UK Civil Aviation Authority

CAP1739

Safety Guidance for Balloon Events and Competitions

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Contents

Revision history

This is a new CAP whose content has been drawn partially from previous CAA documents as well as inclusion of added content specific to Balloon Events and Competitions.

Edition 1- April 2026

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 or suggestions about CAP 1739, please send them to ga@caa.co.uk with subject line ‘CAP 1739 feedback’.

Terminology, Abbreviations and Definitions

Term	Abbreviation	Definition
Air Navigation Order	ANO	Air Navigation Order 2016 (as amended).
Air Traffic Services	ATS	References to 'ATS' contained in this document apply to all ground to air radio telephony transmission communications carried out.
British Balloon and Airship Club	BBAC	The British Balloon & Airship Club is the national representative body for hot-air ballooning and airship operations in the United Kingdom.
Crowd Line		The line delineating the closest edge of any area, including Car Park(s), accessible to Spectators with respect to the Operating Area.
Event Organiser	EO	The EO is the person responsible for all matters pertaining to the wider planning and execution of a Balloon Event and for the safety of the general public, both at the event and those affected by the wider impacts of the event.
Flying Display		Any flying activity deliberately performed for the purpose of providing an exhibition or entertainment at an advertised event open to the public.
Fédération Aéronautique Internationale	FAI	The world air sports federation.
Flight Director	FD	The Flight Director (FD) is responsible for the safe conduct of flying at the Balloon Event.
Flying Display Director (Air Displays)	FDD	The person responsible to the CAA for the safe conduct of a Flying Display.
Liquefied Petroleum Gas	LPG	A fuel gas which contains a flammable mixture of hydrocarbon gases that is commonly used in hot air airships and hot air balloons.
Safety Officer	SO	The Safety Officer (SO) has oversight for the safety of the event on the day and should advise the EO and FD accordingly.

Chapter 1

General information

Introduction

1.1 This non-statutory safety guidance is for participating pilots, Event Organisers (EO), Flight Directors (FD) and associated staff of balloon-only events, ballooning as part of a flying display and balloon competitions when such events are conducted in accordance with the normal rules of the air (unless specifically permitted or exempted).

1.2 Aerial events along with flying displays form a significant part of the UK leisure industry today. Participation, together with their organisation and administration, need careful consideration if the highest safety standards are to be achieved and maintained. This publication provides non-statutory safety **guidance** and where applicable summarises relevant rules to ensure that the safety of both the participants and the public is not compromised.

1.3 "Flying displays" are defined in Schedule 1 of the Air Navigation Order 2016, as amended (ANO), as:

"any flying activity deliberately performed for the purpose of providing an exhibition or entertainment at an advertised event open to the public."

1.4 Flying Displays are governed by Article 86 of the ANO which contains specific regulatory requirements (appointment of a Flying Display Director, participating pilots requiring a Display Authorisation, etc) and the requirement to obtain a Permission from the Civil Aviation Authority (CAA) for that Flying Display. These requirements along with safety related CAA guidance on their planning and organisation, are detailed in CAP403 - Flying Displays and Special Events.

1.5 For other non-balloon general aviation events CAP1988 (being published in Q2 2026) provides further non-statutory **guidance** for events that are not in the scope of CAP403.

1.6 These guidance notes have been prepared in association with the ballooning community, including the British Balloon and Airship Club (BBAC). It should augment any BBAC publications on the conduct of balloon events, this CAP should be read in conjunction with that material.

1.7 It is important to state that the overall responsibility for individual events remains with the event organiser.

1.8 Other specific types of events are excepted from Article 86. The table below summarises those relevant events and where further information may be found.

Topic	Exception to Article 86	Coverage of this topic	When Article 86 *may* apply
Balloon-only events (including "flying displays" only involving balloons)	Article 86 (16): key provisions in Article 86 do not apply if only participating aircraft are balloons	Chapter 2 of this 'CAP: Balloon Events'	For balloons, see Chapter 3 of this CAP 'Ballooning as part of a Flying Display'. See CAP403 for all other air display material.

1.9 Event organisers may still wish to refer to CAP403, notably its chapters on Event Organiser Guidance and Information and Risk Assessments.

