

United Kingdom Overseas Territories Aviation Circular

OTAC 139-9

Aerodrome Manual

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GENERAL

Overseas Territories Aviation Circulars are issued to provide advice, guidance and information on standards, practices and procedures necessary to support Overseas Territory Aviation Requirements. They are not in themselves law but may amplify a provision of the Air Navigation (Overseas Territories) Order or provide practical guidance on meeting a requirement contained in the Overseas Territories Aviation Requirements.

PURPOSE

Applicants for the issue of an Aerodrome Certificate are required by Air Navigation (Overseas Territories) Order Article 155(2)(d) to have an adequate Aerodrome Manual as a prerequisite to the issue of an Aerodrome Certificate. The Aerodrome Manual is thus of critical importance to the operation of certificated aerodromes. This circular provides guidance on Aerodrome Manuals.

RELATED REQUIREMENTS

This Circular relates to OTAR Part 139.

CHANGE INFORMATION

Third issue updates external references.

ENQUIRIES

Enquiries regarding the content of this Circular should be addressed to Air Safety Support International at the address on the ASSI website www.airsafety.aero or to the appropriate Overseas Territory Aviation Authority.

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1 Introduction

- 1.1 The Aerodrome Manual is an essential document for any aerodrome required to hold an Aerodrome Certificate. The Aerodrome Manual fulfils two functions: first it is a comprehensive exposition of how an aerodrome operator intends to operate an aerodrome; second, it is a means of demonstrating to the regulator how the aerodrome operator intends to comply with legal and regulatory requirements. As a consequence considerable care must be taken in the drafting of such manuals.
- 1.2 This circular offers guidance on how an aerodrome operator might draft the aerodrome manual so as to fulfil the functions specified above.

2 Requirement for an aerodrome manual

- 2.1 Every applicant for an Aerodrome Certificate is required by Article 155(2)(d) of the Air Navigation (Overseas Territories) Order, as amended, to satisfy the Governor that the Aerodrome Manual is adequate prior to the issue of the Aerodrome Certificate.
- 2.2 OTAR Part 139, Subpart D sets out the requirements relating to Aerodrome Manuals for the UK Overseas Territories. Aerodrome Manuals should be drafted to comply with all OTAR 139 Subpart D requirements.

3 Content of the aerodrome manual

- 3.1 Appendix 1 to ICAO Doc 9774 – Manual on Certification of Aerodromes gives a schedule of particulars to be included in an aerodrome manual, and OTAR Part 139 specifies additional requirements. Aerodrome manuals should meet both ICAO and OTAR requirements.
- 3.2 OTAR Part 139 Appendix A does not specify a structure for aerodrome manuals but lists information and instructions which must be included.
- 3.3 ICAO Doc 9774 Appendix 1 specifies a structure for aerodrome manuals. This may be overly proscriptive, particularly for small aerodromes. Provided all the appropriate material is included in an aerodrome manual this structure need not be rigidly applied. Where information is normally required to be included in the Aerodrome Manual, but is not necessary for a particular aerodrome, the appropriate section header and a brief explanation for exclusion should be included. An example might be a section on low visibility operations where an aerodrome is not certificated or equipped for such operations, or a Snow Clearance Plan where snow falls do not occur.
- 3.4 The structure specified in ICAO Doc 9774 Appendix 1 is as follows

Part 1 – General

This part should include the aerodrome certificate holder's signature, letter of acceptance from the regulator, a copy of the aerodrome certificate and any conditions or restrictions, any deviations or exemptions issued, the legal requirement for an aerodrome manual as cited in the Air Navigation (Overseas Territories) Order, and the scope and purpose of the aerodrome manual. Generally it may be useful to include all appropriate legal items relating to the aerodrome operation in this section.

ICAO Doc 9774 specifies that this section should include information on the available aeronautical information system, the system for recording aircraft movements and certain conditions, such as opening times and availability, of the aerodrome. However, these may be more appropriately included in later parts of the manual, and simply referred to in this section.

Part 2 –The Aerodrome Site

This part should include various plans of the aerodrome to the appropriate scales.

