STATUTORY INSTRUMENTS
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S T A T U T O R Y I N S T R U M E N T S

2022 No. 95.

THE CIVIL AVIATION (HELIPORTS) REGULATIONS, 2022

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S T A T U T O R Y I N S T R U M E N T S

2022 No. 95.

The Civil Aviation (Heliports) Regulations, 2022

IN EXERCISE of the powers conferred upon the Minister by sections 34 (2) and 61 of the Civil Aviation Authority Act, and on the recommendation of the Uganda Civil Aviation Authority, these Regulations are made this 12th day of August, 2022.

Part I—Preliminary

1. Title

These Regulations may be cited as the Civil Aviation (Heliports) Regulations, 2022.

2. Application

(1) These Regulations apply to all civil heliports in Uganda intended to be used by helicopters in international civil aviation except where otherwise specified.

(2) The specifications in these Regulations shall apply to all civil heliports or helipads in Uganda intended to be used by helicopters in domestic civil aviation as determined by the authority.

(3) These Regulations apply equally to areas for the exclusive use of helicopters at an aerodrome primarily meant for the use of aeroplanes and where relevant, the requirements of the Civil Aviation (Aerodromes) Regulations, 2022 shall apply to the helicopter operations being conducted at such an aerodrome.

(4) Unless otherwise specified, the specification for a colour referred to within these Regulations shall be that contained in Schedule 5 of the Civil Aviation (Aerodromes) Regulations, 2022.

3. Interpretation

In these Regulations unless the context otherwise requires—

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

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

(i) being in the aircraft; or

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

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

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

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

(ii) will normally require major repair or replacement of the affected component; or

(iii) except for engine failure or damage, where the damage is limited to a single engine (including

its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the random); or

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

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

"Act" means the Civil Aviation Act, Cap 354;

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

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

"Aeronautical Information Publication (AIP)" means a publication issued by the authority containing aeronautical information of a lasting character essential to air navigation;

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

air taxi-route" means a marked taxi-route intended for air taxiing;

"apron" means a helicopter stand on an elevated heliport;

"authorised person" means any person authorised by the authority either generally or in relation to a particular case or class of cases and reference to an authorised person includes references to the holder for the time being of an office designated by the authority;

"authority" means the Uganda Civil Aviation Authority established by section 3 of the Act;

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

"critical data" means there is a high probability where using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

"currency point" has the value assigned to it in Schedule 1 to these Regulations;

"D" means the largest overall dimension of the helicopter where rotors are turning measured from the most forward position of the main rotor tip path plane to the most rearward position of the tail rotor tip path plane or helicopter structure;

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

"declared distances— heliports" means—

(a) Takeoff Distance Available (TODAH) - the length of the FATO plus the length of helicopter clearway (if provided) declared available and suitable for helicopters to complete the takeoff;

(b) Rejected Takeoff Distance Available (RTODAH) - length of the FATO declared available and suitable for helicopters operated in performance class 1 to complete a rejected takeoff;

(c) landing distance available (LDAH) - the length of the FATO plus any additional area declared available and suitable for helicopters to complete the landing maneuvers from a defined height;

"design D" means the D of the design helicopter;

"d-value" means a limiting dimension, in terms of "D", for a heliport, helideck or shipboard heliport, or for a defined area within;

"dynamic load-bearing surface" means a surface capable of supporting the loads generated by a helicopter in motion;

"elevated heliport" means a heliport located on a raised structure on land;

"elongated" where used with TLOF or FATO, elongated means an area which has a length more than twice its width;

"enroute obstacle" means any building, structure or erection, which is one hundred meters or more, above ground level, excludes a building, structure or erection, which is in the vicinity of a heliport;

"essential data" means there is a low probability where using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

"final approach and takeoff area (FATO)" means a defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the takeoff manoeuvre is commenced; where the FATO is to be used by helicopters operated in performance class 1, the defined area includes the rejected takeoff area available;

"ground taxi-route" means a taxi-route centered on a taxiway;

"helicopter air taxiway" means a defined path on the surface established for the air taxiing of helicopters;

"helicopter clearway" means a defined area on the ground or water, selected and prepared as a suitable area over which a helicopter operated in performance class 1 may accelerate and achieve a specific height;

"helicopter stand" means a defined area intended to accommodate a helicopter for purposes of: loading or unloading passengers, mail or cargo; fuelling, parking or maintenance; and, where air taxiing operations are contemplated, the TLOF.

"helicopter taxiway" means a defined path on a heliport intended for the ground movement of helicopters and that may be combined with an air taxi-route to permit both ground and air taxiing;

"helicopter taxi-route" means a defined path established for the movement of helicopters from one part of a heliport to another—

(a) Air taxi-route. A marked taxi-route intended for air taxiing.

(b) Ground taxi-route. A taxi-route centred on a taxiway.

"helideck" means a heliport located on a fixed or floating offshore facility such as an exploration and production unit used for the exploitation of oil or gas;

"helipad" means a landing area or platform for helicopters and powered lift aircraft;

"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;

"heliport elevation" means the elevation of the highest point of the FATO;

"Heliport Reference Point (HRP)" means the designated location for a heliport or a landing location;

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

"landing location" means a marked or unmarked area that has the same physical characteristics as a visual heliport final approach and takeoff area (FATO);

"medium intensity steady light" means a light, which complies with the characteristics described for a medium intensity type C light;

"obstacle" means fixed (whether temporary or permanent) and mobile objects or parts that—

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

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

(c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation or;

(d) the largest overall dimension of the helicopter where rotors are turning measured from the most forward position of the main rotor tip path plane to the most rearward position of the tail rotor tip path plane or helicopter structure;

"point-in-space (PinS) approach" means the point-in-space approach based on GNSS and is an approach procedure designed for helicopters only; it is aligned with a reference point located to permit subsequent flight manoeuvring or approach and landing using visual manoeuvring in adequate visual conditions to see and avoid obstacles;

"Point-in-Space (PinS) visual segment" means the segment of a helicopter PinS approach procedure from the MAPt to the

landing location for a PinS "proceed visually" procedure; this visual segment connects the PinS to the landing location;

"protection area" means a defined area surrounding a stand intended to reduce the risk of damage from helicopters accidentally diverging from the stand;

"rejected takeoff area" means a defined area on a heliport suitable for helicopters operating in performance class 1 to complete a rejected takeoff;

"relevant authority" means any authority other than Civil Aviation Authority whose action may be necessary or complimentary for the implementation of these Regulations;

"routine data" means there is a very low probability where using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

"runway-type FATO" means a FATO having characteristics similar in shape to a runway;

"safety" means a state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level;

"safety area" means a defined area on a heliport surrounding the FATO which is free of obstacles, other than those required for air navigation purposes and intended to reduce the risk of damage to helicopters accidentally diverging from the FATO;

"shipboard heliport" means a heliport located on a ship that may be purpose or non-purpose built. A purpose-built shipboard heliport is one designed specifically for helicopter

operations; a non-purpose-built shipboard heliport is one that utilises an area of the ship that is capable of supporting a helicopter but not designed specifically for that task;

"static load-bearing surface" means a surface capable of supporting the mass of a helicopter situated upon it;

"surface-level heliport" means a heliport located on the ground or on a structure on the surface of the water;

"Tribunal" means the Civil Aviation Appeals Tribunal established under sections 43 and 44 of the Act;

"Touchdown and Lift-off Area (TLOF)" means an area on which a helicopter may touch down or lift off;

"Touchdown Positioning Circle (TDPC)" means a touchdown positioning marking (TDPM) in the form of a circle used for omnidirectional positioning in a TLOF;

"Touchdown Positioning Marking (TDPM)" means a marking or set of markings providing visual cues for the positioning of helicopters;

"winching area" means an area provided for the transfer by helicopter of personnel or stores to or from a ship.

4. Use of common reference systems

(a) The World Geodetic System — 1984 (WGS-84) shall be used as the horizontal reference system, and reported aeronautical geographical coordinates, indicating latitude and longitude shall be expressed in terms of the WGS84 geodetic reference datum.

(b) The Mean Sea Level datum, which gives the relationship of gravity-related height (elevation) to a surface known as the geoid, shall be used as the vertical reference system.

(c) The Gregorian calendar and Coordinated Universal Time shall be used as the temporal reference system except

where notified in Uganda Aeronautical Information Publication or the Aeronautical Information Circular.

(d) Unless otherwise prescribed by the authority, the International System of Units developed and maintained by the General Conference of Weights and Measures (CGPM) shall be used as the standard system of units of measurement.

5. Types of heliports

In these Regulations the following types of heliports shall be considered—

(a) surface level heliport which is a heliport located on the ground or on a structure on the surface of the water;

(b) elevated heliport which is an a heliport located on a raised structure on land;

(c) helideck which is a heliport located on a fixed or floating offshore facility such as an exploration and production unit used for the exploitation of oil or gas; and

(d) shipboard heliport which is an a heliport located in the bow or stern of a ship or is purpose built above the ship's structure.

Part II—Design and Construction of Heliports

6. Requirements for application for heliport construction permit

(1) A person shall not construct a heliport unless that person has a valid heliport construction permit issued under regulation 7.

(2) A person shall submit an application for a heliport construction permit to the authority in a form prescribed by the authority and the application shall be accompanied with the following information—

(a) a detailed design of the proposed construction including related architectural requirements for approval by the relevant authority;

(b) heliport data; and

(c) a topographical map of the proposed heliport site as specified by the authority, where applicable.

(3) An application for a heliport construction permit shall be considered for approval by the authority, where —

(a) the applicant holds a valid authorisation from a relevant authority for use of the place as a heliport; and

(b) the application is approved by the National Environment Management Authority.

(4) The authority shall prior to issuance of a construction permit, assess the suitability of the place proposed for construction taking into consideration—

(a) the proximity of the place to other heliports and landing areas including military and civil aerodromes and heliports;

(b) obstacles, terrain and existing airspace restrictions; and

(c) that it is not against public interest that the place where the heliport is to be constructed shall be used as such.

7. Issuance of heliport construction permit

The authority shall issue a heliport construction permit to an applicant where the application meets the requirements in regulation 6 and any other requirements specified by any relevant authority.

8. Design and construction of heliport

(1) An applicant for a construction permit shall ensure that the design and construction of the heliport is undertaken by a person registered by the relevant professional body and shall take into account land use and environmental control measures.

(2) The authority shall inspect the site of a heliport during construction to ascertain compliance with these Regulations, the Civil Aviation (Security) Regulations 2022, other applicable laws and the terms and conditions of the heliport construction permit.

9. Requirements for heliport design

A heliport design shall indicate the—

(a) physical characteristics in accordance with these Regulations;

(b) obstacle limitation surfaces;

(c) visual aids for navigation;

(d) appropriate equipment and installations, if any; and

(e) integrate security measures in accordance with the Civil Aviation (Security) Regulations, 2022.

Part III—Certification of Heliports

10. Application of this Part

(1) This Part applies to all heliports used for international operations.

(2) A person shall not operate a heliport used for international operations unless that person holds a certificate issued by the authority in accordance with these Regulations.

(3) International helicopter flights shall depart from certified aerodromes or heliports.

11. Application for certificate

(1) An application for a heliport certificate shall be made to the authority on a heliport certificate application form and the application shall be accompanied by—

(a) two copies of the heliport manual;

(b) a site plan for the heliport;

(c) an environmental impact assessment report approved by National Environment Management Authority;

(d) approval from any other relevant authority;

(e) proof of financial capability;

(f) particulars of any non-compliance or deviations from the appropriate heliport design, operation or equipment standards;

(g) evidence of payment of the charges prescribed by the authority;

(h) details of competence of the key heliport personnel including resumes, training records history and any other information that may be sought by the authority to ascertain the competency of the person as prescribed by the authority in the Aeronautical Information Publication or Aeronautical Information Circular;and

(i) WGS84 heliport survey report and drawings.

(2) Application forms for a heliport certificate may be obtained from the authority or from its website.

12. Conditions for issuance of certificate

(1) A certificate shall be issued subject to any conditions prescribed by the authority.

(2) The authority shall endorse on a certificate the conditions for use of a heliport and any other details as the authority may consider necessary.

13. Heliport certificate

(1) A heliport certificate shall specify—

(a) the restrictions, if any, relating to not complying with or deviations from the appropriate heliport design, operation or equipment standards; and

(b) the period of validity of the certificate.

(2) A certificate issued under these Regulations shall not be transferable.

14. Issuance of heliport certificate

(1) The authority shall issue a heliport certificate where the authority is satisfied that—

(a) the applicant and the personnel of the applicant are adequate in number and have the necessary competency and experience to operate and maintain a heliport;

(b) the heliport manual submitted with the application contains all the relevant information;

(c) the heliport facilities, services and equipment are established in accordance with approved standards;

(d) the heliport operating procedures make satisfactory provision for the safety of aircraft;

(e) the applicant has an acceptable safety management system in place; and

(f) the applicant has an approved aviation security programme in accordance with the Civil Aviation (Security) Regulations, 2022.

(2) The issuance of a certificate shall be subject to compliance with these Regulations and standards prescribed by the authority and any other condition specified or notified by the authority in accordance with the safety audit and inspection.

(3) The authority may refuse to grant a certificate to an applicant and where the authority refuses, it shall notify the applicant in writing, of the reasons for the refusal, not later than fourteen days after making that decision.

(4) The authority, shall following the issuance of a certificate, carry out surveillance and inspections to ensure continuing validity of the certificate and continuing capacity of the heliport operator to maintain safe and regular operation of the heliport and associated facilities and services.

15. Validity of heliport certificate

A heliport certificate shall be valid for a period of three years, unless the certificate is surrendered, suspended or cancelled in accordance with these Regulations.

16. Renewal of heliport certificate

(1) An application for renewal of a heliport certificate shall be submitted by the heliport certificate holder at least six months before the expiry of the certificate.

(2) An application for the renewal of a heliport certificate shall be made to the authority in the prescribed form and shall be accompanied by—

(a) the heliport manual if significant changes have been made following the initial certification;

(b) particulars of deviations, if any, from the appropriate design, operation or equipment standards; and

(c) evidence of payment of the appropriate charges as prescribed by the authority in the Aeronautical Information Circular.

(3) The renewal of a heliport certificate shall be subject to compliance with these Regulations, standards prescribed by the authority and any other conditions specified or notified by the authority as determined by the safety audit conducted by the authority.

17. Amendment of heliport certificate

(1) An application for amendment of a heliport certificate shall be submitted in a form prescribed by the authority.

(2) The authority may request that the application be accompanied by any or all of the following—

(a) two copies of the heliport manual;

(b) a site plan for the heliport;

(c) an environmental impact assessment report;

(d) approval from any relevant authority;

(e) particulars of any non-complying or deviating features from the appropriate heliport design, operation or equipment standards; and

(f) evidence of payment of the charges prescribed in the Aeronautical Information Publication or Aeronautical Information Circular by the authority.

(3) The authority may, where necessary, amend a heliport certificate —

(a) for a change in the use or operation of the heliport;

(b) for a change in the boundaries of the heliport;

(c) if the holder of the heliport certificate requests an amendment; or

(d) if the authority deems it necessary provided the requirements of regulation 15, are met.

18. Breach of conditions of certificate and non-conformance with certification requirements

(1) A breach of any condition subject to which a certificate is issued including any approval, permission or exemption shall render the certificate invalid.

(2) The authority may impose operating restrictions or sanctions at a certified heliport, in the event of not observing the certification requirements or any unresolved safety concerns.

19. Interim heliport certificate

(1) The authority may issue an interim heliport certificate to the applicant, authorising the applicant to operate a heliport if the authority is satisfied that—

(a) a heliport certificate in respect of the heliport will be issued to the applicant, as soon as the application procedure for the grant of a heliport certificate has been completed; and

(b) the grant of the interim certificate is in the public interest and is not detrimental to aviation safety.

(2) An interim heliport certificate referred to in subregulation (1) shall be valid for a maximum period of six months.

(3) An interim heliport certificate referred to in subregulation (1) shall expire on—

(a) the date on which the heliport certificate is issued; or

(b) the expiry date specified in the interim heliport certificate,

whichever is earlier.

20. Suspension of heliport certificate

(1) The authority may suspend a heliport certificate where—

(a) following a safety inspection or audit, it is evident that the holder of the certificate has not complied with the requirements prescribed in these Regulations and has failed to remedy the non-compliance within a period of thirty days after the inspection;

(b) the holder of the certificate prevents the authority from carrying out a safety inspection or audit in accordance with these Regulations;

(c) the holder of the certificate is under receivership, liquidation or bankruptcy proceedings;

(d) the holder of the certificate voluntarily gives notice in writing to the authority;

(e) the holder of the certificate resists or is unwilling to take action to correct or mitigate a condition affecting aviation safety;

(f) the holder of the certificate fails to perform an already agreed upon corrective action and suspension of the certificate is the last resort to avoid unsafe operations in the heliport; or

(g) the authority considers it necessary in the interest of aviation safety.

(2) The authority may, on giving reasons to the holder of a certificate, suspend the certificate for a period not exceeding sixty days.

(3) A holder of a certificate who is notified of a suspension in subregulation (2) may submit a response in writing within a period of fourteen days.

(4) Notwithstanding subregulation (3), the authority may suspend any or all of the operations at a heliport pending receipt of a response from the holder.

(5) A holder of a certificate who is aggrieved by the suspension of a certificate may appeal against the suspension to the Tribunal, within thirty days of the suspension.

(6) Where an appeal is made under subregulation (5), the holder of a heliport certificate shall state in writing the reasons why in his or her opinion, the suspension should be varied or set aside.

(7) A holder of a heliport certificate which is suspended shall within thirty days of the suspension, surrender the certificate to the authority.

(8) Notwithstanding subregulation (7), where a heliport certificate is suspended for a period of less than thirty days, a holder of the certificate shall immediately surrender the certificate immediately to the authority.

21. Cancellation of heliport certificate

(1) The authority may cancel a heliport certificate where—

(a) the certificate holder is incapable or unwilling to carry out corrective action or has repeatedly committed serious violations;

(b) the certificate holder has demonstrated a lack of responsibility, such as deliberate and flagrant acts of non-compliance or falsification of records jeopardizing aviation safety; or

(c) the certificate holder has made it convincingly clear that the continued operation of the heliport will be detrimental to public interest.

(2) A holder of a certificate who is aggrieved by the cancellation of a certificate may appeal against the cancellation to the Tribunal, within thirty days of the cancellation.

(3) Where a holder of a certificate does not appeal against the cancellation in accordance with subregulation (2), the holder of the certificate shall immediately surrender the certificate to the authority.

22. Surrender of heliport certificate

(1) A holder of a certificate who wishes to surrender the certificate shall give the authority a notice in writing not later than sixty days before the date on which the certificate is to be surrendered.

(2) The authority shall cancel the certificate upon the expiry of the period of notice under subregulation (1).

(3) Where, after the expiry of the period in subregulation (1), a heliport is abandoned or is not maintained in accordance with the conditions of the certificate, the holder of the certificate shall remove, obliterate or modify the prescribed markings.

(4) Subject to subregulation (1), a holder of a certificate may surrender the certificate to the authority at any time.

23. Charges and fines at certificated heliports

(1) A holder of a certificate shall prescribe charges for the use of the heliport or of any facilities provided at the heliport for the safety, security, efficiency or regularity of air navigation.

(2) Where required a holder of a heliport certificate shall, furnish particulars of the charges levied for the use of a heliport or the performance of services at the heliport.

(3) Notwithstanding subregulation (1), the authority may where necessary, prescribe the maximum charges which may be levied for the use of a heliport or the performance of services at the heliport, for a specified period.

(4) A holder of a heliport certificate of a heliport for which the authority prescribes charges under subregulation (3) shall not cause or permit any other charges to be made in contravention of that subregulation.

(5) A holder of a heliport certificate of a heliport for which the authority prescribed charges shall cause the prescribed charges to be posted in a conspicuous place at the heliport.

24. Certificates register

(1) The authority shall maintain a register of all certificates issued in accordance with these Regulations.

(2) The register shall contain—

(a) the full name of the holder of a heliport certificate;

(b) the nationality of the holder of a certificate;

(c) the postal, telephone, facsimile and e-mail addresses of a holder of a certificate;

(d) the name and location of the heliport for which a certificate is issued;

(e) the number of the certificate;

(f) the date on which the certificate was issued; and

(g) any other relevant information.

Part IV—Licensing of Heliports

25. Application of this Part

This Part applies to all surface level heliports, elevated heliports and shipboard heliports used for domestic flights in Uganda.

26. Application for heliport licence

(1) An application for a heliport licence shall be made to the authority on a heliport licence application form and the application shall be accompanied by—

(a) two copies of the heliport manual;

(b) a statement of compliance;

(c) a site plan for the heliport;

(d) an environmental impact assessment report;

(e) an approval from any relevant authority;

(f) particulars of any noncompliance or deviations from the appropriate aerodrome design, operation or equipment standards; and

(g) charges prescribed by the authority in the Aeronautical Information Publication or Aeronautical Information Circular.

(2) The heliport licence application forms may be obtained from the authority or from its website.

27. Conditions for issuance of heliport licence

(1) A licence may be issued subject to the conditions prescribed by the authority.

(2) The authority shall endorse on a licence the conditions for use of a heliport and any other details deemed necessary by the authority.

(3) An aerodrome operator shall not refuse an aircraft in an emergency condition from using the aerodrome.

28. Specifications for heliport licence

(1) A heliport licence shall specify—

(a) the type of heliport;

(b) the restrictions, if any, relating to non-compliance with or deviations from the appropriate heliport design, operation or equipment standards; and

(c) the period of validity of the heliport licence.

(2) A heliport licence issued under these Regulations shall not be transferable.

(3) A holder of a heliport licence which is suspended or cancelled shall within thirty days of the suspension or cancellation, surrender the licence to the authority.

(4) Notwithstanding subregulation (2), where a heliport licence is suspended for a period of less than thirty days, a holder of the licence shall immediately surrender the licence.

29. Issuance of heliport licence

(1) The authority shall issue a licence in the prescribed form and manner where the authority is satisfied that —

(a) the applicant and the personnel of the applicant are adequate in number and have the necessary competency and experience to operate and maintain a heliport;

(b) the heliport manual submitted with the application contains all the relevant information;

(c) the heliport facilities, services and equipment are established in accordance with approved standards;

(d) the heliport operating procedures make satisfactory provision for the safety of aircraft; and

(e) the applicant for a licence has complied with the requirements in the National Civil Aviation Security Programme.

(2) The issuance of a licence shall be subject to compliance with these Regulations and the standards prescribed by the authority and any other condition specified or notified by the authority.

(3) The authority may refuse to grant a licence to an applicant and where the authority refuses, it shall notify the applicant in writing, of the reasons for the refusal,with in fourteen days after making that decision.

(4) The authority shall, following the issuance of a licence, carry out surveillance and inspections to ensure the continuing validity of the licence and continuing capacity of the heliport operator to maintain safe and regular operations of the heliport and associated facilities and services.

30. Validity of heliport licence

(1) A licence shall be valid for a period of two years, unless the licence is suspended, cancelled or revoked in accordance with these Regulations.

(2) A holder of a heliport licence which is suspended or cancelled shall within thirty days of the suspension or cancellation, surrender the licence to the authority.

31. Renewal of heliport licence

(1) An application for the renewal of a licence shall be made to the authority in the prescribed form and shall be accompanied by—

(a) the heliport manual if significant changes have been made following the initial licensing;

(b) particulars of deviations, if any, from the appropriate design, operation or equipment standards; and

(c) evidence of payment of the appropriate charges prescribed by the authority in the Aeronautical Information Circular.

(2) An application for renewal shall be submitted ninety days before the expiry of the licence.

(3) The renewal of a licence shall be subject to compliance with these Regulations, standards prescribed by the authority and any other conditions as may be specified or notified by the authority as determined by the safety inspections and audit procedures by the authority.

32. Amendment of heliport licence

(1) An application for amendment of a licence shall be submitted in a form prescribed by the authority.

(2) The authority may request that the application be accompanied by any or all the following—

(a) the heliport manual;

(b) a site plan for the aerodrome;

(c) an environmental impact assessment report;

(d) approval from any relevant authority;

(e) a report of the safety assessment and change management process;

(f) particulars of any non compliance or deviations from the appropriate aerodrome design, operation or equipment standards; and

(g) evidence of payment of the charges prescribed by the authority in the Aeronautical Information Publication or the Aeronautical Information Circular.

(3) The authority may, where the requirements of amendment of a heliport licence have been met, amend the licence where—

(a) there is a change in the use or operation of the heliport;

(b) there is a change in the boundaries of the heliport;

(c) the holder of the heliport certificate requests an amendment; or

(d) the authority deems it necessary.

33. Breach of conditions of heliport licence and nonconformity with licensing requirements

(1) The breach of any condition subject to which a licence is issued including any approval, permission or exemption shall render the licence invalid.

(2) The authority shall impose operating restrictions or sanctions at a licenced heliport in the event of failure to meet the licensing requirements or any unresolved safety concerns.

34. Interim heliport licence

(1) The authority may issue an interim heliport licence to the applicant, authorising the applicant to operate a heliport if the authority is satisfied that—

(a) a heliport licence in respect of the heliport will be issued to the applicant, as soon as the application procedure for the grant of a heliport certificate has been completed; and

(b) the grant of the interim licence is in public interest and is not detrimental to aviation safety.

(2) An interim heliport licence referred to in subregulation (1) shall be valid for a maximum period of six months.

(3) An interim heliport licence referred to in subregulation (1) shall expire on the date on which the heliport certificate is issued or the expiry date specified in the interim heliport certificate; whichever is earlier.

35. Suspension and cancellation of heliport licence

(1) The authority may suspend a licence where—

(a) following a safety inspection or audit, it is evident that the holder of the licence has not complied with the requirements prescribed in these Regulations and failed to remedy the noncompliance within a period of thirty days after the inspection;

(b) the holder of the licence prevents the authority from carrying out a safety inspection or audit in accordance with these Regulations;

(c) the holder of the licence is under receivership, liquidation or bankruptcy proceedings; or

(d) it is deemed necessary in the interest of aviation safety.

(2) The authority may, on giving reasons to the holder of a licence suspend the licence for a period not exceeding sixty days.

(3) A holder of a heliport licence who is notified of an intended suspension in subregulation (2) may submit a response in writing within a period of fourteen days from the date of issue of the notice of the intended suspension.

(4) Notwithstanding subregulation (3), the authority may suspend any or all of the operations at a heliport pending receipt of a response from the holder of the heliport licence.

(5) A holder of a heliport licence who is aggrieved by the suspension of a heliport licence may appeal against the suspension to the Appeals Tribunal, within thirty days of the suspension.

(6) Where an appeal is made under subregulation (5), the holder of a heliport licence shall state in writing the reasons why the suspension should be varied or set aside.

(7) The Appeals Tribunal may vary or set aside the suspension made under subregulation (2) .

(8) Where a holder of a heliport licence does not appeal against the suspension in accordance with this regulation, the authority may cancel the heliport licence, and states the reasons for the cancellation.

