the page.

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## Revision history

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### Third edition

**March 2003**

References in this third edition of CAP 660 are to the Air Navigation Order 2000.

The majority of changes made in preparing this edition are editorial in nature. These have been made where it was considered that the meaning of the text could be clarified. In addition, amendments have been made to enable recognition of the new FAI International Parachutist Certificate of Proficiency. Although this has necessitated changes to the way the qualification requirements for parachuting displays are stated in Chapter 4, the substance of those requirements has not been altered.

In Chapter 3, a new paragraph 20.2 has been added in relation to jumps from maximum altitude. This explains the underlying rationale and makes explicit the actions that **must** be taken if the ascent is prolonged, or delays at altitude expose parachutists to risk of hypoxia beyond the specified limits.

Significant amendments have been indicated by the use of a vertical line in the margin, as demonstrated to the left of this paragraph.

### Fourth edition

**March 2007**

References in this fourth edition of CAP 660 are to the Air Navigation Order 2005.

All amendments are hi-lighted by vertical lines in the page margins.

A new chapter, Chapter 6, has been added, giving guidance on Safety Management Systems and Risk Assessment.

### Fourth edition, amendment 1/2007

**October 2007**

Chapter 3, paragraph 18 has been amended to add the latest guidance on seating and emergency procedures for parachutists.

### Fourth edition, amendment 1/2008

**July 2008**

Chapter 3 has been amended as follows:

The "Maximum Altitude" limitations in the old paragraph 20 have been moved to paragraph 6.6 which is now entitled "Maximum Altitude and Flight Crew Oxygen Requirements". Paragraph 6.6 reflects the conditions of the Exemption for carriage and use of oxygen issued to all British Skydiving Parachute Training Organisations and Display Teams.

A new paragraph, paragraph 22, contains guidance on obstacle and runway marking.

**Fifth edition****XXXX 2020**

References in this fourth edition of CAP 660 are to the Air Navigation Order 2016 and EASA Regulations. Various amendments throughout the document. Removal and renumbering of various chapters and appendices.

All amendments are highlighted by underlining.

**Feedback**

The CAA seeks to continually improve its regulation and guidance and your feedback is helpful to us in doing so. If you have any comments on or suggestions about CAP 660 please send them to [ga@caa.co.uk](mailto:ga@caa.co.uk) with subject line 'CAP 660 feedback'.

DRAFT



# Terminology and Definitions

Throughout this CAP the following terms and definitions are used:

Term	Abbreviation	Definition
<b>Automatic Activation Device</b>	<b>AAD</b>	A device that automatically deploys the parachute at a determined altitude.
<b>Accelerated Free Fall</b>	<b>AFF</b>	A formal programme of training in which the trainee is accompanied.
<b>Aeronautical Information Circular</b>	<b>AIC</b>	Notices relating to safety, navigation, technical, administrative or legal matters.
<b>Air Traffic Control</b>	<b>ATC</b>	Has the meaning assigned to it in ANO Article 155 and does not include aerodrome flight information service (AFIS) units (callsign suffix 'Information') nor air/ground radio stations (many of which use the callsign suffix 'Radio').
<b>Aeronautical Information Package</b>	<b>AIP</b>	Aeronautical information, updated every 28 days, containing information essential to air navigation within UK airspace.
<b>Air Navigation Order</b>	<b>ANO</b>	Air Navigation Order.
<b>Ancillary equipment</b>		Any equipment which may be carried by parachutists, other than parachute equipment, e.g. altimeters, helmets, flags, sky-surfing boards, cameras and smoke canisters.
<b>Air Operator's Certificate</b>	<b>AOC</b>	Certificate issued to an operator to conduct Commercial Air Transport.
<b>Basic Instructor</b>		A person holding a valid <u>British Skydiving</u> Basic Instructor qualification or an acceptable alternative
<b>Boogie</b>		A skydiving meet.
<b>British Skydiving</b>	<b>BS</b>	<u>British Skydiving</u> is the trading name of the <u>British Parachute Association Limited</u> . <u>British Skydiving</u> is the national governing body for sport parachuting in the UK.
<b><u>British Skydiving</u> 'B' Licence</b>		The certificate awarded when a parachutist has made 50 descents.
<b><u>British Skydiving</u> 'C' Licence</b>		The certificate awarded when a parachutist has made 200 descents.
<b><u>British Skydiving</u> Pilot Examiner</b>		A person holding a valid <u>British Skydiving</u> Pilot Examiner qualification.
<b><u>British Skydiving</u> Examiner</b>		A person holding a valid <u>British Skydiving</u> Examiner qualification.

<b>Term</b>	<b>Abbreviation</b>	<b>Definition</b>
<b>United Kingdom Civil Aviation Authority.</b>	<b>CAA</b>	The National Aviation Authority for the United Kingdom.
<b>Canopy Formation</b>	<b>CF</b>	A descent in which the participants attempt to bring themselves together or near to each other after their parachutes are open.
<b>Category 8</b>		The parachutist has demonstrated the ability to perform all the solo freefall foundation manoeuvres of the formal training progression – exits, turns, backloops and tracking.
<b>Chief Instructor</b>	<b>CI</b>	An appointed person whose name and qualifications have been notified to the CAA for this purpose.
<b>CMR</b>	<b>CMR</b>	Certificate of Maintenance Review.
<b>Chief Pilot</b>	<b>CP</b>	The person appointed by the operator to be responsible to them for flying operations.
<b>Congested Area</b>		In relation to a city, town or settlement, means any area which is substantially used for residential, industrial, commercial or recreational purposes. (Schedule 1 of the ANO).
<b>Cutaway/Cutaway Descent</b>		A descent during which the parachutist deliberately jettisons the first parachute and opens a second parachute.
<b>Display Authorisation.</b>	<b>DA</b>	An authorisation for a pilot to conduct flying displays in accordance with Article 86 of the ANO 2016
<b>Descent</b>		A parachute descent, from the time when the parachutist departs the aircraft until the parachutist lands.
<b>Despatcher</b>		An Experienced Parachutist, nominated to take charge of or assist with the dropping by parachute of persons or articles; or a member of Her Majesty's naval, army or air forces acting in this capacity in the course of thier duty.
<b>Direct Supervision</b>		The personal direction of an operation in which the supervisor is present throughout the entire operation.
<b>Display Parachuting</b>		Any parachuting activity deliberately performed for the purpose of providing an exhibition or entertainment for an assembly of persons at an organised event and any parachute descent onto a temporary parachuting site located within the congested area of a city, town or settlement.
<b>Dropping/Drop Zone</b>	<b>DZ</b>	The notified portion of airspace within which parachute descents are made.
<b>DZ Control</b>		The operator's arrangements for operational control when parachuting is in progress.

Term	Abbreviation	Definition
<b>Experienced Parachutist</b>		A person who has achieved standards required for FAI 'B' or 'C' Certificate.
<b>Fédération Aéronautique Internationale</b>	<b>FAI</b>	The world governing body for air sports.
<b>Flight Level</b>	<b>FL</b>	A level, expressed as the number of hundreds of feet, which would be indicated on a pressure altimeter set to 1013.2 millibars.
<b>Flying Display</b>		Any flying activity deliberately performed for the purpose of providing an exhibition or entertainment at an event that has been advertised and is open to the public.
<b>Flying Display Director</b>	<b>FDD</b>	The person responsible to the CAA for the safe conduct of a Flying Display <sup>1</sup> .
<b>Free-Fall</b>		the period beginning when a parachutist leaves an aircraft on a descent and ending when the parachute is open, other than a static line descent.
<b>General Aviation Unit</b>	<b>GA Unit</b>	General Aviation Unit, CAA: <a href="mailto:GA@caa.co.uk">GA@caa.co.uk</a> . The department within the CAA that deals solely with General Aviation and which issues Permissions, Exemptions, Variations and Approvals for General Aviation activities.
<b>Hazard</b>		See major hazard and minor hazard.
<b>Incident</b>		Any fortuitous or unexpected event, not being a reportable accident, by which the safety of an aircraft or any person is threatened.
<b>Intermediate Parachutist</b>		A person who has achieved the standard required for Category 8 but who has not attained FAI 'B' Certificate.
<b>Jumpmaster</b>		An Experienced Parachutist, nominated to take charge of the parachutists on a parachute dropping flight; or a member of Her Majesty's naval, army or air forces acting in this capacity in the course of their duty.
<b>Major Hazard</b>		Any object or feature, whether natural or artificial, which because of its size may be difficult to avoid and which, if struck by a parachutist may result in injury (e.g. large hangars, buildings, woods).

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<sup>1</sup> The Event Organiser and FDD might in some cases be the same person.

Term	Abbreviation	Definition
<b>Minimum Equipment List</b>	<b>MEL</b>	A minimum equipment list (MEL) is a list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative (which is) prepared by an operator in conformity with, or more restrictive than, the MEL established for the aircraft type. The MEL must be approved by the CAA (Article 78 of the ANO).
<b>Military Parachutist</b>		A person parachuting from a civil registered aircraft in accordance with the terms of a CAA parachuting Permission which specifies compliance with Ministry of Defence procedures.
<b>Minor Hazard</b>	<b>Minor Hazard</b>	Any object or feature, whether natural or artificial, which should be easily avoided but which, if struck by a parachutist may result in injury (e.g. hedges, fences, ditches).
<b>MTWA</b>	<b>MTWA</b>	Maximum Total Weight Authorised.
<b>Notice to Airmen</b>	<b>NOTAM</b>	A notice to airmen (NOTAM) is a notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.
<b>Operator</b>		A person, organisation or enterprise engaged in or offering to engage in an aircraft operation – in this publication the word is used to denote the Permission holder, who is the person having overall control of the parachuting operation – the Permission holder will usually be the person who at the relevant time has the management of the aircraft and will therefore be the operator as defined in Article 4 of the Air Navigation Order.
<b>Operating Staff</b>		All those individuals involved in the conduct and control of a parachuting operation, including pilots, whether paid or unpaid, fulltime or part-time.
<b>Overshoot Area</b>		An area largely free of Major Hazards where parachutists may land if they are unable to land on the designated landing area.
<b>Packing Certificate</b>		A qualification to pack parachutes, issued by the <u>British Skydiving</u> or a competent parachuting organisation recognised for that purpose by the CAA.

Term	Abbreviation	Definition
<b>Parachute</b>		Any non-rigid aerodynamic decelerator or lift device which when deployed is used for descent from an aircraft in flight.
<b>Parachute Descent</b>		See descent
<b>Parachute Equipment</b>		The parachute canopies, deployment devices, container, harness and requisite attachments.
<b>Parachuting Display</b>		See display parachuting.
<b>Parachuting Instructor</b>		A person holding a valid <u>British Skydiving</u> Instructor qualification (other than a Basic Instructor qualification) or <u>British Skydiving</u> Advanced Instructor qualification or an acceptable alternative in compliance with Chapter 3
<b>Parachutist</b>		Any person making or intending to make a parachute descent.
<b>Pilot In Command</b>	<b>PIC</b>	the pilot designated by the operator as being in command and charged with the safe conduct of its flight, without being under the direction of any other pilot in the aircraft.
<b>Parachute Landing Area</b>	<b>PLA</b>	The terrain onto which parachute descents are made.
<b>Ram Air Progression System</b>	<b>RAPS</b>	A formal programme of training in which the trainee follows a conventional syllabus (not AFF) but is equipped with a ram-air main parachute.
<b>Series of Flights</b>		Any number of consecutive flights made for the same purpose, taking off and landing at the same airfield with the same PIC.
<b>Special Hazard</b>		A hazard which could constitute a special risk to parachutists, e.g. stretches of open water, deep rivers, electricity power lines, densely built up areas, cliffs and quarries.
<b>Special Parachuting Permission</b>		A parachuting permission which relates to unusual parachuting activity.
<b>Radar identification transponder code</b>	<b>Squawk</b>	The transponder code set by the pilot in the aircraft to allow radar identification.
<b>Stand-Off</b>		Flight by parachute when the intended landing site is more than three nautical miles from the point of leaving the aircraft.
<b>Static Line</b>		An attachment strop which is for the purpose of causing the parachute to commence deployment immediately the parachutist starts to fall.

