



# **OVERSEAS TERRITORIES AVIATION REQUIREMENTS (OTARs)**

## **Part 190 AERODROME OPERATIONS**

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Enquiries regarding the content of this publication should be addressed to:

Air Safety Support International, The Portland Building, 25 High Street, Crawley, RH10 1BG, UK

**[www.airsafety.aero](http://www.airsafety.aero)**

## Revisions

<b>OTAR Issue</b>	<b>Subject</b>
Draft version 0.07	Information related to the operation of aerodromes, heliports and water aerodromes.

Draft

## Contents

REVISIONS .....	1
CONTENTS .....	2
<b>SUBPART A – GENERAL .....</b>	<b>3</b>
190.1 PURPOSE .....	3
190.3 USE OF ENGLISH.....	4
190.5 POWER TO INSPECT .....	4
190.7 DEFINITIONS .....	4
190.9 ABBREVIATIONS .....	13
190.11 APPLICABILITY .....	13
190.13 ICAO COMPLIANCE .....	13
<b>SUBPART B – OPERATIONAL SERVICES.....</b>	<b>15</b>
190.15 GENERAL REQUIREMENTS.....	15
190.17 EMERGENCY PLANNING AND EXERCISES .....	15
190.19 WILDLIFE HAZARD MANAGEMENT .....	17
190.21 GROUND SERVICING AND VEHICLE OPERATIONS.....	17
190.23 DISABLED AIRCRAFT REMOVAL.....	18
190.25 AERODROME MAINTENANCE.....	18
190.27 RUNWAY PAVEMENT OVERLAYS .....	20
190.29 MAINTENANCE OF VISUAL AIDS.....	21
190.31 CONDITION OF THE MOVEMENT AREA AND RELATED FACILITIES .....	22
190.33 CO-ORDINATION BETWEEN AIS AND AERODROME AUTHORITIES .....	24
<b>SUBPART HE HELIPORT OPERATIONAL SERVICES .....</b>	<b>25</b>
190.HE.17 GENERAL REQUIREMENTS .....	25
190.HE.19 EMERGENCY PLANNING AND EXERCISES .....	25
190.HE.21 WILDLIFE HAZARD MANAGEMENT .....	26
190.HE.23 HELIPORT MAINTENANCE.....	26
190.HE.25 CO-ORDINATION BETWEEN AIS AND HELIPORT AUTHORITIES .....	26
<b>SUBPART WA.A WATER AERODROME OPERATIONAL SERVICES.....</b>	<b>28</b>
190.WA.17 GENERAL REQUIREMENTS .....	28
190.WA.19 EMERGENCY PLANNING .....	28
190.WA.21 WILDLIFE HAZARD MANAGEMENT .....	29
190.WA.23 WATER AERODROME MAINTENANCE .....	29

## **Subpart A – General**

### **190.1 Purpose**

- (a) The requirements of this OTAR Part prescribe the requirements governing the operation 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 2007 (as amended) ("the Order"), including the Rules of the Air set out in Schedule 8 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 operation of aerodromes, heliports and water 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 the aerodrome, heliport, or water aerodrome certificate.
- (d) The issue of a certificate shows only that the holder is considered competent to ensure the safe and secure operation of the aerodrome, heliport, or water aerodrome in accordance with the Aerodrome, Heliport, or Water Aerodrome Manual and, where applicable, the Airport Security Programme. The possession of a certificate, Aerodrome, Heliport, or Water Aerodrome Manual or Airport Security Programme does not relieve the 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 applied to them.
- (e) Other OTAR Parts may impinge upon activities conducted under this Part. 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](http://www.airsafety.aero).
- (f) References to the Governor in this OTAR Part mean the regulator designated by the Governor of the Territory to exercise his functions under the Order.

### 190.3 Use of English

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

### 190.5 Power to Inspect

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

### 190.7 Definitions

The definitions used throughout this Part are in accordance with OTAR Part 1. Additionally, in this Part:

**Aerodrome** - A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

**Aerodrome beacon** - Aeronautical beacon used to indicate the location of an aerodrome from the air.

**Aerodrome certificate** - A certificate issued by the appropriate authority under applicable regulations, for the operation of an aerodrome.

**Aerodrome elevation** - The elevation of the highest point of the landing area.

**Aerodrome identification sign** - A sign placed on an aerodrome to aid in identifying the aerodrome from the air.

**Aerodrome mapping data (AMD)** - Data collected for the purpose of compiling aerodrome mapping information for aeronautical uses.

**Note:** Aerodrome mapping data is collected for purposes that include the improvement of the user's situational awareness, surface navigation operations, training, charting and planning.

**Aerodrome mapping database (AMDB)** - A collection of aerodrome mapping data organised and arranged as a structured data set.

**Aerodrome reference point** - The designated geographical location of an aerodrome.

**Aerodrome traffic density:**

- (a) **Light** - Where the number of movements in the mean busy hour is not greater than 15 per runway or typically less than 20 total aerodrome movements.
- (b) **Medium** - Where the number of movements in the mean busy hour is of the order of 16 to 25 per runway or typically between 20 to 35 total aerodrome movements.
- (c) **Heavy** - Where the number of movements in the mean busy hour is of the order of 26 or more per runway or typically more than 35 total aerodrome movements.

**Note 1:** The number of movements in the mean busy hour is the arithmetic mean over the year of the number of movements in the daily busiest hour.

**Note 2:** Either a take-off or a landing constitutes a movement.

**Aeronautical beacon** - An aeronautical ground light visible at all azimuths, either continuously or intermittently, to designate a particular point on the surface of the earth.

**Aeronautical ground light** - Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.

**Aeroplane reference field length** - The minimum field length required for take-off at maximum certificated take-off mass, sea level, standard atmospheric conditions, still air and zero runway slope, as shown in the appropriate aeroplane flight manual prescribed by the certifying authority or equivalent data from the aeroplane manufacturer. Field length means balanced field length for aeroplanes, if applicable, or take-off distance in other cases.

