



OVERSEAS TERRITORIES AVIATION REQUIREMENTS (OTARs)

Part 139

CERTIFICATION OF AERODROMES

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Revisions

OTAR Issue	Subject
Issue 1	First issue published for information.
Issue 2	Second issue released for gazetting, with minor amendment to introductory text and other minor editorial changes.
Issue 3	Third issue reflecting amendments to AN(OT)O requirements for certification of aerodromes, incorporation of additional standards of ICAO Annex 14 and minor editorial changes.
Issue 4	Addition of Appendix J Water Aerodromes and associated changes to Subparts A and B. Order of Appendices A & B reversed to improve arrangement.
Issue 5	This issue primarily reflects changes due to Amendment 10 to Annex 14 Vol 1 and Amendment 4 to Annex 14 Vol 2. There are also editorial changes mainly in Subparts B and C to improve readability and in relation to the links to the RFFS requirements in Part 140. Alleviation against certain requirements in Appendix H relating to the siting of non-visual aids has been removed as the compliance date given has passed.
Issue 6	Sixth issue reflects a fundamental revision of the OTAR to reference to the appropriate ICAO Annexes. Additionally, specific requirements applicable to the Territories are set out in 139.29 and Subparts B – E. 139.31 details the basis on which aerodrome reference code is to be calculated. Subpart F – H revises the water aerodrome requirements. Subpart I introduces oversight of aviation fuel facilities.
Issue 7	This issue incorporates the requirements for aviation security with effect from 1 April 2015. Inclusion of new Subpart J with requirement for a Runway safety programme

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Subpart A – General

139.1 Purpose

- (a) This OTAR prescribes the requirements governing the certification, management, operation and maintenance of an aerodrome requiring to be certificated under the Order.
- (b) These Requirements are not in themselves Law. Failure to comply may not constitute an offence. However, the Requirements repeat or reproduce many of the provisions of the Air Navigation (Overseas Territories) Order (“the Order”), including the Rules of the Air and the requirements for certification of aerodromes to the Order. Therefore, failure to comply with these Requirements may:
 - (1) constitute a breach of the Order; and
 - (2) result in proceedings for breaches of the Order; or
 - (3) result in the refusal of an application for renewal of a certificate or licence; or
 - (4) result in action to suspend or revoke a certificate or licence.
- (c) The Order details the legal obligations governing the certification of aerodromes but specifies these obligations in rather general terms. Therefore there is a provision in the Order which requires the Governor to publish Requirements to augment, amplify and detail more precisely the manner in which these obligations shall be met. The Requirements are the means by which the aerodrome operator will be able to satisfy the Governor as to the fulfilment of the obligations in respect of the entitlement to hold and exercise the privileges of an aerodrome certificate.
- (d) The issue of a certificate, licence or approval indicates only that the holder is considered competent to ensure the safe and secure operation of an aerodrome in accordance with the Aerodrome Manual and, where applicable, the Aerodrome Security Programme. The possession of such a certificate, Aerodrome Manual or Aerodrome Security Programme does not relieve the aerodrome certificate holder from the responsibility for compliance with the Order and any other legislation in force. Neither does it relieve them of their responsibility for oversight of any service provider contracted by them to meet the requirements imposed upon them.
- (e) Other OTAR Parts may impinge upon activities conducted under this OTAR. In particular, Part 1 contains definitions which apply, unless otherwise stated, to all Parts. A full list of OTAR Parts, a description of the legislative structure and the place of OTARs and Overseas Territory Aviation Circulars (OTACs) within it can be viewed on the ASSI website www.airsafety.aero. OTACs relevant to this OTAR can be viewed at:
<http://www.airsafety.aero/Requirements-and-Policy/OTACs.aspx>.
- (f) References to the Governor in this OTAR means the regulator designated by the Governor of the Territory to exercise his functions under the Order.

139.3 Use of English

All documentation, written communications and data (electronic or otherwise) for submission to the Governor in support of an application for an aerodrome certificate shall be provided in English.

139.5 Laws, regulations and procedures

Each holder of a certificate, or aerodrome operator, shall take reasonable care to ensure that all persons employed, engaged, or contracted by the holder to perform aviation-related activities are familiar with the appropriate sections of legislation, the Overseas Territories Aviation Requirements, any applicable conditions on the certificate and the procedures specified in the approval holder's safety assurance documentation or Aerodrome Manual and, where applicable, Airport Security Programme.

139.7 Procedure compliance

Each person performing duties in relation to a certificate shall conform to the applicable procedures specified in the Aerodrome Manual and, where applicable, Airport Security Programme of the certificate holder which authorises the operation.

