Annex 16

RPA Operator's Certificate (ReOC) Holders

Introduction

This annex is an integral part of the CASA Surveillance Manual (CSM), which should be referenced at all times. To allow for more frequent revisions, this annex can be updated independent of the CSM and other annexes. The process of updating this annex requires verification and approval from its owners and sponsors, as well as from Safety Risk and Intelligence Branch. An updated version can only be published once SRI has finalised the format, with the latest revision history data included in the revision table.

Revision history

Revisions to this annex are recorded below in order of the most recent first.

Version Nº.	Date	Parts / sections	Details
6.0	April 2024	Section 2 and 4	Updated references to match CSM
5.1	February 2023	All	Administrative review only
5.0	December 2019	Section 2.1	Change of where to locate Health Check mandatory elements
4.0	April 2019	Inclusion of Introduction and Revision history.	These inclusions allow for updates and revisions independent of the CSM and other annexes.
4.0	April 2019	Section 2.1	Removal of recommended Health Check timeframes.
4.0	April 2019	Section 3	Removal of recommended surveillance intervals.
4.0	April 2019	Section 4	Addition of third-party audits.

1   Overview

This Annex provides instructions for conducting surveillance of CASR 101.330 Remotely Piloted Aircraft Operator's Certificates. It contains information relating to the following:

- Systems and Elements
- Systems and Elements – Health Checks
- Surveillance Currency Guide
- Information Sources.

2   Systems and Elements: RPA Operator Certificate Holders

The audit technique involves assessing the documented system, comparing it against the actual system processes. The system is assessed for compliance and sampling conducted as appropriate. The assessment of the system and its risks is achieved by a questioning technique using the four attributes (12 components) of the Management System Model (MSM), see CSM Sections 3.3.4 System attributes – Management System Model and Section 3.3.4.1 – Systems attributes (table).

The CASA description of an ReOC consists of six systems incorporating 17 elements.

Table 1: System and Elements

Systems	Elements
Remotely Piloted Aircraft	Maintenance System
	Works Control
	Airworthiness Assurance
Operational Personnel	Scheduling
	Operational Standards
Flight Operations	RPA Operations
	Flight System
	Operations Area
Command, Control and Communications	Maintenance System
	Works Control
	Technical Assurance
Remote Pilot Aircraft	Maintenance System
	Works Control
	Technical Assurance
Support Systems	Data and Documents
	Role Equipment
	Ground Support

Table 2: Remotely Piloted Aircraft Elements

SYSTEM: Remotely Piloted Aircraft	
ELEMENT: Maintenance System	
This element contains the systems and processes for identifying "what" maintenance activities are required to be done as well as "when" the maintenance activities are to be completed.	
Prompts:	
Receivers	Transmitters
Electrics/looming	Battery/batteries
GPS	Autopilot
Motors/Engines	Propellers
Airframe	Configuration control
Landing gear	Launch components
Recovery equipment	Servos
Wings and winglets	Empennage
Speed Controller	Compass
ELEMENT: Works Control	
This element contains the systems and processes for achieving the "how" maintenance activities are conducted and "who" completes the maintenance activities.	
Prompts:	
Battery servicing manual	Maintenance controller
Motor/engine servicing	Maintainer
Maintenance schedule	Remote pilot
Maintenance manual	Maintenance release
Flight manual	Defect recording
Refuelling/Charging procedures and records	Recording un-serviceability
ELEMENT: Airworthiness Assurance	
This element contains the systems and processes for ensuring the aircraft is airworthy and fit for service. This is accomplished primarily through the authorisation holder's internal audit processes and closes the loop on the entire maintenance system.	
Prompts:	
Internal audit	Defect recording cleared
Flight Release	Reliability recording
Configuration Control	Specifications
Schedules	Parts replacement tracking

