



CIVIL AVIATION SAFETY AUTHORITY OF PNG

PNG

Civil Aviation Rules

Part 1

**Definitions, Abbreviations and Units of
Measurements**

Applicable 13 November 2018

DESCRIPTION

Part 1 contains the definitions and abbreviations used in the Civil Aviation Rules to facilitate the interpretation of those rules.

Part 1 includes -

- Definitions of specific terms used in the Rule Parts
- Abbreviations used in the Rule Parts

BULLETIN

This Part first came into force on 1 January 2004 and now incorporates the following amendments:

Amendment	Effective Date
Amendment 1	1 January 2011
Amendment 2	1 May 2017
Amendment 3	1 February 2018
Amendment 4	13 November 2018

Summary of amendments:

Amendment 4: *New definitions:*

(Docket
18/CAR/1/05)

ADS-C agreement; Aerodrome mapping data (AMD); Aerodrome mapping database (AMDB); Aeronautical information product; Aeronautical mobile service; Airborne collision avoidance system (ACAS); Air traffic management (ATM); Airway; Area navigation route; As soon as practicable; ATS route; Automatic dependent surveillance – broadcast (ADS-B); Automatic dependent surveillance – contract (ADS-C); Automatic terminal information service (ATIS); Base turn; Calender; (CAVOK); changeover point; competency; competency element; competency unit; continuing airworthiness; controller-pilot data link communication (s); credit; critical engine(s); damp lease; data accuracy; data integrity; (assurance level); data link communications; data quality; datum; design landing mass; design take-off mass; design taxiing mass; discreet source damage; dry lease; duty; engine; error; error management; fatigue; final approach; fire resistant; fireproof; fireproof material; flight duty period; flight operations officer/dispatcher; Geodetic datum; Geoid; Geoid undulation; Gregorian calendar; instrument approach operations; instrument ground time; integrity classification; landing surface; limit load; likely; load factor; marking; medical assessor; minimum en-route altitude (MEA); minimum obstacle clearance altitude (MOCA); obstacle clearance altitude (OCA) or obstacle clearance height(OCH); operational control; organisation responsible for type design; performance criteria; pilot(to); pilot-in-command under supervision; powerplant; problematic use of substances; procedure altitude/height; quality; quality assurance; quality control; quality management; quality system; Radio navigation service requirement; safe forced landing; satisfactory evidence; solo flight time; standard atmosphere; State of Manufacture; Station declination; take-off surface; terrain; threat; threat management; traceability; track; type design; unmanned aircraft; unmanned aircraft system; validation; verification; wet lease.

Amended Definitions:

Aeronautical Information Service; AIP Supplement; Approach control office to unit; Instrument runway; METAR; Small aeroplane; SPECI; Terminal Aerodrome Forecast Waypoint.

New Abbreviations:

ACN; AIM; AMD; AMDB; ARIWS; ASE; ATM; CAVOK; CPDLC; CRC; FOD; LCFZ; LFFZ; LSFZ; MEA; MOCA; OCA; OCH; OLS; OMGWS; PAPI; PCN; RFF; TAF.

Additional Units of Measurement:

The use of the
Gregorian
calendar and
Coordinated
Universal Time
(UTC); Symbols.

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1.1 General definitions

In rules made under the Act, unless the context otherwise requires—

Accelerate-stop distance available means the length of the take-off run available plus the length of any stopway:

Accident has the same meaning as in Section 3 of the Act:

Accredited medical conclusion means the conclusion reached, regarding the medical fitness of an applicant for a medical certificate, by one or more medical experts acceptable to the Director for the purposes of the case concerned:

Act means the Civil Aviation Act No. 20 of 2000 as amended from time to time:

Acts of unlawful interference means acts or attempted act such as to jeopardise the safety of civil aviation, including but not limited to:

- (1) unlawful seizure of aircraft,
- (2) destruction of an aircraft in service,
- (3) hostage-taking on board aircraft or on aerodromes,
- (4) forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility,
- (5) introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes,
- (6) use of an aircraft in service for the purpose of causing death, serious bodily injury, or serious damage to property or the environment,
- (7) communication of false information such as to jeopardise the safety of an aircraft in flight or on the ground of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility:

Adequate aerodrome, in relation to EDTO, means an aerodrome that-

- (1) is associated with a Part 139 certificate or meets safety requirements equivalent to such an aerodrome; and
- (2) has suitable facilities and services available, for the aeroplane type concerned, that include-
 - (i) ATC or an aerodrome flight information service; and
 - (ii) a meteorological reporting service; and
 - (iii) at least one instrument approach procedure; and
 - (iv) a visual approach slope indicator system for turbojet and turbofan powered aeroplanes; and
 - (v) sufficient lighting:

ADS-C agreement means a reporting plan which establishes the conditions of ADS-C data reporting (i.e. data required by the air traffic services unit and frequency of ADS-C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services):

Aerial work means an aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc:

Aerobatic flight means—

- (1) an intentional manoeuvre in which the aircraft is in sustained inverted flight or is rolled from upright to inverted or from inverted to upright position; or
- (2) manoeuvres such as rolls, loops, spins, upward vertical flight culminating in a stall turn, hammerhead or whip stall, or a combination of such manoeuvres:

Aerodrome has the same meaning as in Section 3 of the Act:

Aerodrome control service has the same meaning as in Section 3 of the Act:

Aerodrome control tower means a unit established to provide ATC service to aerodrome traffic:

Aerodrome flight information service has the same meaning as in Section 3 of the Act:

Aerodrome incident means an incident involving an aircraft operation and –

- (1) an obstruction either on the aerodrome operational area or protruding into the aerodrome obstacle limitation surfaces; or
- (2) a defective visual aid; or
- (3) a defective surface of manoeuvring area; or
- (4) any other defective aerodrome facility

Aerodrome mapping data (AMD) means data collected for the purpose of compiling aerodrome mapping information:

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

Aerodrome mapping database (AMDB) means a collection of aerodrome mapping data organized and arranged as a structured data set:

Aerodrome operational area means—

- (1) the movement area at an aerodrome and its associated strips and safety areas; and
- (2) any ground installation or facility provided at an aerodrome for the safety of aircraft operations:

Aerodrome operating minima means the limits of usability of an aerodrome for:

- (1) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- (2) landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and
- (3) landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.

Aerodrome traffic has the same meaning as in Section 3 of the Act:

Aerodrome traffic circuit has the same meaning as in Section 3 of the Act:

Aerodrome traffic zone means an airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic:

Aeronautical facility means-

- (1) the various types of communication systems used for an aeronautical broadcasting service, or an aeronautical fixed service, that supports IFR flight or an air traffic service; or
- (2) the ground elements of the various types of communication systems used for an aeronautical mobile service; or
- (3) the various types of radio navigation aids used for the aeronautical radio navigation service; or
- (4) any other type of ground-based telecommunication system that supports IFR flight or an air traffic service; or
- (5) the various types of ground-based telecommunication systems that operate in the aeronautical mobile radio frequency bands and are used to provide basic weather information, local aerodrome information, or flight following services:

Aeronautical Information Circular means a notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the PNGAIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters:

Aeronautical information publication means a publication issued by, or with the authority of, a State and containing aeronautical information of a lasting character essential to air navigation:

Aeronautical information product means aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media.

Aeronautical information products include:

- Aeronautical Information Publication (AIP), including Amendments and Supplements;
- Aeronautical Information Circulars (AIC);
- Aeronautical charts;
- NOTAM; and
- Digital data sets:

Aeronautical information service means a service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation—

Aeronautical mobile service means a mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies:

Aeronautical product has the same meaning as in Section 3 of the Act:

Aeroplane means a power-driven heavier-than-air aircraft deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight:

Aeroplane movement means an aeroplane take-off or landing, including the taxiing associated with take-off or landing:

Agricultural aircraft operation means the operation of an aircraft, on a single flight, or on a series of flights, for one or more of the following purposes:

- (1) dispensing an agricultural chemical:
- (2) dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control:
- (3) engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation:

Agricultural chemical means any substance or mixture of substances intended for—

- (1) preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds or other forms of plant, animal life or viruses (except viruses on or in living man or other animals) which have been declared by the appropriate authority to be a national or regional pest or noxious plant; or
- (2) use as a plant regulator, defoliant or desiccant:

Airborne collision avoidance system (ACAS) means an aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders:

AIRAC means aeronautical information regulation and control, signifying a system aimed at advance notification based on common effective dates, of circumstances that require significant changes in operating practices:

AIP Amendment means permanent changes to the information contained in the PNGAIP:

AIP service means a service for the publication of the PNGAIP, AIP Amendments, AIP Supplements and aeronautical information circulars:

AIP Supplement means temporary changes to the information contained in the PNGAIP which provided by means of special pages:

Aircraft has the same meaning as in Section 3 of the Act:

Aircraft avionics means a term designating any electronic device - including its electrical part - for use in an aircraft, including radio, automatic flight control and instrument systems:

Aircraft category and category of aircraft means any one of the following groups of aircraft: aeroplane, helicopter, glider, and balloon:

Aircraft certificated for single-pilot operation means a type of aircraft which the Director has determined, during the certification process, can be operated safely with the minimum crew of one pilot:

Aircraft component means any component part of an aircraft up to and including a complete airframe or power plant, and includes any operational or emergency equipment fitted to or provided in an aircraft:

Aircraft engine means an engine that is used or intended to be used for propelling aircraft, and includes turbo-superchargers and accessories necessary for its functioning, but does not include propellers:

Aircraft flight manual means the aircraft flight manual referenced in the airworthiness certificate issued for that aircraft under Part 21, Subpart F and includes all amendments approved under Part 21. In the case of a foreign registered aircraft, aircraft flight manual means the aircraft flight manual, including all amendments, approved for that aircraft by the State of registry:

Aircraft incident means any incident, not otherwise classified, associated with an association of an aircraft:

Aircraft radio station means—

- (1) all installed radio equipment including antennae, indicators, controls, interconnecting cabling, and wiring into the aircraft electrical system, which are required in order to perform the intended function; and
- (2) all portable emergency radio equipment required to be carried by Part 91:

Aircraft to be operated with a co-pilot means a type of aircraft that is required to be operated with a co-pilot, as specified in the flight manual or by the air operator certificate:

Airmanship means the consistent use of judgement and well developed knowledge, skills and attitudes to accomplish flight objectives:

Aircraft operating manual means a manual, acceptable to the Director, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft:

Aircraft security check means an inspection of the interior of an aircraft to which passengers may have had access and an inspection of the hold for the purposes of discovering suspicious objects, weapons, explosives or other dangerous devices, articles and substances:

Aircraft security search means a thorough inspection of the interior and exterior of the aircraft for the purpose of discovering suspicious objects, weapons, explosives or other dangerous devices, articles or substances:

Aircraft Tracking means a process, established by the operator, that maintains and updates, at standardized intervals, a ground based record of the four-dimensional position of individual aircraft in flight:

Air operation means a commercial air transport operation:

Air operator certificate means a certificate authorizing an operator to carry out specified commercial air transport operations under Part 119:

Aircraft - type of in relation to the licensing of aviation personnel means all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics:

Air operator security programme means a programme to safeguard an air operator's passengers, crew, ground personnel, aircraft, and facilities from acts of unlawful interference:

Air operation type means an air operation declared to be either international or domestic, fixed wing or rotary, carriage of passengers, or cargo or mail, VFR or IFR, or a combination of any of these for the purpose of operations specifications.

Airside means the movement area of an airport, adjacent terrain and buildings or portions thereof, access to which is controlled.

Airspace incident means an incident involving deviation from, or shortcomings of, the procedures or rules for –

- (1) avoiding a collision between aircraft; or
- (2) avoiding a collision between aircraft and other obstacles when an aircraft is being provided with Air Traffic Service:

Air traffic has the same meaning as in Section 3 of the Act:

Air Traffic Service has the same meaning as in Section 3 of the Act:

Air traffic advisory service means a service provided within class F airspace to ensure separation, as far as practical, between aircraft that are operating on IFR flight plans:

Air traffic control service has the same meaning as in Section 3 of the Act:

Air traffic control unit means a unit for providing any air traffic control service, and includes either an area control centre, an approach control office, or an aerodrome control tower:

Air traffic management (ATM) means the dynamic, integrated management of air traffic and airspace (including air traffic services, airspace management and air traffic flow management) — safely, economically and efficiently — through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions:

Air traffic service has the same meaning as in Section 3 of the Act:

Air traffic services unit means a unit providing an air traffic service, which may include an air traffic control unit and flight information centre;

Airway means a control area or portion thereof established in the form of a corridor:

Airworthiness certificate means—

- (1) for a PNG registered aircraft, an airworthiness certificate issued by the Director under Part 21, Subpart F; and
- (2) for a foreign registered aircraft, an airworthiness certificate issued by the competent authority of the State of registry:

Airworthiness data means any information necessary to ensure that an aircraft or aircraft component can be maintained in an airworthy condition:

Airworthiness directive means a mandatory airworthiness requirement issued under Part 39 that specifies modifications, inspections, conditions, or limitations to be applied to an aircraft or aeronautical product to ensure continued safe operating conditions:

Airworthy means the status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation:

Alerting service means an air traffic service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and to assist such organisations as required:

Alternate aerodrome means an aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or land at the aerodrome of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

- (1) **Take-off alternate.** An alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

- (2) **En-route alternate.** An alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.
- (3) **Destination alternate.** An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Altitude means the vertical distance of a level, a point, or an object considered as a point, measured from mean sea level:

Altimetry system error (ASE) means the difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure:

Amateur built aircraft means an aircraft—

- (1) that is eligible for the issue of a special category airworthiness certificate under Part 21, Subpart F; and
- (2) at least 51% of which is fabricated by the aircraft's amateur constructor:

Amateur constructor means a person who constructs an aircraft solely for their own education or recreation:

Anticipated Operating conditions means those conditions which are known from experience or which can be reasonably envisaged to occur within the life of the aircraft taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of aircraft, to the efficiency of personnel, and to all the factors affecting safety in flight. Anticipated operating conditions do not include:

- (a) those extremes which can be effectively avoided by means of operating procedures; and
- (b) those extremes which occur so infrequently that to require the standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical:

Appropriate airworthiness requirements mean the comprehensive and detailed airworthiness codes, accepted by the Director under Part 21 Appendix B, for a class of aircraft, engine or propeller under consideration:

Appliance means any instrument, mechanism, equipment, part, or accessory that is used, or is intended to be used, in operating or controlling an aircraft in flight, or is installed in or attached to the aircraft, that is not part of the airframe, engine, or propeller:

Approach control unit means a unit established to provide ATC service to controlled flights arriving at, or departing from, one or more aerodromes:

Approach control service has the same meaning as in Section 3 of the Act:

Approved, unless used with reference to another person, means approved in writing by the Director:

Approved maintenance organisation means an organisation approved by the Director, in accordance with the requirements of Part 145, to performed maintenance of aircraft or parts thereof and operating under supervision approved by the Director:

Approved training means training conducted under special curricula and supervision approved by the Director:

Approved training organisation means an organisation approved by and operating under the supervision of the Director in accordance with the requirements of Part 141 to perform approved training:

Apron means a defined area on a land aerodrome intended to accommodate aircraft for the purpose of loading or unloading passengers or cargo, refuelling, parking, or maintenance:

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

Area control centre means a unit established to provide ATC service to controlled flights in control areas under its jurisdiction:

Area control service has the same meaning as in Section 3 of the Act:

Area minimum altitude means a minimum altitude prescribed for a defined area that will provide a safe clearance above all obstacles for aircraft operating under IFR:

Area navigation (RNAV) means a method of navigation which permits aircraft operation on any desired flight path within the coverage of station-referenced navigation aids or within the limits of the capability of self-contained aids, or a combination of these:

Area navigation route means an ATS route established for the use of aircraft capable of employing area navigation:

As soon as practicable means with a minimum of delay and by the most suitable and quickest means possible.

ATC clearance means authorisation for an aircraft to proceed under conditions specified by an air traffic control unit:

ATC instruction means a directive issued by ATC for the purpose of requiring a pilot to take a specific action:

ATS route means a specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services:

ATS surveillance service is a term used to indicate a service provided directly by means of an ATS surveillance system:

ATS surveillance system is a generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft:

ATS unit means a unit established to provide one or more air traffic service:

Augmented crew means the crew on an aeroplane when it is comprised of more than the minimum crew required by the aeroplane certification:

Authorised flight examiner means a person approved by the Director or authorised under these rules to conduct specified flight tests or ZFT simulator tests for flight crew licences or ratings:

Authorised medical examiner means a medical professional appointed by the Director as an authorised representative under Part 183.

Authorised release certificate means a PNG CAA Form One or equivalent document issued by an organisation in accordance with the airworthiness requirements of a Contracting State:

Authorised representative means a person appointed under Part 183 as an authorised representative of the Director.

Authority has the same meaning as in Section 18 of the Act:

Automatic dependent surveillance — broadcast (ADS-B) is a means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link:

Automatic dependent surveillance — contract (ADS-C) is a means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports:

Automatic terminal information service (ATIS) means the automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof and can be delivered via data link or continuous and repetitive voice broadcasts:

Aviation event means an event to be conducted below the minimum safe heights prescribed under Part 91 that is—

- (1) an air show or practice for an air show; or
- (2) an air race or practice for an air race; or
- (3) an aerobatic competition.

Aviation Medical Assessor means a medical practitioner appointed as an Aviation Medical Assessor under 67.05.

Aviation Security Service has the same meaning as in Section 12 (f) of the Act:

Background check means a check of a person's identity and previous experience, including where legally permissible, any criminal history, as part of the assessment of an individual's suitability to implement a security control and/or for unescorted access to a security restricted area.

Baggage means personal property of passengers or crew carried on an aircraft by agreement with the operator, or personal property of passengers or crew that is intended by passengers or crew to be carried on an aircraft:

Balloon means a non-power-driven lighter-than-air aircraft:

Base turn means a turn executed by an aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal:

Basic weather report means a verbal comment, in support of aviation, describing any of the following current weather conditions observed at a particular place or airspace:

- (1) wind direction and strength:
- (2) mean sea level air pressure:
- (3) air temperature:
- (4) weather conditions and cloud cover:

Behaviour detection means the application of techniques, within an aviation security environment, involving the recognition of behavioural characteristics, including but not limited to physiological or gestural signs indicative of anomalous behaviour, to identify persons who may pose a threat to civil aviation:

Broadcast means a transmission intended to be received by all stations:

Bird incident means an incident where –

- (1) there is a collision between an aircraft and one or more birds; or
- (2) when one or more birds pass sufficiently close to an aircraft in flight to cause alarm to the pilot:

Cabin crew member means a crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crewmember.

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

Cargo means any property carried on an aircraft other than mail, stores and baggage:

Carry-on baggage means baggage and any other item that-

- (1) is carried on to an aircraft by a passenger or crew member with the agreement of the operator; and
- (2) remains in the custody of the passenger or crewmember:

Category I precision approach procedure means a precision instrument approach and landing with a decision height not lower than 200 feet and with either a visibility not less than 800 m or a runway visual range not less than 550 m:

Category II precision approach procedure means a precision instrument approach and landing with a decision height lower than 200 feet, but not lower than 100 feet, and a runway visual range not less than 350 m:

Category III precision approach procedure means one of the following precision

instrument approach and landings:

- (1) **Category IIIA:** A precision instrument approach and landing with—
 - (i) a decision height lower than 100 feet or no decision height; and
 - (ii) a runway visual range not less than 200m:
- (2) **Category IIIB:** A precision instrument approach and landing with—
 - (i) a decision height lower than 50 feet or no decision height; and
 - (ii) a runway visual range less than 200 m but not less than 50 m:
- (3) **Category IIIC:** A precision instrument approach and landing with no decision height and no runway visual range limitations:

CAVOK means, in relation to the following conditions occurring simultaneously at the time of observation:

- (a) visibility 10km or more (the lowest visibility is not reported);
- (b) no cloud of operational significance;
- (c) no weather of significance to aviation as given in Annex 3;

Note: Information on visibility, runway visual range, present weather and cloud amount, cloud type and height of cloud base is replaced in all meteorological reports by the term “CAVOK”

Ceiling means the height above ground or water of the base of the lowest layer of cloud below 20 000 feet covering more than half the sky:

Certificated for single pilot operation, in relation to an aircraft, means determined by the State of Registry, during the certification process, to be a type of aircraft that can be operated safely with a minimum crew of one pilot:

Certificated organisation means an organisation issued with a certificate under rules made under the Act

Certificated passenger seating capacity means the maximum passenger seating configuration stated on the aircraft type certificate or any proper modifications thereto including any STC or approved design change.

