



CAR 138

Civil Aviation Regulation

Approval of organizations performing aeronautical obstacle assessment studies

Effective date: 25 December 2025

Approved by: H.E. Eng. Naif Ali Hamed Al Abri

President of Civil Aviation Authority

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List of Amendments

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Glossary of Terms or Abbreviations

The following terms or acronyms may be used in any manual or document published by CAA. Reproduction in part or whole is allowed without prior approval. The Document Control Office reserves the rights to include such a listing in any CAA manual or document prior to publishing.

For the purposes of this CAR, the following abbreviations apply:

AIP – Aeronautical Information Publication
AIM – Aeronautical Information Management
AIS – Aeronautical Information Services
AM – Accountable Manager
ATC – Air Traffic Control
ATS – Air Traffic Services
CAR – Civil Aviation Regulation
CAA – Civil Aviation Authority
CNS – Communication, Navigation and Surveillance
DGCAR – Directorate General of Civil Aviation Regulation
ICAO – International Civil Aviation Organization
IFP – Instrument Flight Procedure
IFPD – Instrument Flight Procedure Designer
IFPDS – Instrument Flight Procedure Design Service
IFPDSP – Instrument Flight Procedure Design Service Provider
ILS – Instrument Landing System
OMR – Omani Rial (Currency)
OFZ – Obstacle Free Zone
OLS – Obstacle Limitation Surfaces
PANS-AIM – ICAO Doc 10066 – Procedures for Air Navigation Services – Aeronautical Information Management
PANS-OPS – ICAO Doc 8168 – Procedures for Air Navigation Services – Aircraft Operations
PAPI – Precision Approach Path Indicator
QAS – Quality Assurance System
SMS – Safety Management System
TOD – Terrain and Obstacle Data

FOREWORD

- (a) The Civil Aviation Regulations (CAR-138) for Approval of organizations performing aeronautical obstacle assessment studies, have been issued by the Civil Aviation Authority of Oman (hereinafter referred as CAA or “the AUTHORITY”) under the provisions of the Civil Aviation Law (CAL) issued by the Royal Decree No. (76/2019) of the Sultanate of Oman.
- (b) The effective utilisation of an aerodrome may be considerably influenced by natural features and manmade constructions inside and outside its boundary. These may result in limitations on the distances available for take-off and landing and on the range of meteorological conditions in which take-off and landing can be undertaken. For these reasons, certain areas of the local airspace must be regarded as integral part of the aerodrome environment. The degree of freedom from obstacles in these areas is as important to the safe and efficient use of the aerodrome as are the more obvious physical requirements of the runways and their associated strips.
- (c) The significance of any existing or proposed structures or objects within the aerodrome boundary or within the vicinity of the aerodrome are assessed by the use of two primary sets of criteria defining airspace requirements:
 - The first of these comprises the obstacle limitation surfaces particular to a runway and its intended use detailed in Chapter 4 of CAR 139 Part 1 Aerodrome Certification, Design and Operations. The broad purpose of these surfaces is to define the volume of airspace that should ideally be kept free from obstacles in order to minimise the dangers presented by obstacles to an aircraft, either during an entirely visual approach or during the visual segment of an instrument approach.
 - The second set of criteria comprises the surfaces described in ICAO Doc 8168 Volume II (Construction of Visual and Instrument Flight Procedures). The PANS-OPS surfaces are intended for use by Flight Procedure Designers for the construction of instrument and visual flight procedures and for specifying minimum safe altitudes/heights for each segment of the procedure. The procedure and/or minimum heights may vary with aeroplane speed, the navigational aid being used, and in some cases the equipment fitted to the aeroplane.

The surfaces established should allow not only for existing operations but also for the ultimate development envisaged for each aerodrome. There may be a need to restrict obstacles in areas other than those covered by CAR 139 if operational minima calculated using the PANS-OPS criteria are not to be increased thereby limiting aerodrome utilisation.

- (d) For these reasons, the Authority shall not accept any Aeronautical Study for obstacles conducted by any organisation unless the organisation:
 - 1) Holds an approval issued by the Authority in terms of this CAR to conduct aeronautical studies for obstacle assessment purposes.
- (e) The editing practices used in this document are as follows:
 - 1) ‘Shall’ is used to indicate a mandatory requirement and appear in regulatory text.
 - 2) ‘Should’ is used to indicate an Acceptable Means of Compliance (AMC).
 - 3) ‘May’ is used to indicate discretion by the CAA, or the industry as appropriate.
 - 4) ‘Will’ indicates a mandatory requirement and is used to advise of action incumbent on the CAA.

Note: The use of the male gender in this regulation shall be interpreted to include the female gender and vice versa.