Term	Abbreviation	Definition
<b>Student Parachutist</b>		A parachutist who has not yet attained the standard required for Category 8.
<b>Supervision</b>		The periodic surveillance and assessment of operations and those conducting operations in order to maintain or improve established standards.
<b>Surface Wind</b>		The wind that will affect a parachute on landing.
<b>Tandem Descent</b>		A descent in which two participants make a parachute descent using a single set of parachute equipment designed for that purpose.
<b>Tandem Parachutist</b>		A person being introduced to parachuting by means of making one or more descents whilst harnessed to a Tandem Instructor.
<b>Tandem Instructor</b>		A person holding a valid <u>British Skydiving Tandem Instructor</u> rating or an acceptable alternative
<b>Target</b>		The visible marking of a parachutist's intended landing point.
<b>Team Leader</b>		The appointed person whose name and qualifications have been notified to the CAA for this purpose.
<b>Undershoot Area</b>		See overshoot area.
<b>Unusual Parachuting Activity</b>		High altitude jumps, stand-off and any other activity which the CAA considers in the particular case to be an unusual parachuting activity.
<b>Valuable Consideration</b>		Any right, interest, profit or benefit, forbearance, detriment, loss or responsibility accruing, given, suffered or undertaken pursuant to an agreement, which is of more than a nominal nature.
<b>VHF</b>		Very High Frequency.
<b>Water Jump</b>		A parachute descent where the parachutist intends to land in water.
<b>Wind Drift Indicator</b>		A paper streamer dropped from the aircraft in order to establish the direction and strength of the wind prior to parachuting.
<b>Wing (Parachute) Loading</b>		The weight, usually expressed in pounds (lb) supported by each square foot (ft <sup>2</sup> ) of canopy and includes the weight of that canopy or the number of kilograms (kg) supported by each square metre (m <sup>2</sup> ) of canopy. 5 kg/m <sup>2</sup> approximates to 1 lb/ft <sup>2</sup> .

## Chapter 1

# Introduction

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## General

- 1.1 The purpose of CAP 660 is to set out minimum standards which the Civil Aviation Authority (CAA) will require to be satisfied prior to the grant or renewal of parachuting Permissions and any related Exemptions; and to indicate the CAA's requirements for the conduct of parachuting operations.
- 1.2 The Permission holder **may** be a registered corporate body or a named individual or individuals with or without a trading name. The Permission holder will usually be the person who at the relevant time is responsible for the management of the parachute dropping aircraft and will therefore be the operator as defined in Article 4 of the ANO. The operator **must** in any event ensure that appropriate arrangements are in place to ensure that any aircraft utilised in support of their parachuting activities are operated legally and with due regard to safety.
- 1.3 The British Skydiving Operations Manual, as amended, represents the accepted standard for sport parachuting in the United Kingdom (UK) and British Skydiving Parachute Training Organisations (PTOs) and Display Teams **should** adhere to the provisions and guidance in that manual in order to achieve an acceptable level of safety in the conduct of their operations.
- 1.4 The CAA recognises that in some areas British Skydiving, the operator and/or local circumstances will require more comprehensive or stringent standards to be adopted.
- 1.5 Whilst every effort is made to ensure that all information is correct at the time of publication, the CAA reserves the right to amend this document as required to accommodate changes to the law, to correct errors and omissions, or to reflect changes in national policy and best practise.
- 1.6 Throughout this document the following editorial practises and definitions shall apply:
- 'Shall' and 'Must' are used to indicate a mandatory requirement.
  - 'Should' is used to indicate strong obligation.
  - 'May' is used to indicate discretion.
- 1.7 The use of 'should' must not, however, be taken to mean that nothing need be done. If the operator's response is deemed by the CAA to be inadequate, a

specific requirement may be applied as a condition of the parachuting Permission.

## Applicability

- 1.8 CAP 660 is applicable to all operations conducted pursuant to parachuting Permissions and any related Exemptions granted under Articles 89, 90 and 266, of the ANO<sup>2</sup>. This includes:
- Parachute Training Organisations
  - Display teams
  - Special parachuting events
  - Companies engaged in the development and manufacture of parachute equipment
  - Military personnel parachuting from civil registered aircraft
- 1.9 CAP 660 does not apply to the descent of persons by parachute from an aircraft in an emergency.
- 1.10 Parachuting Permissions and any related Exemptions granted by the CAA **may** be granted subject to the condition that all operations are conducted in accordance with applicable requirements stated in CAP 660 and subject also to such other conditions as the CAA thinks fit.
- 1.11 CAP 660 is intended to be a useful working document and therefore includes relevant summaries of some regulations and requirements that are enforceable in law. When parachute dropping is conducted from UK registered aircraft operating outside the UK, operators **must** observe all legal requirements applicable to the operation of the aircraft and **should** continue to adhere to the provisions of CAP 660 unless the laws and regulations of the country of operation demand otherwise.

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<sup>2</sup> References in this publication to the ANO and Regulations are to the 2016 Order and Regulations.



## Chapter 2

# Legal Requirements

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## General

- 2.1 Parachute dropping from civil registered aircraft over the United Kingdom is regulated by the CAA and **must** be conducted in accordance with the requirements of Articles 89 and 90 of the ANO and the applicable EASA Air Operations Regulations. Every person who is involved in a parachuting operation has, under Articles 90, 240 and 241 of the ANO, a statutory duty to ensure that they do not endanger other persons, property or aircraft.
- 2.2 Both the CAA and the operator have responsibility for achievement of acceptable standards of safety. The CAA fulfils its duty to regulate parachuting by:
- Satisfying itself as to the suitability of applicants prior to grant or renewal of parachuting Permissions
  - Stipulating certain requirements for the conduct of parachuting activity
  - The addition to parachuting Permissions and/or Exemptions of such conditions as the CAA may from time to time think fit
  - Monitoring of parachuting operations
- 2.3 In order to conduct parachute dropping operations, each operator **must** first obtain Permission from the CAA as required by Article 90 of the ANO. Application **should** be made on form SRG 1313: Application for Grant or Renewal of Parachuting Permission, available at [www.caa.co.uk/SRG1313](http://www.caa.co.uk/SRG1313).
- 2.4 Nothing in CAP 660 is intended to conflict with the ANO or other legislation, which in case of doubt **must** be regarded as overriding.

## Charges

- 2.5 A charge is payable on initial application for, and on each renewal of, a parachuting Permission and any related Exemptions. However, no charge is payable in respect of such an application if it is supported by a recommendation by an approved person, unless it is an application relating to unusual parachuting activity. British Skydiving is currently the only body approved for this purpose within the UK. No action will be taken on applications until any appropriate charge has been paid.
- 2.6 Details of current charges **may** be found in the CAA Official Record, Series 5, available at [www.caa.co.uk/ORS5](http://www.caa.co.uk/ORS5) under General Aviation.

## Permissions and/or Exemptions

- 2.7 The CAA **may** grant a Permission required under Article 90 of the ANO once it is satisfied that the applicant is a fit and competent person, having regard in particular to their previous conduct and experience, their equipment, organisation, instructor training, staffing and other arrangements, to safely organise the proposed parachuting operation. The current British Skydiving Operations Manual represents the minimum standard for the arrangements which would be required. The Permission **may** be granted subject to such conditions as the CAA thinks fit and **shall**, subject to the provisions of Article 253 of the ANO, remain in force for the period specified in the Permission.
- 2.8 The CAA **may** also, under Article 266, grant Exemptions from other provisions of the ANO. For example, parachute manufacturers **may** be granted an Exemption from Article 89 to enable them to drop dummies and stores.
- 2.9 Exemptions, Permissions and Approvals relating to the ANO shall be valid for a finite period and have a notified expiry date. The holder is responsible for ensuring that appropriate Exemptions, Permissions and Approvals remain valid and **should** apply for renewal well before expiry.
- 2.10 Operations conducted in disregard of the conditions stated on a Permission or Exemption, or under the terms of a Permission or Exemption that has lapsed, are in breach of the law.

## Applications for PTOs

- 2.11 Prior to submitting an application for the grant of a parachuting Permission, applicants are advised to consider the following factors which **may** influence the proposed operation:
- Planning consent (if necessary)
  - Potential problems and difficulties with the use of the airspace within or close to the proposed parachute Dropping Zone (DZ)
  - Integration and de-confliction arrangements with other aviation activities at or near the proposed DZ
  - The certification, suitability and CAA clearance of any aircraft intended for use in the parachute dropping role
- 2.12 Applicants for initial grant of a Permission must conduct the following before the Permission **may** be issued:
- Fulfil the requirements relating to airspace notification outlined in chapter 3.

- If the proposed parachuting operation is to be based at an aerodrome, provide a copy of the relevant sections of the operational instructions applicable to that aerodrome<sup>3</sup> detailing the procedures to ensure de-confliction of aircraft and parachutists in the air and on the ground; and procedures for aircraft landing, taking off or manoeuvring within or close to the designated DZ or the Parachute Landing Area (PLA).
- Provide a copy of the operator's local Standard Operating Procedures (SOPs). In the case of an operation based at an aerodrome it is essential that these instructions are compatible with the instructions detailed in chapter 3, and at a licensed aerodrome, these procedures and the instructions in the Aerodrome Manual and the Manual of Air Traffic Services (MATS) Part 2 **must** be in accord.
- Provide a copy of any agreements which have been made with other users of the site or in connection with the use of airspace (e.g. Air Traffic Services Unit (ATSU)).
- Provide any other information requested in order to satisfy the requirements.
- Complete application form SRG 1313: Application for Grant or Renewal of Parachuting Permission and email it to the CAA at [GA@CAA.co.uk](mailto:GA@CAA.co.uk).

2.13 Notwithstanding any review of the above items by the CAA, operators remain responsible for ensuring the ongoing validity of their landowner permission, other agreements, and instructions to their operating staff, including pilots, and to the parachutists themselves.

2.14 Permissions are not transferable, therefore change of ownership of a Parachute Training Organisation will mean that a new application must be submitted.

## Display Team Applications

2.15 Applicants for a Display Team Permission **should** also use form SRG 1313: Application for Grant or Renewal of Parachuting Permission.

2.16 Permissions are not transferable, therefore change of ownership of a Display Team will mean that a new application **must** be submitted.

## Renewals

2.17 The CAA parachuting Permission **may** be renewed subject to satisfactory assessment of achieved operating and safety standards.

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<sup>3</sup> At a licensed aerodrome, this is the Aerodrome Manual.

## Cessation or revocation

- 2.18 If a holder elects to cease or applies to vary parachuting operations for which a Permission has previously been granted, or if the document is revoked, it **should** be returned at once to the [CAA General Aviation Unit \(GA Unit\)](#). Where the CAA refuses the grant or renewal of a Permission or proposes to vary, suspend or revoke an existing one, the applicant or holder will be informed of the reasons for the CAA's decision or proposal and of the process for seeking a review of that decision.
- 2.19 Prior to submitting an application for the grant of a parachuting Permission, applicants are advised to consider the following factors which **may** influence the proposed operation:
- Planning consent (if necessary)
  - Potential problems and difficulties with the use of the airspace within or close to the proposed parachute DZ
  - Integration and de-confliction arrangements with other aviation activities at or near the proposed DZ
  - The certification, suitability and CAA clearance of any aircraft intended for use in the parachute dropping role

## Insurance

- 2.20 The operator is responsible for ensuring that insurance cover adequately meets regulatory requirements. The requirement for aircraft insurance cover is contained within Articles 6 & 7 of Regulation (EC) No. 785/2004.

## EASA legislation for parachute operations

- 2.21 All operators of EASA aircraft are required to comply with the requirements of the regulations referenced below in addition to any requirements of the parachuting Permission under Article 90 of the [ANO 2016](#). Operators **should** note that the aircraft equipage requirements in the EASA regulations **may** differ from those previously in force under Schedule 6 of the ANO 2016. [Details can be found in the Easy Access rules for EASA legislation](#). In summary, the regulations state:
- For non-commercial operators of non-complex aircraft, operators will have to comply with Part-NCO and Part-NCO.SPEC which came into force on 21st April 2017.
  - For commercial operators and operators of complex motor powered aircraft, will have to comply with Part-SPO and Part-ORO which came into force on 21st April 2017.