36. Surrender of heliport licence

(1) A holder of a heliport licence who wishes to surrender the heliport licence shall give the authority notice of not less than ninety days in writing, before the date on which the heliport licence is to be surrendered.

(2) The authority shall cancel the heliport licence upon the expiry of the period of notice in stated under subregulation (1).

(3) After the expiry of the period in subregulation (1), the holder of the heliport licence shall remove, obliterate or modify the heliport markings.

(4) Notwithstanding subregulation (1), a holder of a heliport licence may surrender the heliport licence to the authority at any time.

37. Charges at licenced heliport

(1) A holder of a heliport licence shall prescribe the charges to be paid for the use of the heliport or of any facilities provided at the heliport for the safety, security, efficiency or regularity of air navigation.

(2) Where required by the authority, a holder of a heliport licence shall, furnish particulars of the charges levied for the use of a heliport or the performance of services at the heliport.

(3) Notwithstanding subregulation (1), the authority may where necessary, prescribe the maximum charges which may be levied for the use of a heliport or the performance of services at the heliport, for a specified period.

(4) A holder of a heliport licence of a heliport for which the authority prescribes charges under subregulation (3) shall not cause or permit any other charges to be made in contravention of that subregulation.

(5) A holder of a heliport licence of a heliport for which the authority prescribes charges shall cause the prescribed charges to be posted in a conspicuous place at the heliport.

38. Licences register

(1) The authority shall maintain a register of the heliport licences issued under this part and shall contain—

(a) the full name of the holder of every heliport licence;

(b) the nationality of the holder of every heliport licence;

(c) the postal, telephone, facsimile and e-mail addresses of a holder of a heliport licence;

(d) the name and location of the heliport for which a heliport licence is issued;

(e) the number of every heliport licence;

(f) the date on which every heliport licence is issued; and

(g) any other relevant information.

39. Notification of information and promulgation of licensing status

(1) A heliport operator shall—

(a) in the case of a heliport licence to operate a heliport for public use, cause to be notified, the times during which the heliport is to be available for takeoff and landing of aircraft for public transport or instruction in flying; and

(b) upon request, furnish to an authorised person, information concerning the terms of the heliport licence.

(2) The licensing status of the heliport shall be promulgated in the Aeronautical Information Publication.

Part V—Obligation of Operator

40. Application of this Part

This Part applies to all heliports except where otherwise specified.

41. Compliance with conditions

A heliport operator shall comply with the conditions, endorsed on a licence, granted under these Regulations.

42. Competence of operational and maintenance personnel

(1) An operator shall ensure that there is an adequate number of qualified and skilled personnel to perform activities for heliport operations and maintenance.

(2) Where the authority or any other relevant authority requires competence licensing for the personnel of a heliport, the operator shall employ persons with the required competence licensing.

43. Heliport operations and maintenance

(1) Subject to any directives that the authority may issue, an operator shall operate and maintain a heliport in accordance with the procedures set out in the heliport manual.

(2) The authority may give written directives to an operator to alter the procedures set out in a heliport manual.

(3) An operator shall ensure proper and efficient maintenance of all heliport facilities.

(4) Where air traffic services are provided at a heliport, the operator shall coordinate with the air traffic services, to ensure the safety of aircraft operating in the airspace, associated with the heliport.

44. Storage of inflammable and other dangerous goods

A person shall not store fuel, pyrotechnic materials and other highly inflammable or dangerous goods at a heliport except with the permission of the authority and in accordance with the prescribed standards.

45. Safety measures against fire

(1) A person shall not—

(a) smoke within any place, or bring an open flame into any place, where that act is prohibited by a displayed notice;

(b) where there is no notice prohibiting smoking in a place, smoke within that place, or bring an open flame into that place, within a distance of an aircraft or, of any vehicle used for the supply of fuel to an aircraft, or a store, dump, liquid fuel or explosives, as may be prescribed;

(c) willfully give a false fire alarm;

(d) tamper or interfere with any fire hose reel, hydrant or any other item of equipment provided for firefighting purposes;

(e) keep, store, discard or discharge any flammable liquid, gas, signal flares or other like material in an aircraft, except in the receptacle appropriate for the purpose or in a place on the heliport specifically approved by the heliport operator for the purpose; or

(f) store, stack or use any material or equipment in a manner which constitutes or is likely to constitute a fire hazard.

(2) An operator shall display in a conspicuous place an appropriate signage in respect of the acts prohibited under subregulation (1).

46. Access to and operations within restricted areas

(1) A person shall not access a restricted area of a heliport unless authorised by the operator and subject to such conditions as the operator may impose.

(2) A person authorised to access a restricted area under subregulation (1) shall not —

(a) move an aircraft or a vehicle in the restricted area except with the permission and directions issued by the air traffic services personnel;

(b) move an aircraft or vehicle in the restricted area in a manner that endangers the safety of persons and property; or

(c) use a portion of the heliport for landing or taking off, other than the area designated for that purpose.

47. Entry or exit from restricted areas of heliport

(1) A person, aircraft or vehicle shall not enter or leave a restricted area of a heliport except through points established by the operator for that purpose.

(2) Except in an emergency or at an appropriate point of entry or exit established by an operator for that purpose, a person—

(a) other than a person carried in an aircraft or in a vehicle, shall not enter or leave restricted areas of a heliport; or

(b) shall not move an aircraft on the surface of a heliport or a vehicle into or from the restricted area.

48. Test running of aircraft engine

A person shall not test run an aircraft engine at a heliport except at the approved aircraft maintenance facility of the heliport or a place designated for that purpose, by the operator.

49. Certain acts prohibited at heliport

(1) A person shall not, at a heliport—

(a) obstruct or interfere with the proper use of the heliport;

(b) obstruct any person executing his or her duties at the heliport;

(c) remove or deface any notice, writing, document or marking erected or displayed by the heliport operator;

(d) throw, leave or drop anything capable of causing injury to any person or damage to any property;

(e) dump any waste matter except at a place approved for the purpose by the heliport operator; or

(f) dump or spill any substance capable of causing water pollution, whether solid, liquid, vapour, gas or a combination of these, except at a place approved for that purpose by the heliport operator.

(2) Except with the permission of the operator, a person shall not —

(a) interfere or tamper with any part of the heliport or any equipment associated with the operation of the heliport;

(b) climb any wall, fence, barrier, ceiling, gate or post on a heliport;

(c) handle any baggage or carry baggage for a passenger at a heliport;

(d) bring a vehicle into or drive into a heliport; or

(e) obstruct an entrance or a passage at a heliport in a manner that inconvenience other users of the entrance or the passage.

50. Removal of obstructions from heliport movement surface

An operator shall remove from the heliport surface any vehicle or other obstruction that is likely to be hazardous to aircraft operations.

51. Maintenance of environment management program

(1) An operator shall establish and maintain a heliport environment running program for the area within the authority of the operator and for the area where any wildlife presents or is likely to present a hazard to aircraft operations.

(2) An operator shall ensure that the environment management program established under subregulation (1) minimizes the effects of any hazards or potential hazards taking into account the provisions of the laws on environmental management.

(3) The operator of a certified heliport shall ensure the continuous monitoring of birds and wildlife status by experts to ascertain any changes and give timely advice of any potential risks.

52. Protection of navigation aids

A heliport operator shall in consultation with the authority —

(a) prevent the construction of any facilities on the heliport, where the facilities may adversely affect the operation of any electronic or visual navigation or air traffic service facility on the heliport; and

(b) as far as it is within the authority of the operator, prevent any interruption of visual or electronic signal of navigation aids.

53. Responsibilities of operator

(1) An operator shall —

(a) maintain the heliport in a serviceable condition;

(b) keep the heliport free of unauthorised persons, vehicles and animals which are not under proper control or any other obstructions;

(c) mark all obstructions in accordance with the prescribed guidelines;

(d) inform the authority of any alterations to obstruction or works on the heliport;

(e) install approved wind direction indicators to show the surface direction of the wind and ensure that they function satisfactorily;

(f) maintain the prescribed markings in a conspicuous condition and ensure that they are readily visible to an aircraft in the air or maneuvering on the ground;

(g) avail facilities and ensure that they are in serviceable condition and that all apparatus installed function efficiently;

(h) appropriately mark the unserviceable areas on the landing terrain;

(i) inform the authority where the heliport becomes unserviceable, through any cause or where any portion of the surface of the landing area deteriorates to such an extent that the safe operation of aircraft may be endangered;

(j) submit to the authority reports on the condition of the heliport as required by the authority; and

(k) report all incidents and accidents at the heliport to the authority.

54. Inspection of heliports and unhindered access by inspectors of authority

(1) Before a heliport licence is issued or renewed and, subsequently, at any other time, for the purpose of ensuring that safety at the heliport is maintained, the authority shall inspect and carry out tests on the heliport facilities, services and equipment, inspect the documents and records of the heliport, and where applicable, verify the safety management system of the heliport.

(2) For the purpose of facilitating the functions of the authority specified in subregulations (1) an inspector of the authority shall have unhindered access to any part of the heliport or any heliport facility, including equipment, records, documents and personnel.

55. Powers of heliport inspector

(1) An officer of the authority who has been designated as a heliport inspector shall exercise the powers accorded to him or her in accordance with the designation granted to him or her.

(2) The designation in subregulation (1) shall include but not limited to carrying out inspection of the heliport facilities, equipment, documents, personnel and imposition of operating restrictions where deemed necessary.

56. Notifying and reporting

(1) An operator shall notify and report to the authority, the air traffic control unit and pilots, within the specified time limits and information on—

(a) any inaccuracies in the AIP;

(b) any changes to the heliport facilities, equipment and level of service planned in advance; and

(c) issues that may require immediate notification including obstacles, obstructions and hazards, levels of service, movement areas, and any other condition that affects aviation safety at the heliport and against which precautions are warranted.

(2) Where it is not feasible for an operator to arrange for the air traffic control and the flight operations unit to receive notice of the circumstances referred to in subregulation (1) (c), the operator shall give immediate notice, directly to the pilots who may be affected by those circumstances.

57. Heliport movement area inspections

A heliport operator shall carry out inspections of the movement area at least once a day.

58. Special inspections

(1) An operator shall inspect a heliport—

(a) as soon as practicable after the occurrence of any accident or incident;

(b) during any period of construction or repair of the heliport facilities or equipment that is critical to the safety of aircraft operation; and

(c) at any other time where there are conditions at the heliport that may affect aviation safety.

(2) An operator shall notify and report to the authority, within the specified time limits, information on any special inspection carried out under subregulation (1).

59. Warning notices

Where a low flying aircraft at or near a heliport, or where a taxiing aircraft, is likely to be hazardous to people or vehicles, an operator shall—

(a) post hazard warning notices to that effect, on any public way that is adjacent to the maneuvering area; or

(b) where the public way is not controlled by the operator, inform the relevant authority about the hazard.

PART VI—HELIPORT MANUAL

60. Requirements for heliport manual

(1) Upon making an application for a heliport licence the applicant shall submit to the authority a heliport manual for approval.

(2) A heliport manual shall —

(a) be typewritten or printed;

(b) be signed by the operator;

(c) be in a format that is easy to revise;

(d) have a system for recording the current pages and any amendments, including a page for logging revisions; and

(e) be organised in a manner that facilitates the preparation, review and approval processes.

(3) An operator shall keep at least one approved copy of the heliport manual at the heliport and one copy at the principal place of business of the operator, where the principle place of business of the operator is different from the heliport.

61. Information to be included in heliport manual

(1) A heliport manual shall contain all the information and instructions necessary to enable the personnel of a heliport perform their duties.

(2) Notwithstanding subregulation (1), and to the extent that the particulars are applicable, a manual for a heliport in category D shall include the particulars provided in Schedule 2 to these regulations.

(3) Where a person is given an exemption in accordance with these Regulations, the heliport manual shall show the exemption notice number given by the authority, the date the exemption came into effect and any conditions or procedures subject to which the exemption was granted.

62. Amendment of heliport manual

(1) For the purpose of maintaining the accuracy of the information in a heliport manual—

(a) an operator shall wherever necessary, amend the heliport manual; or

(b) the authority may issue a written directive requiring an operator to alter or amend the heliport manual.

(2) An operator shall submit the proposed amendment to the authority for approval, before amending the manual.

(3) The authority shall approve the amendment made to a heliport manual where the amendment meets the requirements of these Regulations.

63. Heliport licensing continued oversight

(1) The heliport licensing status shall be maintained through heliport licensing, safety assessments and heliport compatibility studies.

(2) The heliport operational management requirements shall be established in accordance with the standards prescribed by the authority.

Part VII—Information to be Reported to Aeronautical Information Services

64. Availability of information

(1) An operator shall ensure that information relating to a heliport and its facilities, which is significant for the conduct of flights to and from the heliport, is available to the users of the heliport.

(2) An operator shall be responsible for notifying the Aeronautical Information Services of any errors and omissions in the aeronautical information which is of operational significance, published in the AIP or Aeronautical Information Circular or in the NOTAM, and of any pending changes in the heliport or its facilities which are likely to affect this information.

(3) An operator shall provide information on the following for the guidance of pilots and other operators —

(a) the status of licensing, certification or registration of the heliport;

(b) any construction or maintenance work on or immediately adjacent to the manoeuvring area;

(c) the unserviceable portions of any part of the manoeuvring area;

(d) the heliport surface conditions where affected by water, damp, wet, water patches or flooded, as may be appropriate;

(e) any parked aircraft or other objects on, or immediately adjacent to the taxiways;

(f) the presence of any other temporary hazards;

(g) failure or irregular operation of any part of the heliport lighting system, or of the heliport main and secondary power supplies;

(h) failure, irregular operation and changes in the operational status of any electronic approach or navigation aid, or aeronautical communication facility; and

(i) any other information of operational significance.

65. Action required for occurrences of operational significance other than those involving electronic aids and communication facilities

(1) Where any of the following conditions occur or are anticipated, an operator shall take immediate action to amend the information contained in the Aeronautical Information Circular and where necessary, promulgate the change by NOTAM through the Aeronautical Information Services using the Aeronautical Information Services address notified in the Aeronautical Information Circular—

(a) changes in the availability of the manoeuvring area and changes in the heliport declared distance; except that increases in declared distances may only be made with the approval of the authority;

(b) significant changes in heliport lighting and other visual aids;

(c) presence or removal of temporary obstructions to aircraft operation in the manoeuvring area;

(d) presence of airborne hazards to air navigation;

(e) interruption, return to service, or major changes to rescue facilities and firefighting services in terms of the new category of the rescue and firefighting service available at the heliport; except that permanent changes to the promulgated rescue firefighting category shall be made with the approval of the authority;

(f) failure or return to operation of hazard beacons and obstruction lights in the vicinity of the heliport;

(g) erection or removal of obstructions to air navigation, and erection or removal of significant obstacles in takeoff, climb or approach areas;

(h) air displays, air races, parachute jumping, or any unusual aviation activity; and

(i) any other information of operational significance.

(2) Where any of the conditions in subregulation (1) arises at short notice, an operator shall notify the Aeronautical Information Services for promulgation of a NOTAM.

(3) Where any of the conditions in subregulation (1) is intended, the operator shall make a written request to the Aeronautical Information Services, for the amendment of the AIP and AIC or for supplementary action.

66. Action required for occurrences that affect electronic aids and communication facilities

(1) An operator or a person in charge of a navigation facility shall initiate NOTAM action—

(a) for the establishment or withdrawal of electronic aids to air navigation; and

(b) for changes in the regularity or reliability of operation of any electronic aid to air navigation or aeronautical communication facility.

(2) An operator or a person in charge of a navigation facility shall request for the NOTAM action, or an amendment or a supplement of AIP or the AIC directly from the Aeronautical Information Services or through channels established by the authority.

67. Aeronautical data reporting

(1) An operator shall provide to the authority for promulgation, accurate aeronautical data as specified in these Regulations.

(2) An operator shall ensure that heliport related aeronautical data is adequate and accurate and that the integrity of the data is maintained and protected throughout the data process from survey or origin up to the next intended user.

(3) An operator shall determine and report heliport related aeronautical data in accordance with the prescribed accuracy and integrity requirements while taking into account the established quality system procedures.

(4) The accuracy requirements for aeronautical data shall be based upon a ninety-five per cent confidence level and in that respect, three types of positional data, namely; surveyed points, calculated points and declared points, shall be identified.

(5) Where made available in accordance with these Regulations, the selection of the heliport mapping data features to be collected shall be made with consideration of the intended applications.

(6) Where made available in accordance with these Regulations, heliport mapping data shall comply with the accuracy and integrity requirements specified by the authority.

(7) Subject to subregulation (6), the following classification and data integrity levels shall apply —

(a) routine data which is for avoidance of corruption throughout the processing of the data;

(b) essential data which is to ensure corruption does not occur at any stage of the entire process and may include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level; and

(c) critical data which is to ensure corruption does not occur at any stage of the entire process and include additional integrity assurance procedures to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks.

Part VIII—Heliports Data

68. Aeronautical data

(1) The determination and reporting of heliport-related aeronautical data shall be in accordance with the accuracy and integrity classification required to meet the needs of the end-user of aeronautical data, in accordance with the specifications in the Civil Aviation (Aeronautical Information Services) Regulations, 2022.

(2) Digital data error detection techniques shall be used during the transmission and storage of aeronautical data and the digital data sets shall be in accordance with the specifications contained in the Civil Aviation (Aeronautical Information Service) Regulations, 2022.

69. Heliport reference point

(1) A heliport reference point shall be established for a heliport not collocated with an aerodrome.

(2) Where the heliport is collocated with an aerodrome, the established aerodrome reference point shall serve both the aerodrome and heliport.

(3) The heliport reference point shall be located near the initial or planned geometric center of the heliport and shall remain where it was first established.

(4) The position of the heliport reference point shall be measured and reported to the aeronautical information services department in degrees, minutes and seconds.

70. Heliport elevations

(1) The heliport elevation and geoid undulation at the heliport elevation position shall be measured and reported to the aeronautical information services department to the accuracy of one-half meter or foot.

(2) The elevation of the TLOF or the elevation and geoid undulation of each threshold of the FATO, where appropriate, shall be measured and reported to the aeronautical information services department to the accuracy of one-half meter or foot.

71. Heliport dimensions and related information

(1) The following data shall be measured or described, as appropriate, for each facility provided on a heliport—

(a) the heliport type which is the surface level, elevated, shipboard or helideck;

(b) the TLOF which is the dimensions to the nearest meter or foot, slope, surface type, bearing strength in tonnes (1,000 kg);

(c) the FATO which is the type of FATO, true bearing to one hundredth of a degree, designation number where appropriate, length and width to the nearest meter slope, surface type;

(d) the safety area which is the length, width and surface type;

(e) the helicopter taxiway and helicopter taxi route which is the designation, width, surface type;

(f) the apron which is the surface type and helicopter stands;

(g) the clearway which is the length and ground profile; and

(h) the visual aids for approach procedures, marking and lighting of FATO, TLOF, helicopter ground taxiways, helicopter air taxiways and helicopter stands.

(2) The geographical coordinates of the geometric center of the TLOF or of each threshold of the FATO, where appropriate, shall be measured and reported to the aeronautical information services department in degrees, minutes, seconds and hundredths of seconds.

(3) The geographical coordinates of appropriate center line points of helicopter ground taxiways and helicopter taxi routes shall be measured and reported to the aeronautical information services department in degrees, minutes, seconds and hundredths of seconds.

(4) The geographical coordinates of each helicopter stand shall be measured and reported to the aeronautical information services department in degrees, minutes, seconds and hundredths of seconds.

(5) The geographical coordinates of obstacles in Area 2, the part within the heliport boundary, and in Area 3 shall be measured and reported to the aeronautical information services department in degrees, minutes, seconds and tenths of seconds.

(6) The top elevation, type, marking and lighting, if any, of obstacles shall be reported to the aeronautical information services department.

72. Declared distances

The following distances to the nearest metre or foot shall be declared, where relevant, for a heliport—

(a) the takeoff distance available;

(b) the rejected takeoff distance available; and

(c) the landing distance available.

73. Coordination between aeronautical information services department and heliport operators

(1) For the purposes of ensuring that the aeronautical information services department obtains information to enable them provide up to date preflight information and to meet the need for inflight information, arrangements shall be made between the aeronautical information services department and the heliport operators responsible for heliport services, to report to the Aeronautical Information Services, with a minimum of delay about—

(a) information on the heliport conditions;

(b) the operational status of associated facilities, services and navigation aids within the area of responsibility ; and

(c) any other information considered to be of operational significance.

(2) Before introducing changes to the air navigation system, due account shall be taken by the services responsible for such changes of the time needed by the Aeronautical Information Services for the preparation, production and issue of relevant material for promulgation.

(3) For the purposes of ensuring the timely provision of the information to the aeronautical information service, there shall be close coordination between the services concerned.

(4) The predetermined, internationally agreed Aeronautical Information Regulation and Control (AIRAC) effective dates shall be observed by the responsible heliport services where, submitting the raw information or data to aeronautical information services constituting changes to aeronautical information that affect charts or computer-based navigation systems, which qualify to be notified by the AIRAC system, as specified in the Civil Aviation (Aeronautical Information Services) Regulations, 2022.

(5) The heliport services responsible for the provision of raw aeronautical information or data to the Aeronautical Information Services, shall do that while taking into account the accuracy and integrity requirements necessary to meet the needs of the end-user of aeronautical data.

74. Rescue and firefighting

(1) Information concerning the level of protection provided at a heliport for helicopter rescue and firefighting purposes shall be made available.

(2) The level of protection normally available at a heliport shall be expressed in terms of the category of the rescue and firefighting service described in Part XII of these Regulations and in accordance with the types and amounts of extinguishing agents normally available at the heliport.

(3) Changes in the level of protection normally available at a heliport for rescue and firefighting shall be notified to the Aeronautical Information Services department and ATS units to enable them provide the necessary information to arriving and departing helicopters; and where such a change has been corrected, the aeronautical information services department and air traffic services units shall be advised accordingly.

(4) Changes in the level of protection from that normally available at the heliport may result from, but may not be limited to, a change in the availability of extinguishing agent or equipment used to deliver agents, or of personnel used to operate the equipment.

(5) A change shall be expressed in terms of the new category of the rescue and firefighting service available at the heliport.

Part IX—Heliports Physical Characteristics

Onshore Heliports

75. Final approach and takeoff areas (FATO)

(1) Only one helicopter shall be allowed in the FATO at any one time.

(2) The conduct of operations to a FATO in proximity to another FATO shall not be simultaneous.

(3) Where simultaneous helicopter operations are required, appropriate separation distances between the FATOs shall be determined before operations, giving due regard to such issues as rotor downwash and airspace, and ensuring that the flight paths for each FATO, as defined in Part XII do not overlap.

(4) A FATO shall provide—

(a) an area free of obstacles, except for essential objects which because of their functions are located on it, and of sufficient size and shape to ensure the containment of every part of the design helicopter in the final phase of approach and the commencement of takeoff in accordance with the intended procedures;

(b) in case of solid, a surface which is resistant to the effects of rotor downwash;

(c) where collocated with a TLOF, is contiguous and flush with the TLOF, has bearing strength capable of withstanding the intended loads; and ensures effective drainage; and

(d) where not collocated with a TLOF, is free of hazards should a forced landing be required.

(5) A FATO shall be associated with a safety area.

(6) A heliport shall be provided with at least one FATO, which may need not be solid.

(7) The minimum dimensions of a FATO shall be—

(a) where intended to be used by helicopters operated in performance class 1:

(i) the length of the Rejected Takeoff Distance (RTOD) for the required takeoff procedure prescribed in the helicopter flight manual (HFM) of the helicopters for which the FATO is intended, or 1.5 Design D, whichever is greater; and

(ii) the width for the required procedure prescribed in the HFM of the helicopters for which the FATO is intended, or 1.5 Design D, whichever is greater.

(b) where intended to be used by helicopters operated in performance class 2 or 3, the lesser of:

(i) an area within which may be drawn a circle of a diameter of 1.5 Design D; or

(ii) where there is a limitation on the direction of approach and touchdown, an area of a width sufficient to meet the requirement of subregulation (4) (a) but not less than 1.5 times the overall width of the design helicopter.

(c) Essential objects located in a FATO shall not penetrate a horizontal plane at the FATO elevation by more than 5 cm.

(9) Where the FATO is solid the slope shall not—

(a) except as provided in subparagraph (b) or (c) exceed 2 per cent in any direction;

(b) where the FATO is elongated and intended to be used by helicopters operated in performance class 1, exceed 3 per cent overall, or have a local slope exceeding 5 per cent; and

(c) where the FATO is elongated and intended to be used solely by helicopters operated in performance class 2 or 3, exceed 3 per cent overall, or have a local slope exceeding 7 per cent.

(10) The FATO shall be located so as to minimize the influence of the surrounding environment, including turbulence, which could have an adverse impact on helicopter operations.

(11) A FATO shall be surrounded by a safety area which need not be solid.

76. Safety areas

(1) A safety area shall provide—

(a) an area free of obstacles, except for essential objects which because of their functions are located on it, to compensate for manoeuvring errors; and

(b) where solid, a surface which: is contiguous and flush with the FATO; is resistant to the effects of rotor downwash; and ensures effective drainage.

(2) The safety area surrounding a FATO shall extend outwards from the periphery of the FATO for a distance of at least 3 m or 0.25 Design D, whichever is greater.

(3) A mobile object shall not be permitted in a safety area during helicopter operations.

(4) Essential objects located in the safety area shall not penetrate a surface originating at the edge of the FATO at a height of 25 cm above the plane of the FATO sloping upwards and outwards at a gradient of 5 per cent.

(5) Where solid, the slope of the safety area shall not exceed an upward slope of 4 per cent outwards from the edge of the FATO.

77. Protected side slope

(1) A heliport shall be provided with at least one protected side slope, rising at 45 degrees from the edge of the safety area and extending to a distance of 10 m as specified in figure 2.

(2) Notwithstanding subregulation (1), a heliport maybe be provided with at least two protected side slopes, rising at 45 degrees outward from the edge of the safety area and extending to a distance of 10m.

(3) The surface of a protected side slope shall not be penetrated by obstacles.

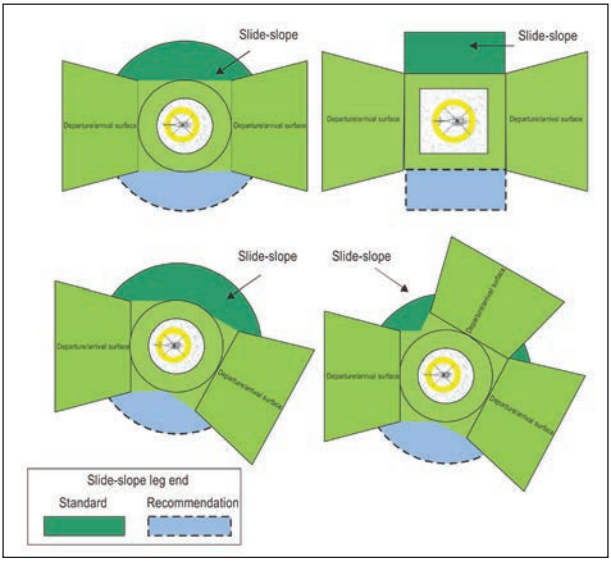


Figure 1: FATO simple, complex safety area and side slope protection

78. Helicopter clearways

(1) A helicopter clearway shall provide—

(a) provide an area free of obstacles, except for essential objects which because of their functions are located on it,

and of sufficient size and shape to ensure containment of the design helicopter where it is accelerating in level flight, and close to the surface, to achieve its safe climbing speed; and

(b) where solid provide a surface which is contiguous and flush which is with the FATO, is resistant to the effects of rotor downwash and is free of hazards in case a forced landing is required.