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SUBPART A – GENERAL PROVISIONS

CAR 138.001 Purpose and Scope

- (a) This Civil Aviation Regulation (CAR 138) establishes the requirements and approval process for organizations seeking to perform aeronautical obstacle studies that may affect aviation infrastructure (aerodromes, heliports, airspace, etc) and/or operations within the territory of, or under the authority of, the Sultanate of Oman.
- (b) This CAR defines:
 - (1) the conditions under which an organization may be granted approval to conduct aeronautical obstacle studies;
 - (2) the organizational, technical and procedural requirements for approved organizations;
 - (3) the oversight, enforcement and transition arrangements applied by the Authority.

CAR 138.005 Applicability

- (a) This CAR applies to all organisations that intend to conduct aeronautical obstacle studies which might impact aviation infrastructure (aerodromes, heliports, airspace, etc) and/or operations within the territory of, or under the authority of, the Sultanate of Oman.
- (b) No organisation shall conduct aeronautical obstacle studies for the purposes described in paragraph (a) unless it holds a valid approval issued by the Authority in accordance with CAR 138.
- (c) The following activities are subject to separate approvals and regulations and are not, by themselves, authorised under this CAR:
 - (1) design, validation and maintenance of Instrument Flight Procedures (IFPs), which require an approval as an Instrument Flight Procedure Design Service Provider (IFPDSP) under CAR 173 or equivalent;
 - (2) conduct Building Restricted Area (BRA) Infringement Studies and advanced CNS electro-magnetic interference assessments, which are regulated under CAR 171 and other applicable CARs.
- (d) This CAR does not relieve any person or organization from the obligation to comply with other applicable laws, regulations or requirements issued by the State or competent authorities.

CAR 138.010 Definitions

- (a) Unless otherwise defined in this CAR, the definitions contained in CAR-1 – Definitions and Abbreviations shall apply.
- (b) For the purposes of CAR 138, the following definitions apply:
 - (1) Authority: The Directorate General of Civil Aviation Regulation (DGCAR) of the Civil Aviation Authority of the Sultanate of Oman, or any person or body to which it has lawfully delegated its powers.
 - (2) Organization: A legal entity seeking approval under this CAR to provide consultancy services in carrying out aeronautical obstacle studies.
 - (3) Aeronautical Obstacle Study: A systematic assessment of proposed or existing obstacles and related projects, using established aeronautical criteria, to determine actual or potential impacts on aviation safety, aerodrome operations, airspace structures, CNS/ATM systems and instrument/visual flight procedures, and to identify appropriate mitigation measures.
 - (4) Flight Procedure Designer (FPD): A person responsible for the design of instrument flight procedures, who meets the competency requirements established by the State.

- (5) Instrument Flight Procedure (IFP): A series of predetermined flight manoeuvres by reference to flight instruments, published by electronic and/or printed means.
- (6) Instrument Flight Procedure Design Service (IFPDS): A service established for the design, documentation, validation, continuous maintenance and periodic review of instrument flight procedures necessary for the safety, regularity and efficiency of air navigation.
- (7) Instrument Flight Procedure Design Service Provider (IFPDSP): A body that provides an IFPDS.
- (8) Quality Assurance System (QAS): A documented system, including organizational structure, responsibilities, procedures, processes and resources, implemented to ensure that the organization's activities comply with applicable requirements and are performed in a consistent manner.
- (9) Safety Risk Assessment: A process used to evaluate the safety significance of hazards, including the assessment of the likelihood and severity of adverse consequences, and the identification of risk mitigation measures.

CAR 138.015 Access, Fees and Charges

- (a) The applicant or approval holder shall grant the Authority free and unhindered access to all facilities, personnel, records, data, documents, tools and equipment relevant to the activities conducted under this CAR, for the purpose of initial and continued oversight.
- (b) The applicant or approval holder shall pay all fees, charges and costs prescribed by the Authority for:
 - (1) processing of applications;
 - (2) audits, inspections and other oversight activities; and
 - (3) issuance, renewal, amendment or extension of approvals.
- (c) The Authority may decline to process an application, or may suspend or revoke an approval, where applicable fees and charges have not been paid in accordance with the applicable CAA schedule of charges.

CAR 138.020 Transition Provisions and Entry into Force

- (a) This Regulation shall enter into force on 25 December 2025.
- (b) From the effective date:
 - (1) all aeronautical obstacle studies submitted to the Authority shall be conducted by organizations approved in accordance with CAR 138; and
 - (2) any reference in CAA guidance or procedures to approval of organizations conducting aeronautical obstacle studies shall be construed as a reference to this CAR.
- (c) Organizations that, prior to the effective date, were providing aeronautical obstacle studies without an approval under this CAR shall:
 - (1) apply for approval under CAR 138 within 03 months of the effective date; and
 - (2) comply with any conditions or limitations imposed by the Authority during the transition period.
- (d) The Authority may, during the transition period, impose additional conditions or limitations on ongoing studies or approvals, where it considers it necessary to maintain an acceptable level of safety.