- All Parachute Training Organisations operating non-complex motor-powered aircraft **must** ensure that they conduct their operations according to the European Regulations which are pertinent to their operational status. For British Skydiving PTOs this status will be determined by whether the profits from any revenues earned by the PTO are distributed outside the organisation (in which case the PTO is a commercial organisation) or not (in which case the PTO is a non-commercial organisation). Twin turboprop aircraft with a MCTOM of 5700kg or less are permitted to operate in accordance with Part-NCO under the derogation published in EU Reg 216/1199. However, for all other complex motor-powered aircraft this distinction does not apply, and all operations are classified as commercial operation under EASA.
- The Annexes to the EASA Aircrew Regulations (Part-FCL) came into effect on 17 September 2012, bringing with them new requirements and restrictions in relation to PPL(A) privileges for commercial or non-commercial parachute dropping. Information Notice IN-2015/029 “Cost Sharing, Parachute Dropping and Introductory Flights” contains further guidance and can be found at [www.caa.co.uk/informationnotices](http://www.caa.co.uk/informationnotices).

2.22 Pilots who are using foreign licenses to fly EASA aircraft will need to get their licence validated for use in the UK. Detailed information about the rules governing this issue can be found within [Annex III of Commission Regulation \(EU\) No.1178/2011](#). Further information on how to proceed with an application for validation can be found here: [www.caa.co.uk/General-aviation/Pilot-licences/Applications/Verifications/Verification-of-a-third-country-ICAO-licence/](http://www.caa.co.uk/General-aviation/Pilot-licences/Applications/Verifications/Verification-of-a-third-country-ICAO-licence/)

## Chapter 3

# Parachuting Operations

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## General

- 3.1 The requirements and procedures relating to aircraft certification and maintenance, pilot qualifications, aircraft documentation, and aviation operating standards are prescribed in the Air Navigation Order, British Civil Airworthiness Requirements (BCARs) and other regulations enabled under the Civil Aviation Act 1982, or the European Aviation Safety Agency (EASA) as appropriate. For the convenience of operators, some of these requirements are summarised in this chapter. Additional requirements, which may in some cases be more stringent, are made in relation to parachuting operations.
- 3.2 A sound and effective management structure, appropriate to the scale of operation, is essential for safe parachuting operations. The duties and responsibilities of all those involved in the management of the operation **must** be clearly defined in writing and the chain of responsibility firmly established.
- 3.3 Key personnel **must** be nominated on form SRG 1313: Application for Grant or Renewal of Parachuting Permission and their duties and responsibilities stated. The CAA **must** be informed of the names of the holders of all these posts and notified in writing, not less than 7 days in advance of any intended change to the person holding the post or in their duties; or of the intended abolition of the post.
- 3.4 The CAA **must** be informed of the name and qualifications of the Chief Instructor (CI) or Team Leader and any change **must** be notified in accordance with paragraph 3.3 above.
- 3.5 The operator **must** ensure that aircraft used in support of their parachuting activities are maintained in an airworthy condition; this responsibility cannot be assumed to fall to the maintenance organisation. In the event that aircraft are intended to be hired or chartered, the Permission holder **must** ensure that such aircraft have been properly maintained and are operated legally. In all cases an individual shall be nominated to discharge this responsibility.

## Parachuting Operations Manual

- 3.6 Every applicant for and every holder of a Permission shall make available to the CAA a parachuting manual and **shall** make such amendments or additions to such manual as the CAA **may** require.
- 3.7 The holder of a Permission **shall** make the manual available to every employee or person who is or **may** engage in parachuting activities conducted by them.

The manual **must** contain all such information and instructions as **may** be necessary to enable such employees or persons to perform their duties in a safe manner.

- 3.8 Operators are responsible for providing adequate instructions and accurate information to their operating staff, including pilots, and to the parachutists themselves.
- 3.9 A CAA Flight Standards Officer (FSO) **may** suggest amendments where they appear to be necessary, but the CAA is not responsible for the detailed information provided in manuals. It is the operator's responsibility to ensure that the manual is correct. A suitably qualified person **should** be designated to ensure that operations manuals (including local SOPs) are properly maintained and up to date.
- 3.10 The operator is responsible for complying with the requirements of applicable health and safety and other legislation. The CAA makes no safety inspections of fan trainers, suspended harnesses or other apparatus or facilities used in connection with parachute training or parachuting activities.
- 3.11 A guide to the compilation of a Parachuting Operations Manual, including local SOPs, can be found at Appendix A.
- 3.12 The use of a Safety Management System (SMS) is mandatory for PTOs and Display Teams. It is therefore recommended that they refer to CAP 795: SMS Guidance for Organisations and CAP 1059: SMS Guidance for small, non-complex organisations in order to fulfil this requirement.

## Airspace Notification

- 3.13 DZs intended for regular parachuting use **must** be notified to the CAA. The list of notified DZs is in the En-Route (ENR) section of the UK Aeronautical Information Publication (AIP). The purpose of this measure is to enhance the safety of all users of airspace, however, such listing does not imply permission for the use of a particular site.

## Applications for new drop zones

- 3.14 An application for permission to use a new site as a DZ should be sent to the CAA Airspace Regulation Section (AROPs) and the GA Unit in the first instance (AROPS@caa.co.uk and GA@caa.co.uk). The application must include the following information:
- DZ Location
  - Details of the main operators of the DZ
  - Requested Height of planned drops

- Planned frequency of activity
- Planned days/hours of activity
- Signed permission of the landowner(s) of the PLA

3.15 To enable a decision on the safety and practicability of the proposed DZ, the application must also be supported with supplementary information representing the consultation of interested parties. Once notified of the proposal, consultees are granted a period of 60 days to formulate and submit their response to the Proposer. The CAA considers that as a minimum the following bodies should be consulted prior to the submission of an application:

- Ministry of Defence: SO1 Airspace, Defence Airspace and Air Traffic Management (DAATM)
- Local Licensed Airfields (within 10nm of the proposed DZ)
- Local General Aviation Groups (within 10nm of the proposed DZ)
- Local Glider sites (within 10nm of the proposed DZ)
- National Air Traffic Services (NATS) (if the DZ will require access to controlled airspace)

3.16 Upon receipt of the application the CAA's Head of Airspace, Air Traffic Control and Aerodromes (AAA) will consider the viability of the operation in terms of airspace utilisation, risk and safety.

3.17 A formal response will be issued to the applicant which may include an invitation to address issues relating to the proposal.

## Final Permission

3.18 Once initial permission has been granted by the CAA, an SRG 1313: Application for Grant or Renewal of Parachuting Permission **must** be submitted to the CAA's GA Unit for final permission to be granted.

## DZ operations

3.19 Operators are required to notify the start and finish of operations to appropriate Air Traffic Service Units (ATSUs) as listed in the UK AIP ENR section 5.5. Attention is drawn to the need to notify Area Control Centres (ACC) outside the operating hours of some ATSUs. The operator **should** maintain a record of the times when the DZ has been notified as active and inactive on BS Form 193 available at [www.britishskydiving.org](http://www.britishskydiving.org).

3.20 Any changes to the normal activity times, or changes of operator/user telephone number **must** be notified via email to CAA AROps and the GA Unit ([AROPS@caa.co.uk](mailto:AROPS@caa.co.uk) and [GA@caa.co.uk](mailto:GA@caa.co.uk)). It is also important that the CAA is



informed when a site ceases to be in regular use, so that it **may** be deleted from the list of notified DZs.

## Military and unusual parachuting activities

- 3.21 Unusual parachuting activity, displays and night jumps **must** be notified to the CAA in accordance with the procedure described in Appendix B.
- 3.22 It is the responsibility of the Ministry of Defence (MoD) to take appropriate Notices to Airmen (NOTAM) action when military parachuting is to be conducted using civil registered aircraft except within established active Danger Areas, Prohibited Areas or established active Free Fall Drop Zones.

## Pilots

- 3.23 Where reference is made in the following text to British Skydiving, the operator **may** report direct to the CAA if appropriate. British Skydiving form numbers are quoted in brackets and are available from [www.britishskydiving.org](http://www.britishskydiving.org)
- 3.24 The operator **must** appoint a Chief Pilot who will be responsible to them for flying operations.

## Pilot Qualifications – aircraft other than balloons

- 3.25 A pilot **shall** not act as Pilot in Command (PIC) of an aircraft on a flight during which parachutists are to be dropped unless they meet the minimum requirements stated below.

## Licence

- 3.26 They must hold a valid pilot's licence for the type or class of aircraft to be flown (including any differences training appropriate to the type\*) and any ratings necessary for the type of flight to be undertaken, i.e. IR, IR(R), Night, IMC; RT licence. The minimum standard of acceptable licence is a UK or EU PPL or equivalent 3rd country licence used in an approved manner for parachuting operations .

## Experience

- 3.27 Pilots must have a minimum of 100 hours as PIC of aeroplanes if aeroplanes are to be flown, or 100 hours as PIC of helicopters if helicopters are to be flown; except in the case of parachutists holding British Skydiving 'C' Licence or equivalent, where the requirement is 75 hours PIC in each case. To act as PIC the pilot is also required meet and/or undertake the following:

PIC Hours	Minimum hours required on type	Notes
Less than 150 hours PIC	10 hours on type	Aircraft type is a type where a type rating is appropriate, or else a specific type within a class.
150 - 250 hours PIC	5 hours on type	
Over 250 hours PIC	Flight test or check on type	

- 3.28 Fly a minimum of four lifts accompanied and supervised by a British Skydiving Pilot Examiner (PE) or Chief Pilot (CP)<sup>4</sup> as PIC (under supervision) on the type<sup>5</sup> of aircraft to be used. The lifts are to be live drops of one or more Experienced Parachutists under the supervision of at least a Category System Instructor or Team Leader.
- 3.29 In the case of service pilots or commercial pilots (operating under the terms of an AOC) flying in the course of their service duty or commercial duty, the training requirement of para 3.26 above **may** be supplanted by the training requirements specified in their military role training or by the training requirements specified in the AOC.

## Training

- 3.30 The pilot must have received at least one hour of ground instruction on parachute dropping techniques, standard procedures and emergency procedures given by at least a British Skydiving Advanced Instructor or British Skydiving Pilot Examiner and studied the British Skydiving Pilot's Manual and relevant sections of the British Skydiving Operations Manual.

## Tests

- 3.31 The pilot must have flown a flight test conducted by a British Skydiving Pilot Examiner as PIC on the type\* of aircraft to be used. The test will be conducted according to the Flight Test Proforma (BS Form 108C) and will be a live drop of one or more Experienced Parachutists under the supervision of at least a Category System Instructor or Team Leader.
- 3.32 In the case of aircraft whose seating capacity or configuration only permits the use of one pilot's seat for parachuting to be safely conducted, the pilot **must** have flown at least three flights with a British Skydiving Pilot Examiner and performed at least two lifts involving a live drop with a Category System Instructor or Team Leader and under the ground supervision of.
- 3.33 The test provisions above **shall not apply to pilots** of foreign registered aircraft who are qualified and experienced in the country of registration to drop

<sup>4</sup> CPs must hold a British Skydiving Pilot Authorisation on the type of aircraft being used

<sup>5</sup> A type where a type rating is appropriate, or else a specific type within a class.

parachutists; nor to any pilot if the CAA has agreed in writing that such provisions are not required.

## Recency

- 3.34 The pilot **shall** not act as PIC of an aircraft carrying passengers, including parachutists, unless within the preceding 90 days they have made three take-offs and three landings as the sole manipulator of the controls in an aircraft of the same type or class.

## Documentation

- 3.35 Having satisfied above qualifications, training, test and recency requirements, British Skydiving should be informed in order that details of the pilot **may** be recorded.

## Balloon Pilots

- 3.36 A balloon pilot **shall** not act as PIC of a balloon for a flight during which parachutists are to be dropped unless they meet the minimum requirements stated below.

## Licence

- 3.37 The pilot holds valid a pilot's licence for the balloon to be flown on the intended flight.

## Experience

- 3.38 The pilot has at least 60 hours PIC of balloons.

## Training

- 3.39 The balloon pilot has received ground instruction on parachute dropping techniques and procedures, sufficient to enable them to perform thier duties. The instruction **must** be given by a Parachuting Instructor or Team Leader who has made a minimum of one parachute jump from a balloon or by a balloon pilot who has already dropped two or more parachutists.
- 3.40 Training **must** include the procedures to be followed in the event of emergencies.
- 3.41 The pilot **must** also have read the 'Guidelines for Skydiving from Hot Air Balloons' (BS Form F109b) available at: [www.britishskydiving.org](http://www.britishskydiving.org).