Change-over point means the point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

Note.— Change-over points are established to provide the optimum balance in respect of signal strength and quality between facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.

Circling approach means an extension of an instrument approach procedure that provides for visual circling of the aerodrome prior to landing:

Civil Aviation Rules means rules made under the Act:

Class 1 microlight aircraft means a microlight aircraft other than a Class 2 microlight aircraft:

Class 2 microlight aircraft means a microlight aircraft designed and equipped to carry 2 persons:

Class 3.1A fuel means a fuel with a flashpoint below 23⁰C and has an initial boiling point (IBP) of a maximum 35⁰C, and includes petrol based products (aviation gasoline):

Class 3.1C fuel means a fuel with a flashpoint at or above 23⁰C but at or below 60⁰C and includes kerosene based-products (aviation turbine grade fuel):

Class 3.1D – Flammable liquid means a liquid that has a flash point of above 60⁰C, but at or below 93⁰C, and include diesel products:

Class B cargo or baggage compartment means a cargo or baggage compartment in which-

- (1) there is sufficient access in flight to enable a crew member to effectively reach any part of the compartment with the contents of a hand fire extinguisher; and
- (2) where the access provisions are being used, no hazardous quantity of smoke, flames, or extinguishing agent, will enter any compartment occupied by the crew or passengers; and
- (3) there is a separate approved smoke detector or fire detector system to give warning at the pilot or flight engineer station:

Clearance limit means the point to which an aircraft is granted an ATC clearance:

Clearway means a defined rectangular area on the ground or water, at the departure end of the runway—

- (1) under the control of the aerodrome operator; or
- (2) with the agreement of the authority controlling the clear way—

selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height:

Combined vision system (CVS) means a system to display images from a combination of an enhanced vision system (EVS) and a synthetic vision system (SVS).

Command practice means the performance by a co-pilot of the duties and functions of a pilot-in-command during a flight under the supervision of a pilot-in-command designated for the purpose by the operator and is synonymous with ICUS:

Company Operator Material (COMAT) means Operator material carried on an operator's aircraft for the operator's own purposes:

Competency means a combination of skills, knowledge and attitudes required to perform a task to the required standard:

Competency element means an action that constitutes a task that has a triggering event and a

terminating event that clearly defines its limit, and an observable outcome:

Competency unit means a discreet function consisting of a number of competency elements:

Commercial air transport operation means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

Component means any instrument, mechanism, equipment, part, or accessory that is used, or is intended to be used, in operating or controlling an aircraft in flight, or is installed in or attached to the aircraft, that has a part number or a serial number allocated by the product manufacturer, unless the manufacturer has designated such an item as a standard part:

Compulsory reporting point means a reporting point, that may be direction or route specific or subject to some other criteria, at which a report to the appropriate controlling authority is mandatory:

Condition monitored maintenance means a maintenance process that monitors maintenance trends, and relies upon analysis of the operating experience of the whole population of specified items to indicate nascent failures requiring corrective action:

Configuration in relation to an aircraft, means a particular combination of the positions of the movable elements, such as wing flaps or landing gear, which affect the aerodynamic characteristics of the aeroplane:

Configuration deviation list (CDL) means a list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction:

Congested area in relation to a city, town, or settlement means any area which is substantially in use for residential, industrial, commercial, or recreational purposes:

Contaminated, in relation to a runway, means more than 25% of the runway surface area within the required length and width is covered by surface water, slush, or loose snow more than 3 millimetres in depth or ice on any part of the runway surface area:

Continuing airworthiness means a set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life:

Continuous descent final approach (CDFA) means a technique, consistent with stabilized approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown:

Contracting State has the same meaning as in Section 3 of the Act:

Control area means a controlled airspace extending upwards from a specified limit above the earth:

Controlled airspace has the same meaning as in Section 3 of the Act:

Controlled flight has the same meaning as in Section 3 of the Act:

Control system means a system by which the flight path, attitude, or propulsive force of an aircraft is changed, including the flight, engine and propeller controls, the related system controls and the associated operating mechanisms.

Controller-pilot data link communications (CPDLC) is a means of communication between controller and pilot, using data link for ATC communications:

Control zone means a controlled airspace extending upwards from the surface of the earth to a specified limit:

Convention has the same meaning as in Section 3 of the Act:

Conversion instruction means instruction for the purposes of familiarisation in the operation of aircraft for which a type rating is required; but does not include instruction or supervision of student pilots nor instruction for the purposes of familiarisation in respect of conversion from fixed-wing to rotary-wing aircraft or from rotary-wing to fixed-wing aircraft:

Co-pilot means a licensed pilot, serving in any piloting capacity other than as pilot-in-command; but does not include a pilot receiving flight instruction from a pilot on board the aircraft:

Credit means recognition of alternative means or prior qualifications:

Crew member has the same meaning as in Section 3 of the Act:

Critical engine(s) means any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under consideration:

Cross-country means a flight which extends more than 25 nautical miles in a straight line distance from the centre of the aerodrome of departure:

Cruise relief pilot means a flight crew member who is assigned to perform pilot tasks during cruise flight, to allow the pilot-in command or a co-pilot to obtain planned rest:

Cruising level means a level maintained during a significant portion of a flight:

Current, in respect of a licence, rating, or medical certificate, means the document is valid and the holder of the document has satisfied all recent experience and medical requirements for the exercise of the privileges:

Damp lease means a wet leased aircraft that includes the cockpit crew but not cabin attendants:

Danger area means an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times:

Dangerous goods means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions:

Dangerous goods accident means an occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property or

environmental damage:

Dangerous goods incident means an occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation, or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants is also deemed to constitute a dangerous goods incident:

Data accuracy means a degree of conformance between the estimated or measured value and true value:

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;

Data link communications means a form of communication intended for the exchange of messages via a data link:

Data quality means a degree of level of confidence that the data provided meets the requirements of the data user in terms of accuracy, resolution and integrity (or equivalent assurance level), traceability, timeliness, completeness and format;

Date of manufacture, in relation to a product, means the date that the product inspection records indicate that the product meets its type design:

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

Day means the hours between the beginning of morning civil twilight and the end of evening civil twilight:

Decision altitude (DA) or **decision height (DH)** means a specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

- (1) Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.
- (2) The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.
- (3) For convenience where both expressions are used they may be written in the form “decision altitude/height” and abbreviated “DA/H”.

Declared distance in relation to a runway means any of the following –

Takeoff runway available;

Takeoff distance available;

Accelerate – stop distance available;

Landing distance available:

Defect incident means an incident that involves failure or malfunction of an aircraft or aircraft component, whether found in flight or on the ground:

Design change means a change to a type design or a change to any other part of a type certificate or type acceptance certificate that if incorporated would require the modification or repair of a product, its components, or an appliance:

Design landing mass means the maximum mass of the aircraft at which, for structural design purposes, it is assumed that it will be planned to land:

Design take-off mass means the maximum mass of the aircraft at which, for structural design purposes, is assumed to be planned to be at the start of the take-off run:

Design taxiing mass means that maximum mass of the aircraft at which structural provision is made for load liable to occur during use of the aircraft on the ground prior to the start of take-off:

Detailed inspection, in respect of a progressive inspection, means a thorough examination of an aircraft and its components, systems and equipment with such disassembly as is necessary and includes the overhaul of a component or system:

Director has the same meaning as in Section 37 of the Act:

Direct supervision means, in the context of maintenance, supervision by a person who is directly responsible for the actions of the person being supervised and who is physically present or in the immediate vicinity of maintenance being conducted:

Disabled passenger means any passenger whose physical, medical, or mental condition requires individual attention not normally extended to passengers during an air transport operation:

Discreet source damage means structural damage of the aircraft that is likely to result from: impact with a bird; uncontained fan blade failure; uncontained engine failure; uncontained high-energy rotating machinery failure or similar causes:

Document means a document in any form, and includes—

- (1) any writing on any material:
- (2) any information recorded or stored by means of any tape recorder, computer, or other device; and any material subsequently derived from information so recorded or stored:
- (3) any book, map, chart, plan, graph, or drawing:
- (4) any photograph, film, negative, tape, or other device in which one or more visual images are embodied so as to be capable (with or without the aid of some other equipment) of being reproduced:

Domestic aerodrome means any aerodrome other than an international aerodrome:

Domestic air operator means an air operator who conducts regular commercial air transport operations within Papua New Guinea.