139.9 Power to Inspect

- (a) The holder of an aerodrome certificate, or an aerodrome operator, shall ensure that any person authorised by the Governor is allowed on an aerodrome or place where an aircraft has taken off or landed.
- (b) The holder of an aerodrome certificate, or an aerodrome operator, shall ensure that any person authorised by the Governor shall have access to any documentation pertinent to the certification of the aerodrome. The holder of a certificate shall be responsible for ensuring that, if requested to do so by an authorised person, documentation is produced within a reasonable period of time.
- (c) Each aerodrome certificate holder or operator of an aerodrome shall comply with any request by the Governor for a practical demonstration or test to verify compliance with the OTARs.

139.11 Definitions

Except where stated, the definitions used throughout OTAR Part 139 are in accordance with those detailed in OTAR Part 1 and ICAO Annex 14, Volumes 1 and 2.

Subpart B – Certification of aerodromes

139.25 Applicability

This OTAR Part applies to all aerodromes certificated under the Order.

139.27 Annex 14 compliance

- (a) Except as provided in this paragraph, the operator of a certificated aerodrome shall comply with the relevant ICAO Standards and Recommended Practices relating to aerodromes and the requirements contained in this OTAR Part and, where applicable, OTAR Part 178. Where there is a difference between a Standard or Recommended Practice, the aerodrome certificate holder shall comply with the more stringent provision.
- (b) The RFFS level of protection to be available shall not be less than that needed for the highest category of aeroplane planned to use the aerodrome. The exception allowed in Annex 14, paragraph 9.2.3 is specifically not allowed under the OTAR requirements.
- (c) The additional requirements in Subpart E of this OTAR Part apply to emergency planning and emergency exercises.
- (d) An alternative means of compliance to that specified in paragraph 139.27(a) may be proposed through submission to the Governor of an aeronautical study.
- (e) An aeronautical study is a study of an aeronautical problem to identify possible solutions and select a solution that is acceptable without degrading safety. An aeronautical study shall:
 - (1) assess the impact of a proposed deviation from the requirements; and
 - (2) present alternative means of ensuring the safety of aircraft operations; and
 - (3) estimate the effectiveness of each alternative and to recommend procedures to compensate for the deviation.
- (f) Any agreement or contract between an aerodrome operator and any service provider or sub-contractor providing services to the certificate holder shall include the specific requirement for compliance with this OTAR Part and/or OTAR Part 140 and/or OTAR Part 178 as appropriate.
- (g) Where Annex 14 places an obligation on a State, it does not apply to the operator of a certificated aerodrome.

139.29 Certification

- (a) The Order defines the type of aircraft operations required to use a certificated or notified aerodrome.

- (b) OTAR Part 178 defines the type of aerodrome operation that is subject to the requirements of that OTAR Part, including the need for an Airport Security Programme.
- (c) An operator of an aerodrome for which an aerodrome certificate is not required may apply for an aerodrome certificate.
- (d) A water aerodrome will be certificated for use by day in VMC only.

139.31 Aerodrome reference code

- (a) An aerodrome reference code comprising a code number and a letter shall be identified for aerodrome planning purposes. The code numbers and letters shall have the meanings assigned to them in Table 139.1 below. The code shall take into account the characteristics of the largest aeroplane regularly using the aerodrome facility (columns 4 and 5).
- (b) Column 1 corresponds to the longest of the declared distances ASDA or TODA instead of aeroplane reference field length. However, this should not restrict the actual runway length provided.
- (c) Column 3 corresponds to the greatest wing span, or the greatest outer main gear wheel span of an aeroplane using the runway, whichever gives the more demanding code.

Table 139.1 Aerodrome reference code

Code element 1		Code element 2		
Code number (1)	The Greater of ASDA or TODA (2)	Code letter (3)	Wingspan (4)	Outer main gear wheel span (5)
1	Less than 800m	A	Less than 15m	Less than 4.5m
2	800m but less than 1200m	B	15m but less than 24m	4.5m but less than 6.0m
3	1200mm but less than 1800m	C	24m but less than 36m	6.0m but less than 9.0m
4	1800m and over	D	36m but less than 52m	9.0m but less than 14m
		E	52m but less than 65m	9.0m but less than 14m
		F	65m but less than 80m	14m but less than 16m

Note: This table is used to determine the aerodrome reference code. Further guidance is given in ICAO Doc 9157 Parts 1 and 2.