SUBPART B – APPLICATION AND APPROVAL PROCESS

CAR 138.030 Application for Approval

- (a) Any organisation intending to conduct aeronautical obstacle studies within the territory of, or under the authority of, the Sultanate of Oman shall obtain an approval issued by the Authority in accordance with this CAR.
- (b) An application for initial approval shall be submitted to the Authority using the prescribed Application Form (Form CAR 138-01), completed in full and signed by the Accountable Manager.
- (c) The applicant shall ensure that all information provided to the Authority is complete, accurate and up to date. Any subsequent changes to the information submitted shall be notified without undue delay.
- (d) The application shall include all required documentation for Authority acceptance/approval.
- (e) The application shall include any limitations or exclusions requested by the applicant.

CAR 138.035 Application Package and Fees

- (a) The application for approval shall be accompanied by an application package containing, as a minimum:
 - 1) a cover letter signed by the Accountable Manager indicating the names of technical personnel, confirming the organisation's intent to obtain approval under CAR 138 and its commitment to comply with all applicable requirements;
 - 2) a description of the organisation, including legal name, address, registration details, ownership structure and organisational chart;
 - 3) curriculum vitae, job descriptions, and supporting evidence of qualifications, training, and experience for the Accountable Manager and all key technical personnel in accordance with Appendix 1;
 - 4) the Operations Manual meeting the content requirements of Appendix 2;
 - 5) a description of the organisation's Quality Assurance System (QAS), including internal audit and corrective action processes;
 - 6) a description of the hazard identification and safety risk assessment process applied to aeronautical obstacle studies;
 - 7) a list and description of facilities, equipment, software tools and data sources used to conduct aeronautical obstacle studies;
 - 8) details of any activities or processes that are outsourced, together with copies of relevant contractual arrangements; and
 - 9) any additional information required by the Authority to determine compliance with this CAR.
- (b) The applicant shall pay the following fees to the Authority:
 - 1) a non-refundable application fee of OMR 100 for the processing of the application; and
 - 2) an approval issuance or renewal fee of OMR 300 for an approval with a validity period of up to two (2) years.
- (c) Additional fees and charges may apply for audits, inspections and other oversight activities, in accordance with the applicable CAA schedule of charges or relevant CAA decisions.
- (d) The application shall not be processed until proof of payment of the application fee has been provided.
- (e) The Authority may request further information, clarification or additional documentation where necessary to complete the assessment. Failure to provide the requested information within the specified timeframe may result in the application being placed on hold or rejected.

CAR 138.040 Review, Audit and Oversight

- (a) Upon receipt of a complete application package, the Authority shall conduct a document review to verify the applicant's compliance with CAR 138 and any related regulations.
- (b) The Authority shall conduct one or more audits and inspections before issuing approval for conducting the aeronautical studies, which may include:
 - 1) on-site audits of the applicant's facilities;
 - 2) interviews with the Accountable Manager, key technical personnel and other relevant staff;
 - 3) sampling and review of internal procedures, records and past project deliverables (where applicable); and
 - 4) observation of ongoing activities relevant to aeronautical obstacle studies.
- (c) The applicant shall provide full access to all facilities, personnel, equipment, tools, records and data necessary for the Authority to carry out its oversight responsibilities.
- (d) Any findings of non-compliance identified during the review or audits shall be notified to the applicant in writing, together with the associated corrective action requirements and due dates.
- (e) The Authority may require the applicant to implement and demonstrate corrective actions before the approval is issued.
- (f) The Authority shall establish an oversight programme for approved organisations, including periodic audits, inspections and targeted reviews commensurate with the complexity and risk of the organisation's activities.
- (g) All costs arising from these oversight activities are the responsibility of the applicant.

CAR 138.045 Issue of Approval

- (a) The Authority shall issue an approval when it is satisfied that:
 - 1) the applicant complies with the applicable requirements of CAR 138; and
 - 2) the organisation is capable of conducting aeronautical obstacle studies in a safe, consistent and controlled manner.
 - 3) The applicant and post holders listed in the application are acceptable to the Authority.
 - 4) The Authority is satisfied that the granting of the approval is not contrary to the interests of aviation safety.
- (b) The approval shall specify, as a minimum:
 - 1) the legal name and address of the organisation;
 - 2) the unique approval number;
 - 3) the approved scope of activities (including any limitations);
 - 4) names of the accountable manager and key technical personnel,
 - 5) the effective date and expiry date of the approval; and
 - 6) any special conditions or limitations imposed by the Authority.
- (c) The approval may be accompanied by a list of accepted manuals and documents, including the Operations Manual, which form part of the approval basis.
- (d) The organisation shall not commence activities under this CAR until the approval has been issued and is in force.

