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IT is hereby notified that the Minister of Transport and Infrastructural Development has, in terms of section 79 of the Civil Aviation Act [*Chapter 13:16*], made the following regulations:—

Title

1. These regulations may be cited as the Civil Aviation (Aerodromes) (Amendment) Regulations, 2023 (No. 1).

2. Section 11 of the Civil Aviation (Aerodrome) Regulations, 2018, published in Statutory Instrument 197 of 2018 ("hereinafter called the principal regulations"), is amended by the repeal of subsection (1) and the substitution of the following definitions—

""accident" means an occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which—

(a) person is fatally or seriously injured as a result of—

(i) being in the aircraft;

(ii) direct contact with any part of the aircraft, including parts which have become detached from the aircraft; or

(iii) direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew;

or

(b) the aircraft sustains damage or structural failure which—

(i) adversely affects the structural strength, performance or flight characteristics of the aircraft; and

(ii) will normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome);

or

(c) the aircraft is missing or is completely inaccessible—

"accuracy" means a degree of conformance between the estimated or measured value and the true value;

"aerodrome" means 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" means an aeronautical beacon used to indicate the location of an aerodrome from the air;

"aerodrome certificate" means a certificate issued by the Authority under Part VI of these regulations for the operation of an aerodrome;

"aerodrome elevation" means the elevation of the highest point of the landing area;

"aerodrome facilities and equipment" means facilities and equipment, inside or outside the boundaries of an aerodrome that are constructed or installed and maintained for the arrival, departure and surface movement of aircraft;

"aerodrome identification sign" means a sign placed on an aerodrome to aid in identifying the aerodrome from the air;

"aerodrome licence" means a licence to operate an aerodrome issued by the Authority under Part VII of these regulations for the operation of an aerodrome;

"aerodrome manual" means the manual that forms part of the application for a licence or a certificate under these regulations, including any amendments to the manual, approved by the Authority;

"Aerodrome mapping data - (AMD)" means data collected for the purpose of compiling aerodrome mapping information for aeronautical uses;

"Aerodrome mapping database - (AMDB)" means a collection of aerodrome mapping data organised and arranged as a structured data set;

"aerodrome operator" in relation to a certified or licensed aerodrome, means, the holder of an Aerodrome certificate or licence;

"aerodrome reference code" means a code used for planning purposes to classify an aerodrome with respect to the critical aircraft characteristics for which the aerodrome is intended;

"aerodrome reference point" means the designated geographical location of an aerodrome;

"aerodrome standards" means standards prescribed by the Authority applicable to aerodromes;

"aerodrome traffic density" means—

(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;

"aerodrome traffic zone" means the airspace extending from aerodrome level to a height of two thousand feet over the area comprising the aerodrome and the surrounding land or water within a distance of two thousand yards of its boundaries;

"aeronautical beacon" means 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" means any light provided as an aid to air navigation, other than a light displayed on an aircraft;

"Aeronautical Information Circular – (AIC)" means a notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the

Aeronautical Information Publication, but which relates to flight safety, air navigation, technical, administrative or legislative matters;

"Aeronautical Information Publication – (AIP)" means an aeronautical information publication of a lasting character essential to air navigation, issued by the Authority;

"aeroplane reference field length" means 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 certificating authority or equivalent data from the aeroplane manufacturer. Field length means balanced field length for aeroplane, where applicable, or take-off distance in other cases;

"Air Traffic Service – (ATS)" means a flight information service, alerting service, air traffic advisory service, or air traffic control service;

"air traffic service unit" is a generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office;

"Aircraft Classification Number (ACN)" means a number expressing the relative effect of an aircraft on a pavement for a specified standard sub grade category;

"Aircraft Classification Rating (ACR)" means a number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category;

"aircraft stand" means a designated area on an apron intended to be used for parking an aircraft;

"ADP" means airside driver permit;

"apron" means a defined area, on an aerodrome, intended to accommodate aircraft for purposes of loading or unloading of passengers, mail or cargo, fuelling, parking or maintenance;

"apron management service" means a service provided to regulate the activities and the movement of aircraft and vehicles on an apron;

"arresting system" means a system designed to decelerate an aeroplane overrunning the runway;

"Autonomous runway incursion warning system - (ARIWS)" means 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" means a landing manoeuvre that is unexpectedly discontinued at any point below the obstacle clearance altitude/ height (OCA/H);

"barrette" means 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" means discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day;

"certificate" means the certificate to operate an aerodrome issued by the Authority under these regulations;

"certified aerodrome" means an aerodrome whose operator has been granted an Aerodrome Certificate;

"clearway" means a defined rectangular area under the control of the appropriate authority selected or prepared as a suitable area over which an aircraft may make a portion of its initial climb to a specified height;

"controlled aerodrome" means an aerodrome where air traffic services are provided;

"critical aircraft" means the most demanding aircraft with regard to the aircraft performance and dimensions for a range of aircraft, for which the aerodrome facilities is intended;

"cross wind component" means the surface wind component at right angles to the runway centre line;

"Cyclic Redundancy Check (CRC)" means a mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data;

"dangerous goods" means articles or substances which are capable of posing a risk to health, safety, property or the environment;

"data accuracy" means a degree of conformance between the estimated or measured value and the true value;

"data quality" means 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;

"data integrity (assurance level)" means a degree of assurance that an aeronautical data and its value has not been lost or altered since the origination or authorised amendment;

"datum" means any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities;

"declared distance" means—

(a) accelerate-stop distance available (ASDA) which is the length of the take-off run available plus the length of the stop way, where provided;

(b) landing distance available (LDA) which is the length of the runway which is declared available and suitable for the ground run of an aircraft landing;

(c) take-off distance available (TODA) which is the length of the take-off run available plus the length of the clearway, where provided;

(d) take-off run available (TORA) which is the length of runway declared available and suitable for the ground run of an aircraft taking off;

"dependent parallel approaches" means simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are prescribed;

"displaced threshold" means a threshold not located at the extremity of a runway;

"effective intensity" means the effective intensity of a flashing light is equal to the intensity of a fixed light of the same colour which shall produce the same visual range under identical conditions of observation;

"Ellipsoid height (Geodetic height)" means the height related to the reference ellipsoid,

measured along the ellipsoidal outer normal through the point in question;

"fixed light" means a light having constant luminous intensity when observed from a fixed point;

"Foreign Object Debris (FOD)" means 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" means an object of low mass designed to break, distort or yield on impact so as to present the minimum hazard to aircraft;

"Geodetic datum" means a minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system or frame;

"geoid" means the equipotential surface in the gravity field of the earth which coincides with the undisturbed Mean Sea Level extended continuously through the continents;

"geoid undulation" means the distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid;

"Gregorian calendar" means calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar Geographic information — Temporal schema (In the Gregorian calendar, common years have 365 days and leap years 366 days divided into twelve sequential months);

"hazard beacon" means an aeronautical beacon used to designate a danger to air navigation;

"heliport" means an aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters;

"holding bay" means a defined area where aircraft can be held, or bypassed, to facilitate efficient surface movement of aircraft;

"holdover time" means 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" means 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 factor principles" means 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" means human capabilities and limitations, which have an impact on the safety and efficiency of aeronautical operations;

"identification beacon" means an aeronautical beacon emitting a coded signal by means of which a particular point of reference can be identified;

"incident" means an occurrence other than an accident associated with the operation of an aircraft, which affect or may affect the safety of operation of aircraft;

"independent parallel approaches" means simultaneous approaches to parallel or

near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are not prescribed;