1.10 In addition to the information available in these chapters, please see **Appendix A** for general considerations for balloon competitions, **Appendix B** for a general consideration for event organisers and flight directors and **Appendix C** for useful contact information for useful links and contact details.

Background

1.11 The Civil Aviation Act 1982 empowers the Civil Aviation Authority (CAA) to regulate civil flying events, and aircraft that participate in such events that are covered in this CAP, within the United Kingdom in accordance with the requirements of the ANO.

1.12 Many of these activities are not covered in CAP403. However, they still require safety guidance. For example, balloon events involving the coordinated launch of multiple balloons and involving hundreds of public spectators may not warrant in-depth regulatory oversight but still carry risks that could be mitigated through clearer guidance. Moreover, experience gained from past similar events can support those new to organising or participating in such events.

1.13 Further useful information can be found on the Flying Displays and Special Events page on the General Aviation section of the CAA website. Further information can be found in Appendix C.

Chapter 2

Balloon Events

Balloon-only events

2.1 Balloon-only events, whether a tethered or static display, contest, or private or public flying event, do not require a Permission under Article 86(16) of the ANO.

2.2 Though the guidance is generally aimed at Hot Air Balloons, the following guidance should be considered for all types of Balloon Event.

Key roles involved at Balloon-only events

2.3 For all events involving the launch and/or recovery of multiple balloons, the following key roles and their responsibilities should be considered:

- Event Organiser
- Flight Director
- Safety Officer
- Pilot

Event organiser

2.4 The Event Organiser[1] (EO) is responsible for the planning, organisation, and wider aspects of the event. The EO is responsible for the conduct of the event and the safety of the general public but is subordinate to the FD in matters relating to balloon operations.

2.5 The EO should appoint a Flight Director (FD) and Safety Officer (SO) depending on the size and complexity of the event. The event organiser is responsible for considering and incorporating any recommended safety actions that the SO may suggest.

2.6 The EO is responsible for ensuring that appropriate and adequate risk assessments are in place, and if required, liaison with and attendance at a local authority Safety Advisory Group.

2.7 The Event Organiser may also review relevant parts of CAP403, including Chapter 7 “Event Organiser (EO) – Guidance and Information” and Appendix A “Risk Assessment”.

[1] The Event Organiser is the responsible role holder and may be an individual or a company or board of directors.

Flight Director

2.8 The Flight Director is responsible for the safe conduct of balloon flight operations on the day of the event and for making any decisions or conditions for flights to be made at the event. The FD should also be involved in the prior planning and preparation of the event.

2.9 The EO is subordinate to the FD in terms of managing and mitigating the safety risk posed by balloon flying activity. Therefore, the FD should have comprehensive knowledge of this CAP.

2.10 The FD should be suitably qualified[2] with experience of flight operations at ballooning events, and have experience of Emergency Response Plans, landowner relations, and LPG refuelling.

2.11 The FD should satisfy themselves that any balloons intending to fly at the event are airworthy and the crew are suitably briefed and licensed as required.

2.12 For smaller events involving low numbers of launches or little or no public involvement, it may be sufficient to have any two of the roles of EO, FD and SO filled by the same individual.

Safety Officer

2.13 The Safety Officer (SO) has oversight for the safety of the event[3] on the day and should advise the EO and FD accordingly.

2.14 The SO should be suitably qualified[4] with experience of ballooning at public events and be capable of developing emergency response plans.

2.15 The safety officer should always be empowered to make decisions independent of any commercial pressure.

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[2] "Suitably qualified" means the Flight Director should have a minimum of 200 hours flying experience in balloons and should hold or have held a relevant flight crew licence for Balloons, alternatively they may have obtained sufficient experience from other event roles at previous events. For larger events with public participation, the Flight Director should have a greater level of experience, ideally with commercial experience. For smaller events or competitions, the level of experience may be less. It is advisable that the individual should have prior experience in the running of events.

[3] For a small event the Safety Officer may oversee safety of the whole event including balloon activities; for a large event there may be a Balloon Safety Officer and a separate Event Safety Officer.

[4] "Suitably qualified" means the Safety Officer should have a minimum of 200 hours flying experience in balloons and should hold or have held a relevant flight crew licence for Balloons, alternatively they may have obtained sufficient experience from other event roles at previous events. For larger events with public participation, the Safety Officer should have a greater level of experience, ideally with commercial experience. For smaller events, the level of experience may be less. It is advisable that the individual should have prior experience in the running of events.