CAR 138.050 Continued Compliance and Enforcement

- (a) The approval holder shall at all times:
 - 1) comply with the requirements of CAR 138 and any other applicable regulations (CAR 12, etc);
 - 2) operate in accordance with the approved scope and accepted manuals; and
 - 3) maintain an effective organisation, QAS and safety risk management process.

- (b) The approval holder shall implement corrective actions to address any findings raised by the Authority within the timeframe agreed with the Authority.
- (c) The Authority may conduct announced or unannounced audits or inspections at any time to verify continued compliance.
- (d) Where the Authority determines that the approval holder no longer meets the applicable requirements or that the level of safety is compromised, it may:
 - 1) impose additional conditions or limitations on the approval;
 - 2) suspend the approval in whole or in part; or
 - 3) revoke the approval, in accordance with the applicable enforcement provisions.
- (e) Failure to cooperate with the Authority, to grant access, or to implement required corrective actions may be grounds for enforcement action, including suspension or revocation of the approval.

CAR 138.055 Validity, Renewal and Extension

The approval shall be valid for a period not exceeding two (2) years, unless suspended, revoked or cancelled by the Authority in the event the approval holder:

- fail to demonstrate compliance with the requirements specified by the Authority; or
- fail to demonstrate technical capability.
- (a) An application for renewal shall be submitted by the approval holder no later than 60 days prior to the expiry date of the approval, using the prescribed renewal form or process specified by the Authority.
- (b) The renewal application shall follow that same application process as an initial application and shall include, as a minimum:
 - (1) confirmation that the organisation continues to comply with CAR 138;
 - (2) details of any significant changes since the last approval or renewal;
 - (3) all manuals or documents requiring acceptance by the Authority.
- (c) The Authority may require an audit or inspection as part of the renewal assessment.
- (d) The renewal of the approval depends on the satisfactory outcome of the oversight activities conducted by the Authority.
- (e) The approval holder shall submit a formal request to the Authority requesting an extension of the approval and including necessary justification. The Authority may grant a one-time extension of the approval validity, not exceeding three (3) months, where justified and subject to conditions.
- (f) An approval may be extended at the discretion of the Authority.

CAR 138.060 Amendment of Approval

- (a) The approval holder shall submit a formal application to the Authority requesting an amendment to the approval. The application shall include the required changes and justification for the change. This application shall be submitted at least thirty (30) days before the proposed amendment is planned to come into force.
- (b) The application for amendment shall include supporting information and documents justifying the proposed change and demonstrating continued compliance with CAR 138.
- (c) The Authority shall assess the proposed amendment, which may include document review and audits.
- (d) Where the Authority determines that the conditions specified in CAR 138.045 are met, it shall issue an amended approval or an additional approval schedule specifying the updated scope and conditions.
- (e) Until the amended approval is issued, the organisation shall not perform activities outside the currently approved scope.

CAR 138.065 Surrender of Approval

- (a) An approval holder that intends to surrender its approval shall notify the Authority in writing at least 30 days prior to the intended surrender date, stating the reasons and the proposed date of surrender.
- (b) Prior to surrender, the approval holder shall:
 - (1) ensure orderly completion or transfer of all ongoing aeronautical obstacle studies;
 - (2) inform affected clients and stakeholders, as appropriate; and
 - (3) ensure that records and data required under CAR 138, including aeronautical studies, are retained and remain accessible to the Authority for the required retention period.
- (c) The surrender of the approval shall not relieve the organisation of any obligations or liabilities arising prior to the effective date of surrender.
- (d) The Authority may impose conditions on the surrender where necessary to protect aviation safety or the interests of the State.

SUBPART C – ORGANISATIONAL REQUIREMENTS**CAR 138.070 Organisation and Accountable Manager**

- (a) The applicant or approval holder shall establish and maintain an organisation with a structure, staffing and resources appropriate to the nature and scope of the aeronautical obstacle studies conducted under this CAR.
- (b) The organisation shall appoint an Accountable Manager who:
 - (1) has the authority within the organisation to ensure that all activities under the scope of approval are adequately resourced, financed and carried out in accordance with this CAR; and
 - (2) is responsible for ensuring that the organisation complies, and continues to comply, with the conditions of approval.
- (c) The organisation shall develop and maintain an organisational chart showing the reporting lines and responsibilities of all management and key technical personnel involved in aeronautical obstacle studies.
- (d) The duties and responsibilities of the Accountable Manager and key technical personnel shall be documented and kept up to date.