## Recency

- 3.42 For any parachute dropping flight, log book evidence is required of flight within the 90 days preceding the date of the intended flight as PIC of the Class of balloon to be used. For the privileges of a professional pilot's licence to be

exercised on a parachute dropping flight, a Certificate of Test is also required which is valid for 13 months.

## Documentation

- 3.43 Having satisfied above qualifications, training, test and recency requirements, British Skydiving should be informed in order that details of the pilot **may** be recorded.

## Aircraft

- 3.44 Other than in accordance with the additional requirements listed in below, the Maximum Total Weight Authorised (MTWA) of aircraft used for parachute dropping **shall** not exceed 5,700 kg.
- 3.45 Aircraft with MTWA in excess of 5,700 kg **may** be used subject to the following conditions:
- The aircraft is registered in the EU
  - The aircraft is flown only by pilots holding valid professional pilot licences which include a valid type rating for that aircraft
  - The aircraft is operated for parachuting from a licensed or Government aerodrome

## Aircraft Clearance and Documentation

- 3.46 An aircraft **shall** not be used for the purpose of dropping persons unless the Certificate of Airworthiness (C of A) issued or rendered valid in respect of that aircraft under the law of the country in which the aircraft is registered includes an express provision that it **may** be used for that purpose and the aircraft is operated in accordance with a written Permission granted by the CAA.
- 3.47 **EU Registered Aircraft.** Aircraft **must** have a valid C of A, be maintained to a standard appropriate to the type of operation and **must** be approved by the CAA for the purpose of parachute dropping. Any aircraft modifications required for parachute dropping, for example the installation of parachutist restraints (if necessary) or static line modifications **must** be appropriately approved. Any structural or performance limitations applicable to parachuting operations, **must** be stated in the aircraft Flight Manual, or in an approved supplement, which **must** be included in the Flight Manual for the individual aircraft. The aircraft **must** be operated in accordance with the individual aircraft Flight Manual and applicable Flight Manual Supplements.
- 3.48 **Foreign Registered Aircraft.** An operating permit, required under Article 252 of the ANO, **must** be obtained from the CAA (foreign carrier permits)(<http://www.caa.co.uk/Commercial-industry/Airlines/Licensing/Foreign-carrier-permits/Foreign-carriers-permit--aerial-work/>) before a foreign registered

(outside the EEA) aircraft is used for any parachuting operation. The aircraft **must** have a valid C of A from the country of registration in the category appropriate to the type of operation and **must** be operated in accordance with the aircraft Flight Manual with respect to flight with the door removed or for parachuting operations.

3.49 **Documents.** The following documents **must** be available to the Pilot and CI or Team Leader before a flight is made for the purpose of parachute dropping:

- The approved Flight Manual/owner's manual/pilot's operating handbook, as applicable to the aircraft
- The C of A
- A mass and Centre of Gravity (C of G) schedule
- Documents recording the maintenance and serviceability of the aircraft
- CAP 660
- The appropriate Operations Manual (including Minimum Equipment Lists (MELs), if required, and local SOPs)
- Any Permissions or Exemptions issued by the CAA relevant to the intended flight

## Aircraft Maintenance

3.50 Aircraft operated in the parachuting role **shall** be maintained in accordance with the requirements of the National Aviation Authority (NAA) appropriate to the country of registration. For aircraft registered in the EU these are as follows

- Aircraft shall be maintained by a Part 145 or MF approved aircraft maintenance organisation
- The management of the continuing airworthiness shall be conducted by an approved CAMO
- All maintenance work and modifications must be certified by an appropriately type rated licensed aircraft maintenance engineer, or an authorised person employed by an approved aircraft maintenance organisation
- For all parachute aircraft, the operator **shall** discuss with the maintenance organisation any specific parachuting related requirements for the intended utilisation and incorporate these into the maintenance programme for each aircraft

## Flying Operations

3.51 All flights made for the purpose of parachute dropping **must** be authorised in writing. The operator **must** maintain a list of those persons entitled to authorise

flights for thier purpose. A person thus entitled **must** be satisfied before authorising such flights that:

- The aircraft to be used has a valid Certificate of Maintenance Review (CMR) and/or Certificate of Release to Service (CRS), or there is evidence in the aircraft log book or Technical Log that the requirements of the maintenance schedule have been met<sup>6</sup>.
- The serviceability state of the aircraft has been properly recorded and that the aircraft is serviceable for the intended flight.
- The pilot of the aircraft is appropriately qualified for the intended flight.

### Recording of Pre and Post Flight Details, Pilot's Fuel Log / Flight Log

- 3.52 The pilot **must** have available to them in the aircraft, a record of fuel and oil uplifts made, and the quantity of fuel on board prior to each flight or series of flights, to enable remaining endurance and fuel reserves to be readily calculated.
- 3.53 The following pre and post flight details for each flight or series of flights **must** be recorded. A series of flights means any number of consecutive flights made for the same purpose, taking off and landing at the same airfield with the same PIC. The record **must** include at least:
- **Pre Flight.** The date, the aircraft registration, the destination or DZ, departure fuel and the signature or initials of the PIC certifying that he has accepted the conditions under which the flight shall be made.
  - **Post Flight.** The take-off and landing times of each flight, the number of landings and the signature or initials of the PIC certifying the serviceability of the aircraft.

### Aircraft Limitations

- 3.54 Mass and balance limitations are to be observed throughout all phases of flight. Pilots are required to advise CIs/Team Leaders of any performance or structural limitations of the aircraft they are commanding, that **may** affect safety during flight and in particular during exit. CIs/Team Leaders **must** ensure that parachutists are aware of such limitations.

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<sup>6</sup> A CMR and a Technical Log are required, in accordance with ANO Articles 14, for public transport aircraft and commercial operations aircraft.

## Maximum Altitude and Flight Crew Oxygen Requirements

- 3.55 The use of oxygen on parachute flights will be determined by the provisions of the Air Operations Regulations at SPO.OP.195 Use of supplemental oxygen and the exemptions at SPO.SPEC.PAR.115 Supplemental oxygen.
- 3.56 Guidance for aircraft commander:
- The aircraft commander will need to monitor the Flight Levels (FL) and time limits specified in the exemption as it is thier legal obligation to ensure the conditions are complied with
  - If the FL or time limits are exceeded the commander should abort the drop and all parachutists should land with the aircraft
  - The aircraft commander is reminded that the exemptions permitted by SPO.SPEC.PAR.115 do not apply to flight crew

## Carriage of Passengers

- 3.57 No passengers **shall** be carried on a flight conducted for the purpose of parachute dropping except parachutists who are equipped for and intending to make a descent by parachute during the flight or task specialists such as those carried solely for the purpose of acting as jumpmaster or parachute instructor during the flight.
- 3.58 Task specialists can only be carried for a specific task connected with the parachute operation and the task specialist duties **must** be defined within the organisation's SOPs.

## Pilot Fatigue and Flight Time Limitations (FTL)

- 3.59 The FTL prescribed in Article 177 of the ANO are applicable: 100 hours in any 28 day period and 900 hours in any one year. In addition, a pilot who is engaged on parachuting operations **should** not fly more than four hours without a thirty minute break away from the aircraft and **should** not fly more than eight hours in any one day.

## Aeronautical Information

- 3.60 Up to date aeronautical information is published in the UK AIP, NOTAMs and AICs. These documents **must** be readily accessible to the pilot.

## Air Traffic Control Clearance

- 3.61 Where it is intended to make flights for the purpose of dropping parachutists in notified areas of Controlled Airspace (CA), the notification procedures published

in the UK AIP for Non-Standard Flights (NSF) **must** be complied with<sup>7</sup>. For parachuting operations in Aerodrome Traffic Zones (ATZ), the prior permission of the person having management of the aerodrome or of the appropriate Air Traffic Control (ATC) unit **must** be obtained.

## Transponder

- 3.62 In the UK, unless a discrete code has already been assigned, pilots of transponder equipped aircraft **should** squawk 0033 with Mode C (altitude reporting). A serviceable transponder with Mode A and Mode C is required for flight above FL100 and normally for NSF in notified areas of CA.

## Crash Rescue Procedures and Equipment

- 3.63 Operators **must** specify crash rescue procedures appropriate to their operation. A notice **should** be displayed at the DZ control position (and/or other suitable location(s)) giving instructions for summoning the local Police, Fire, Ambulance, and (where applicable), Coastguard services in the event of an emergency.
- 3.64 Fire-fighting release and rescue equipment **should** be available whilst parachuting is taking place to a scale appropriate to the aircraft types to be used, and **should** never be less than a vehicle carrying:
- One foam fire extinguisher of appropriate size
  - One axe
  - One bolt cropper - 61cm
  - One crowbar - 1m
  - One fire resisting blanket
  - Two pairs fire resistant gloves
  - One medical first aid pack
  - One stretcher with blankets
- 3.65 Holding of equipment at a forward site at which a Display Team **may** emplane is not mandatory. It **should** nevertheless be provided at such sites whenever it is practicable to do so.
- 3.66 For aircraft operations at a location other than a licensed or Government Aerodrome further guidance is to be found CAP 793 'Safe Operating Practices at Unlicensed Aerodromes (Including Helicopter Landing Sites and Aerodromes Used for Flying Training)'

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<sup>7</sup> The procedures described in Appendix B will fulfil their requirement.



## Parachute Dropping Flights In Controlled Airspace

- 3.67 Upon application the CAA, in exercise of its powers under Article 266 of the ANO, **may** exempt any aeroplane operated by or on behalf of a PTO together with the operator and the commander thereof, from the above requirements. Flights pursuant to such an exemption **shall** be conducted only:
- For the purpose of the dropping of persons by parachute under and in accordance with the terms of a written permission granted by the CAA pursuant to Article 90 of the ANO
  - Using aircraft with navigation equipment sufficient to enable the flights to be conducted safely and in conformity with the requirements of ATC
  - In accordance with the terms of any procedures set in place between the PTO and the appropriate ATC unit regarding parachute dropping activity in the relevant airspace or DZ
  - On any flight pursuant to such an Exemption when flying under the privileges of a United Kingdom Private Pilot's Licence (Aeroplanes), Basic Commercial Pilot's Licence (Aeroplanes) or Part-FCL Private Pilot Licence (Aeroplane) the pilot in command **shall** have included in that licence a valid UK Instrument Meteorological Conditions (IMC) rating or Instrument Rating (Restricted) (IR(R))
- 3.68 Exemptions have effect from the date of issue up until and including 31 March of each year unless revoked, suspended or varied.
- 3.69 Exemptions apply only to parachute dropping flights. They do not apply to flights made to position the aircraft for such a flight or returning after such a flight.
- 3.70 SERA.6001 of Commission Implementing Regulation (EU) No 923/2012 requires flights in class A airspace to be conducted in accordance with Instrument Flight Rules (IFR). Exemptions have the effect of allowing the holder of an IMC rating or Instrument Rating (Restricted) to accept an IFR clearance in class A airspace for the purpose of parachute dropping, which their privileges do not normally allow.

## Records to be Kept

- 3.71 Part 9 of the ANO prescribes the regulations for the maintenance and production of aircraft documents and records.
- 3.72 In addition, proper records **must** be maintained of parachute training, equipment, modifications, inspection, servicing, repairs and maintenance (including Automatic Activation Devices (AADs)). Packing of main and reserve parachutes **must** be recorded, with the exception that Licensed Parachutists are not

required to record the packing, for their own use, of personally owned main parachutes.

- 3.73 Records **must** be submitted to the CAA and/or British Skydiving of all incidents, parachute deployment problems, malfunctions and accidents.
- 3.74 DZ activity notifications **should** be recorded as described in Chapter 3.
- 3.75 In order to facilitate monitoring, as outlined in Chapter 5, all records **must** be preserved for at least 2 years from the date of the last entry, or longer if required by Article 238 of the ANO.

### Minimum Age for Parachuting

- 3.76 Persons under the age of 16 years **should** not be permitted to make a parachute descent for sport, training or display purposes. Persons of 16 years or more but less than 18 years of age, **should** be permitted to make a descent only with the written permission of their parent or guardian.

### Medical

- 3.77 All parachutists **must** be in possession of a completed medical declaration or doctor's certificate, certifying their fitness to undertake the planned descents.
- 3.78 For all Parachute Instructors a doctor's certificate is required, to be issued only by a medical practitioner who also holds appropriate qualifications in aviation medicine; with the exception that it **may** be issued by a medical practitioner who is also a Parachuting Instructor.