"independent parallel departures" means simultaneous departures from parallel or near-parallel instrument runways;

"instrument runway" means one of the following types of runways intended for the operation of aircraft using instrument approach procedures—

(a) non-precision approach runway means a runway served by visual aids and non-visual aids intended for landing operations following an instrument approach operation type A and a visibility not less than 1 000m;

(b) precision approach runway, category I means 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 60m (200ft.) and either a visibility not less than 800m or a runway visual range not less than 550m;

(c) precision approach runway, category II means 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 60m (200ft.) but not lower than 30m (100ft.) and a runway visual range not less than 300m;

(d) precision approach runway category III means 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 30m (100ft.), or no decision height and a runway visual range not less than 300m or no runway visual range limitations;

"integrity (aeronautical data)" means a degree of assurance that an aeronautical data and its value has not been lost nor altered since the data origination or authorised amendment;

"integrity classification (aeronautical data)" means 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 will 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 will 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 will be severely at risk with the potential for catastrophe;

"intermediate holding position" means a designated position intended for traffic control at which taxiing aircraft and vehicles stop and hold until they are cleared to proceed, when so instructed by the aerodrome control tower;

"landing area" means that part of a movement area intended for the landing or take-off of aircraft;

"landing direction indicator" means a device to indicate visually the direction currently designated for landing and take-off;

"Laser-beam Critical Flight Zone (LCFZ)" means an 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)" means an 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)" means an 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;

"licence" means a licence to operate an aerodrome issued by the Authority under these regulations;

"lighting system reliability" means the probability that the complete installation operates within the specified tolerances and that the system is operationally usable;

"manoeuvring area" means that part of an aerodrome to be used for the take-off,

landing and taxiing of aircraft, excluding aprons;

"marker" means an object displayed above ground level in order to indicate an obstacle or delineate a boundary;

"marking" means a symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information;

"movement area" means that part of the aerodrome to be used for take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and apron;

"near-parallel runways" means non-intersecting runways whose extended centre lines have an angle of convergence/divergence of 15 degrees or less;

"notify" means shown in Aeronautical Information Publications, Aeronautical Information Circulars, NOTAM, civil aviation publications or any other official publication issued for the purpose of enabling any of the provisions of these Regulations to be complied with;

"non-instrument runway" means 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;

"normal flight zone (NFZ)" means 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" means any fixed (whether temporary or permanent) and mobile object, or part thereof, that—

(a) is located on an area intended for the surface movement of aircraft; or

(b) extends above a defined surface intended to protect aircraft in flight; or

(c) stands outside those defined surfaces and that has been assessed as being a hazard to air navigation;

"Obstacle Free Zone (OFZ)" means the airspace above the inner approach surface, inner transitional surfaces, the 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;

"obstacle limitation surfaces" means a series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacles in order to permit the intended aircraft operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome;

"orthometric height" means height of a point related to the geoid, generally presented as an MSL elevation;

"Outer main gear wheel span (OMGWS)" means the distance between the outside edges of the main gear wheels;

"operator" means a person operating an aerodrome licensed or certificated under these regulation;

"Pavement Classification Number (PCN)" means a number expressing the bearing strength of a pavement for unrestricted operations;

"Pavement Classification Rating (PCR)" means a number expressing the bearing strength of a pavement;

"precision approach runway" refers to an instrument runway which excludes a non-precision approach runway;

"primary runway" means runway used in preference to others whenever conditions permit;

"protected flight zones" means an airspace specifically designated to mitigate the hazardous effects of laser radiation;

"recommended practice" means any specification for the physical characteristics configuration, material, performance or procedure, the uniform application of which is recognised as desirable in the interest of safety, regularity or efficiency of international air navigation;

"road" means an established surface route on the movement area meant for the exclusive use of vehicles;

"road holding position" means a designated position at which vehicles may be required to hold;

"runway" means a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft;

"runway condition assessment matrix (RCAM)" means a matrix allowing the assessment of the runway condition code, using associated procedures, from a set of observed runway surface condition(s) and pilot report of braking action;

"Runway Condition Code (RWYCC)" means a number describing the runway surface condition to be used in the runway condition report;

"Runway condition report (RCR)" means a comprehensive standardised report relating to runway surface conditions and its effect on the aeroplane landing and take-off performance;

"Runway surface condition(s)" means a description of the condition(s) of the runway surface used in the runway condition report which establishes the basis for the determination of the runway condition code for aeroplane performance purposes as follows—

(a) dry runway. A runway is considered dry where its surface is free of visible moisture and not contaminated within the area intended to be used;

(b) wet runway. The runway surface is covered by any visible dampness or water up to and including 3mm deep within the intended area of use;

(c) slippery wet runway. A wet runway where the surface friction characteristics of a significant portion of the runway has been determined to be degraded;

(d) contaminated runway. A runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the runway surface condition descriptors;

"Runway end safety area (RESA)" means an area symmetrical about the extended runway centreline and adjacent to the end of the strip primarily intended to reduce the risk

of damage to an aircraft undershooting or overrunning the runway;

"Runway guard lights" means a light system intended to caution pilots or vehicle drivers that they are about to enter an active runway;

"Runway-holding position" means a designated position intended to protect a runway, an obstacle limitation surface, or an Instrument Landing System/Microwave Landing System critical or sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorised by the aerodrome control tower;

"runway strip" means a defined area including the runway and stop way, where 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" means 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)" means the range over which a 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" means a state in which the risk of harm to persons or of property damage is reduced to, and maintained at or below unacceptable level through a continuing process or hazard identification and risk management;

"Safety management system (SMS)" means a systematic approach to managing safety including the necessary organisational structure, accountabilities, policies and procedures;

"segregated parallel operations" means simultaneous operations on parallel or near-parallel instrument runways in which one runway is used exclusively for approaches and the other runway is used exclusively for departures;

"shoulder" means an area adjacent to the edge of a pavement, prepared to provide a transition between the pavement and the adjacent surface;

"sign" means—

(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" means an area on an aerodrome used for the display of ground signals;

"standard" means any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognised as necessary for the safety of air navigation;

"state safety programme" means an integrated set of regulations and activities aimed at improving safety;

"station declination" means an alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated;

"stop way" means a defined rectangular area on the ground at the end of the 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)" means the time required for the actual intensity of a light measured in a given direction to fall from 50 per cent and recover to 50 per cent during a power supply change-over, when the light is being operated at intensities of 25 per cent or above;

"take-off runway" means a runway intended for take-off only;

"taxiway" means 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 taxi lane which is a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only;

(b) apron taxiway which is 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 which is a taxiway connected to a runway at an acute angle and designed to allow landing aircrafts to turn off at higher speeds than are achieved on other exit taxiways thereby minimising runway occupancy times;

"taxiway intersection" means a junction of two or more taxiways;

"taxiway strip" means an area including a taxiway intended to protect aircraft operating on a taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway;

"threshold" means the beginning of that portion of the runway usable for landing;

"touchdown zone" means the portion of a runway beyond the threshold, intended for landing aircraft on first contact with the runway;

"unserviceable area" means a part of the movement area that is unfit and unavailable for use by aircraft;

"usability factor" means the percentage of time during which the use of a runway or system of runways is not restricted because of the cross-wind component (cross wind component means the surface wind component at right angles to the runway centre line);

"vicinity" means a defined airspace around an aerodrome for control of obstacles that may infringe the obstacle limitation surfaces around the aerodrome, contained within a radius of thirteen kilometres from the aerodrome reference point up to a height of one thousand five hundred feet above ground level;

"visual traffic pattern" means the aerodrome traffic zone of the aerodrome;

"WIP" means Work in Progress;

"wildlife" means feral birds and animals, including domestic animals out of the control of their owners;

"wildlife hazard" means a potential for a damaging aircraft collision with wildlife on or near an aerodrome; and

"WHMP" means Wildlife Hazard Management Programme.".