139.33 Application for an aerodrome certificate

- (a) An applicant for the grant or amendment of an aerodrome certificate shall apply to the Governor in the manner required, supplying:
- (1) the applicant's name and address; and
 - (2) the aerodrome name and location; and
 - (3) the name and position of the accountable manager; and
 - (4) the Aerodrome Manual required by Subpart C; and
 - (5) where applicable, the Airport Security Programme;
 - (6) evidence that the requirements in paragraph (b) have been met; and
 - (7) such other particulars relating to the applicant and the aerodrome as may be required by the Governor; and
 - (8) payment of any applicable fee required by the appropriate requirements.
- (b) The applicant for an aerodrome certificate shall satisfy the Governor that:
- (1) the applicant and his/her staff have the necessary competence and experience to operate and maintain the aerodrome safely and, where applicable securely, and meet the responsibilities of paragraph 139.75; and
 - (2) the Aerodrome Manual, and where applicable, the Airport Security Programme, prepared for the aerodrome contains all of the relevant information; and
 - (3) the aerodrome facilities, services and equipment meet the required standards; and
 - (4) the aerodrome operating procedures ensure the safe, and where applicable secure, operations of aircraft and/or the safety of air navigation; and
 - (5) acceptable safety and quality management systems are in place to ensure continued compliance with, and the adequacy of, the requirements of this Part and the safe operation of the aerodrome; and
 - (6) appropriate arrangements are in place for the provision of:
 - (i) the Air Traffic Services; and
 - (ii) the Aeronautical Information Service; and
 - (iii) the Meteorological Service.
 - (7) the Rescue and Fire Fighting Services provided for the aerodrome meet the requirements of OTAR Part 140.

139.35 Grant of an aerodrome certificate

- (a) Before an aerodrome certificate is granted:
- (1) the applicant shall satisfy the Governor that the requirements of paragraph 139.33 and, where applicable, the requirements of OTAR Part 178 have been met; and
 - (2) the Air Traffic Service Unit, including the Air Traffic Service Engineering Unit, shall have been approved in accordance with the requirements of OTAR Parts 172 and 171; and
 - (3) the Instrument Approach Procedures shall have been approved in accordance with the requirements of OTAR Part 176; and
 - (4) the aerodrome shall have been inspected to the satisfaction of the Governor.
- (b) An aerodrome certificate remains in force until it is suspended, varied or revoked, or for the period of time specified by the Governor and will be subject to such conditions as the Governor thinks fit.

139.37 Transfer of an aerodrome certificate

- (a) The suitability of an individual or organisation intending to take over a certificated aerodrome will require assessment, before the change of operation or ownership is agreed, in the same way as for the issue of an Aerodrome Certificate.
- (b) Circumstances that will require transfer of an Aerodrome Certificate are:
- (1) the aerodrome operator intends to relinquish aerodrome operations in favour of another person or organisation; or
 - (2) the aerodrome operator is subject of a takeover.
- (c) An aerodrome certificate may be transferred to a new operator when:
- (1) the current holder of the aerodrome certificate notifies the Governor, in writing, at least 60 days before ceasing to operate the aerodrome, of an intention to cease operating together with the name of the proposed transferee; or
 - (2) the transferee applies to the Governor, in writing, at least 60 days before the current holder of the aerodrome certificate ceases to operate the aerodrome, for the aerodrome certificate to be transferred; or
 - (3) the transferee has complied with the requirements at paragraph 139.35.

Subpart C – The Aerodrome Manual

139.51 Aerodrome Manual requirements

- (a) The aerodrome certificate holder shall ensure that the Aerodrome Manual:
- (1) is typewritten or printed, and signed by the aerodrome certificate holder; and
- Note:** Documents may be in hardcopy or electronic. Electronic documents must be accessible to all staff requiring access.
- (2) is in a format that is easy to revise; and
 - (3) comprises a system for recording the currency of pages and amendments, including a page for logging revisions; and
 - (4) is organised in a manner that will facilitate preparation; review and acceptance/approval processes; and
 - (5) conforms to paragraph 139.53 and ICAO Document 9774.
- (b) The aerodrome certificate holder shall provide the Governor with a complete and current copy of the Aerodrome Manual.
- (c) The aerodrome certificate holder shall keep at least one complete and current copy of the Aerodrome Manual at the aerodrome and one copy at the aerodrome certificate holder's place of business if other than the aerodrome.
- (d) Each such copy or part shall be kept up to date.
- (e) The aerodrome certificate holder shall alter or amend the Aerodrome Manual, whenever necessary, in order to maintain the accuracy and currency of the information in the Manual.
- (f) The aerodrome certificate holder shall comply with any directive issued by the Governor to the aerodrome certificate holder requiring alteration or amendment of the Manual.

139.53 Content of the aerodrome manual

- (a) The aerodrome manual shall include information and instructions relating to:
- (1) the name and status of the person in charge of day to day operation of the aerodrome together with the names and status of other senior aerodrome operating staff (including the persons accountable for the Aerodrome Emergency Plan and the Aerodrome Maintenance Plan) and instructions as to the order and circumstances in which they may be required to act as the person in charge; and
 - (2) the name and position of the accountable manager and a corporate commitment to compliance with applicable OTARs.
 - (3) the system of aeronautical information service available; and