(2) Where a helicopter clearway is provided, it shall be located beyond the end of the FATO and its width shall not be less than the width of the FATO and associated safety area as indicated in Figure 2.

(3) Where solid, the ground in a helicopter clearway shall not project above a plane having an overall upward slope of 3 per cent or having a local upward slope exceeding 5 per cent and the lower limit of this plane being a horizontal line which is located on the periphery of the FATO.

(4) An object situated in a helicopter clearway, which may endanger helicopters in the air, shall be regarded as an obstacle and shall be removed.

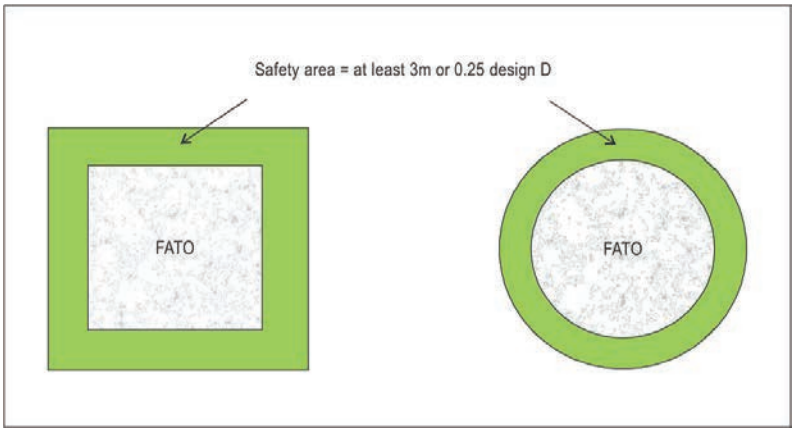


Figure 2: FATO and associated safety area

79. Touchdown and liftoff areas (TLOF)

(1) A TLOF shall provide—

(a) an area free of obstacles and of sufficient size and shape to ensure containment of the undercarriage of the most demanding helicopter the TLOF is intended to serve in accordance with the intended orientation; and

(b) a surface which—

(i) has sufficient bearing strength to accommodate the dynamic loads associated with the anticipated type of arrival of the helicopter at the designated TLOF;

(ii) is free of irregularities that would adversely affect the touchdown or lift-off of helicopters;

(iii) has sufficient friction to avoid the skidding of helicopters or the slipping of persons;

(iv) is resistant to the effects of rotor downwash; and

(v) ensures effective drainage while having no adverse effect on the control or stability of a helicopter during touchdown and lift-off, or when stationary.

(2) A TLOF shall be associated with a FATO or a stand.

(3) A heliport shall be provided with at least one TLOF.

(4) A TLOF shall be provided whereever it is intended that the undercarriage of the helicopter will touch down within a FATO or stand, or lift off from a FATO or stand.

(5) The minimum dimensions of a TLOF shall—

(a) where a FATO is intended to be used by helicopters operated in performance class 1, be the dimensions for the required procedure prescribed in the helicopter flight manuals (HFMs) of the helicopters for which the TLOF is intended; and

(b) where a FATO is intended to be used by helicopters operated in performance classes 2 or 3, or in a stand—

(i) where there is no limitation on the direction of touchdown, be of sufficient size to contain a circle of diameter of at least 0.83 D of, in a FATO, the design helicopter; or in a stand, the largest helicopter the stand is intended to serve.

(ii) where there is a limitation on the direction of touchdown, of sufficient width to meet the requirement of subregulation (1) (a) but not less than twice the undercarriage width (UCW) of, in a FATO, the design helicopter or, in a stand, the most demanding helicopter the stand is intended to serve.

(c) For an elevated heliport, the minimum dimensions of a TLOF, where in a FATO, shall be of sufficient size to contain a circle of a diameter of at least 1 Design D.

(7) The slope on a TLOF shall not, to the extent possible—

(a) exceed 2 per cent in any direction, except as provided in (b) or (c) below;

(b) where the TLOF is elongated and intended to be used by helicopters operated in performance class 1; exceed 3 percent overall, or have a local slope exceeding 5 percent; and

(c) where the TLOF is elongated and intended to be used solely by helicopters operated in performance class 2 or 3, exceed 3 per cent overall, or have a local slope exceeding 7 percent.

(8) Where a TLOF is within a FATO it shall:

(a) be centered on the FATO; or

(b) for an elongated FATO, be centered on the longitudinal axis of the FATO.

(9) Where a TLOF is within a helicopter stand, it shall be centered on the stand.

(10) A TLOF shall be provided with markings which clearly indicate the touchdown position and, by their form, any limitations on manoeuvring.

(11) Where a TLOF in a FATO is larger than the minimum dimensions, the touchdown or positioning marking (TDPM) may be offset while ensuring containment of the undercarriage within the TLOF and the helicopter within the FATO.

(12) Where an elongated performance Class 1 FATO/TLOF contains more than one TDPM, the heliport operator shall put be in place measures to ensure that only one can be used at a time.

(13) Where alternative TDPMs are provided, they shall be placed to ensure containment of the undercarriage within the TLOF and the helicopter within the FATO.

(14) The efficacy of the rejected takeoff or landing distance shall be dependent upon the helicopter being correctly positioned for takeoff or landing.

(15) Safety devices such as safety nets or safety shelves shall be located around the edge of an elevated heliport but shall not exceed the height of the TLOF.

80. Helicopter taxiways

(1) A helicopter taxiway shall provide—

(a) an area free of obstacles and of sufficient width to ensure containment of the undercarriage of the most demanding wheeled helicopter the taxiway is intended to serve—

(b) a surface which—

(i) has bearing strength to accommodate the taxiing loads of the helicopters the taxiway is intended to serve;

(ii) is free of irregularities that would adversely affect the ground taxiing of helicopters;

(iii) is resistant to the effects of rotor downwash; and

(iv) ensures effective drainage while having no adverse effect on the control or stability of a wheeled helicopter when manoeuvred under its own power, or when stationary.

(2) A helicopter taxiway shall be associated with a taxi route.

(3) The minimum width of a helicopter taxiway shall be the lesser of—

(a) twice the undercarriage width (UCW) of the most demanding helicopter the taxiway is intended to serve; or

(b) a width meeting the requirements of subregulation (1) (a) .

(4) The transverse slope of a taxiway shall, to the extent possible, not exceed 2 per cent and the longitudinal slope shall not exceed 3 per cent.

81. Helicopter taxi-routes

(1) A helicopter taxi-route shall provide—

(a) an area free of obstacles, except for essential objects which because of their function are located on it, established for the movement of helicopters; and shall be of sufficient width to ensure containment of the largest helicopter the taxi-route is intended to serve; and

(b) where solid, a surface which is resistant to the effects of rotor downwash and

(i) where collocated with a taxiway is contiguous and flush with the taxiway, does not present a hazard to operations and ensures effective drainage; and

(ii) where not collocated with a taxiway, is free of hazards where a forced landing is required.

(2) A mobile object shall not be permitted on a taxi-route during helicopter operations.

(3) Where solid and collocated with a taxiway, the taxi-route shall, to the extent possible, not exceed an upward transverse slope of 4 per cent outwards from the edge of the taxiway.

82. Helicopter ground taxi-routes

(1) A helicopter ground taxi-route shall have a minimum width of 1.5 times the overall width of the largest helicopter it is intended to serve, and shall be centered on a taxiway as indicated in figure 3.

(2) The essential objects located in a helicopter ground taxi route shall not—

(a) be located at a distance of less than 50 cm outwards from the edge of the helicopter taxiway; and

(b) penetrate a plane originating 50 cm outwards of the edge of the helicopter taxiway and a height of 25 cm above the surface of the taxiway and sloping upwards and outwards at a gradient of 5 per cent.

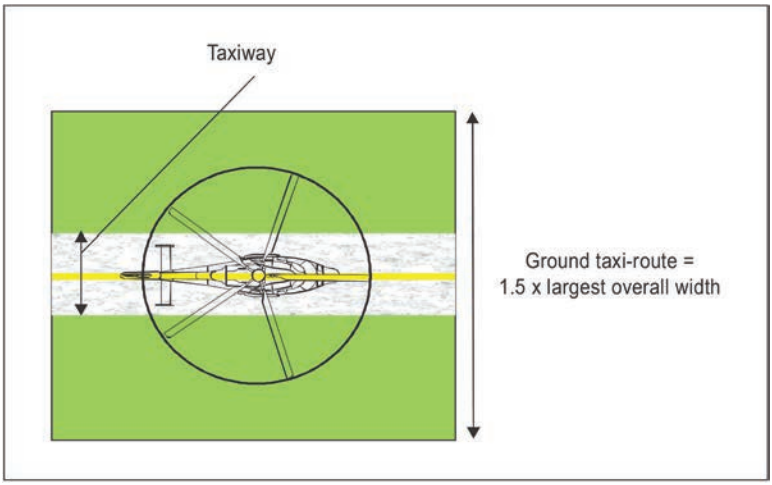


Figure 3: Helicopter taxiway ground taxi route

83. Helicopter air taxi-routes

(1) A helicopter air-taxi route, if provided, shall be intended to permit the movement of a helicopter above the surface at a height normally associated with ground effect and at a ground speed of less than 37 km/h (20 kt).

(2) A helicopter air taxi-route shall have a minimum width of twice the overall width of the largest helicopter it is intended to serve.

(3) If collocated with a taxiway for the purpose of permitting both ground and air taxi operations as indicated in figure 4—

(a) the helicopter air taxi-route shall be centered on the taxiway; and

(b) essential objects located in the helicopter air taxi-route shall not—

(i) be located at a distance of less than 50 cm outwards from the edge of the helicopter taxiway; and

(ii) penetrate a surface originating 50 cm outwards of the edge of the helicopter taxiway and a height of

25 cm above the surface of the taxiway and sloping upwards and outwards at a gradient of 5 per cent.

(4) Where not collocated with a taxiway, the slopes of the surface of an air taxi-route shall not exceed the slope landing limitations of the helicopters the taxi route is intended to serve.

(5) The transverse slope shall, to the extent possible, not exceed 10 percent and the longitudinal slope shall not exceed 7 per cent.

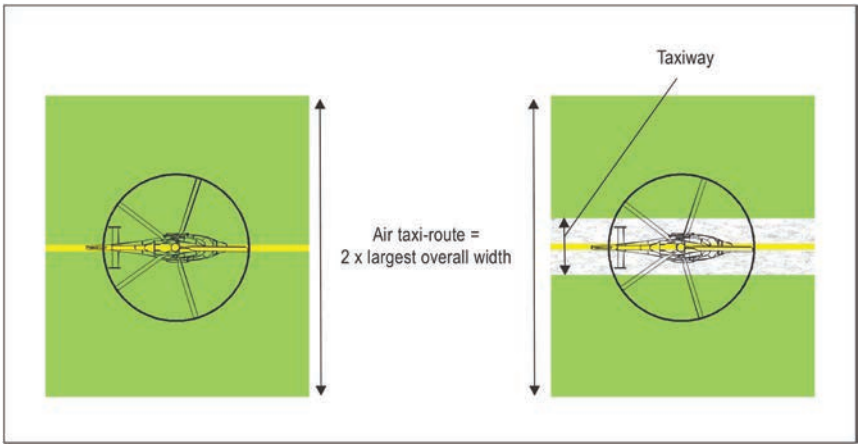


Figure 4: Helicopter air taxi -route and combined air taxi-route/taxiway

84. Helicopter stands

(1) A helicopter stand shall provide—

(a) an area free of obstacles and of sufficient size and shape to ensure containment of every part of the largest helicopter the stand is intended to serve where it is being positioned within the stand;

(b) a surface which—

(i) is resistant to the effects of rotor downwash;

(ii) is free of irregularities that would adversely affect the manoeuvring of helicopters;

(iii) has bearing strength capable of withstanding the intended loads;

(iv) has sufficient friction to avoid the skidding of helicopters or the slipping of persons; and

(v) ensures effective drainage while having no adverse effect on the control or stability of a wheeled helicopter where being manoeuvred under its own power, or when stationary.

(2) A helicopter shall be associated with a protection area.

(3) The minimum dimensions of a helicopter stand shall—

(a) be a circle of a diameter of 1.2 D of the largest helicopter the stand is intended to serve; or

(b) where there is a limitation on manoeuvring and positioning, be of sufficient width, to meet the requirement of subregulation (1) (a) but not less 1.2 times overall width of largest helicopter the stand is intended to serve.

(4) For a helicopter stand intended to be used for taxi-through only, a width of less than 1.2 D but which provides containment and still permits all required functions of a stand to be performed, may be used in accordance with subregulation (1) (a).

(5) The mean slope of a helicopter in any direction shall, to the extent possible, not exceed 2 per cent.

(6) Each helicopter stand shall be provided with positioning markings to clearly indicate where the helicopter is to be positioned and, by their form, any limitations on manoeuvring.

(7) A stand shall be surrounded by a protection area which need not be solid.

85. Protection areas

(1) A protection area shall provide—

(a) an area free of obstacles, except for essential objects which because of their function are located on it; and

(b) where solid, a surface which is contiguous and flushs with the stand is resistant to the effects of rotor downwashensures effective drainage.

(2) Where associated with a stand designed for turning, the protection area shall extend outwards from the periphery of the stand for a distance of 0.4D as indicated in figure 5.

(3) Where associated with a stand designed for taxi-through, the minimum width of the stand and the protection area shall not be less than the width of the associated taxi-route as indicated in figures 6 and 7.

(4) Where associated with a stand designed for non-simultaneous use as indicated in figures 8 and 9—

(a) the protection area of adjacent stands may overlap but shall not be less than the required protection area for the larger of the adjacent stands; and

(b) the adjacent non-active stand may contain a static object but it shall be wholly within the boundary of the stand.

(5) To ensure that only one of the adjacent stands is active at a time, instruction to pilots in the AIP shall make it clear that a limitation on the use of the stands is in force.

(6) A mobile object shall not be permitted in a protection area during helicopter operations.

(7) Essential objects located in the protection area shall not—

(a) if located at a distance of less than 0.75 D from the center of the helicopter stand, penetrate a surface at a height of 5 cm above the surface of the central zone; and

(b) if located at a distance of 0.75 D or more from the center of the helicopter stand, penetrate a surface at a height of 25 cm above the plane of the central zone and sloping upwards and outwards at a gradient of 5 per cent.

(8) Where solid, the slope of a protection area shall, to the extent possible, not exceed an upward slope of 4 per cent outwards from the edge of the stand.

86. Location of final approach and takeoff area in relation to runway or taxiway

(1) Where a FATO is located near a runway or taxiway, and where simultaneous operations are planned, the separation distance between the edges of a runway or taxiway and the edge of a FATO shall not be less than the appropriate dimension in Table 1.

(2) A FATO should not be located—

(a) near taxiway intersections or holding points where jet engine efflux is likely to cause high turbulence; or

(b) near areas where aeroplane vortex wake generation is likely to exist.

Table 1. FATO minimum separation distance for simultaneous operations

If aeroplane mass and helicopter mass are	Distance between FATO edge and runway edge or taxiway edge
up to but not including 3 175 kg	60 m
3 175 kg up to but not including 5 760 kg	120 m
5 760 kg up to but not including 100 000 kg	180 m
100 000 kg and over	250 m

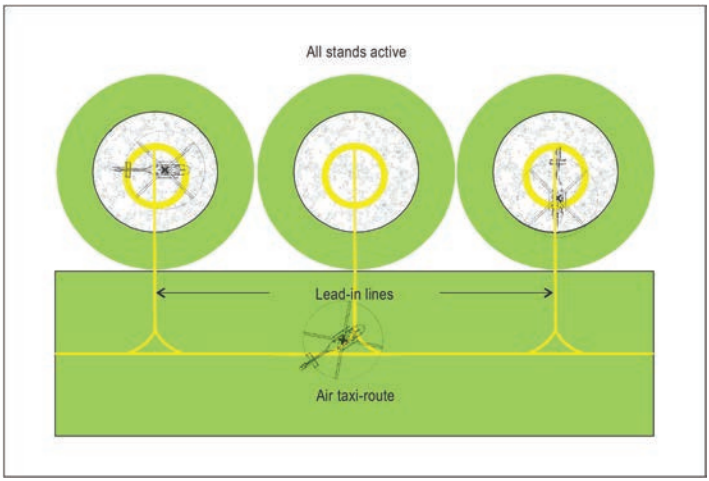


Figure 5: Turning stands (with air taxi-routes) — simultaneous use

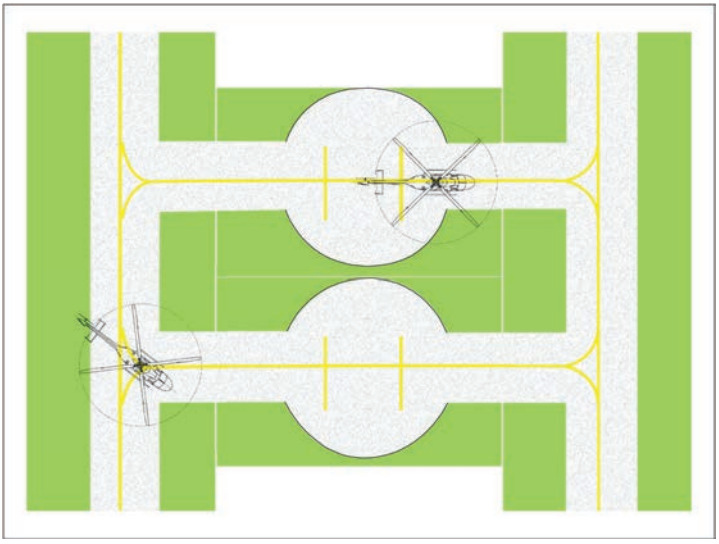


Figure 6: Ground taxi-through stands (with taxiway/ground taxi -route) simultaneous use

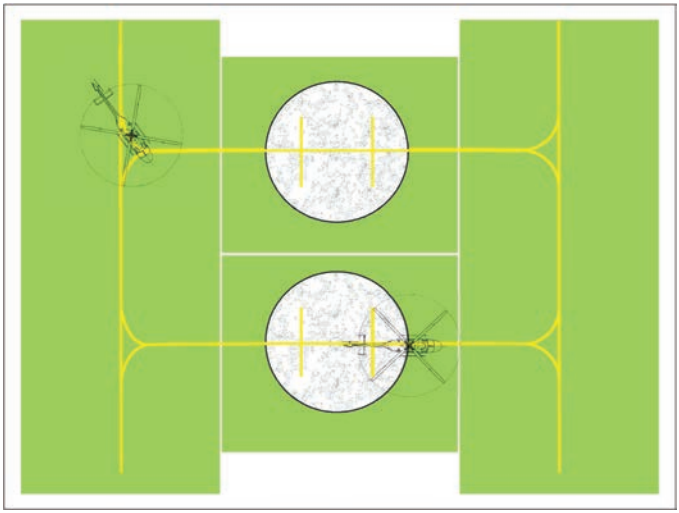


Figure 7: Air taxi-through stands (with air taxi -route) simultaneous use

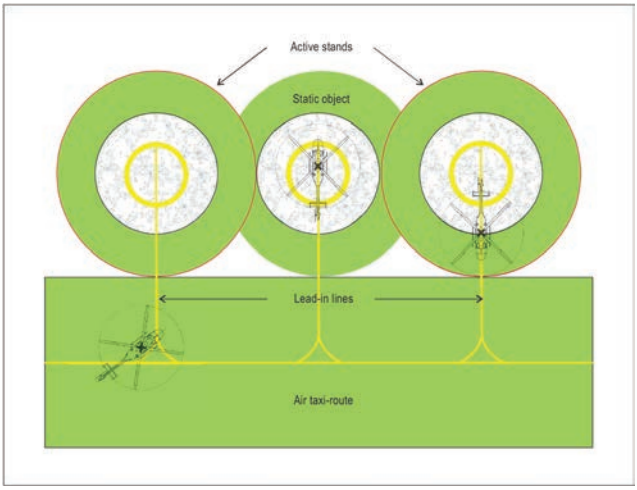


Figure 8: Turning stands (with air taxi -routes) non-simultaneous use — outer stands active

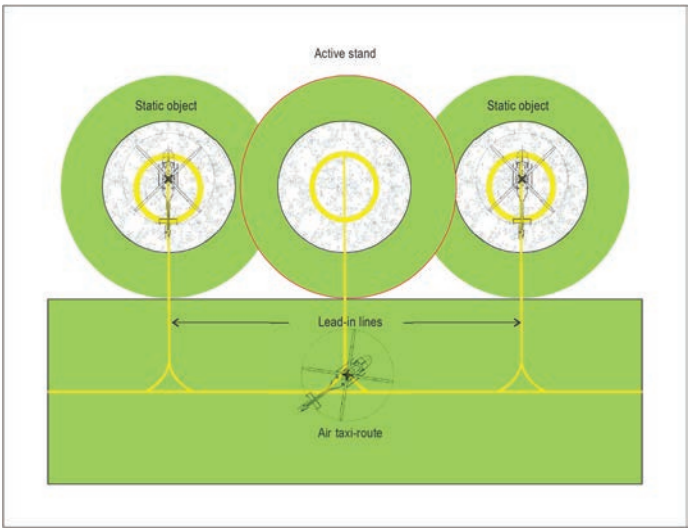


Figure 9: Turning stands (with air taxi-route) non-simultaneous use — inner stand active

Helidecks

87. Final approach and takeoff areas and touch down and lift-off areas

(1) A helideck shall be provided with one FATO and one coincident or collocated TLOF.

(2) A FATO may be any shape but shall be of sufficient size to contain an area within which can be accommodated a circle of diameter of not less than 1 D of the largest helicopter the helideck is intended to serve.

(3) A TLOF may be any shape but shall be of sufficient size to contain—

(a) for helicopters with an MTOM of more than 3,175 kg, an area within which can be accommodated a circle of diameter not less than 1 D of the largest helicopter the helideck is intended to serve; and

(b) for helicopters with an MTOM of 3,175 kg or less, an area within which can be accommodated a circle of diameter not less than 0.83 D of the largest helicopter the helideck is intended to serve.

(4) For helicopters with a MTOM of 3 175 kg or less, the TLOF may be of sufficient size to contain an area within which can be accommodated a circle of diameter of not less than 1 D of the largest helicopter the helideck is intended to serve.

(5) A helideck shall be arranged to ensure that a sufficient and unobstructed air-gap is provided which encompasses the full dimensions of the FATO.

(6) The FATO shall be located so as to avoid, as far as is practicable, the influence of environmental effects, including turbulence, over the FATO, which could have an adverse impact on helicopter operations.

(7) The TLOF shall be dynamic load-bearing and shall provide ground effect.

(8) A fixed object shall not be permitted around the edge of the TLOF except for frangible objects, which, because of their function, must be located thereon.

(9) For any TLOF of 1 D or greater and any TLOF designed for use by helicopters having a D-value of greater than 16.0 m, objects installed in the obstacle-free sector whose function requires them to be located on the edge of the TLOF shall not exceed a height of 25 cm.

(10) For any TLOF designed for use by helicopters having a D-value of 16.0 m or less, and any TLOF having dimensions of less than 1 D, objects installed in the obstacle-free sector whose function requires them to be located on the edge of the TLOF, shall not exceed a height of 5 cm.

(11) Lighting that is mounted at a height of less than 25 cm shall typically be for adequacy of visual cues before and after installation.

(12) Objects whose function requires them to be located within the TLOF such as lighting or nets, shall not exceed a height of 2.5 cm. and the objects shall only be present if they do not represent a hazard to helicopters.

(13) Safety devices including safety nets or safety shelves shall be located around the edge of a helideck but shall not exceed the height of the TLOF.

(14) The surface of the TLOF shall be skid-resistant to both helicopters and persons and be sloped to prevent pooling of water.

Shipboard Heliports

88. Final approach, takeoff and touchdown and lift off areas

(1) Where helicopter operating areas are provided in the bow or stern of a ship or are purpose-built above the ship's structure, the heliports operating areas shall be regarded as purpose-built shipboard heliports.

(2) A shipboard heliport shall be provided with one FATO and one coincidental or collocated TLOF.

(3) A FATO may be any shape but shall be of sufficient size to contain an area within which can be accommodated a circle of a diameter of not less than 1 D of the largest helicopter the heliport is intended to serve.

(4) The TLOF of a shipboard heliport shall be dynamic load-bearing and shall provide ground effect.

(5) For purpose built shipboard heliports provided in a location other than the bow or stern, the TLOF shall be of a sufficient size to contain a circle with a diameter of not less than 1 D of the largest helicopter the heliport is intended to serve.

(6) For purpose-built shipboard heliports provided in the bow or stern of a ship, the TLOF shall be of sufficient size—

(a) and contain a circle with a diameter not less than 1 D of the largest helicopter the heliport is intended to serve; or

(b) for operations with limited touchdown directions, to contain an area within which may be accommodated two opposing arcs of a circle with a diameter of not less than 1 D in the helicopter's longitudinal direction.

(7) The minimum width of the heliport shall be not less than 0.83 D as specified in Figure 10.

(8) For non purpose built shipboard heliports, the TLOF shall be of sufficient size to contain a circle with a diameter of not less than 1 D of the largest helicopter the heliport is intended to serve.

(9) A shipboard heliport shall be arranged to ensure that a sufficient and unobstructed air gap is provided which encompasses the full dimensions of the FATO is provided.

(10) The FATO shall be located so as to avoid, as far as is practicable, the influence of environmental effects, including turbulence, over the FATO, which may have an adverse impact on helicopter operations.

(11) A fixed object shall not be permitted around the edge of the TLOF except for frangible objects, which, because of their function, must be located thereon.

(12) For any TLOFof 1D or greater and any TLOF designed for use by helicopters having a D-value of greater than 16.0 m, objects installed in the obstacle-free sector whose function requires them to be located on the edge of the TLOF shall not exceed a height of 25 cm.

(13) For any TLOF designed for use by helicopters having a D-value of 16.0 m or less, and any TLOF having dimensions of less than 1 D, objects in the obstacle-free sector, whose function requires them to be located on the edge of the TLOF, shall not exceed a height of 5 cm.

(14) The lighting that is mounted at a height of less than 25 cm is shall be assessed for adequacy of visual cues before and after installation.