CAR 138.075 Technical Personnel

- (a) The organisation shall employ or otherwise engage suitably qualified and experienced technical personnel to perform aeronautical obstacle studies within the approved scope.
- (b) The minimum qualification and experience requirements for technical personnel shall be in accordance with Appendix 1.
- (c) The organisation shall develop and maintain job descriptions for all technical positions involved in aeronautical obstacle studies, clearly defining:
 - (1) roles and responsibilities;
 - (2) required competencies, qualifications and experience; and
 - (3) authority and reporting lines.
- (d) Where the organisation outsources any part of the technical work:
 - (1) such work shall be performed under a written agreement that clearly defines the scope of work, applicable standards and responsibilities;
 - (2) the organisation shall retain overall responsibility for compliance with CAR 138; and
 - (3) the organisation shall ensure that outsourced personnel meet equivalent qualification and experience requirements.

CAR 138.080 Training

- (a) To ensure that technical personnel remain trained, qualified, and competent to perform aeronautical obstacle studies, the organisation shall establish and implement a Training Programme for each technical staff position.
- (b) The Training Programme shall, as a minimum:
 - (1) identify all required initial/induction training, OJT, recurrent training, specialised/advanced training and refresher training, as applicable;
 - (2) specify the training objectives, content, duration and delivery method;
 - (3) define the required frequency or interval for recurrent training; and
 - (4) include criteria for assessing, recording training effectiveness and maintaining competency.
- (c) Based on the Training Programme, the organisation shall establish an individual Training Plan for each technical staff member, detailing:
 - (1) the type of training to be provided;
 - (2) completion dates or target timeframes; and
 - (3) any prerequisites or progression requirements.
- (d) Training Plan should be based on relevant training needs analysis and prioritised according to the operational requirements of the organisation.
- (e) The organisation shall maintain training records for each staff member, including:
 - (1) courses attended and completed;
 - (2) dates of training and validity periods, where applicable;
 - (3) evidence of assessment or examination results.
- (f) Training records shall be retained for at least five (5) years after the person ceases to perform duties under this approval.

CAR 138.085 Operations Manual

- (a) The organisation shall develop, maintain and implement an Operations Manual describing the policies, procedures and processes applicable to the provision of aeronautical obstacle studies under this CAR.
- (b) The Operations Manual shall contain, as a minimum, the elements specified in Appendix 2.
- (c) The Operations Manual, and any subsequent amendments, shall be submitted to the Authority for acceptance as part of the approval process.
- (d) The organisation shall ensure that:
 - (1) the Operations Manual is kept up to date and reflects the current organisation, scope of activities, tools and processes;
 - (2) relevant personnel have easy access to the current version of the Operations Manual and are familiar with the parts of it relevant to their duties; and
 - (3) obsolete versions are removed from operational use but retained in accordance with document control procedures.

CAR 138.090 Quality Assurance System (QAS)

- (a) The organisation shall establish and maintain a Quality Assurance System (QAS) to ensure:
 - (1) compliance with CAR 138 and other applicable requirements;
 - (2) consistent provision of products and services;
 - (3) identification and elimination of deficiencies; and
 - (4) continuous improvement of the organisation's activities.
- (b) The QAS shall include, as a minimum:
 - (1) documented quality policies and objectives;
 - (2) documented procedures describing how aeronautical obstacle studies are conducted, reviewed and approved;

- (3) an internal audit programme covering all relevant activities at a frequency commensurate with their complexity and risk;
- (4) processes for reporting, analysing and correcting non-conformities; and
- (5) regular management reviews of the effectiveness of the QAS.
- (c) The organisation shall implement corrective and preventive actions (CAPA) to address findings or deficiencies identified through internal audits, external audits, quality checks or other sources.
- (d) An external ISO 9001 certification may be used to support the demonstration of an effective QAS but is not a prerequisite for approval under this CAR.

CAR 138.095 Safety Management System (SMS)

- (e) The organisation shall establish and maintain documented procedures for hazard identification and safety risk assessment related to its aeronautical obstacle studies.
- (f) These procedures shall, as a minimum:
 - (1) identify the types of hazards that may be relevant to the studies performed;
 - (2) provide methods for assessing the likelihood and severity of the associated risks;
 - (3) specify criteria for determining the acceptability of risks; and
 - (4) define actions for risk mitigation and verification of their effectiveness.
- (g) The organisation shall maintain records of safety risk assessments and associated mitigation measures for each relevant aeronautical obstacle study.
- (h) A full Safety Management System (SMS) compliant with CAR 100 is not a prerequisite for approval under this CAR; however, the safety risk assessment processes shall be acceptable to the Authority.

