Safety and Airspace Regulation Group

UK Civil Aviation Authority

CAP 1395

Safety Standards Acknowledgement and Consent (SSAC)

Edition 4 January 2023

Published by the Civil Aviation Authority, 2023

Civil Aviation Authority
Aviation House
Beehive Ring Road
Crawley
West Sussex
RH6 0YR

First published March 2015
Second edition March 2016
Third edition January 2021
Fourth edition January 2023

Enquiries regarding the content of this publication should be addressed to: **ga@caa.co.uk**

Contents

Revision history

First edition **March 2015**

First edition published – initial issue.

Second edition **March 2016**

Revisions made where it was considered that the meaning of the text could be clarified.

Third edition **January 2021**

A significant restructuring of the layout which now incorporates SSAC guidance and requirements previously contained in CAP632 "Operation of Permit-to-Fly ex-military aircraft on the UK register".

Various minor amendments throughout the document. Removal and renumbering of various chapters and appendices.

All amendments are usually highlighted by red underlining. As this edition is a comprehensive rewrite, amendments are not shown in the usual manner and the whole document should be read.

Fourth edition **January 2023**

Various amendments throughout the document highlighted by red underline.

Introduction of SSAC Class 5 "Experience flight in an ex-military jet aeroplane" with a new Appendix to cover high-level requirements for operators.

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 1395 please send them to **ga@caa.co.uk** with subject line '**CAP 1395 SSAC Feedback**'.

Terminology and definitions

Throughout this publication the following terms and definitions are used:

Term	Abbreviation	Definition
Air Navigation Order	**ANO**	Air Navigation Order 2016 (as amended).
Airworthiness Approval Notes	**AAN**	An Airworthiness Approval Note is a document that records the basis of the approval upon which a Certificate of Airworthiness or Permit-to-Fly **may** be issued (or reinstated following modification).
Air Operator's Certificate	**AOC**	The Certificate issued to an operator to conduct Commercial Air Transport.
Continued Airworthiness Management Organisation (BCAR Section A, A8-25)	**CAMO (A8-25)**	An organisation having an approval for the management of the continuing airworthiness of non-EASA aircraft with a Certificate of Airworthiness or a Permit-to-Fly.
General Aviation Unit	**GAU**	General Aviation Unit, ga@caa.co.uk. The department within the CAA that deals solely with General Aviation.
Mandatory Permit Directive	**MPD**	Mandatory Permit Directives summarise the mandatory actions that are required to be complied with by UK Owners and Operators of Permit-to-Fly aircraft.
Operator		A person, organisation or enterprise engaged in or offering to engage in the operation of an ex-military aircraft. The Operator will also be the person who at the relevant time has the management of the aircraft as defined in Article 4 of the ANO.
Operating Staff		Any individual involved in the conduct and control of a SSAC operation, including pilots, whether paid or unpaid, fulltime or part-time.
Safety Standards Acknowledgement and Consent	**SSAC**	Allows a person to make an informed decision and pay to participate in a flight experience.
SSAC Operations Manual	**SSAC OM**	Operations Manual containing organisational structure, processes, procedures.

Chapter 1

Introduction

General

1.1 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.

1.2 Throughout this document the following definitions **shall** apply:

- '**Shall**' **/ 'Shall not'** and '**Must**' **/ 'Must not'** are used to indicate a mandatory requirement.
- **'Should'** is used to indicate strong obligation.
- **'May'** is used to indicate discretion.

1.3 The use of 'should' **must** be taken to mean that further action needs to be considered. If the operator's response is deemed by the CAA to be inadequate, a specific requirement **may** be applied as a condition.

Intended use

1.4 Safety Standards Acknowledgement and Consent (SSAC) is used for remunerated flights that are solely for recreational benefit and which could otherwise be conducted if they were private flights but with no money changing hands. It is not intended to provide a cheaper alternative for operators engaged in the transport of passengers or as a means of normalising extreme risk-taking. SSAC is not intended to be a replacement for AOC operations with Certificate of Airworthiness (C of A) aircraft.

1.5 SSAC is a means of setting out, in simple terms, the risks involved in participating in paid recreational flights. Aircraft operators will be able to offer flights to paying participants without having to apply the very high safety standards normally applied to commercial flights provided that:

a) The participants are informed of the key risks involved with participating in the activity.
b) The participants are willing to participate in the activity having been informed of the risks involved.
c) The expected high level of safety to the general public, including other airspace users and those not participating in the activity, is maintained.

Chapter 2

Legal requirements

General

2.1 SSAC flights shall be conducted where the CAA has issued an Exemption under Article 266 of the ANO to the operator.

2.2 SSAC flights are not to be considered Public Transport flights for the purposes of Article 6(2)(b)(i) of the ANO where the only valuable consideration given or promised is for Safety Standards Acknowledgment and Consent operations.

2.3 Such operations will not be deemed as Commercial Air Transport but are a form of Commercial Operation[1].

Safety Management

2.4 The Accountable Manager (see Chapter 5 – Operational Requirements) has overall responsibility for the planning, organisation and wider aspects of safety for the SSAC operations. The Accountable Manager is the person responsible for the safe conduct of the SSAC flight(s) carried out pursuant to the SSAC Exemption issued by the CAA under Article 266 of the ANO. For the avoidance of any doubt, the Accountable Manager must understand that they are responsible for the safety risks posed by the planning and management of SSAC operations. They may be held accountable by the CAA for a failure to comply with the applicable regulations, the conditions of the SSAC Exemption or the requirements set out in this CAP.

2.5 The pilot-in-command of an SSAC flight is responsible for ensuring that they comply with the SSAC Operations Manual, Standardised European Rules of the Air and the ANO, the conditions of their licence(s), the aircraft's Permit to Fly limitations, and the conditions of the SSAC Exemption issued by the CAA. They will be accountable to the CAA for a failure to comply with any of these requirements.

2.6 Any Accountable Manager or pilot that is unsure about their safety responsibilities for the SSAC flight(s) should contact the CAA GA Unit to clarify the position using the email address ga@caa.co.uk.

[1] Commercial Operation as defined in Article 7 of the ANO

SSAC Exemption

2.7 The CAA will grant an SSAC Exemption once it is satisfied that the applicant operator is competent to safely operate the proposed aircraft types for the purposes specified.

2.8 Further information regarding the principles of SSAC can be found in the CAP 1396 “Framework for the evaluation of aviation activities for payment based on Safety Standards and Consent”.

Chapter 3

Types of SSAC operations

Classes of aviation activity

3.1 SSAC operations will be categorised into distinct classes of aviation activity, activities within each category are considered to have very similar levels of risk.

3.2 Established Classes of aviation activity include:

- Class 1: Wing-walking
- Class 2: Experience flight in an historic (single engine piston) warbird
- Class 3: Experience flight in an historic ex-military helicopter
- Class 4: Experience flight in an ex-military multi-engined (piston and turboprop) aeroplane
- Class 5: Experience flight in an ex-military jet aeroplane

Maximum number of participants per class of aviation activity

3.3 The following maximum occupancy limitation (excluding crew) for each aircraft[2] **must** not be exceeded:

- Class 1: One
- Class 2: Two
- Class 3: Six (with upto 3 crew)
- Class 4: Six (with upto 3 crew)
- Class 5: One

[2] The maximum occupancy limitation stated on the aircraft's Permit-to-Fly **must** not be exceeded.

Chapter 4

SSAC applications

Applications for SSAC

4.1 Before the CAA issues an exemption for operations of aircraft that fall within the scope of this publication, it **must** be satisfied that the operational procedures, personnel, maintenance and airworthiness management provisions are sufficient to provide the operation with the required level of safety.

Initial SSAC applications

4.2 Initial applications **must** be submitted on form SRG1323 to ga@caa.co.uk.

4.3 When the application, SSAC Operations Manual, Safety Management System and any supporting documentation has been received with the appropriate fee paid, the CAA will review and assess the application. When deemed acceptable by the CAA, an SSAC Exemption will be issued to allow SSAC flights, subject to any conditions the CAA deems appropriate.