3. The principal regulations are amended in section 15 by the deletion of subsection (5).

4. The principal regulations are amended in section 16 by the deletion of subsection (5).

5. The principal regulations are amended in section 20 by the deletion of subsection (7).

6. The principal regulations are amended in section 28 by the deletion of subsection (4).

7. The principal regulations are amended in section 30 by the deletion of subsection (7).

8. The principal regulations are amended in section 33 by the deletion of subsection (5).

9. The principal regulations are amended in section 36 by the deletion of subsection (6).

10. The principal regulations are amended in section 37 by the deletion of subsection (2).

11. The principal regulations are amended in section 39 by the deletion of subsection (9).

12. The principal regulations are amended in section 43 by the deletion of subsection (4).

13. The principal regulations are amended in section 44 by the deletion of subsection (8).

14. The principal regulations are amended in section 53 by the deletion of subsection (2).

15. The principal regulations are amended in section 54 by the deletion of subsection (2).

16. The principal regulations are amended in section 55 by the deletion of subsection (4).

17. The principal regulations are amended in section 56 by the deletion of subsection (6).

18. The principal regulations are amended in section 57 by the deletion of subsection (2).

19. The principal regulations are amended in section 58 by the deletion of subsection (5).

20. The principal regulations are amended in section 59 by the deletion of subsection (3).

21. The principal regulations are amended in section 60 by the deletion of subsection (3).

22. The principal regulations are amended in section 61 by the deletion of subsection (3).

23. The principal regulations are amended in section 63 by the deletion of subsection (3).

24. The principal regulations are amended in section 64 by the deletion of subsection (2).

25. The principal regulations are amended in section 65 by the deletion of subsection (3).

26. The principal regulations are amended in section 66 by the deletion of subsection (2).

27. The principal regulations are amended in section 67 by the deletion of subsection (2).

28. The principal regulations are amended in section 68 by the deletion of subsection (3).

29. The principal regulations are amended in section 69 by the deletion of subsection (3).

30. The principal regulations are amended in section 68 by the deletion of subsection (3).

31. The principal regulations are amended in section 69 by the deletion of subsection (3).

32. The principal regulations are amended in section 70 by the deletion of subsection (2).

33. The principal regulations are amended in section 76 by the deletion of subsection (4).

34. The principal regulations are amended in section 78 by the deletion of subsection (2).

35. The principal regulations are amended in section 79 by the deletion of subsection (3).

36. The principal regulations are amended in section 80 by the deletion of subsection (14).

37. The principal regulations are amended in section 82 by the deletion of subsection (8).

38. The principal regulations are amended in section 88 by the deletion of subsection (7).

39. The principal regulations are amended in section 91 by the deletion of subsection (2).

40. The principal regulations are amended in section 92 by the deletion of subsection (4).

41. The principal regulations are amended in section 97 by the deletion of subsection (6).

42. The principal regulations are amended in section 102 by the deletion of subsection (6).

43. The principal regulations are amended in section 104 by the deletion of subsection (2).

44. The principal regulations are amended in section 110 by the deletion of subsection (9).

45. The principal regulations are amended in section 112 by the deletion of subsection (5).

46. The principal regulations are amended in section 113 by the deletion of subsection (4).

47. The principal regulations are amended in section 114 by the deletion of subsection (3).

48. The principal regulations are amended in section 116 by the deletion of subsection (9).

49. The principal regulations are amended in section 117 by the deletion of subsection (5).

50. The principal regulations are amended in section 118 by the deletion of subsection (9).

51. The principal regulations are amended in section 119 by the deletion of subsection (3).

52. The principal regulations are amended in section 120 by the deletion of subsection (4).

53. The principal regulations are amended in section 121 by the deletion of subsection (11).

54. The principal regulations are amended in section 122 by the deletion of subsection (3).

55. The principal regulations are amended in section 123 by the deletion of subsection (8).

56. The principal regulations are amended in section 124 by the deletion of subsection (2).

57. The principal regulations are amended in section 125 by the deletion of subsection (6).

58. The principal regulations are amended in section 126 by the deletion of subsection (7).

59. The principal regulations are amended in section 127 by the deletion of subsection (2).

60. The principal regulations are amended in section 129 by the deletion of subsection (9).

61. The principal regulations are amended in section 131 by the deletion of subsection (4).

62. The principal regulations are amended in section 132 by the deletion of subsection (4).

63. The principal regulations are amended in section 133 by the deletion of subsection (3).

64. The principal regulations are amended in section 134 by the deletion of subsection (7).

65. The principal regulations are amended by the deletion of section 151.

66. The principal regulations are amended in the First Schedule by the deletion of Form F and substitution of the following—

"**Airport certificate**

CIVIL AVIATION ACT [*CHAPTER 13:16*]

THE CIVIL AVIATION (AERODROMES) REGULATIONS, 2018

AERODROME CERTIFICATE

In exercise of the powers conferred by the Civil Aviation Act and in accordance with Part VI of the Civil Aviation (Aerodromes) Regulations 2018, the Director Flight Safety and Standards through delegated powers from the Director General of Civil Aviation hereby certifies the aerodrome mentioned below to be used as a **Category XX** aerodrome subject to the conditions/restrictions listed overleaf.

Interim Aerodrome Certificate No.:	**Date**:
Name of Aerodrome:	
Location of Aerodrome:	**Critical Aircraft**:
Aerodrome Elevation:	**Runway(s) Orientation**:
Runway(s) Dimensions:	**Runway(s) Surface**:
Aerodrome Reference Code:	**PCN**:
Hours of Operation:	**Fire Category**:
Name and Address of Aerodrome Operator:	
City/Town:	**County**:

This Aerodrome Certificate is not transferable and shall remain in force unless amended, suspended or cancelled.

_____

Director Flight Safety and Standards."

67. The Second Schedule of the principal regulations is amended by the deletion of Table 1 and substitution of the following—

"**Table 1: Aerodrome Reference Code**

Code element 1	
Code number	Aeroplane reference field length
1	Less than 800 m
2	800 m up to but not including 1 200 m
3	1 200 m up to but not including 1 800 m
4	1 800 m and over

Code element 2	
Code letter	Wingspan
A	Up to but not including 15 m
B	15 m up to but not including 24 m
C	24 m up to but not including 36 m
D	36 m up to but not including 52 m
E	52 m up to but not including 65 m
F	65 m up to but not including 80 m

Note.— Guidance on planning for aeroplanes with wingspans greater than 80 m is given in the ICAO Aerodrome Design Manual *(Doc 9157), Parts 1 and 2."*

68. The principal regulations are amended in the Fifth Schedule—

(a) by the repeal of paragraph 1.2;

(b) by the deletion of paragraph 2.3 and substitution of the following—

"2.3 Airport design and master plan

2.3.1 Every aerodrome operator shall submit a master plan containing detailed plans for the development of aerodrome infrastructure for approval by the Authority.

2.3.2 A master plan submitted to the Authority in terms of section 2.3.1 represents the development plan of a specific aerodrome and it shall be developed by the aerodrome operator based on, among other factors, economic feasibility, traffic forecasts, and current and future requirements provided by, among others, aircraft operators.