2.16 At smaller events it may be sufficient for the FD and the SO to be filled by the same individual, while for larger events, particularly any involving the public, this role should be separate from the FD role.

2.17 The SO may appoint one or more assistants to help with safety oversight. The SO should ensure that these individuals are sufficiently competent, capable, and briefed to discharge their functions.

Pilots

2.18 Pilots have responsibility for the safety of the balloon they are flying, any passengers and the ground crew.

2.19 Pilots should attend all pilot safety briefings for the event, and register their attendance as required by the FD.

2.20 Pilots must always retain the final decision to refuse to fly if they judge conditions unsafe or outside their personal operating limits.

2.21 Pilots intending to fly are responsible for ensuring that their licences are valid, current and that their balloon is airworthy with all emergency equipment available as required.

2.22 Where tethered flight is intended, suitable tethering (three-point tether) should be applied to ensure that the balloon remains at a controlled and appropriate altitude.

2.23 Pilots should appoint and brief a competent, non-flying crew member to assist the pilot in safe launching and tethering. In addition, the crew should oversee ground vehicle management (including parking the vehicle and trailer throughout the event so that it presents minimum risk to other balloons or vehicles), and passenger assistance.

2.24 Pilots flying new types of balloons should consider availing themselves of familiarisation training where possible, especially where significant differences may exist.

2.25 If the FD has decided not to permit flying activities, then flights should not be conducted from the event.

2.26 If the FD has imposed a minimum flight hours restriction, then those individuals affected should not fly from the event.

Classes of balloon-only events

2.27 These guidelines apply to the full range of balloon events in varying degrees depending on the nature of the risks involved:

Category	Number of Balloons/Public Involvement	Considerations
Fly-Out Fly-In Private Balloon Meets	Balloons: <40 Public Involvement: Not expected (not advertised) but may include some interested spectators	Any two of the roles of EO, FD and SO could be combined. Some planning depending on the number of expected balloons. Larger event might warrant a Flight Director who is not also the Event Organiser and Safety Officer
Balloon Competition	Balloons: >5 competitors Public Involvement: Not expected (not advertised) but may include some interested spectators	Any two of the roles of EO, FD and SO could be combined. Some planning depending on the number of expected balloons. Larger event might warrant a Flight Director who is not also the Event Organiser and Safety Officer Further specific guidance is available in Appendix A
Small Event Public Displays Balloon activity as part of another public event	Balloons: <50 Public Involvement: Some paying or non-paying spectators; passengers; other uninvolved public in proximity	Significant planning. EO/FD may be combined in some cases for smaller events. SO should be separate. Event Organiser should refer to CAP403 chapters on Event Organisers, Liaison with Local Authority and Emergency Services, Emergency Plan and Risk Assessment Further considerations are available in Appendix B
Large Event	Balloons: >50 Public Involvement: Significant: paying or non-paying spectators; passengers	Major planning. Should have Event Organiser and separate Flight Director and Safety Officer. Safety Officer may need assistants. Event Organiser should refer to CAP403 chapters on Event Organisers, Liaison with Local Authority and Emergency Services, Emergency Plan and Risk Assessment Further considerations are available in Appendix B

General considerations

Planning and preparation

2.28 Launch fields should be free of obstacles, have adequate space for the activity, and be inspected by the FD and/or SO prior to use.

2.29 The SO should be involved in event planning and be present during all launch and inflation periods. While duties may be delegated, the FD retains overall responsibility, including authority to cancel planned launches for safety or weather-related reasons, the FD should conduct their activities in consultation with the SO.

2.30 It is the responsibility of the FD and the pilots to ensure that the planned activities do not infringe airspace restrictions. If at the planning stage it seems likely that flights may affect an aerodrome, then liaison should be established with the relevant air traffic service unit (ATSU) in good time.

2.31 For mass ascents, the use of transponders and/or radios on the lead and final balloon should be considered so that the ATSU has an indication of the track and extent of the activity and can provide information to other airspace users. The ATSU should be informed of actual launch time and when all balloons have landed. Consideration should also be given at larger events to requesting a NOTAM to alert other airspace users of the event. Further useful information can be found about submitting a NOTAM in Appendix C.