There should be a plan of the aerodrome to a scale of 1:2,500 denoting the layout of runways, taxiways, manoeuvring areas and other facilities.

There should also be a plan showing the aerodrome boundaries, including the defined aerodrome boundary (i.e. “airside”) and the title deed boundary showing the complete area over which the aerodrome certificate holder or operator exercise authority, particularly where these are not coincident.

There should also be a plan of sufficient extent to show the aerodrome within the context of the local area, displaying relevant information on obstacles, noise sensitive areas, environmental hazards, built-up areas and aerodrome facilities outside the aerodrome boundary proper.

Part 3 – Particulars of the Aerodrome Required to be Reported to the Aeronautical Information Service (AIS)

This part should set out comprehensive information about the aerodrome as it is promulgated in the Territory’s Aeronautical Information Publication, aeronautical charts, instrument flight procedures and other documents. It should also specify details of the aeronautical information system available at the aerodrome, and the means of promulgation of such information.

General Information

This part should include accurate general aerodrome information such as aerodrome name, reference point WGS84 coordinates, elevation and geoid undulation.

It should also include details of the aerodrome operator, including contact telephone numbers, address, website and email addresses. In particular, business and contact details should be included for the person with responsibility for day-to-day operation of the aerodrome, and his or her nominated deputies and the procedures for handover of responsibilities.

Aerodrome Dimensions and Related Information

This part should include all relevant aerodrome technical information, such as runway dimensions, declared distances and PCN, marking, lighting, taxiways, manoeuvring areas, radio frequencies, navigation facilities, instrument flight procedures, obstacles and other hazard information.

It should also include information on contingency procedures, such as RFFS temporary downgrade and reduced declared distance calculation.

The information contained in this section should be treated as being critical to aircraft safety and should form the basis for the information package forwarded to the Aeronautical Information Service (AIS). A procedure is needed to ensure that this information is both accurate and complete, and to ensure that a quality check is performed on the information published in the AIP. A procedure is also needed to ensure that any changes are forwarded promptly to the AIS.

OTAR Part 139 Appendix A specifically requires that sufficient survey information be provided at aerodromes with published instrument flight procedures to enable the appropriate charts to be drawn.

Information in this section should conform to the standards set down in ICAO Annex 15 for aeronautical data quality.

Part 4 – Particulars of the Aerodrome Operating Procedures and Safety Measures

This part should be the most comprehensive in the aerodrome manual. It should contain the bulk of material relating to the operating procedures specified for the aerodrome by the operator and cover the following areas:

Aerodrome Reporting

This part should specify procedures relating to the reporting of safety related information. In particular procedures should be specified for the reporting of changes to information required by law or regulation, such as declared distances, obstacles and airspace restrictions. OTAR 139.77 specifically requires that procedures shall be implemented for notifying change of the aerodrome state.

Procedures should be specified for the promulgation of changes by radio broadcast, NOTAM and other means, and responsibilities assigned to specific persons or posts.

Access to the Aerodrome Movement Area

This part should specify procedures for traffic using the aerodrome manoeuvring areas, including aircraft, ground vehicles and pedestrian traffic. Procedures should include security measures and training of airside personnel. This section may form part of the aerodrome apron manual (see also **Aerodrome Works**).

Aerodrome Emergency Plan

This part is of fundamental importance to the aerodrome as it should contain all procedures relating to the handling of incidents and emergencies. It should contain details of emergency procedures for immediate action in a number of eventualities, taking full account of the aerodrome and its environment.

This part should also detail the chain of command in the event of an emergency, and specify the agencies responsible for each part of the plan. Arrangements for the establishment of an aerodrome emergency committee should also be specified.

Normally, the Emergency Plan is published as a separate document for ease of use, and also because it must be supplied to external agencies.

Rescue and Fire-Fighting

Closely linked to the aerodrome emergency plan is the Rescue and Fire-Fighting Service. The RFFS may be part of the aerodrome operator's organisation, a separate contracted service or part of the State's domestic RFFS. In any case the level of service required must be specified in the aerodrome manual, and in the case of a separate organisation, in a service level agreement or contract.