2.3.3 A master plan may be required when the lack of capacity at an airport, due to conditions such as, but not limited to expected traffic growth, changing weather and climatic conditions or major works to address safety or environmental concerns, would put the connectivity of a geographical area at risk or cause severe disruption to the air transport network.

2.3.4 A master plan shall—

(a) contain a schedule of priorities including a phased implementation plan; and

(b) be reviewed periodically to take into account current and future aerodrome traffic;

(c) provide data to facilitate the planning process which includes—

(i) future aircraft types;

(ii) characteristics and numbers of aircraft expected to be used;

(iii) anticipated growth of aircraft movements; and

(iv) number of passengers and amount of cargo projected to be handled.

2.3.5 In developing a master plan an aerodrome operator shall consult stakeholders particularly aircraft operators.

2.3.6 The aerodrome operator shall ensure that architectural and infrastructure-related requirements for the optimum implementation of international civil aviation security measures are integrated into the design and construction of new facilities and alterations to existing facilities at an aerodrome.

2.3.7 The design of aerodromes shall take into account land-use and environmental control measures.".

(c) by the deletion of paragraph 2.2.2 and insertion of the following—

"*2.2.2 Aerodrome reference code*

2.2.2.1 An aerodrome reference code (code number and letter) which is selected for aerodrome planning purposes shall be determined by the Authority in accordance with the characteristics of the aeroplane for which an aerodrome facility is intended.

2.2.2.2 The aerodrome reference code numbers and letters shall have the meanings assigned to them in Table 1–1.

2.2.2.3 The code number for element 1 shall be determined from Table 1 selecting the code number corresponding to the highest value of the aeroplane reference field lengths of the aeroplanes for which the runway is intended.

2.2.2.4 The code letter for element 2 shall be determined from Table 1 by selecting the code letter which corresponds to the greatest wingspan of the aeroplanes for which the facility is intended.

Table 1 Aerodrome reference code

Table 1: Code Number

Code Element 1	
Code number (1)	Aerodrome reference field length (2)
1	Less than 800 m
2	800 m up to but not including 1 200 m
3	1 200 m up to but not including 1 800 m
4	1 800 m and over

Table 1: Code Letter

Code Element 2	
Code letter	Wingspan
A	Up to but not including 15 m
B	15 m up to but not including 24 m
C	24 m up to but not including 36 m
D	36 m up to but not including 52m
E	52 m up to but not including 65 m
F	65 m up to but not including 80 m

(d) by the deletion of Table 7–1 and substitution of the following—

"Table 7–1. Taxiway minimum separation distances

Distance between taxiway centre line and runway centre line (metres)												
Code letter	Instrument				Non-instrument runways code number				Taxiway centreline to taxiway centre line (metres)	Taxiway, other than aircraft stand taxilane, centre line to object (metres)	Aircraft stand taxilane centre line to aircraft stand taxilane centre line (metres)	Aircraft stand taxilane centre line to object
	1	2	3	4	1	2	3	4				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
A	77.5	77.5	-	-	37.5	47.5	-	-	23	15.5	19.5	12
B	82	82	152	-	42	52	87	-	32	20	28.5	16.5
C	88	88	158	158	48	58	93	93	44	26	40.5	22.5
D	-	-	166	166	-	-	101	101	63	37	59.5	33.5
E	-	-	172.5	172.5	-	-	107.5	107.5	76	43.5	72.5	40
F	-	-	180	180	-	-	115	115	91	51	87.5	47.5

(e) by the deletion of paragraph 6.2.6 and substitution of the following—

"6.2.6 Strength of pavements until 27th November, 2024

6.2.6.1 The provisions of this section are applicable until 27th November, 2024.

6.2.6.2 The aerodrome operator shall determine the bearing strength of a pavement.

6.2.6.3 An aerodrome operator shall that the bearing strength of a pavement intended for aircraft of apron (ramp) mass greater than 5 700 kg is made available using the aircraft classification number — pavement classification number (ACN-PCN) method by reporting all of the following information—

(a) the pavement classification number (PCN);

(b) pavement type for ACN-PCN determination;

(c) subgrade strength category;

(d) maximum allowable tire pressure category or maximum allowable tire pressure value; and

(e) evaluation method.

6.2.6.4 The PCN reported shall indicate that an aircraft with an ACN equal to or less than the reported PCN can operate on the pavement subject to any limitation on the tire pressure, or aircraft all-up mass for specified aircraft type.

6.2.6.5 Different PCNs may be reported where the strength of the pavement is subject to significant seasonal variation.

6.2.6.6 The ACN of an aircraft shall be determined in accordance with the standard procedures associated with the ACN-PCN method.

6.2.6.7 For the purposes of determining the ACN, the behaviour of a pavement shall be classified as equivalent to a rigid or flexible construction.

6.2.6.8 Information on pavement type for ACN-PCN determination, subgrade strength category, maximum allowable tire pressure category and evaluation method shall be reported using the following codes—

(a) Pavement type for ACN-PCN determination—

	Code
Rigid pavement	R
Flexible pavement	F

(b) Subgrade strength category	Code
High strength: characterised by K = 150 MN/m3 and representing all K values above 120 MN/m3 for rigid pavements, and by CBR = 15 and representing all CBR values Above 13 for flexible pavements.	A
Medium strength: characterised by K = 80 MN/m3 and representing a range in K of 60 to 120 MN/m3 for rigid pavements, and by CBR = 10 and representing a range in CBR of 8 to 13 for flexible pavements.	B
Low strength: characterised by K = 40 MN/m3 and representing a range in K of 25 to 60 MN/m3 for rigid pavements, and by CBR = 6 and representing a range in CBR of 4 to 8 for flexible pavements.	C
Ultra-low strength: characterised by K = 20 MN/m3 and representing all K values below 25 MN/m3 for rigid pavements, and by CBR = 3 and representing all CBR values below 4 For flexible pavements.	D

(c) Maximum allowable tire pressure category—

	Code
Unlimited: no pressure limit	W
High: pressure limited to 1.75 MPa	X
Medium: pressure limited to 1.25 MPa	Y
Low: pressure limited to 0.50 MPa	Z

(d) Evaluation method—

	Code
Technical evaluation: representing a specific study of the pavement characteristics and application of pavement behaviour technology.	T
Using aircraft experience: representing a knowledge of the specific type and mass of Aircraft satisfactorily being supported under regular use.	U

6.2.6.9 The following examples shall be used to illustrate how pavement strength data are reported under the ACN-PCN method—

(a) Where the bearing strength of a rigid pavement, resting on a medium strength subgrade, has been assessed by technical evaluation to be PCN 80 and there is no tire pressure limitation, then the reported information shall be:

PCN 80 / R / B / W / T

(b) Where the bearing strength of a composite pavement, behaving like a flexible pavement and resting on a high strength subgrade, has been assessed by using aircraft experience to be PCN 50 and the maximum tire pressure allowable is 1.25 MPa, then the reported information shall be:

PCN 50 / F / A / Y / U

(c) Where the bearing strength of a flexible pavement, resting on a medium strength subgrade, has been assessed by technical evaluation to be PCN 40 and the maximum allowable tire pressure is 0.80 MPa, then the reported information shall be:

PCN 40 / F / B / 0.80 MPa /T

(d) Where a pavement is subject to a B747-400 all-up mass limitation of 390 000 kg, then the reported information shall include a note to the effect that the reported PCN is subject to a B747-400 all-up mass limitation of 390 000 kg.