**Note:** Attachment A, Section 2, provides information on the concept of balanced field length and the Airworthiness Manual (Doc 9760) contains detailed guidance on matters related to take-off distance.

**Aircraft classification number (ACN)** - A number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category.

**Note:** The aircraft classification number is calculated with respect to the centre of gravity (CG) position which yields the critical loading on the critical gear. Normally the aftmost CG position appropriate to the maximum gross apron (ramp) mass is used to calculate the ACN. In exceptional cases the forwardmost CG position may result in the nose gear loading being more critical.

**Aircraft stand** - A designated area on an apron intended to be used for parking an aircraft.

**Apron** - A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

**Apron management service** - A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

**Arresting system** - A system designed to decelerate an aeroplane overrunning the runway.

**Autonomous runway incursion warning system (ARIWS)** - A system which provides autonomous detection of a potential incursion or of the occupancy of an active runway and a direct warning to a flight crew or a vehicle operator.

**Balked landing** - A landing manoeuvre that is unexpectedly discontinued at any point below the obstacle clearance altitude/height (OCA/H).

**Barrette** - Three or more aeronautical ground lights closely spaced in a transverse line so that from a distance they appear as a short bar of light.

**Calendar** - Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108).

**Certified aerodrome** - An aerodrome whose operator has been granted an aerodrome certificate.

**Clearway** - A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.

**Cyclic redundancy check (CRC)** - A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

**Data accuracy** - A degree of conformance between the estimated or measured value and the true value.

**Data integrity (assurance level)** - A degree of assurance that an aeronautical data and its value has not been lost or altered since the origination or authorised amendment.

**Data quality** - A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity (or equivalent assurance level), traceability, timeliness, completeness and format.

**Datum** - Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO 19104).

**De-icing/anti-icing facility** - A facility where frost, ice or snow is removed (de-icing) from the aeroplane to provide clean surfaces, and/or where clean surfaces of the aeroplane receive protection (anti-icing) against the formation of frost or ice and accumulation of snow or slush for a limited period of time.

**Note:** Further guidance is given in the Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640).

**De-icing/anti-icing pad** - An area comprising an inner area for the parking of an aeroplane to receive de-icing/anti-icing treatment and an outer area for the manoeuvring of two or more mobile de-icing/anti-icing equipment.



**Declared distances:**

- (a) **Take-off run available (TORA)** - The length of runway declared available and suitable for the ground run of an aeroplane taking off.
- (b) **Take-off distance available (TODA)** - The length of the take-off run available plus the length of the clearway, if provided.
- (c) **Accelerate-stop distance available (ASDA)** - The length of the take-off run available plus the length of the stopway, if provided.
- (d) **Landing distance available (LDA)** - The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

**Displaced threshold** - A threshold not located at the extremity of a runway.

**Dynamic load-bearing surface** - A surface capable of supporting the loads generated by a helicopter in motion.

**Effective intensity** - The effective intensity of a flashing light is equal to the intensity of a fixed light of the same colour which will produce the same visual range under identical conditions of observation.

**Ellipsoid height (Geodetic height)** - The height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question.

**Fixed light** - A light having constant luminous intensity when observed from a fixed point.

**Foreign object debris (FOD)** - An inanimate object within the movement area which has no operational or aeronautical function, and which has the potential to be a hazard to aircraft operations.

**Frangible object** - An object of low mass designed to break, distort or yield on impact so as to present the minimum hazard to aircraft.

**Note:** Guidance on design for frangibility is contained in the Aerodrome Design Manual (Doc 9157), Part 6.

**Geodetic datum** - A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

**Geoid** - The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.

**Note:** The geoid is irregular in shape because of local gravitational disturbances (wind tides, salinity, current, etc.) and the direction of gravity is perpendicular to the geoid at every point.

**Geoid undulation** - The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid.

**Note:** In respect to the World Geodetic System — 1984 (WGS-84) defined ellipsoid, the difference between the WGS-84 ellipsoidal height and orthometric height represents WGS-84 geoid undulation.

**Gregorian calendar** - Calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar (ISO 19108).

**Note:** In the Gregorian calendar, common years have 365 days and leap years 366 days divided into twelve sequential months.

**Hazard beacon** - An aeronautical beacon used to designate a danger to air navigation.

**Holding bay** - A defined area where aircraft can be held, or bypassed, to facilitate efficient surface movement of aircraft.

**Holdover time** - The estimated time the anti-icing fluid (treatment) will prevent the formation of ice and frost and the accumulation of snow on the protected (treated) surfaces of an aeroplane.

**Hot spot** - A location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

**Human Factors principles** - Principles which apply to aeronautical design, certification, training, operations, and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

**Human performance** - Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

**Identification beacon** - An aeronautical beacon emitting a coded signal by means of which a particular point of reference can be identified.

**Instrument runway** - One of the following types of runways intended for the operation of aircraft using instrument approach procedures:

- (a) **Non-precision approach runway** - A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type A and a visibility not less than 1 000 m.
- (b) **Precision approach runway, category I** - A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type B with a decision height (DH) not lower than 60 m (200 ft) and either a visibility not less than 800 m or a runway visual range not less than 550 m.
- (c) **Precision approach runway, category II** - A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type B with a decision height (DH) lower than 60 m (200 ft) but not lower than 30 m (100 ft) and a runway visual range not less than 300 m.
- (d) **Precision approach runway, category III** - A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type B with a decision height (DH) lower than 30 m (100 ft), or no decision height and a runway visual range less than 300 m, or no runway visual range limitations.

**Note 1:** Visual aids need not necessarily be matched to the scale of non-visual aids provided. The criterion for the selection of visual aids is the conditions in which operations are intended to be conducted.