### Qualifications

- 3.79 When the training of parachutists (including Tandem Parachutists) is to be undertaken, all personnel involved **must** be appropriately qualified to perform their duties.
- 3.80 The CAA accepts Fédération Aéronautique Internationale (FAI) Parachutist Certificates / British Skydiving Licences for the purposes described in this publication.
- 3.81 The CAA recognises British Skydiving qualifications. Equivalent qualifications issued or accepted by the representative or governing bodies of parachuting in other countries **may** also be recognised if they are considered to be the equivalent of British Skydiving qualifications. A lapsed qualification **may** only be recognised if it can be shown that the necessary experience requirements for revalidation of that qualification have been met. The CAA reserves the right to judge whether other qualifications are considered to be equivalent to British Skydiving qualifications.

- 3.82 The minimum qualification and experience requirements acceptable to the CAA, for any type of Parachute Instructor qualification, are not less than those stated in the British Skydiving Operations Manual, as amended. This need not apply to a member of Her Majesty's naval, army or air forces acting in the course of their duty and in accordance with MoD procedures<sup>8</sup>.

## Tandem Instructors

- 3.83 For tandem descents, other than evaluation/renewal descents, a Tandem Instructor **must** hold a valid rating for the type of tandem parachute equipment to be used and **must** have made at least one tandem descent in the 90 days immediately preceding the date of the intended descent (Only parachutists holding a minimum of a British Skydiving 'B' Licence, or equivalent, **may** be carried on evaluation/renewal descents).
- 3.84 In addition, Tandem Instructors **must** conduct/hold one of the following:
- A satisfactory evaluation on the type of tandem equipment within the 6 months preceding the date of the intended descent.
  - A Certificate of Experience (C of E) certifying not less than 20 tandem descents (not including descents acting as a student) within the 12 months preceding the date of the new C of E, of which not less than 10 descents must be on the type of tandem equipment to be used. The C of E should be endorsed in the parachutist's log book by a CI or authorised representative of a parachuting association recognised by the CAA. The period of validity of a Tandem Instructor C of E is 12 months is required.

## Training and Supervision

- 3.85 Direct responsibility for training and for the safe conduct and control of parachute descents is held by the managers and instructors of any PTO.
- 3.86 Managers, instructors, Team Leaders and jumpmasters are responsible for the training and supervision of all parachutists participating in activities under their control.
- 3.87 All parachutists **must** receive training and briefings appropriate to the planned descent, taking into account their experience and the equipment to be used. Managers, instructors, Team Leaders and jumpmasters **should** pay particular attention to individuals who have experienced a lay-off from parachuting and can no longer be considered to be in current practice and those who have recently graduated from formal training.

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<sup>8</sup> Minimum qualification and experience requirements do apply to member of HM forces if they are undertaking sport parachuting.

- 3.88 Operators **must** specify instructor/novice ratios appropriate to the type of training to be undertaken, taking into account the facilities available. Such ratios stated in the British Skydiving Operations Manual, as amended, represent the accepted standard for sport parachuting in the UK.
- 3.89 All parachutists **must** be trained in the drills to be carried out in the event of aircraft and parachuting emergencies.
- 3.90 Except as stated in paragraph 3.96 and 3.97 below, parachuting **must** only take place under arrangements made by an appointed CI, who **must** be a person holding a valid British Skydiving Advanced Instructor rating or a person approved by the CAA for this purpose. This also applies to military personnel engaged in sport parachuting.
- 3.91 The CI **must** normally be present on a daily basis when parachuting is taking place. If the CI is not present, there **must** be the equivalent of a British Skydiving Advanced Instructor present. The CAA **must** approve the person if the CI is to be absent for more than one day.
- 3.92 Parachutists who have achieved British Skydiving 'B' Licence, or equivalent, and 100 jumps **may** parachute in displays, or at temporary parachuting sites, under arrangements made by an appointed Team Leader. Minimum qualifications for a Team Leader are stated in Chapter 4.
- 3.93 Night jumps and water jumps **must** only take place under arrangements made by an appointed CI or a person holding a valid British Skydiving Advanced Instructor rating.
- 3.94 Student Parachutists (including Tandem Parachutists) **must** have their equipment checked by a suitably qualified Instructor prior to emplaning. These checks **must** be individually signed for by the instructor conducting the check.
- 3.95 Except as stated in paragraph 3.100 below, Student Parachutists **must** be despatched from the aircraft by a suitably qualified Instructor.
- 3.96 Experienced Parachutists (defined as a person who has achieved standards required for FAI 'B' or 'C' Certificate) preparing to attend or whilst attending a Basic Instructor course **may** despatch Student Parachutists under the direct supervision of a Parachuting Instructor in the aircraft.
- 3.97 All jumpmasters **must** be Experienced Parachutists.
- 3.98 Experienced Parachutists **must** accede to the supervision of the CI when they are parachuting under the auspices of a PTO; and otherwise to the supervision of the Team Leader.

## Equipment

- 3.99 All parachutists intending to make a descent **must** be equipped with a minimum of two serviceable parachutes attached to a common harness, except Tandem Parachutists who **must** be attached to a Tandem Instructor.
- 3.100 Jumpmasters/despatchers not intending to make a parachute descent **must** be equipped with a minimum of one serviceable parachute and/or a suitable restraint harness securely attached to an aircraft strong point, as appropriate.
- 3.101 Parachutes **should** only be used if they are manufactured for use by sport or military parachutists by recognised parachute equipment manufacturers or riggers with the appropriate qualifications.
- 3.102 Student Parachutists and Tandem Parachutists **must** only use parachute equipment acceptable to British Skydiving or a competent parachuting organisation recognised for that purpose by the CAA.
- 3.103 Operators are responsible for the safe condition of all parachute equipment provided by them for use in parachuting activities under their control and for ensuring that such equipment is serviced, checked and inspected as appropriate.
- 3.104 Licensed Parachutists are responsible for the safe condition of personally owned equipment that they **may** use and for ensuring that such equipment is serviced, checked and inspected as appropriate.
- 3.105 All parachutists **should** be equipped with suitable helmets, clothing, footwear and equipment appropriate to the type of jump and their experience. Until at least British Skydiving 'C' Licence or equivalent has been achieved, parachutists **should** wear a rigid helmet with a hard shell; with the exception that Student Tandem Parachutists **must** wear a 'French type' ribbed leather helmet.
- 3.106 Static line parachute equipment for use by Student Parachutists **must** incorporate a deployment bag which is integral with the static line.
- 3.107 The length of static lines and static line deployment bags **must** be correct for the aircraft to be used and such equipment **must** conform to any requirements imposed by the Aircraft Flight Manual or Flight Manual Supplements applicable to that aircraft. Static lines **should** be continuous from the deployment bag to the point of attachment in the aircraft.
- 3.108 Any Modifications to parachute equipment **must** be carried out by a parachute equipment manufacturer or a rigger with the appropriate qualifications.
- 3.109 Modifications to equipment for use by Student Parachutists and Tandem Parachutists **must** also be acceptable as described in paragraph 3.107 above.

- 3.110 All parachutists **should** use parachuting equipment that is fitted with an operational Automatic Activation Device (AAD) at least until they reached FAI 'B' certificate or equivalent.
- 3.111 All AADs **must** be installed in accordance with acceptable procedures and serviced in accordance with the manufacturer's requirements. They **may** be used in conjunction with either the main or reserve parachute but **must** only back up the manual operation.
- 3.112 All Tandem parachute equipment **must** be fitted with an AAD specifically designed for Tandem equipment.
- 3.113 All parachutists on free-fall descents of 15 seconds or more **should** be equipped with a suitable altimeter, securely mounted so that the parachutist can observe it without difficulty throughout the descent and set to indicate height above the PLA.

### Ancillary Equipment

- 3.114 Any objects which, if dropped, would constitute a danger to persons or property on the ground **must** be securely attached to the parachutist. Only in cases of emergency **should** they be jettisoned.
- 3.115 Wind drift indicators **should** be made entirely from bio-degradable and non-injurious materials; paper and plasticine have proved satisfactory.

### Parachute Packing

- 3.116 All parachutes **must** have been inspected and packed within the 6 calendar months immediately preceding the date of use.

### Main Parachutes

- 3.117 Main parachutes are to be packed by, or under the supervision of, a person holding a valid Packing Certificate for the parachute being packed, with the exception that Licensed Parachutists are not required to hold a Packing Certificate to pack their own main parachutes, provided they are approved to do so by a CI (Log book endorsement will suffice). When packing is done under the supervision of an appropriately qualified person, checks **must** be made at each stage of packing and the appropriate packing/record card **must** be signed at the time the checks are made.

### Reserve Parachutes

- 3.118 Reserve parachutes **must** only be inspected and packed in accordance with acceptable procedures by or under the direct supervision of a person who is formally qualified to do so, and who is in possession of a valid Packing qualification for that equipment.

- 3.119 Reserve parachutes **must** be inspected and certified as serviceable on an appropriate Record of Inspection/Inspection Checklist prior to packing (BS Forms 112, 112A or 113 available at: [www.britishskydiving.org](http://www.britishskydiving.org)). A reserve packing/record card **must** also be maintained.

## Parachute Landing Areas

- 3.120 The term 'PLA' is used in order to draw a clear distinction between the area on the ground and 'DZ', which is used to denote a portion of airspace.
- 3.121 It is the operator's responsibility to be satisfied that the PLA is suitable for the intended purpose, taking into account the capability of the parachutists, the dimensions of the landing area, the dimensions and relative positions of available overshoot and undershoot areas, proximity to any buildings, power lines or anything else which **may** be a hazard to parachutists and the presence of other activities on or near the PLA. An appropriately qualified and independent person **must** be designated to discharge this responsibility. Operators **should** always seek additional expert opinion regarding the suitability of the PLA when appropriate; e.g. when parachuting is planned to take place at a new location or at a location which has not been in recent use.
- 3.122 PLAs to be used by all designations of parachutists **should** provide a large open space of reasonably level ground which can contain a circle, radius 250 metres, free from Major Hazards (objects or features, whether natural or artificial, which because of their size **may** be difficult to avoid and which, if struck by a parachutist **may** result in injury e.g. large hangars, buildings and woods) and largely free from Minor Hazards (objects or features, whether natural or artificial, which **should** be easily avoided but which, if struck by a parachutist **may** result in injury e.g. hedges, fences and ditches). These landing areas **should** ideally be bordered on at least three sides by suitable overshoot/undershoot areas.
- 3.123 Special hazards over 15m in height (eg national grid pylons and power lines and wind turbines) are not acceptable within 1200m of the PLA/DZ centre without restrictions.
- 3.124 PLAs that do not comply with the above, or which have high voltage power lines within 800 metres of the centre of the landing area, will require the operator to stipulate restrictions on operating procedure and/or **may** not be suitable for all designations of parachutists. This does not apply to temporary parachuting sites intended for use by parachutists who are qualified; nor to parachuting displays (see Chapter 4).
- 3.125 Where open water or a deep river (excluding minor rivers and small **shallow** ponds) exists within 1200 metres of the centre of the PLA, all parachutists **should** be equipped with suitable flotation aids. Rescue boat provision **should** be made, appropriate to the local circumstances, taking into account the

experience of the parachutists, the proximity and nature of the water hazard and the number of parachutists in the air at any one time.

- 3.126 Operators at PLAs used for routine parachuting **should** provide, for the purpose of briefing parachutists, an aerial photograph on which Major and Special Hazards (hazards which could constitute a special risk to parachutists e.g. stretches of open water, deep rivers, electricity power lines, wind turbines, densely built up areas, cliffs and quarries) on the overshoot/undershoot areas are marked.
- 3.127 For a PLA to be used by all designations of parachutists, a windsock or other means of indicating the surface wind direction **should** be displayed so as to be visible to descending parachutists.