CAR 138.100 Facilities, Equipment and Tools

- (a) The organisation shall ensure that it has access to adequate facilities, equipment, software tools and data necessary to perform aeronautical obstacle studies in accordance with applicable standards.
- (b) The organisation shall:
 - (1) identify all software tools, models, databases and other resources used for obstacle studies;
 - (2) ensure that such tools and data are supported, maintained and updated at intervals appropriate to their use; and
 - (3) document and control configuration, version and validity of critical tools and data sources.
- (c) Facilities shall provide a suitable working environment for technical personnel, including appropriate security, IT infrastructure and data protection measures.

CAR 138.105 Document and Record Management

- (a) The organisation shall establish and maintain procedures for the control of documents and records related to the activities carried out under this CAR.
- (b) Document control procedures shall ensure that:
 - (1) documents are reviewed and approved prior to issue;
 - (2) changes and revisions are controlled and traceable;
 - (3) current versions of documents are available at the point of use; and
 - (4) obsolete documents are promptly removed from operational use and properly archived.
- (c) The organisation shall keep records of:
 - (1) aeronautical obstacle studies and associated risk assessments;
 - (2) internal audits and inspection reports;
 - (3) corrective and preventive actions;
 - (4) qualifications, experience and training of technical personnel; and

- (5) any other information required by the Authority.
- (d) Records shall be:
 - (1) legible, accurate and protected against damage, alteration and unauthorised access;
 - (2) stored in a manner that ensures integrity and retrievability; and
 - (3) retained for a period not less than ten (10) years for aeronautical studies and five (5) years for staff records, or as otherwise required by the Authority.
- (e) Electronic records shall be backed up regularly and protected through appropriate IT security measures.

CAR 138.110 Notification of Changes to the Organisation

- (a) The approval holder shall notify the Authority of any change to its name, address or contact details within fourteen (14) days of the change.
- (b) Prior acceptance by the Authority is required before the approval holder implements any planned change that may affect the basis on which the approval was granted, including changes to:
 - (1) Accountable Manager;
 - (2) key technical personnel;
 - (3) organisational structure;
 - (4) Operations Manual and/or other approved/accepted manuals forming part of the approval basis;
 - (5) Quality Assurance System; or
 - (6) safety management system (SMS).
- (c) The approval holder shall notify the Authority of any such planned change not less than thirty (30) days in advance of the intended implementation date, unless a shorter period is agreed with the Authority.
- (d) In the case of unplanned or urgent changes (e.g. sudden resignation or unavailability of key personnel), the approval holder shall notify the Authority as soon as practicable, propose interim arrangements and implement any conditions specified by the Authority.
- (e) The Authority may conduct an assessment or audit of the proposed changes and may amend, limit, suspend or revoke the approval if it determines that the organisation can no longer demonstrate compliance with CAR 138.

CAR 138.115 Scope and contents of aeronautical study

The approval holder shall ensure that all aeronautical studies complies with the requirements contained in Appendix 3.

APPENDIX 1 – MINIMUM QUALIFICATION AND EXPERIENCE REQUIREMENTS FOR TECHNICAL PERSONNEL

1. General

- 1.1.** This Appendix specifies the minimum qualification, training and experience requirements for technical personnel conducting aeronautical obstacle studies under CAR 138.
- 1.2.** The organization may impose additional requirements where justified by the complexity or criticality of the activities performed.

2. Qualifications

- 2.1** Technical personnel conducting OLS assessments under this approval shall have successfully completed:
 - 2.1.1 ICAO Annex 14 course; and
 - 2.1.2 OLS/Obstacle Assessment course.
- 2.2** In addition, technical personnel conducting PANS-OPS assessments shall have successfully completed:
 - 2.2.1 A basic PANS-OPS course;
 - 2.2.2 On-the-Job Training for Instrument Flight Procedure Design;
Specialised/Advanced training relevant to the types of Instrument Flight Procedures being assessed; and
 - 2.2.3 PANS-OPS recurrent training of which the interval shall not exceed three (3) years.