(15) Objects whose function requires them to be located within the TLOF such as lighting or nets, shall not exceed a height of 2.5cm. and these objects shall only be present if they do not represent a hazard to helicopters.

(16) Safety devices such as safety nets or safety shelves shall be located around the edge of a shipboard heliport, except where structural protection exists, but shall not exceed the height of the TLOF.

(17) The surface of the TLOF shall be skid-resistant to both helicopters and persons.

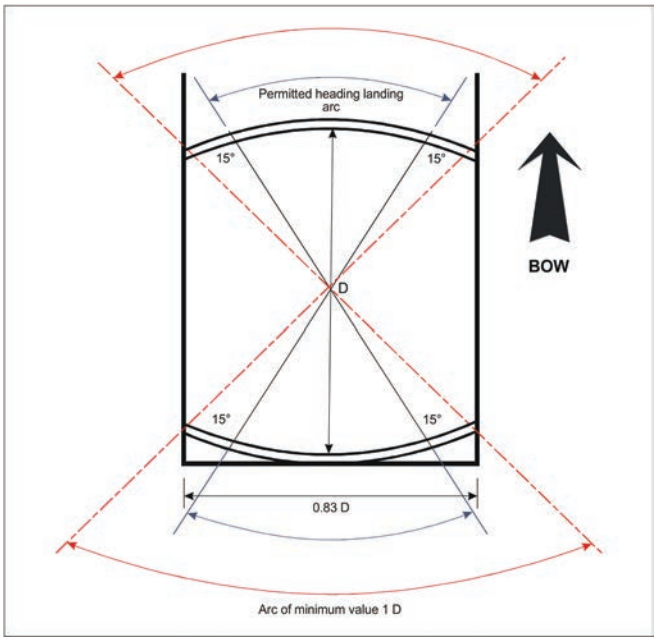


Figure 10: Shipboard permitted landing headings for limited heading operations

(18) Physical characteristics for instrument heliports with non precision and precision approaches are covered under Schedule 3.

Obstacle Limitation Surfaces and Sectors

89. Obstacle limitation surfaces and sectors

(1) A heliport shall have obstacle limitation surfaces and sectors which shall describe the airspace around heliports so as to permit the intended helicopter operations to be conducted safely and to prevent heliports from becoming unusable by the growth of obstacles around them.

(2) The heliport operator shall establish Obstacle Limitation Surfaces (OLS) and sectors defining the limits to which objects may project into the airspace.

90. Approach surface

(1) An approach surface shall be an inclined plane or a combination of planes or, where a turn is involved, a complex surface sloping upwards from the end of the safety area and centered on a line passing through the center of the FATO.

(2) The approach surface shall be depicted as specified in Figures 11, 12, 13 and 14, and the dimensions and slopes of surfaces shall be as indicted in Table 2 in these Regulations.

(3) The limits of an approach surface shall comprise—

(a) an inner edge horizontal and equal in length to the minimum specified width or diameter of the FATO plus the safety area, perpendicular to the center line of the approach surface and located at the outer edge of the safety area;

(b) two side edges originating at the ends of the inner edge diverging uniformly at a specified rate from the vertical plane containing the center line of the FATO; and

(c) an outer edge horizontal and perpendicular to the center line of the approach surface and at a specified height of 152 m (500 feet) above the elevation of the FATO.

(4) The elevation of the inner edge shall be the elevation of the FATO at the point on the inner edge that is intersected by the center line of the approach surface.

(5) For heliports intended to be used by helicopters operated in performance class 1 and where approved by an appropriate authority, the origin of the inclined plane may be raised directly above the FATO.

(6) The slopes of the approach surface shall be measured in the vertical plane containing the center line of the surface.

(7) In the case of an approach surface involving a turn, the surface shall be a complex surface containing the horizontal normal to its center line and the slope of the center line shall be the same as that for a straight approach surface, as shown in Figure 15.

(8) For an approach surface involving a turn, the surface shall not contain more than one curved portion.

(9) Where a curved portion of an approach surface is provided, the sum of the radius of the arc defining the center line of the approach surface and the length of the straight portion originating at the inner edge shall not be less than 575 m.

(10) Any variation in the direction of the center line of an approach surface shall be designed so as not to necessitate a turn radius less than 270 m.

91. Transitional surface

(1) A transitional surface is a complex surface along the side of the safety area and part of the side of the approach or takeoff climb surface, that slopes upwards and outwards to a predetermined height of 45 m (150 feet).

(2) A transitional surface is as depicted in figure 13 and the dimensions and slopes of the surfaces shall be as indicated in Table 2.

(3) For a FATO at a heliport without a PinS approach incorporating a visual segment surface may not be required to provide transitional surfaces.

(4) The limits of a transitional surface shall comprise—

(a) a lower edge beginning at a point on the side of the approach or takeoff climb surface at a specified height above the lower edge extending down the side of the approach or takeoff climb surface to the inner edge of the approach or takeoff climb surface and from there along the length of the side of the safety area parallel to the center line of the FATO; and

(b) an upper edge located at a specified height above the lower edge as set out in Table 2.

(5) The elevation of a point on the lower edge shall be—

(a) along the side of the approach or takeoff climb surface, equal to the elevation of the approach or takeoff climb surface at that point; and

(b) along the safety area, equal to the elevation of the inner edge of the approach or takeoff climb surface.

(6) If the origin of the inclined plane of the approach or takeoff climb surface is raised as approved by the authority, the elevation of the origin of the transitional surface shall be raised accordingly.

(7) For the purpose of subregulation (5) (b), the transitional surface along the safety area shall be curved if the profile of the FATO is curved, or a plane if the profile is a straight line.

(8) The slope of the transitional surface shall be measured in a vertical plane at right angles to the center line of the FATO.

92. Takeoff climb surface

(1) The takeoff climb surface shall be an inclined plane, a combination of planes or, where a turn is involved, a complex surface sloping upwards from the end of the safety area and centered on a line passing through the center of the FATO.

(2) The takeoff climb surface shall be depicted as indicated in Figures 11, 12, 13 and 14, and the dimensions and slopes of surfaces shall be as indicted in Table 2.

(3) The limits of a takeoff climb surface shall comprise of—

(a) an inner edge, horizontal and equal in length to the minimum specified width or diameter of the FATO plus the safety area, perpendicular to the center line of the takeoff climb surface and located at the outer edge of the safety area;

(b) side edges, originating at the ends of the inner edge and diverging uniformly at a specified rate from the vertical plane containing the center line of the FATO; and

(c) an outer edge horizontal and perpendicular to the center line of the takeoff climb surface and at a specified height of 152 m (500 feet) above the elevation of the FATO.

(4) The elevation of the inner edge shall be the elevation of the FATO at the point on the inner edge that is intersected by the center line of the takeoff climb surface.

(5) For heliports intended to be used by helicopters operated in performance class 1 and where approved by an appropriate authority, the origin of the inclined plane may be raised directly above the FATO.

(6) Where a clearway is provided the elevation of the inner edge of the takeoff climb surface shall be located at the outer edge of the clearway at the highest point on the ground based on the center line of the clearway.

(7) In the case of a straight take off climb surface, the slope shall be measured in the vertical plane containing the center line of the surface.

(8) In the case of a takeoff climb surface involving a turn, the surface shall be a complex surface containing the horizontal normals to its center line and the slope of the center line shall be the same as that for a straight takeoff climb surface as depicted in figure 15.

(9) In the case of a takeoff climb surface involving a turn, the surface shall not contain more than one curved portion.

(10) Where a curved portion of a takeoff climb surface is provided the sum of the radius of the arc defining the center line of the takeoff climb surface and the length of the straight portion originating at the inner edge shall not be less than 575 m.

(11) Any variation in the direction of the center line of a takeoff climb surface shall be designed so as not to necessitate a turn of radius less of than 270 m.

93. Obstacle-free sector or surface helidecks

(1) Obstacle free sector or surface shall be a complex surface originating at and extending from, a reference point on the edge of the FATO of a helideck.

(2) In the case of a TLOF of less than 1 D, the reference point shall be located not less than 0.5 D from the center of the TLOF.

(3) An obstacle free sector or surface shall subtend an arc of a specified angle.

(4) A helideck obstacle free sector shall comprise of two components, as indicated in Figure 17, one above and one below the helideck level as follows—

(a) above helideck level, the surface shall be a horizontal plane level with the elevation of the helideck surface that

subtends an arc of at least 210 degrees with the apex located on the periphery of the D circle extending outwards to a distance that allows for an unobstructed departure path appropriate to the helicopter the helideck is intended to serve; and

(b) below helideck level within the minimum 210-degree arc, the surface shall additionally extend downward from the edge of the FATO below the elevation of the helideck to water level for an arc of not less than 180 degrees that passes through the center of the FATO and outwards to a distance that will allow for safe clearance from the obstacles below the helideck in the event of an engine failure for the type of helicopter the helideck is intended to serve.

94. Limited obstacle sector or surface helidecks

(1) Limited obstacle sector or surface shall be a complex surface originating at the reference point for the obstacle free sector and extending over the arc not covered by the obstacle free sector within which the height of obstacles above the level of the TLOF may be prescribed.

(2) A limited obstacle sector shall not subtend an arc greater than 150 degrees. Its dimensions and location shall be as indicated in Figure 18 for a 1 D FATO with coincidental TLOF and Figure 19 for a 0.83 D TLOF.

(3) Where obstacles are necessarily located on the structure, a helideck may have a Limited Obstacle Sector (LOS).

Obstacle Limitation Requirements

95. Surface level heliports

(1) The following obstacle limitation surfaces shall be established for a FATO at heliports with a PinS approach procedure utilising a visual segment surface as indicated in Figure 13—

(a) takeoff climb surface;

(b) approach surface; and

(c) transitional surface.

(2) The following obstacle limitation surfaces shall be established for a FATO at both surface level heliports and elevated heliports, other than those specified in subregulation (1), including heliports with a PinS approach procedure where a visual segment surface is not provided—

(a) takeoff climb surface; and

(b) approach surface.

(3) The slopes of the obstacle limitation surfaces shall not be greater than, and their other dimensions not less than, those specified in Table 2 and shall be located as shown in Figures 11, 12 and 16.

(4) For heliports that have an approach or takeoff climb surface with a 4.5 per cent slope design, objects shall be permitted to penetrate the obstacle limitation surface, if the results of an aeronautical study approved by the authority have reviewed the associated risks and mitigation measures.

(5) New objects or extensions of existing objects shall not be permitted above any of the surfaces specified in subregulations (1) and (2) except when shielded by an existing immovable object or after an aeronautical study approved by the authority determines that the object will not adversely affect the safety or significantly affect the regularity of the operations of helicopters.

(6) Existing objects above any of the surfaces in subregulation (1) and (2) shall as far as practicable, be removed except where the object is shielded by an existing immovable object or after an aeronautical study approved by an appropriate authority determines that the object will not adversely affect the safety or significantly affect the regularity of the operations of helicopters.

(7) A surface level and elevated heliport shall have at least one approach and takeoff climb surface.

(8) An aeronautical study shall be undertaken by an appropriate authority where a single approach and take off climb surface is provided considering as a minimum, the following factors—

(a) the area or terrain over which the flight is being conducted;

(b) the obstacle environment surrounding the heliport and the availability of at least one protected side slope;

(c) the performance and operating limitations of helicopters intending to use the heliport; and

(d) the local meteorological conditions including the prevailing winds.

(9) Surface level and elevated heliport shall have at least two approach and take off climb surfaces to avoid downwind conditions, minimize crosswind conditions and permit for balked landing.

Table 2: Dimensions and slopes of obstacle limitation surfaces for all visual FATOs

Surface and dimensions	*Slope design categories*		
	A	*B*	*C*
Approach and takeoff climb surface:			
Length of inner edge	Width of safety area	Width of safety area	Width of safety area
Location of inner edge	Safety area boundary (Clearway boundary if provided)	Safety area boundary	Safety area boundary
Divergence: (1st and 2nd section) Day use only Night use	10% 15%	10% 15%	10% 15%

First section:			
Length	3 386 m	245 m	1 220 m
Slope	4.5%	8%	12.5%
Outer width	(1:22.2)	(1:12.5)	(1:8)
	(b)	N/A	(b)
Second section:			
Length	N/A	830 m	N/A
Slope	N/A	16%	N/A
Outer width	N/A	(1:6.25) (b)	N/A
Total length from inner edge (a)	3 386 m	1 075 m	1 220 m
Transitional surface: (FATOs with a PinS approach procedure with a VSS)	50%	50%	50%
Slope	(1:2)	(1:2)	(1:2)
Height	45 m	45 m	45 m

a. The approach and takeoff climb surface lengths of 3 386 m, 1 075 m and 1 220 m associated with therespective slopes brings the helicopter to 152 m (500 feet) above FATO elevation.

b. Seven rotor diameters overall width for day operations or 10 rotor diameters overall width for nightoperations.

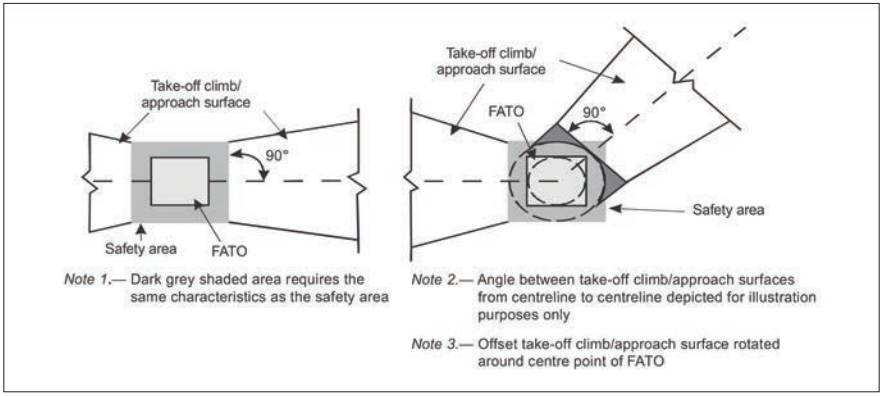


Figure 11: Obstacle limitation surfaces — takeoff climb and approach surface

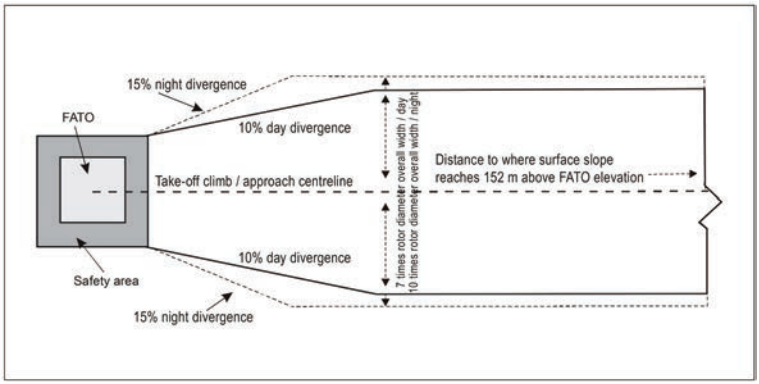


Figure 12: Takeoff climb/approach surface width

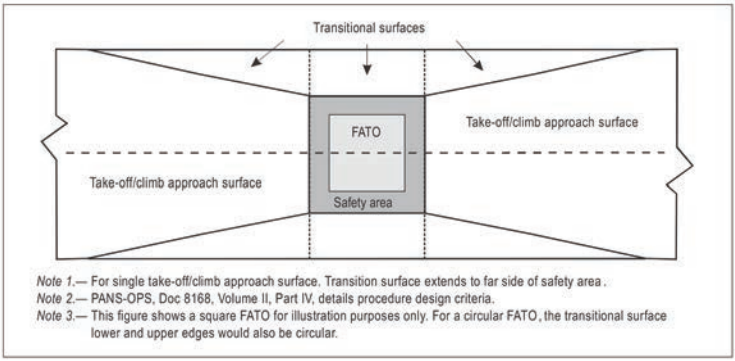


Figure 13: Transitional surface for a FATO with a PinS approach procedure with a VSS

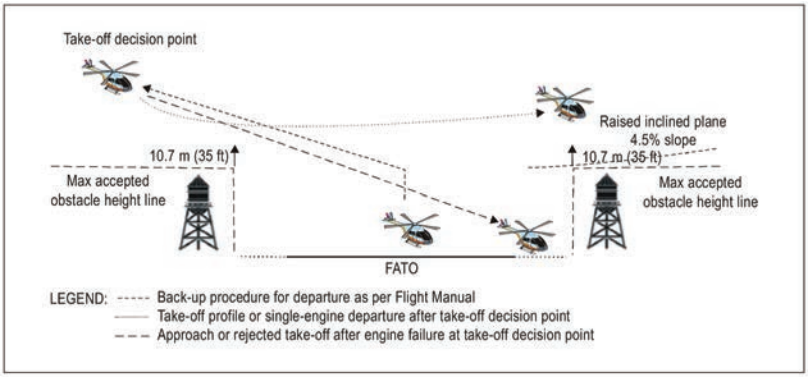
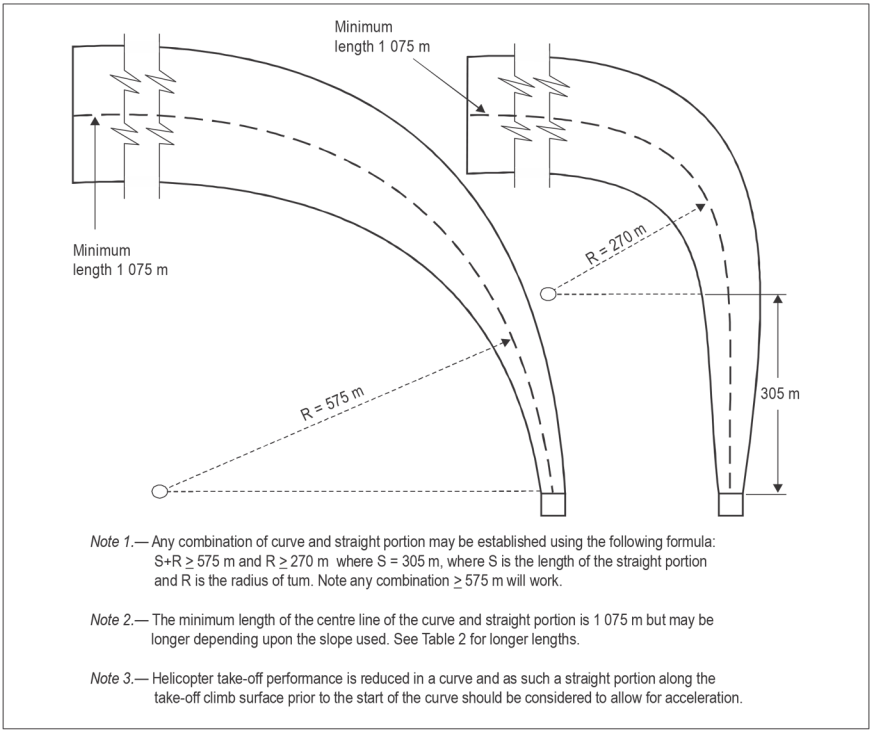


Figure 14: Example of raised inclined plane during operations in performance class 1

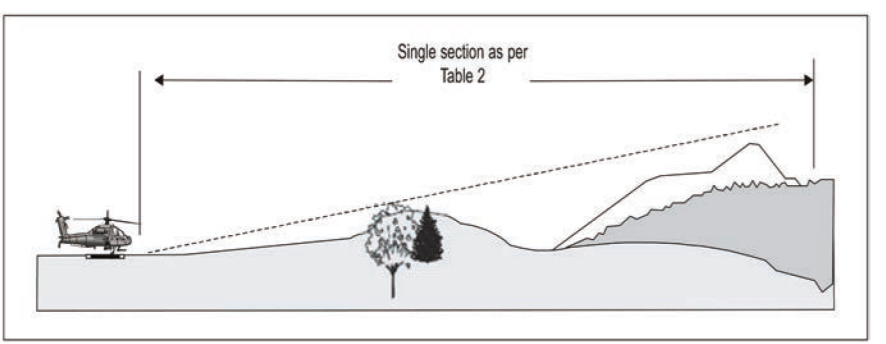


Note 1.— Any combination of curve and straight portion may be established using the following formula: S+R ≥ 575 m and R ≥ 270 m where S = 305 m, where S is the length of the straight portion and R is the radius of tum. Note any combination ≥ 575 m will work.

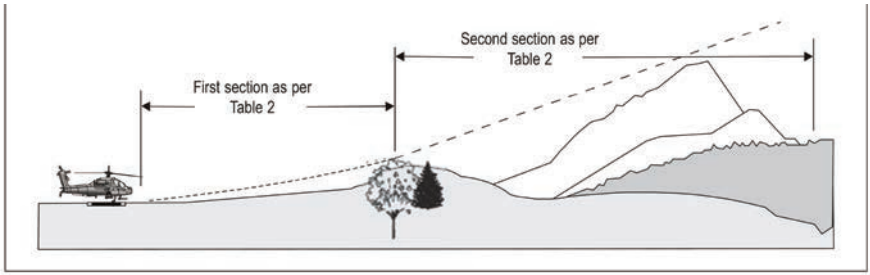
Note 2.— The minimum length of the centre line of the curve and straight portion is 1 075 m but may be longer depending upon the slope used. See Table 2 for longer lengths.

Note 3.— Helicopter take-off performance is reduced in a curve and as such a straight portion along the take-off climb surface prior to the start of the curve should be considered to allow for acceleration.

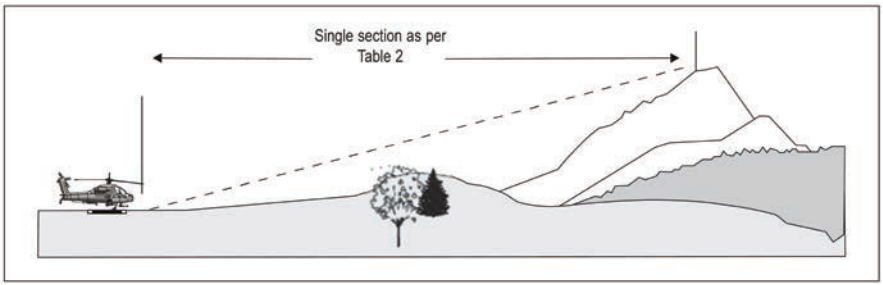
Figure 15: Curved approach and takeoff climb surface for all FATOs



a) Approach and takeoff climb surfaces - “A” slope profile - 4.5% design



b) Approach and takeoff climb surfaces - "B" slope profile - 8% and 16% design



c) Approach and takeoff climb surfaces - "C" slope profile - 12.5% design

Figure 16. Approach and takeoff climb surfaces with different slope design categories

96. Elevated heliports

(1) The obstacle limitation surfaces for elevated heliports shall conform to the requirements for surface level heliports specified in regulation 95(1) to (6).

(2) An elevated heliport shall have at least one approach and take off climb surface.

(3) An aeronautical study shall be undertaken by an appropriate authority where only a single approach and take off climb surface is provided considering as a minimum, the following factors—

(a) the area or terrain over which the flight is being conducted;

(b) the obstacle environment surrounding the heliport and the availability of at least one protected side slope;

(c) the performance and operating limitations of helicopters intending to use the heliport; and

(d) the local meteorological conditions including the prevailing winds.

(4) An elevated heliport should have at least two approach and takeoff climb surfaces to avoid downwind conditions, minimise crosswind conditions and permit for a balked landing.

97. Helidecks

(1) A helideck shall have an obstacle free sector.

(2) There shall be no fixed obstacles within the obstacle free sector above the obstacle-free surface of a helideck.

(3) In the immediate vicinity of the helideck, obstacle protection for helicopters shall be provided below the helideck level.

(4) The protection in subregulation 3 shall extend over an arc of at least 180 degrees with the origin at the center of the FATO, with a descending gradient having a ratio of one unit horizontally to five units vertically from the edges of the FATO within the 180-degree sector.

(5) The descending gradient in subregulation (4) shall be reduced to a ratio of one unit horizontally to three units vertically within the 180-degree sector for multi-engine helicopters operated in performance class 1 or 2 as specified in Figure 17.

(6) For a TLOF of 1 D and larger, within the 150-degree limited obstacle surface or sector out to a distance of 0.12 D measured from the point of origin of the limited obstacle sector, objects shall not exceed a height of 25 cm above the TLOF and

beyond that arc, out to an overall distance of a further 0.21 D measured from the end of the first sector, the limited obstacle surface rises at a rate of one unit vertically for each two units horizontally originating at a height 0.05 D above the level of the TLOF, as specified in Figure 18.

(7) A TLOF of less than 1 D within the 150-degree limited obstacle surface or sector out to a distance of 0.62 D and commencing from a distance 0.5 D, both measured from the center of the TLOF, objects shall not exceed a height of 5 cm above the TLOF and beyond that arc, out to an overall distance of 0.83 D from the center of the TLOF, the limited obstacle surface rises at a rate of one unit vertically for each two units horizontally originating at a height 0.05 D above the level of the TLOF as shown in Figure 19.

98. Shipboard heliports

(1) Where helicopter operating areas are provided in the bow or stern of a ship they shall apply the obstacle criteria for helidecks.

(2) Forward and aft of a TLOF of 1 D or larger, shall be two symmetrically located sectors, each covering an arc of 150 degrees, with their apexes on the periphery of the TLOF.

(3) Within the area enclosed by these two sectors, there shall be no objects rising above the level of the TLOF, except those aids essential for the safe operation of a helicopter and in this case, then only up to a maximum height of 25 cm.

(4) Objects whose function requires them to be located within the TLOF, including lighting or nets, shall not exceed a height of 2.5 cm. Such objects shall only be present if they do not represent a hazard to helicopters.

(5) To provide further protection from obstacles fore and aft of the TLOF, rising surfaces with gradients of one unit vertically to five units horizontally shall extend from the entire length of the edges of the two 150 degree sectors. These surfaces shall extend for a horizontal distance equal to at least 1 D of the largest helicopter the

TLOF is intended to serve and shall not be penetrated by any obstacle as specified in Figure 20.

(6) No objects shall be located within the TLOF except those aids essential for the safe operation of a helicopter, such as nets or lighting, and then only up to a maximum height of 2.5 cm. Such objects shall only be present if they do not represent a hazard to helicopters.

(7) From the fore and aft mid-points of the D circle in two segments outside the circle, limited obstacle areas shall extend to the rail of the ship, to a fore and aft distance of 1.5 times the fore-to-aft-dimension of the TLOF, located symmetrically about the athwart ships bisector of the D circle.

(8) Within these areas there shall be no objects rising above a maximum height of 25 cm above the level of the TLOF as shown in Figure 21. Such objects shall only be present if they do not represent a hazard to helicopters.

(9) A limited obstacle sector horizontal surface shall be provided, at least 0.25 D beyond the diameter of the D circle, which shall surround the inboard sides of the TLOF to the fore and aft mid-points of the D circle. The limited obstacle sector shall continue to the ship's rail to a fore and aft distance of 2.0 times the fore-to-aft dimension of the TLOF, located symmetrically about the athwart ships bisector of the D circle.