SSAC Operations Manual

4.4 The SSAC Operations Manual **shall** contain all such information, procedures and instructions as **may** be necessary to enable the operating personnel and pilots to perform their duties in a safe manner.

4.5 The SSAC Operations Manual **must** cover the content and format outlined in Appendix A although operators **may** choose a different document structure.

4.6 The CAA will conduct an initial on-site audit as part of the application process.

Operators of CAP632 aircraft

4.7 The SSAC Operations Manual **must** also include the operational, maintenance and continuing airworthiness requirements in CAP 632 “Operation of Permit-to-Fly Ex-Military aircraft on the UK register”.

4.8 Operators who conduct non-SSAC flights and/or operators with more than one aircraft **may** choose to operate with two separate manuals (an SSAC Operations Manual and an existing OCM). Alternatively, operators **may** decide to produce a combined operations manual to cover both CAP632 and SSAC operations. Operators **should** keep a record of the type of each flight - either SSAC or non-SSAC.

Operations Manual Revisions

4.9 Applications for revisions to an Operations Manual **must** be submitted to ga@caa.co.uk. When an SSAC Operations Manual revision has been received, reviewed and deemed acceptable by the CAA, an updated SSAC Exemption will be issued. Only once the updated SSAC Exemption has been issued can those amendments take effect.

Operations Manual Notice of Proposed Amendments (NPA)

4.10 When temporary amendments are made to the operations manual but the manual has not been revised as a whole or in part, operators **may** submit and publish a Notice of Proposed Amendment (NPA) to the CAA. The operator is not to incorporate the proposed amendment until the CAA has reviewed the NPA and emailed an acknowledgement. The operator **must** also ensure the following:

a) The NPA's are consistent and compatible in form and content,
b) All personnel **shall be** made aware of the temporary changes,
c) A copy of each NPA **must** be kept in the front of the Operations Manual until incorporated into the next revision of the Operations Manual,
d) All NPA's are tracked by the operator and incorporated into the Operations Manual within 90 Days or cancelled.

4.11 When immediate amendments or revisions in the interest of safety are deemed necessary by the operator, they **may** be published and applied immediately by the operator, provided the CAA have been notified of the urgent safety nature.

Validity

4.12 SSAC Exemptions are normally issued for a maximum period of 12 months.

SSAC Renewal applications

4.13 Renewal applications **must** be submitted on form SRG1323 to ga@caa.co.uk.

4.14 Renewal applications received within 3 months of the existing SSAC Exemption expiry date will be granted for a further 12 months period from the existing expiry date.

4.15 Where the CAA refuses to grant, amend or renew an exemption the operator will be informed of the reasons for the decision and of the process for seeking a review.

Charges

4.16 A charge is payable on initial and renewal applications for an SSAC Exemption. Refer to CAA Scheme of Charges under General Aviation.

Chapter 5

Operational requirements

General

5.1 The operator **shall** submit to the CAA an SSAC Operations Manual when sending an application for SSAC initial, amendment or renewal and **shall** make such amendments or additions to such manual as the CAA **may** require.

5.2 The operator **shall** conduct all operations in accordance with the SSAC Operations Manual once the SSAC Exemption has been issued.

Organisational structure

5.3 The operator **must** have an accountable manager, acceptable to the CAA, who is responsible for the management and supervision of the operation. Applications for the nomination of accountable managers **should** be supported by completing the form SRG1705 "Form 4 - Details of nominated Personnel".

5.4 The following post holders **must** be nominated within the SSAC Operations Manual. The roles and responsibilities **should** be defined by the operator taking into account the size and scope of the operation:

Nominated Role	Description
Accountable Manager	An appointed person who has the authority and responsibility for ensuring there is adequate support and financial backing to safely operate the intended aircraft and carried out in accordance with the applicable requirements including a direct safety accountability.
Chief Pilot	The nominated person should hold a valid commercial flight crew licence and the associated ratings appropriate to the type operated and is responsible for air operations and the supporting ground operations. Responsible to the Accountable Manager.
Safety Manager	The Safety Manager is responsible for monitoring the performance and effectiveness of the Safety Management System to ensure that the hazard identification, risk assessment and mitigation process is being implemented effectively. Responsible to the Accountable Manager.
Continuing Airworthiness Coordinator	This person is responsible for fulfilling obligations of the Continuing Airworthiness Arrangement between the operator and the approved CAMO (A8-25). Responsible to the Accountable Manager.
Head of Training	The nominated person should be a current instructor on a type/class operated. The nominated person should have a thorough knowledge of the operator's crew training requirements and procedures. The Head of Training is responsible for all crew training. Responsible to the Chief Pilot or Accountable Manager.
Ground Operations Manager	Monitors the day-to-day ground operations in accordance with the SSAC Operations Manual. Responsible to the Accountable Manager.

SSAC Operations Manual

5.5 The Accountable Manager **must** ensure that the SSAC Operations Manual is available to those persons carrying out SSAC duties. The Accountable Manager **must** ensure that the SSAC Operations Manual contains all such information and instructions as **may** be necessary to enable such employees or persons to perform their duties in a safe manner.

5.6 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.

Operational requirements

5.7 Any SSAC flight **must** be only be conducted to and from the same airfield as identified in the SSAC Exemption.

Run and Break[3] arrivals for SSAC flights

5.8 Run and break arrivals for SSAC flights **should not** be flown at civilian airfields.

5.9 SSAC flights **must** conform with the pattern of traffic formed by other aircraft in operation unless a specific operational requirement exists to conduct a run and break arrival. Where a specific operational requirement exists, run and break arrivals for SSAC flights **must** not increase the risk to other airspace users. Operators **must** conduct a risk assessment and operational procedures that **must** be included in the SSAC Operations Manual. The airfield management and Air Traffic Control manager (not A/G or AFISO) **must** both give written agreement and pre-authorise each run and break arrival.

Enhancing awareness of impact resistant headgear in Class 2, 4 and 5 SSAC aircraft

5.10 After some accidents to ex-military high-performance aircraft, references have been made to the participant's use of Impact Resistant Headgear. These references suggest that participants in SSAC Class 2 and Class 5 flights **should** wear suitable impact resistant headgear when flying in such aircraft.

5.11 It is appreciated that different marques and different modification standards affect the headroom clearance of the participant's cockpit, so in some cases, it will be impossible for the participant to wear some types of rigid helmet. In this case, the operator **must** conduct a risk assessment[4] to determine the most appropriate type of impact resistant headgear to reduce the risk of head injury.

[3] Run and break arrivals are an established procedure for military aircraft to join the circuit usually at military airfields.

[4] Refer to Chapter 7 for the risk assessments.

5.12 Any risks identified by the operator **should** be included in the operator's hazard log. The operator's mitigation **should** be included to reduce the risk to as low as reasonably practicable (ALARP). This **may** include an assessment of the likely head impact area to potentially reduce sharp edges etc.

5.13 The operator **should** also review the brace position to be adopted by the participant in the event of a rapid deceleration.

5.14 As this risk directly affects the survivability of the participant, the operator **must** provide quantifiable information for the type of headgear provided in the "Participant Information Pack" so that the participants can make an informed decision.

5.15 For SSAC Class 5, where a live ejection seat is used, a correctly fitted helmet with visor suitable for ejection **must** be used. The headgear **must** be periodically checked/serviced to ensure continuing serviceability.

SSAC briefing areas

5.16 SSAC participants **must** be given a briefing prior to each SSAC flight[5]. The briefing **must** be conducted in a dedicated area within the operator's facility. This area **must** be a quiet area with restricted access to allow the briefings to take place without distraction.

Electronic Conspicuity

5.17 'See and avoid' is the foundation for Visual Flight Rules flying in the UK. Electronic Conspucity (EC) devices can improve situational awareness for pilots but do not replace the fundamental role of 'see and avoid'. Pilots using EC devices **should** be aware of their functionality and what they can, and cannot, do. Devices are not always interoperable with each other. This means that users of one type of device **may** or **may not** be electronically visible to each other, **may** have different standards of reliability and accuracy, and **may** use different parts of the radio spectrum for transmitting signals. Operators **should** consider the use of EC devices.