6.2.6.10 An aerodrome operator in coordination with the Authority shall establish the criteria to regulate the use of a pavement by an aircraft with an ACN higher than the PCN reported for that pavement in accordance with subsections (2) and (3).

6.2.6.11 The bearing strength of a pavement intended for aircraft of apron (ramp) mass equal to or less than 5 700 kg shall be made available by reporting the following information—

(a) maximum allowable aircraft mass; and

(b) maximum allowable tire pressure.

e.g.: 4 000 kg/0.50 MPa.

Strength of pavements

6.2.6.12 The provisions of this section shall be applicable from 28 November 2024.

6.2.6.13 The aerodrome operator shall determine the bearing strength of a pavement.

6.2.6.14 The bearing strength of a pavement intended for aircraft of apron (ramp) mass greater than 5 700 kg shall be made available using the aircraft classification rating — pavement classification rating (ACR-PCR) method by reporting all of the following information—

(a) the PCR and numerical value;

(b) pavement type for ACR-PCR determination;

(c) subgrade strength category;

(d) maximum allowable tire pressure category or maximum allowable tire pressure value; and

(e) evaluation method.

6.2.6.15 The PCR reported shall indicate that an aircraft with an ACR equal to or less than the reported PCR can operate on the pavement subject to any limitation on the tire pressure, or aircraft all-up mass for specified aircraft type.

6.2.6.16 The ACR of an aircraft shall be determined in accordance with the standard procedures associated with the ACR-PCR method.

6.2.6.17 For the purposes of determining the ACR, the behaviour of a pavement shall be classified as equivalent to a rigid or flexible construction.

6.2.6.18 Information on pavement type for ACR-PCR determination, subgrade strength category, maximum allowable tire pressure category and evaluation method shall be reported using the following codes—

(a) Pavement type for ACR-PCR determination—

	Code
Rigid pavement	R
Flexible pavement	F

Subgrade strength category	Code
High strength: characterised by E = 200 MPa, and representing all E values equal to or above 150 MPa for rigid and flexible pavements	A
Medium strength: characterised by E = 120 MPa and representing a range in E values equal to or above 100 MPa and strictly less than 150 MPa, for rigid and flexible pavements.	B
Low strength: characterised by E = 80 MPa and representing a range in E values equal to or above 60 MPa and strictly less than 100 MPa, for rigid and flexible pavements.	C
Ultra-low strength: characterised by E = 50 MPa and representing all E values strictly less than 60 MPa, for rigid and flexible pavements.	D

(b) Maximum allowable tire pressure category:

	Code
Unlimited: no pressure limit	W
High: pressure limited to 1.75 MPa	X
Medium: pressure limited to 1.25 MPa	Y
Low: pressure limited to 0.50 MPa	Z

(c) Evaluation method:

	Code
Technical evaluation: representing a specific study of the pavement characteristics and the types of aircraft which the pavement is intended to serve.	T

	Code
Using aircraft experience: representing a knowledge of the specific type and mass of Aircraft satisfactorily being supported under regular use.	U

6.2.6.19 The following examples shall be used to illustrate how pavement strength data are reported under the ACR-PCR method—

(a) where the bearing strength of a rigid pavement, resting on a medium strength subgrade, has been assessed by technical evaluation to be PCR 760 and there is no tire pressure limitation, then the reported information shall be:

PCR 760 / R / B / W / T

(b) where the bearing strength of a composite pavement, behaving like a flexible pavement and resting on a high strength subgrade, has been assessed by using aircraft experience to be PCR 550 and the maximum tire pressure is 1.25 MPa, then the reported information shall be:

PCR 550 / F / A / Y / U

6.2.6.20 An aerodrome operator may, with the approval of the Authority, establish the criteria to regulate the use of a pavement by an aircraft with an ACR higher than the PCR reported for that pavement in accordance with subsections (2) and (3).

6.2.6.21 The bearing strength of a pavement intended for aircraft of apron (ramp) mass equal to or less than 5 700 kg shall be made available by reporting the following information:

(a) maximum allowable aircraft mass; and

(b) maximum allowable tire pressure.

Example: 4 800 kg/0.60 MPa."

(f) by the deletion of paragraph 6.2.9 and substitution of the following—

" 6.2.9 Condition of movement area and related facilities

6.2.9.1 The aerodrome operator shall provide information on the condition of the movement area and the operational status of related facilities to the appropriate aeronautical information services units, and similar information of operational significance to the air traffic services units, to enable those units to provide the necessary information to arriving and departing aircraft.

6.2.9.2 The information referred to in section (6.2.9.1) shall be kept up to date and changes in conditions reported without delay.

6.2.9.3 The aerodrome operator shall monitor the condition of the movement area and the operational status of related facilities, and provide reports on matters of operational significance affecting aircraft and aerodrome operations to Aeronautical information Service provider and air traffic control unit in order to take appropriate action in respect of at least the following—

(a) construction or maintenance work;

(b) rough or broken surfaces on a runway, a taxiway or an apron;

(c) water on a runway, a taxiway or an apron;

(d) anti-icing or de-icing liquid chemicals or other contaminants on a runway, taxiway or apron such as mud, dust, sand, volcanic ash, oil and rubber;

(e) snow banks or drifts adjacent to a runway, a taxiway or an apron;

(f) other temporary hazards, including parked aircraft;

(g) failure or irregular operation of part or all of the aerodrome visual aids; and

(h) failure of the normal or secondary power supply.

6.2.9.4 An aerodrome operator shall carry out the following inspections each day—

(a) for the movement area, at least once where the code number is 1 or 2 and at least twice where the code number is 3 or 4;

(b) for the runway, in addition to (a) whenever the runway surface conditions may have changed significantly due to meteorological conditions.

6.2.9.5 The aerodrome operator shall ensure that personnel assessing and reporting runway surface conditions required in sections (6.2.9.2) and (6.2.9.6) shall be trained and competent personnel to perform such duties.

6.2.9.6 Aerodrome operator shall assess and report through the runway surface condition through a runway condition code (RWYCC) and a description using the following terms—

(a) compacted snow;

(b) dry;

(c) dry snow;

(d) dry snow on top of compacted snow;

(e) dry snow on top of ice;

(f) frost;

(g) ice;

(h) slush;

(i) standing water;

(j) water on top of compacted snow;

(k) wet;

(l) wet ice;

(m) wet snow;

(n) wet snow on top of compacted snow;

(o) wet snow on top of ice;

(p) chemically treated;

(q) loose sand.

6.2.9.7 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.

6.2.9.8 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 the standard set or agreed by the State.

6.2.9.9 Information that a runway or portion thereof is slippery wet shall be made available.

6.2.9.10 Notification shall be given to relevant aerodrome users when the friction level of a paved runway or portion thereof is less than the minimum friction level specified by the Authority."

(g) by the deletion of paragraph 7.2.1.10 and substitution of the following—

"7.2.1.10.1 The width of a runway shall not be less than the appropriate dimension specified in the following tabulation—

	Outer Main Gear Wheel Span (OMGWS)			
Code number	Up to but not including 4.5	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
1[a]	18 m	18 m	23 m	–
2a	23 m	23 m	30 m	–
3	30 m	30 m	30 m	45 m
4	–	–	45 m	45 m

a. The width of a precision approach runway shall be not less than 30 m where the code number is 1 or 2.