(10) Within this sector there shall be no objects rising above a maximum height of 25 cm above the level of the TLOF.

(11) Any objects located within the areas described in subregulations (6) and (7) that exceed the height of the TLOF shall be notified to the helicopter operator using a ship's helicopter landing area plan.

99. Winching areas

(1) An area designated for winching on board ships shall be comprised of a circular clear zone of a diameter of 5 m and extending from the perimeter of the clear zone, a concentric manoeuvring zone of diameter 2 D as specified in Figure 22.

(2) The manoeuvring zone shall be comprised of—

(a) the inner manoeuvring zone extending from the perimeter of the clear zone and of a circle of a diameter of not less than 1.5 D; and

(b) the outer manoeuvring zone extending from the perimeter of the inner manoeuvring zone and of a circle of diameter of not less than 2 D.

(3) Within the clear zone of a designated winching area, no objects shall be located above the level of its surface.

(4) Objects located within the inner manoeuvring zone of a designated winching area shall not exceed a height of 3 m.

(5) Objects located within the outer maneuvering zone of a designated winching area shall not exceed a height of 6 m.

100. Obstacle environment for instrument heliports

Obstacle environment requirements for instrument heliports with non precision and precision approaches are covered under Schedule 3 to these regulations.

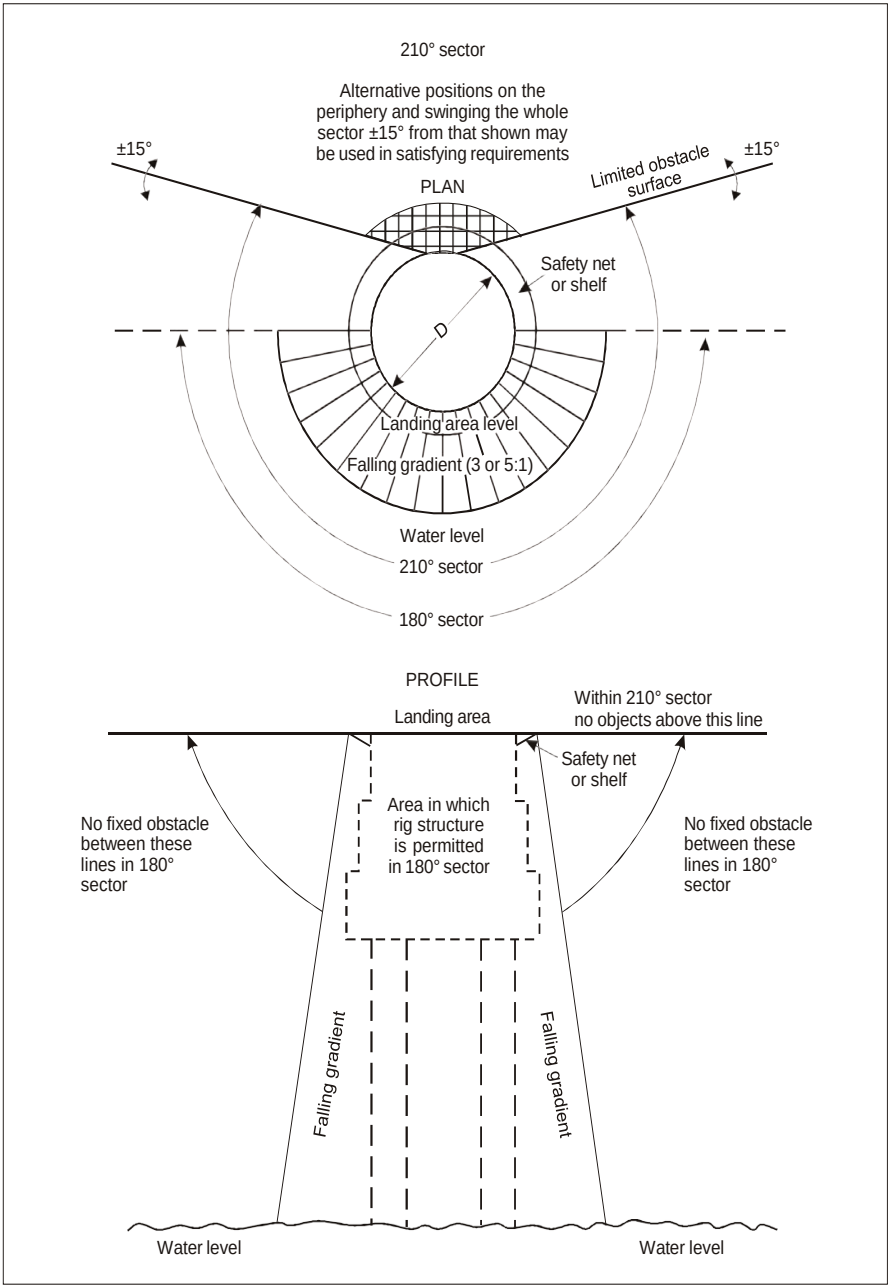


Figure 17: Helideck obstacle-free sector

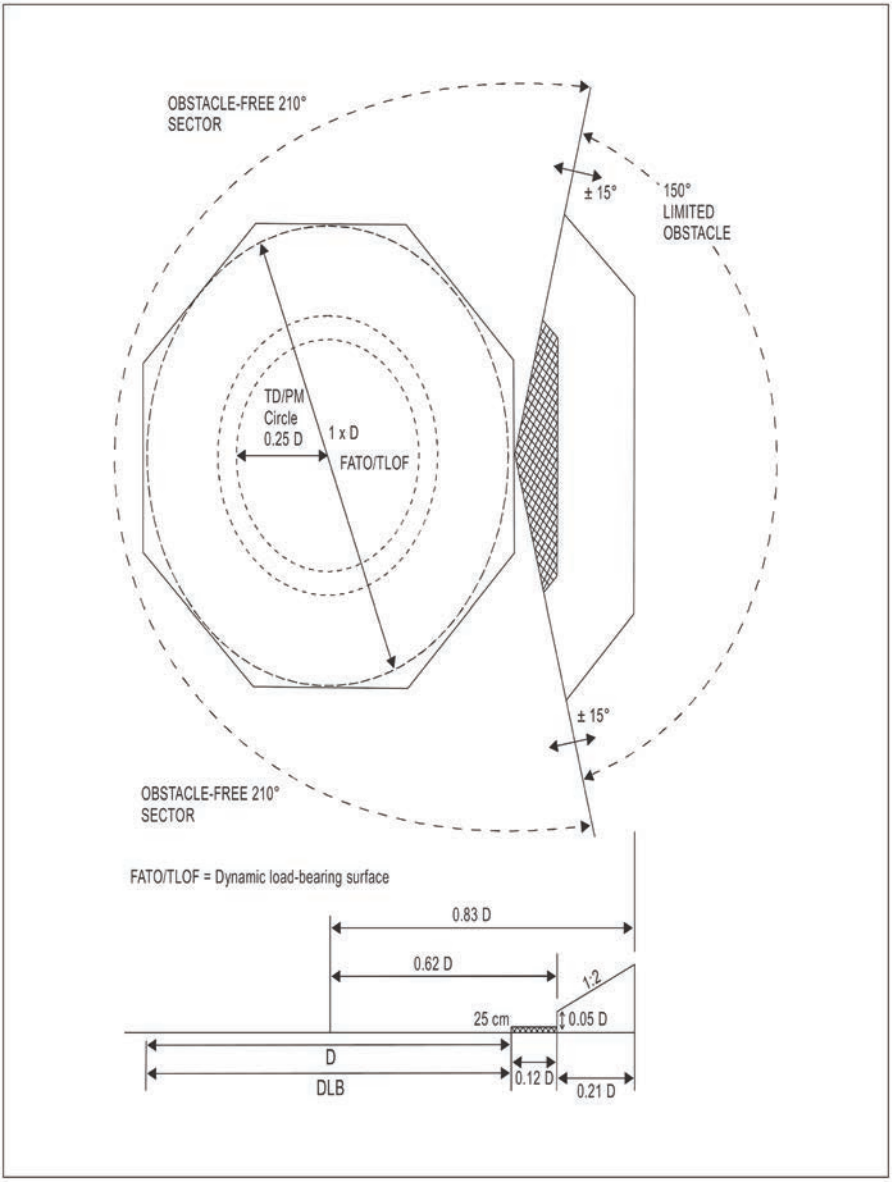


Figure 18: Helideck obstacle limitation sectors and surfacesfor a FATO and coincidental TLOF of 1 D and large

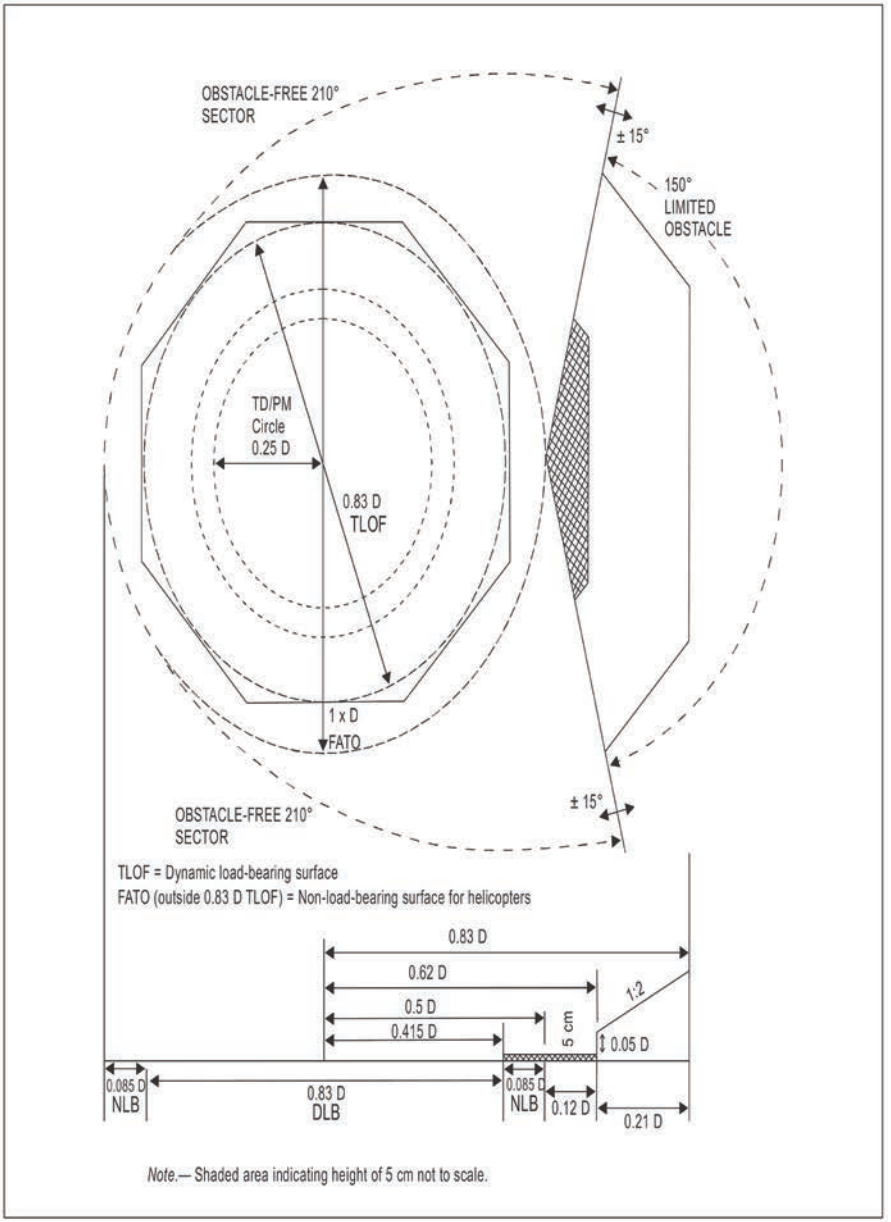


Figure 19: Helideck obstacle limitation sectors and surfaces for a TLOF of 0.83 D and larger

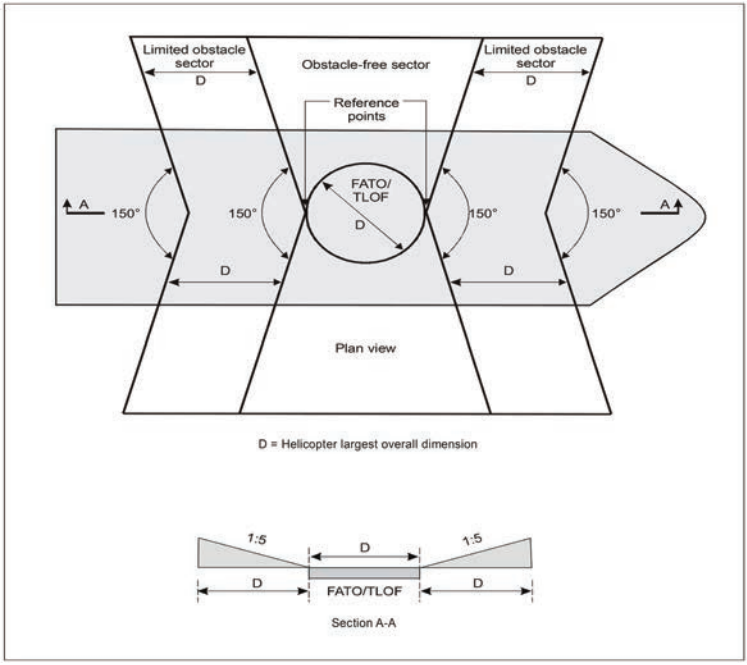


Figure 20: Amidship's location — shipboard heliport obstacle limitation surfaces

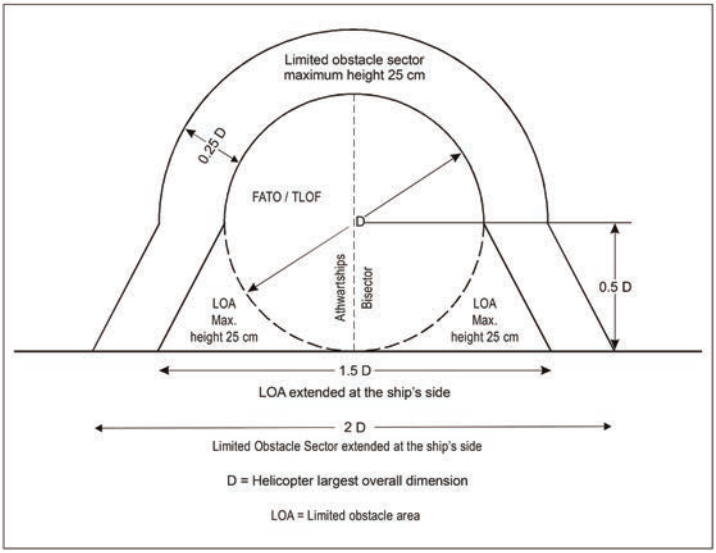


Figure 21: Ships-side non-purpose-built heliport obstacle limitation sectors and surfaces

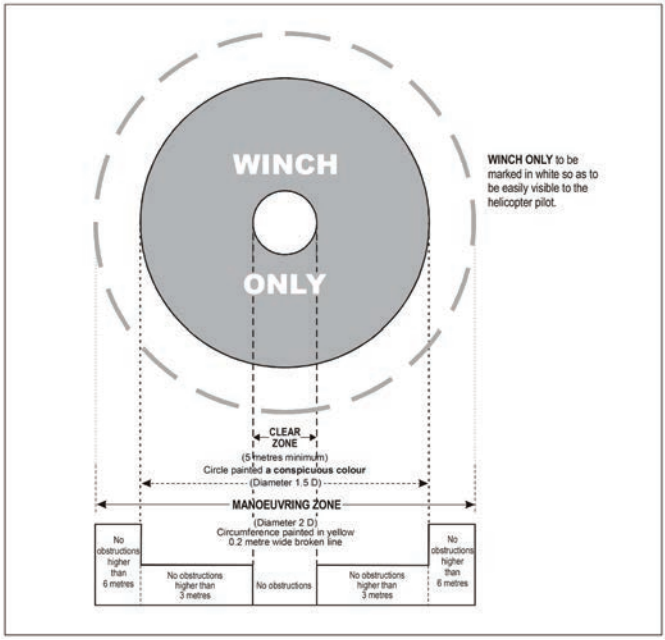


Figure 22: Winching area of a ship

PART XI—VISUAL AIDS

Indicators

101. Wind direction indicators

(1) A heliport shall be equipped with at least one wind direction indicator.

(2) A wind direction indicator shall indicate the wind conditions over the FATO and TLOF and in such a way as to be free from the effects of airflow disturbances caused by nearby objects or rotor downwash and shall be visible from a helicopter in flight, in a hover or on the movement area.

(3) Where a TLOF and FATO are subject to a disturbed airflow, then additional wind direction indicators located close to the

area with a disturbed airflow shall be provided to indicate the surface wind on the area.

(4) A wind direction indicator shall be constructed so that it gives a clear indication of the direction of the wind and a general indication of the wind speed of the wind.

(5) An indicator shall be a truncated cone made of lightweight fabric and should have the following minimum dimensions—

	Surface-level heliports and Helidecks	Elevated heliports
Length	2.4 m	1.2 m
Diameter (larger end)	0.6 m	0.3 m
Diameter (smaller end)	0.3 m	0.15 m

(6) The colour of the wind direction indicator shall be a colour that that makes the wind direction indicator clearly visible and understandable from a height of at least 650 feet above the heliport, having regard to background.

(7) A combination of two colours shall be used to give adequate conspicuity against changing backgrounds, they shall preferably be orange and white with red and white, or black and white, and the colours shall be arranged in five alternate bands the first and last band being the darker colour.

(8) A wind direction indicator at a heliport intended for use at night shall be illuminated.

Markings and Markers

102. Winching area marking

(1) Winching area markings shall be provided at a designated winching area as shown in Figure 22, to give visual cues which assist a helicopter to be positioned over, and retained within, an area from which a passenger or equipment can be lowered or raised.

(2) Winching area markings shall be located so that their centers coincide with the center of the clear zone of the winching area as specified in Figure 22.

(3) Winching area markings shall comprise a winching area clear zone marking and a winching area maneuvering zone marking.

(4) A winching area clear zone marking shall consist of a solid circle of a diameter of not less than 5 m and of a conspicuous colour.

(5) A winching area maneuvering zone marking shall consist of a broken circle line of 30 cm in width and of a diameter not less than 2 D shall be marked in a conspicous colour.

(6) A winching area manouvering zone shall be marked with the words "WINCH ONLY" to be easily visible to the pilot.

103. Heliport identification marking

(1) A heliport shall be provided with a heliport identification marking, to provide to the pilot an indication of the presence of a heliport and, by its form, and likely usage; the preferred direction of approach or the FATO orientation, within the helideck obstacle environment.

(2) A heliport identification marking shall be located at or near the center of the FATO.

(3) Where the touchdown or positioning marking is offset on a helideck, the heliport identification marking shall be established in the center of the touchdown or positioning marking.

(4) On a FATO, which does not contain a TLOF and which is marked with an aiming point marking as indicated in Regulation 100, except for a heliport at a hospital, the heliport identification marking shall be established in the center of the aiming point marking as shown in Figures 23 and 24.

(5) On a FATO which contains a TLOF, a heliport identification marking shall be located in the FATO and the position of it shall coincide with the center of the TLOF.

(6) A heliport identification marking shall be located in the FATO and where used in conjunction with FATO designation markings, it shall be displayed at each end of the FATO as shown in Figure 25.

(7) A heliport identification marking, except for a heliport at a hospital, shall consist of a letter H, white in colour.

(8) The dimensions of the H marking referred to in subregulation (7) shall be no less than those indicated in Figure 26 and where the marking is used for a runway type FATO, the dimensions of the marking shall be increased by a factor of 3 as specified in Figure 25.

(9) A heliport identification marking for a heliport at a hospital shall consist of a letter H, which shall be red in colour, on a white cross made of squares adjacent to each of the sides of a square containing the H as indicated in Figures 24 and 26.

(10) A heliport identification marking shall be oriented with the cross arm of the H at right angles to the preferred final approach direction.

(11) For a helideck the cross arm shall be on or parallel to the bisector of the obstacle free sector.

(12) For a non purpose built shipboard heliport located on a side of a ship, the cross arm shall be parallel with the side of the ship.

(13) On a helideck or a shipboard heliport where the D value is 16.0 m or larger, the size of the heliport identification H marking shall have a height of 4 m with an overall width not exceeding 3 m and a stroke width not exceeding 0.75 m.

(14) Where the D value is less than 16.0 m, the size of the heliport identification H marking shall have a height of 3 m with an overall width not exceeding 2.25 m and a stroke width not exceeding 0.5 m.

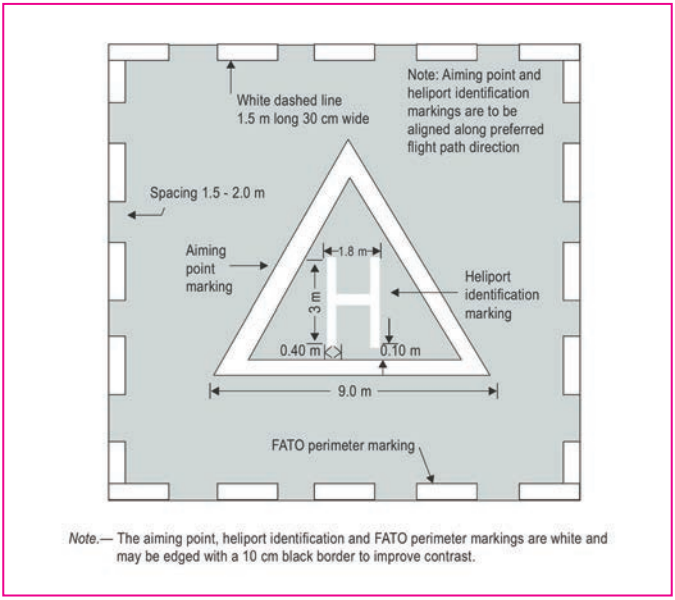


Figure 23: Combined heliport identification, aiming point and FATO perimeter marking

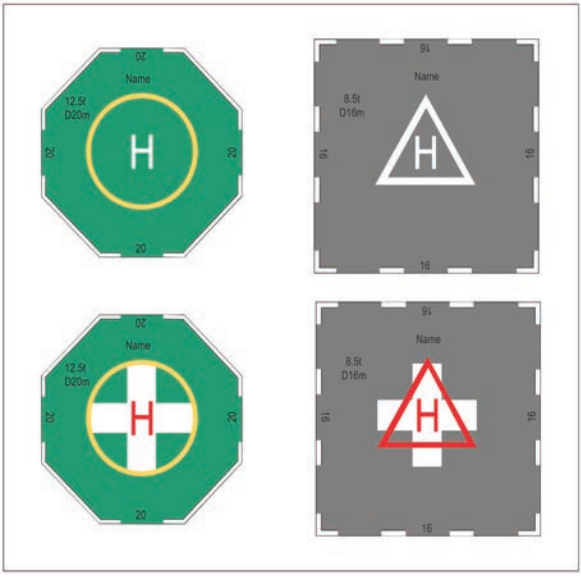


Figure 24: Heliport identification markings with TLOF and aiming markings for heli port and hospital heliport

Figure 25: FATO designation marking and heliport identification marking for a runway type FATO

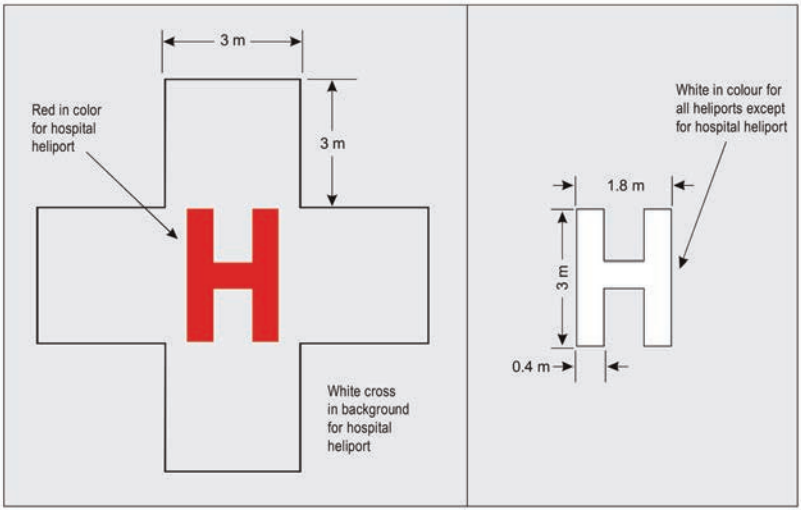


Figure 26: Hospital heliport identification and heliport identification marking

104. Maximum allowable mass marking

(1) The maximum allowable mass marking shall be displayed at an elevated heliport, a helideck a shipboard heliport and surface level heliport.

(2) The maximum allowable mass marking shall be located within the TLOF or FATO and shall be readable from the preferred final approach direction.

(3) The maximum allowable mass marking shall consist of a one-, two or three digit number.

(4) The maximum allowable mass shall be expressed in tonnes, 1,000 kg rounded down to the nearest 1,000 kg followed by a letter “t”.

(5) Where the maximum allowable mass is expressed to 100 kg, the decimal place shall be preceded with a decimal point marked with a 30 cm square.

(6) For all FATOs except runway type FATO, the numbers and the letter of the marking shall have a colour contrasting with the background and shall be in the form and proportion shown in Figure 27, for a D value of more than 30 m.

(7) For a D value between 15 m and 30 m the height of the numbers and the letter of the marking shall be a minimum of 90 cm, and for a D value of less than 15 m the height of the numbers and the letter of the marking shall be a minimum of 60 cm, each with a proportional reduction in width and thickness.

(8) For runway type FATOs, the numbers and the letter of the marking shall have a colour contrasting with the background and shall be in the form and of the proportion indicated in Figure 27.