- (4) procedures for promulgating information concerning the aerodrome's state; and
- (5) procedures for the control of access, vehicles and work in relation to the aerodrome manoeuvring area and apron; and
- (6) procedures for the reporting of accidents and occurrences and for the removal of disabled aircraft; and
- (7) in the case of an aerodrome which has facilities for fuel storage, procedures for complying with provisions of the Order relating to such matters; and
- (8) plans depicting the layout of runways, taxiways and aprons, aerodrome markings, aerodrome lighting if provided and the siting of any navigational aids within the runway strip (a linear scale shall be shown), except that in the case of copies of the manual or extracts from it provided to aerodrome operating staff, the plans shall be of a scale reasonably appropriate for the purposes of paragraph 139.51(d); and
- (9) in respect of an aerodrome in relation to which there is a notified instrument approach procedure, survey information sufficient to provide data for the production of aeronautical charts relating to that aerodrome; and
- (10) description, height and location of obstacles which infringe standard obstacle limitation surfaces, and whether they are lit; and
- (11) data for and method of calculation of declared distances and elevations at the beginning and end of each declared distance; and
- (12) method of calculating reduced declared distances and the procedure for their promulgation; and
- (13) details of surfaces and bearing strengths of runways, taxiways and aprons; and
- (14) the system of management of air traffic in the airspace associated with the aerodrome, including procedures for the co-ordination of traffic with adjacent aerodromes, except any such information or procedures already published in any appropriate manual of air traffic services; and
- (15) operational procedures for the routine and special inspection of the aerodrome manoeuvring area and aprons; and
- (16) if operations are permitted during periods of limited visibility, procedures for the protection of the runways during such periods; and
- (17) procedures for the safe integration of all aviation activities undertaken at the aerodrome; and
- (18) procedures for wildlife hazard reduction; and
- (19) procedures for the use and inspection of the aerodrome lighting system, if it is provided; and

- (20) the on-aerodrome capability for Rescue and Fire Fighting Service identified by the ICAO category and the hours of provision; and
 - (21) the service level agreement with the provider of any ancillary service, such as RFFS, AIS or Met, if the service is provided by an organisation separate from the aerodrome organisation; and
 - (22) the procedures to be adopted in the event of temporary depletion of the Rescue and Fire Fighting Service.
- (b) Where the Governor grants the aerodrome certificate holder a deviation from complying with any requirement set out in paragraph 139.35(a), the Aerodrome Manual shall show:
- (1) the identifying reference given by the Governor to that deviation;
 - (2) the date that the deviation came into effect; and
 - (3) any conditions or procedures under which the deviation was granted.
- (c) If any prescribed subject is not included in the Aerodrome Manual because it is not applicable to that aerodrome, then the aerodrome certificate holder shall state in the Manual the reason for non-applicability of that subject.

Subpart D – The Aerodrome Certificate holder

139.75 Responsibilities of the aerodrome certificate holder

- (a) The aerodrome certificate holder shall employ an adequate number of qualified and skilled personnel to perform all critical activities for aerodrome operation and maintenance. If any personnel require the competency certification of a competent authority, then only holders of such a certificate shall be employed.
 - (b) Where aerodrome certificate holder proposes to make a change to any of the following, prior notification to and acceptance by the Governor is required:
 - (1) the Accountable Manager; or
 - (2) the listed senior persons; or
 - (3) any aspect of aerodrome that may have an effect on aerodrome operation or physical characteristics.
 - (c) The aerodrome certificate holder shall operate and maintain the aerodrome in accordance with the procedures set out in the Aerodrome Manual and, where applicable, the Airport Security Programme.
 - (d) The aerodrome certificate holder shall ensure proper and efficient maintenance of the aerodrome facilities.
 - (e) The aerodrome certificate holder shall take all reasonable steps to ensure that each member of the aerodrome operating staff:
 - (1) is aware of the contents of every part of the Aerodrome Manual which is relevant to his/her duties as such; and
 - (2) undertakes his/her duties, as such, in conformity with the relevant provisions of the Manual.
- NOTE:** Documents may be in hardcopy or electronic. Electronic documents must be accessible to all staff requiring access.
- (f) The aerodrome certificate holder shall ensure that any ATS provision is appropriate for the airspace associated with the aerodrome and the maintenance of the safety of aircraft.
 - (g) The aerodrome certificate holder shall ensure that all other services related to safety where established for the aerodrome, including those services described in paragraphs 139.33(b)(6) and (7) and 139.35(a)(2) and (3)), are established in accordance with the OTARs.
 - (h) The aerodrome certificate holder shall establish a safety and quality management system for the aerodrome describing the structure of the organisation and the duties, powers and responsibilities of the officials in the organisational structure.