**Note 2:** Refer to ICAO Annex 6 — Operation of Aircraft for instrument approach operation types.

**Integrity classification (aeronautical data)** - Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data is classified as:

- (a) **routine data:** there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;
- (b) **essential data:** there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and
- (c) **critical data:** there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

**Intermediate holding position** - A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.

**Landing area** - That part of a movement area intended for the landing or take-off of aircraft.

**Landing direction indicator** - A device to indicate visually the direction currently designated for landing and for take-off.

**Laser-beam critical flight zone (LCFZ)** - Airspace in the proximity of an aerodrome but beyond the LFFZ where the irradiance is restricted to a level unlikely to cause glare effects.

**Laser-beam free flight zone (LFFZ)** - Airspace in the immediate proximity of the aerodrome where the irradiance is restricted to a level unlikely to cause any visual disruption.

**Laser-beam sensitive flight zone (LSFZ)** - Airspace outside, and not necessarily contiguous with, the LFFZ and LCFZ where the irradiance is restricted to a level unlikely to cause flash-blindness or after-image effects.

**Lighting system reliability** - The probability that the complete installation operates within the specified tolerances and that the system is operationally usable.

**Manoeuvring area** - That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

**Marker** - An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

**Marking** - A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

**Movement area** - That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

**Non-instrument runway** - A runway intended for the operation of aircraft using visual approach procedures or an instrument approach procedure to a point beyond which the approach may continue in visual meteorological conditions.

**Note:** Visual meteorological conditions (VMC) are described in Chapter 3 of Annex 2 — Rules of the Air.

**Normal flight zone (NFZ)** - Airspace not defined as LFFZ, LCFZ or LSFZ but which must be protected from laser radiation capable of causing biological damage to the eye.

**Obstacle** - All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

- (a) are located on an area intended for the surface movement of aircraft; or
- (b) extend above a defined surface intended to protect aircraft in flight; or
- (c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

**Obstacle free zone (OFZ)** - The airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

**Orthometric height** - Height of a point related to the geoid, generally presented as an MSL elevation.

**Outer main gear wheel span (OMGWS)** - The distance between the outside edges of the main gear wheels.

**Pavement classification number (PCN)** - A number expressing the bearing strength of a pavement for unrestricted operations.

**Point-in-space (PinS) approach** - The point-in-space approach is based on GNSS and is an approach procedure designed for helicopter only. It is aligned with a reference point located to permit subsequent flight manoeuvring or approach and landing using visual manoeuvring in adequate visual conditions to see and avoid obstacles.

**Point-in-space (PinS) visual segment** - This is the segment of a helicopter PinS approach procedure from the MAPt to the landing location for a PinS "proceed visually" procedure. This visual segment connects the PinS to the landing location.

**Note:** The procedure design criteria for a PinS approach and the detailed design requirements for a visual segment are established in the Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168).

**Precision approach runway**, see Instrument runway.

**Protected flight zones** - Airspace specifically designated to mitigate the hazardous effects of laser radiation.

**Rejected take-off area** - A defined area on a heliport suitable for helicopters operating in performance class 1 to complete a rejected take-off.

**Road** - An established surface route on the movement area meant for the exclusive use of vehicles.

**Road-holding position** - A designated position at which vehicles may be required to hold.

**Runway** - A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

**Runway end safety area (RESA)** - An area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

**Runway guard lights** - A light system intended to caution pilots or vehicle drivers that they are about to enter an active runway.

**Runway-holding position** - A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorised by the aerodrome control tower.

**Note:** In radiotelephony phraseologies, the expression "holding point" is used to designate the runway-holding position.

**Runway strip** - A defined area including the runway and stopway, if provided, intended:

- (a) to reduce the risk of damage to aircraft running off a runway; and
- (b) to protect aircraft flying over it during take-off or landing operations.

**Runway turn pad** - A defined area on a land aerodrome adjacent to a runway for the purpose of completing a 180-degree turn on a runway.

**Runway visual range (RVR)** - The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

**Safety management system (SMS)** - A systematic approach to managing safety including the necessary organisational structure, accountabilities, policies, and procedures.

**Shoulder** - An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

**Sign:**

- (a) **Fixed message sign** - A sign presenting only one message.

- (b) **Variable message sign** - A sign capable of presenting several predetermined messages or no message, as applicable.

**Signal area** - An area on an aerodrome used for the display of ground signals.

**Static load-bearing surface** - A surface capable of supporting the mass of a helicopter situated upon it

**Station declination** - An alignment variation between the zero-degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

**Stopway** - A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off.

**Switch-over time (light)** - The time required for the actual intensity of a light measured in each direction to fall from 50 per cent and recover to 50 per cent during a power supply changeover, when the light is being operated at intensities of 25 per cent or above.

**Take-off runway** - A runway intended for take-off only.

**Taxiway** - A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- (a) **Aircraft stand taxilane** - A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.
- (b) **Apron taxiway** - A portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron.
- (c) **Rapid exit taxiway** - A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimising runway occupancy times.

**Taxiway intersection** - A junction of two or more taxiways.

**Taxiway strip** - An area including a taxiway intended to protect an aircraft operating on the taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

**Threshold** - The beginning of that portion of the runway usable for landing.

**Touchdown zone** - The portion of a runway, beyond the threshold, where it is intended landing aeroplanes first contact the runway.

**Usability factor** - The percentage of time during which the use of a runway or system of runways is not restricted because of the crosswind component.