7.2.1.10.2 The width of a precision approach runway shall be not less than 30 m where the code number is 1 or 2."

(h) by the deletion of paragraph 7.2.2.3 and substitution of the following—

"7.2.2.3 For aeroplanes with OMGWS from 9 m up to but not including 15 m, the runway shoulders shall extend symmetrically on each side of the runway so that the overall width of the runway and its shoulders is not less than—

(a) 60 m where the code letter is D or E;

(b) 60 m where the code letter is F with two- or three-engined aeroplanes; and

(c) 75 m where the code letter is F with four (or more)-engined aeroplanes."

(i) by the deletion of paragraph 7.2.3.6 and substitution of the following—

"7.2.3.6 The design of a runway turn pad shall be such that, when the cockpit of the aircraft for which the turn pad is intended remains over the turn pad marking, the clearance distance between any wheel of the aircraft landing gear and the edge of the turn pad shall be not less than that given by the following tabulation—

OMGWS				
	Up to but not including 4.5m	4.5m up to but not including 6m	6m up to but not including 9m	9m up to but not including 15m
Clearance	1.50 m	2.25 m	3 m[a] or 4 m[b]	4 m
[a] Where the turn pad is intended to be used by aeroplanes with a wheelbase less than 18 m.				
[b] Where the turn pad is intended to be used by aeroplanes with a wheelbase equal to or greater than 18 m."				

(j) by the repeal of paragraph 7.2.3.7.

(k) by the deletion of paragraph 7.2.4.7 and substitution of the following—

"7.2.4.7 No fixed object, other than visual aids required for air navigation or those required for aircraft safety purposes and which must be sited on the runway strip, and satisfying the relevant frangibility requirement, shall not be permitted on any part of a runway strip of a precision approach runway delineated by the lower edges of the inner transitional surfaces.

7.2.4.7.1 No mobile objects shall be permitted on this part of the runway strip during the use of the runway for landing or take-off."

(l) by the deletion of paragraph 7.2.4.3 and 7.2.4.4 and substitution of the following—

"*Width of runway strips*

7.2.4.3 A strip including a precision approach runway shall, wherever practicable, extend laterally to a distance of at least—

(a) 140 m where the code number is 3 or 4; and

(b) 70 m where the code number is 1 or 2;

on each side of the centre line of the runway and its extended centre line throughout the length of the strip.

7.2.4.4 A strip including a non-precision approach runway shall extend laterally to a distance of at least—

(a) 140 m where the code number is 3 or 4; and

(b) 70 m where the code number is 1 or 2;
on each side of the centre line of the runway and its extended centre line throughout the length of the strip."

(m) by the deletion of paragraph 7.2.6.3 and substitution of the following—

"7.2.6.3 A clearway shall extend laterally on each side of the extended centre line of the runway, to a distance of at least—

(a) 75 m for instrument runways; and

(b) half of the width of the runway strip for non-instrument runways."

(n) by the deletion of 7.2.9.3 and substitution of the following—

"7.2.9.3 The design of a taxiway shall be such that, when the cockpit of the aeroplane for which the taxiway is intended remains over the taxiway centre line markings, the clearance distance between the outer main wheel of the aeroplane and the edge of the taxiway shall not be less than that given by the following tabulation—

	OMGWS			
	Up to but not including 4.5	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
Clearance	1.50 m	2.25 m	3 m[a, b] or 4m[c]	4 m

[a] On straight portions.

[b] On curved portions where the taxiway is intended to be used by aeroplanes with a wheelbase of less than 18 m.

[c] On curved portions where the taxiway is intended to be used by aeroplanes with a wheel base equal to or greater than 18 m."

(o) by the deletion of 7.2.9.5 and substitution of the following—

"7.2.9.5 A straight portion of a taxiway shall have a width of not less than that given by the following tabulation—

	OMGWS			
Clearance	Up to but not including 4.5	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
Taxiway width	7.5 m	10.5 m	15 m	23m";

(p) by the deletion of 7.2.10.1 and 7.2.10.2 and substitution of the following—

"7.2.10.1 Straight portions of a taxiway where the code letter is C, D, E or F shall be provided with shoulders which extend symmetrically on each side of the taxiway so that the overall width of the taxiway and its shoulders on straight portions is not less than—

(a) 44 m where the code letter is F;

(b) 38 m where the code letter is E;

(c) 34 m where the code letter is D; and

(d) 25 m where the code letter is C.".

7.2.10.2 Where increased pavement is provided on taxiway curves and on junctions or intersections, the shoulder width shall be not less than that on the adjacent straight portions of the taxiway."

"7.2.10.3 Where a taxiway is intended to be used by turbine-engine aeroplanes, the surface of the taxiway shoulder shall be so prepared as to resist erosion and the ingestion of the surface material by aeroplane engines."

(q) by the deletion of 7.2.11.4 and substitution of the following—

"7.2.11.4 The centre portion of a taxiway strip shall provide a graded area to a distance from the centre line of the taxiway of not less than that given by the following tabulation—

(a) 10.25 m where the OMGWS is up to but not including 4.5 m;

(b) 11 m where the OMGWS is 4.5 m up to but not including 6 m;

(c) 12.50 m where the OMGWS is 6 m up to but not including 9 m;

(d) 18.50 m where the OMGWS is 9 m up to but not including 15 m, where the code letter is D;

(e) 19 m where the OMGWS is 9 m up to but not including 15 m, where the code letter is E; and

(f) 22 m where the OMGWS is 9 m up to but not including 15 m, where the code letter is F."

(r) by the deletion of paragraphs 7.2.12.6, 7.2.12.7, 7.2.12.8 and substitution of the following—

"7.2.12.6 The distance between a holding bay, runway-holding position established at a taxiway or runway intersection or road-holding position and the centre line of a runway shall be in accordance with Table 7.2 and, in the case of a precision approach runway, such that a holding aircraft or vehicle shall not interfere with the operation of radio navigation aids or penetrate the inner transitional surface.

7.2.12.7 At elevations greater than 700 m (2 300 ft.) the distance of 90 m specified in Table 7.2 for a precision approach runway code number 4 shall be increased as follows—

(a) up to an elevation of 2 000 m (6 600 ft.); 1 m for every 100 m (330 ft.) in excess of 700 m (2 300 ft.);

(b) elevation in excess of 2 000 m (6 600 ft.) and up to 4 000 m (13 320 ft.); 13 m plus 1.5 m for every 100 m (330 ft.) in excess of 2 000 m (6 600 ft.); and

(c) elevation in excess of 4 000 m (13 320 ft.) and up to 5 000 m (16 650 ft.); 43 m plus 2 m for every 100 m (330 ft.) in excess of 4 000 m (13 320 ft.).

7.2.12.8 Where a holding bay, runway-holding position or road-holding position for a precision approach runway code number 4 is at a greater elevation

compared to the threshold, the distance specified in Table 7.2 shall be further increased 5 m for every metre the bay or position is higher than the threshold.

7.2.12.9 The location of a runway-holding position established in accordance with section 7.2.12.8 shall be such that a holding aircraft or vehicle shall not infringe the obstacle free zone, approach surface, take-off climb surface or ILS or MLS critical or sensitive area or interfere with the operation of radio navigation aids.

Table 7.2 Minimum distance from the runway centre line to a holding bay, runway-holding position or road-holding position

Type of Runway	Code Number			
	1	2	3	4
Non-instrument	30 m	40 m	75 m	75 m
Non-precision approach	40 m	40 m	75 m	75 m
Precision approach category I	60 m[b]	60 m[b]	90 m[a,b]	90 m[a,b]
Precision approach category II and III	–	–	90 m[a,b]	90 m[a,b]
Take-off runway	30 m		75	

7.2.12.10 Where a holding bay, runway-holding position or road-holding position is at a lower elevation compared to the threshold, the distance may be decreased 5 m for every metre the bay or holding position is lower than the threshold, contingent upon not infringing the inner transitional surface.