## Weather

- 3.128 Parachute descents or the dropping of wind drift indicators **shall** only be made when the PLA is clearly visible from the aircraft and the aircraft is clear of cloud and with an in-flight visibility of not less than 5 kilometres.
- 3.129 The strength and direction of the winds between 2,000 feet and the surface **must** be determined prior to parachuting.
- 3.130 The following maximum surface wind speed limits for parachutists are acceptable, although local circumstances **may** demand that more restrictive limits be adopted:

Type of Parachutist	Surface wind Limit
Student Parachutists using ram-air parachutes	15 Knots
Licensed and Tandem Parachutists	20 Knots

## Ground Control Organisation

- 3.131 The operator **must** provide adequate procedures for ground control organisation, to include the checking and briefing of parachutists and DZ Control, including procedures to ensure that first aid assistance is given to any parachutist requiring it, and that emergency services are contacted when necessary.
- 3.132 The names of all parachutists and other persons **must** be entered on a designated manifest form before they embark an aircraft. A copy of the manifest **must** remain on the ground.
- 3.133 All parachutists **must** be formally informed that aircraft are not maintained in accordance with Public Transport requirements if such is the case; and that flights are not conducted in accordance with the requirements of flight for the purpose of Public Transport.



- 3.134 The operator **must** provide adequate procedures for safety in the vicinity of aircraft. Written instructions **must** detail the procedures for the safe embarkation and disembarkation of all parachutists and the supervision of the process.
- 3.135 A jumpmaster is to be nominated prior to embarkation of the parachutists.
- 3.136 Unless alternative procedures are in force, the jumpmaster is to be responsible for the orderly embarkation/disembarkation of all parachutists and is to ensure that all embarked parachutists have been instructed in the correct method of exit from the type of aircraft concerned, so as to ensure adequate separation between themselves and the aircraft structure. Each individual parachutist **must** also bear responsibility for their own safety during these phases.

### Aeronautical Radio Stations

- 3.137 Personnel who are required to use radios **must** be appropriately qualified. Details of the CAA Parachute Radio Operator's Certificate of Competence are contained in **BS** Forms 125-127 available at [www.britishskydiving.org](http://www.britishskydiving.org)
- 3.138 For communication between DZ Control and the aircraft, frequencies assigned at the aerodrome of operation **may** be used with the approval of the aerodrome management and local air traffic services.
- 3.139 Within the UK the following Very High Frequency (VHF) frequencies are also available:

Requirement	Frequency
DZ Control to aircraft	129.905 MHz (shared with other users)
DZ Control to parachutists	130.530 MHz

- 3.140 Application for approval to establish an air/ground VHF aeronautical radio station operating at 130.530 MHz Channel **may** be made on **BS** Form 128 available at [www.britishskydiving.org](http://www.britishskydiving.org). This can only be done by holders of non-restricted ROCC.

### Safety in the Aircraft

- 3.141 The pilot is in overall command.
- 3.142 All parachutists **must** be briefed as to the emergency crash procedures and brace positions relevant to their seating or kneeling positions in the aircraft. Crash Landing Procedures can be found on **BS** Form 261 available at [www.britishskydiving.org](http://www.britishskydiving.org).
- 3.143 The jumpmaster is responsible to the pilot for the control of the parachutists in the aircraft.

- 3.144 The jumpmaster **must** have a suitable knife available to them in the aircraft for use in emergencies.
- 3.145 Where parachutist restraints are fitted they **must** be used during take-off and landing or otherwise as required by the aircraft Flight Manual or Flight Manual Supplement.
- 3.146 All Student Tandem Parachutists, or parachutists acting as Student Tandem Parachutists, are to be attached to the Tandem Instructor before take-off and **must** remain attached, except in the event of an aircraft emergency landing, where Tandem Instructors **may** have to separate from their Students inside the aircraft.
- 3.147 All parachutists **must** wear helmets for take-off and landing in aircraft other than balloons, with the exception that parachutists using camera helmets **may** fit their helmets immediately prior to jumping.
- 3.148 Parachutists **should** not exit the aircraft until there has been a clear indication from the pilot, either visually or audibly, that the aircraft is in the correct configuration for exit. This indication **may** be in the form of lights, sound or pre-arranged hand signals.

### Safety During Parachute Descents

- 3.149 The following are the minimum heights by which parachutists **should** have their main parachute open:

Level of Licence Holder	Minimum Height
Tandem Parachutists <sup>9</sup>	5000 ft AGL
<u>British Skydiving</u> 'B' Licence parachutists and below	3000 ft AGL
<u>British Skydiving</u> 'C' Licence parachutists and above	2500 ft AGL
<u>British Skydiving</u> 'C' Licence holders or equivalent during displays	1500 ft AGL
Parachute manufacturers	In accordance with company trials procedures

<sup>9</sup> Tandem Parachutists must not take part in Canopy Formation.

## Chapter 4

# Unusual Parachuting Activity

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## Permission and Variation

- 4.1 A variation or special parachuting Permission must be obtained from the CAA before any parachuting activity **may** take place that is not already covered by the terms of the Permission issued to the operator.

## High Altitude Jumps

- 4.2 A special parachuting Permission **must** be obtained from the CAA before conducting any parachute descent from 15,000 feet or higher.

## Stand-off Jumps and cross country flights

- 4.3 Free-fall parachuting sites listed in the UK AIP **should** notify a 1.5 nautical mile radius zone centred on the point listed. Any parachuting outside the notified zone should be notified in accordance with the procedures detailed in Appendix B. Parachute cross-country flights that exceed 3 nautical miles require a special parachuting Permission from the CAA.

## Cutaways

- 4.4 Licenced Parachutists **may** perform a pre-planned cutaway using equipment incorporating three parachutes and designed for the purpose.
- 4.5 Pre-planned display cutaways **must** only be performed by parachutists holding British Skydiving 'C' Licence, or equivalent.
- 4.6 In planning any cutaway descent, careful attention **must** be given to wind conditions and the availability of open areas so that any incidents affecting the safety of people on the ground **may** be avoided.

## Night Jumps

- 4.7 Night jumps **must** be conducted under arrangements made by an appointed CI or a person holding a valid British Skydiving Advanced Instructor rating. The activity **must** be notified at least 28 working days in advance, following the procedures detailed in Appendix B.
- 4.8 Unless they are planned to take place at a notified DZ that is already in regular use, the following types of descent will need to be notified to the CAA in accordance with the procedures detailed in Appendix B.

## Balloon Jumps

- 4.9 The minimum qualification to participate in a descent from a balloon is FAI 'B' Certificate or equivalent.

## Water Jumps

- 4.10 Intentional descents into water must be conducted under arrangements made by an appointed CI or a person holding a valid British Skydiving Advanced Instructor rating. All parachutists **must** be equipped with suitable buoyancy aids. There **must** be a minimum of one power boat to each parachutist in the air. For the site to be used by all designations of parachutists it **should** conform to the PLA requirements in chapter 3 above.

## Temporary Parachuting Sites

- 4.11 It **may** be desired to use a temporary parachuting site, e.g. for Display Team training or a balloon jump. Parachutists with a minimum of 100 jumps and British Skydiving 'B' Licence or equivalent, **may** make descents at a temporary parachuting site notified to the CAA. The notification procedure for a temporary parachuting site for non-display purposes is the same as the notification procedure for display parachuting. It is the responsibility of the display Team Leader to ensure that all conditions of the Display Team Permission are adhered to. The Team Leader and the individual parachutists **must** satisfy themselves with regard to the presence of any hazards on or close to the PLA.

## Incident and Accident Reporting and Investigation

### Reportable Accidents

- 4.12 An accident **shall** be reported to the Air Accidents Investigation Branch (AAIB) and the local Police if, between the time when anyone boards an aircraft with the intention of flight and such time as all have left it if<sup>10</sup>:
- Anyone is killed or seriously injured while in or on the aircraft or by direct contact with any part of the aircraft, including any part which has become detached from it
  - The aircraft incurs damage or structural failure
  - The aircraft is missing or completely inaccessible
  - The aircraft commander (or if the commander is killed or incapacitated, the operator) must report immediately by telephone to the AAIB on 01252 512299. This number is monitored 24 hours a day.

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<sup>10</sup> There are some exceptions – full details are contained in: <https://www.gov.uk/government/organisations/air-accidents-investigation-branch>.

- 4.13 In the event of an accident, an MOR **must** also be submitted to the CAA within 72 hours.

## Mandatory Occurrence Reporting

- 4.14 Any incident which endangers, or which if not corrected would endanger, any aircraft, its occupants or any other person, **shall** be reported to the CAA. These provisions also apply to any defect or malfunctioning of such an aircraft or of a ground facility which **may** be used in connection with its operation<sup>11</sup>.
- 4.15 The CAA requires a written report of any incident of a serious nature or accident involving injury or damage to a third party.
- 4.16 Accidents occurring at locations under the control of the MoD or involving members of the armed forces who are on duty or deemed to be on duty will also be reported and investigated in accordance with MoD regulations.
- 4.17 The requirements of CAP 660 do not absolve any person from the requirements of other legislation or regulations relating to health and safety or the reporting of accidents, which **may** in some circumstances be overriding.
- 4.18 Incidents of a serious nature involving British Skydiving Parachute Training Organisations and Display Teams **must** be reported to British Skydiving, who will follow their established procedure.
- 4.19 Fatal accidents involving British Skydiving Parachute Training Organisations and Display Teams are subject to a British Skydiving Board of Inquiry, which is composed of experienced British Skydiving Examiners and the Chief Operating Officer and/or the Safety and Technical Officer, none of whom **must** have any direct interest in the organisation involved. The inquiry report will be passed to the Police, the Coroner and the CAA.

## Runway and Obstacle Marking

- 4.20 Any obstacle that, because of its height or position, could be a hazard to an aircraft landing or taking off, and which cannot be removed, **should** be conspicuous and marked if necessary.
- 4.21 The boundaries of unlicensed unpaved runways used for parachuting operations **should** always be delineated by end markers. The runway edges **should** be delineated by edge markers unless the runway edges are clearly distinguishable from the bordering terrain. Guidance on marking on unpaved runways and marker dimensions is available in CAP 793: Safe Operating Procedures at Unlicensed Aerodromes, chapter 4.

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<sup>11</sup> The types of occurrence to be reported and the information to be supplied are prescribed at [www.caa.co.uk/cap382](http://www.caa.co.uk/cap382).

## Chapter 5

## Parachuting Displays

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- 5.1 A Display Team **must** have a suitably qualified Team Leader who is responsible for the parachuting and flying operations carried out by that Display Team. He **must** ensure that all conditions of the Display Team Permission are adhered to.
- 5.2 The CAA **must** be informed of the name and qualifications of the Team Leader and notified in writing, not less than 7 days in advance of a parachute display if there is a change to the Team Leader for that display.
- 5.3 Display parachuting **may** be arranged as an additional attraction at many events including flying displays or as an event in its own right. Display Teams **must** be in possession of a valid parachuting Permission as required by Article 90 of the ANO. This Permission is issued by the CAA and is different from that issued to PTOs in that the Permission allows Parachute Display Teams to drop outside established Free Fall Drop Zones provided specific notification procedures are followed. This permission also includes specific permission under Article 89 for the Display Team to drop wind drift indicators.
- 5.4 At the planning stage, consideration must be given to ensure that flight over a Congested Area **shall** be conducted so as in the event of an emergency arising, a landing can be made without undue hazard to persons or property on the surface (SERA 3105) . This means that for some displays over large conurbations, a multi-engine aeroplane **must be utilised**. A Congested Area is defined in the ANO Schedule 1 as 'any area in relation to a city, town or settlement which is substantially used for residential, industrial, commercial or recreational purposes.
- 5.5 Note that parachute dropping aircraft that drop parachutists as part of a flying display are not permitted to execute a low pass after the drop, unless an appropriate Article 86 Permission or SERA 5005 Permission has been issued and, if an Article 86 Permission is in force, the pilot **must** hold a valid Display Authorisation (DA) or Exemption from the requirement to hold a DA.
- 5.6 Aircraft may only be used for parachute dropping if there is information relating to parachute dropping in the Flight Manual (or in a Flight Manual Supplement or upon the individual Certificate of Airworthiness) for that particular aircraft. The aircraft must have approved modifications if necessary for the purpose of parachute dropping and must be operated in accordance with the Aircraft Flight Manual and any applicable Flight Manual Supplements. The other requirements relating to the use of aircraft, summarised in Chapter 3, must also be fulfilled.