3. Experience

- 3.1** Technical personnel conducting obstacle assessments under this approval shall have minimum of five (5) years' experience conducting ICAO Annex 14 OLS and related assessments, including fundamental knowledge or experience in:
 - 3.1.1 PAPI obstacle protection surface;
 - 3.1.2 Significant effect on radio altimeters;
 - 3.1.3 Airside design and operations;
 - 3.1.4 Aeronautical Information Services;
 - 3.1.5 Geodesy;
 - 3.1.6 Safety Management Systems.
- 3.2** In addition, technical personnel conducting PANS-OPS assessments shall have a minimum of five (5) years' experience as a qualified Flight Procedure Designer, including fundamental knowledge or experience in:
 - 3.2.1 Air Traffic Management;
 - 3.2.2 Navigation, Navigation Systems and Geography;
 - 3.2.3 Aircraft Operations;
 - 3.2.4 Aircraft Performance;
 - 3.2.5 Aeronautical Information Services;
 - 3.2.6 Aerodrome safeguarding; and
 - 3.2.7 Geodesy.

APPENDIX 2 – CONTENTS OF OPERATIONS MANUAL

1. General

- 1.1 This Appendix specifies the minimum content of the Operations Manual required under CAR 138.085.
- 1.2 The Operations Manual may consist of one or more volumes. Cross-references to other controlled documents are acceptable, provided that such documents are clearly identified and controlled under the organization's document management system.

2. Minimum Contents

The Operations Manual shall include, as a minimum, the following sections:

1. General

- 1.1 Purpose of the Operations Manual
- 1.2 Precedence of the Operations Manual within the organisation's documentation hierarchy
- 1.3 Scope of the Operations Manual (activities and locations covered)
- 1.4 Approval page (including Accountable Manager sign-off and Authority acceptance)
- 1.5 Table of contents
- 1.6 Revision table / record of amendments
- 1.7 Foreword

2. Document Control

- 2.1 Procedure for the revision and distribution of the Operations Manual
- 2.2 Document control and archiving

3. Organization

- 3.1 Description of the organization and legal entity
- 3.2 Organizational structure diagram
- 3.3 Description of roles and responsibilities of departments, sections and positions
- 3.4 Staffing requirements, including hierarchy and lines of reporting
- 3.5 Job descriptions for key technical and management positions

4. Services and Scope of Activities

- 4.1 Description of services provided by the organisation
- 4.2 Statement of scope and limitations in relation to CAR 138
- 4.3 Interfaces with clients, aerodrome operators, ANSP, CAA and other stakeholders

5. Personnel and Training

- 5.1 Personnel qualification and competence requirements
- 5.2 Training policy and objectives
- 5.3 Training programme (initial, OJT, recurrent, specialized)
- 5.4 Individual training plans
- 5.5 Training records management

6. Facilities, Resources, Tools and Data

- 6.1 Description of facilities and resources used to perform tasks (building, offices, etc.)
- 6.2 Software and design tools (including version and configuration control)
- 6.3 Data sources (terrain, obstacle, aeronautical, CNS, airspace), including validation and updating
- 6.4 Reference materials, standards, practices and procedures used by technical personnel

7. Operational Procedures

- 7.1 End-to-end process for conducting aeronautical obstacle studies
- 7.2 Procedures for data collection, verification and validation
- 7.3 Procedures for conducting OLS and safeguarding assessments
- 7.4 Procedures for conducting PAPI, Type A and other specific assessments
- 7.5 Procedures for assessing impacts on CNS facilities and radio altimeters
- 7.6 Procedures for assessing flight procedures
- 7.7 Procedures for producing deliverables (reports, drawings, digital data)
- 7.8 Internal review, verification and approval of aeronautical studies

8. Forms, Templates and Checklists

- 8.1 Templates for data collection and analysis
- 8.2 Templates for aeronautical study reports
- 8.3 Internal checklists for quality and safety verification

9. Quality Assurance System (QAS)

- 9.1 Quality policy and objectives
- 9.2 Description of the QAS structure and responsibilities
- 9.3 Internal audit programme and methodology
- 9.4 Management of non-conformities, corrective and preventive actions
- 9.5 Management review process

10. Safety Management System (SMS)

- 10.1 Procedure for hazard identification in the context of aeronautical obstacle studies
- 10.2 Safety risk assessment methodology
- 10.3 Risk acceptance criteria and mitigation strategies
- 10.4 Documentation and follow-up of safety risk assessments

11. Document and Record Management

- 11.1 Procedures for creation, control, storage and retrieval of records
- 11.2 Retention periods and archiving arrangements
- 11.3 Protection of records and confidentiality requirements

12. Security and Confidentiality

- 12.1 Information security measures applied to project data and deliverables
- 12.2 Confidentiality provisions and client data protection

APPENDIX 3 – SCOPE AND CONTENTS OF AERONAUTICAL STUDY

1. General

1.1 Aeronautical studies conducted under CAR 138 shall comply with:

- (a) this Appendix; and
- (b) the CAA Guidance Manual "Guidance for Obstacle Management", as amended.

