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CONTROL OF OBSTACLES

1. PURPOSE

This Advisory Circular provides guidance to Aerodrome Operators on method acceptable to the Department of Civil Aviation (DCA, Myanmar) in compliance with the requirements for control of obstacles at and the vicinity of aerodromes prescribed in MCAR Part 139 for obstacle limitation surfaces.

2. REFERENCES

Applicable Standards and Guidance Material for control of obstacles in compliance with the provisions of the latest editions of the following documents:-

- 2.1 Myanmar Civil Aviation Requirements - MCAR Part 139, Section 1 and 2
- 2.2 Ministerial Order for Obstacle Control (Notification No. 136/2019, 22 July 2019)
- 2.3 ICAO Annex 4 - Aeronautical Charts
- 2.4 ICAO Annex 15 – Aeronautical Information Services
- 2.5 ICAO Doc 9137-AN/898 - Airport Services Manual, Part 6 - Control of Obstacles
- 2.6 ICAO Doc 9137-AN/898 - Airport Services Manual, Part 8 - Airport Operational Services
- 2.7 ICAO Doc 8168-OPS/611 PANS-OPS Volume 1, Flight Procedures
- 2.8 ICAO Doc 8168-OPS/611 PANS-OPS Volume 2, Construction of Visual and Instrument Flight Procedures
- 2.9 ICAO Doc 9157-AN/901 Aerodrome Design Manual, Part 4 (Visual Aids)

3. Cancellation

3.1 The first edition of DCA-AC-AGA 01 issued on 1 July, 2010 for Control of Obstacles is cancelled. This edition supersedes the 1st edition of DCA-AC-AGA 01.

4. GUIDANCE AND PROCEDURES

4.1 INTRODUCTION

4.1.1 Under the Chapter 4 of MCAR Part 139 (Section 2, Aerodrome Standards), an aerodrome operator is required to monitor the airspace around the aerodrome for infringement of the obstacle limitation surfaces by any object, building or structure.

4.1.2 The aerodrome operator must take all reasonable measures to ensure that obstacles at or within the vicinity of the aerodrome are detected as quickly as possible.

4.1.3 The aerodrome operator is required to inform the DCA immediately it becomes aware of the presence of an obstacle, giving details of its height and location and amended declared distances and gradients where applicable.

4.1.4 In addition, where the aerodrome operator becomes aware of any development or proposed construction near the aerodrome that is likely to create an obstacle, it must be informed to the DCA as soon as practicable, giving all details of the likely obstacle.

4.1.5 The method of assessing the significance of any existing or proposed object within the aerodrome boundary or in the vicinity of the aerodrome is to establish defined obstacle limitation surfaces particular to the runway and its intended use.

4.1.6 Obstacles which penetrate the obstacle limitation surfaces may in certain circumstances cause an increase in the obstacle clearance altitude or obstacle clearance height for an instrument approach procedure or any associated visual circling procedure.

4.1.7 In ideal circumstances all the surfaces will be free from obstacles, but when a surface is infringed, any safety measures required by the DCA will give consideration to the following:-

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- a) The nature of the obstacle and its location relative to the surface origin, to the extended centre line of the runway or normal approach and departure paths and to existing obstructions;
 - b) The amount by which the surface is infringed;
 - c) The gradient presented by the obstacle to the surface origin;
 - d) The type of air traffic at the aerodrome; and
 - e) The instrument approach procedures published for the aerodrome.

4.1.8 Safety measures could be as follows:

- a) Promulgation in the AIP of appropriate information;
- b) Marking and/or lighting of the obstacle;
- c) Variation of the runway distances declared as available;
- d) Limitation of the use of the runway to visual approaches only; and
- e) Restrictions on the type of traffic.

4.1.9 Particular attention should also be given to the security of the movement area and access denied to unauthorized persons and/or vehicles.

4.2 AERODROME OBSTACLE LIMITATION SURFACES

General

4.2.1 The effective utilization of an aerodrome may be influenced by natural features and man made objects inside and outside the aerodrome boundary. These may result in –

- a) Limitations on the distance available for aircraft take-off and landings;
- b) The range of meteorological conditions in which take-off and landings can be undertaken; or
- c) A reduction in the payload of some aircraft types, or all the above.

ESTABLISHMENT OF OBSTACLE LIMITATION SURFACES

4.2.2 The requirements for obstacle limitation surfaces are specified on the basis of the intended use of the runway with respect to take off or landing and type of approach, and are intended to be applied when such use is made of the runway.