Table 3: Operational Personnel Elements

SYSTEM: Operational Personnel	
ELEMENT: Scheduling	
This element plays a significant role in achieving safe operations for it is through crew scheduling that the authorisation holder ensures that controllers and support crew have appropriate qualifications, certification, operate in accordance with legislative requirements and have appropriate recency (as applicable) in order to safely conduct the planned task from the start of the duty period until completion.	
Prompts:	
Fatigue	Medical
Certification	Qualifications
Ratings	Currency/Recency requirements
Flight and duty records	Pilot qualification records
Flight and duty limitations	Induction requirements
Rostering	Experience requirements
DAMP	Professional development
Continuation training	Recording cycles/events
ELEMENT: Operational Standards	
Operational Standards are a vital element of the RPA system required to maintain safe operations through the establishment of an appropriate set of systems (includes an appropriate organisational structure) to accommodate induction, check to operations, upgrade training (where applicable) and a system for dealing with unacceptable performance.	
Prompts:	
Chief remote pilot	Maintenance controller
Ground operations staff	Remote pilots
Induction syllabus	Type conversion syllabus
Remote pilot in command upgrades	RPA observer syllabus
Personnel records	Unsatisfactory performance reporting
DAMP education and testing	

Table 4: Flight Operations Elements

SYSTEM: Flight Operations	
ELEMENT: ReOC Operations	
The RPA Operating Certificate (ReOC) Operations element addresses the systems that ensure the authorisation holder contains its operations to those authorised by legislation. This is primarily achieved through the use of a properly structured organisation with appropriate communication channels. Appropriate Key Personnel is a key link in ensuring OC operations are not only contained but are appropriately controlled. Examples include the Chief Remote Pilot and, when applicable, the Chief RPAS Instructor, Maintenance Controller, RPA Observer and Safety Officer.	
Prompts:	
Chief remote pilot	Maintenance controller
Chief RPAS instructor	RPA observer
CASA approval/co-ordination	ReOC conditions
Compliance to applicable regulations	Conformance to company policies and procedures
Area approval	Accident/Incident reporting
AIP	Operations manual
Flight manual	Maintenance manual
Advisory circulars	Copies of instruments
Remote PIC responsibilities	
ELEMENT: Flight System	
This element contains the authorisation holder's systems and processes for the safe conduct of the flight phase of operations. Much of this information, procedures and instructions are contained in the operations manual. This is not a limiting factor and other areas of operations may or may not require consideration.	
Prompts:	
Pre-flight procedures	Beyond visual range operations
Pre-flight brief	Visual line of sight operations
RPA weight and CG control	Weather and daylight limitations
Flight endurance	Post-flight procedures
Operations manual	Crew briefing
Specific procedures for operations area	Safety measures
Dangerous goods	Flight authorisation
ELEMENT: Operations Area	
This element contains the systems and processes that allow an authorisation holder to use, as applicable, but not be limited to the provisions of beyond visual range navigation and visual line of sight operations.	
Prompts:	
Visual line of sight	Transition procedures
Beyond visual range navigation	Area approval

SYSTEM: Flight Operations	
Air traffic management	Risk assessment
RPAS observer briefing	Aerodrome specifications/procedures

Table 5: Command, Control and Communications Elements

SYSTEM: Command, Control and Communications	
ELEMENT: Maintenance System	
This element contains the systems and processes for identifying "what" maintenance activities are required to be done as well as "when" the maintenance activities are to be completed.	
Prompts:	
Receivers	Transmitters
Batteries/Power	Computers
Manual control panel	Frequency selection/allocation
ELEMENT: Works Control	
This element contains the systems and processes for achieving the "how" maintenance activities are conducted and "who" completes the maintenance activities.	
Prompts:	
Battery servicing manual	Maintenance Controller
Transmitter/Receiver servicing	Maintainer
Maintenance schedule	Remote Pilot
Maintenance manual	Maintenance release
Flight manual	Defect recording
ELEMENT: Technical Assurance	
This element contains the systems and processes for identifying "what" maintenance activities are required to be done as well as "when" the maintenance activities are to be completed.	
Prompts:	
Internal audit	Defect recording cleared
Technical Release	Reliability recording
Configuration Control	Specifications
Schedules	Parts replacement tracking