2. Minimum Scope of Assessments


2.1 As applicable, aeronautical studies shall include assessments for:


- 2.1.1 Obstacle Limitation Surfaces (OLS), including the Obstacle Free Zone (OFZ) ;
- 2.1.2 PAPI obstacle protection surface ;
- 2.1.3 ICAO Type A surface assessment;
- 2.1.4 Significant effect on radio altimeters (if the obstacle in the Inner approach surface): demonstration should be made (flight control system is not affected);
- 2.1.5 Effects on Communication, Navigation and Surveillance (CNS) facilities;
- 2.1.6 Instrument and Visual Flight Procedures:
 - a. Instrument and Visual Flight Procedures currently published in AIP;
 - b. Planned Instrument and Visual Flight Procedures not yet published in AIP;
 - c. Conceptual Instrument and Visual Flight Procedures to protect areas other than those listed above considering the Airport Master Plan.
- 2.1.7 Airspace:
 - a. Existing airspace currently published in AIP;
 - b. Planned airspace changes;
 - c. ATC Surveillance Altitude Minimum Chart.
- 2.1.8 ICAO Terrain and Obstacle Data (TOD) surfaces as defined in ICAO PANS AIM Doc 10066;
- 2.1.9 Safety Risk Assessment.

ATTACHMENT 1 – FORM CAR 138-01


APPLICATION APPROVAL OF ORGANIZATIONS PERFORMING AERONAUTICAL OBSTACLE ASSESSMENT STUDIES

(Under CAR 138 – Approval of Organisations performing aeronautical obstacle assessment studies)

	CIVIL AVIATION AUTHORITY DIRECTORATE GENERAL OF CIVIL AVIATION REGULATION AERODROME SAFETY DEPARTMENT	Form	CAR 138-01
		Revision	01
		Date	25 Dec 2025

APPROVAL OF ORGANISATION CONDUCTING AERONAUTICAL STUDIES OF OBSTACLES	
APPLICATION FORM	
I. TYPE OF APPLICATION	
<input type="checkbox"/> INITIAL	<input type="checkbox"/> RENEWAL
<input type="checkbox"/> AMENDMENT	
II. COMPANY DATA	
1. COMPANY NAME	:
2. REGISTERED ADDRESS	:
3. CEO / ACCOUNTABLE MANAGER	:
4. TELEPHONE NUMBER	:
5. FAX NUMBER	:
6. EMAIL	:
7. WEBSITE	:
III. OPERATION DETAILS TO BE APPROVED	
1. SCOPE OF APPROVAL	: APPROVAL OF ORGANISATION CONDUCTING AERONAUTICAL STUDIES OF OBSTACLES
2. PROPOSED COMMENCEMENT DATE	:
3. REQUIRED DOCUMENTS ATTACHED	: <input type="checkbox"/> YES <input type="checkbox"/> NO
IV. LIST OF NON-COMPLIANCE WITH CIVIL AVIATION REGULATION (CAR) 138 (ATTACHED LIST IF INSUFFICIENT SPACE)	
DGCAR CAR 138	DETAILS AND REASON FOR NON COMPLIANCE
V. STATEMENT	
ON BEHALF OF....., I HEREBY APPLY FOR APPROVAL TO CONDUCT AERONAUTICAL STUDIES OF OBSTACLES.	
SIGNATURE..... 	DATE:...../...../.....

ATTACHMENT 2 – FORM CAR 138-02

 CAA هيئة الطيران المدني CIVIL AVIATION AUTHORITY	CIVIL AVIATION AUTHORITY DIRECTORATE GENERAL OF CIVIL AVIATION REGULATION AERODROME SAFETY DEPARTMENT	Form	138-02
		Revision	01
		Date	25 Dec 2025
APPROVAL OF ORGANISATION CONDUCTING AERONAUTICAL STUDIES OF OBSTACLES			
Documentation Checklist			
<input type="checkbox"/>	Letter of undertaking by the applicant		
<input type="checkbox"/>	Written statement sets out the name(s), relevant qualification and experience of the: <ul style="list-style-type: none"> a. Accountable Manager; and b. Technical personnel. 		
<input type="checkbox"/>	Copy of the CV and Job Descriptions of: <ul style="list-style-type: none"> a. Accountable Manager; and b. Technical personnel 		
<input type="checkbox"/>	Copies of relevant qualifications and training of the technical personnel.		
<input type="checkbox"/>	Copy of the Operations Manual.		
<input type="checkbox"/>	Proof of payment of the prescribed application fee.		
Checklist of Additional Required Documentation for Renewal Application			
<input type="checkbox"/>	Copy of previous / current approval (if applicable)		
Applicant Remarks and/or Questions			
Date		Applicant's Signature and Stamp	