**Note:** Crosswind component means the surface wind component at right angles to the runway centre line.

## 190.9 Abbreviations

<b>ACN</b>	Aircraft classification number
<b>AIRAC</b>	Aeronautical information regulation and control
<b>AIS</b>	Aeronautical information service
<b>AMD</b>	Aerodrome mapping data
<b>AMDB</b>	Aerodrome mapping database
<b>ARIWS</b>	Autonomous runway incursion warning system
<b>CG</b>	Centre of gravity
<b>CRC</b>	Cyclic redundancy check
<b>DH</b>	Decision height
<b>FOD</b>	Foreign object debris
<b>LCFZ</b>	Laser-beam critical flight zone
<b>LDA</b>	Landing distance available
<b>LFFZ</b>	Laser-beam free flight zone
<b>LSFZ</b>	Laser-beam sensitive flight zone
<b>MSL</b>	Mean sea level
<b>NFZ</b>	Normal flight zone
<b>OCA/H</b>	Obstacle clearance altitude/height
<b>OFZ</b>	Obstacle free zone
<b>OMGWS</b>	Outer main gear wheel span
<b>PCN</b>	Pavement classification number
<b>PinS</b>	Point-in-space
<b>RESA</b>	Runway end safety area
<b>RVR</b>	Runway visual range
<b>SMS</b>	Safety management system
<b>TODA</b>	Take-off distance available
<b>TORA</b>	Take-off run available
<b>WGS-84</b>	World Geodetic System

## 190.11 Applicability

The requirements of OTAR Part shall apply to all certificated aerodromes or at aerodromes where the Governor requires compliance with this OTAR Part.

## 190.13 ICAO compliance

- (a) Except as set out in sub-paragraphs (b) to (d), the operator of an aerodrome shall comply with:
  - (i) ICAO Annex 14 and Annex 19 Standards and Recommended Practices; or
  - (ii) where there is a difference between an applicable Standard and Recommended Practice, the more stringent shall be applied; and
  - (iii) this OTAR Part; and

- (iv) where applicable, OTAR Part 178; and
  - (v) where the requirements of this OTAR Part are inconsistent with those of paragraph OTAR 190.15(a)(1), the OTAR requirement shall take precedence.
- (b) If an aerodrome operator is unable to achieve compliance or wishes to adopt an alternative means of compliance from that specified in paragraph OTAR 191.13(a) it may submit, following consideration through its safety management system, a safety assessment to the Governor in support of its case.
- (c) A safety assessment is a study of an aeronautical problem to identify possible solutions and select one that is acceptable without degrading safety. A safety assessment shall:
- (i) assess the impact of a proposed deviation from the requirements; and
  - (ii) present alternative means of ensuring the safety of aircraft operations; and
  - (iii) estimate the effectiveness of each alternative and to recommend procedures to compensate for the deviation.
- (d) Where ICAO Annex 14 places an obligation on a State, it does not apply to the operator of a certificated aerodrome.



## **Subpart B – Operational Services**

### **190.15 General Requirements**

- (a) The aerodrome certificate holder shall maintain, for compliance by its personnel, an Aerodrome Manual for the service provided which complies with OTAR Part 139.
- (b) The aerodrome certificate holder shall maintain compliance with OTAR Part 139, OTAR Part 191, the applicable parts of OTAR Part 178 and OTAR Part 140.
- (c) The aerodrome certificate holder shall ensure that the operation is continuously and adequately financed and resourced.

### **190.17 Emergency Planning and Exercises**

- (a) The aerodrome certificate holder shall:
  - (i) establish an emergency response plan commensurate with the aircraft operations and other activities conducted at the aerodrome.
  - (ii) ensure the emergency response plan defines the co-ordination of the actions to be taken in an emergency occurring at or in the vicinity of the aerodrome.

**Note:** Examples of emergencies are aircraft emergencies, sabotage including bomb threats, unlawfully seized aircraft, dangerous goods occurrences, building fires, natural disasters and public health emergencies.

- (iii) ensure the emergency response plan co-ordinates the response or participation of all existing agencies which, in the opinion of the Governor could be of assistance in responding to an emergency.

**Note:** Examples of aerodrome agencies: Air traffic control units, rescue and firefighting services, aerodrome administration, medical and ambulance services, aircraft operators, security services, and police.

**Note:** Examples of off-aerodrome agencies: fire departments, police, health authorities, military, harbour patrol or coast guard.

- (iv) ensure the emergency plan provides for cooperation and co-ordination with the appropriate rescue co-ordination, as necessary.
- (b) In addition to the requirements contained in OTAR Part 139 the emergency plan shall include:
  - (i) types of emergencies planned for; and
  - (ii) agencies involved in the plan; and
  - (iii) role and responsibility of each agency; and
  - (iv) the emergency operations centre and the command post for each type of emergency; and

- (v) information on names and telephone numbers of offices or persons to be contacted in the case of a particular emergency; and
  - (vi) a grid map of the aerodrome and its immediate vicinity.
- (c) The emergency plan shall observe human factors principles to ensure optimum response by all participating agencies.

**Note:** Guidance on Human Factors in Aviation Organisations is provided in OTAC 139-28.

- (d) The emergency plan shall contain provisions for testing the effectiveness of the plan and for reviewing the results of any exercise with the aim of improving the plan.
- (e) The emergency plan shall be tested by:
- (i) conducting a full-scale aerodrome emergency exercise at intervals not exceeding two years and partial exercises in the intervening year to ensure that any deficiencies found during the full-scale exercise have been addressed; or
  - (ii) conducting a series of modular tests commencing in the first year and concluding in a full-scale aerodrome emergency exercise at intervals not exceeding three years.
- (f) The emergency plan shall be reviewed after each modular test, full-scale exercise, partial exercise, or after an actual emergency to correct any deficiency found during such exercises or an actual emergency.

**Note:** The purpose of a full-scale exercise is to ensure the adequacy of the plan to cope with different types of emergencies. The purpose of a partial exercise is to ensure the adequacy of the response to individual participating agencies and components of the plan, such as the communications system. The purpose of modular tests is to enable concentrated effort on specific components of established emergency plans.

**Note:** The exercises should rotate based on the time of year and daylight or darkness if applicable and if seasonal changes provide an evident change to the environment.