- (i) The aerodrome certificate holder shall ensure that all users of the aerodrome, including fixed-base operators, ground handling agencies and other organisations comply with the safety and security requirements laid down by the aerodrome certificate holder. The aerodrome certificate holder shall monitor such compliance. Additionally, the aerodrome certificate holder shall require these users to cooperate in any programme to promote safety and security at the aerodrome by immediately reporting any safety related accidents, incidents, defects or faults.
- (j) The aerodrome certificate holder shall arrange for an annual audit of the safety management system, including an inspection of the aerodrome's facilities and equipment. The audit shall cover the aerodrome certificate holder's own functions. The aerodrome certificate holder shall arrange, similarly, for an external audit and inspection programme for the evaluation of contractors, sub-contractors or tenants at the aerodrome.
- (k) The aerodrome certificate holder shall ensure that any audit report, including the report on the aerodrome facilities, services and equipment, is prepared by a suitably qualified safety expert(s) who shall prepare and sign the report.
- (l) An aerodrome certificate holder shall allow access to any part of the aerodrome or any aerodrome facility, including equipment, records, documents and operator personnel, by an authorised person. An aerodrome certificate holder shall co-operate in any associated audit or inspection.
- (m) An aerodrome certificate holder shall systematically review all Aeronautical Information Publications (AIPs), AIP Supplements, AIP Amendments, Notices to Airmen (NOTAMs), Pre-flight Information Bulletins and Aeronautical Information Circulars issued by AIS about the certificated aerodrome and shall notify AIS of any inaccurate information.
- (n) An aerodrome certificate holder shall notify AIS and the Governor, in writing, at least 60 days before effecting any change to the aerodrome facility or equipment or the level of service at the aerodrome that has been planned in advance and which will affect the accuracy of the information contained in any AIS publication.
- (o) An aerodrome certificate holder shall immediately notify AIS, ATS and any affected aircraft operators and the Governor about:
 - (1) any projections by an object through an obstacle limitation surface relating to the aerodrome; or
 - (2) the existence of any obstruction or hazardous condition affecting aviation safety at or near the aerodrome; or
 - (3) any reduction in the level of service at the aerodrome previously promulgated in any of the AIS publications; or
 - (4) the closure of any part of the movement area of the aerodrome; or
 - (5) any other condition that could affect aviation safety at the aerodrome.
- (p) When it is not feasible for an aerodrome certificate holder to arrange for the relevant ATS or aircraft operator to receive a notice of any change of operational significance, then the operator must inform pilots, who may be affected by that change, directly.

- (q) An aerodrome certificate holder shall inspect an aerodrome:
 - (1) as soon as practicable after any aircraft accident or incident, as defined in OTAR Part 1; or
 - (2) during any period of construction or repair of the aerodrome's facilities or equipment that is critical to the safety of aircraft operation; or
 - (3) at any other time when there are prevailing conditions at the aerodrome that could affect aviation safety.
- (r) An aerodrome certificate holder shall remove any hazardous vehicle or other obstruction from the aerodrome.
- (s) When low flying aircraft, at or near an aerodrome, or taxiing aircraft are likely to be hazardous to people or vehicular traffic, the aerodrome certificate holder shall:
 - (1) post hazard warning notices on any public way that is adjacent to the manoeuvring area; and
 - (2) if the aerodrome certificate holder does not control such a public way, inform the authority responsible for posting such notices that there is a hazard.

139.79 Aerodrome availability

- (a) Subject to their published conditions of use, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of weather conditions.
- (b) Notwithstanding paragraph 139.79(a), nothing shall require an aerodrome certificate holder to keep an aerodrome open due to force majeure or in conditions that put life at risk.

Subpart E – Emergency planning

139.101 Emergency planning

- (a) In addition to the requirements in Annex 14, aerodrome operators shall:
 - (1) form an Emergency Planning Committee to discuss, determine and implement emergency planning arrangements commensurate with the size and types of aircraft using the aerodrome; and
 - (2) ensure the ready availability of and coordination with appropriate specialist rescue services to be able to respond to emergencies at a water aerodrome or where a land aerodrome is located close to water and/or swampy areas or difficult terrain and where a significant portion of approach or departure operations takes place over these areas; and
 - (3) include, in the case of a water aerodrome, water rescue, oil and fuel spillages response, and recovery of aircraft from the movement area; and
 - (4) the emergency plan shall be acceptable to the Governor.
- (b) The emergency plan shall ensure it identifies an appropriate incident commander to undertake the coordination of those agencies responding to the emergency; and

139.103 Aerodrome emergency exercise

- (a) In addition to the requirements in Annex 14, at aerodromes where the approach or departure areas have water and/or swampy areas, or difficult terrain, the aerodrome shall make arrangements to test and assess the pre-determined response for the specialist rescue services as set out in paragraph 139.101(a)(2).
- (b) Where an actual incident/accident has occurred to which the response could be said to have tested all parts of the plan, an aerodrome operator can request in writing to the Governor to defer the biennial exercise.
- (c) the aerodrome certificate holder shall notify the Governor well in advance of an intention to conduct an exercise.