Carriage of Non Able Bodied Person(s)

5.18 Although the majority of participants will be classed as able bodied persons, there **may** be circumstances that non able bodied person(s) wishes to experience SSAC flying. The CAA want to be inclusive to people who have a disability, provided the operator can fulfil the criteria outlined below:

a) The operator **must** complete a Risk Assesment for the specific flight to assess any additional risk(s);

[5] Refer to Chapter 7 for details of participant briefings.

b) The participant understands any additional risks identified in addition to those of a standard SSAC flight and declares whether or not they accept that they **may not** be able to exit the aircraft in the event of an abandonment;

c) The participant **must not** be a hinderance to the controls of the aircraft; (does not interfere with the controls/rudder pedals);

d) The final decision on fitness to fly **must** always rest with the pilot in command, who **must** be under no pressure to a accept an unsafe participant.

5.19 Operators **should** recognise that the widely varying needs of people with hidden disabilities require them to offer a different type of assistance to that usually offered to people with a visible disability.

Operating Bases

5.20 The operator **shall** arrange operational support facilities at the main operating base and any remote operating base(s), appropriate for the area and type of operation.

5.21 The operator **shall** ensure that the available working space at each operating base is sufficient for personnel whose actions **may** affect the safety of flight operations. Consideration **shall** be given to the needs of ground crew, personnel concerned with operational control, the storage and display of essential records, crew rest, flight planning by crews and participant briefing and holding.

5.22 All SSAC flight are only approved to be undertaken at those aerodromes listed within the Operations Specification. Whilst the majority of SSAC activity takes place at licensed aerodromes, there are a number of unlicensed airfields at which some commercial operations take place.

5.23 When an unlicenced aerodrome is being used by an SSAC operator, a risk assessment **must** be carried out to ensure the performance characteristics of their aircraft are suitable, and that the aerodrome characteristics, dimensions and operating practices provide a safe operational environment. Operators **must** satisfy themselves and the CAA that the aerodrome is safe for that purpose.

5.24 Such documented risk assessments **may** be necessary to prove to the CAA and other authorities in the event of an accident or incident that the operator has had sufficient grounds to be satisfied that the aerodrome is safe for SSAC flying.

Rescue and Firefighting Service (RFFS)

5.25 Rescue and Firefighting Service (RFFS) **shall** be made available for the duration of each SSAC flight. The emergency procedures at an aerodrome will depend upon the amount of flying and types of aircraft expected to use the aerodrome. The level of RFFS protection available at an aerodrome is normally expressed in

terms of the category of the rescue and firefighting services as described within CAP168 and the types and amounts of extinguishing agents normally available at the aerodrome.

5.26 In the event of an aircraft accident or an incident on the aerodrome that involves anything other than very minor injuries, the most important action is to immediately alert the appropriate emergency services. A first aid kit (for very minor injuries) **should** be obtained and placed in a prominent position where it can be accessed easily when SSAC flights are operating.

5.27 The minimum RFFS category for all SSAC flights is category 1 cover, however some SSAC aircraft **may** require a higher RFFS category.

5.28 Operators of flights at unlicensed aerodromes **must** achieve a level of the equivalent suitable required RFFS cover. In order to determine the the equivalent cover, CAP168 Appendix 8B **should** be used.

5.29 Local RFFS **should** also be familiar with the aircraft being operated. Operators **should** hold regular briefings with the airfield and RFFS to ensure they are familiar with the safety features of the aircraft being operated. This becomes critically important when RFFS members are expected to perform their duties around live ejection seats. The operator **must** provide appropriate information (and training as required) to the airfield or RFFS team performing these duties.

Safety Management System

5.30 The use of a Safety Management System (SMS) is mandatory for SSAC operators. It is therefore recommended that they refer to CAP 795 “SMS Guidance for Organisations” and CAP 1059 “SMS Guidance for small, non-complex organisations” to fulfil this requirement. Further guidance is also available at www.caa.co.uk/sms.

5.31 Operators **must** conduct a risk assessment to determine the suitability for each airfield where SSAC flights are to be conducted. The risk assessment **must** be reviewed on an annual basis and when significant changes take place.

Emergency Response Plan checklist

5.32 As part of the Safety Management System the operator **must** have an Emergency Response Plan. The list of actions in the event of an accident or incident **should** be available to relevant ground staff. A checklist format is recommended, and staff **should** be trained accordingly.

Records to be kept

5.33 To facilitate monitoring during CAA audits as referenced in Chapter 9, 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. Records **may** be kept in electronic format.

Insurance

5.34 The operator **must** ensure that insurance cover meets the regulatory requirements contained within Articles 6 & 7 of Regulation (EC) No. 785/2004 (as amended).

5.35 The operator **should** include information regarding the level of insurance cover for the participant provided by the operator prior to the flight. A participant **may** wish to obtain additional cover from their own provider prior to participating in an SSAC flight.

Safety reporting

5.36 Operators **must** comply with the Mandatory Occurrence Reporting requirements set out in CAP382 "Occurrence Reporting Scheme" for any SSAC flight.

Utilising aircraft not on an operators OCM

5.37 Aircraft operating under CAP632 are only permitted to be listed on a single CAA OCM approval. However, Aircraft operating under CAP1395 can be listed on different operators SSAC approvals.

5.38 To enable aircraft to transfer from an operators OCM to another operators OCM or Operations Manual, and transfer from one operator (lessor) to another (lessee) lease agreements **must** be in effect which allow the aircraft to be incorporated into the Lessee's Operations Manual to operate under the SSAC Approval. These lease agreements **must** be managed by an appropriate nominated person.

5.39 The lease agreements **must** include delivery and redelivery receipts and signed by both parties. The lease agreement **shall** as a minimum include the following:

a) Obligations of the Lessor
b) Obligations of the Lessee
c) Deliver and Redelivery process
d) Maintenance and continuing airworthiness management
e) Liability and Insurance
f) Inclusion of safety equipment
g) Inclusion of aircraft documents

Provision of Training

5.40 All the training required **shall** be conducted in accordance with the training programmes and syllabi established by the operator in the operations manual. The training **shall** be conducted by appropriately qualified personnel.

5.41 All flight crew **shall** complete the operator conversion training course before commencing unsupervised SSAC flying. The amount of training required by the flight crew member **shall** be determined in accordance with the standards of

qualification and experience specified in the operations manual, taking into account his/her previous training and experience.

5.42 Flight and ground crew members **shall** complete annual recurrent flight and ground training relevant to the type or variant of aircraft on which he/she operates. Each flight and ground crew member **shall** be periodically (maximum every 12 months) checked to demonstrate competence in out their role. Elements of Crew Resource Management (CRM) **shall** be integrated into all appropriate phases of the recurrent training.

Chapter 6

Airworthiness requirements

General

6.1 The operator **must** be approved as a CAMO (A8-25) or have a contract[6] (Continuing Airworthiness Arrangement) with such an Approved Organisation. It is the operator's responsibility to ensure any contracted organisation has the required scope of approval to manage the aircraft types in the SSAC Operations Manual.

6.2 Operators **must** consider any airworthiness risks applicable to the particular activity. These risks **should** be evaluated by the operator and the CAMO (A8-25).

6.3 An aircraft survey **may** be required. The survey might include assessing aircraft adaptations and provisions for occupants that might be necessary to mitigate certain risks associated with SSAC operations. These **may** include cladding of vertical posts if protective helmets are not worn, provision of appropriate seating and occupant restraint and, for intermediate category aircraft, the placing of one crew member in the cabin where participants are seated.

Certificate of Airworthiness aircraft

6.4 Where an aircraft has a Certificate of Airworthiness, any flights carrying fare paying passengers **must** be conducted under an AOC and not SSAC. An exception to this requirement is Wingwalking (SSAC Class 1). These flights can be conducted using a Certificate of Airworthiness aircraft when fitted with an approved wing-riding rig.