4.2.3 In cases where operations are conducted to or from both directions of a runway, then the function of certain obstacle limitation surfaces may be nullified because of more stringent requirements of another lower surface.

4.2.4 The aerodrome design specifications state that all existing objects penetrating the obstacle limitation surfaces should, as far as practical, be removed unless they are shielded by existing immovable objects.

4.2.5 Detailed specifications about the marking and lighting of obstacles are contained in the Chapter 6 of MCAR Part 139, Section 2 (Aerodrome Standards).

4.2.6 The aerodrome operator shall establish obstacle limitation surfaces consistent with those defined in the Chapter 4 of MCAR Part 139, Section 2 (Aerodrome Standards). Airport operators should provide aerodrome regulator and local planning authorities with pertinent information about each airport, including:

- a) location, orientation, length and elevation of all runways;
- b) locations and elevations of all reference points used in establishing obstacle limitation surfaces;
- c) proposed categories of runway use - non-instrument, non-precision approach or precision approach (category I, II Or III);
- d) plans for future runway extension or change in category.

4.2.7 It would be desirable so base all obstacle limitation surfaces on the most critical airport design features anticipated for future development.

4.2.8 The following obstacle limitation surfaces are essential elements of a height zoning regulation associated with a precision approach runway:

- a) outer horizontal surface;
- b) conical surface;
- c) inner horizontal surface;
- d) approach surface;
- e) inner approach surface;
- f) transitional surfaces;
- g) inner transitional surfaces;
- h) balked landing surface; and
- i) take-off climb surface

Of these surfaces, only the balked landing surface does not form part of the height zoning regulations for non- instrument and non-precision approach runways. In the case of take-off runways, the only surface which affects the height zoning regulation is the take-off climb surface. The dimensions and slopes of all the above-mentioned surfaces are specified in Tables 4-1 and 4-2 of MCAR Part 139, Section 2 (Aerodrome Standards).

Outer Horizontal Surface

4.2.9 1) An outer horizontal surface is a specified portion of a horizontal plane around an aerodrome beyond the limits of the conical surface. It represents the level above which consideration needs to be given to the control of new obstacles in order to facilitate practicable and efficient instrument approach procedures, and together with the conical and inner horizontal surfaces to ensure safe visual manoeuvring in the vicinity of an aerodrome.

2) An outer horizontal surface is established for every aerodrome.

3) As a broad specification for the outer horizontal surface, tall structures can be considered to be of possible significance if they are both higher than 30 m above local ground level, and higher than 150 m above aerodrome elevation within a radius of 15 000 m of the centre of the airport where the runway code number is 3 or 4. The area of concern may need to be extended to coincide with the obstacle-accountable areas of PANS-OPS for the individual approach procedures at the airport under consideration.

Conical Surface

4.2.10 1) A conical surface is a surface sloping upward and outward from the periphery of the inner horizontal surface. It represents the level above which consideration needs to be given to the control of new obstructions and the removal or marking of existing obstructions so as to ensure safe visual manoeuvring in the vicinity of an aerodrome.

2) A conical surface is established for every aerodrome.

Inner Horizontal Surface

4.2.11 1) An inner horizontal surface is a surface located in a horizontal plane above an aerodrome and its environs. It represents the level above which consideration needs to be given to the control of new obstacles and the removal or marking of existing obstacles to ensure safe visual manoeuvring of airplanes in the vicinity of the aerodrome.

2) An inner horizontal surface is established for every aerodrome.

3) The height of the inner horizontal surface shall be measured above an elevation datum.

4) The purpose of the inner horizontal surface is to protect airspace for visual circling prior to landing, possibly after a descent through cloud aligned with a runway other than that in use for landing.

Approach Surface

4.2.12 1) An approach surface is an inclined plane or combination of planes preceding the threshold.

2) An approach surface is established for each runway direction intended to be used for the landing of aircraft.

3) This approach surface define the volume of airspace that should be kept free from obstacles to protect an aeroplane in the final phase of the approach-to-land maneuver.

Inner Approach Surface

4.2.13 An inner approach surface is a rectangular portion of the approach surface immediately preceding the threshold.

Transitional Surface

4.2.14 1) The transitional surface is a complex surface along the side of the runway strip and from part of the side of the approach surface that slopes upwards and outwards to the inner horizontal surface.