7.2.12.11 The distance referred to in section 7.2.12.10 may need to be increased to avoid interference with radio navigation aids, particularly the glide path and localiser facilities."

(s) by the deletion of Table 8-1 in section 8.2.2 and insertion of the following—

"Table 8-1 – Dimensions and slopes of obstacle limitation surfaces

APPROACH RUNWAYS

Surfaces and Dimensions[a]	RUNWAY CLASSIFICATION										
	Non-instrument I				Non-precision approach II or III			Precision approach Category			
	Code number				Code number			Code number		Code number	
	1	2	3	4	1,2	3	4	1,2	3,4	3,4	
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
CONICAL											
Slope	5%		5%	5%	5%	5%	5%	5%	5%	5%	5%
Height	35 m		55 m	75 m	100 m	60 m	75 m	100 m	60 m	100 m	100 m
INNER HORIZONTAL											
Height	45 m		45 m	45 m	45 m	45 m	45 m	45 m	45 m	45 m	45 m
Radius	2 000 M		2 500 m	4 000 M	4 000 M	3 500 M	4 000 m	4 000 m	3 500 m	4 000 M	4 000 M
INNER APPROACH											
Width	-		-	-	-	-	-	-	90 m	120 m[c]	120 m[c]
Distance from Threshold	-		-	-	-	-	-	-	60 m	60 m	60 m
Length	-		-	-	-	-	-	-	900 m	900 M	900 M
Slope	-		-	-	-	-	-	-	2.5%	2%	2%
APPROACH											
Length of inner edge	60m		80m	150m	150m	140m	280 m	280m	140m	280m	280m
Distance from threshold	30m		60m	60m	60m	60m	60m	60m	60m	60m	60m
Divergence (each side)	10%		10%	10%	15%	15%	15%	15%	15%	15%	15%
First section											
Length	1 600 M		2 500 m	3 000 M	3 000 M	2 500 M	3 000 m	3 000 m	3 000 m	3 000 M	3 000 M
Slope	5%		4%	3.33%	2.5%	3.33%	2%	2%	2.5%	2%	2%

(a) All dimensions are measured horizontally unless specified otherwise.

(b) Variable length.

(c) Distance to the end of strip.

(d) Or end of runway whichever is less.

(e) Where the code letter is F (Column (3) of Table 2-1 of these regulations, the width is increased to 140 m except for those aerodromes that accommodate a code letter F aeroplane equipped with digital avionics that provide steering commands to maintain an established track during the go-around manoeuvre.".

(t) by the insertion of a new paragraph after 9.2.1.1 as follows—

"9.2.1.2 The Aerodrome operator shall ensure that the specifications for markings, lights, signs, markers, signaling devices and aerodrome indicators meet the national requirements as prescribed by the Authority.".

(u) by the deletion of paragraph 9.2.3.19.1 and substitution of the following—

"9.2.3.19.1 A stop bar shall be provided at every runway-holding position serving a runway when it is intended that the runway shall be used in runway visual range conditions less than a value 550 m, except where—

(a) appropriate aids and procedures are available to assist in preventing inadvertent incursions of traffic onto the runway; or

(b) operational procedures exist to limit, in runway visual range conditions less than a value of 550 m, the number of—

(i) aircraft on the manoeuvring area to one at a time; and

(ii) vehicles on the manoeuvring area to the essential minimum.".

(v) by the repeal of paragraphs 9.2.3.22.1 to 9.2.3.22.18 and substitution of the following—

"Runway guard lights

9.2.3.22.1 Runway guard lights, Configuration A, shall be provided at each taxiway or runway intersection associated with a runway intended for use in—

(a) runway visual range conditions less than a value of 550 m where a stop bar is not installed; and

(b) runway visual range conditions of values between 550 m and 1 200 m where the traffic density is heavy.

9.2.3.22.2 As part of runway incursion prevention measures, runway guard lights, Configuration A or B, shall be provided at each taxiway or runway intersection where runway incursion hot spots have been identified, and used under all weather conditions during day and night.

9.2.3.22.3 Configuration B runway guard lights shall not be co-located with a stop bar.

9.2.3.22.3 Where more than one runway-holding positions exist at a runway or taxiway intersection, only the set of runway guard lights associated with the operational runway-holding position shall be illuminated.

9.2.3.22.4 Runway guard lights, Configuration A, shall be located at each side of the taxiway on the holding side of the runway-holding position marking.

9.2.3.22.5 Runway guard lights, Configuration B, shall be located across the taxiway on the holding side of the runway-holding position marking.

9.2.3.22.6 Runway guard lights, Configuration A, shall consist of two pairs of yellow lights.

9.2.3.22.7 Where there is a need to enhance the contrast between the on and off state of runway guard lights, Configuration A, intended for use during the day, a visor of sufficient size to prevent sunlight from entering the lens without interfering with the function of the fixture shall be located above each lamp.

9.2.3.22.8 Runway guard lights, Configuration B, shall consist of yellow lights spaced at intervals of 3 m across the taxiway.

9.2.3.22.9 The light beam shall be unidirectional and shall show yellow in the direction of approach to the runway-holding position.

9.2.3.22.10 The intensity in yellow light and beam spreads of lights of Configuration A shall be as prescribed by the Authority.

9.2.3.22.11 Where runway guard lights are intended for use during the day, the intensity in yellow light and beam spreads of lights of Configuration A shall be as prescribed by the Authority.

9.2.3.22.12 Where runway guard lights are specified as components of an advanced surface movement guidance and control system where higher light intensities are required, the intensity in yellow light and beam spreads of lights of Configuration A shall be as prescribed by the Authority.

9.2.3.22.13 The intensity in yellow light and beam spreads of lights of Configuration B shall be as prescribed by the Authority.

9.2.3.22.14 Where runway guard lights are intended for use during the day, the intensity in yellow light and beam spreads of lights of Configuration B shall be as prescribed by the Authority.

9.2.3.22.15 Where runway guard lights are specified as components of an advanced surface movement guidance and control system where higher light intensities are required, the intensity in yellow light and beam spreads of lights of Configuration B shall be as prescribed by the Authority.

9.2.3.22.16 The lights in each unit of Configuration A shall be illuminated alternately.

For Configuration B, adjacent lights shall be alternately illuminated and alternative lights shall be illuminated in unison.

9.2.3.22.17 The lights shall be illuminated between 30 and 60 cycles per minute and the light suppression and illumination periods shall be equal and opposite in each light.".

(w) by the deletion of paragraphs 9.2.3.28.1 to 9.2.3.28.8 and substitution of the following—

"No-entry bar

9.2.3.28.1 A no-entry bar shall—

(a) be provided across a taxiway which is intended to be used as an exit only taxiway to assist in preventing inadvertent access of traffic to that taxiway;

(b) be located across the taxiway at the end of an exit only taxiway where it is desired to prevent traffic from entering the taxiway in the wrong direction;

(c) be co-located with a no-entry sign or a no-entry marking;

(d) consist of unidirectional lights spaced at uniform intervals of no more than 3 m showing red in the intended direction(s) of approach to the runway.

9.2.3.28.2 A pair of elevated lights shall be added to each end of the no-entry bar where the in pavement no entry bar lights might be obscured from a pilot's view, for example, by snow or rain, or where a pilot may be required to stop the aircraft in a position so close to the lights that they are blocked from view by the structure of the aircraft.