6.5 Aircraft types that could qualify for either a Certificate of Airworthiness or a Permit-to-Fly, e.g. de Havilland (DH.82) Tiger Moth, North American T6 Harvard or Consolidated PBY-5A, **must** possess a Certificate of Airworthiness and be operated under an AOC if passengers are to be carried for remuneration; these aircraft are therefore outside the scope of SSAC.

Permit-to-Fly aircraft

6.6 Operators **must** address the following points and submit this information as an attachment with the application form SRG1323 for initial applications only:

a) The anticipated utilisation of the aircraft in the SSAC role as compared with current utilisation. This includes assessment of the proposed

[6] BCAR A8-25 Supplement 1 Continuing Airworthiness Arrangement can be used as a contract template

changes in operation such as increased circuit flying, shorter flights, more aerobatic flying etc.

b) Proposed changes to the maintenance programme as a result of the change in usage for the aircraft based on the previous point above. This **may** involve changes to inspection/check intervals, routine maintenance intervals and health monitoring methods along with changes to the handling of defect reports.

c) Results of a review of the modification and repair standards for the aircraft concerned, and the suitability of those standards for the intended SSAC role. Modifications fitted on a trial basis **should not** be considered for SSAC usage. SSAC flights **must** not be conducted on an aircraft where the Permit-to-Fly has been issued on a temporary basis.

d) Results of a review of all applicable airworthiness directives, where the aircraft type has (or is of) a civil derivative, or MPDs for the aircraft to determine whether revisions to the methods of compliance or inspection intervals are justified, or any currently accepted alternative means of compliance remain applicable for SSAC operation.

e) Proposed revisions to aircraft placarding. This could include placards to identify the means to operate emergency exits.

f) Any further airworthiness guidance for SSAC as set out in CAP 1640 "Ex-Military Aircraft: Design, restoration and continuing airworthiness approval", particularly for intermediate aircraft types.

Maximum aircraft occupancy

6.7 Maximum aircraft occupancy levels are already specified for Certificate of Airworthiness and Permit-to-Fly aircraft.

6.8 Any proposal to increase the maximum occupancy specified on a Permit-to-Fly aircraft will require a major modification. The operator **must** make a separate application for approval of the modification by the CAA, with support from an appropriately approved design organisation.

Airworthiness recommendation

6.9 Final acceptance of the airworthiness case by the CAA under the current Certificate of Airworthiness[7] or Permit-to-Fly along with any additional limitations, will be indicated by a letter to the approved person or organisation in support of the application.

[7] Only applicable to Wingwalking (SSAC Class 1) flights that can be conducted using a Certificate of Airworthiness aircraft when fitted with an approved wing-riding rig

Aircraft technical log

6.10 The operator **must** record flights in an aircraft technical log. The aircraft technical log **must be** agreed with the aircraft's CAMO (A8-25). The use of electronic formats **may** be agreed with the CAA.

6.11 The aircraft technical log **must** have instructions for completion either in the technical log or the SSAC Operations Manual.

6.12 Pilots **must** be able to easily determine the operational status of the aircraft prior to each flight or series of flights.

Continuing airworthiness coordinator

6.13 The operator **must** ensure that the obligations of the operator as defined in the CAMO (A8-25) contract are fulfilled.

6.14 The continuing airworthiness coordinator is responsible for the transfer of operational data to the contracted CAMO (A8-25) in accordance with Continuing Airworthiness Arrangement. The frequency and content of this transfer **should** be agreed and stated in the SSAC Operations Manual.

Chapter 7

Risk analysis and participant consent

General requirements

7.1 Operators applying to conduct flights under SSAC principles will be required to show that they have analysed the risks to participants and third parties, established the likelihood and severity of them occurring and set out how these risks will be explained to participants.

7.2 Operators **must** conduct a risk assessment for the SSAC flights to identify the risks to participants and third parties. After conducting the risk assessment, the operator **must** apply any resultant mitigations and **may** decide to use enhanced operational procedures to further mitigate the identified risks associated with the activity, such as the selection of operating area(s).

7.3 Certain activities such as commercial air transport involve higher expectations of safety outcomes because they have become integrated into the pursuit of everyday economic or social activity. However, activities of an adventurous nature, such as SSAC flights, **may** justify a higher acceptance of personal risk by the participant as the purpose of the activity is primarily for their recreational value.

7.4 For the avoidance of any doubt, the operator **must** understand that they are responsible for the safety risks posed by the SSAC flights. The operator is responsible for the safe conduct of the flying activity carried out pursuant to the SSAC Exemption issued by the CAA. The operator **may** be held accountable by the CAA for a failure to comply with the applicable regulations, the conditions of the SSAC Exemption or the requirements set out in this CAP.

7.5 Pilots conducting SSAC flights are responsible for ensuring that they comply with the Rules of the Air Regulations and the ANO, the conditions of their licence(s), and the SSAC Operations Manual. They **may** be held accountable by the CAA and/or the operator for a failure to comply with any of the applicable regulations or conditions.

7.6 Any operator or pilot that is unsure about their safety responsibilities for conducting an SSAC flight **should** contact the CAA GA Unit to clarify the position.

Risk analysis

7.7 To enable a full understanding of the risks and the implementation of appropriate mitigations, attention **should** be paid to hazards that expose other airspace

users, third parties on the ground and the paying participants to greater risks than would be the case if the aircraft were being operated under an AOC.

7.8 Having established the hazards, operators **must** then assess the associated risks in terms of likelihood and severity. The tables and risk matrix[8] in CAP1396 Section 3 or CAP795 "SMS: Guidance to organisations" or CAP1059 "SMS: Guidance for small, non-complex organisations" **should** be used[9] in the analysis and the SSAC Operations Manual **must** include the rationale behind the choice.

7.9 Once the risks have been assessed in terms of likelihood and severity, mitigating actions necessary to reduce the risk to As Low As Reasonably Practicable (ALARP) can be decided upon. Implemented mitigation measures **should** reduce the likelihood of the risk occurring and / or reduce the severity of the outcome if it does.

7.10 Human Factors issues **should** be considered alongside the risk analysis, acknowledging that these **may** not fit neatly into the likelihood / severity matrix. Human Factors for all involved in the activity **should** be considered, including pilots, maintenance staff, participants and observers. For further details refer to CAP 719 "Fundamental Human Factor Concepts" and CAP 715 "An Introduction to Aircraft Maintenance Engineering Human Participant risk and consent".

7.11 Having identified the hazards and established the risks to participants, the participants **must** be informed of the consequences of those risks. It **must be** explained to participants that the operation does not meet AOC safety standards and that the activity could result in serious injury or death.

7.12 Operators **must** show that in explaining the risk to participants they have considered a reasonable person's expectation for safety and calculated the additional risk they will be exposed to, compared to the same flight or a similar operation conducted under an AOC.

7.13 Participants **must** be given sufficient opportunity to consider their decision in a relaxed and unpressurised environment. Participants **must not** be financially committed in any way before making the decision, for example, they **must not** stand to lose a deposit or down payment if they decide not to fly. The decision to participate **should** be made ideally before the participant is about to board the aircraft.

7.14 Participants **must** give their written confirmation that they have had the risks explained to them and are willing to accept those risks and take part in the flight. Operators **must** have a process for retaining written permissions that also show

[8] The tables used here are based on risk assessment criteria as set out in the ICAO Safety Management Manual (www.icao.int).

[9] Operators **may** use other formats appropriate to the size and scope of their operation

that participants gave their consent freely and without any undue pressure to participate. Operators **should** retain these records either in paper format or as scanned electronic records.

Methods of delivering the risk information

7.15 Operators **must** demonstrate that they have developed a clear method of informing participants in a commonly understood format. Operators **should** consider using practical examples and comparisons that enable most people to relate the consequences of those risks to something with which they are familiar.

7.16 The content and method of delivery of this information to participants **must** be consistent. Methods to be used might include:

a) Information pamphlets
b) Audio briefings
c) Video briefings
d) Visual briefings in person by the operator

7.17 The amount of information provided and the level of engagement with the participant **must** be directly proportionate to the risk involved in the activity. Higher levels of risk will necessitate greater engagement between the operator and the participant.