Dry, in relation to a runway, means a runway that is neither wet nor contaminated, and includes a paved runway that has been specially prepared with grooves or a porous pavement to retain effectively dry-braking action even when moisture is present:

Dry lease means a lease where the aircraft is provided without crew:

Dual instruction time means flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft:

Duty means any task that flight or cabin crew members are required by the operator to perform including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue:

Extended Diversion Time Operations (EDTO) means any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternative aerodrome is greater than the threshold time established by the Director:

EDTO critical fuel means the fuel quantity necessary to fly to an en-route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure:

EDTO significant system means an aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion:

Electronic flight bag (EFB) means an electronic information system, comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties:

Emergency airworthiness directive means an airworthiness directive that requires urgent compliance:

Emergency locator transmitter (ELT) is a generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

- (1) Automatic fixed ELT (ELT(AF)). An automatically activated ELT which is permanently attached to an aircraft.
- (2) Automatic portable ELT (ELT(AP)). An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.
- (3) Automatic deployable ELT (ELT(AD)). An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.
- (4) Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors:

Emergency parachute means a parachute assembly designed and intended to be used by

persons in an emergency:

Empty weight means the weight of the airframe, engines, propellers, rotors, and fixed equipment. Empty weight excludes the weight of the crew and payload, but includes the weight of all fixed ballast, unusable fuel supply and full operating fluids other than fuel:

Engine means a unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propellers or rotors if applicable:

Enhanced vision system (EVS) means a system to display electronic real-time images of the external scene achieved through the use of image sensors:

Error means an action or inaction by an operational person that leads to deviation from organizational or the operational person's intentions or expectations:

Error management means the process of detecting and responding to errors with counter-measures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired states:

Escorted passenger means any passenger requiring the personal attendance of an appointed escort, during an air transport operation:

Exposition means the document or suite of documents submitted by an applicant for a certificate to declare the manner in which that applicant intends to comply with the requirements prescribed for the certificate to be held:

Extended-range twin-engine operations means an operation of a twin-engine aeroplane over a route that contains a point farther than one hour flying time, in still air at the normal one-engine- inoperative cruising speed, from an adequate aerodrome:

Facility malfunction incident means an incident that involves an aeronautical telecommunications facility:

Fatigue means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, workload (mental or physical activity) that can impair a person's alertness and ability to perform operational-related safety duties:

Fatigue Risk Management System (FRMS) means a data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness:

Final approach means that part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified,

- (a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or
- (b) at the point of interception of the last track specified in the approach procedure; and ends at a point in the vicinity of an aerodrome from which:
 1. a landing can be made; or
 2. a missed approach procedure is initiated:

Final approach segment (FAS) means the segment of an instrument approach procedure in which alignment and descent for landing is accomplished:

Final reserve fuel means the minimum quantity of fuel required to provide a margin to secure the safe completion of a flight in the event of any unplanned manoeuvring in the vicinity of the destination or alternate or a suitable aerodrome, as the case may be, and in ordinary circumstances remains on board until completion of the landing:

Finite life means, in relation to a component, the mandatory replacement time specified in the Airworthiness Limitations section of a manufacturer's maintenance manual or instructions for continued airworthiness issued for an aircraft:

Firearm has the same meaning as in Section 267(1) of the Act:

Fire resistant means the capability to withstand heat by a flame for a period of 5 minutes:

Fireproof means the capability to withstand heat by a flame for a period of 15 minutes:

Fireproof material means a material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose:

Fit and proper person means a person who satisfies the fit and proper person test specified in the Act:

Flexibility, in relation to the issue of a medical certificate under Part 67, means the discretion to issue a medical certificate where an applicant fails to meet the medical standards prescribed for the medical certificate but use of the medical certificate does not jeopardise flight safety:

Flight attendant means cabin crew member:

Flight crew member means a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period:

Flight check, means, in the context of airworthiness, a flight conducted after assembly or maintenance of an aircraft if there was likelihood that the flight characteristics or handling in flight may have been affected:

Flight data analysis means a process of analysing recorded flight data in order to improve the safety of flight operations:

Flight duty period means a period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aeroplane finally comes to rest and the engines are shutdown at the end of the last flight on which he/she is a crew member:

Flight examiner means Authorised flight examiner.

Flight following flight plan means a flight plan that establishes a flight watch over the aircraft and initiates emergency action in the event of a missed report or non-arrival within a specific time-frame:

Flight following service means a service providing a flight watch over an aircraft, which initiates emergency action in the event of a missed report or non-arrival of the aircraft within a specific time- frame:

Flight information centre means a unit established to provide an area flight information service and alerting service:

Flight information region means airspace of defined dimensions within which flight information services and alerting services are provided:

Flight information service has the same meaning as in Section 3 of the Act:

Flight instruction means instruction in the control of aircraft in basic and advanced flight manoeuvres; and includes instruction in respect of conversion from fixed-wing to rotary-wing aircraft or from rotary-wing to fixed-wing aircraft:

Flight level means a surface of constant atmospheric pressure that is related to a specific datum, hPa (1013.2 mb), and is separated from other such surfaces by specific pressure intervals:

Flight manual means an approved manual, associated with the certificate of airworthiness, containing limitations within which the aircraft may be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft:

Flight Operations officer /dispatcher means a person designated by the operator to engage in the control and supervisions of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs and assists the pilot-in-command in the safe conduct of the flight:

Flight plan means specified information provided to an ATS unit or flight following service relative to an intended flight, or portion of a flight, of an aircraft:

Flight recorder means any type of recorder installed in the aircraft for the purpose of complementing accident and incident investigation:

Flight safety documents system means a set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual as described in Part 119:

Flight simulation training device means any one of the following three types of apparatus in which flight conditions are simulated on the ground:

- (1) A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;
- (2) A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;
- (3) A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

Flight test, means, in the context of airworthiness, a flight conducted under a special category experimental certificate to establish unknown operating limitations or the flight envelope:

Flight time means the total time from the moment the aircraft first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight:

Foreign air operation means an operation to or from Papua New Guinea conducted by persons not domiciled in Papua New Guinea:

Foreign aircraft means any aircraft other than a Papua New Guinea registered aircraft:

Formation flight means more than one aircraft which—

- (1) navigate and report as a single aircraft; and
- (2) are no more than one nautical mile laterally and within 100 feet vertically from the formation leader.

Fully functioning dual controls means pitch, roll, yaw, and engine power controls which can be operated from each pilot station:

General aviation operation means an aircraft operation other than a commercial air transport operation or an aerial work operation:

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;

Geoid means equipotential surface in the gravity field of the earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents;

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

Geographical co-ordinates mean latitude and longitude that are expressed relative to the geodetic reference datum of the World Geodetic System 1984:

Glider means a non-power-driven heavier-than-air aircraft which derives its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight:

Goods mean all kinds of moveable property, including animals and mail:

GPS database means an electronic memory containing information on aerodromes, navigation aids, reporting points, instrument approach aids, departure procedures, special use airspace:

GPS sensor means a single GPS unit used for navigation within a Flight Management System:

Gregorian calendar means the 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.*

Ground handling means services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services:

Hang glider means a glider, including a powered glider with the engine not operating, capable of being launched and landed solely by the use of the pilot's legs, and includes paragliders:

Head-up display (HUD) means a display system that presents flight information into the pilot's forward external field of view:

Health and usage monitoring system means a system that acquires data from specialised sensors that measure various parameters related to the airworthy condition of the aircraft and its systems:

Heavier-than-air aircraft means any aircraft deriving its lift in flight chiefly from aerodynamic forces:

Height means the vertical distance of a level, a point, or an object considered as a point, measured from a specified datum:

Helicopter means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes:

Helideck means an approved heliport located on a floating or a fixed offshore structure:

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:

Helicopter external load operation means—

- (1) a helicopter sling load operation; or
- (2) a helicopter winching operation; or
- (3) a helicopter rappelling operation:

Helicopter rappelling operation means—

- (1) the lowering of a load, cargo or persons from a helicopter by means of a static line attached to the helicopter; or
- (2) a person coming down from, or going up to, a helicopter by a means of a flexible ladder attached to the helicopter:

Helicopter sling load operation means the external carriage, lowering, or picking up, of a load, or cargo, by a helicopter by means of a bucket, net, harness or sling suspended beneath the helicopter:

Helicopter winching operation means the external carriage, lowering, or picking up, of a load, cargo or persons, by helicopter by means of a winch or hoist fitted to the helicopter:

Hover means a helicopter flight at a constant height and position over the surface:

High-risk cargo or mail means cargo or mail presented by an unknown entity or showing signs of tampering shall be considered high risk, in addition, it meets one of the following criteria:

- a) specific intelligence indicates that the cargo or mail poses a threat to civil aviation; or
- b) the cargo or mail shows anomalies that give rise to suspicion; or
- c) the nature of the cargo or mail is such that baseline security measures alone are unlikely to detect prohibited items that could endanger the aircraft.

Regardless of whether the cargo or mail comes from a known or unknown entity, specific intelligence about a consignment may render it as high risk:

Human Factors principles means principles which apply to 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, security and efficiency of aeronautical operations:

ICAO Annex means an Annex to the Convention and unless otherwise specified in a rule, includes the amendments in force under section 78 of the Act, but excludes any differences to an Annex as notified by Papua New Guinea:

ICAO Contracting State means a State that is a signatory to the Convention; and includes an organisation established by a group of States that are signatories to the Convention to issue an aviation related document or authorisation on behalf of those States:

IFR flight means a flight conducted in accordance with the instrument flight rules:

Incident has the same meaning as in Section 3 of the Act:

Initial approach segment means that segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point:

Instructions for continued airworthiness means any data relating to a product that gives specific instructions for maintenance, modification or repair contained in a planning manual, maintenance manual, repair manual, overhaul manual, service bulletin or manufacturer's equivalent document that includes airworthiness directives:

Instrument approach operation means an approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instruments approach operations:

- a) a two-dimensional(2D) instrument approach operation, using lateral navigation guidance only; and
- b) a three-dimensional (3D) instrument approach operations, using both lateral and vertical navigation guidance:

Note – Lateral and vertical navigation guidance refers to the guidance provided either by:

- a) a ground-based navigation aid; or*
- b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these:*

Instrument approach procedure means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route, to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply Instrument approach procedures are classified as follows:

- (1) Non-precision approach (NPA) procedure. An instrument approach procedure designed for 2D instrument approach operations Type A.
- (2) Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.
- (3) Precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS CAT I) designed for 3D instrument approach operations Type A or B.