2.32 Event rules should take account of current regulations. Any changes, especially those affecting safety (e.g. wind limits), should be sufficiently promulgated to participants before the event. These should include the limits of acceptable weather conditions for flights, including tethered flights, to be made. Non-safety related changes may be shared at pilot briefings.

2.33 Consideration should be given to the creation and dissemination of guidance notes to pilots prior to the event. Appendix B includes a non-exhaustive list of topics to include. Consideration should be given to using visual presentations and electronic messaging for the dissemination of information during an event and especially at pilot briefings.

2.34 At a minimum, a structured live briefing is recommended including a weather briefing before flying starts with the participation of all pilots. This may be done daily, with a longer master briefing at the beginning of the event.

2.35 The Briefing should at least include:

- Launch Field Information,
- Meteorological Situation,
- Landowner Relation Considerations,

- Airspace Considerations

2.36 To ensure information has been sufficiently promulgated, it may be sensible for the event organiser to organise a roll call at all briefings.

2.37 Flight should be delayed, altered, or cancelled due to unsafe weather, including:

- Surface winds exceeding safe limits (typically >8 knots for inflation or landing).
- Forecast storms or convective activity.
- Poor visibility or low cloud ceilings.

2.38 Any officials, commentators, pilots, and crew should be briefed by the SO on the contingency plan to be followed in the event of an emergency on the launch field with clear method(s) of communication. Similar contingency plans should be considered by the EO for any situation that may take place on the event site.

2.39 In addition to the above, the FD should brief a clear procedure to suspend launching should it be necessary. Such a procedure may include the use of a pyrotechnic/radio/flag/mobile phone communication or at larger events, PA system.

2.40 The size and location of an event can have bearing when deciding who to notify and liaise with within the Local Authorities and Emergency Services. Discussions should take place prior to the event with external emergency services and relevant safety action groups, and communication channels established with them for the duration of the event, so as to facilitate their rapid assistance in the case of an emergency.

2.41 Adequate first aid and fire-fighting equipment should be available on site to deal immediately with minor incidents.

2.42 EOs and FDs are particularly reminded that a large balloon event or any event where a significant number of spectators are expected, requires effective control with specific assistance from the SO and a landowner relations officer (if applicable). As referred to above, EOs are strongly advised to read the chapters in CAP403 on "*Event Organiser Guidance and Information*" (including the sections "*Liaison with Local Authority and Emergency Services*", "*Emergency Plan*") and "*Risk Assessments*".

2.43 Suitable emergency access to the site and launch field should always be maintained.

2.44 Further generic event information should be considered by the EO and FD. This can be found on the Event Safety page of the Health and Safety Executive website. Other useful documents should be considered such as the Events

Industry Forum (EIF) Event Safety Guide, 'the Purple Guide.' Relevant links are available in Appendix C.

2.45 Operations should respect the landowner relations, LPG and safety codes, and should refer to relevant BBAC guidance. The following points should be noted in relation to landowner relations:

- The EO or FD should nominate an experienced person as the landowner relations officer to be the primary contact person to manage any landowner concerns or potential problems caused by the event.
- Because of the potential disturbance that large groups of balloons may cause to livestock, poultry etc. consideration should be given to briefing pilots to comply with the Rules of the Air, and to always take account of any specific sensitive areas.
- A system should be in place to ensure that each pilot can complete a landing report form for each flight and return it to the FD for tracking purposes so that should there be a subsequent landowner relations or flight safety issue the balloons involved can be identified. Further information can be found in Appendix B.
- An event should not take place unless the FD and SO ensure that a level of support is provided in the areas of safety and landowner relations appropriate to the number of balloons participating in the event.

2.46 All free and tethered flights must be made within the criteria contained in the manufacturer's flight manual or builder's operating notes for each specific balloon.

2.47 Static displays must be made in accordance with the manufacturer's flight manual for tethering (3-point tether) to ensure that the basket does not leave the ground.

2.48 Tethered flights must be made in accordance with the manufacturer's flight manual for tethering (3-point tether) to ensure the balloon is in control at all times.

2.49 During inflation and take-off at a balloon event, balloon envelopes can come into contact with (rub against) other balloon envelopes, baskets, and other obstacles. It is essential that there are no sharp edges that could cause damage to envelopes. For example, cable ties holding banners on the balloon envelope or basket must not have any sharp edges.