Participant information packs

7.18 Each operator **must** develop a Participant Information Pack which includes all the risk information delivered to the participants. This could include information given at point of sale, prior to arrival at the airfield, and information given to the participant on the day as set out above.

7.19 The participant declaration form **should** be included as part of this pack. Applicant operators **must** submit the Participant Information Pack with their SSAC application.

Minimum age of participants

7.20 The minimum age is 18 years old.

Monitoring and improvement

7.21 Risk assessments **should** be reviewed regularly (at least quarterly or when a significant change to operations is made) by the operator to ensure that there have been no significant changes and the hazards and risks have not changed. Consideration **should** be given to investigating whether improvements can still be made or whether further control measures have become available, there **may** be lessons learnt from incidents or near misses for example. Risk assessments **should** be kept up-to-date and details of reviews recorded by the operator.

Chapter 8

Licensing requirements for SSAC flights

General

8.1 Following a consultation with industry in early 2019, the minimum licensing requirements were established. The table below sets out the minimum licensing requirements.

8.2 The Chief Pilot **must** hold a CPL or ATPL.

8.3 The privileges of a PPL do not allow the pilot to act as pilot in command on commercial operations and/or receive payment for their services.

8.4 The SSAC Operations Manual **must** detail requirements for pilot's licence, minimum experience, competency and recency requirements for each aircraft type.

8.5 The Chief Pilot **should** consider the general level of overall experience of a pilot given the broad spectrum of backgrounds, whilst considering the complexity of the type operated.

Table for minimum licensing requirements (Class of Aviation Activity):

Class of Aviation Activity	Licence Requirements prior to 1 April 2019	Current Licence Requirements[10] (After 1 April 2019)	Current Medical Requirements (After 1 April 2019)	Minimum Flight Time on Type (hours)[11]
Class 1: Wingwalking	**CPL or ATPL with a Wingwalking DA** Transitional Arrangements prior to 1 April 2019: PPL with Wingwalking DA and Chief Pilot (CPL or ATPL) oversight (see Para 8.3 & 8.4 above).	**CPL or ATPL with a Wingwalking DA[12].**	Class Two	5
Class 2: Experience flight in an historic (single engine piston) warbird	**CPL or ATPL** Transitional Arrangements prior to 1 April 2019: PPL with previous Military experience and qualification on appropriate types agreed on case by case basis. Retired / lapsed CPL or ATPL	**CPL or ATPL**	Class Two	5
Class 3: Experience flight in an historic ex-military helicopter	**CPL or ATPL** Single pilot aircraft operating with two pilots: A two-crew operation **may** consist of CPL or ATPL (as PIC) and a PPL pilot provided both pilots hold a valid type rating, type rating exemption or class rating for the aircraft.	**CPL or ATPL** Single pilot aircraft operating with two pilots: A two-crew operation **may** consist of CPL or ATPL (as PIC) and a PPL pilot provided both pilots hold a valid type rating, type rating exemption or class rating for the aircraft.	Class Two	5
Class 4: Experience flight in an Ex-military Multi-Engined (piston and turboprop) aeroplanes	**n/a**	**CPL or ATPL** Single pilot aircraft operating with two pilots: A two-crew operation **may** consist of CPL or ATPL (as PIC) and a PPL pilot provided both pilots hold a valid type rating, type rating exemption or class rating for the aircraft.	Class Two	5
Class 5: Experience flight in an Ex-military Jet aeroplane		**CPL or ATPL**	Class One (unrestricted) (or in consultation with CAA Aeromedical).	10

[10] Existing SSAC pilots (prior to 1 April 2019) are grandfathered (see Para 8.3 & 8.4 above). No new pilots will be allowed unless they meet the new requirements.

[11] Minimum hours on first type of aircraft then at the Chief Pilot's discretion if a second type within the same class is utilisied.

[12] A current Wingwalking DA is required, except the chief pilot **may** propose to the CAA, on a case-by-case basis, a pilot who has previously held a Wingwalking DA with considerable wingwalking experience.

Chapter 9

CAA oversight

General

9.1 SSAC operations are subject to regulatory oversight by the CAA and will follow the same format as detailed in CAP632 "Operation of Permit-to-Fly ex-military aircraft on the UK register".

9.2 Audits will be scheduled using performance-based regulation, and intervals between audits **may** vary, typically between 12 – 24 months. Audits are normally agreed with the operator at a mutually acceptable date and time and the CAA **should** give sufficient notice for an inspection audit, however the CAA retains the right to visit at any time without prior notice.

9.3 The audit **may** be conducted at either the main operating base or one of the remote operating base(s) (if applicable).

9.4 For the purpose of determining compliance with the relevant requirements within this CAP, the operator **shall** grant access at any time to any facility, aircraft, document, records, data, procedures or any other material relevant to its activity whether it is contracted or not, to any person authorised by the Civil Aviation Authority.

9.5 Access to the aircraft **shall**, include the possibility to enter and remain in the aircraft during flight operations unless otherwise decided by the commander for the flight crew compartment in the interest of safety.

Scope of the audit

9.6 In addition to the CAP632 audit scope, the audit will cover organisation management systems, SSAC operations manual and SSAC processes.

9.7 A check or proving flight **may** be undertaken by the CAA as part of the audit oversight programme.

9.8 Operators will be required to address any audit findings to rectify non-conformance(s) and to take actions to control any future repetition. Failure to take satisfactory action **shall** ultimately lead to the provisional suspension of the SSAC Exemption.

Procedure for suspension or revocation of an SSAC Exemption

9.9 Where a major or dangerous non-compliance (Level 1) with the SSAC Operations Manual is found during an audit, or where a significant breach of the SSAC Exemption is identified, the exemption **may** be provisionally suspended or

revoked by the CAA. This **shall** result in operations being stopped with immediate effect.

9.10 The SSAC operator will be sent a letter by the CAA outlining the reasons for this action. The letter will also contain details of any remedial action required by the operator and details of the CAA's internal review process.

9.11 In most circumstances, the SSAC operator concerned will be given the opportunity to rectify any deficiencies within an agreed timescale. The CAA **may** reinstate the SSAC Exemption once the deficiencies have satisfactorily been rectified.

9.12 If an operator ceases SSAC operations, or if the SSAC Exemption is provisionally suspended or revoked, the operator will be removed from the CAA's centrally held list of approved SSAC operators.

APPENDIX A

Guidance on compilation of an SSAC Operations Manual

Purpose

A1 The purpose of an SSAC 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 The content of the SSAC OM **shall** reflect the size and complexity of the organisation and the type(s) operated. In general terms, the more complex and demanding the aircraft, the more detail that will be required in the SSAC OM.

A3 Completion of the checklist below will assist in identifying any areas of omission or areas that require expansion. The latest changes in both CAP1395 and CAP 632 (highlighted or underlined) **should** be specifically reviewed for applicability and the changes incorporated into the SSAC OM accordingly.

SSAC Operations Manual contents

A4 Although the layout of operations manuals **may** differ from operator to operator, the operator **shall** ensure that the SSAC Operations Manual contains as a minimum the following aspects:

SSAC Operations Manual Requirement	Operators OM Reference
PART A	
0.1 Introduction a) A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable SSAC Exemption, Permission, Approval or Certificate. b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel. c) A list and brief description of the various parts, their contents, applicability and use d) Explanations and definitions of terms and words needed for the use of the manual.	
0.2 System of amendment and revision a) Details of the person(s) responsible for the issuance and insertion of amendments and revisions. b) A record of amendments and revisions with insertion dates and effective dates. c) Immediate amendment or revision in the interest of safety. d) A description of the system for the annotation of pages and their effective dates. e) A list of effective pages. f) Annotation of changes (on text pages and, on charts and diagrams) g) Procedure for temporary revisions (e.g. NPA 2022-01) h) A description of the distribution system for the manuals, amendments, and revisions. Including procedures on how management will ensure all operational personnel have read and understood the manual and any revisions or amendments.	
1.0 Organisation and Responsibilities a) A description of the organisational structure including the general company organogram, subordination and reporting lines of all. b) Nominated postholders. The name of each nominated postholder to include the Accountable Manager, Chief Pilot, Head of Training, Ground Operations Manager, Safety Manager, and Continuing Airworthiness Coordinator. c) Responsibilities and duties of operations management personnel. A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations. d) Flight crew: A statement defining the authority, duties and responsibilities of the pilot in command and other required flight crew	

e) Ground crew: A statement defining the authority, duties and responsibilities of the ground crew and other required crew	
2.0 Operational Control and Supervision a) Supervision of the operation by the operator. This **must** show how the safety of flight operations and the qualifications of personnel are supervised. The procedures related to the following items **must** be described: i. Licence and qualification validity; ii. Competence of operations personnel; and iii. Control, analysis and storage of records, flight documents, additional information and data. b) System of promulgation of additional operational instructions and information. A description of any system for promulgating information which **may** be of an operational nature but is supplementary to that in the SSAC Operations Manual. The applicability of this information and the responsibilities for its promulgation **must** be included. c) Accident prevention and flight safety programme. A description of the main aspects of the flight safety programme. d) Powers of the Civil Aviation Authority. A description of the powers of the Authority and guidance to staff on how to facilitate inspections by Authority personnel.	
3.0 Safety Management System a) A description of the management system, including at least the following: i. Safety policy – Management commitment and responsibilities ii. Safety accountabilities of managers iii. Appointment of key safety personnel iv. SMS implementation plan b) A description of, and procedures for the safety risk management: i. Identifying safety hazards and maintenance of the Hazard Log ii. Risk Assessment and mitigations iii. Internal safety and MOR reporting c) A description of, and procedures for safety assurance: i. Safety performance monitoring and measurement ii. The management of change iii. Continuous improvement of the SMS iv. Safety Review Boards / committee d) A description of, and procedures for Safety promotion: i. Training and education ii. Safety communication e) A description of the Compliance Monitoring System adopted including at least: i. Responsibilities ii. Internal Audit Procedure iii. Compliance monitoring programme iv. Compliance inspections and audits v. Reporting system and processing of reports f) Coordination of emergency response planning and production of the emergency response plan. Checklist format recommended for the emergency response plan key actions.	
4.0 Qualification Requirements a) A description of the following: i. required licence ii. rating(s) iii. qualification/competency iv. experience v. training, checking vi. recency for flight crew to conduct their duties b) Procedures to gain & renew ATRE(s) (if applicable)	
5.0 Crew Composition a) Crew composition. An explanation of the method for determining crew compositions, taking account of the following: i. The type of aircraft being used; ii. The area and type of operation being undertaken; iii. The phase of the flight; iv. The minimum crew requirement v. Experience requirement (total and on type), vi. Recency requirements and qualification of the crew members; vii. The designation of the pilot-in-command if more than single crew viii. The designation of other flight crew b) Flight crew incapacitation. Instruction on the succession of command in the event of flight crew incapacitation.	

6.0 Crew health precautions a) The relevant regulations and guidance to crew members concerning health including: i. Alcohol and other intoxicating liquor ii. Narcotics iii. Drugs iv. Sleeping tablets v. Pharmaceutical preparations vi. Immunisation vii. Deep diving viii. Blood donation ix. Sleep and rest x. Surgical operations	
7.0 Flight Time Limitations a) Flight and duty time limitations and rest requirements. b) Exceedance of flight and duty time limitations and/or reductions of rest periods. Conditions under which flight and duty time **may** be exceeded or rest periods **may** be reduced, and the procedures used to report these modifications. c) A description of the fatigue risk management philosophy and principles.	
8.0 Operating Procedures a) Procedures for the following: i. Flight preparation instructions. ii. Minimum flight altitudes. A description of the method of determination and application of minimum altitudes. iii. Criteria and responsibilities for the authorisation of the use of airfields. iv. Instructions for route selection with respect to the availability of surfaces which allow a safe forced landing. v. Determination of the quantities of fuel and oil carried including required minimum quantities. vi. Mass and centre of gravity. Methods, procedures and responsibilities for preparation and acceptance of mass and centre of gravity calculations. vii. Completion of aircraft technical log. The responsibilities and the use of the aircraft technical log viii. Recording of 250 KIAS exceedances below FL 100 ix. Procedures aimed at achieving safety whilst the aircraft is on the ramp x. Aircraft performance. Methods, procedures and responsibilities for preparation and acceptance of performance calculations. b) Procedures to ensure that persons who appear to be intoxicated or who are under the influence of drugs are refused embarkation. c) Procedures to ensure that participants who due to their physical or mental condition **may** present a hazard to the safety of the flight or to themselves are refused embarkation. d) Procedures and responsibilities for the preparation and submission of the ATS flight plan or PPR (if applicable). e) Adverse and potentially hazardous atmospheric conditions. Procedures for operating in, and/or avoiding adverse and potentially hazardous atmospheric conditions. f) Method of briefing participants advising them of the risks associated with the proposed activity. g) Procedure for participants consenting to that risk and recording of acceptance of the risk. h) Procedure to ensure all participants have undergone all relevant briefings, training and completion of all documentation including consent and Next of Kin (NOK) actions. i) Briefings regarding the use of safety equipment, normal and non-normal procedures associated with the intended activity. j) A description of fuelling procedures, including safety precautions during refuelling and defueling, including refuelling when participants are embarking, on board or disembarking. k) Procedures and responsibilities for leasing aircraft to and from other operators.	
9.0 Flight Procedures a) Start-up, ramp, departure and arrival procedures. b) Altimeter setting procedures. c) Visual flight rules and weather minima. d) Policy and procedures for the use of traffic collision avoidance system. e) Inflight Navigation and Moving maps. f) Policy and procedures for in-flight fuel management. g) Use of restraint devices for crew and participants. The requirements for crew members and participants to use safety belts and/or restraint systems during the different phases of flight or whenever deemed necessary in the interest of safety. h) Wake turbulence. Wake turbulence separation criteria, taking into account aircraft types, wind conditions and runway/final approach and take-off area (FATO) location. For helicopters, consideration **should** also be given to rotor downwash. i) Inflight- participant re-briefing procedures (if applicable). j) Oxygen Requirements. k) Procedures on G-Limitations and manoeuvres (if applicable) including aerobatics and flight above 250 knots below FL100. l) Procedures on use of safety equipment including Parachutes, Ejection Seats, Anti G system, Clothing, Helmets.	
10.0 Maintenance Procedures a) Details of the BCAR A8-23/24 Maintenance Organisation(s) and CAMO (A8-25).	