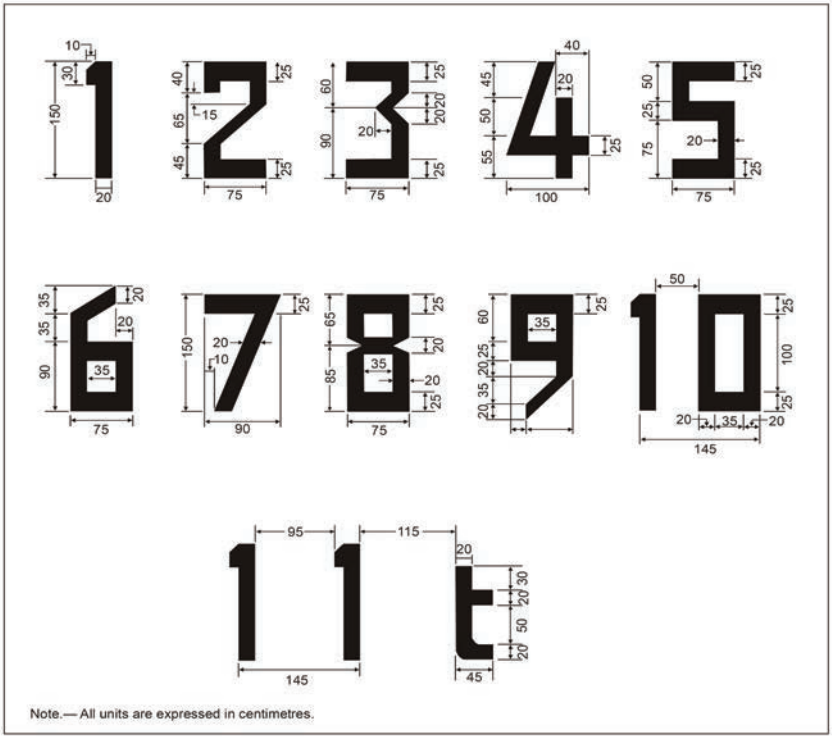


Figure 27: Form and proportions of numbers and letters

105. D-value marking

(1) All FATOs except runway type FATOs shall have the D value marking displayed at a helideck and at a shipboard heliport.

(2) Runway type FATOs do not need to be marked with the D value.

(3) The D value marking shall be displayed at surface level heliport and elevated heliports.

(4) A D value marking shall be located within the TLOF or FATO and shall be arranged as to be readable from the preferred final approach direction.

(5) Where there is more than one approach direction, additional D value markings shall be provided such that at least one D value marking is readable from the final approach directions.

(6) For a non-purpose-built heliport located on a ship's side, D value markings shall be provided on the perimeter of the D circle at the 2 o'clock, 10 o'clock and 12 o'clock positions when viewed from the side of the ship facing towards the center line.

(7) The D-value marking shall be white.

(8) The D value marking shall be rounded to the nearest whole meter or foot with 0.5 rounded down.

(9) The numbers of the marking shall have a colour contrasting with the background and shall be in the form and proportion shown in Figure 27 for a D value of more than 30 m.

(10) For a D value with a dimension of between 15 m and 30 m the height of the numbers of the marking shall be a minimum of 90 cm, and for a D value of less than 15m the height of the numbers of the marking shall be a minimum of 60cm, each with a proportional reduction in width and thickness.

106. Final approach and takeoff area perimeter marking or markers for surface-level heliports

(1) FATO perimeter marking or markers shall be provided at a surface level heliport where the extent of a FATO with a solid surface is not self evident.

(2) The FATO perimeter marking or markers shall be located on the edge of the FATO.

(3) The perimeter of a FATO shall be defined with markings or markers spaced at equal intervals of not more than 50 m with at least three markings or markers on each side including a marking or marker at each corner.

(4) A FATO perimeter marking shall be a rectangular stripe with a length of 9 m or one fifth of the side of the FATO which it defines and a width of 1 m.

(5) FATO perimeter markings shall be white.

(6) A FATO perimeter marker shall have the dimensional characteristics as specified in Figure 28.

(7) FATO perimeter markers shall be of colours that contrast effectively against the operating background.

(8) FATO perimeter markers shall be of a single colour, orange or red, or of two contrasting colours, orange and white or, alternatively, red and white should be used except where such colours would merge with the background.

(9) All FATOs except runway type FATOs shall be defined as follows—

(a) for an unpaved FATO the perimeter shall be defined with flush in-ground markers;

(b) the FATO perimeter markers shall be 30 cm in width, 1.5 m in length, and with end to end spacing of not less than 1.5 m and not more than 2 m;

(c) the corners of a square or rectangular FATO shall be defined;

(d) For a paved FATO the perimeter shall be defined with a dashed line;

(e) the FATO perimeter marking segments shall be 30 cm in width, 1.5 m in length, and with end-to-end spacing of not less than 1.5 m and not more than 2 m; and

(f) the corners of a square or rectangular FATO shall be defined.

(10) FATO perimeter markings and flush in-ground markers shall be white.

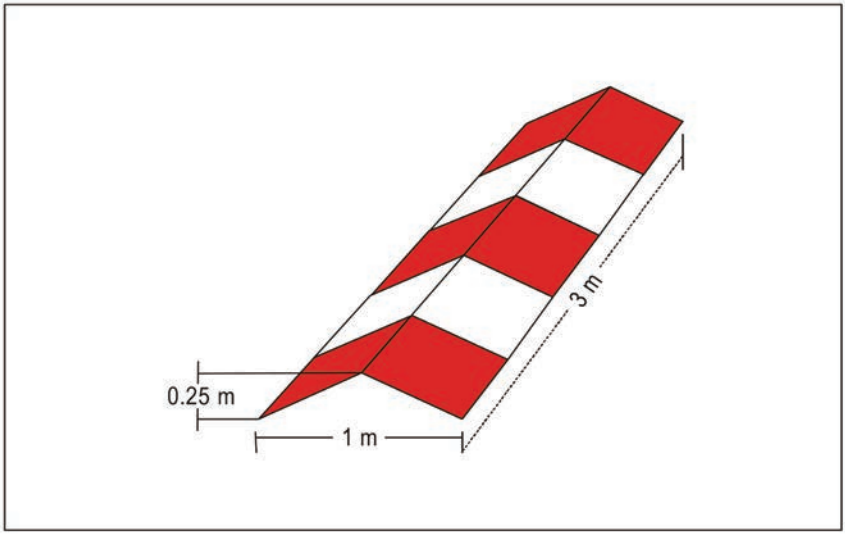


Figure 28: Runway-type FATO edge marker

107. Final approach and takeoff area designation markings for runway-type FATOs

(1) FATO designation marking shall be provided at a heliport where it is necessary to designate the FATO to the pilot.

(2) A FATO designation marking shall be located at the beginning of the FATO as specified in Figure 25.

(3) A FATO designation marking shall consist of a two digit number.

(4) The two digit number shall be the whole number nearest the one-tenth of the magnetic North when viewed from the direction of the approach.

(5) Where the requirement of subregulation (4) would give a single digit number, it shall be preceded by a zero.

(6) The aiming point marking indicated in Figure 25, shall be supplemented by the heliport identification marking.

108. Aiming point marking

(1) An aiming point marking shall be provided at a heliport where it is necessary for a pilot to make an approach to a particular point above a FATO before proceeding to a TLOF.

(2) The aiming point marking shall be located within the FATO.

(3) For all FATOs except runway-type FATOs, the aiming point marking shall be located at the center of the FATO as shown in Figure 23.

(4) The aiming point marking shall be an equilateral triangle with the bisector of one of the angles aligned with the preferred approach direction.

(5) The aiming point marking shall consist of continuous lines, providing a contrast with the background colour, and the dimensions of the marking shall conform to those shown in Figure 29.

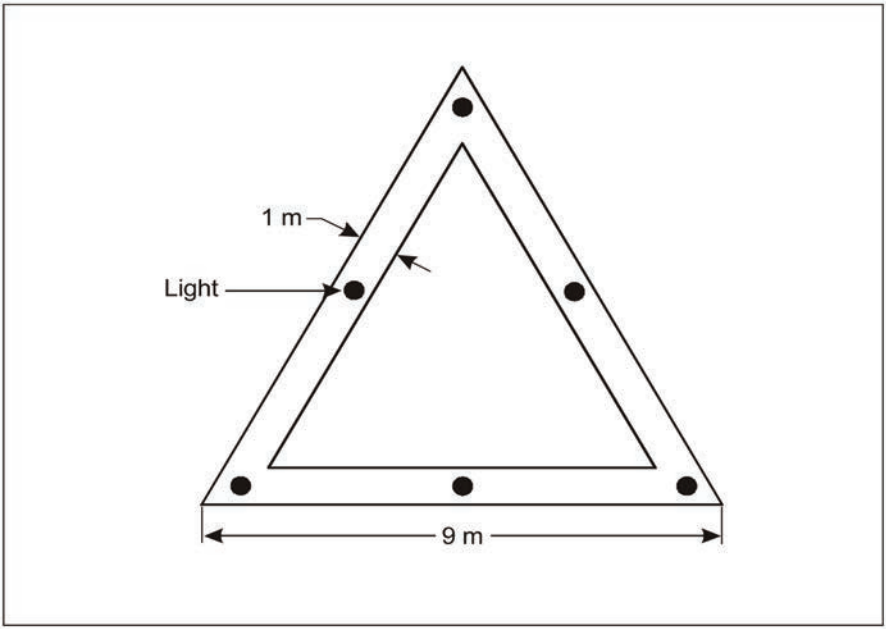


Figure 29: Aiming point marking

109. Touchdown and lift-off area perimeter marking

(1) A TLOF perimeter marking shall be displayed on a TLOF located in a FATO at a surface level heliport if the perimeter of the TLOF is not self-evident.

(2) A TLOF perimeter marking shall be displayed on an elevated heliport, a helideck and a shipboard heliport.

(3) The TLOF perimeter marking shall be located along the edge of the TLOF and shall consist of a continuous white line with a width of at least 30cm.

110. Touchdown or positioning marking

(1) A touchdown or positioning marking shall be provided for a helicopter to touch down or be accurately placed in a specific position.

(2) The touchdown or positioning marking shall be—

(a) where there is no limitation on the direction of touchdown or positioning, a touchdown or positioning circle (TDPC) marking;

(b) where there is a limitation on the direction of touchdown or positioning;

(c) for unidirectional applications, a shoulder line with an associated centerline; or

(d) for multidirectional applications, a TDPC marking with prohibited landing sectors marked.

(3) The inner edge or inner circumference of the touchdown or positioning marking shall be at a distance of 0.25 D from the center of the area in which the helicopter is to be positioned.

(4) On a helideck, the center of the TDPC marking shall be located at the center of the FATO, except that the marking may be offset away from the origin of the obstacle-free sector by no more than 0.1 D where an aeronautical study indicates that the offsetting is necessary and does not impair safety.

(5) Prohibited landing sector markings, where provided, shall be located on the touchdown or positioning marking, within the relevant headings, and shall extend to the inner edge of the TLOF perimeter marking.

(6) The inner diameter of the TDPC shall be 0.5 D of the largest helicopter the area is intended to serve.

(7) A TDPM shall have a line width of at least 0.5 m. and for a helideck and a purpose built shipboard heliport, the line width shall be at least 1m.

(8) The length of a shoulder line shall be 0.5D of the largest helicopter the area is intended to serve.

(9) The prohibited landing sector markings, when provided, shall be indicated by white and red hatched markings as indicated in Figure 30.

(10) The TDPM shall take precedence where used in conjunction with other markings on the TLOF except for the prohibited landing sector marking.

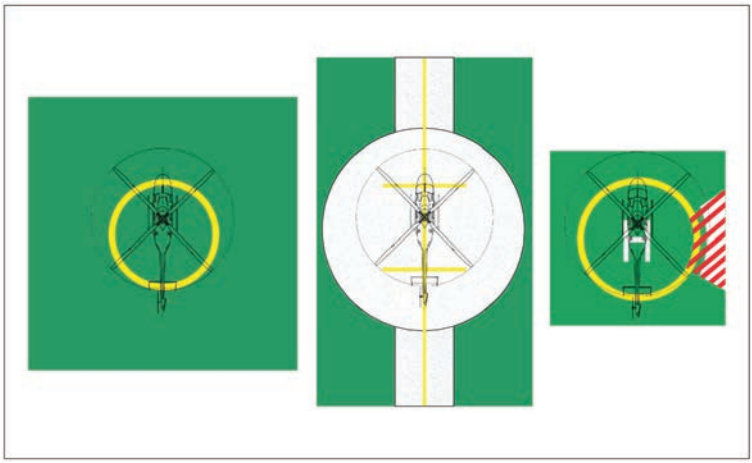


Figure 30: Multidirectional TDPC with no limitations (left) Unidirectional marking shoulder line with associated center line (center) Multidirectional TDPC with prohibited landing sector marking (right)

111. Heliport name marking

(1) A heliport name marking shall be provided at a heliport and helideck where there is insufficient alternative means of visual identification.

(2) Where a Limited Obstacle Sector (LOS) exists on a helideck the name marking shall be located on that side of the heliport identification marking.

(3) For a non purpose built heliport located on a ship's side the marking shall be located on the inboard side of the heliport identification marking in the area between the TLOF perimeter marking and the boundary of the LOS.

(4) A heliport name marking shall consist of the name or the alphanumeric designator of the heliport as used in the radio (R/T) communications.

(5) A heliport name marking intended for use at night or during conditions of poor visibility shall be illuminated, either internally or externally.

(6) For runway type FATOs, the characters of the marking shall be not less than 3 m in height.

(7) For All FATOs except runway-type FATOs, the characters of the marking shall be not less than 1.5 m in height at surface-level heliports and not less than 1.2 m on elevated heliports, helidecks and shipboard heliports.

(8) The color of the marking shall contrast with the background and preferably be white.

112. Helideck obstacle-free sector (chevron) marking

(1) A helideck with adjacent obstacles that penetrate above the level of the helideck shall have an obstacle free sector marking.

(2) A helideck obstacle free sector marking shall be located, where practicable, at a distance from the center of the TLOF equal to the radius of the largest circle that can be drawn in the TLOF or 0.5 D, whichever is greater.

(3) The helideck obstacle-free sector marking shall indicate the location of the obstacle-free sector and the directions of the limits of the sector.

(4) The height of the chevron shall not be less than 30 cm and shall be in a conspicuous colour preferably black.

113. Helideck and shipboard heliport surface marking

(1) A surface marking shall be provided to assist the pilot to identify the location of the helideck or shipboard heliport during an approach by day.

(2) A surface marking shall be applied to the dynamic load bearing area bounded by the TLOF perimeter marking.

(3) The helideck or shipboard heliport surface bounded by the TLOF perimeter marking shall be dark green colour and of a high friction coating.

(4) Where the application of a surface coating may have a degrading effect on friction qualities the surface may not be painted.

(5) For purposes of subregulation (4) to enhance the conspicuity of markings deck markings shall be outlined with a contrasting colour.

114. Helicopter taxiway markings and markers

(1) The specifications for taxi holding position markings in the Civil Aviation (Aerodromes) Regulations, 2022 are equally applicable to taxiways intended for ground taxiing of helicopters.

(2) The center line of a helicopter taxiway shall be identified with a marking.

(3) The edges of a helicopter taxiway, if not self evident, shall be identified with markers or markings.

(4) Helicopter taxiway markings shall be along the center line and, if required, along the edges of a helicopter taxiway.

(5) Helicopter taxiway edge markers shall be located at a distance of 1 m to 3 m beyond the edge of the helicopter taxiway.

(6) Helicopter taxiway edge markers shall be spaced at intervals of not more than 15 m on each side of straight sections and 7.5 m on each side of curved sections with a minimum of four equally spaced markers per section.

(7) On a paved taxiway, a helicopter taxiway center line marking shall be a continuous yellow line 15 cm in width.

(8) On an unpaved taxiway that will not accommodate painted markings, a helicopter taxiway center line shall be marked with flush in ground 15cm wide and approximately 1.5 m in length yellow markers, spaced at intervals of not more than 30 m on straight sections and not more than 15m on curves, with a minimum of four equally spaced markers per section.

(9) Helicopter ground taxiway edge markings shall be a continuous double yellow line, each 15cm in width, and spaced 15 cm apart, nearest edge to nearest edge.

(10) A helicopter taxiway edge marker shall be frangible to the wheeled undercarriage of a helicopter.

(11) A helicopter taxiway edge marker shall not exceed a plane originating at a height of 25cm above the plane of the helicopter taxiway, at a distance of 0.5 m from the edge of the helicopter ground taxiway and sloping upwards and outwards at a gradient of 5 per cent to a distance of 3 m beyond the edge of the helicopter taxiway.

(12) A helicopter taxiway edge marker shall be blue.

(13) where the helicopter taxiway is to be used at night, the edge markers shall be internally illuminated or retro reflective.

115. Helicopter air taxi route markings and markers

(1) The center line of a helicopter air taxi route shall be identified with markers or markings.

(2) A helicopter air taxi route center line marking or flush in ground center line marker shall be located along the center line of the helicopter air taxiway.

(3) A helicopter air taxi route center line, where on a paved surface shall be marked with a continuous yellow line of 15 cm in width.

(4) A helicopter air taxi route center line, where on an unpaved surface that will not accommodate painted markings, shall be marked with flush in ground of 5 cm wide and approximately 1.5 m in length yellow markers, spaced at intervals of not more than 30 m on straight sections and not more than 15 m on curves, with a minimum of four equally spaced markers per section.

(5) Where the helicopter air taxi route is to be used at night, markers shall be either internally illuminated or retro reflective.

116. Helicopter stand markings

(1) A helicopter stand perimeter marking shall be provided with the appropriate TDPM as shown in Figure 30.

(2) Alignment lines and lead in or lead out lines shall be provided on a helicopter stand in accordance with figures 5 to 9.

(3) The TDPM, alignment lines and lead in or lead out lines shall be located such that every part of the helicopter can be contained within the helicopter stand during positioning and permitted manoeuvring.

(4) Alignment lines and lead-in lead-out lines shall be located as shown in Figure 31.

(5) A helicopter stand perimeter marking shall consist of a continuous yellow line and have a line width of 15 cm.

(6) The TDPM shall have the characteristics described in regulation 110.

(7) Alignment lines and lead-in or lead-out lines shall be continuous yellow lines and have a width of 15cm.

(8) Curved portions of alignment lines and lead-in or lead out lines shall have radii appropriate to the most demanding helicopter type the helicopter stand is intended to serve.

(9) Stand identification markings shall be marked in a contrasting colour so as to be easily readable.

(10) Where it is intended that helicopters proceed in one direction only, arrows indicating the direction to be followed may be added as part of the alignment lines.

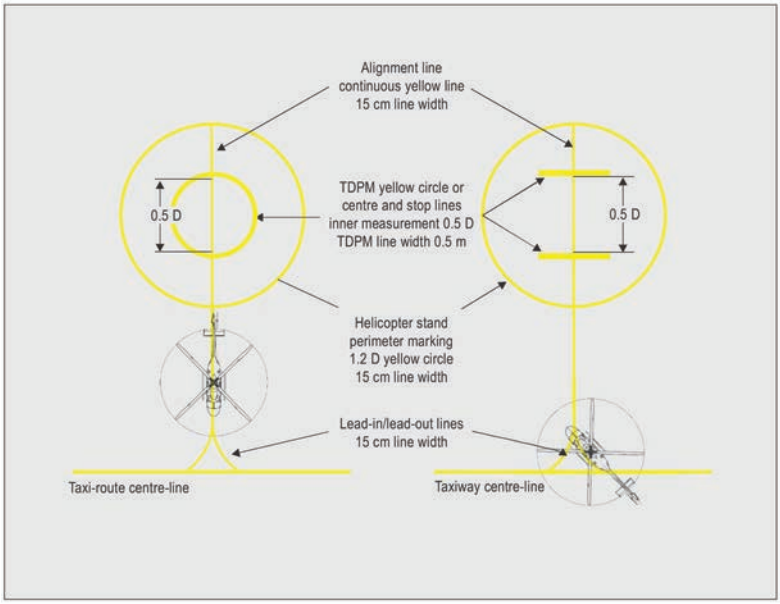


Figure 31: Helicopter stand markings

117. Flight path alignment guidance marking

(1) Flight path alignment guidance markings shall be provided at a heliport where it is desirable and practicable to indicate the available approach and departure path direction.

(2) The flight path alignment guidance marking shall be located in a straight line along the direction of approach and departure path on one or more of the TLOF, FATO, safety area or any suitable surface in the immediate vicinity of the FATO or safety area.

(3) A flight path alignment guidance marking shall consist of one or more arrows marked on the TLOF, FATO and safety area surface as shown in Figure 32.

(4) The stroke of the arrows shall be 50 cm in width and at least 3 m in length.

(5) When combined with a flight path alignment guidance lighting system the flight path alignment guidance shall take the form shown in Figure 32 and shall include the scheme for marking 'heads of the arrows' which are constant regardless of stroke length.

(6) The markings shall be in a colour which provides good contrast against the background colour of the surface on which they are marked, and shall preferably be white.

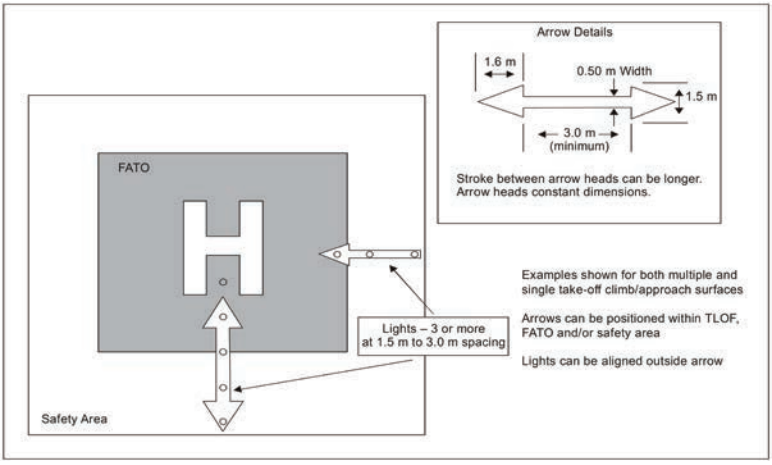


Figure 32: Flight path alignment guidance markings and lights

118. General requirement for heliport lights

(1) The specifications for the screening of non aeronautical ground lights, and the design of elevated and inset lights shall be the specifications in the Civil Aviation (Aerodromes) Regulations, 2022.

(2) In the case of helidecks and heliports located near navigable waters, consideration shall be given to ensure the aeronautical ground lights do not cause confusion to mariners.

(3) The specifications for marking and lighting of obstacles in the Civil Aviation (Aerodromes) Regulations, 2022 shall apply to heliports and winching areas.

119. Heliport beacon

(1) A heliport beacon shall be provided at a heliport where—

(a) long range visual guidance is considered necessary and is not provided by other visual means; or

(b) identification of the heliport is difficult due to surrounding lights.

(2) The heliport beacon shall be located on or adjacent to the heliport preferably at an elevated position so that it does not dazzle a pilot at short range.

(3) Where a heliport beacon is likely to dazzle pilots at short range, it shall be switched off during the final stages of the approach and landing.

(4) The heliport beacon shall emit repeated series of equispaced short duration white flashes in the format shown in Figure 33 and the light shall show at all angles of azimuth.

(5) The effective light intensity distribution of each flash shall be as shown in Figure 34 illustration 1.

(6) Where brilliancy control is desired, settings of 10 per cent and 3 per cent shall be satisfactory.

(7) In addition, to the requirements of the regulations,shielding may be necessary to ensure that pilots are not dazzled during the final stages of the approach and landing.

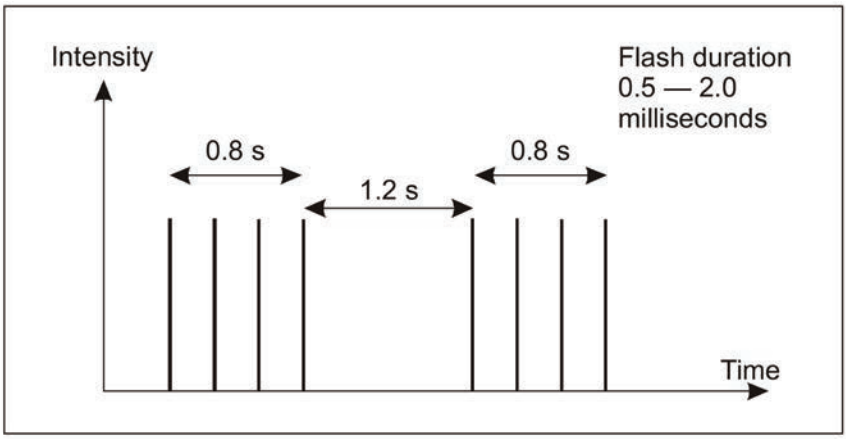


Figure 33: Heliport beacon flash characteristics

120. Approach lighting system

(1) An approach lighting system shall be provided at a heliport where it is desirable and practicable to indicate a preferred approach direction.

(2) The approach lighting system shall be located in a straight line along the preferred direction of approach.

(3) An approach lighting system shall consist of a row of three lights spaced uniformly at 30 m intervals and of a crossbar of 18 m in length at a distance of 90 m from the perimeter of the FATO as specified in Figure 35.

(4) The lights forming the crossbar shall be as nearly as practicable in a horizontal straight line at right angles to, and bisected by, the line of the center line lights and spaced at 4.5 m intervals.

(5) Where there is the need to make the final approach course more conspicuous, additional lights spaced uniformly at 30 m intervals shall be added beyond the crossbar.

(6) The lights beyond the crossbar may be steady or sequenced flashing lights, depending on the environment.

(7) Both steady and sequenced flashing lights shall be omnidirectional white lights.

(8) The flashing lights should have a flash frequency of one per second and the light distribution shall be as specified in Figure 34, Illustration 3.

(9) The flash sequence shall commence from the outermost light and progress towards the crossbar.

(10) A suitable brilliancy control shall be incorporated in the flash lights to allow for adjustment of light intensity to meet the prevailing conditions.

(11) The intensity settings for steady and flashing lights shall be as follows —

(a) for steady lights which is 100 per cent, 30 per cent and 10 per cent; and

(b) for flashing lights which is 100 per cent, 10 per cent and 3 per cent.