Subpart F – Water aerodromes

139.125 Water aerodrome applicability

- (a) This Subpart details the requirements which apply to the certification of water aerodromes in addition to the requirements of Subparts A to E of this OTAR Part.
- (b) The operation of a seaplane on the surface of the water shall be subject to the rules and regulations in the relevant maritime, docks authorities and coastguard legislation covering the area of water utilised by the aircraft. The water aerodrome certificate holder shall ensure that all aerodrome operations are compliant with that legislation, where applicable. These requirements shall be detailed in the water aerodrome manual for all applicable water aerodrome operations.
- (c) A water aerodrome will be certificated for use by day in VMC only.

139.127 Water aerodrome definitions and units of measurement

- (a) In addition to the definitions in OTAR Part 1, the following definitions apply to Subparts F-H:
 - (1) **airside** means the area of a water aerodrome consisting of the dockside, of the movement area and its adjacent areas within the aerodrome boundaries, and does not include maintenance of aircraft, or a building and its appurtenances used for the movement of passengers;
 - (2) **airside personnel** means persons that are assigned duties on airside that are either employees of the airport operator or those persons employed by aviation organizations that utilize the airport;
 - (3) **dockside** means the area that is part of the airport and includes the area(s), on or adjacent to the water, used for the embarkation or disembarkation of passengers; or the aircraft loading or unloading of cargo;
 - (4) **mooring** means an arrangement for securing a vessel to a mooring buoy or a pier;
 - (5) **take-off and landing area** means the area on the surface of the water that is designated for take-off and landing of aircraft;
 - (6) **underway** means that a vessel is not at anchor, made fast to the shore, moored or aground;
 - (7) **vessel** means every description of watercraft, including non-displacement craft, WIGE craft and seaplanes, used or capable of being used as a means of transportation on water;
 - (8) **water aerodrome boundary** means the movement area and dockside(s) as described in the Water Aerodrome Operations Manual;
 - (9) **water aerodrome elevation** means the elevation of the take-off and landing area;

- (b) In addition to the requirements for units of measurement in OTAR Part 1, water depths and range of tides or water levels shall be measured and promulgated:
- (1) to the nearest foot; or
 - (2) in metres to the nearest decimal.

139.129 Water aerodrome reference codes

Water aerodromes shall be coded in accordance with Table 139.2 below. Water aerodrome codes W1, W2 and W3 can be equated to Code 1, 2 and 3 non-instrument land aerodromes.

Table 139.2 Water aerodrome reference codes

Manoeuvring Area Code	W1	W2	W3
Aircraft MTWA	<2,730 kg	2,730 – 5,700 kg	>5,700 kg
Strip Length	<800 m	800 – 1,199 m	1,200 m+
Strip Width	60 m	80 m	150 m
Strip End	30 m	60 m	60 m
APPS (10 deg splay)	1:20	1:25	1:30
TOCS	1:20	1:25	1:50
TS	1:5	1:5	1:7
IHS	2,000 m	2,500 m	2,500 m

139.131 Water Aerodrome Reference Point (WARP)

A Water Aerodrome Reference Point (WARP) shall be located at the planned geometric centre of the manoeuvring area or, if there is more than one manoeuvring area, of the main one.

139.133 Water aerodrome elevations

- (a) The Water Aerodrome Reference Elevation (WARE) shall be determined at the WARP in accordance with:
- (1) lowest normal tide, where there are tides; or
 - (2) lowest known water level for that body of water.
 - (3) This elevation shall be determined from the Chart Height, or from the lowest recorded water level, converted to an elevation in metres above Ordnance Datum.

139.135 Water aerodrome dimensions and related information

- (a) Where possible, the manoeuvring area shall be large enough to provide a choice of take-off and landing direction, dependent upon prevailing water surface and weather conditions. For the purpose of this OTAR Part, this type of manoeuvring area is termed 'omnidirectional'.
- (b) Where it is not possible to provide an omnidirectional manoeuvring area, such as on a river or narrow lake, a manoeuvring area that caters for take-off and landing in one direction and its reciprocal only, in a direction parallel to the longer sides of the manoeuvring area may be provided. This type of manoeuvring area is termed 'bi-directional'.
- (c) The manoeuvring area(s) shall be square, rectangular or rhomboidal in shape, and shall encompass all parts of the water surface intended for the taking off and landing of seaplanes.
- (d) For the purpose of providing the appropriate minimum strip width and obstacle limitation surfaces, manoeuvring areas are coded according to the maximum take-off mass, or performance group, of the largest seaplane likely to operate from the water aerodrome, as shown in Table 1.
- (e) Code W1, W2 and W3 manoeuvring areas shall have a minimum width, at any point, equal to the non-instrument strip width for code numbers 1, 2 and 3 land runways respectively, as described in Annex 14 Chapter 3.

Subpart G – Water aerodrome obstacle restriction and removal

139.151 Water aerodromes general

The following criteria define the airspace around a water aerodrome that shall be maintained free from obstacles. This shall be achieved by establishing a series of obstacle limitation surfaces that define the upper limits of permissible objects.