2) Transitional surfaces are established for every runway intended to be used for landing.

- 3) This transitional surface defines the volume of airspace that should be kept free from obstacles to protect an aeroplane in the final phase of the approach-to-land maneuver.
- 4) The transitional surface is intended to remain as the controlling obstacle limitation surface for buildings, etc.
- 5) The slope of the transitional surface shall be measured in a vertical plane at right angles to the centre line of the runway.

Inner Transitional Surface

- 4.2.15
- 1) Inner transitional surface. A surface similar to the transitional surface but closer to the runway.
 - 2) It is intended that the inner transitional surface be the controlling obstacle limitation surface for navigation aids, aircraft and other vehicles that must be near the runway and which is not to be penetrated except for frangible objects.
 - 3) The slope of the inner transitional surface shall be measured in a vertical plane at right angles to the centre line of the runway.

Balked Landing Surface

- 4.2.16
- 1) Balked landing surface is an inclined plane located at a specified distance after the threshold, extending between the inner transitional surface.
 - 2) The elevation of the inner edge shall be equal to the elevation of the runway centre line at the location of the inner edge.

3) The slope of the balked landing surface shall be measured in the vertical plane containing the centre line of the runway.

Take-off Climb Surface

4.2.17 1) A take-off climb surface is an inclined plane or other specified surface beyond the end of a runway or clearway.

2) A take-off climb surface is established for each runway direction intended to be used for takeoff.

3) The elevation of the inner edge shall be equal to the highest point on the extended runway centre line between the end of the runway and the inner edge, except that when a clearway is provided the elevation shall be equal to the highest point on the ground on the centre line of the clearway.

4) This surface provides protection for an aircraft on take-off by indicating which obstacles should be removed if possible, and marked or lighted if removal is impossible.

Inner approach, inner transitional and balked landing surfaces

4.2.18 The inner approach, inner transitional and balked landing surfaces together define a volume of airspace in the immediate vicinity of a precision approach runway which is known as the obstacle-free zone (OFZ).

Inner transitional and balked landing surfaces versus Y surfaces and missed approach surface

4.2.19 Where establishing the obstacle-free zone for precision approach category II operations, the Obstacle Clearance Panel (OCP) created the inner transitional and

balked landing surfaces. When developing the new approach procedure contained in PANS-OPS, Vol II, instead of using these surfaces for obstacle assessment, the OCP used the Y surface and a new surface referred to as the missed approach surface.

Characteristics of Aerodrome Obstacle Limitation Surfaces

4.2.20 Characteristics of aerodrome obstacle limitations surfaces are detailed in the Chapter 4 of MCAR Part 139, Section 2 (Aerodrome Standards). The aerodrome operators shall develop their OLS plan in the respective aerodrome manual.

Aerodrome Obstacle Chart - Type "A"

4.2.21 1) Significant obstacles in the take off flight path area of runways regularly used by international aviation must be published in the AIP. The aerodrome operator is responsible for providing or arranging for the provision of necessary surveyed aerodrome obstacle data to the AIS. The aerodrome operator must notify the AIS of any significant obstacles in the take off flight path area of the runway.

2) The aerodrome obstacle chart Type "A" represents a profile of the take-off obstruction environment on departure from a specific runway. The basic slope shown on the chart is 1.2 percent which is below the slope of the protected take-off climb surface established for a runway intended for use.

3) Although objects may penetrate the 1.2 percent (1:83.3) slope, there is no need to remove any which are beneath the aerodrome design take-off climb surface. However, all objects shown are accountable in the calculation of the aircraft take-off performance and in some instances may affect the payload of a particular aircraft type. The extent of this limitation depends on individual

circumstances, but it is possible to significantly reduce the payload penalty by judicious obstacle removal close to the aerodrome. Conversely, it may be that an obstacle several kilometres from the aerodrome is the limiting factor.

ICAO PANS-OPS surfaces

4.2.22 1) The PANS-OPS surfaces are used in the construction of instrument flight procedures. They are designed to safeguard an aeroplane from collision with obstacles when flying on instruments. Pilots use minimum safe altitudes, established for each segment of the instrument procedures, which are based on obstacle clearances in the procedure areas.

2) Instrument flight procedure obstacle free surfaces sizes and dimensions do not usually coincide with the aerodrome design obstacle limitation surfaces. Aerodrome operators should refer to PANSOPS, Doc 8168, Volume 2 for the obstacle free surfaces needed for instrument flight approach, for missed approach procedures, and for visual manoeuvring (circling) procedures.