b) Proposed maintenance procedures in accordance with BCAR A8-23 or A8-24 for maintenance and A8-25 for continuing airworthiness with details of the contractual arrangements. c) Method by which maintenance and operational areas will interface with reference to interchange of relevant information on aircraft status i.e. notification of defects, technical log sector record pages, update of hours. d) Policy for maintenance away from base particularly safety precautions for ejection seats or other live explosive devices. Refuelling, unless straightforward. Responsibility for completion of technical logs. Process for recording and rectifying defects. e) Policy for the maintenance of carry-on equipment and safety equipment such as parachutes, life-vests etc. that are not included in the aircraft maintenance programme. f) Operator's Continuing Airworthiness Coordinator responsibilities including maintenance liaison coordination on behalf of the operator. g) The aircraft Technical Log, formatting, Permit Maintenance Release, defect recording, deferred defects, control of hours, recording oil and hydraulic top ups, Fatigue Index monitoring, run down times, anti-deterioration engine runs and system checks. h) Aircraft observation log (defects not affecting the airworthiness of the aircraft) recording and rectification/deferral. i) Aircraft maintenance programme (approval CAP 553 BCAR A3-7 refers) including details of the maintenance programme/schedule for higher utilisation and continuing aircraft airworthiness oversight. j) Aircraft serviceability including notification details of when the next aircraft maintenance is due based upon hours, calendar date, cycles or landings (as appropriate) i.e. forecast of maintenance due (Out of Phase (OOPs)). k) Policy towards allowable deficiencies with associated flight limitations. l) Pilot maintenance items including certification and daily inspection, training and authorisation by the appropriate BCAR A8-23/24 Maintenance Organisation or CAMO (A8/25). m) Procedures on when to divert and diversion criteria.	
11.0 Reporting, analysis and follow up of occurrences a) Procedures for handling, notifying and reporting accidents, incidents and occurrences. b) Definitions of occurrences and of the relevant responsibilities of all persons involved. c) Reference to forms used for reporting all types of occurrences, instructions on how they are to be completed, the addresses to which they **should** be sent, and the time allowed for this to be done. d) In the event of an accident, descriptions of which company departments, Authorities and other organisations that **must** be notified, how this will be done and in what sequence. e) Reporting procedures. These procedures **should** include internal safety-related reporting procedures to be followed by crew members	
12.0 Appendices a) Copy of all relevant documents, forms, and templates, including participant information/declaration forms. b) Operational procedures required to mitigate any additional risk to third parties on the ground and in the air, such as keeping clear of congested areas or location of operating area.	
PART B	
1.0 Approved SSAC aircraft a) List of aircraft registrations approved to conduct SSAC Operations	
2.0 General Information a) General technical information on the aircraft type(s) to be operated. Identification of the reference documents to be utilised by crews for operational information and limitations. b) Units of measurement used for the operation of the aircraft type concerned and conversion tables	
3.0 Limitations a) A description of the certified limitations and the applicable operational limitations	
4.0 Normal Procedures a) The normal procedures and duties assigned to the crew, the appropriate checklists and the system for their use, including any task or specific role equipment procedures not contained in the AFM.	
5.0 Abnormal Procedures a) The abnormal and/or emergency procedures and duties assigned to the crew, the appropriate checklists and the system for their use, including: i. Any task or specific role equipment emergency procedures not contained in the AFM, ii. Minimum fuel states iii. Engine failure iv. Fire drills v. System failure vi. Emergency landing / ditching vii. Forced landing viii. Aircraft Abandonment ix. Participant incapacitation x. Distress communications and alerting	
6.0 Aircraft Performance a) Performance data which **should** be provided in a form in which it can be used without difficulty including: i. Take-off performance, including minimum take off field length ii. Landing performance, including minimum field length iii. Considerations affecting landing distance including surface condition and system failures. iv. Application of performance factors.	
7.0 Flight Planning a) Data and instructions necessary for pre-flight and in-flight planning	

b) The method for calculating fuel needed for the various stages of flight including minimum fuel states c) Procedures for specialised tasks.	
8.0 Mass and Balance a) Instructions and data for the calculation of the mass and balance including: i. Information and instructions for completion of mass and balance documentation, including manual and computer, if required ii. Limiting masses and centre of gravity for the individual aircraft used by the operator. iii. Dry operating mass and corresponding centre of gravity or index	
9.0 Minimum Equipment List a) The establishment of a Minimum Equipment List and the process for authorising flight in accordance with the approved list. The Minimum Equipment List **must** be agreed with the CAMO (A8-25). The Minimum Equipment List includes any relevant operational and maintenance procedures and the maximum deferral period	
10.0 Survival and emergency equipment including oxygen a) A list of the survival equipment to be carried, taking into account the nature of the area of operation, such as a hostile or a non-hostile environment. b) A checklist for assessing the serviceability of the equipment and instructions for its use prior to take-off c) The procedure for determining the amount of oxygen required and the quantity that is available.	
11.0 Aircraft Information a) Emergency evacuation procedures, crew coordination and occupant handling in the event of a forced landing, ditching or other emergency. b) A description of the aircraft systems and all equipment specific to the tasks. Additional equipment, systems or fitting, related special procedures including any supplements to the AFM. c) State the current versions of the aircraft's flight manual, pilot's notes and checklists / flight reference cards	
12.0 Appendices a) Copy of all relevant documents, aircraft documents, forms, and templates, including Techlog.	
PART C	
1.0 Operating Airfields a) A list of approved operating airfields. b) Procedure to add additional aircraft to SSAC. c) Instructions and information relating to communications, weather, navigation per each aerodromes/operating sites. d) Relevant charts relating to the operation and flying areas.	
2.0 Recommended Operating Areas, Routes and Diversion Airfields a) A description of the recommended local operating areas for each approved airfield, and their standard respective routes and flight profiles. b) A list of recommended diversion airfields for each approved operating airfield and standard route. c) A description of the aeronautical charts that **must** be carried on board in relation to the type of flight and the route to be flown. d) Recommended sources (or applications) to access aeronautical information and weather information services.	
3.0 Appendices a) Copy of all relevant documents, forms, and templates. Including all Risk Assessments for SSAC operations at main operating airfield/site and for each remote base.	
PART D	
1.0 Training Procedures a) Procedures for all training and checking. b) Procedures to be applied in the event that personnel do not achieve or maintain the required standards. c) Procedures to be applied in the event that personnel do not achieve or maintain the required recency. d) A system for tracking expiry dates for qualifications, checks, tests, recency and licences.	
2.0 Record Storage Retention a) Description of documentation to be stored and storage periods.	
3.0 Flight Crew Training Syllabi a) Training syllabi and checking programmes for all flight crew personnel in connection with the preparation, conduct and post actions of a flight Which **should** include: i. CRM training ii. Operator Initial / conversion training iii. Differences and Familiarisation training iv. Recurrent Checking v. Other operator specific training i.e. aerobatics, formation b) Procedures and checking for pilot Authorisation approvals	
4.0 Ground Crew Training Syllabi a) Training syllabi and checking programmes for all ground crew personnel in connection with the preparation, conduct and post actions of a flight which **should** include: i. Initial training ii. Recurrent checking	
5.0 Appendices a) Copy of all relevant documents, forms, and templates.	

APPENDIX B

SSAC Class 5: Additional Requirements

General requirements

B1 The operator is responsible for conducting risk assessments for the activity, implementing any mitigations and reviewing these assessments to monitor their effectiveness.

B2 The following set of requirements are **in addition to the requirements** already detailed in this CAP.

Airworthiness

General

B3 The organisation managing the airworthiness of the aircraft **must** present a recent Airworthiness Review Report in accordance with A3-7 Paragraph 12 for each aircraft prior to acceptance for SSAC Class 5 operations. This report **should** detail changes to the aircraft since the Airworthiness Approval Note (AAN) was issued. Modifications and repairs applied to the aircraft that have been recorded and are approved according to the relevant Chapters of BCAR Section A will be included in an addendum to the AAN.

B4 The operator or contracted A8-25 **shall** demonstrate that they have sufficient spares and consumables to support the operation (including service life limited components) at the forecast utilisation for the duration of the approval. The operator or contracted A8-25 **must** either hold a replacement part or have a verified method of obtaining one.

Maintenance Programmes

B5 During the duration of the SSAC approval, in addition to the requirements of 6.6 (b), the CAMO (A8-25) managing the aircraft **shall** ensure the periodicity of the reviews of the Approved Maintenance Programme (AMP) are sufficient to ensure the AMP's effectiveness (refer to BCAR A3-7 and CAP1740).

Aircraft Survey

B6 Each aircraft proposed for SSAC Class 5 operations will be surveyed by the CAA to verify and record the aircraft status.

B7 Each aircraft **shall** have an individual inspection/survey before being accepted for Class 5 SSAC at which time the servicablity of the Aircraft Assisted Escape System (AAES) or alternative measures **shall** be assessed.

Medical considerations

B8 The performance envelope of many jet aircraft can place significant physiological demands on the occupants such as G exposure, motion sickness, hypoxia and barotrauma from rapid rates of climb or descent. When live ejection seats are fitted to the aircraft, the individual's anthropometry and boarding weight will also need to be considered.

B9 Operators will need to develop flight profiles where operational limitations are appropriately matched to the physical fitness and physiology of the participants. A benign flight profile would include G exposures of less than 2Gz with no negative component and rates of ascent or descent of less than 4000ft/min.

B10 **Pressure Changes**. The risk of personal injury increases with sustained high rates of descent at lower altitudes due to volumes changes to air trapped in the middle ear or sinuses. Participants **should** be briefed on ear clearance and measure to be taken in the event of ear or sinus pain. Likewise, advice **should** be given about bowel gas expansion during ascent.