- (g) If the aerodrome is located close to water and/or swampy areas or difficult terrain, then the emergency plan shall include the testing and assessment of a predetermined response for the appropriate specialist rescue services at regular intervals.
- (h) A fixed emergency operation centre and mobile command post shall be available for use during an emergency.
- (i) The emergency operations centre must be part of the aerodrome facilities and shall be responsible for the overall co-ordination and direction of the emergency response.
- (j) The mobile command must be a facility capable of being moved rapidly to the site of an emergency and shall undertake the local co-ordination of agencies responding to the emergency.

## 190.19 Wildlife Hazard Management

- (a) The aerodrome certificate holder shall establish and maintain a wildlife hazard management programme that represents the size and level of complexity of the aerodrome and takes hazardous species and the level of risk associated with the species and the volume of flight operations.
- (b) The wildlife hazard management programme shall:
  - (i) define procedures to collect information from aircraft operators, aerodrome personnel, and other sources on the presence of wildlife on or in the vicinity of the aerodrome that constitutes a potential hazard to aircraft operations.
  - (ii) define procedures that ensure that personnel undertaking any role in the wildlife hazard management programme are trained and competent.
  - (iii) define procedures that ensure action is taken to decrease the risk to aircraft operations by adopting measures to minimise the likelihood of collisions between wildlife and aircraft.
  - (iv) continuously assess the wildlife strike hazard on and in the vicinity of the aerodrome.

**Note:** Guidance on Bird/Wildlife Management is provided in OTAC 139-6.

## 190.21 Ground Servicing and Vehicle Operations

- (a) The aerodrome certificate holder shall ensure that fire extinguishing equipment is available and suitable for initial intervention in the event of a fuel fire and that trained personnel are readily available during the ground servicing of an aircraft, and that means of rapidly notifying the RFFS are employed in the event of a major fuel spill.
- (b) When refuelling operations are taking place while passengers are embarking, on board or disembarking, the certificate shall ensure that ground equipment is positioned so as to allow the use of a sufficient number of exits for expeditious evacuation and a ready escape route is provided from each exit to be used in an emergency.
- (c) The aerodrome certificate holder shall:
  - (i) ensure any vehicle operated on a manoeuvring area is authorised by the Aerodrome Air Traffic Service Unit.
  - (ii) ensure any vehicle operated within the aerodrome boundary is authorised by the appropriate designated authority.
  - (iii) ensure the driver of a vehicle complies with all instructions, markings and signs including those conveyed by lights unless otherwise authorised by:
    - (1) the aerodrome Air Traffic Service Unit when on the manoeuvring area; or

- (2) the appropriately designated authority when operating within the aerodrome boundary.
- (iv) ensure that drivers of any vehicle do not operate:
  - (1) unless they are trained and competent; and
  - (2) unless they establish and maintain two-way radio communication with the aerodrome control tower before entering the manoeuvring area; and
  - (3) unless they have the appropriate authority.

### 190.23 Disabled Aircraft Removal

- (a) The aerodrome certificate holder shall establish a plan for the removal of an aircraft disabled on or adjacent to the movement area and a coordinator designated to implement the plan when necessary.
- (b) The removal plan must be based on characteristics of the aircraft that may normally be expected to operate at the aerodrome and include:
  - (i) a list of equipment and personnel on, or in the vicinity of, the aerodrome which is available for such a purpose; and
  - (ii) arrangements for the rapid receipt of aircraft recovery equipment available from other sources.

### 190.25 Aerodrome Maintenance

- (a) The aerodrome certificate holder shall establish a maintenance programme, including preventative maintenance, to maintain facilities in a condition which does not impair the safety, regularity or efficiency of air navigation.

**Note:** Preventive maintenance is programmed maintenance work done in order to prevent a failure or degradation of facilities.

- (b) The design and application of the maintenance programme must observe human factors principles.

**Note:** Guidance on Human Factors is provided in OTAC 139-28.

- (c) The surfaces of all movement areas, including pavements (runways, taxiways and aprons) and adjacent areas, shall be inspected and their conditions monitored regularly as part of an aerodrome preventive and corrective maintenance programme with the objective of avoiding and eliminating any FOD that might cause damage to aircraft or impair the operation of aircraft systems.
- (d) The surface of a runway shall be maintained in a condition such as to prevent the formation of harmful irregularities.
- (e) A paved runway shall be maintained in a condition so as to provide surface friction characteristics at or above the minimum friction level shown in Table 190-1.

- (f) Runway surface friction characteristics for maintenance purposes shall be measured periodically with continuous friction measuring devices using self-wetting features and documented. The frequency of these measurements shall be sufficient to determine the trend of the surface friction characteristics of the runway.

**Note:** The objective of measuring the runway surface friction characteristics for the entire runway is to ensure that it remains at or above a minimum friction level.

- (g) When runway surface friction measurements are made for maintenance purposes using a self-wetting continuous friction measuring device, the performance of the device shall meet the standard set in Table 190-1.
- (h) Personnel measuring runway surface friction shall be trained and competent to perform their duties.
- (i) Corrective maintenance action shall be taken by the certificate holder to prevent the runway surface friction characteristics for either the entire runway or a portion thereof from falling below the minimum friction level.
- (j) The runway surface shall be visually assessed, as necessary, under natural or simulated rain conditions for ponding or poor drainage, and where required, corrective maintenance taken.

**Note:** A portion of the runway in the order of 100 metres long may be considered significant for maintenance or reporting action. Consideration should be given to the overall length of the runway and other operational conditions when assessing maintenance issues.

- (k) Taxiway shoulders shall be maintained so as to be free of any loose stones or other objects that could be ingested by the aeroplane engines if a taxiway is used by turbine-engines aeroplanes.
- (l) Snow, slush, ice, standing water, mud, dust, sand, oil, rubber deposits, and other contaminants shall be removed from the surface of runways in use as rapidly and completely as possible to minimise accumulation.
- (m) Taxiways shall be kept clear of contaminants to the extent necessary to enable aircraft to be taxied to and from an operational runway.
- (n) Aprons shall be kept clear of contaminants to the extent necessary to enable aircraft to manoeuvre safely or, where appropriate, to be towed or pushed.
- (o) Whenever the clearance of snow, slush, ice, etc., from the various parts of the movement area, cannot be carried out simultaneously, the order of priority after the runway(s) in use shall be set in consultation with the affected parties such as rescue and firefighting service and documented in a snow plan.
- (p) Chemicals to remove or prevent the formation of ice and frost on aerodrome pavements shall be used when conditions indicate their use could be effective. Caution must be exercised in applying the chemicals so as not to create a more slippery condition.