Table 6: Remote Pilot Aircraft

SYSTEM: Remote Pilot Aircraft	
ELEMENT: Maintenance System	
This element contains the systems and processes for identifying "what" maintenance activities are required to be done as well as "when" the maintenance activities are to be completed.	
Prompts:	
Manual control panel	Computers
Air conditioning	Displays
Furnishings	Keyboard(s)
Back-up power	Power source
Controls	
ELEMENT: Works Control	
This element contains the systems and processes for achieving the "how" maintenance activities are conducted and "who" completes the maintenance activities.	
Prompts:	
Power servicing	Maintenance controller
Controls servicing	Maintainer
Maintenance schedule	Remote pilot
Maintenance manual	Maintenance release
Flight manual	Defect recording
ELEMENT: Technical Assurance	
This element contains the systems and processes for identifying "what" maintenance activities are required to be done as well as "when" the maintenance activities are to be completed.	
Prompts:	
Internal audit	Defect recording cleared
Technical release	Reliability recording
Configuration control	Specifications
Schedules	Parts replacement tracking

Table 7: Support Systems Elements

SYSTEM: Support Systems	
ELEMENT: Data and Documents	
This element contains the authorisation holder's systems and processes that addresses technical data, design drawings, regulatory documentation, and quality/procedures manuals used in the course of carrying out aircraft operations.	
Prompts:	
Co-ordination/authorisation with CASA	Noise abatement
Regulatory/operational Library access	Aeronautical information publication
Maps and charts	Airspace structure
Register of local operators	Flight planning and notification
Weather services	DAMP documentation
ELEMENT: Role Equipment	
This element contains the authorisation holder's systems and processes that address the specialised role equipment required for the safe operation of the task. This includes considerations of other specialised equipment required for the task such as launch equipment, recovery equipment and radios; and their respective maintenance requirements.	
Prompts:	
Launch system	Radio communications – fixed
Recovery system	Radio communications – hand-held
Maintenance manuals	
ELEMENT: Ground Support	
This element contains the authorisation holder's systems and processes that address the support systems necessary to ensure the flight phase is enabled and includes such items as ground vehicles, generators and transit equipment; and their respective maintenance requirements.	
Prompts:	
Base stations	Power/Generators
Transit cases	Specialised vehicles, including trailers
Maintenance processes for ground support equipment	Company policies and procedures
Logistics – spares	Maintenance manuals

2.1   Health Check

Health Check mandatory elements are available on the CASA Intranet. Details of the current mandatory elements for each authorisation type are published separately to the CASA website.

3   Surveillance Currency Guide: RPA Operator Certificate (ReOC) Holders

Surveillance level	Type	Elements
Level 1	Systems Audit	Systems, Risks and Compliance
	Health Check	Specific Elements, Risks and Compliance
	Post-authorisation Review	Entry Control Elements
Level 2	Operational Check	E.g. Operational Observation, Ramp check

Note: Surveillance intervals are determined by the National Surveillance Selection Process (NSSP). Refer to the NSSP planned surveillance schedule for further information regarding surveillance intervals.

4 Information Sources

The following is a non-exhaustive list of information sources that can be accesses to support the assessment:

- surveys
- third-party audits
- regulatory history, findings (Safety Findings and Safety Observations)
- past Surveillance Reports and findings (Safety Findings and Safety Observations)
- EAP information
- ReOC conditions
- area approvals
- letters of approval for Chief Remote Pilots and Maintenance Controllers
- Regulatory Service activity
- information gathered by the authorisation holder
- external information gathered from industry or other government agencies
- Enforcement action
- past accident/incident history
- risk management plans provided by the authorisation holder.

A large portion of this information is available to the surveillance team and authorisation management team via the Data Warehouse using the Business Objects application.

Note: For advice on where and how to access required information, refer to CSM Chapter 5 – Monitoring and Response Surveillance (MRS)