2.50 When refuelling the BBAC LPG (Propane) Code should be followed. Refuelling should take place in a secure area to which the public does not have access. The LPG tanker or fuel bulk tank should be separated from any large gathering of people by at least one hundred metres and sited to avoid drainage of LPG

towards any gathering of people or other area that may cause an environmental hazard.

2.51 The numbers of vehicles, crews and cylinders within the refuelling area should be kept to a minimum. It may be necessary to allow extra space for vehicles/balloons waiting to refuel.

2.52 Unauthorised use of drones by the public at events poses a possible risk to aircraft and should not be permitted. Consideration should be given by the EO and FD to raising public awareness of their legal responsibility and the importance of compliance.

2.53 Event staff should be briefed on appropriate action if unauthorised drone operation is suspected or observed.

Weather including wind conditions

2.54 Mass take-offs should only take place in wind speeds of eight knots or less on the surface. When circumstances dictate, especially in gusty wind conditions and when winds exceed eight knots, take-offs may be staged in ‘waves’ so as to maximise the separation of balloons. The speed of the upper winds should also be considered.

2.55 At an event with a planned public involvement (or other uninvolved public in close proximity), the EO and FD should consider in their risk assessment that the public should be sufficiently separated from the balloons in such a way that in the event of a change of wind direction prior to launching or other issue, no part of a balloon will come into contact with the crowd.

2.56 When light and variable winds are present or forecast, the FD will need to consider the options for flight as there may be minimal or no safe landing options. If there is any likelihood of the wind becalming in the intended area to be flown, the FD should consider the suitability of the launch decision.

Take-offs

2.57 The FD has the right and responsibility to permit flights or to withhold the take-off of any balloon or all balloons participating at any time during the event for meteorological reasons or any other reasons bearing on safety. When the FD has declared that flying is permitted, the final decision to fly rests with the individual pilot. Under no circumstances should a FD be or feel pressured for not authorising a take-off, nor should a pilot be penalised for not electing to take-off.

2.58 Low energy collisions such as balloons contacting fabric-on-fabric are to be avoided. It is especially vital to avoid high energy fabric-on-fabric collisions, or collisions whereby the basket of one balloon contacts the envelope of another.

2.59 Although the lower balloon has priority, pilots need to be aware of the possibility of other balloons above, especially in light wind conditions. All pilots need to

consider the rate of ascent from the launch site, especially the impact that a fast rate of ascent may have on a balloon above. Pilots of balloons above a launch site, especially in light wind conditions, need to be aware of ascending balloons and adjust their rate of climb to avoid collision.

2.60 Cameras and other available technology may help pilot situational awareness but should not replace pilot visual lookout.

2.61 Before take-off, pilots should ensure that their projected track out of the site is clear of balloons and other obstructions either on the ground or in the air.

2.62 Wind will always lead to some degree of false lift. Pilots should compensate for this so as not to result in inadvertent downwind ground contact.

2.63 Immediately before the take-off of each balloon, a visual check for other balloons overhead should be performed, either:

- by a member of the crew in verbal or non-verbal communication with the pilot. The pilot may wish to agree a set of hand signals with the relevant crew member for this purpose that are clear and not susceptible to misinterpretation; or,
- by the FD, SO or assistant on that person's behalf.

2.64 Whilst waiting to leave the ground, the quick release should remain attached (to a solid anchor point) to avoid an inadvertent take-off due to gusting winds. Take-off only once confirmation is received (from FD, SO or crew) that it is clear above and will remain so for the necessary amount of time.

2.65 Minimise rates of climb and descent when in proximity to other balloons. Keep a good lookout and give way to balloons climbing from below. The ascent and descent rate above the launch site should avoid exceeding 200 feet per minute unless a higher rate of climb is appropriate for clearing downwind obstructions given the prevailing wind conditions. Where a higher rate of climb is appropriate, this should be promulgated at briefing to pilots.

2.66 It is strongly recommended that all balloons involved at a launch use a dedicated balloon channel (frequency) for that event. In the UK this is 122.480MHz unless a specific event frequency has been allocated. This enables balloons to support or warn each other during operations especially during take-off and climb out. Radio usage on this channel by all stations should be kept to operational matters only to keep messages to a minimum. Alternatively, the use of a whistle as an immediate warning may assist a climbing pilot in becoming aware that there is a balloon above.