4.3 OBSTACLE LIMITATION REQUIREMENTS

4.3.1 The requirements for obstacle limitation surfaces are specified on the basis of the intended use of a runway, i.e. take-off or landing and type of approach, and are intended to be applied when such use is made of the runway. In cases where operations are conducted to or from both directions of a runway, then the function of certain surfaces may be nullified because of more stringent requirements of another lower surface. The obstacle limitation surfaces to be established for various runway classifications are described in the Chapter 4 of MCAR Part 139, Section 2 (Aerodrome Standards).

5 OBSTACLE CONTROL

5.1 General

5.1.1 Ultimate responsibility for limitation and control of obstacles, must in practice, rest with the aerodrome operator. This includes the responsibility for controlling obstacles on aerodrome property and for arranging the removal or lowering of existing obstacles outside the aerodrome boundaries.

5.1.2 Each aerodrome operator should designate a person to be responsible for the continuing process of ensuring that aerodrome approach, departure and manoeuvring areas remain clear of obstacles which may affect safety. The aerodrome operator must maintain constant vigilance to prevent erection of obstacles around his aerodrome. The aerodrome operator should establish a programme of regular and frequent visual inspections of all areas around the aerodrome in order to be sure that construction activity or natural growth likely to infringe any of the obstacle limitation surfaces is discovered before it becomes a problem. This inspection programme should also include a daily observation of all obstacle lights, both on and off the aerodrome, and corrective action taken in event of light failure.

5.1.3 When considering obstacle control the following should not be overlooked:

a) Objects which penetrate the approach surface are critical since they represent an erosion of the clearance between the final approach path, usually 3 degrees, and fixed or mobile obstacles on the ground. On an approach where the approach surface is significantly obstructed, the safe operation of aircraft is ensured by raising the aerodrome approach meteorological minima. If the object penetrates into the approach surface, the landing threshold is displaced, effectively reducing the available landing distance. This can have an adverse effect on the regularity of aircraft operations and could impose payload penalties on landing aircraft;

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- b) The transitional surfaces are adjacent to the runway strip and approach surface. Penetration of them by an obstacle results in the reduction in the clearance available whilst carrying out an approach to land or during a missed approach procedure. Such obstacles may have an adverse effect on the aerodrome meteorological minima and may need marking and lighting;
- c) Aircraft performance requirements, applicable to take-off and climb, require all aircraft to clear all obstacles by a minimum specified margin. For a multi-engine aircraft, that requirement includes the climb following failure of the critical engine. Objects which penetrate approach and take-off climb surfaces do not represent a degradation of safety standards but they may impose significant payload penalties on aircraft taking off;
- d) The inner horizontal surface is more significant for VFR operations. It also provides protection for circuiting aircraft following an instrument approach. It does not usually represent a critically limiting surface around a large aerodrome handling IFR traffic, except in so far that it extends beneath the approach surface;
- e) The conical surface represents the obstacle limiting surface some distance from the aerodrome. It is often not practical to control obstacles which penetrate this surface, although it does usually provide a limit to new construction;
- f) Obstacle control, to maintain or improve the Aerodrome Obstacle Chart - Type "A" obstacle profile, should be based on the clear understanding of the performance requirements of the aircraft regularly using the aerodrome or those proposed to be brought into regular use;
- g) Any obstacles which are allowed to penetrate the established PANS-OPS surfaces could raise the minimum safe altitudes of the aerodrome instrument

flight procedures. This could have an adverse effect on the regularity of aircraft operations.

5.2 *Identifying obstacles*

5.2.1 Identification of obstacles requires a complete engineering survey of all areas beneath the aerodrome obstacle limitation surfaces.

5.2.2 The initial survey should produce a chart presenting a plan view of the entire aerodrome and its environs. The scope of the chart should be to the outer limit of the conical, approach and take-off climb surfaces. It will need to include profile views of all obstacle limitation surfaces. Each obstacle should be identified in both plan and profile with its description and height above the datum, which should be specified on the chart. Engineering field surveys can be supplemented by aerial photographs and photogrammetry to identify possible obstacles not readily visible from the aerodrome.