- (q) Chemicals which may have harmful effects on aircraft or pavements or chemicals which may have toxic effects on the aerodrome environment shall not be used.

**Note:** Guidance on Runway Pavement Characteristics and Maintenance is provided in OTAC 139-23.

**Note:** Information on the use of chemicals for aerodrome pavements is given in the PANS-Aerodromes (Doc 9981).

**Table 190-1 Runway Surface Condition Levels**

Test equipment	Tyre type and Pressure(Kpa)		Speed(km/h)	Water Depth (mm)	Design Objective	Maintenance Planning level	Minimum Friction Level
Mu-metre	A	70	65	1.0	0.72	0.52	0.42
	A	70	95	1.0	0.66	0.38	0.26
Skiddometer	B	210	65	1.0	0.82	0.60	0.50
	B	210	95	1.0	0.74	0.47	0.34
Surface Friction Tester Vehicle	B	210	65	1.0	0.82	0.60	0.50
	B	210	95	1.0	0.74	0.47	0.34
Runway Friction Tester Vehicle	B	210	65	1.0	0.82	0.60	0.50
	B	210	95	1.0	0.74	0.54	0.41
TATRA Friction Tester Vehicle	B	210	65	1.0	0.76	0.57	0.48
	B	210	95	1.0	0.67	0.52	0.42
RUNAR Trailer	B	210	65	1.0	0.69	0.52	0.45
	B	210	95	1.0	0.63	0.42	0.32
Griptester	C	140	65	1.0	0.74	0.53	0.43
	C	140	95	1.0	0.64	0.36	0.24

## 190.27 Runway Pavement Overlays

**Note:** If a temporary ramp or overlay between old and new runway surfaces is required during the runway pavement overlay project, and the runway is temporarily returned to an operational status before resurfacing is complete, the certificate holder shall comply with the requirements of this subsection.

- (a) The longitudinal slope of the temporary ramp, measured with reference to the existing runway surface or previous overlay course, shall be:

- (i) 0.5% to 1.0% for overlays up to and including 5cm in thickness; and
  - (ii) Not more than 0.5% for overlays more than 5cm in thickness.
- (b) Overlaying shall proceed from one end of the runway toward the other end so that based on runway utilisation, most aircraft operations will experience a down ramp.
  - (c) The entire width of the runway shall be overlaid during each work session.
  - (d) Before the runway being overlaid is returned to a temporary operational status, a runway centre line marking conforming to the specifications in OTAR Part 191 shall be provided. The location of any temporary threshold shall be identified by a 3.6-metre-wide transverse stripe.
  - (e) The overlay shall be constructed and maintained above the minimum friction level specified in Table 190-1.

## 190.29 Maintenance of Visual Aids

- (a) The aerodrome certificate holder shall maintain a system of preventative maintenance of visual aids to ensure lighting and marking system reliability in addition to the requirements in section 190.27.
- (b) A light shall be deemed to be unserviceable when the main beam average intensity is less than 50 per cent of the value specified in the appropriate figure in OTAR 191. For light units where the designed main beam average intensity is above the value shown in OTAR Part 191, the 50 per cent value shall be related to that design value.
- (c) The aerodrome certificate holder shall employ a system of preventative maintenance for a precision approach runway category I that has objectives that ensure during any period of category I operations, all approach and runway lights are serviceable and that, in any event, at least 85 per cent of the lights are serviceable in each of the following:
  - (i) precision approach category I lighting system;
  - (ii) runway threshold lights;
  - (iii) runway edge lights; and
  - (iv) runway end lights.

**Note:** In order to provide continuity of guidance, an unserviceable light shall not be permitted adjacent to another unserviceable light unless the light spacing is significantly less than that specified. In barrettes and crossbars, guidance is not lost by having two adjacent unserviceable lights.

- (d) The aerodrome certificate holder shall employ a system of preventative maintenance for a runway meant for take-off in runway visual range conditions of a value of 500m or greater and shall have an objective that, during any period of operations, all runway lights are serviceable and that, in any event, at least 85 per cent of the lights are serviceable in the runway edge lights and runway end lights.

## 190.31 Condition of the Movement Area and Related Facilities

- (a) The aerodrome certificate holder shall provide the appropriate Aeronautical Information Service (AIS) with information on the condition of the movement area and the operational status of related facilities and similar information of operational significance to the air traffic service unit. The information must be kept up to date, and any changes in conditions be reported without delay. The information must enable those units to provide the necessary information to arriving and departing aircraft.
- (b) The aerodrome certificate holder shall monitor the condition of the movement area and the operational status of related facilities. The certificate holder shall provide a report on matters of operational significance affecting aircraft and aerodrome operations and appropriate action taken in respect of the following:
  - (i) construction or maintenance work; and
  - (ii) rough or broken surfaces on a runway, a taxiway or an apron; and
  - (iii) water, snow, slush, ice, or frost on a runway, a taxiway or an apron; and
  - (iv) anti-icing or de-icing liquid chemicals or other contaminants on a runway, taxiway or apron; and
  - (v) snowbanks or drifts adjacent to a runway, a taxiway or an apron; and
  - (vi) other temporary hazards, including parked aircraft; and
  - (vii) failure or irregular operation of part or all of the aerodrome visual aids; and
  - (viii) failure of the normal or secondary power supply.