- 5.7 The parachute display Team Leader is responsible for obtaining any air traffic permission (e.g. Non-Standard Flights in Controlled Airspace) and for notifying the proposed display, normally not less than 28 days in advance, to British Skydiving, CAA AROps ([AROPS@caa.co.uk](mailto:AROPS@caa.co.uk)) and to the local Police (see Appendix B) using BS form 185. Notification must additionally be sent to NATS via the NATS Airspace User Portal (<https://aup.nats.aero/>). Forms received later than 28 days prior to the display **may** not always be processed in time for the display, therefore for the awareness and safety of all airspace users, it is crucial that the forms are submitted in time.
- 5.8 For parachuting into temporary Drop Zones, the parachute Display Team will require the written permission of the landowner concerned, or their agent.

## Qualifications

- 5.9 The minimum qualifications for a Team Leader or Jumpmaster are:
- British Skydiving 'C' Licence or equivalent with a minimum of 300 descents
  - A minimum of 20 display jumps
  - A valid authorisation to display
- 5.10 The minimum qualifications for team members are:
- British Skydiving 'B' Licence or equivalent
  - 100 descents
  - 5 consecutive, pre-declared landings within 10 metres of a target
  - A valid authorisation to display
- 5.11 All parachutists intending to participate in a parachuting display **must** have a valid authorisation to display endorsed in the parachutist's log book by an authorised representative of a parachuting organisation recognised by the CAA and certifying the capacity in which the holder **may** act, together with any limitations which apply.
- 5.12 To participate in a night display descent, parachutists **must** have British Skydiving 'C' Licence, or equivalent, and a minimum of 500 jumps.

## Display Landing Areas

- 5.13 Parachutists holding a British Skydiving 'C' Licence, or equivalent, **may** perform display descents into designated landing areas of not less than 5000 square metres of which the minimum width **must** be 50 metres.
- 5.14 Parachutists holding a British Skydiving 'B' Licence, or equivalent, **may** perform display descents into designated landing areas of not less than 20,000 square metres of which the minimum width **must** be 100 metres.

- 5.15 Where the designated landing area is in an area set aside for the public, it **should** be enclosed, e.g. with rope, tape or fencing; and no parachutist **should** land closer than 15 metres (British Skydiving 'C' Licence) or 30 metres (British Skydiving 'B' Licence) to any spectator.
- 5.16 In all cases there **must** be suitable alternate landing areas pre-identified in the event that parachutists are unable to descend into the designated landing area.

### Main Parachute Canopy

- 5.17 The flight and landing characteristics of parachutes with a high wing loading **may** render some combinations of exit weight/canopy area unsuitable for demonstration descents into designated landing areas of minimum dimensions. With this in mind, Team Leaders **should** ensure that all team members select appropriate parachute equipment for use when displaying.

### Reserve Parachute Canopy

- 5.18 All team members participating in displays **should** be equipped with ram-air reserve parachutes.

### Canopy Formation (CF)

- 5.19 Prior to a CF descent being made at a display, the Team Leader **must** satisfy themselves that those participating are current in CF.

### Ancillary Equipment

- 5.20 The requirements stated in Chapter 3 apply.
- 5.21 If a flag is to be flown beneath a parachutist, care **must** be taken to ensure the safety of the people on the ground. The method of weighting the flag and the flight path of the parachutist must not be hazardous to people on the ground in the event that the flag is cut away or the crowd is overflowed.

### Liaison And Reconnaissance

- 5.22 An experienced team member **must** visit the proposed PLA before the display takes place. Existing and anticipated hazards **must** be plotted, and team members briefed accordingly. If open water or a deep river exists within 1200 metres of the centre of the designated landing area, refer to Chapter 3, paragraph 3.130.
- 5.23 The Team Leader is responsible for ensuring that liaison takes place with the local Police to confirm that they have no objection to the proposed display.
- 5.24 The Team Leader is responsible for liaison with the Event Organiser to ensure that arrangements for the aspects listed below are in place. The Team Leader should clarify who is responsible for each aspect. The arrangements should include at least the following:



- Weather minima.
- Dimensions of the PLA required by the Team.
- Arrangements for crowd control.
- Location of alternate landing areas, overshoot/undershoot areas, buildings and power lines.
- Locations of car parks, marquees and other hazards (e.g. cranes used for bungee jumping).
- First aid.
- Any other aviation related activities at the event or nearby (e.g. helicopter pleasure flights, tethered balloons, Model aircraft).
- The nomination of a person responsible for notification of the emergency services in the event of an accident.

5.25 When the parachuting forms part of a flying display, the commander of the parachute dropping aircraft will require a display briefing by the Flying Display Director on the specifics of the display and pertinent CAP 403 requirements<sup>12</sup>.

## The Display

- 5.26 At least one responsible person with parachuting experience nominated by the Team Leader **must** be present at the display landing area for the purpose of DZ control. The nominated person **must** have a thorough knowledge of the relevant requirements and be briefed on their duties by the Team Leader or nominated jumpmaster. They are to communicate with the parachute dropping aircraft by means of signal panels and/or radio (see Chapter 3). A windsock or other visible means of indicating the direction of the surface wind **must** be displayed. If the surface wind conditions are unsuitable, then the signal to drop **must** not be given and the descent **must** not take place.
- 5.27 The Event Organiser is responsible for crowd control arrangements. If these arrangements are not adequate or if the dimensions of the display landing area do not conform to the requirements, then the signal to drop **must** not be given and the descent **must** not take place.
- 5.28 The jumpmaster **should** take account of all available information in making the decision whether to abort or proceed with a display. In addition to the surface wind speed and direction in relation to the dimensions and alignment of the landing area, the general weather conditions and the winds at all levels throughout the planned descent **should** be taken into account. The jumpmaster

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<sup>12</sup> CAP 403: Flying Displays and Special Events: Safety and Administrative Requirements and Guidance

must also ensure they conduct a comprehensive lookout in the airspace around and beneath the aircraft prior to the drop.

- 5.29 Display parachuting demands the highest levels of individual parachuting skill, team planning, organisation and sound judgement by team leaders and jumpmasters. In addition to the judgement of Team Leaders and jumpmasters, all team members must exercise their own sound judgement in protecting the public at parachute displays.

## Incident Reports

- 5.30 The CAA requires a written report of any incident of a serious nature or accident involving injury or damage when participating in parachuting activities, to a third party, BS Forms 117 and 118 may be used, see Chapter 3 for further details.
- 5.31 British Skydiving's responsibilities regarding serious incidents are outlined in its CAA Schedule of Approval.

## Chapter 6

## Monitoring and Audit

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- 6.1 During the specified period of validity of a CAA parachuting Permission, the CAA **may** require periodic reports on the continued competency of the holder or on the adequacy of the holder's organisation and procedures to maintain acceptable levels of safety in parachuting activities and associated aircraft operations. For this purpose, Flight Standards Officers (FSOs) of the CAA GA Unit **may** carry out inspections of the Permission holder's operation. Such CAA staff members are 'authorised persons' as defined in the ANO.
- 6.2 During such inspections, GAU FSOs **may** require the production to them of specified records, licences, certificates or other documents required to be held or carried in accordance with the ANO. GA Unit FSOs have the right of access to an aerodrome or any other place where an aircraft has landed and **may** in certain circumstances direct the operator or commander of any aircraft not to permit an aircraft to make a particular intended flight.
- 6.3 Additionally, in order that the CAA **may** be informed on the adequacy of aircraft maintenance arrangements, GA Unit Airworthiness Surveyors **may** make periodic checks of aircraft, facilities and records.

### Approval of Persons to Furnish Reports

- 6.4 Under the terms of Article 268 of the ANO the CAA **may** approve a person as qualified to furnish reports to it and **may** accept such reports. This responsibility will normally be undertaken within the structure provided by a competent corporate body which has been recognised for that purpose by the CAA. Since 1996 the British Parachute Association Limited (trading as British Skydiving from Dec 2019) has been the holder of an Exposition & CAA Schedule of Approval, which enables parachuting Permissions to be issued to British Skydiving Parachute Training Organisations and Display Teams, by the CAA, on the basis of recommendations made by British Skydiving.

### Audit

- 6.5 Where monitoring tasks are devolved to British Skydiving, the CAA requires to undertake periodic audits, in order to ensure that acceptable operational standards and monitoring procedures continue to be maintained. The timing of such an audit will normally be by mutual agreement although the CAA reserves the right to visit at any time.

## Records

- 6.6 To facilitate the monitoring and audit tasks, operators **must** maintain correct and proper records of their activities (see Chapter 3) and **must** submit such reports as **may** be requested.

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## APPENDIX A

# Guidance on compilation of a Parachuting Operations Manual/Local SOPs

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### Purpose

- A1 The purpose of a Parachuting Operations Manual is to provide to all persons involved, the necessary policy guidance and specific instructions for the carrying out of operations in a safe and proper manner and in accordance with the requirements.
- A2 Operators are reminded of the requirement in Chapter 2 to make the Manual available to everybody who **may** be involved in their parachuting activities.

### Format

- A3 Each copy of the Parachuting Operations Manual **should** bear a serial number, and a list of holders **should** be maintained by the person responsible for issuing amendments. Where this system is not used, an operator **should** have satisfactory alternative arrangements for controlling the issue and amendment of manuals. Each manual **should** bear a title and list of contents, giving a clear indication of its scope. At the front there **should** be an amendment page to indicate amendment number, date of incorporation and the signature or initials of the person(s) making the amendment. Amended pages **should** be dated. The arrangements of pages, sections, paragraphs, etc. **should** be orderly and systematic to facilitate immediate identification of any part of the subject matter. The standard of printing, duplication, binding, section dividers, indexing of sections, etc. **should** be sufficient to enable the document to be read without difficulty and to ensure that it remains intact and legible during normal use.
- A4 The amendment of an operations manual in manuscript is not acceptable. Changes or additions, however slight, **must** be incorporated by the issue of a fresh or additional page, dated accordingly, on which the amendment material is indicated by a vertical line in the margin as shown to the left.
- A5 Electronic operations manuals are encouraged over paper versions to facilitate ease of update and inspection. Operators should however ensure that they have a method of version control in place.

### British Skydiving Operations Manual

- A6 The British Skydiving Operations Manual, as amended, represents the accepted standard for sport parachuting in the United Kingdom. It has been produced by

British Skydiving with the co-operation of the CAA and represents many years of careful refinement. All operators are therefore advised to utilise the content of that manual in the development of operating standards and techniques best suited to their particular circumstances and conditions. Operators **should**, however, bear in mind that the British Skydiving Operations Manual is supported by an infrastructure of training courses, disciplinary procedures, management committees and auditing processes, together with accident reporting and investigation procedures which would be difficult for a small organisation to replicate. Organisations not part of British Skydiving must seek written permission from British Skydiving prior to using any British Skydiving documentation.