5.2.2.1 Constant vigilance is required to ensure the control of obstacles. Periodic surveys should be conducted to ensure the validity of the information in the initial survey. The aerodrome operator should make frequent visual observations of surrounding areas to determine the presence of new obstacles. Follow-up surveys should be conducted whenever significant changes occur. A detailed survey of a specific area may be necessary when the initial survey indicates the presence of obstacles for which a control programme is contemplated. Following completion of an obstacle control programme, the area should be resurveyed to provide corrected data on the presence or absence of obstacles. Similarly, revision surveys should be conducted if changes are made, or planned, to the aerodrome characteristics such as runway length, elevation or orientation. Changes in obstacle data arising from surveys are to be notified to the Aeronautical Information Service (AIS) and the aerodrome regulator as soon as practicable for promulgation to aircraft operators.

5.3 OBSTACLE SURVEYS

5.3.1 Identification of obstacles requires a complete engineering survey of all areas underlying the obstacle limitation surfaces. Such surveys are conducted by the airport operator. The airport operator should consider making the necessary survey with his own staff or with the assistance of a consultant or local operators.

5.3.2 *Initial survey.* The initial survey should produce a chart presenting a plan view of the entire airport and its environs to the outer limit of the conical surface (and the outer horizontal surface where established), together with profile views of all obstacle limitation surfaces. Each obstacle should be identified in both plan and profile with its description and height above the datum, which should be specified on the chart. Engineering field surveys may be supplemented by aerial photographs and photogrammetry to identify possible obstacles not readily visible from the airport.

5.3.3 *Periodic surveys.* The airport operator should, as previously suggested, make frequent visual observations of surrounding areas to determine the presence of new obstacles. Follow-up surveys should be conducted whenever significant changes occur. A detailed survey of a specific area may be necessary when the initial survey indicates the presence of obstacles for which a removal programme is contemplated. Following completion of an obstacle removal programme, the area should be resurveyed to provide corrected data on the presence or absence of obstacles. Similarly, revision surveys should be made if changes are made (or planned) in airport characteristics such as runway length, elevation or orientation. Changes in obstacle data arising from such surveys should be reported to the AIS and the aerodrome regulator.

5.4 METHODS OF CONTROL

5.4.1 The viability and safety of aerodrome use by aircraft operators can be assured by establishing effective obstacle control to maintain the obstacle limitation surfaces. Control can be achieved in a number of ways, by:

- a) Enactment of height zoning protection by the local government authority;
- b) Establishing an effective obstacle removal programme; or
- c) Purchasing of easement or property rights, or all of these.

Height Zoning

5.4.2 1) The objective of height zoning is to protect the aerodrome obstacle limitation surfaces from intrusion by manmade objects and natural growth such as trees.

2) This is done by the enactment of ordinances identifying height limits underneath the aerodrome obstacle limitation surfaces. The responsibility for the enactment of such an ordinance is a matter between the aerodrome operator and the local government authority.

Obstacle Removal

5.4.3 1) When Obstacles have been identified, the airport operator shall inform the Department of Civil Aviation. The airport operator should make every effort to have them removed or reduced in height so that they no longer constitute an obstacle. If the obstacle is a single object such as a tree, a television antenna or a chimney, it may be possible to reach agreement to reduce the height to acceptable limits without adverse effect.

2) **Trees.** In the case of trees which are trimmed, agreement should be reached in writing with the property owner to ensure that future growth will not create new obstacles. Property owners can give such assurance by agreeing to trim trees when necessary or by permitting access to the premises for the purpose of having such trimming done by representatives of the airport operator.

3) Some aids to navigation, both electronic (such as ILS components) and visual (such as approach and runway lights), constitute obstacles which cannot be removed. Such objects should be frangibly designed and constructed, and mounted on frangible couplings so that they will fail on impact without damage to an aircraft. Guidance on the frangibility requirements of visual and non-visual aids to navigation is contained in the Chapter 5 of Doc. 9137, Part 6. Where necessary, such objects should be marked and/or lighted.

Easements and Property Rights

- 5.4.4 1) In those areas where zoning is inadequate, such as locations close to runway ends or where existing obstacles are present, the airport operator should take steps to protect the obstacle limitation surfaces. These steps should include removal or reduction in height of existing obstacles, as well as measures to ensure that no new obstacles may be erected in the future.
- 2) Where agreement can be reached for the reduction in height of an obstacle, the agreement should include a written aviation easement limiting heights over the property to specific levels unless effective height zoning has been established.