**Note:** Other contaminants may include mud, dust, sand, volcanic ash, oil and rubber.

- (c) The operator of an aerodrome where the reference code is one or two shall carry out inspections of the movement area at least once per day.
- (d) The operator of an aerodrome where the reference code is three or four shall inspect the movement area at least twice per day.
- (e) The aerodrome operator shall inspect the runway whenever the runway surface conditions may have changed significantly due to meteorological conditions.
- (f) The aerodrome operator shall ensure that personnel assessing and reporting runway surface conditions required by 190.32 (b) and 190.32(g) are trained and competent to perform their duties.
- (g) The aerodrome operator shall assess the runway condition whenever water, snow, slush, ice or frost is present on an operational runway. The assessment shall be in the form of a Runway Condition Report (RCR), which assigns a Runway Condition Code (RWYCC) that is based on the type, depth, and coverage of contaminants.



- (h) The runway surface condition shall be described using the following terms:

COMPACTED SNOW  
DRY  
DRY SNOW  
DRY SNOW ON TOP OF COMPACTED SNOW  
DRY SNOW ON TOP OF ICE  
FROST  
ICE  
SLUSH  
STANDING WATER  
WATER ON TOP OF COMPACTED SNOW  
WET  
WET ICE  
WET SNOW  
WET SNOW ON TOP OF COMPACTED SNOW  
WET SNOW ON TOP OF ICE  
CHEMICALLY TREATED  
LOOSE SAND

**Note:** The terms Chemically Treated and Loose Sand do not appear in the aeroplane performance section but are used in the situational awareness section of the runway condition report.

- (i) Whenever an operational runway is contaminated, an assessment of the contaminant depth and coverage over each third of the runway shall be made and reported.

**Note:** Guidance on Global Reporting Format and reporting of the runway surface condition is provided in OTAC130-30.

**Note:** Additional guidance is provided in PANS Aerodromes (Doc 9981)

- (j) When friction measurements are used as part of the overall runway surface assessment on compacted snow or ice-covered surfaces, the friction measuring device shall meet a standard acceptable to the Governor.
- (k) Friction measurements made on runway surface conditions with contaminants other than compacted snow and ice must not be reported.

**Note:** Friction measurements on loose contaminants such as snow and slush, in particular, are unreliable due to drag effects on the measurement wheel.

- (l) When a paved runway or portion thereof, is slippery wet, the aerodrome operator shall make such information available to the relevant aerodrome users. This shall be done by issuing a NOTAM and shall describe the location of the affected portion.
- (m) When a paved runway or portion thereof is at or below the minimum friction level defined in Table 190-1, the aerodrome operator shall make such information available to the relevant aerodrome users. This shall be done by issuing a NOTAM and shall describe the location of the affected portion.

**Note:** The surface friction characteristics of a runway or a portion thereof can be degraded due to rubber deposits, surface polishing, poor drainage or other factors. Determining that a runway or portion thereof is slippery wet stems from various methods used solely or combined. These methods may be functional friction measurements, using a continuous friction measuring device that fall below a minimum standard as defined in Table 190-1, observations by aerodrome maintenance personnel, repeated reports by pilots and aircraft operators based on flight crew experience, or through analysis of aeroplane stopping performance that indicates a substandard surface.

**Note:** Guidance on Runway Pavement Characteristics and Maintenance is provided in OTAC 139-23.

### 190.33 Co-ordination between AIS and Aerodrome Authorities

- (a) The aerodrome certificate holder shall make arrangements with the AIS provider for the provision of pre-flight and in-flight information which satisfies the requirement to update information with minimum delay.
- (b) The certificate holder shall report to the AIS provider information related to:
  - (i) information on the status of certification of the aerodromes and aerodrome conditions as defined by OTAR Part 139, OTAR Part 140, and 191.31; and
  - (ii) the operational status of associated facilities, services and navigation aids within their area of responsibility; and
  - (iii) any other information considered to be of operational significance.
- (c) The aerodrome operator shall give the AIS provider adequate time to prepare and produce the relevant information required by any change to the air navigation system.
- (d) The aerodrome certificate holder shall take the Aeronautical Information Regulation And Control (AIRAC) system into account when considering changes to aeronautical information that affect charts and/or computer-based navigation systems as defined in OTAR 175 and ICAO Annex 15. The predetermined, internationally agreed AIRAC effective dates shall be observed by the responsible aerodrome authority when submitting raw information or data to the AIS provider.
- (e) The aerodrome certificate holder shall ensure that the provision of raw aeronautical information/data provided to the AIS provider is accurate and meets the integrity requirements necessary to meet the needs of the end-user of the aeronautical data.

**Note:** Guidance on the Transition from AIS to AIM is provided in OTAC 139-33.

**Note:** Guidance on Quality Manager Systems is provided in OTAC 139-22.

## **Subpart HE Heliport Operational Services**

### **190.HE.17 General Requirements**

- (a) The heliport operator shall maintain, for compliance by its personnel, a Heliport Manual for the service provided which complies with OTAR Part 139.
- (b) The heliport operator shall maintain compliance with OTAR Part 139, OTAR Part 192, OTAR Part 140 and, where applicable, OTAR Part 191.
- (c) The heliport operator shall ensure the operation is continuously, adequately financed, and resourced.

### **190.HE.19 Emergency Planning and Exercises**

- (a) The heliport operator shall establish and maintain an emergency plan commensurate with the helicopter operations and other activities conducted at the heliport.
- (b) The emergency plan shall identify agencies which could be of assistance in responding to an emergency at the heliport or in the vicinity of the heliport.
- (c) The heliport emergency plan shall provide for the co-ordination of the actions to be taken in the event of an emergency at the heliport or in the vicinity of the heliport.
- (d) If an approach/departure path at a heliport is located over water, the emergency plan shall identify which agency is responsible for co-ordinating rescue in the event of a helicopter ditching and indicate how to contact that agency.
- (e) The plan shall include:
  - (i) the types of emergencies planned for; and
  - (ii) how to initiate the plan for each emergency specified; and
  - (iii) the name of agencies on and off the heliport to contact for each type of emergency with telephone numbers or other contact information; and
  - (iv) the role of each agency for each type of emergency; and
  - (v) a list of pertinent on-heliport services available with telephone numbers or other contact information; and
  - (vi) copies of any written agreements with other agencies for mutual aid and the provision of emergency services; and
  - (vii) a grid map of the heliport and its immediate vicinity.
- (f) The heliport operator shall consult with all identified agencies about their role in the emergency plan.