The aerodrome RFFS will normally have a separate RFFS Manual, which will normally be the responsibility of the RFFS Manager. OTAR Part 140 specifies requirements for RFFS, and this should be read in conjunction with this OTAC.

Inspection of the Aerodrome Movement Area and Obstacle Limitation Surface by the Aerodrome Operator

This section, with the following two sections, may form part of the aerodrome maintenance manual.

Visual Aids and Aerodrome Electrical Systems

Maintenance of the Movement Area

Aerodrome Works – Safety

This section, with the following three sections and **Access to the Aerodrome Movement Area**, may form part of the aerodrome apron manual.

Apron Management

Apron Safety Management

Airside Vehicle Control

Wildlife Hazard Management

This part should specify the operator's plans to manage wildlife, to reduce the hazard to aircraft and flight safety. Wildlife hazard management is a specialised area, and operators are recommended to seek expert advice from qualified zoologists or similar. Procedures may be required for cooperation with local and municipal authorities to ensure bird flocking and animal migration are not promoted on or near the aerodrome. Wildlife hazards may be managed using the operator's Safety Management Systems.

Obstacle Control

Obstacle control forms part of the safeguarding of an aerodrome. This part of the aerodrome manual will be very comprehensive and highly technical. Control of obstacles is related to instrument flight procedures and the need to provide sufficient clearance between aircraft in flight, on ground and obstacles (The strips and OTAR Part 139 surfaces). Instrument flight procedures designed to ICAO PANS-OPS volumes 1 and 2 provide the necessary clearance from obstacles; ICAO PANS-OPS should be read in conjunction with this OTAC. Obstacle control may also require procedures for cooperation with local planning authorities, so that artificial obstacles outside the aerodrome boundary are controlled.

Removal of Disabled Aircraft

This part should be included or reproduced in the aerodrome emergency plan, and should include contact details for contractors providing equipment and personnel for removal of disabled aircraft. This part of the plan should encompass numerous modes of disablement of aircraft. This part should also include details of liaison procedures between the aerodrome and aircraft operators, and set down the responsibilities of both parties.

Handling of Hazardous Materials

This part should include routine handling of dangerous goods, and should be read in conjunction with ICAO Annex 18 and OTAR Part 92. This part should also include handling of hazardous materials in emergency situations, including spillages or exposure of hazardous materials. Procedures for handling hazardous materials in emergency situations, particularly spills and inadvertent exposures should be reproduced in the aerodrome emergency plan.

Low-Visibility Operations

This part should include all additional procedures for low visibility operations. Generally in the UK OTs there are no aerodromes certificated for low visibility operations, but aerodromes contemplating offering low visibility operations will need to include a comprehensive section on low visibility operations in their manual.

Protection of Sites for Radar and Navigational Aids

This part should include procedures for the protection of radio and electronic navigational facilities. This section might be included in a safeguarding section.

Part 5 – Aerodrome Administration and Safety Management System

This part will include information about the aerodrome operator and their administration, and should include a list and an organisational chart of all responsible managers within the organisation.

Aerodrome Administration

This part should also include procedures for the various aerodrome committees, contact details for all responsible personnel, and training arrangements.

Safety Management System (SMS)

This part should specify principles and procedures of operation of the aerodrome operator's Safety Management System. Guidance on Safety Management Systems is provided in OTAC 139-2.

3.5 OTAR Part 139 Appendix A specifies additional requirements for:

- (a) Procedures for compliance with Article 162 of the AN(OT)O for aerodromes with aircraft fuel storage installations;
- (b) Procedures for the management of air traffic services (normally part of a separate Air Traffic Services Manual);

- 3.6 OTAR Part 139.77 specifies additional requirements for procedures for the reporting of aircraft accidents and incidents (normally included as part of the Safety Management System).