9.2.3.28.3 The intensity in red light and beam spreads of no-entry bar lights shall be as prescribed by the Authority.

9.2.3.28.4 Where no-entry bars are specified as components of an advanced surface movement guidance and control system and where, from an operational point of view, higher intensities are required to maintain ground movements at a certain speed in very low visibilities or in bright daytime conditions, the intensity in red light and beam spreads of no-entry bar lights shall be as prescribed by the Authority.

9.2.3.28.5 Where a wide beam fixture is required, the intensity in red light and beam spreads of no-entry bar lights shall as prescribed by the Authority.

9.2.3.28.6 Taxiway centre line lights installed beyond the no-entry bar, looking in the direction of the runway, shall not be visible when viewed from the taxiway.".

(x) by the deletion of Table 9-4 and substitution of the following—

"Table 9-4 Location distances for taxiing guidance signs including runway exit signs

Sign height (mm)				Perpendicular distance from defined taxiway pavement edge to near side of sign	Perpendicular distance from defined runway pavement edge to near side of sign
Code Number	Legend	Face (min.)	Installed (max)		
1 or 2	200	300	700	5-11 m	3-10 m
1 or 2	300	450	900	5-11 m	3-10 m
3 or 4	300	450	900	11-21 m	8-15 m
3 or 4	400	600	1 100	11-21 m	8-15 m."

(y) by the deletion of paragraphs 9.2.4.3.35 to 9.2.4.3.37 and substitution of the following—

"9.2.4.3.35 A taxiway shall be identified by a designator that is used only once on an aerodrome comprising a single letter, two letters or a combination of a letter or letters followed by a number.

9.2.4.3.36 When designating taxiways, use of words such as "inner" and "outer" shall be avoided wherever possible.

9.2.4.3.37 When designating taxiways, the use of the letters I, O or X shall not be used to avoid confusion with the numerals 1, 0 and closed marking.

9.2.4.3.38 The use of numbers alone on the manoeuvring area shall be reserved for the designation of runways.

9.2.4.3.39 Apron stand designators shall not be the same as taxiway designators.".

(z) by the deletion of paragraph 13.2.2.1 and substitution of the following—

"13.2.2.1 An aerodrome operator shall provide Rescue and firefighting equipment and services at an aerodrome when serving commercial air transport operations.".

(aa) by the deletion of paragraph 13.2.2.23.

(bb) by the deletion of 13.2.9.5 and substitution of the following—

"13.2.9.5 Any equipment or installation required for air navigation or for aircraft safety purposes which must be located on or near a strip of a precision approach runway category I, II or III and which—

(a) is situated within 240 m from the end of the strip and within—

(i) 60 m of the extended runway centre line where the code number is 3 or 4; or

(ii) 45 m of the extended runway centre line where the code number is 1 or 2;

or

(b) penetrates the inner approach surface, the inner transitional surface or the balked landing surface;

shall be frangible and mounted as low as possible."

(cc) by the deletion of Table 13-2 and substitution of the following—

"Table 13–2 Minimum usable amounts of extinguishing agents

	Foam meeting performance level A		Foam meeting performance level B		Foam meeting performance level B		Complementary agents	
Aerodrome Category	Water (L)	Discharge rate foam solution/ minute (L)	Water (L)	Discharge rate foam solution/ minute (L)	Water (L)	Discharge rate foam solution/ minute (L)	Dry Chemical powder (kg)	Discharge Rate kg/ sec
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	350	350	230	230	160	160	45	2.25
2	1 000	800	670	550	460	360	90	2.25
3	1 800	1 300	1 200	900	820	630	135	2.25
4	3 600	2 600	2 400	1 800	1 700	1 100	135	2.25
5	8 100	4 500	5 400	3 000	3 900	2 200	180	2.25
6	11 800	6 000	7 900	4 000	5 800	2 900	225	2.25
7	18 200	7 900	12 100	5 300	8 800	3 800	225	2.25
8	27 300	10 800	18 200	7 200	12 800	5 100	450	4.5
9	36 400	13 500	24 300	9 000	17 100	6 300	450	4.5
10	48 200	16 600	32 300	11 200	22 800	7 900	450	4.5."

(dd) the deletion of paragraph 14.2.2 and substitution of the following—

"14.2.2 Maintenance of pavements and adjacent areas

14.2.2.1 Every aerodrome operator shall at all times ensure that—

(a) the surfaces of all movement areas including pavements (runways, taxiways, and aprons) and adjacent areas are inspected and their conditions monitored regularly as part of an aerodrome preventive and corrective maintenance programme with the objective of avoiding and eliminating any foreign object debris (FOD) that might cause damage to aircraft or impair the operation of aircraft systems;

(b) the surface of the runway is maintained in a condition that precludes formation of harmful irregularities such as water pools and rough surfaces;

(c) a paved runway is maintained in a condition so as to provide surface friction characteristics at or above the minimum friction level specified by the Authority;

(d) runway surface friction characteristics for maintenance purposes is periodically measured with a continuous friction measuring device using self-wetting features and documented. The frequency of these measurements must be sufficient to determine the trend of the surface friction characteristics of the runway;

(e) 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 or agreed by the Authority;

(f) the personnel measuring runway surface friction required in paragraph (e) is trained to fulfil their duties;

(g) corrective maintenance action is taken to prevent the runway surface friction characteristics for either the entire runway or a portion thereof from falling below a minimum friction level specified by the Authority;

(h) the runway surface is visually assessed, as necessary, under natural or simulated rain conditions for ponding or poor drainage and where required, corrective maintenance action taken;

(i) when a taxiway is used by turbine-engine aeroplanes, the surface of the taxiway shoulders shall be maintained so as to be free of any loose stones or other objects that may be ingested by the aeroplane engines.

Removal of contaminants

14.2.2.2 Every aerodrome operator shall ensure that—

(a) snow, slush, ice, standing water, mud, dust, sand, oil, rubber deposits and other contaminants is removed from the surface of runways in use as rapidly and completely as possible to minimise accumulation;

(b) taxiways are kept clear of snow, slush, ice, standing water, mud, dust, sand, oil, rubber deposits and other contaminants, to the extent necessary to enable aircraft to be taxied to and from an operational runway;

(c) aprons are kept clear of snow, slush, ice, standing water, mud, dust, sand, oil, rubber deposits and other contaminants, to the extent necessary to enable aircraft to manoeuvre safely or, where appropriate, to be towed or pushed;

(d) whenever the clearance of snow, slush, ice, standing water, mud, dust, sand, oil, rubber deposits and other contaminants, from the various parts of the movement area cannot be carried out simultaneously, the order of priority after the runways in use are set in consultation

with the affected parties such as rescue and firefighting service and documented in a snow plan;

chemicals which may have harmful effects on aircraft or pavements, or chemicals which may have toxic effects on the aerodrome environment, are not used.

Table 14-1 – Guidelines for establishing the design objective, maintenance planning level and minimum friction levels of runways in use

Test equipment	Test tire		Test speed (km/h)	Test water depth (mm)	Design objective for new surface	Maintenance planning level	Minimum friction level
	Type	Pressure (kPa)					
(1)	(2)		(3)	(4)	(5)	(6)	(7)
Mu-meter Trailer	A	70	65	1.0	0.72	0.52	0.42
	A	70	95	1.0	0.66	0.38	0.26
Skiddometer Trailer	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
GRIPTESTER Trailer	C	140	65	1.0	0.74	0.53	0.43
	C	140	95	1.0	0.64	0.36	0.24