2.67 Handling by inexperienced student pilots is discouraged during take-off and early phases of flight when balloons are in close proximity.

2.68 The balloon should always be flown so that there is never any doubt about the ability to clear spectator areas by a safe margin.

2.69 Pilots should only operate non-essential equipment in or around balloons or perform any other non-operational tasks when it is safe to do so and when the balloon is clear of the launch site and safely clear of other balloons.

In flight

2.70 Pilots are reminded of their obligations in the UK Standardised European Rules of the Air- SERA.3205 to not operate in such proximity to other aircraft as to create a collision hazard.

2.71 Pilots should maintain situational awareness throughout all stages of flight, especially when operating close to other balloons and should endeavour to reduce risk in all wind conditions.

2.72 When climbing or descending, Pilots should ensure they have sufficient control of the balloon to maintain safe separation.

2.73 The FD should monitor safe maximum climb/descent rates and monitor adherence to the rules to reduce the risk of collisions.

2.74 Cameras and other available technology may aid pilot situational awareness.

Parachute stalls and flight loading

2.75 A parachute stall occurs when the internal pressure at the top of the balloon is not sufficient to keep the parachute sealed within its aperture. This can occur when the balloon is light and ascending rapidly without activation of the parachute line. Activation of the parachute line in these conditions will exacerbate the situation. If not corrected early there is the danger that the balloon will completely deflate and may become unrecoverable.

2.76 In a rapid ascent, it may be necessary to provide a short blast of heat to keep the parachute suitably sealed, thereby mitigating against a stall. However, this is a matter of judgement for the pilot at the time.

2.77 If the parachute vent is used repeatedly to produce a steep descent, then the pilot should take care to observe the amount of deflation that this is producing upon the envelope. If held open too long the mouth of the envelope will close making it difficult to reinflate without serious damage. In very lightly loaded conditions, it is possible that the parachute may not close automatically, because the balloon has cooled too much to support the weight of the parachute. A short blast of heat is usually sufficient to push the parachute back up into place, but this is a matter of judgement at the time.

2.78 Anti-stall vent systems should be strongly considered over a basic parachute vent when expecting to operate a balloon frequently at high rates of ascent/descent.

2.79 Particular care should be taken in respect to loading when flying in strong wind gradients. There is an increased risk of parachute stalls particularly so when the balloon is light and in a fast ascent. Transition through turbulent air or areas of rapidly changing wind speed may exacerbate this risk. A stall can occur spontaneously without activation of the parachute (rip) line.

2.80 In these conditions it may be advisable to ensure the balloon is adequately loaded to ensure envelope pressure is relatively high and the envelope therefore more rigid.

2.81 Pilots should be fully aware of published maximum and minimum loading weights for both take-off and landing, noting changes during flight.

2.82 If no minimum loading is published, then the recommended factor is 50% of the maximum take-off mass (MTOM).

Landings

2.83 Landing areas should be planned with due care to minimize risks to people, animals, and property.

2.84 When considering the landing sequence and where it is safe to do so, the first pilots in a landing zone should attempt to land in an area to avoid becoming an obstruction for other balloons arriving subsequently. Ideally this should be in the downwind end of the landing zone.

2.85 Pilots should ensure that their crew keep retrieve vehicles clear of incoming balloons in the landing zone.

2.86 Pilots should obtain landowner permission where required and follow established landowner relations policies.

Tethered flight and static displays

2.87 Tethered Flight (and static displays where the basket remains on the ground at all times) should be conducted in line with the Manufacturer's Flight Manual or builder's operating notes. This includes using appropriate serviceable equipment and utilising a three- or four-point tether system to a solid anchor point; this must not include a quick release system.

2.88 As far as possible a single point of failure in a tether system should be avoided and all components must be of appropriate breaking strain.

2.89 The FD, SO or their nominated assistants should have the right to stop tethered flight or static display of any balloon or all balloons participating at any time during the event. Pilots however reserve the right to decide not to proceed with

the tethered flight or static display of an individual balloon. Under no circumstances should a FD, SO or pilot be penalised for electing not to authorise or take part in activities.