4 Production of the aerodrome manual

- 4.1 Given the critical nature of an Aerodrome Manual care should be taken in its production. The Aerodrome Manual must be a comprehensive documentation of how the aerodrome operator intends to operate and to meet legal and regulatory requirements.
- 4.2 The task of drafting and producing it is often underestimated and there may be a temptation to shortcut the work required by copying and rebranding a Manual from another aerodrome, or to use one of the generic aerodrome manuals available. This should be resisted as there are circumstances unique to every aerodrome which must be accurately reflected in the Aerodrome Manual.
- 4.3 On the other hand, the study of the Aerodrome Manuals of other aerodromes as examples of good practice is encouraged, particularly where the subject aerodrome has a good record of compliance. The use of a structural template can also assist in ensuring that all the relevant information is included.
- 4.4 The Aerodrome Manual will most probably be prepared using a computer based word processing or desktop publishing program, but any human readable format that complies with OTARs would be acceptable. Adoption of computer based means of production makes amendment easier, but care should be taken to ensure consistency of formatting. Particular care should be taken over the document control parts of the Aerodrome Manual, as a good implementation of these will render the ensuing management, review and auditing of the Aerodrome Manual much easier and more consistent.
- 4.5 The personnel responsible for certain aspects of the aerodrome should be clearly identified. These will include, amongst others, nominated responsible or accountable managers such as the Chief Executive, Manager Air Traffic Services and Aerodrome Maintenance Manager. As a guide, any person who is responsible for an aspect of aerodrome operation required by law or regulation should be listed.
- 4.6 The size of an Aerodrome Manual will reflect the size and complexity of aerodrome operations. For a small airport handling a few flights by small aircraft the Aerodrome Manual would most probably comprise a single volume, whereas for a large international airport the Aerodrome Manual may require several binders, not just to accommodate the volume of material, but also to confine the material circulated to that required by each aerodrome user.
- 4.7 Once the drafting of the Aerodrome Manual is complete, an authorisation page should be inserted at the front of the manual. This page should hold a signature block for the Aerodrome Operator.
- 4.8 During the early part of the drafting process the Aerodrome Certificate holder or aerodrome operator should submit copies to the appropriate OTAA for review. This will allow the OTAA to review the manual at an early stage, and will reduce the time taken to approve the manual.
- 4.9 Once the regulator has approved the Aerodrome Manual, it will write a formal letter of acceptance and return it to the certificate holder. The certificate holder will include the original OTAA letter of acceptance in the original master copy of the Aerodrome

Manual. Once the manual is signed by the certificate holder and accepted by the OTAA it is considered adequate as required under Article 155(2)(d) of the AN(OT)O and is approved for use.

- 4.10 A circulation list should be included in the document control pages towards the front of the Aerodrome Manual.

5 Distribution of the aerodrome manual

- 5.1 Once the Aerodrome Manual is approved for use the Aerodrome Certificate holder must then ensure that copies are distributed to all aerodrome users, who should be listed in the distribution list. Alternatively, where the Aerodrome Manual is lengthy, the parts appropriate to their duties may be distributed to aerodrome users. The Aerodrome Certificate holder must take reasonable steps to ensure that persons whose duties are defined and described in the Aerodrome Manual are fully conversant with the relevant parts of the manual.
- 5.2 Aerodrome Certificate holders are not restricted to circulation of the Aerodrome Manual in hardcopy. Whilst a minimum number of hardcopy manuals must be provided to aerodrome users, additional copies may be made available in electronic form, or through an internet or intranet service.

6 Management of Changes

- 6.1 As aerodrome operations change, so the Aerodrome Manual will have to change. Changes may be initiated by changes to legislation or regulation, by change to the aerodrome facilities and environment, and by economic change, particularly in demand for scheduled air services, and above all in response to change in safety culture.
- 6.2 The Aerodrome Operator or Aerodrome Certificate holder has a responsibility to ensure that the Aerodrome Manual is updated to reflect these changes and to retain its accuracy.
- 6.3 When an Aerodrome Manual is amended it is imperative that the changes are promulgated as soon as possible to the appropriate parties on the circulation list. Within an aerodrome this may be undertaken by distributing amended copies of the relevant Aerodrome Manual sections or pages in hard copy to the recipients. If the manual is also made available in electronic form or through a web service, these must also be promulgated as being amended.
- 6.4 The regulator must also be notified when the Aerodrome Manual is amended. The regulator may instruct an Aerodrome Certificate holder to amend the manual by means of a written directive which will contain information as to how the manual is to be amended.