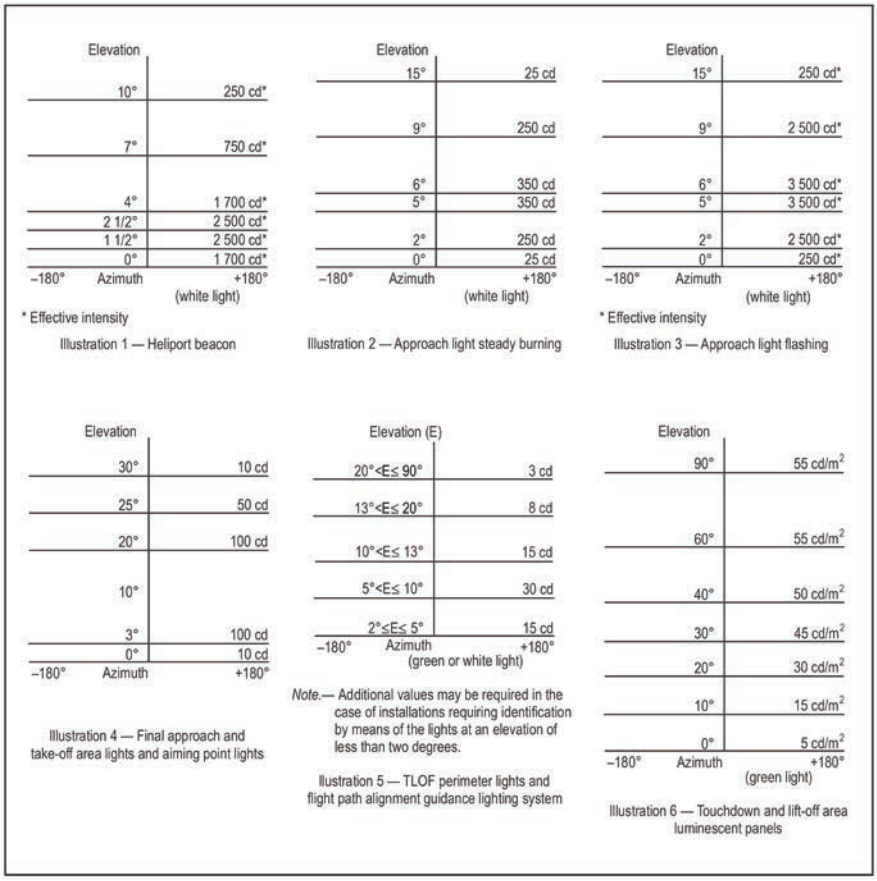


Figure 34: Isocandela diagrams

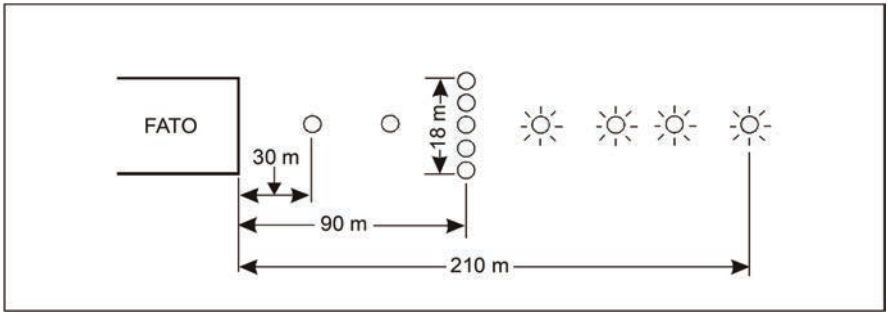


Figure 35: Approach lighting system

121. Flight path alignment guidance lighting system

(1) Flight path alignment guidance lighting system shall be provided at a heliport where it is desirable and practicable to indicate the available approach and departure path direction.

(2) The flight path alignment guidance lighting may be combined with the flight path alignment guidance marking described in regulation 117.

(3) The flight path alignment guidance lighting system shall be in a straight line along the direction of approach and departure path on one or more of the TLOF, FATO, safety area or any suitable surface in the immediate vicinity of the FATO, TLOF or safety area.

(4) When combined with a flight path alignment guidance marking, as far as is practicable, the lights shall be located inside the "arrow" markings.

(5) A flight path alignment guidance lighting system shall consist of a row of three or more lights spaced uniformly for a total minimum distance of 6 m.

(6) The Intervals between the lights should not be less than 1.5 m and shall not exceed 3 m.

(7) Where space permits there shall be 5 lights steady omnidirectional inset white lights as shown in Figure 32.

(8) The lights shall be steady omnidirectional inset white lights.

(9) The distribution of the lights shall be as indicated in Figure 34, Illustration 6.

(10) A suitable control shall be incorporated to allow for the adjustment of light intensity to meet the prevailing conditions and to balance the flight path alignment guidance lighting system with other heliport lights and general lighting that may be present around the heliport.

122. Visual alignment guidance system

The Visual alignment guidance system shall be provided to serve the approach to a heliport where one or more of the following conditions exist especially at night where—

(a) obstacle clearance, noise abatement or traffic control procedures require a particular direction to be flown;

(b) the environment of the heliport provides few visual surface cues; and

(c) it is physically impracticable to install an approach lighting system.

123. Visual approach slope indicator

A visual approach slope indicator shall be provided to serve the approach to a heliport, whether or not the heliport is served by other visual approach aids or by non-visual aids, where one or more of the following conditions exist especially at night where—

(a) obstacle clearance, noise abatement or traffic control procedures require a particular slope to be flown;

(b) the environment of the heliport provides few visual surface cues; and

(c) the characteristics of the helicopter require a stabilized approach.

124. Final approach and takeoff area lighting systems for onshore surface-level heliports

(1) Where a FATO with a solid surface is established at a surface level heliport intended for use at night, FATO lights shall be provided except that they may be omitted where the FATO and the TLOF are nearly coincidental or the extent of the FATO is self-evident.

(2) FATO lights shall be placed along the edges of the FATO and the lights shall be uniformly spaced as follows—

(a) for an area in the form of a square or rectangle, at intervals of not more than 50 m with a minimum of four lights on each side including a light at each corner; and

(b) for any other area with a shape not indicated in (a)shaped area, including a circular area, at intervals of not more than 5 m with a minimum of ten lights.

(3) The FATO lights shall be fixed omnidirectional lights showing white.

(4) Where the intensity of the lights is to be varied, the lights shall show variable white and the light distribution of FATO lights shall be as shown in Figure 34, Illustration 4.

(5) The lights shall not exceed a height of 25 cm and shall be inset where a light extending above the surface would endanger helicopter operations.

(6) Where a FATO is not meant for lift-off or touchdown, the lights shall not exceed a height of 25 cm above ground level.

125. Aiming point lights

(1) Where an aiming point marking is provided at a heliport intended for use at night, aiming point lights shall be provided.

(2) Aiming point lights shall be collocated with the aiming point marking.

(3) Aiming point lights shall form a pattern of at least six omnidirectional white lights as shown in Figure 29.

(4) The lights shall be inset where a light extending above the surface could endanger helicopter operations.

(5) The light distribution of aiming point lights shall be as shown in Figure 34, Illustration 4.

126. Touchdown and lift-off area lighting system

(1) A TLOF lighting system shall be provided at a heliport intended for use at night.

(2) For a surface-level heliport, lighting for the TLOF in a FATO shall consist of one or more of the—

(a) perimeter lights;

(b) floodlighting; and

(c) Arrays of Segmented Point Source Lighting (ASPSL) or luminescent panel (LP) lighting to identify the TLOF where the lighting in paragraphs (a) and b) are not practicable and FATO lights are available.

(3) For an elevated heliport, shipboard heliport or helideck, lighting of the TLOF in a FATO shall consist of—

(a) perimeter lights; and

(b) ASPSL or LPs to identify the TDPM or floodlighting to illuminate the TLOF.

(4) TLOF ASPSL or LPs to identify the TDPM or floodlighting shall be provided at a surface level heliport intended for use at night where enhanced surface texture cues are required.

(5) TLOF perimeter lights shall be placed along the edge of the area designated for use as the TLOF or within a distance of 1.5 m from the edge and where the TLOF is a circle the lights shall be—

(a) located in straight lines in a pattern which will provide information to pilots on drift displacement; and

(b) where the requirement of paragraph (a) above are not practicable, evenly spaced around the perimeter of the TLOF at the appropriate interval, except that over a sector of 45 degrees the lights shall be spaced at half spacing.

(6) TLOF perimeter lights shall be uniformly spaced at intervals of not more than 3 m for elevated heliports and helidecks and not more than 5 m for surface-level heliports.

(7) There shall be a minimum of four lights on each side including a light at each corner and for a circular TLOF where the

lights are installed in accordance to subregulation (5) (b) there shall be a minimum of fourteen lights.

(8) The TLOF perimeter lights shall be installed at an elevated heliport or fixed helideck in a way that the pattern is not seen by the pilot from below the elevation of the TLOF.

(9) The TLOF perimeter lights shall be installed on a moving helideck or shipboard heliport, in a way that the pattern cannot be seen by the pilot from below the elevation of the TLOF where the helideck or shipboard heliport is level.

(10) On surface level heliports, ASPSL or LPs, provided to identify the TLOF, shall be placed along the marking designating the edge of the TLOF.

(11) Where the TLOF is a circle, the ASPSL or LPs shall be located in straight lines circumscribing the area.

(12) On surface level heliports the minimum number of LPs on a TLOF shall be nine and the total length of LPs in a pattern shall not be less than 50 per cent of the length of the pattern.

(13) There shall be an odd number of panels with a minimum number of three panels on each side of the TLOF including a panel at each corner.

(14) LPs shall be uniformly spaced with a distance between adjacent panel ends of not more than 5 m on each side of the TLOF.

(15) Where LPs are used on an elevated heliport or helideck to enhance surface texture cues, the panels shall not be placed adjacent to the perimeter lights, the panels shall be placed around a touchdown marking or coincident with heliport identification marking.

(16) TLOF floodlights shall be located in such a way that avoids glare to pilots in flight or to personnel working on the area.

(17) The arrangement and aiming of floodlights shall keep shadows at minimum.

(18) The TLOF perimeter lights shall be fixed omnidirectional lights showing green.

(19) At a surface level heliport, ASPSL or LPs shall emit green light where the ASPSL or LPs used to define the perimeter of the TLOF.

(20) The chromaticity and luminance of colours of LPs shall conform to the Civil Aviation (Aerodrome) Regulations, 2022.

(21) An LP shall have a minimum width of 6 cm.

(22) The panel housing shall be the same colour as the marking it defines.

(23) For a surface level or elevated heliport, the TLOF perimeter lights located in a FATO shall not exceed a height of 5 cm and should be inset where a light extending above the surface could endanger helicopter operations.

(24) For a helideck or shipboard heliport, the TLOF perimeter lights shall not exceed a height of 5 cm, or for a FATO or TLOF, shall not exceedd a height of 15 cm.

(25) Where the TLOF flood lights are located within the safety area of a surface level or elevated heliport, the TLOF floodlights shall not exceed a height of 25 cm.

(26) For a helideck or shipboard heliport, the TLOF floodlights shall not exceed a height of 5 cm, or for a FATO or TLOF, shall not exceed a height of 15 cm.

(27) The LPs shall not extend above the surface by more than 2.5 cm.

(28) The light distribution of the perimeter lights should be as shown in Figure 34, Illustration 5.

(29) The light distribution of the LPs shall be as shown in Figure 34, Illustration 6.

(30) The spectral distribution of TLOF area floodlights shall be in a way enables the surface and obstacle marking to be correctly identified.

(31) The average horizontal illuminance of the floodlighting shall be at least 10 lux, with a uniformity ratio, average to a minimum, of not more than 8:1 measured on the surface of the TLOF.

(32) The lighting used to identify the TDPC shall comprise a segmented circle of omnidirectional ASPSL strips showing yellow.

(33) The segment referred to in subregulation (32) shall consist of ASPSL strips, and the total length of the ASPSL strips shall not be less than 50 per cent of the circumference of the circle.

(34) If utilised, the heliport identification marking lighting shall be omnidirectional showing green.

127. Helicopter stand floodlighting

(1) Floodlighting shall be provided on a helicopter stand intended to be used at night.

(2) Helicopter stand floodlights shall be located in a way that provide adequate illumination, with a minimum of glare to the pilot of a helicopter in flight and on the ground, and to the personnel on the stand.

(3) The arrangement and aiming of floodlights should be such that a helicopter stand receives light from two or more directions to minimize shadows.

(4) The spectral distribution of stand floodlights shall be such that the colours used for surface and obstacle marking are correctly identified.

(5) Horizontal and vertical illuminance shall be sufficient to ensure that visual cues are discernible for the required manoeuvring and positioning, and essential operations around the helicopter may be performed expeditiously without endangering personnel or equipment.

128. Winching area floodlighting

(1) Winching area floodlighting shall be provided at a winching area intended for use at night, to provide illumination of the surface, obstacles and visual cues to assist a helicopter to be positioned over, and retained within, an area from which a passenger or equipment can be lowered or raised.

(2) Winching area floodlights shall be located so as to avoid glare to pilots in flight or to the personnel working on the area.

(3) The arrangement and aiming of floodlights shall be such that shadows are kept to a minimum.

(4) The spectral distribution of winching area floodlights shall be such that the surface and obstacle markings can be correctly identified.

(5) The average horizontal illuminance shall be at least 10 lux, measured on the surface of the winching area.

129. Taxiway lights

The requirements for lights for taxiways intended for ground taxiing of helicopters shall conform to the taxiway lights and taxiway center line lights requirements of the Civil Aviation (Aerodrome) Regulations, 2022.

130. Visual aids for denoting obstacles outside and below obstacle limitation surfaces

(1) Where an aeronautical study indicates that obstacles in areas outside and below the boundaries of the OLS, established for

a heliport, constitute a hazard to helicopters, the obstacles shall be marked and lit, except that the marking may be omitted where the obstacle is lighted with high intensity obstacle lights by day.

(2) Where an aeronautical study indicates that overhead wires and cables crossing a river, waterway, valley or highway constitute a hazard to helicopters, the wires or cables shall be marked and the supporting towers of the wires and cables marked and lit.

131. Floodlighting of obstacles

(1) At a heliport intended for use at night, obstacles shall be floodlighted if it is not possible to display obstacle lights on the obstacles.

(2) Obstacle floodlights shall be arranged in such a way that illuminates the entire obstacle and as far as practicable in a manner that does not dazzle pilots.

(3) Obstacle floodlighting shall be such as to produce a luminance of at least 10 cd/m2.

132. Visual aids for instrument heliports

Visual aids for instrument heliports with non precision and precision approaches are covered under Schedule 3 to these Regulations.

Part XII— Heliport Operational Services, Equipment, Installations and Facilities

133. Heliport emergency planning

(1) A heliport emergency plan shall be commensurate to the helicopter operations and the other activities conducted at the heliport.

(2) The heliport emergency plan shall identify agencies which could be of assistance in responding to an emergency at the heliport or in its vicinity.

(3) The heliport emergency plan shall provide for the coordination of the actions to be taken in the event of an emergency occurring at a heliport or in its vicinity.

(4) Where an approach or departure path at a heliport is located over water, the plan shall identify the agency is responsible for coordinating rescue in the event of a helicopter ditching and shall indicate how the agency is to be conducted.

(5) The plan shall include, as a minimum, the following information—

(a) the types of emergencies planned for;

(b) how to initiate the plan for each emergency specified;

(c) the name of agencies on and off the heliport to contact for each type of emergency with the telephone numbers or other contact information;

(d) the role of each agency for each type of emergency;

(e) a list of the pertinent on heliport services available with telephone numbers or other contact information;

(f) copies of any written agreements with other agencies for mutual aid and the provision of emergency services; and

(g) a grid map of the heliport and its immediate vicinity.

(6) All agencies identified in the heliport emergency plan shall be consulted about their role in the plan.

(7) The plan shall be reviewed and the information in it updated at least yearly or, if deemed necessary, after an actual emergency, so as to correct any deficiency found during the emergency.

(8) A test of the emergency plan shall be carried out at least once every three years.

Rescue and Firefighting

134. Provision of RFFS equipment and services

(1) A heliport operator shall provide rescue and firefighting equipment and services at helidecks and at elevated heliports located above occupied structures.

(2) A safety risk assessment shall be performed to determine the need for rescue and firefighting equipment and services at surface level heliports and elevated heliports located above unoccupied structures.

135. Level of protection provided

(1) For the application of primary media the discharge rate, in litres per minute, applied over the assumed practical critical area, in m2, shall be predicated on a requirement to bring any fire which may occur on the heliport under control within one minute, measured from activation of the system at the appropriate discharge rate.

(2) For practical critical area calculation where primary media is applied as a solid stream, the practical critical area shall be calculated by multiplying the helicopter fuselage length (m) by the helicopter fuselage width (m) plus an additional width factor (W1) of 4 m and categorisation from H0 to H3 should be determined on the basis of the fuselage dimensions in the following table 3—

Table 3: Heliport firefighting category

Category (1)	*Maximum fuselage length (2)*	*Maximum fuselage width (3)*
H0	up to but not including 8 m	1.5 m
H1	from 8 m up to but not including 12 m	2 m
H2	from 12 m up to but not including 16 m	2.5 m
H3	from 16 m up to 20 m	3m

(3) The practical critical area calculation where primary media is applied in a dispersed pattern—

(a) for heliports except helidecks, the practical critical area shall be based on the area contained within the heliport perimeter, which always includes the TLOF, and to the extent that it is load bearing, the FATO; and

(b) for helidecks shall be based on the largest circle capable of being accommodated within the TLOF perimeter.

136. Extinguishing agents

(1) For surface level heliports with primary media applied as a solid stream using a portable foam application system (PFAS), where an RFFS is provided at a surface level heliport, the amount of primary media and complementary agents shall be in accordance with Table 4.

Table 4: Minimum usable amounts of extinguishing agents for surface level heliports

Foam meeting performance level B			*Foam meeting performance level C*		*Complementary agents*	
Category	*Water (L)*	*Discharge rate foam solution/ minute (L)*	*Water (L)*	*Discharge rate foam solution/ minute (L)*	*Dry chemical powder (kg)*	*Gaseous media (kg)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
H 0	500	250	330	165	23	9
H 1	800	400	540	270	23	9
H 2	1 200	600	800	400	45	18
H 3	1 600	800	1 100	550	90	36

(2) For elevated heliports with primary media applied as a solid stream using a fixed foam application system (FFAS), where an RFFS is provided at an elevated heliport, the amount of foam media and complementary agents shall be in accordance with Table 5.

Table 5: Minimum usable amounts of extinguishing agents for elevated heliports

Foam meeting performance level B			*Foam meeting performance level C*		*Complementary agents*	
Category	*Water (L)*	*Discharge rate foam solution/ minute (L)*	*Water (L)*	*Discharge rate foam solution/ minute (L)*	*Dry chemical powder (kg)*	*Gaseous media (kg)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
H 0	1 250	250	825	165	23	9
H 1	2 000	400	1 350	270	45	18
H 2	3 000	600	2 000	400	45	18
H 3	4 000	800	2 750	550	90	36

(3) For elevated heliports or limited-sized surface level heliports with primary media applied in a dispersed pattern through a Fixed Foam Application System (FFAS) – a solid plate heliport—

(a) the amount of water required for foam production shall be predicated on the practical critical area (m2) multiplied by the appropriate application rate (L/min/m2), giving a discharge rate for foam solution (in L/min) and the discharge rate shall be multiplied by the discharge duration to calculate the amount of water needed for foam production;

(b) the discharge duration shall be at least three minutes; and

(c) the complementary media shall be in accordance with Table 5, for H2 operations.

(4) For purpose built elevated heliports limited sized surface level heliport with primary media applied in a dispersed pattern through a Fixed Application System (FAS), a passive fire retarding surface with water only DIFFS—

(a) the amount of water required shall be predicated on the practical critical area (m2) multiplied by the appropriate application rate (3.75 L/min/m2) giving a discharge rate for water (in L/min). The discharge rate shall be multiplied by the discharge duration to determine the total amount of water needed;

(b) the discharge duration shall be at least two minutes; and

(c) complementary media shall be in accordance with Table 5, for H2 operations.

(5) For purpose built helidecks with primary media applied in a solid stream or a dispersed pattern through a fixed foam application system (FFAS), a solid plate heliport—

(a) the amount of water required for foam media production shall be predicated on the practical critical area (m2)

multiplied by the application rate (L/min/m2) giving a discharge rate for foam solution (in L/min). The discharge rate should be multiplied by the discharge duration to calculate the amount of water needed for foam production.

(b) the discharge duration shall be at least five minutes; and

(c) the complementary media shall be in accordance with Table 5, H0 levels for helidecks up to and including 16.0 m and to H1/H2 levels for helidecks greater than 16.0 m. Helidecks greater than 24 m shall adopt H3 levels.

(6) For purpose built helidecks with primary media applied in a dispersed pattern through a fixed application system (FAS), a passive fire retarding surface with water only DIFFS—

(a) the amount of water required shall be predicated on the practical critical area (m2) multiplied by the application rate (3.75 L/min/m2) giving a discharge rate for water (in L/min);

(b) the discharge rate should be multiplied by the discharge duration to calculate the amount of water needed;

(c) the discharge duration shall be at least three minutes; and

(d) complementary media shall be in accordance with Table 5, to H0 levels for helidecks up to and including 16.0 m and to H1/H2 levels for helidecks greater than 16.0 m and helidecks greater than 24 m shall adopt H3 levels.

137. Response time

(1) At surface level heliports, the operational objective of the rescue and firefighting response shall be to achieve response times not exceeding two minutes in optimum conditions of visibility and surface conditions.

(2) Response time is considered to be the time between the initial call to the rescue and firefighting service and the time where

the first responding vehicle of the rescue and firefighting service is in position to apply foam at a rate of at least 50 per cent of the discharge rate specified in Table 4.

(3) At elevated heliports, limited sized surface level heliports and helidecks, the response time for the discharge of primary media at the required application rate shall be 15 seconds measured from system activation.

(4) If rescue and firefighting personnel are needed, they shall be immediately available on or in the vicinity of the heliport while helicopter movements are taking place.

138. Rescue arrangements

Rescue arrangements commensurate with the overall risk of the helicopter operation shall be provided at the heliport.

139. Communication and alerting system

A suitable alerting and communication system shall be provided in accordance with the emergency response plan.

140. Personnel

(1) Where provided, the number of rescue and firefighting personnel shall be sufficient for the required task.

(2) The rescue and firefighting personnel shall be trained to perform their duties, and maintain their competence.

(3) The rescue and firefighting personnel shall be provided with protective equipment.

141. Means of escape

(1) Elevated heliports and helidecks shall be provided with a main access and at least one additional means of escape.

(2) Access points shall be located as far apart from each other as practicable.

142. Application for exemption

(1) The authority may, in writing exempt a heliport operator from complying with a specific provision of these Regulations.

(2) An application for an exemption from a provision of these Regulations shall be submitted at least sixty days before the proposed effective date of the exemption.

(3) A heliport operator shall submit an application for exemption in writing and the application shall contain—

(a) name of the heliport and the address of the heliport operator;

(b) the specific requirement from which the applicant seeks exemption;

(c) justification for the exemption;

(d) an aeronautical study;

(e) a description of the type of operations to be conducted under the proposed exemption;

(f) the proposed duration of the exemption;

(g) a detailed description of the alternative means by which the applicant is to ensure a level of safety equivalent to that established by the regulation from which the exemption is applied for;

(h) a review of any known safety concerns related to the required exemption, including information about any relevant accidents or incidents of which the applicant is aware; and

(i) any other relevant information that may be required by the authority.

(4) Other than existing heliport facilities and equipment that are allowed to continue to in use, or exemptions granted to the heliport operator for specific cases of consideration, a heliport operator is expected to comply with these Regulations when introducing a new heliport facility or equipment, or when carrying out replacement or improvement works on an existing facility or equipment, unless the replacement or improvement works is limited to those of very minor nature.

143. Initial review by the authority

(1) The authority shall review an application for exemption for accuracy and compliance with the requirements of these Regulations.

(2) Where the applicant does not meet the requirements of regulation 142, the authority shall inform the applicant and no further action shall be taken on that application.

144. Evaluation of application for exemption

(1) The authority shall evaluate of an application after the initial review in accordance with regulation 143, to determine whether —

(a) the proposal by the applicant provides a level of safety equivalent to that established by the regulation from which the exemption is sought; or

(b) a grant of the exemption would contravene the applicable standards.

(2) The authority shall inform the applicant in writing and publish a detailed report of its evaluation and decision to grant or deny the application for exemption.

(3) The report referred to in subregulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

145. Grant or refusal of exemption

(1) Where the operator meets the requirements and criteria set for grant of exemption, the authority shall grant an exemption for a specified period.

(2) The authority may refuse to grant an exemption where in the opinion of the authority—

(a) the reasons given for the exemption are not satisfactory;

(b) the exemption adversely affect safety;

(c) exemption is not in public interest; or

(d) if applicable, the exemption does not provide the level of safety equal to that intended by these Regulations.

(3) An exemption granted to a heliport operator shall be recorded in the heliport manual.

(4) The heliport manual shall contain details of the exemption, reason that the exemption was requested for, any resultant limitations, conditions or procedures imposed, and other related safety information.

(5) An exemption granted in respect of an existing facility shall continue to apply until its expiry date.

146. Control or review of exemption

Following the grant or refusal of an exemption the authority shall carry out continuous review of the exemption as prescribed in the applicable technical guidance material.

PART XIV —GENERAL PROVISIONS

147. Change of name of licence

(1) A holder of a licence may apply to the authority to change the name of the holder of the licence.

(2) An application in subregulation (1) shall be accompanied by—

(a) the current licence; and

(b) a court order, or any other legal document verifying the change of name, if any.

(3) The authority shall change the name of the holder and issue a replacement licence with the appropriate endorsement.

(4) The authority shall retain copies of the documents submitted under subregulation (2).

148. Change of address of licence

(1) A holder of a licence shall inform the authority of —

(a) change in the physical address at least fourteen days in advance; and

(b) the mailing address upon the change.

(2) Where a holder of a licence does not inform the authority of the change in the physical address within the time specified in subregulation (1), the authority may suspend the licence.

149. Use and retention of licences, and records

(1) A person shall not—

(a) use a licence permission, exemption or any other document issued or required by or under these Regulations which is forged, altered, revoked, or suspended, or which the person is not entitled to use;

(b) forge or alter a licence permission, exemption or any other document issued or required by or under these Regulations;

(c) lend a licence, exemption or any other document issued or required by or under these Regulations to any other person; or

(d) make any false representation for the purpose of procuring for himself, herself or any other person the issue, renewal or variation of a licence, permission or exemption or other document.

(2) A person shall not, during the period for which it is required under these Regulations to be preserved—

(a) mutilate, alter, render illegible or destroy a licence, or any entry made in any record;

(b) knowingly make, procure or assist in the making of any false entry in a licence or record, or

(c) willfully omit to make a material entry in a licence, or record.

(3) A record required to be maintained under these Regulations shall be recorded in a permanent and indelible material.

(4) A person shall not purport to issue a licence or exemption for the purpose of these Regulations unless that person is authorised to do so.

(5) The authority may suspend or cancel a licence of an operator who contravenes any provision of these Regulations.

150. Replacement of documents

A holder of a licence who requires a replacement of the licence may apply to the authority in the prescribed form.

151. Aeronautical user charges

(1) The authority shall notify the fees to be charged in connection with—

(a) the issue, validation, renewal, extension or variation of any licence or any other document, including a copy of any of these;

(b) the undertaking of any examination, test, inspection or investigation; and

(c) the grant of any permission or approval required for the purpose of these Regulations.

(2) Where an application for which any fee is chargeable under subregulation (1) is made, the applicant shall, before the application is processed, pay the required fee.

(3) The authority shall not refund the fees where an application is withdrawn after payment of the fees is made or where the application ceases to have effect or is rejected.

152. Conditions for operating heliport

A person shall not operate a heliport licenced, under these Regulations unless the facilities and characteristics of the heliport are effectively related and match the needs of the aircraft for which the heliport is intended.

153. Lighting of enroute obstacles

(1) The owner or a person in charge of an enroute obstacle shall ensure that the en route obstacle is fitted with medium intensity steady red light—

(a) positioned as close as possible to the top of the obstacle; and

(b) spaced as far as practicable, equally between the top lights and ground level with an interval not exceeding thirty-three meters, at the intermediate levels.

(2) Where any light which is required by this regulation to be displayed fails, the owner or a person in charge of an en route obstacle shall repair or replace the light as soon as is reasonably practicable but in any case not later than twenty-four hours after the failure of the light.