2.90 Consideration should be given to the immediate surroundings when setting up to tether or static display, including proximity of fixed or temporary objects (e.g. trees, marquees, fences), other balloons and associated vehicles, other activities, and persons.

2.91 Reference should be made to Article 92(5)(b) of the Air Navigation Order 2016 which states ‘A balloon in captive or tethered flight must not be flown within 60 metres of any vessel, vehicle or structure except with the permission of the person in charge of any such vessel, vehicle or structure’. The FD should ensure suitable co-ordination of such activities.

2.92 Any balloons that are being inflated for static display purposes only, must be ballasted and tethered appropriately so the basket doesn’t leave the ground. All balloons should also have public liability insurance.

2.93 If a night glow is to be performed, a specific night glow briefing should be given to all participating pilots prior to the activity taking place.

Chapter 3

Ballooning as part of a Flying Display

3.1 This chapter incorporates additional considerations to be made when a balloon event is held jointly with a flying display. This section should be read in conjunction with the general requirements of CAP403.

Regulations

3.2 Public flying displays that include balloons in addition to other aircraft types are subject to the requirements of ANO Article 86.

3.3 Pilots of balloons in flight who hold a relevant flight crew licence for balloons are authorised to take part in a Flying Display without holding a Display Authorisation (DA) by General Exemption.

Considerations

3.4 The Flying Display Director (FDD) is responsible for the management of any ballooning at the event during the effective times of a Flying Display and has primacy for any ballooning outside these times on the day of an event. FDDs can delegate the supervision, planning, organisation, and subsequent running of balloon activity to a suitable person but the ultimate responsibility for the safe operation lies with the FDD.

3.5 Balloons require a large area to lay out and prepare for inflation. This area can be between the Crowd Line and the display axis. The specific requirements for the setup, lay out, inflation, free flight, tethered flight, and deflation should be discussed with the FDD in advance.

3.6 If aircraft are displaying, wake vortices might be generated which could affect the lay out and inflation of the balloons. Consideration by the FDD and EO must be given to these effects on balloon operation.

Appendix A – General considerations for Balloon Competitions

Introduction:

A1 Across the UK there are several Balloon Competitions each year. These competitions test the skills, precision, and strategy of balloon pilots in a variety of tasks. This guidance in conjunction with the information in previous chapters provides an overview of key safety aspects related to organising, participating in, and attending balloon competitions in the UK.

A2 Hot air balloon competitions involve pilots completing a series of tasks designed to test navigation, accuracy, and control. Tasks may include flying to targets on the ground or points in the air, manoeuvring through certain designated areas or executing specific changes in direction.

A3 Racer or competition balloons usually range from 56,000 to 75,000 cu ft (1600 to 2200 m^3) in volume, which provide manoeuvrability for quick ascents and descents.

Common Competition Formats

- **Hare and Hound:** One balloon (hare) takes off first, and others (hounds) try to follow and land as close as possible to the hare's landing spot or drop a marker as near to it as possible.
- **Judge Declared Goal**: Organisers pick a target, and pilots try to get as close to it as possible.
- **Pilot Declared Goal:** Pilots must choose their own target before launch and aim for it. This could be on the ground or in the air as a 3D task.
- **Hesitation Waltz:** Competitors attempt to drop a marker close to one of several set targets.
- **Fly-In:** Competitors launch from different locations and try to reach a common target.
- **Fly-On**: After reaching a first target, pilots must declare a second target mid-flight and try to reach it. This could also be a 3D task.
- **Distance and Duration:** Tasks testing how far or how long a pilot can fly within set limits.

General Principles:

A4 The BBAC Competitions Club has several policies and documents on their website for the organisation of competitions in the UK which may be of use, most of which follow international competition standards set by the Fédération Aéronautique Internationale Ballooning Commission (CIA) and are reviewed on a yearly basis. These documents are designed to provide a high level of safety in ballooning competitions. In addition, for FAI Documentation, the 'FAI Sporting Code' should be referred to alongside the 'Model Event Rules,' 'Competition Organisers Handbook' and CIA Safety Handbook. Further useful links are published in Appendix C.

A5 These policies and procedures should be followed carefully when organising an event, though additional rules and policies can be set at the discretion of the event organiser.