- (g) The emergency plan shall be reviewed and the information in it updated at least annually or if deemed necessary, after an actual emergency so as to correct any deficiency found during an actual emergency.
- (h) A test of the emergency plan shall be carried out at least once every three years.

### **190.HE.21 Wildlife Hazard Management**

- (a) The heliport operator shall establish and maintain a wildlife hazard management programme that represents the size and level of complexity of the heliport and takes into account hazardous species and the level of risk associated with the species and the volume of flight operations.
- (b) All reasonable measures shall be taken to discourage wildlife from gathering on or in the vicinity of the heliport.
- (c) The heliport operator shall ensure that all personnel tasked with wildlife hazard management duties are trained and competent.

### **190.HE.23 Heliport Maintenance**

- (a) The heliport operator shall establish a maintenance programme, including preventative maintenance, to maintain facilities in a condition which does not impair the safety, regularity or efficiency of air navigation.
- (b) The heliport operator shall ensure the surface of the heliport is fit for purpose and fulfils its design objective, including surfaces intended for helicopter touchdown, taxi or parking and general containment.
- (c) The surface shall be prepared to allow for essential objects, surface loading, and surface friction, and is resistant to rotor downwash and has adequate drainage to prevent water or other contaminants from pooling.

### **190.HE.25 Co-ordination between AIS and Heliport Authorities**

- (a) The aerodrome certificate holder shall make arrangements with the AIS provider for the provision of pre-flight and in-flight information which satisfies the requirement to update information with minimum delay.
- (b) The certificate holder shall report to the AIS provider information related to:
  - (i) information on heliport conditions; and
  - (ii) the operational status of associated facilities, services and navigation/visual aids within the certificate holder's responsibility; and
  - (iii) any other information considered to be of operational significance.
- (c) The heliport operator shall give the AIS provider adequate time to prepare and produce the relevant information required by any change to the air navigation system.

- (d) The certificate holder shall take the aeronautical information regulation and control (AIRAC) system into account when considering changes to aeronautical information that affect charts and/or computer-based navigation systems as defined in OTAR 175 and ICAO Annex 15. The predetermined, internationally agreed AIRAC effective dates shall be observed by the responsible aerodrome authority when submitting raw information or data to the AIS provider.
- (e) The aerodrome certificate holder shall ensure that the provision of raw aeronautical information/data provided to the AIS provider is accurate and meets the integrity requirements necessary to meet the needs of the end-user of the aeronautical data.

**Note:** Guidance on the Transition from AIS to AIM is provided in OTAC 139-33.

**Note:** Guidance on Quality Manager Systems is provided in OTAC 139-22.

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## **Subpart WA.A Water Aerodrome Operational Services**

### **190.WA.17 General Requirements**

- (a) The water aerodrome operator shall maintain, for compliance by its personnel, a Water Aerodrome Manual for the service provided which describes the facilities, physical characteristics and operational procedures of water aerodrome.
- (b) The heliport operator shall maintain compliance with OTAR Part 139, OTAR Part 192, OTAR Part 140 and, where applicable, OTAR Part 191.
- (c) The water aerodrome operator shall ensure the operation is continuously, adequately financed, and resourced.

### **190.WA.19 Emergency Planning**

- (a) The certificate holder shall form an Emergency Planning Committee to develop and implement emergency planning arrangements and produce an aerodrome emergency plan document for responding to and managing emergencies applicable to the water aerodrome's particular characteristics and operations.
- (b) The emergency plan shall consider:
  - (i) the number of passengers on the largest aircraft that may use the water aerodrome; and
  - (ii) local water and tidal conditions; and
  - (iii) availability of external rescue boats or specialist equipment; and
  - (iv) floatation equipment and rafts; and
  - (v) availability of communication equipment; and
  - (vi) other such matters the Governor considers to be relevant.
- (c) The certificate holder shall define and maintain procedures for co-ordinating the responses of all actions to be taken in the event of an emergency occurring on or in the vicinity of the water aerodrome.
- (d) The certificate holder shall define and maintain procedures for the co-ordination and use of specialist rescue equipment if the water aerodrome is located near a difficult environment/terrain and a significant portion of the approach or departure operations takes place over these areas.
- (e) The certificate holder shall consider human factors principles to ensure optimum response by all agencies participating in emergency situations.
- (f) The certificate holder shall complete a full-scale emergency exercise that tests all the elements of the plan at a frequency acceptable to the Governor.

- (g) The certificate holder shall review the results of the emergency exercise in order to improve its effectiveness.

### **190.WA.21 Wildlife Hazard Management**

- (a) The water aerodrome operator shall establish and maintain a wildlife hazard management programme that represents the size and level of complexity of the water aerodrome and takes account of the hazardous species and the level of risk associated with the species and the volume of flight operations.
- (b) All reasonable measures shall be taken to discourage wildlife from gathering in the movement area and under the anticipated departure and arrival paths.
- (c) The water aerodrome operator shall ensure that all personnel tasked with wildlife hazard management duties are trained and competent.

### **190.WA.23 Water Aerodrome Maintenance**

- (a) The water aerodrome operator shall inspect the movement areas to remove FOD or other hazards during operational hours.
- (b) The certificate holder shall implement a maintenance programme that ensures all markers, buoys, and other infrastructure that supports the operation remains fit for purpose throughout the operational hours of the water aerodrome.