B11 **G Exposure**. Gz exposure up to +2.5 is generally well tolerated but inexperienced individuals **may** become uncomfortable and suffer gey out, black out or G -LOC (G Induced loss of consciousness) as positive Gz levels increase. Sustained Gz in excess 4.5 is likely to cause G-LOC if an effective anti G straining manoeuvre is not carried out and this is more likely without a functioning anti G suit. Negative Gz is generally uncomfortable and unpleasant for most individuals. Levels above –2Gz **should** be avoided.

B12 **Hypoxia**. Operating at cabin altitudes above 10,000ft introduces the risk of hypoxia. Most fast jets will have a low-pressure differential pressurisation system and participants will be wearing an oxygen mask. The onset of hypoxia is subtle and symptoms variable. Participants **should** receive a briefing on the symptoms of hypoxia and hyperventilation and **should** be fitted with appropriate oxygen equipment and instructed on its use, including emergency procedures if appropriate.

B13 **Motion sickness.** Flight in high performance aircraft can be disorientating and result in motion sickness. Participants **should** be briefed on the symptoms and mitigations including general advice, the location of sickbags and removing of their facemask if they are to be sick.

B14 Operators **must** develop guidance for participants to outline the expected physiological demands for the different flight profiles.

B15 The flight profile **must** be discussed with the participant to understand their expectations. Where higher G manoeuvres are to be used, exposure to G **should** be introduced gradually throughout the flight.

B16 Operators **must** provide serviceable anti-G personnel equipment if sustained Gz above 4.5 is anticipated.

B17 Operators **should** ensure that participants are informed of the physiological demands of the flight profile including the typical G associated with possible manoeuvres and the effect of sustained G duration (G-induced loss of consciousness can be reduced by limiting exposure to less than 3.5G and less than 4 second exposure).

B18 Participants **must** make a declaration of their medical fitness to participate on the day of the flight and it would be reasonable to expect an individual to be fit to drive a car. Additionally, in an emergency situation the individual **should** be able to egress the aircraft without assistance. Participants who are unsure of their medical suitability **should** seek professional medical advice from a GP or Aeromedical Examiner (AME) (Medical Examiners Database Search (caa.co.uk)).

Safety and Emergency Equipment

B19 The briefing to the participant **must** include the expected flight profile. Areas to be considered include:

1. PPE and survival equipment.
2. Flying coverall (fire retardant), life preserver (where flights over water are anticipated), oxygen mask (where required), correctly fitted helmet with visor suitable for ejection, anti-G trousers (where fitted to the aircraft), additional restraint garters specific to ejection seat. Footwear **should** be suitable for the aircraft environment and if ejection seats are fitted able to withstand ejection.
3. Flights above 10,000 feet (or 8,000ft if an oxygen system is fitted) require operators to provide a serviceable supplementary oxygen supply for the occupants.

Operational considerations

B20 The operator **must** consider whether the proposed activity presents any additional risks to third parties or other airspace users. Careful consideration **should** be given by the operator to determine suitable airfield(s) and local areas that can accommodate the proposed flight profiles. The operator **should** establish a local profile brief for each operating airfield.

B21 The operator **must** ensure that the pilot complies with the aircraft's Permit to Fly flight conditions and any additional specific limitations for SSAC Class 5 flight.

B22 The operator **must** establish a method of monitoring the well-being of the participant during the SSAC flight. Post flight, a summary of the participant's well-being **should** be recorded (to include if the participant suffered from barotrauma, G-LOC, dizziness and/or sickness).

B23 The operator's Risk Assessment **should** include (but not limited to):

1. The risk of jet blast damage to other aircraft taxiing, third parties around the operating area,
2. Prevention of FOD ingress to the engine,
3. Noise nuisance and management,
4. Selection of operating location to mitigate ejection risk to third parties on the ground.

Briefing format

B24 In addition to the briefing for SSAC flights, operators **should** include the following specific elements:

1. Medical Declaration, and check of physical limitations (including seat limitations / height / weight)
2. Pilot Briefing (including the flight profile, cockpit briefing and communications)
3. Safety Equipment and Fitment
4. Aircraft briefing

Ejection Seat Training

B25 Operators **must** develop guidance for participants including anthropometric limitations.

B26 The use of an ejection seat is a last resort and carries a significant risk of injury to the occupant. Early models of ejection seat carry a significantly higher risk of injuy compared to the current generation of ejection seats. A statement to this effect **must** be included in the Participant Information Pack. Operators **must** ensure equipment is sized and fitted appropriately, and that the individual's anthropometry is within the release to service limitations for the aircraft.

B27 Operators **must** provide specific training for the correct fitment and use of the safety equipment (including the ejection seat). Operators **must** establish and formalise medical requirements and an Ejection Seat Training Programme (ESTP) in which every participant **must** undergo prior to an SSAC flight. This training **must** include both classroom based and practical demonstration training. Various elements of the training can be undertaken using computer-based training.

B28 Testing and checking is required to measure a participant's knowledge and accomplishment at the completion of training using these methods:

1. Written and/or Oral Examination.
2. Scenario-Based Practical Evaluation.

B29 Throughout the ESPT the operator **must** assess participants to ensure they are competent to undertake the flight. The operator **must** set out clear performance criteria used to assess participant competence. Multiple observations **should** be undertaken to determine whether or not a participant has achieved the interim and/or final competency standard. There **must** be sufficient evidence to ensure that the participant achieves the competency and meets the final required competency prior to undertaking an SSAC flight.

B30 The ESTP as a minimum **must** contain the following training elements:

a) Overview of the Ejection System.
b) Aircraft and Seat Markings.
c) Ejection Sequence.
d) Ejection Seat Controls/Features/Safety Devices.
e) Ejection Seat Arming/Safe Procedures.
f) Entry, Exit and Strap-In.
g) Ejection Seat Egress and Emergency Ground Egress.
h) Body Position for Ejection.
i) Ejection Seat Failure and Manual Bailout (if applicable).
j) Post Ejection Procedures.
k) Injuries Typically Caused by Ejection.
l) Practical demonstration of equipment.
m) Formal proficiency sign off

B31 Operators **should** detail the cost of the training and the cost of the flight. Where a participant fails the training, an operator **must** refund the cost of the flight but **may** recover a proportion of the cost of the training provided. This **should** be made clear to participants in the Participant Information Pack.

Participant Information Pack

B32 The participant information pack **must** include (in addition to Para 7.18):

1. Details of the consequence of any additional identified risks for SSAC Class 5.
2. Physical limitations of the ejection seat.
3. A statement that the use of an ejection seat is a last resort and carries a significant risk of injury to the occupant. Early models of ejection seat (if applicable to the specific aircraft) carry a significantly higher risk of injuy compared to the current generation of ejection seats.
4. Details of the training provided.
5. Refund policy if the participant fails the training.
6. Guidance for seeking medical advice.

Annual Review

B33 The CAA aims to be flexible and proportionate, and will ask Class 5 SSAC operators to assist with a review of the Class 5 SSAC flights conducted in each 12 months of operation.

B34 The Operator is required to conduct an Annual Review of their activity and submit the results to the GA inbox at ga@caa.co.uk.

B35 The Annual Review is designed to cover three major elements – the Operators annual SSAC activity, participants post flight wellbeing and the operator's airworthiness review. The details of each element are as follows.

B36 The annual review **must** include, as a minimum, the following information for the previous 12 months:

a) Number of SSAC flights provided per aerodrome and aircraft type.
b) Number per each aircraft type of SSAC flights provided.
c) Number of Participants carried.
d) Participants wellbeing post flight including, if the participant suffered from barotrauma, G-LOC, dizziness and sickness. This **should** be recorded with the type of flight profile the participant had flown.
e) Refusals of participants (for any reason).
f) Servicability of aircraft and any changes to the AMP.
g) Summary of all MORs and internal safety reports filed.

B37 The annual review is designed for the operator to evaluate the effectiveness of their safety policy, adequacy of the training and flights offered, along with the CAA to establish and gain sufficient data within this period of review.