(3) Subject to subregulation (2), the owner or a person in charge of an en route obstacle shall ensure that the lights required to be fitted by this regulation are displayed.

(4) The owner or a person in charge of an en route obstacle shall ensure that sufficient light is fitted and arranged at each level of an obstacle where lights are required to be fitted, so as to show, where displayed, in all directions.

(5) The authority may direct that an en route obstacle is fitted with additional lights which shall be displayed in such positions and at such times as the authority may specify.

154. Land use in vicinity of heliport

All land use practices and activities in the vicinity of a heliport shall conform to the guidelines prescribed by the authority.

155. Deviations from Regulations

Any deviation from these Regulations or procedure shall be set out in an endorsement on the heliport manual.

156. Safety inspections and audits

The authority shall —

(a) carry out such safety inspections and audits as may be necessary for the purpose of verifying the validity of an application for construction and operation of a heliport; and

(b) carry out safety inspections and audits of any document and records of an operator, which may be necessary to determine compliance with the appropriate requirements prescribed in these Regulations.

157. Obligation to insure heliport

(1) A person shall not operate, or cause or permit any other person to operate, a heliport unless there is a policy of insurance in force in relation to that heliport.

(2) For the purposes of subregulation (1) a policy of insurance shall be of no effect unless—

(a) the policy is in a form and contains particulars the authority may prescribe; and

(b) the operator has sent or caused to be sent to the authority a copy the policy of insurance.

(3) If the policy of insurance at any time or for any reason ceases to have effect, any licence issued under these Regulations in respect of the heliport to which the policy of insurance relates shall be deemed to have been revoked.

(4) A licence shall not be renewed or amended under these Regulations in relation to the operation of a heliport where the policy of insurance has expired.

(5) In this regulation "policy of insurance" means a policy which insures the operator of a heliport against liability in respect of loss and damage caused to any person or property at that heliport and which complies with such conditions as prescribed by the authority.

158. Enforcement

(1) The authority shall take enforcement action on any regulated entity that fails to comply with the provisions of these Regulations.

(2) The inspectors of the authority holding valid delegations shall take necessary actions to preserve safety where an undesirable condition has been detected.

(3) The actions referred to in subregulation (2) may include—

(a) in the case of a regulated entity, the imposition of operating restrictions until such a time that the existing undesirable condition has been resolved; or

(b) in the case of a licenced personnel, require that the individual does not exercise the privileges of the licence until such a time that the undesirable condition has been resolved.

(4) In carrying out the enforcement actions pursuant to the provisions of subregulation (2), the inspectors of the authority shall invoke the powers with due care and act in good faith in the interest of preserving safety.

PART XV—MISCELLANEOUS

159. Contravention of Regulations

The authority may suspend or revoke a certificate, licence or authorisation of a person who contravenes any provision of these Regulations.

160. Appeals Tribunal

A person who is aggrieved with the decision of the authority made under these Regulations may within twenty one days appeal to the Tribunal.

161. Offences and penalties

(1) A person who contravenes any provision of these Regulations commits an offence and on conviction is liable, on conviction, to a fine not exceeding one hundred currency points or to imprisonment for a term of not more than six months or both.

(2) Where it is proved that an act or omission of any person, which would otherwise have been a contravention by that person of a provision of these Regulations, orders or notices made there under was due to any cause not avoidable by the exercise of reasonable care by that person, the act or omission shall be deemed not to be a contravention by that person of that provision.

SCHEDULES

SCHEDULE 1

CURRENCY POINT

Regulation 3

A currency point is equivalent to twenty thousand shillings

SCHEDULE 2

Regulation 61(2)

PARTICULARS TO BE INCLUDED IN A HELIPORT MANUAL (HELIPORTS IN CATEGORY D)

PART I—GENERAL

General information, including the following —

(a) purpose and scope of the heliport manual;

(b) the legal requirement for a heliport licence as prescribed in the national regulations;

(c) conditions for use of the heliport which is a statement to indicate that the heliport shall at all times, where it is available for the take off and landing of aircraft, be so available to all persons on equal terms and conditions;

(d) the available aeronautical information system and procedures for its promulgation;

(e) the system for recording aircraft movements;

(f) obligations of the heliport operator;

(g) lines of succession of heliport operational responsibility;

(h) each current exemption issued to the heliport from the requirements of this Part; and

(i) any limitations imposed by the authority;

PART 2—PARTICULARS OF HELIPORT SITE

General information, including the following—

(a) a plan of the heliport showing the main heliport facilities for the operation of the heliport including, particularly, the location of each wind direction indicator;

(b) a plan of the heliport showing the heliport boundaries;

(c) a plan showing the distance of the heliport from the nearest city, town or other populous area, and the location of any heliport

facilities and equipment outside the boundaries of the heliport; and

(d) grid map or other means of identifying locations and terrain features on and around the heliport which are significant to emergency operations.

PART 3—PARTICULARS OF HELIPORT REQUIRED TO BE REPORTED TO THE AERONAUTICAL INFORMATION SERVICE (AIS)

1—General Information which includes the —

(a) name of the heliport;

(b) location of the heliport;

(c) geographical coordinates of the heliport reference point determined in terms of the World Geodetic System - 1984 (WGS-84) reference datum;

(d) heliport elevation of the touch down and lift off area (TLOF) and or the elevation and geoid undulation of each threshold of the final approach and take off area (FATO);

(e) FATO type, true bearing, designation number, length, width, slope, surface type; and

(f) safety area which is the length, width and surface type;

(g) apron which is the surface type, helicopter stands and geographical coordinates of specific points;

(h) declared distances which is the takeoff distance available, rejected take off distance available and landing distance available;

(i) heliport reference temperature;

(j) name of the heliport operator and the address, telephone and facsimile numbers at which the heliport operator may be contacted at all times;

(k) maximum allowable mass;

(l) visual aids available;

(m) rescue and firefighting and level of protection; and

(n) availability of HAPI, AHAPI or helicopter approach HAPI indicator.

2 **—Heliport dimensions and related information**

General information, including the following **—**

(a) dimensions of safety areas, apron, clear way, FATO and TLOF, obstacle limitation surfaces, helideck obstacle free sector, helideck obstacle limitation sector and approach surface;

(b) helicopter ground taxiway, air taxiway and air transit route;

(c) one or more preflight altimeter check locations established on an apron and their elevation;

(d) the system of air taxiways, air transit route and ground taxiway identification;

(e) the location of each obstruction required to be lighted or marked within the heliport's area of authority; and

(f) any other item or limitations which the authority finds, is necessary in the public interest.

Note: The accuracy of the information in this Part is critical to aircraft safety. Information requiring engineering survey and assessment shall be gathered or verified by qualified technical persons.

PART 4—PARTICULARS OF THE HELIPORT OPERATING PROCEDURES AND SAFETY MEASURES

1— Heliport reporting

Particulars of the procedures for reporting any changes to the heliport information set out in the AIP and AIC and procedures for requesting the issue of NOTAMs, including the following—

(a) arrangements for reporting any changes to the authority and recording the reporting of changes during and outside the normal hours of heliport operations;

(b) the names and roles of persons responsible for notifying the changes, and their telephone numbers during and outside the normal hours of heliport operations;

(c) the address and telephone and facsimile numbers, as provided by the authority, of the place where changes are to be reported to the authority; and

(d) procedures for complying with the requirements relating to heliport data.

2—Access to the heliport movement area

Particulars of the procedures that have been developed and are to be followed in coordination with the agency responsible for preventing unlawful interference in civil aviation at the heliport and for preventing unauthorised entry of persons, vehicles, equipment, animals or other things into the movement area, including the following —

(a) the role of the heliport operator, the aircraft operator, heliport fixed base operator, the heliport security entity, the Authority and other government departments, as applicable;

(b) the personnel responsible for controlling access to the heliport, and the telephone numbers for contacting them during and after working hours;

(c) inspection checklist;

(d) arrangements for reporting the results of inspections and for taking prompt follow up actions to ensure correction of unsafe conditions; and

(e) the names and roles of persons responsible for carrying out inspections, and their telephone numbers during and after working hours.

3—Maintenance of the movement area

Particulars of the facilities and procedures for the maintenance of the movement area, including arrangements for maintaining the—

(a) unpaved areas and taxiways;

(b) FATO and TLOF; and

(c) heliport drainage.

4—Heliport works and safety

Particulars of the procedures for planning and carrying out construction and maintenance work safely (including work that may have to be carried out at

short notice) on or in the vicinity of the movement area which may extend above an obstacle limitation surface, including the following—

(a) The names, telephone numbers and roles of the persons and organizations responsible for planning and carrying out the work, and arrangements for contacting those persons and organisations at all times;

(b) a distribution list for work plans, if required; and

(c) procedures for avoidance of interruption or failure during construction work of utilities serving facilities or navaids which support helicopter operations.

5—Obstacle Control

Procedures for Obstacle restriction and removal including particulars setting out the procedures for —

(a) monitoring the obstacle limitation surfaces;

(b) controlling obstacles within the authority of the operator;

(c) monitoring the height of buildings or structures within the Boundaries of the obstacle limitation surfaces;

(d) controlling new developments in the vicinity of heliports; and

(e) notifying the authority of the nature and location of obstacles and subsequent addition of removal of obstacles for action as necessary, including amendment of the AIS publications.

6—Protection of Sites for Radar and Navigational Aids

Particulars of the procedures for the protection of sites for radar and radio navigational aids located on the heliport to ensure that their performance will not be degraded, including the following arrangements for —

(a) the control of activities in the vicinity of radar and navigational aids installations;

(b) ground maintenance in the vicinity of these installations; and

(c) the supply and installation of signs warning of hazardous microwave radiation—

(i) where, or in what circumstances, an operating procedure is to be activated;

(ii) how an operating procedure is to be activated;

(iii) actions to be taken; and

(iv) the equipment necessary for carrying out the actions, and access to such equipment.

7—Maintenance procedures

The procedures include—

(a) conducting the maintenance program;

(b) conducting the self inspection program;

(c) a description of, and procedures for maintaining, the indicators;

(d) a description of, and procedures for maintaining, markings and markers systems;

(e) a description of, and procedures for maintaining, the lightings systems;

(f) procedures for complying with the requirements of relating to Physical characteristics; and

(g) a description of the facilities, equipment, personnel, and procedures for meeting and maintaining the rescue and firefighting status and equipment.

SCHEDULE 3

Regulation 88(18), 100 and 132

GUIDANCE MATERIALS FOR INSTRUMENT HELIPORTS WITH NON-PRECISION AND/ OR PRECISION APPROACHES AND INSTRUMENT DEPARTURES

1. **General**

(a) The Civil Aviation (Heliports) Regulations contain specifications that prescribe the physical characteristics and obstacle limitation surfaces to be provided for at heliports, and certain facilities and technical services normally provided at a heliport. It is not intended that these specifications limit or regulate the operation of an aircraft.

(b) The specifications in this schedule describe additional conditions beyond those found in the main sections of the Civil Aviation (Heliports) Regulations that apply to instrument heliports with no precision and precision approaches. All specifications contained within the main parts of the Heliports regulations are equally applicable to instrument heliports, but with reference to further provisions described in this schedule.

2. **Heliport Data**

2.1 Heliport elevation

The elevation of the TLOF and the elevation and geoid undulation of each threshold of the FATO (where appropriate) shall be measured and reported to the aeronautical information services authority to the accuracy of:

a) one half meter or foot for no precision approaches; and

b) one quarter meter or foot for precision approaches.

Note. Geoid undulation must be measured in accordance with the appropriate system of coordinates.

2.2 HELIPORT DIMENSIONS AND RELATED INFORMATION

The following additional data; distances to the nearest meter or foot of localizer and glide path elements comprising an instrument landing system (ILS) or azimuth and elevation antenna of a microwave landing system

(MLS) in relation to the associated TLOF or FATO extremities; shall be measured or described, as appropriate, for each facility provided on an instrument heliport:

3. Physical Characteristics
3.1 Surface-level and elevated heliports

Safety areas
A safety area surrounding an instrument FATO shall extend:

(a) laterally to a distance of at least 45 m on each side of the center line; and

(b) longitudinally to a distance of at least 60 m beyond the ends of the FATO.

Note. — See Figure S2-1.

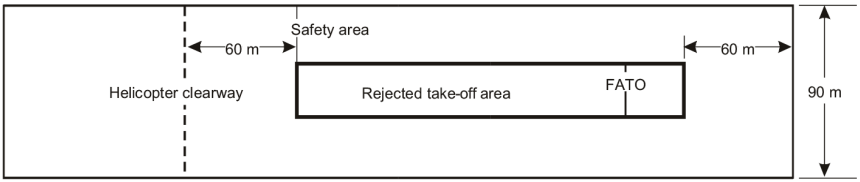


FIGURE S2-1. SAFETY AREA FOR INSTRUMENT FATO

4. Obstacle Environment
4.1 Obstacle limitation surfaces and sectors

Approach surface
Characteristics. The limits of an approach surface shall comprise:

a) an inner edge horizontal and equal in length to the minimum specified width of the FATO plus the safety area, perpendicular to the center line of the approach surface and located at the outer edge of the safety area;

b) two side edges originating at the ends of the inner edge;

i) for an instrument FATO with a non-precision approach, diverging uniformly at a specified rate from the vertical plane containing the center line of the FATO;

ii) for an instrument FATO with a precision approach, diverging uniformly at a specified rate from the vertical plane containing the center line of the FATO, to a specified height above FATO, and then diverging uniformly at a specified rate to a specified final width and continuing thereafter at that width for the remaining length of the approach surface; and

c) an outer edge horizontal and perpendicular to the center line of the approach surface and at a specified height above the elevation of the FATO.

4.2 Obstacle limitation requirements

a) The following obstacle limitation surfaces shall be established for an instrument FATO with a no precision and precision approach: takeoff climb surface;

b) approach surface; and

c) Transitional surfaces.

Note. — See Figure S2-2 to S2-5.

d) The slopes of the obstacle limitation surfaces shall not be greater than, and their other dimensions not less than, those specified in Tables S2-1 to S2-3.

Figure S2-2. Takeoff climb surface for instrument FATO

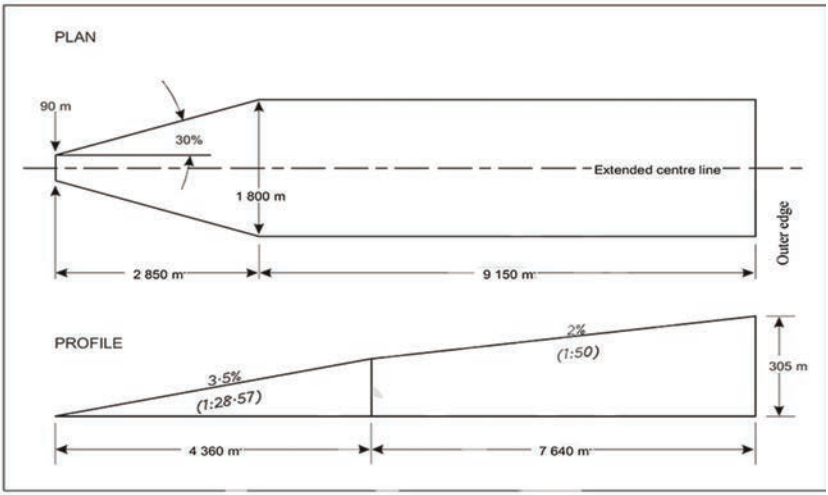


Figure S2-3. Approach surface for precision approach FATO

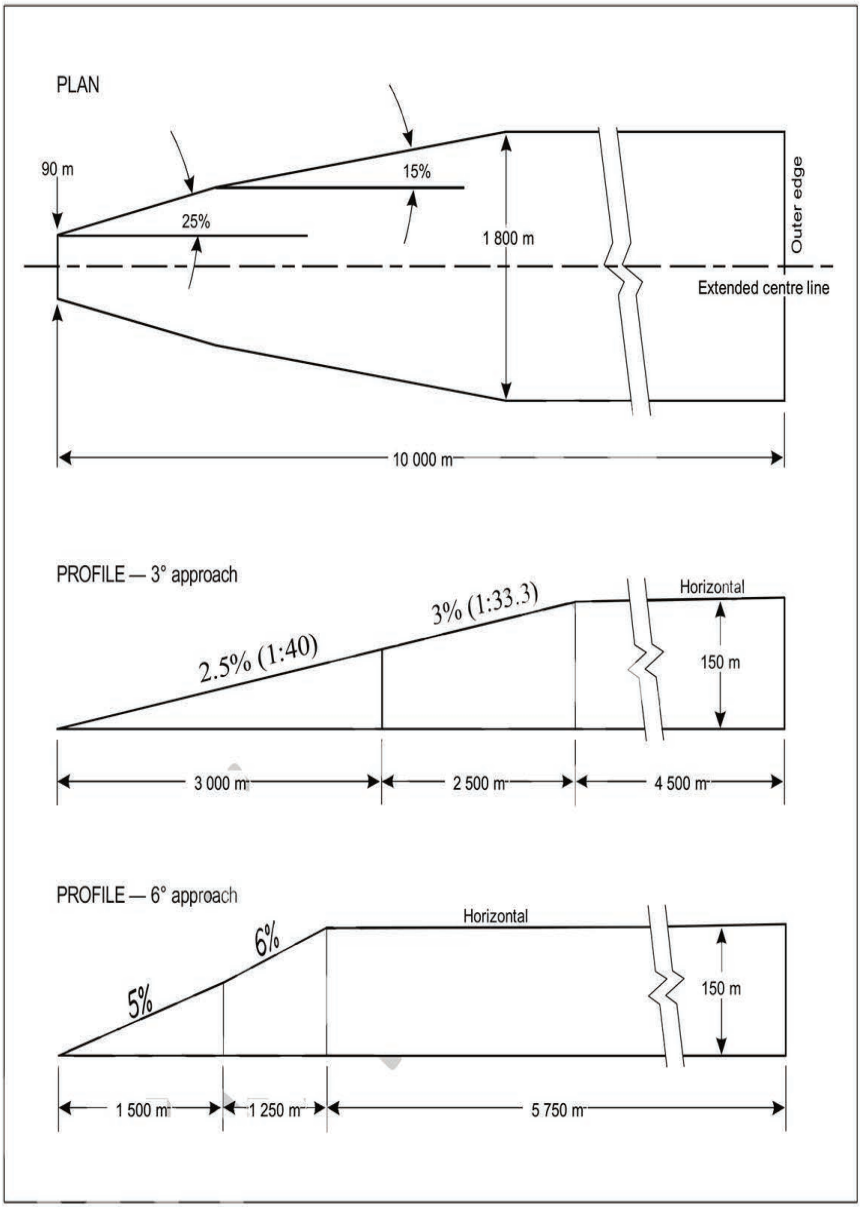


Figure S2-4. Approach surface for non precision approach FATO

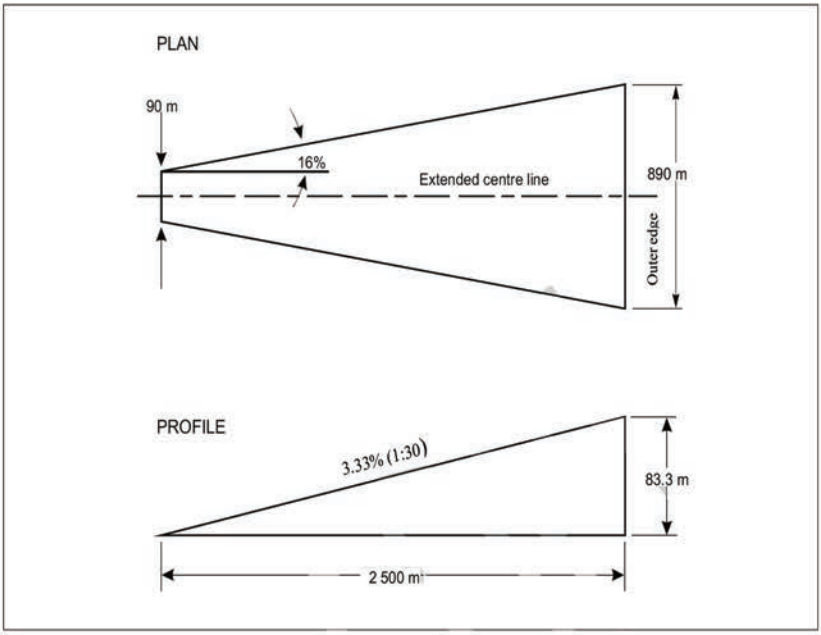
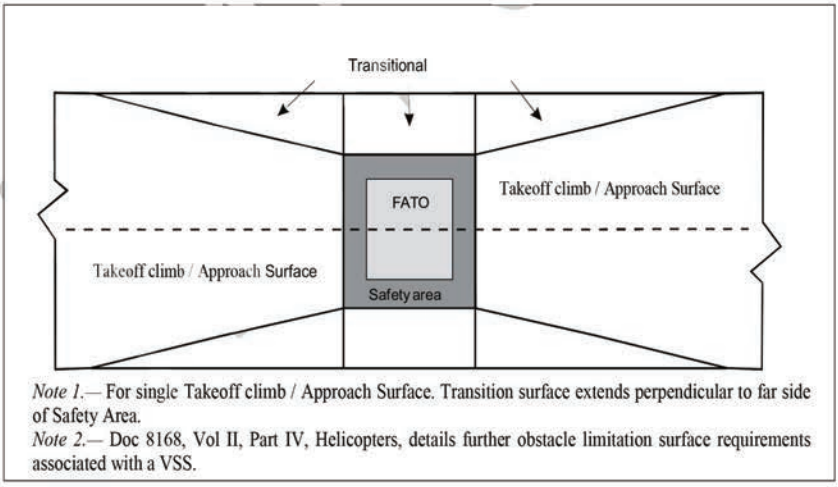


Figure S2-5. Transitional surfaces for an instrument FATO with a non-precision and precision approach



Note 1.— For single Takeoff climb / Approach Surface. Transition surface extends perpendicular to far side of Safety Area.

Note 2.— Doc 8168, Vol II, Part IV, Helicopters, details further obstacle limitation surface requirements associated with a VSS.

Table S2-1. Dimensions and slopes of obstacle limitation surfaces (nonprecision) FATO

Surface and dimensions	
APPROACH SURFACE Width of inner edge Location of inner edge	Width of safety area boundary
First section	
Divergence — day — night	16%
Length — day — night	2 500 m
Outer width — day — night	890 m
Slope (maximum)	3.33%
Second section	
Divergence — day — night	—
Length — day — night	—
Outer width — day — night	—
Slope (maximum)	—
Third Section	
Divergence	—
Length — day — night	—
Outer width — day — night	—
Slope (maximum)	—
TRANSITIONAL	
Slope	20%
Height	45 m

Table S2-2. Dimensions and slopes of obstacle limitation surfaces Instrument (Precision) FATO

	3° approach				6° approach			
	Height above FATO				Height above FATO			
Surface and dimensions	90 m (300 ft)	60 m (200 ft)	45 m (150 ft)	30 m (100 ft)	90 m (300 ft)	60 m (200 ft)	45 m (150 ft)	30 m (100 ft)
APPROACH SURFACE								
Length of inner edge	90 m	90 m	90 m	90 m	90 m	90 m	90 m	90 m
Distance from end of FATO	60 m	60 m	60 m	60 m	60 m	60 m	60 m	60m
Divergence each side to heightabove FATO	25%	25%	25%	25%	25%	25%	25%	25%
Distance to height above FATO	1 745 m	1 163 m	872 m	581 m	870 m	580 m	435 m	290 m
Width at height above FATO	962 m	671 m	526 m	380 m	521 m	380 m	307.5 m	235 m
Divergence to parallel section	15%	15%	15%	15%	15%	15%	15%	15%
Distance to parallel section	2 793 m	3 763 m	4 246 m	4 733 m	4 250 m	4 733 m	4 975 m	5 217 m
Width of parallel section	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m
Distance to outer edge	5 462 m	5 074 m	4 882 m	4 686 m	3 380 m	3 187 m	3 090 m	2 993 m
Width at outer edge	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m	1 800 m
Slope of first section	2.5% (1:40)	2.5% (1:40)	2.5% (1:40)	2.5% (1:40)	5% (1:20)	5% (1:20)	5% (1:20)	5% (1:20)

Length of first section	3 000 m	3 000 m	3 000 m	3 000 m	1 500 m	1 500 m	1 500 m	1 500 m
Slope of second section	3% (1:33.3)	3% (1:33.3)	3% (1:33.3)	3% (1:33.3)	6% (1:16.66)	6% (1:16.66)	6% (1:16.66)	6% (1:16.66)
Length of second section	2 500 m	2 500 m	2 500 m	2 500 m	1 250 m	1 250 m	1 250 m	1 250 m
Total length of surface	10 000 m	10 000 m	10 000 m	10 000 m	8 500 m	8 500 m	8 500 m	8 500 m
TRANSITIONAL								
Slope	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%
Height	45 m	45 m	45 m	45 m	45 m	45 m	45 m	45 m

Table S2-3. Dimensions and slopes of obstacle limitation surfaces Straight takeoff

Surface and dimensions		*Instrument*
TAKEOFF CLIMB		
Width of inner edge Location of inner edge		90 m Boundary of end of clearway
First section		
Divergence	— day	30%
	— night	
Length	— day	2 850 m
	— night	
Outer width	— day	1 800 m
	— night	
Slope (maximum)		3.5%
Second section		
Divergence	— day	parallel
	— night	
Length	— day	1 510 m
	— night	
Outer width	— day	1 800 m
	— night	
Slope (maximum)		3.5%*
Third Section		
Divergence		parallel
Length	— day	7 640 m
	— night	
Outer width	— day	1 800 m
	— night	
Slope (maximum)		2%

* *This slope exceeds the maximum mass one-engine-inoperative climb gradient of many helicopters which are currently operating.*

5. Visual Aids

5.1 Lights

Approach Lighting Systems

a) Where an approach lighting system is provided for a non-precision FATO, the system should not be less than 210 m in length.

b) The light distribution of steady lights should be as indicated in Figure S3-30, Illustration 2 except that the intensity should be increased by a factor of three for a non-precision FATO.

Table S2-4. Dimensions and slopes of obstacle protection surface

Surface and dimensions	*Non-precision FATO*	
Length of inner edge	Width of safety area	
Distance from end of FATO	60 m	
Divergence	15%	
Total length	2 500 m	
Slope	PAPI	A[a] – 0.57°
	HAPI	A[b] – 0.65°
	APAPI	A[a] – 0.9°

c. *As indicated in civil Aviation (aerodromes) Regulations.*

d. *The angle of the upper boundary of the "below slope" signal.*

Cross References

Civil Aviation (Aerodromes) Regulations, S.I. No. 94 of 2022

Civil Aviation (Aeronautical Information Services) Regulations, S.I. No. 71 of 2022

Civil Aviation (Security) Regulations, S.I. No. 92 of 2022

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Minister of Works and Transport