139.153 Water aerodrome Obstacle Limitation Surfaces

- (a) A take-off climb surface and an approach surface shall be established in the direction of take-off or landing for each manoeuvring area, with the elevation of the inner edges of both surfaces equal to the ARE. The inner edges of the take-off climb surface and an approach surface originate at a distance of 30 m from the appropriate edges of a code W1 manoeuvring area, and 60 m from the appropriate edges of code W2 and W3 manoeuvring areas, and slope upwards and outwards until reaching their limiting distance.
- (b) The take-off climb surface and an approach surface for a code W1, W2 and W3 omnidirectional manoeuvring area shall form a continuous surface surrounding the manoeuvring area and be equal to the corresponding length and slope dimensions for land-based runway code numbers 1, 2 and 3 respectively.
- (c) The dimensions of the take-off climb surface and an approach surface relating to a code W1, W2 and W3 bi-directional manoeuvring area shall correspond to the dimensions for land-based runway code numbers 1, 2 and 3 respectively.
- (d) The inner edge of the transitional surface is coincidental with the edge of the manoeuvring area in both elevation and position. It slopes upwards and outwards with distance from the manoeuvring area until it intercepts the plane of the inner horizontal surface.
- (e) A transitional surface is not required for an omnidirectional manoeuvring area.
- (f) An inner horizontal surface shall be established at a height of 45 m above the ARE, and shall be circular in shape radiating from the WARP to a distance of 2,000 m and 2,500 m for codes W1 and W2 manoeuvring areas respectively.
- (g) The conical surface relating to codes W1 and W2 manoeuvring areas slopes upwards and outwards from the periphery of the inner horizontal surface in accordance with the criteria shown in Annex 14 Chapter 3 for the land-based runway code numbers 1 and 2 respectively.

139.155 Water aerodrome obstacle limitation requirements

- (a) New objects or extensions of existing objects shall not be permitted above an approach or transitional surface except when, in the opinion of the Governor, the new object or extension would be shielded by an existing immovable object.