Marking and Lighting of Obstacles

- 5.4.5 1) Where it is impractical to eliminate an obstacle it should be appropriately marked or lighted so as to be clearly visible to pilots in all weather and visibility conditions. MCAR Part 139, Section 2 (Aerodrome Standards), Chapter 6 contains detailed requirements concerning marking and/or lighting of obstacles.
- 2) It should be noted that the marking and lighting of obstacles is intended to reduce hazards to aircraft by indicating the presence of obstacles. It does not

necessarily reduce operating limitations which may be imposed by the obstacle. Obstacles shall be marked and, if the aerodrome is used at night, lighted, except that:

- a) such lighting and marking may be omitted when the obstacle is shielded by another fixed obstacle; and
 - b) the marking may be omitted when the obstacle is lighted by high intensity obstacle lights by day.
- 3) Vehicles and other mobile objects, excluding aircraft, on movement areas of aerodromes should be marked and lighted, unless they are used on apron areas only.
- 4) The aerodrome operator should make a daily visual inspection of all obstacle lights on and around the aerodrome, and take steps to have inoperative lights repaired. In some cases, principally at commercial or industrial sites, the property owner may provide for maintenance, repair and replacement of lights. Otherwise, the airport operator should have agreements permitting his representatives to enter the property and perform the necessary maintenance.

Obstacle Shielding

5.4.6 The principle of obstacle shielding is employed to permit a more logical approach to restricting new construction and to the requirements for marking and lighting of obstacles. Shielding principles are employed when some object, an existing building or natural terrain, already penetrates above one of the aerodrome obstacle limitation surfaces. If the obstacle is permanent, then additional objects within a specified area around it can penetrate the surface without being obstacles. The original obstacle dominates or shields the surrounding area.

Reporting of Obstacles

5.4.7 MCAR Part 139, Section 2 (Aerodrome Standards), Chapter 2 specifies that the location, top elevation and type of each significant obstacle on or in the vicinity of an aerodrome shall be made available to the Department of Civil Aviation.

5.4.8 Whenever an obstacle, either temporary or permanent in nature, is identified, the airport operator shall report promptly to the Department of Civil Aviation. To this end, the obstacle survey should be responsible for seeing that information on obstacles is promptly transmitted to the aerodrome regulator for disseminating aeronautical information service. Reporting of new construction may be done by the project sponsor or the airport operator. The airport operator has the most direct interest in seeing that information is properly disseminated and, through visual inspections and periodic surveys, is most likely to be aware of the presence of new obstacles. It is, therefore, in his best interest for the airport operator to report all data on obstacles, including marking and lighting, to the aeronautical information service and the aerodrome regulator for further distribution. Reports may be verbal, but should be confirmed in writing as soon as possible.

5.4.9 Annex 15 contains detailed requirements on methods of disseminating aeronautical information including data on obstacles. In addition to NOTAM, which may be given either Class I distribution (by means of telecommunication) or Class II (by other means), material may be issued in the form of Aeronautical Information Publications (AIPs) or Aeronautical Information Circulars.

5.4.10 A high degree of co-operation among aerodrome regulator and local authorities, airport operators and property owners is required to control obstacles and to provide a safe environment for efficient operation of aircraft at airports.

6 OBSTACLE CONTROL PROCEDURES IN THE AERODROME MANUAL

6.1 1) Details of the procedures for inspection of the aerodrome movement area and obstacle limitation surface and for obstacle control at an aerodrome are required to be presented in Part 4 of the aerodrome manual in accordance with MCAR Part 139, Section 1 (Aerodrome Certification).

2) Particulars in the aerodrome manual of the procedures for the inspection of the aerodrome movement area and obstacle limitation surface must include details of the following:

- a) Arrangements for carrying out inspections;
- b) Arrangements and means of communicating with ATC during an inspection;
- c) Arrangements for keeping an inspection logbook and the location of the logbook;
- d) Details of inspection intervals and times;
- e) Inspection checklist;
- f) Arrangements for reporting the results of inspections and for taking prompt follow-up actions to ensure correction of unsafe conditions; and
- g) The names and roles of persons responsible for carrying out inspections and their contact numbers during and after working hours.

3) Particulars in the aerodrome manual for obstacle control must contain details setting out the procedures for:-

- a) Monitoring the obstacle limitation surfaces and Type A chart for obstacle in the takeoff surface;
- b) Controlling obstacles within the authority of the aerodrome 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 the aerodrome;

- e) Notifying the Department of Civil Aviation of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including amendment of AIS publications.

Director General

Department of Civil Aviation