Instrument departure procedure means a prescribed IFR departure route linking the aerodrome, or a specified runway of the aerodrome, with a significant point, normally on a route prescribed under Part 95, at which the en-route phase of the flight commences:

Instrument flight means flight during which an aircraft is piloted solely by reference to instruments and without external reference points:

Instrument flight time means time during which an aircraft is piloted solely by reference to instruments and without external reference points:

Instrument ground time means time during which a pilot is practicing, on the ground, simulated instrument flight in a flight simulation training device approved by the Director:

Instrument meteorological conditions means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions:

Instrument Runway means a runway intended for the operation of aircraft using instrument approach procedures:

Instrument time includes instrument flight time and time during which a pilot is practising simulated instrument flight on an approved mechanical device:

Integrity classification (aeronautical data) means classification based upon the potential risk resulting from the use of corruptive 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 very 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 very low 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 approach segment means the segment between—

- (1) the intermediate approach fix and the final approach fix or point; or
- (2) the end of a reversal, racetrack, or dead reckoning track procedure and the final approach fix or point:

International aerodrome means an international airport:

International air operator means an air operator who conducts regular air operations to or from Papua New Guinea.

International airport has the same meaning as in Section 3 of the Act:

International NOTAM office means an office that is designated for the international exchange of NOTAM:

Intoxicated means a person's impaired state as a result of a blood-alcohol content greater than 0.02:

Isolated aerodrome means a destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type:

Justifiable **aircraft equipment** means any equipment necessary for the operation of the aircraft. It does not include equipment or ballast specifically installed, permanently or otherwise, for the purpose of altering the empty weight of an aircraft to meet the maximum payload capacity:

Landing distance available means the length of the runway that is declared by the aerodrome operator as available and suitable for the ground run of an aeroplane:

Landing surface means that part of the surface of an aerodrome which the aerodrome authority has declared available for normal ground or water run of aircraft landing in a particular direction:

Large aeroplane means an aeroplane of a maximum certificated take-off mass of over 5 700 kg and certificated to carry 20 or more passengers or that has a payload capacity of more than 2500 kg:

Level in the context of flight is a generic term relating to the vertical position of an aircraft and meaning variously height, altitude, or flight level:

Lifed, in relation to an aeronautical product or a product or component, means that the instructions for continued airworthiness for the aeronautical product, product, or component specify-

- (1) a finite life time for the aeronautical product, product, or component; or
- (2) a recommended or mandatory overhaul time for the aeronautical product, product, or component:

Lighter-than-air aircraft means any aircraft supported chiefly by its buoyancy in the air:

Limit loads means the maximum loads assumed to occur in the anticipated operating conditions:

Likely in the context of medical provisions in Part 67 means a probability of occurring that is unacceptable to the medical assessor:

Load factor means the ratio of a specified load to the weight of the aircraft, the former being expressed in terms of aerodynamic forces, inertia forces or ground reactions:

Lowest safe altitude has the same meaning as the term “minimum en-route safety altitude”:

Mach number means the ratio of true airspeed to the speed of sound:

Main parachute means a parachute, other than an emergency parachute, that is designed and intended to be used as a primary parachute:

Maintenance means the performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair:

Maintenance logbook means any document or storage medium acceptable to the Director that provides a record of the maintenance status of an aircraft, product, or component:

Maintenance manual means an approved manual containing limitations within which the aircraft may be considered airworthy, and instructions and information necessary to ensure the aircraft is in an air worthy condition:

Maintenance organisation’s procedures manual means the exposition described in Part 145.

Maintenance programme means a document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies:

Maintenance release means a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system:

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

Master minimum equipment list (MMEL) means a list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures:

Maximum diversion time means maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome:

Maximum mass means maximum certificated take-off mass:

Major modification means a modification, where potentially, incorrect embodiment could affect the safety of an aircraft or its occupants through one or more of the following incidents occurring:

- (1) structural collapse:
- (2) loss of control:
- (3) failure of motive power:
- (4) unintentional operation of, or inability to operate, any systems or equipment essential to the safety or operational function of the aircraft:
- (5) incapacitating injury to any occupant:
- (6) unacceptable unserviceability or maintainability:

Major repair means a repair, where potentially, incorrect embodiment could affect the safety of an aircraft or its occupants through one or more of the following incidents occurring:

- (1) structural collapse:
- (2) loss of control:
- (3) failure of motive power:
- (4) unintentional operation of, or inability to operate, any systems or equipment essential to the safety or operational function of the aircraft:
- (5) incapacitating injury to any occupant:
- (6) unacceptable unserviceability or maintainability:

Manoeuvring area has the same meaning as in Section 3 of the Act:

Manufacturer's maintenance programme means a programme that is contained in a maintenance manual or the instructions for continued airworthiness published by the manufacturer as required by the certifying authority for the aircraft, aircraft engines, propellers, rotors, appliances, emergency equipment, and parts:

Maximum certificated take-off weight, in relation to an aircraft, means the weight specified as the maximum take-off weight of the aircraft in a flight manual or airworthiness certificate relating to the aircraft:

Maximum zero fuel weight means the maximum permissible weight of an aircraft with no disposable fuel or oil. The zero fuel weight figure may be found in either the aircraft type certificate data sheet, the approved Aircraft Flight Manual, or both:

Medical Assessor in the context of the medical provisions of Part 67, means a physician appointed by the Director, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance:

Medium aeroplane means an aeroplane of a maximum certificated take-off mass of over 5 700 kg and certificated to carry 10 to 19 passengers or that has a payload capacity of less than 2500 kg:

Meteorological information means any meteorological report, analysis, or forecast in support of aviation, and any other statement in support of aviation relating to existing or expected meteorological conditions:

Meteorological report means a statement of observed meteorological conditions related to a specific time and location:

Meteorological service means any of the following services that provide meteorological information in support of aviation:

- (1) *Climatology service*: a service for the development and supply of climatological information for a specific place or airspace:
- (2) *Forecast service*: a service for the supply of forecast meteorological information for a specific area or portion of airspace:
- (3) *Information dissemination service*: a service for the collection and dissemination of meteorological information:
- (4) *Meteorological briefing service*: a service for the supply of written and oral meteorological information on existing and expected meteorological conditions:
- (5) *Meteorological reporting service*: a service for the supply of routine meteorological reports:
- (6) *Meteorological watch service*: a service for maintaining a watch over meteorological conditions affecting aircraft operations in a specific area:

Microlight aircraft means a basic low performance aircraft designed to carry not more than 2 persons which meets low momentum parameters that are acceptable to the Director:

Minimum descent altitude means a specified altitude, referenced to mean sea level, in a non-precision approach or circling approach below which descent may not be made without visual reference:

Minimum descent height means a specified height, referenced to the aerodrome reference point or the runway threshold (if that is more than 2m below the aerodrome elevation), in a non-precision approach or circling approach below which descent may not be made without visual reference:

Minimum descent altitude (MDA) or minimum descent height (MDH) means a specified

altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference as detailed below:

- (1) Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.
- (2) The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.
- (3) For convenience when both expressions are used they may be written in the form “minimum descent altitude/height” and abbreviated “MDA/H”.

Minimum en-route altitude (MEA) means the altitude for an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance:

Minimum en-route safety altitude means the lowest altitude within the en-route procedural design area that will provide a minimum clearance of—

- (1) 2000 feet above the highest obstacle on an en-route segment over terrain with a height in excess of 10 000 feet; or
- (2) 1500 feet above the highest obstacle on an en-route segment over terrain with a height in excess of 5000 feet; or
- (3) 1000 feet above the highest obstacle on an en-route segment over terrain with a height of 5000 feet or less.

Minimum equipment list (MEL) means list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type:

Minimum obstacle clearance altitude (MOCA) means the minimum altitude for a defined segment of flight that provides the required obstacle clearance:

Minimum sector altitude means the lowest altitude within a defined sector that will provide a minimum clearance of—

- (1) 2000 feet above the highest obstacle in a sector over terrain with a height in excess of 10 000 feet; or
- (2) 1500 feet above the highest obstacle in a sector over terrain with a height in excess of 5000 feet; or
- (3) 1000 feet above the highest obstacle in a sector over terrain with a height of 5000 feet or less.

Minister means the Minister of Transport or Civil Aviation as the context requires:

Missed approach means the procedure to be followed if the approach cannot be continued:

Modification means a design change that generally results in a change to the configuration of a product, component, or appliance:

Movement area means that part of an aerodrome intended to be used for the take-off and landing of aircraft and for the surface movement of aircraft, and includes the manoeuvring area, maintenance areas, and aprons:

Navigation specification. A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

- (1) Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.
- (2) Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Net take-off flight path has the same meaning as prescribed in the rules under which the aeroplane was certificated:

Newly overhauled means a product that has not been operated or placed in service, except for functional testing, since having been overhauled:

Night means the hours between the end of evening civil twilight and the beginning of morning civil twilight:

Non-compulsory reporting point means a reporting point, that may be direction or route specific, at which a report to the appropriate controlling authority is not mandatory:

NOTAM means a notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations:

NOTAM service means a service for the issue and distribution of NOTAM relevant to air navigation in the Port Moresby FIR:

Obstacle clearance altitude (OCA) or Obstacle clearance height (OCH) means the lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria:

Occurrence means an accident or incident:

Operable, in relation to equipment and instruments, means fully functional, calibrated, and meeting the applicable airworthiness requirements:

Operate has the same meaning as in Section 3 of the Act:

Operating cycle means a complete flight segment consisting of a takeoff, climb, en-route portion, descent, and landing:

Operational control means the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight:

Operational flight plan means the certificate holders plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations, and relevant expected conditions, on the route to be followed and at the aerodromes concerned:

Operations manual means a manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties:

Operations specifications means the authorisations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual:

Operator means the person, organization or enterprise engaged in or offering to engage in an aircraft operation:

Operator's maintenance control manual means a document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner:

Originating aircraft means any aircraft about to be used on a regular air transport passenger service from any PNG aerodrome, that has been emptied of passengers and goods at the conclusion of a previous flight or flights, but does not include any aircraft transiting PNG or any PNG aerodrome, in circumstances where passengers and goods are added to an existing load:

Organisation responsible for the type design means the organization that holds the type certificate, or equivalent document for an aircraft, engine or propeller type, issued by a Contracting State:

Overhaul, in relation to an aircraft or aircraft component, means to perform a major work operation which involves disassembly, cleaning, inspecting, repairing as necessary, reassembly and complete testing to specification and renewal of operational life:

Owner has the same meaning as in Section 3 of the Act:

Papua New Guinea Aeronautical Information Publications means the AIP for PNG published for the Authority by the holder of the AIS certificate for the AIP service:

Papua New Guinea registered aircraft has the same meaning as in Section 3 of the Act:

Papua New Guinea Register of Aircraft has the same meaning as in Section 3 of the Act:

Papua New Guinea certificate of registration means an aircraft certificate of registration issued by the Director:

Parachute means any device, without a motor in operation, comprising a flexible drag, or lift/drag, surface from which a load is suspended by shroud lines capable of controlled

deployment from a packed condition:

Parachute assembly means any parachute and its associated harness and container system and other component parts for use by persons:

Parachute drop zone means a designated column of airspace with a radius of 3 nautical miles centred on a parachute landing area:

Parachute landing area means an area onto which parachute landings are intended to be made:

Paraglider means a hang glider with no rigid primary structure:

Passenger has the same meaning as in Section 3 of the Act:

Payload capacity means—

- (1) when a maximum zero fuel weight is not prescribed, the maximum certificated takeoff weight of an aircraft, less the empty weight, less all justifiable aircraft equipment, and less the operating load consisting of—
 - (i) the minimum weight of fuel required under the CAR for a flight between points 174 nm apart, assuming VFR weather conditions; and
 - (ii) the lesser of the maximum oil capacity as specified on the Type Certificate Data Sheet or 160 kg of oil; and
 - (iii) required flight crew members at 91 kg per crew member; and
 - (iv) required catering supplies; or
- (2) when a maximum zero fuel weight is prescribed, the maximum zero fuel weight less the empty weight that, except for disposable fuel and oil, consists of—
 - (i) all justifiable aircraft equipment, and the operating load; and
 - (ii) minimum flight crew at 91 kg per crew member; and
 - (iii) required catering supplies:

Performance-based communication (PBC) means communication based on performance specifications applied to the provision of air traffic services:

Performance-based navigation (PBN) means area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace:

Performance-based surveillance (PBS) means surveillance based on performance specifications applied to the provision of air traffic services:

Performance-class 1 helicopter means a helicopter with performance such that, in case of a critical power-unit failure, it is able to land on the rejected take-off area or safely continue the

flight to an appropriate landing area, depending on where the failure occurs:

Performance class 2 helicopter means a helicopter with performance such that, in case of critical power unit failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which case a forced landing may be required:

Performance class 3 helicopter means a helicopter with performance such that, in the case of power-unit failure at any point in the flight profile, a forced landing must be performed:

Performance criteria means simple evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved:

Personal locator beacon means an equipment that broadcasts a distinctive signal on a designated radio frequency to facilitate a search and rescue operation, is designed to be carried on a person, and is manually activated:

Pilot (to) means to manipulate the flight controls on an aircraft during flight time:

Pilot-in-command means the pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight:

Pilot-in-command under supervision means Co-pilot performing under the supervision of a pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to the Director:

Point of no return means the last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en-route alternate aerodrome for a given flight:

Powered glider means an aircraft equipped with one or more engines which has, with the engine or engines not operating, the performance characteristics of a glider:

Powerplant means a system consisting of all the engines, drive system components (if applicable), and propellers (if installed), their accessories, ancillary parts, and fuel and oil systems installed on an aircraft but excluding the rotors for a helicopter:

Precision approach procedure means an instrument approach procedure utilising azimuth and glide path information:

Pre-flight information bulletin means a presentation of current NOTAM information of operational significance, prepared prior to flight:

Pre-flight information service means a service for the provision of aeronautical information to a third party for pre-flight planning purposes:

Pressure altitude means an atmospheric pressure, expressed in terms of altitude, which corresponds to that pressure in the standard atmosphere:

Primary-means navigation system means a navigation system approved for a given operation

or phase of flight that must meet accuracy and integrity requirements, but need not meet full availability and continuity of service requirements for a sole-means navigation system:

Priority part means each part or assembly in a type-certificated product the failure of which is likely, to cause an unsafe condition in an aircraft, aircraft engine or propeller:

Problematic use of substances means the use of one or more psychoactive substances by aviation personnel in a way that:

- a) constitutes a direct hazard to the user or endangers the lives, health, or welfare of others; and
- b) causes or worsens an occupational, social, mental or physical, problem or disorder:

Procedure altitude/height means a published altitude/height used in defining the vertical profile of a flight procedure, at or above the minimum obstacle clearance altitude/height where established.

Product means an aircraft, aircraft engine, or propeller:

Production Non-type Certificated aircraft means an aircraft that has been produced in a series in a controlled design environment and accepted for use by a recognised civil or military operator and which has been shown to have a satisfactory service history:

Progressive inspection means an inspection of a complete aircraft that is split into a number of smaller inspections:

Prohibited area means an airspace of defined dimensions within which the flight of aircraft is prohibited:

Promulgated information incident means an incident that involves significantly incorrect, inadequate, or misleading information promulgated in any aeronautical information publication, map or chart:

Propeller means a device, for propelling an aircraft that has blades on an engine-driven shaft and that when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of engines:

Psychoactive substances means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded:

Quality means the degree to which a set of inherent characteristics fulfils requirements (ISO 9000*):

Note 1. — The term “quality” can be used with adjectives such as poor, good or excellent.

Note 2. — “Inherent”, as opposed to “assigned”, means existing in something, especially as a permanent characteristic.

Quality assurance means the part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000*):

Quality control means the part of quality management focused on fulfilling quality requirements (ISO 9000*):

Quality management means the coordinated activities to direct and control an organization with regard to quality (ISO 9000*):

Quality system means documented organizational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement:

Racetrack procedure means a procedure designed to enable the aircraft to reduce altitude during the initial approach segment and/or establish the aircraft inbound when the entry into a reversal procedure is not practical:

Radio navigation aid facility means the following types of radio navigation aids—

- (1) Instrument Landing System (ILS): Microwave Landing System (MLS):
- (2) VHF Omnidirectional radio range (VOR):
- (3) Distance Measuring Equipment (DME):
- (4) Non-directional Radio Beacon (NDB):
- (5) Precision Approach Radar (PAR):
- (6) Secondary Surveillance Radar (SSR)
- (7) Primary Surveillance Radar (PSR):

Radio navigation service means a service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids:

RAIM not available message means RAIM warning:

RAIM warning means a warning that the integrity of the navigation position solution from GPS satellites may be unreliable:

Rating means an authorisation entered on, or associated with, a licence, certificate, or logbook, and forming part of it, stating special conditions, privileges, or limitations relating to the licence or certificate:

Receiver autonomous integrity monitoring means a function whereby the airborne GPS receiver/processor detects a position error that exceeds the GPS position integrity performance requirements of the TSO for that phase of flight. It gives a visual and/or aural warning when appropriate:

Regulated Air Cargo Agent means an organisation certificated under Part 109:

Release note means a PNG CAA Form Two – Release Note issued by a Part 144 certificated supply organisation certifying conformity of a product, material or item of equipment with acceptable airworthiness standards:

Repair means the restoration of an aeronautical product to an airworthy condition to ensure that

the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear:

Reporting point means a specified geographical location in relation to which the position of an aircraft can be reported:

Required communication performance (RCP) specification means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication:

Required inspection means any inspection required by an airworthiness directive, or by an approved maintenance manual, programme or schedule:

Required surveillance performance (RSP) specification means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

Requirement means the need or expectation that is stated, generally implied or obligatory (ISO 9000*):

Note 1. — “Generally implied” means that it is custom or common practice for the organization, its customers and other interested parties, that the need or expectation under consideration is implied.

Note 2. — A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement.

Note 3. — A specified requirement is one which is stated, for example, in a document. Note 4. — Requirements can be generated by different interested parties.

Reserve parachute means a parachute assembly designed and intended to be used as a secondary parachute in the event of the failure of the main parachute:

Restricted area means an airspace of defined dimensions within which the flight of aircraft is restricted in accordance with certain specified conditions:

Reversal procedure means a procedure designed to enable aircraft to reverse direction, during the initial approach segment of an instrument approach procedure, that may include procedure turns, base turns or racetrack procedures:

Rotorcraft means any heavier-than-air aircraft which derives its lift in flight from the reaction of the air on one or more rotors on substantially vertical axes:

Route stage means a route or portion of a route flown without an intermediate landing:

Routine inspection in relation to a progressive inspection, means a visual inspection of an aircraft and its components, systems and equipment as far as practicable without disassembly:

Runway means a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft:

Runway end safety area means an area symmetrical about the extended centre line of the runway and adjacent to the end of the runway strip primarily intended to reduce the risk of damage to an aeroplane undershooting or over-running the runway:

Runway strip means a defined area including the runway, and stopway (if a stopway is provided), that is intended-

- (1) to reduce the risk of damage to an aircraft running off the runway; and
- (2) to provide obstacle protection for aircraft flying over the runway strip during take-off or landing operations:

Runway visual range means 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 centreline:

Safe forced landing means unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface:

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

Small aeroplane means an aeroplane of a maximum certificate take-off mass of 5700kg or less and certificated to carry 9 or less passengers:

Satisfactory evidence means a set of documents or activities which a Contracting State accepts as sufficient to show compliance with an airworthiness requirement:

Screening means the application of technical or other means which are intended to identify and/or detect weapons, explosives or other dangerous devices, articles or substances which may be used to commit an act of unlawful interference:

Security means safeguarding civil aviation against acts of unlawful interference, and is achieved by a combination of measures and human and material resources:

Security area has the same meaning as in Section 3 of the Act:

Security control means measures by which the introduction of weapons, explosives or other dangerous devices, articles or substances which may be utilised to commit an act of unlawful interference can be prevented:

Security designated aerodrome has the same meaning as in Section 3 of the Act:

Security incident means an incident that involves unlawful interference:

Serious incident means an incident involving circumstances indicating that an accident nearly occurred:

Shore means that area of the land adjacent to the water that is above the high-water mark and excludes land areas that are intermittently under water:

SIGMET information means information issued by a meteorological office concerning the occurrence or expected occurrence of specified en-route weather phenomena that may affect the safety of aircraft operations:

Significant point means a specified geographical location used in defining an ATS route, or the flight path of an aircraft, and for other navigation and ATS purposes:

Single pilot aircraft means an aircraft that is authorised in its flight manual to be operated with a minimum flight crew of 1 pilot for the type of flight:

Small aeroplane means an aeroplane of a maximum certificated take-off mass of 5 700 kg or less and certificated to carry 9 or less passengers:

Sole-means navigation system means a navigation system approved for a given operation or phase of flight that shall allow the aircraft to meet, for that operation or phase of flight, all four navigation system performance requirements: namely: accuracy, integrity, availability, and continuity of service:

Solo flight time means flight time during which a student pilot is the sole occupant of an aircraft:

Special VFR flight means a VFR flight cleared by an ATC unit to operate within controlled airspace in meteorological conditions below visual meteorological conditions:

Specification is the minimum performance standard specific to an article used on an aircraft:

Standard Atmosphere means an atmosphere defined as follows:

1. the air is a perfect dry gas
2. the physical constants are:
 - a. Sea level molar mass: $M_o = 28.964420 \times 10^{-3} \text{ kg mol}^{-1}$
 - b. Sea level atmospheric pressure: $P_o = 1013.250 \text{ hPa}$
 - c. Sea level temperature: $t_o = 15^\circ\text{C}$ or $T_o = 288.15\text{K}$
 - d. Sea level atmospheric density: $\rho_o = 1.225 \text{ kgm}^{-3}$
 - e. Temperature of the ice point: 273.15 K
 - f. Universal Gas constant: $8.31432 \text{ JK}^{-1}\text{mol}^{-1}$
 - g. The Standard geopotential metre: $9.80665\text{m}^2\text{s}^{-2}$
 - h. The temperature gradients are:-

<i>Geopotential Altitude in (km)</i>		<i>Temperature Gradient (Kelvin per standard geopotential km)</i>
<u>From</u>	<u>To</u>	
<u>-5</u>	<u>11</u>	<u>-6.5</u>
<u>11</u>	<u>20</u>	<u>0.0</u>
<u>20</u>	<u>32</u>	<u>+1.0</u>
<u>32</u>	<u>47</u>	<u>+2.8</u>
<u>47</u>	<u>51</u>	<u>0.0</u>
<u>51</u>	<u>71</u>	<u>-2.8</u>
<u>71</u>	<u>80</u>	<u>-2.0</u>

Standard part means an aeronautical product that conforms to an aeronautical specification published by a standard-setting organisation, including design, material, manufacture, and identification requirements detailed in one of the following series—

- (1) Air Force – Navy Aeronautical Standard(AN)
- (2) American National Standards Institute(ANSI)
- (3) Australian Standards (AS)
- (4) British Standards, Aircraft Series (BS)
- (5) Military Standards (MS)
- (6) Military Specifications (MIL –SPEC)
- (7) National Aerospace Standards (NAS)
- (8) New Zealand Standards (NZS)
- (9) SAE Aerospace Standard (AS)
- (10) Society of Automotive Engineers (SAE):

State of Design means the State having jurisdiction over the organisation responsible for the type design:

State of Manufacture means the State having jurisdiction over the organization responsible for the final assembly of the aircraft, engine or propeller:

State of Registry means the state on whose register the aircraft is entered:

State of the Aerodrome means the State in whose territory the aerodrome is located:

State of the Operator means the state in which the operator’s principal place of business is located or if there is no such place of business, the operator’s permanent residence:

State safety program means an integrated set of regulations and activities aimed at improving safety:

Statement of compliance means, in relation to the approval of technical data, a statement by an aircraft design organisation or airworthiness authority that a particular design meets a set of specified airworthiness design requirements:

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:

Sterile area means that area at an aerodrome between the passenger inspection and screening station and the aircraft into which access is strictly controlled:

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

Straight-in approach means a designated instrument approach procedure designed to enable the aircraft to land on a runway without having to conduct a circling approach for that runway:

Supplemental means navigation system means a navigation system that shall be used in conjunction with a sole means navigation system:

Synthetic Vision System (SVS) means a computer-generated image of the external scene topography from the perspective of the flight deck, derived from aircraft attitude, high-precision navigation solution, and database of terrain, obstacles, and relevant cultural features:

Take-off distance has the same meaning as prescribed in the rules under which the aeroplane was certificated:

Take-off distance available means the length of the take-off run available plus the length of any clearway:

Take-off flight path has the same meaning as prescribed in the rules under which the aeroplane was certificated:

Take-off run has the same meaning as prescribed in the rules under which the aeroplane was certificated:

Take-off run available means the length of the runway declared by the aerodrome operator as available and suitable for the ground run of an aeroplane taking-off:

Take-off surface means that part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking-off in a particular direction:

Take-off weight means the weight of the aeroplane at the commencement of the take-off run and includes everything and everyone carried in or on the aeroplane at the commencement of the take-off run:

Target level of safety (TLS) is a generic term representing the level of risk which is considered acceptable in particular circumstances:

Taxi means movement of an aircraft on the surface of an aerodrome or on water, excluding take-off and landing, but including, in the case of helicopters, operation over the surface of an aerodrome within a height band associated with ground effect and at speeds associated with air taxiing:

Technical arrangement means an arrangement between Papua New Guinea and another State to mutually recognise each State's aircraft maintenance organisation certification, maintenance standards and documentation, and personnel licences and certificates to allow maintenance performed on aircraft and components in one State to be recognised by the other State in accordance with the terms of the arrangement.

Technical data are drawings, instructions or other data required to be used for product certification, approvals, and authorisations under Part 21 or for the maintenance, modification, and repair of products, their components, and appliances under Part 43:

Technical Instructions means the Technical Instructions for the Safe Transport of Dangerous Goods by air (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council:

Terrain means the surface of the earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles:

Technical log means the technical log that is required for every applicable aircraft under rule 91.619:

Threat means events or errors that occur beyond the influence of an operational person, increase operational complexity, and must be managed to maintain the margin of safety:

Threat management means the process of detecting and responding to threats with counter-measures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states:

Threshold means the beginning of that portion of the runway usable for landing:

Threshold time means the range, expressed in time, established by the State of the Operator, to an en-route alternate aerodrome, whereby any time beyond requires an EDTO approval from the State of the Operator.

Three view means the accurate depiction of an aircraft from a collection of views that includes a plan, a front elevation and a side elevation:

Time in service means, for maintenance time records, aircraft log records, and similar purposes, the elapsed time from the aircraft leaving the surface until touching it again on landing:

Total vertical error (TVE) means the vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level):

Traceability means the ability to trace the history, application or location of that which is under consideration (ISO 9000*):

Note. — *When considering product, traceability can relate to:*

- *the origin of materials and parts;*
- *the processing history; and*
- *the distribution and location of the product after delivery.*

Track means the projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid):

Traffic information means information issued by an ATS unit, to alert a pilot to other known or observed air traffic which may be in proximity to the position, or intended route of flight, and to help the pilot avoid a collision:

Traffic load means the total weight of passengers, baggage, and cargo:

Transfer baggage means baggage that is departing on an aircraft other than that on which it arrived;

Transfer cargo or mail means cargo or mail departing on an aircraft other than that on which it arrived:

Transit baggage means baggage that-

- (1) is on board an aircraft that arrives at an aerodrome; and
- (2) is still on board that aircraft when that aircraft leaves the aerodrome:

Translation circuit means a circuit in a helicopter that includes translation to forward flight:

Trip fuel means the fuel required for the planned flight from the commencement of the take off run to the completion of landing run prior to runway turn off:

Turbine powered means powered by turbojet, or turbofan, or turboprop:

Turbofan means a turbojet core engine that uses a proportion of the residual gas flow energy to drive a compressor ducting gas flow around the core engine as additional propulsion:

Turbojet means a gas turbine engine that uses the residual gas flow energy directly as propulsion:

Turboprop means a gas turbine engine that uses the residual gas flow energy to drive a propeller:

Type in relation to the certification of aircraft, aircraft engines, or propellers, means those aircraft, aircraft engines or propellers which are similar in design:

Type certificate means a document issued by a Contracting State to define the design of an aircraft, engine or propeller type and to certify that this design meets the appropriate airworthiness design requirements of that State. It includes-

- (1) the type design; and
- (2) the operating limitations; and
- (3) the type certificate data sheet; and
- (4) the applicable airworthiness design standards specified in Part 21 Appendix B; and
- (5) for an aircraft type, the flight manual; and
- (6) any other conditions or limitations prescribed for the product type under Part 21:

Type Design means the set of data and information necessary to define an aircraft, engine or propeller type for the purpose of airworthiness determination:

Unidentified item means an item at an aerodrome or aeronautical facility, with or without identifying information, that is not in the control of a person who is present at the aerodrome or facility:

Unmanned aircraft means an aircraft designed to operate with no pilot on board and includes unmanned balloons, kites, control-line model aircraft, free flight model aircraft, remotely piloted and autonomous aircraft:

Unmanned aircraft system means an aircraft and its associated elements which are operated with no pilot on board:

Valid, in respect of a licence, rating, or medical certificate, means the document has been issued in accordance with the Civil Aviation Rules, and is not expired, suspended, or revoked:

Validation means a confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000*):

Variant means a specifically configured aeroplane for which the Authority has identified training and qualification requirements that are significantly different from those applicable to an aeroplane of the same make, model, and series:

Verification means a confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000*):

Note. — The term “verified” is used to designate the corresponding status.