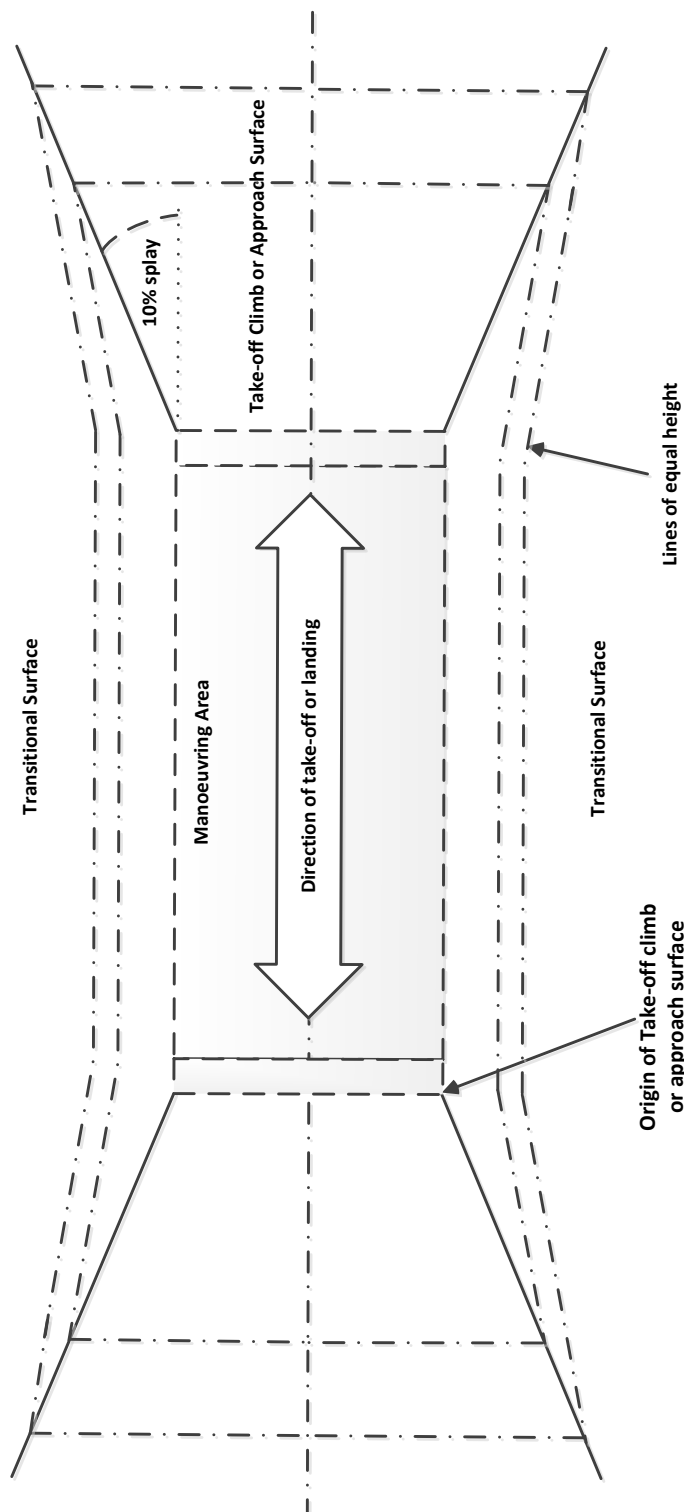


Figure 139.G.1 Water aerodrome Take-Off Climb, Approach and Transitional Surfaces for a Bi-directional Manoeuvring Area

Subpart H – Water aerodrome emergency equipment and rescue & fire fighting

139.175 Water aerodrome Rescue and Fire Fighting Services - General

- (a) Procedures for the enhancement of passenger and crew post-accident survival shall be developed and resources in terms of staff and equipment, appropriate to the type of seaplane operations anticipated at the water aerodrome shall be provided. Within the provision of these procedures and resources, account shall be taken of the effect that various environmental conditions could have on the ability of the RFFS to respond rapidly to accidents and incidents.
- (b) A rescue vessel shall be provided and be of a design and size that would allow survivors to be brought aboard, or it shall be equipped with an adequate number of floatation devices of a design that would enable survivors to remove themselves from the water.

139.177 Water aerodrome response times and availability

- (a) The RFFS shall achieve a response time not exceeding 5 minutes to any point of the movement area in good visibility and water surface conditions.
- (b) For the published hours of the water aerodrome, the RFFS shall be available:
 - (1) 15 minutes prior to the published hours of the water aerodrome; until
 - (2) 15 minutes after take-off of the last departing aircraft.
- (c) Where the hours of operation are not notified, the RFFS shall be available prior to the engine start of the first departing seaplane, or to the first arriving seaplane commencing its final approach; and until the last arrival is moored, or 15 minutes after take-off of the final seaplane.

139.179 Water aerodrome RFFS training

The aerodrome operator shall ensure that RFFS personnel:

- (a) receive initial and recurrent competence-based training relevant to their role and task, and shall at all times be medically and physically capable of performing the tasks expected of them; and
- (b) be provided with appropriate personal protective equipment for fire fighting and seaborne functions.

139.181 Water aerodrome emergency planning

- (a) The objectives of Subpart E Aerodrome Emergency Planning apply to a water aerodrome.

- (b) The emergency plan shall consider the particular hazards associated with seaplane operations, including:
- (1) passenger evacuation into a further life-threatening environment, e.g. deep water; and
 - (2) the onset of hypothermia, and its associated effects, during and following prolonged immersion in cold water; and
 - (3) the immediate toxicity and respiratory effects on survivors in the water following the ingestion of floating fuel and oils and their associated vapours, and fire suppressant foams, powders and gases.

Note:

Additional guidance on seaplane accidents in the water is given in Appendix 6 to the ICAO Airport Services Manual (Doc 9137) Part 7.

Subpart I – Aviation fuel

139.201 Aviation fuel management

- (a) The operator of a certificated aerodrome with fuel storage facilities is required under the Order to satisfy himself that the person who has management of any fuel installation ensures that throughout the processes of receiving, storing, managing, and distributing fuel, it is fit for use in aircraft.

Note:

- (i) The Order does not differentiate between single or multiple installations at an aerodrome, nor does it make distinction as to ownership of the installation(s);
- (ii) For the purpose of Order the meaning of the term “aviation fuel installation” is any apparatus or container, including a vehicle, designed, manufactured or adapted for the storage of aviation fuel or for the delivery of such fuel to an aircraft.
- (b) The Order requires fuel installation managers to satisfy themselves that:
- (1) fuel received at an installation is fit for use in aircraft;
 - (2) the installation and the storage and dispensing processes will not render it unfit;
 - (3) the fuel storage and delivery system is appropriately labelled;
 - (4) the fuel is sampled on delivery into the installation; and
 - (5) the fuel is of the correct grade for the installation.

Note:

ICAO Document 9137 Part 1 (Chapter 16) provides guidance in respect of the aerodrome operator, the aircraft operator and the fuel supplier responsibilities for safety measures to be taken during aircraft fuelling/defuelling operations.

Subpart J – Runway safety programme

- (a) In addition to the requirements in Annex 14, aerodrome operators, in partnership with the ATS provider, shall develop a runway safety programme.
- (b) The runway safety programme shall include provisions regarding the use of radiotelephony, phraseology, language proficiency, ATS procedures, aerodrome lighting and marking, situational awareness and human factors.
- (c) ICAO Document 9870 provides guidance on the prevention of runway incursions.

END