A6 It is recommended that briefing materials are made available in advance of the event. On each competition day, a structured live briefing is recommended including a task and weather briefing before competition flying starts with the participation of all competitors.

A7 It is especially important for Balloon Competitions that pilots should be aware of manufacturer's published maximum climb and descent rates and not exceed them. Pilots are also advised to consider all potential mitigations against the risk of a Parachute Stall; this topic is discussed in Chapter 2- Balloon Events.

A8 Pilots inexperienced with flying racer balloons should consider availing themselves of familiarisation training where possible, especially where significant differences may exist.

A9 Competition organisers are recommended to appropriately limit the maximum climb rate noted in the event specific rules to reduce the risk of collisions. This is especially important in conditions where windshear may occur, competitors in these conditions are advised to adjust their climb/descent profiles accordingly.

A10 In some competitions when balloons have variable performance or pilot experience is low, it may be advisable to have a lower climb rate limit.

A11 Competition tasks should not be set in such a way that they cause large concentrations of balloons in the proximity of livestock or sensitive areas.

A12 Competition organisers are advised to take note of local airspace when planning suitable tasks and coordinate as necessary with other airspace users. Promulgating a NOTAM may be advisable to provide situational awareness to other airspace users. Further information can be found about submitting a NOTAM in the link list in Appendix C.

Appendix B – General considerations for Event Organisers and Flight Directors

Event Organisers and Flight Directors should complete guidance notes that include:

B1 Contact details for the event organiser and personnel on the day.

B2 Site Location address / post code.

B3 Emergency services access points.

B4 Balloon and crew access points.

B5 Outline of the event programme and site map.

B6 Relevant site and local area contact details.

- Local emergency services information and onsite first aiders, etc.
- Information on local hospitals with A&E Facilities.
- Relevant ATS/Local Airfield Contacts.

B7 Radio channel(s) to be used during take-off / flight.

B8 Check in arrangements (location / hours) and requirements for pilot hours, balloon paperwork and pilot declaration, crew, and vehicle pass.

B9 Rules for the launch field, signals, refuelling, after flight reports (including LRO).

B10 Flight Briefing – standard format detailing what must be included.

- Flight briefing – reminder of key safety points, including any relevant NOTAMS, ATS etc.

B11 Risk Assessment – for site / location / balloons / pilots / crew / spectators.

- Include any special requirements for Competition Club events.

B12 Additionally Event Organisers may wish to compile a Flight Report Form for pilots to complete, comprising the following.

- Pilot name or Balloon Registration,
- Takeoff Time
- Landing Time and Position
- Any Landowner Issues
- Any In-Flight Issues

The form could be made available either electronically (preferable) or in paper format

Appendix C – Useful links and contact details

Name	**Link**
Aeronautical Information Circulars/AIP/Briefing Sheets	NATS UK | AIP Supplements/AICs/Briefing Sheets
Air Navigation Order 2016 (as amended)	The Air Navigation Order 2016
CAA Airspace Regulation- Balloon Events and Activities (NOTAM)	Balloon events and activities | UK Civil Aviation Authority
British Balloon and Airship Club	British Balloon and Airship Club™
Balloon Rulebook	The Balloon Rulebook (UK Reg No. 2018/395)
CAA Flying Displays and Special Events	Flying displays and Special events | UK Civil Aviation Authority
CAP403- Flying Displays and Special Events	CAP 403: Flying Displays and Special Events:
FAI Ballooning Commission (CIA)	Documents | World Air Sports Federation
General Aviation Homepage (CAA)	General aviation | UK Civil Aviation Authority
Health and Safety Executive (Event Safety)	Event Safety
ORS 4 (Miscellaneous)	ORS 4 - Miscellaneous | UK Civil Aviation Authority
ORS 5 (CAA Schemes of charges)	ORS 5 - Schemes of charges | UK Civil Aviation Authority
Standardised European Rules of the Air	Standardised European Rules of the Air | UK Civil Aviation Authority
Events Industry Forum (EIF) Event Safety Guide	The Purple Guide
UK Competition Ballooning	UK Competition Ballooning
CAA Department	**Email Address**
CAA Airspace Regulation (Utilisation)	AROps@caa.co.uk
CAA General Aviation	ga@caa.co.uk