VFR flight means a flight conducted in accordance with the visual flight rules:

Visibility means the ability, as determined by atmospheric conditions and expressed in units of measurement, to see and identify prominent unlighted objects by day and prominent lighted objects by night:

Visual manoeuvring (circling) area means a defined area within which obstacle clearance is provided during the visual phase of flight after completing an instrument approach, to bring the aircraft into position for landing on a runway:

Visual meteorological conditions means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima:

Waypoint means a specified geographical location used to define an area route, or the flight path of an aircraft employing area navigation:

Waypoints are identified as either:

Fly-by waypoint. A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure, or

Flyover waypoint. A waypoint at which a turn is initiated in order to join the next segment of a route or procedure:

Wet, in relation to a runway, means a runway with sufficient moisture on its surface to cause it to appear reflective but without significant areas of standing water:

Wet lease means a lease where the aircraft is provided with crew:

ZFT simulator means a synthetic flight trainer which—

- (1) meets the standard of level 5 as described in New Zealand Civil Aviation Publication CAP 37 dated 1 March 1986; or
- (2) meets the standard of level 5 as described in the relevant current Civil Aviation Authority of Australia (CASA) publication; or
- (3) meets the standard of level D/phase III as described in Appendix H (dated 30 July 1980) to Part 121 of the United States Federal Aviation Regulations; or
- (4) meets an equivalent standard acceptable to the Director.

1.2 Abbreviations

In rules made under the Act—

AAR means authorised airworthiness representative:

AATSE means authorised air traffic service examiner:

ACAS means airborne collision avoidance system:

ACC means area control centre:

ACN means aircraft classification number;

AD means airworthiness directive:

ADS-B means automatic dependent surveillance-broadcast:

ADS-B (I) means automatic dependent surveillance-broadcast IN:

ADS-B (O) means automatic dependent surveillance-broadcast OUT:

ADS-C means automatic dependent surveillance-contract and can be referred to as ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode:

AER means authorised engineering representative:

AFE means authorised flight examiner:

AFIS means aeronautical flight information service:

AFS means aeronautical fixed service:

AFTN means aeronautical fixed telecommunication network:

AGL means above ground level:

AIC means aeronautical information circular:

AIM means aeronautical information management

AIP means aeronautical information publication:

AIS mean aeronautical information service:

ALoS means acceptable level of safety:

AMA means area minimum altitude:

AMC means an accredited medical conclusion, as defined in Part 67:

AMD means aerodrome mapping data:

AMDB means aerodrome mapping database:

AMOC means alternate means of compliance:

AMSL means above mean sea level:

AOC means air operator certificate:

APA means authorised personnel assessor:

APV means approach procedure with vertical guidance:

AQP means advanced qualification programme:

ARC means aerodrome reference code:

ARFL means aeroplane reference field length:

ARIWS means autonomous runway incursion warning system;

ASDA means accelerate-stop distance available:

ASE means altimetry system error:

ATC means air traffic control service:

ATIS means automatic terminal information service:

ATM means air traffic management:

ATS means air traffic services:

ATZ means aerodrome traffic zone:

BRNAV means basic area navigation:

BTPD means body temperature and pressure dry:

BTPS means body temperature and pressure standard:

CAR means Civil Aviation Rules:

CAVOK means cloud and visibility okay:

CDL means configuration deviation list:

CDFA means continuous descent final approach:

COMAT means company operational material:

CPDLC means controller-pilot data link communication;

CRC means cyclic redundancy check;

CRM means crew resource management:

DA means decision altitude:

DAME means designated aviation medical examiner:

dbm means a power expressed in decibels with a reference level of 1 milliwatt: **dbw**

means a power expressed in decibels with a reference level expressed in watts: **DF**

means direction finding:

DH means decision height:

DME means distance measuring equipment:

EDTO means extended diversion time operation:

EET means estimated elapsed time:

EFB means electronic flight bag:

EGPWS means enhanced ground proximity warning system:

ELT means emergency locator transmitter:

ELT(AF) means emergency locator transmitter (automatic fixed):

ELT(AD) means emergency locator transmitter (automatic deployable):

ELT(AP) means emergency locator transmitter (automatic portable):

ELT(S) means emergency locator transmitter (survival):

EPIRB means emergency position indicating radio beacon:

ETA means estimated time of arrival:

EVS means enhanced vision system:

FAF means final approach fix:

FAP means final approach point:

FAR means Federal Aviation Regulations issued by the Federal Government of the United States of America:

FAS means final approach segment:

FDPS means flight data processing system:

FIC means flight information centre:

FIR means flight information region:

FL means flight level:

FOD means foreign object debris;

FRMS means fatigue risk management system:

GNSS means a global navigation satellite system:

GPS means global positioning system:

GPWS means ground proximity warning system:

HF means high frequency or human factors:

HUD means heads-up display:

HUMS mean health and usage monitoring system:

IAF means initial approach fix:

IAS means indicated airspeed:

ICAO means the International Civil Aviation Organisation established under the Convention; and includes any successor to the Organisation:

ICUS means in command under supervision:

IF means intermediate approach fix:

IFR means instrument flight rules:

IFSD means in-flight shut down:

ILS means instrument landing system:

IMC means instrument meteorological conditions:

LCFZ means laser-beam critical flight zone:

LDA means landing distance available;

LFFZ means laser-beam free flight zone:

LLZ means localiser:

LRNS means long range navigation system:

LSALT means lowest safe altitude:

LSFZ means laser-beam sensitive flight zone:

MAPt means missed approach point:

MCTOW means maximum certificated take-off weight:

MDA means minimum descent altitude:

MDH means minimum descent height:

MEA means minimum en-route altitude:

ME1 means a medical examiner who holds a Medical Examiner 1 Certificate issued under the Act:

ME2 means a medical examiner who holds a Medical Examiner 2 Certificate issued under the Act:

MEL means minimum equipment list:

MESA means minimum en-route safety altitude:

MMEL means master minimum equipment list:

MLS means microwave landing system:

MNPS means minimum navigation performance specifications:

MOCA means minimum obstacle clearance altitude:

MSA means minimum sector altitude:

MTOPP means mean tracheal oxygen partial pressure:

NDB means non-directional radio beacon:

NDT means non-destructive testing:

NOF means international NOTAM office:

NOTAM means notice to airmen:

NPA means non-precision approach:

OCA means obstacle clearance altitude:

OCH means obstacle clearance height:

OFZ means obstacle free zone:

OGE means out of ground effect:

OLS means obstacle limitation surface:

OMGWS means outer main gear wheel span:

PAPI means precision approach path indicator:

PAR means precision approach radar:

PASO means Pacific Aviation Safety Office:

PBC means performance-based communication:

PBN means performance-based navigation:

PBS means performance-based surveillance:

PCN means pavement classification number:

PDZ means parachute drop zone:

PIB means Pre-flight Information Bulletin:

PIC means pilot-in-command:

PLA means parachute landing area:

PLB means personal locator beacon:

PNC means a production non-type certificated aircraft:

PNR means point of no return:

PNGAIP means Papua New Guinea Aeronautical Information Publications:

PNG means Papua New Guinea:

PRA means precision radar approach:

PSR means primary surveillance radar:

QFE means atmospheric pressure at aerodrome level or at runway threshold:

QNH means an altimeter sub-scale setting to obtain elevation when on the ground:

RAIM means receiver autonomous integrity monitoring:

RCP means required communication performance:

RDPS means radar data processing system:

RESA means a runway end safety area:

RF means radio frequency:

RFF means rescue firefighting:

RFDPS radar and flight data processing system:

RNAV means area navigation:

RNP means required navigation performance:

RPAS means remotely piloted aerial system:

RPM means revolutions per minute:

RSP required surveillance performance:

RVR means runway visual range:

RVSM means reduced vertical separation minimum:

SBAS means satellite-based augmentation system:

SEIFR means single-engine IFR:

SELCAL means selective calling system:

SFAR means Special Federal Aviation Regulations issued by the Federal Government of the United States of America:

SIGMET means significant meteorological report:

SMS means safety management system:

SSP means state safety programme:

SSR means secondary surveillance radar:

STA means supplemental type approval:

STC means supplemental type certificate:

STPD means standard temperature and pressure dry:

SVS means synthetic vision systems:

TAWS means terrain avoidance warning system:

TBO means time before overhaul:

TCAD means traffic alert and collision avoidance device:

TCAS means traffic alert and collision avoidance system:

TLS means target level of safety:

TODA means takeoff distance available:

TORA means takeoff run available

TSO means a technical standard order that is issued by the Federal Aviation Administration of the United States of America:

TVE means total vertical error:

UAV unmanned aerial vehicle:

UF means uplink formats:

UHF means ultra high frequency:

UTC means co-ordinated universal time:

V1 means take-off decision speed:

V2 means the initial climb out speed:

Vat means the speed across the threshold

VEF means the calibrated speed at which the critical engine is assumed to fail:

VS means the stalling speed:

VFR means visual flight rules:

VHF means very high frequency:

VMA means visual manoeuvring area:

VMC means visual meteorological conditions:

VOLMET means meteorological information for aircraft in flight:

VOR means VHF omnidirectional radio range:

VSM means vertical separation minimum:

VSWR means voltage standing wave ratio:

ZFT means zero flight time.

1.3 Units of Measure

C.1 Source reference

Subject to paragraph C.2, the units of measure used for aeronautical purposes in Papua New Guinea are those specified in the International System of Units as adopted in Annex 5 to the Convention.

C.2 Variations from source

Non International System Units adopted by Annex 5 are used in accordance with the following table in Papua New Guinea:

Distance	Nautical miles
Altitude, elevations, and heights	Feet
Visibility	Kilometres or metres
Speed, including wind speed	Knots
Vertical speed	Feet per minute

C.3 Common Reference System

For international civil aviation, the Gregorian calendar and Coordinated Universal Time (UTC) shall be used as the temporal reference system.