- A7 To facilitate the production of a similar document, the following guidance is divided into sections, which broadly correspond with the sections in the British Skydiving Operations Manual.
- A8 Operators **may** conduct their activities in accordance with the British Skydiving Operations Manual, with the addition of a section detailing the local SOPs which will be peculiar to their own operation. If this is the case, then the specific details of key managerial and technical personnel, staffing levels etc. which would otherwise be included in SECTION 1, ORGANISATION AND CONTROL, **may** for convenience be included at the beginning of the local SOPs.
- A9 This guidance **should** not be regarded as being exhaustive, as the content of a manual **may** vary considerably according to the nature of the operation and local circumstances.
- A10 The requirements set out in this publication are considered to be the minimum acceptable and in some areas British Skydiving, the operator and/or local circumstances will require more comprehensive or stringent standards to be adopted.
- A11 A typical Parachuting Operations Manual should contain the following sections:

### **Section 1: Organisation and Control**

- Terms of reference, duties and responsibilities of all those involved in the management of the operation **must** be clearly defined and the chain of responsibility firmly established. Key managerial and technical personnel **must** be nominated, and their duties and responsibilities stated
- Conditions under which parachuting training and operations **may** take place. (
- Responsibility
- Appropriate staffing
- Ground control organisation

## Section 2: Designation and Classification of Parachutists

- This section **should** detail the designation and classification of parachutists. If the operation is to undertake the training of novice parachutists (including Tandem Parachutists) then the progression scheme for each type of training **should** be described, e.g. Conventional Basic Training, Accelerated Free Fall (AFF), Ram Air Progression System (RAPS), Tandem

## Section 3: Jumpmaster

- Qualifications and duties of a jumpmaster
- Operators utilising the British Skydiving Operations Manual will need to include specific instructions in their local SOPs

## Section 4: Instructors

- Qualifications required of each type and grade of Instructor and Examiner
- Tandem Instructor recency

## Section 5: Training

- Ground training syllabus, including emergency drills and procedures
- Instructor/novice ratios
- Records
- Recency requirements

## Section 6: Equipment

- Parachutes – general
- Parachute equipment for students
- Personal clothing and equipment
- Instruments - altimeters - audible altitude warning devices
- Radios
- Automatic Activation Devices
- Ancillary equipment, including cameras
- Parachute packing
- Packing qualifications
- Packing records

## Section 7: Parachute Landing Areas.

- Approval
- Dimensions/restrictions

- Other requirements

## **Section 8: Parachuting Limitations**

- Wind speed limits
- Cloud and visibility
- Opening heights
- Maximum altitude
- Number of parachutists in the air
- Unusual parachuting activity

## **Section 9: Flying**

- Pilots
- Aircraft
- Aircraft Maintenance
- Flying Operations

## **Section 10: Safety**

- Embarkation/disembarkation
- In the aircraft and in-flight emergencies
- Static line operation
- During free-fall, including malfunctions
- During descents under canopy
- Incident/accident reporting procedures
- Discipline

## **Section 11: Medical**

- Medical Requirements to Parachute
- Medical Declarations

## **Section 12: Documentation**

- Personal documents
- Operator's records
- Reports to be submitted

## **Section 13: Display Parachuting (if required)**

- Team Leader



- Team Members
- Equipment
- Canopy Formation, Canopy Piloting and Currency
- Notification Procedures and Incident Reporting

## Section 14: Rigging

- Repair, Manufacture and Assembly
- Qualifications of Riggers
- Currency of qualifications

## Local Standard Operating Procedures (SOPs)

- A12 This Section is to contain the SOPs peculiar to the particular operation. Detailed procedures designed to prevent conflict with other activities, at or near the DZ and PLA **should** be included. In the case of an operation based at an aerodrome, it is essential that these procedures are compatible with the operational instructions applicable to that aerodrome (at a licensed aerodrome, the Aerodrome Manual and the Manual of Air Traffic Services (MATS) Part 2).
- A13 The following headings are intended to give an indication of some of the areas which will need to be addressed:
- **Duties and Responsibilities** of all those involved in the management of the operation, including who **may** authorise what. Names of key personnel, and their duties and responsibilities.
  - **Chief Instructor** A Club Chief Instructor/Team Leader **must** be nominated.
  - **Chief Pilot** - The name of the person appointed.
    - Responsibilities **must** be stated.
    - System for periodic checking of all pilots in accordance with BS Forms 108D, E & F.
  - **Person responsible for aircraft maintenance management**
    - The name of the person appointed.
    - Responsibilities **must** be stated.
  - **Rigger/Equipment Member**
    - This **may** be the Chief Instructor or an appropriately qualified person who will be responsible to them for equipment matters.
    - Responsibilities **must** be stated.

- **Staffing Levels.** The staffing of the club/team/organisation will be dependent upon the degree of complexity and level of activity of the operation.
  - Numbers and qualifications of staff **must** be specified.
  - Instructor/novice ratios **must** be specified.
- **Instructions to all Operating Staff**
  - Responsibility for notifying DZ active/inactive to ATSU/ACC
  - List of persons entitled to authorise flights
  - System to ensure Tandem Instructor medical / recency / emergency drills
  - Checking of parachutists' personal documents
  - Checking of club equipment
  - Manifesting
  - Pre-flight checks
  - Briefing
  - Major and Special Hazards
  - Rescue boat
  - Informing non-Public Transport
  - Emplaning point
  - Embarkation/disembarkation
  - Incident/accident reporting
- **Instructions to DZ Controllers**
  - Duties
  - DZ vehicles
  - De-confliction procedures
  - Communication/co-ordination with other local activities
  - Radio frequencies and procedures
  - Incident/accident/emergency procedures
  - Crash rescue equipment and procedures
- **Instructions to Jumpmasters**
  - Briefing of pilot
  - Conduct of lifts
  - Performance or structural limitations of aircraft
  - Use of in-flight door
  - Use of Knife
  - Static line operations
  - Signals to/from the pilot
  - Ground to air signals
  - Emergency procedures
- **Instructions to all Parachutists**

- PLA and overshoot/undershoot areas
- No-go areas
- Major/minor hazards and areas to avoid
- Parachuting limitations, e.g. deployment heights
- Parachute equipment and ancillary equipment
- Performance or structural limitations of aircraft
- Emergency procedures
- De-confliction procedures, in the air and on the ground (DZ drills)
  
- **Instructions to Pilots**
  - Pilots **must** be made aware of their individual responsibilities in relation to the legality and currency of any Flight Crew Licences and associated ratings and certificates held. However, the operator also has responsibilities to fulfil, therefore a system for certifying that all licences, tests, ratings and medicals have actually been renewed **should** exist. Flying with an applicable element of a licence out of date is illegal and **may** invalidate insurance cover.
  - It is important that all operating staff **should** be made fully aware of the overriding responsibility and the ultimate authority of the pilot in command. Manuals **should** state that, in order to secure the safety of a particular flight, the pilot in command is authorised to apply greater safety margins (e.g. reduced payload, increased fuel reserves) than those specified by the Operator for normal operations.
  - Flight and rest period limitations
  - Minima and maximum take-off weights (MTOWs) for specific aerodromes
  - Special instructions relating to particular aerodromes
  - Weather minima
  - Carriage of passengers
  - Minimum Equipment Lists (MELs) for each aircraft
  - Payload
  - Fuel policy - normal fuel reserves, bowser procedures etc
  - Location of aircraft documents
  - Documents to be carried
  - Care and maintenance away from base
  - Location of Aeronautical Information

- Security - locks, covers, chocks, picketing
- Ground handling of aircraft
- Pre-flight/daily/check A - as appropriate to each aircraft
- Start-up
- Taxying
- Fuelling, fuel management
- Emplaning point
- Signals/communications with jumpmaster
- Frequencies and squawk
- AADs - procedure prior to descent
- De-confliction procedures on the ground and in the air, to include procedures for landing, taking off, taxying and engine running if parachutists are in the air or moving airside.
- **Equipment**
  - System of checking/approval of parachute and ancillary equipment including cameras. This **must** include the parachutist's weight, experience level and any manufacturers recommendations.
  - Use and packing of club/centre parachute equipment
  - AADs - and procedure for switching on/off
  - System for obtaining and implementing equipment safety information
  - Maintenance, servicing, repairs and packing; including:
    - Tandem parachute equipment
    - Who **may** do what
    - Records and logs
    - Use of ground training equipment and facilities
    - A system for ensuring that parachutists intending to re-pack club equipment have the appropriate endorsements on their packing certificates
- **Weather criteria and dropping restrictions**, including restrictions on operating procedure/wind limits due to local hazards etc.
- **Other procedures peculiar to the operation**
  - Night jumps - local procedures

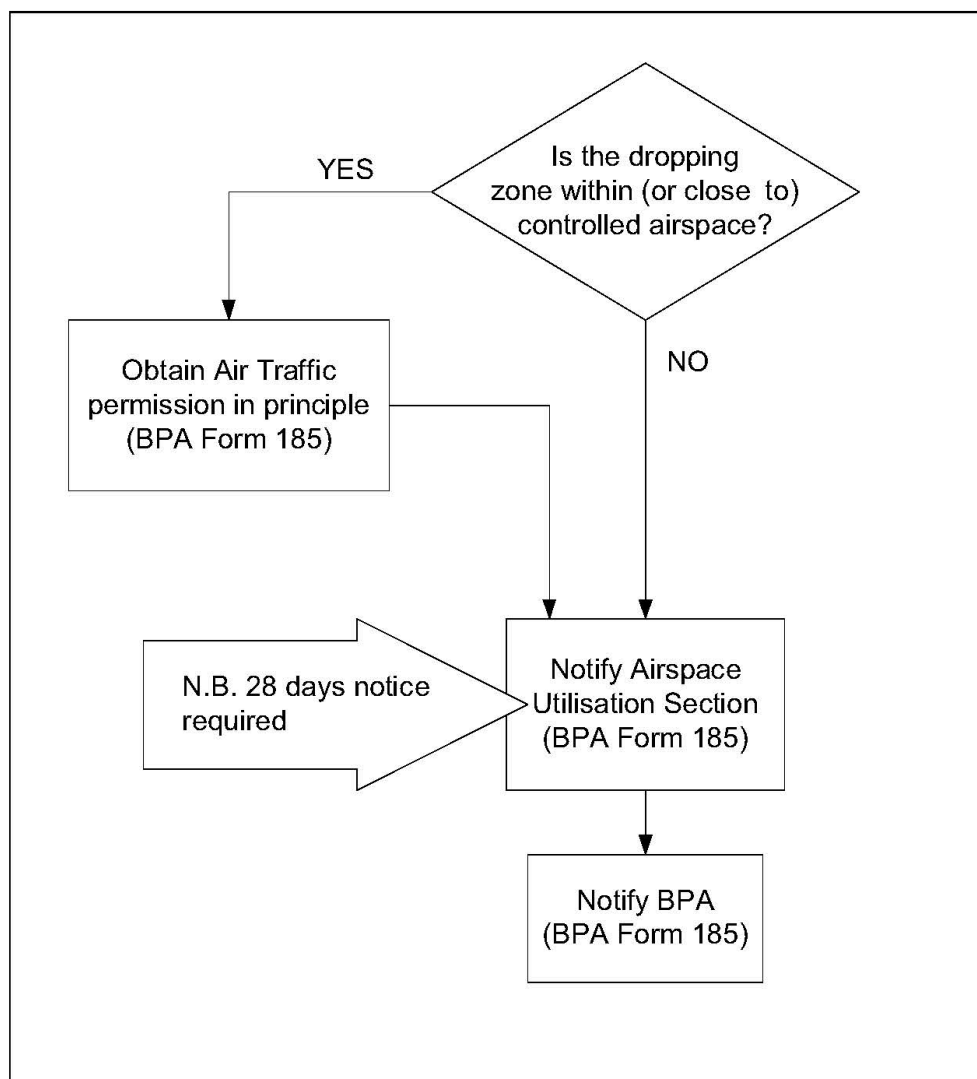
- Water jumps - local procedures
- The person designated to maintain the Parachuting Operations Manual

- A14 The normal SOPs **may** be inadequate for special events such as competitions, championships and boogies. Operators **should** review their procedures at the planning stage and ensure that adequate provision is made for the safe conduct of any such event.
- A15 Details of any variations or waivers from the provisions of the British Skydiving Operations Manual which have been authorised by British Skydiving and any other Exemptions issued by the CAA **should** be stated at the end of the Section. Exemption from the provisions of CAP 660 **may** only be made by the CAA

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## APPENDIX B

## Procedure for notification of unusual parachuting activity, displays and night jumps



## NOTES:

1. All of the above actions **may** be carried out concurrently.
2. Where reference is made above to British Skydiving, organisations independent from British Skydiving **should** notify direct to the CAA General Aviation Unit.

3. NATS require a minimum of 28 days for an application including a request for ENSF and a minimum of 21 days for an application including a request for NSF. For applications not requiring access to a restricted area or CAS a minimum of 7 days is required by AR Ops to process these activities accordingly. In the NATS case, applications submitted less than 7 days in advance of the application will not be processed. AR OPS will endeavour to process all applications received, however those received after the deadline are subject to other activity priorities and workload at the time
4. Applications to the CAA must be sent to [AROPS@caa.co.uk](mailto:AROPS@caa.co.uk).

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## APPENDIX C

## Relevant Legislation

Air Navigation Order 2016 Article	
33	Certificate of Airworthiness to be in force
35	Certificate of Release to Service
136	Flight crew licences and ratings (also Schedule 8)
152	Grant, renewal and effect of flight crew licences
89	Dropping of articles and animals
90	Dropping of persons
240	Endangering safety of an aircraft
241	Endangering safety of any person or property
86	Flying displays
177	Flight times – <u>responsibilities of flight crew</u>
238	Preservation of documents
253	Revocation, suspension and variation of certificates, licences and other documents
CAP 382	Mandatory reporting
266	Exemption from Order
Schedule 1	Interpretation (definitions)
268	Approval of persons to furnish reports