Australian Government

AVIW0007 Perform aerial mapping and modelling using remote piloted aircraft systems

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

Application

This unit involves the application of skills and knowledge required to conduct aerial mapping and modelling using remote piloted aircraft systems (RPAS), in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes conducting pre-flight operations, performing operational area evaluations, and conducting aerial surveys.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties of flight crew and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision within a single-pilot or multi-crew environment.

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Pre-requisite Unit

Not applicable.

Competency Field

Y – Aircraft Operation and Traffic Management

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Conduct pre-flight actions	**1.1** Own fitness for flight and planned operations is self-assessed
	1.2 Operational aircraft type is determined for suitability for type of aerial mapping and modelling operation
	1.3 Aircraft and role equipment are checked and assessed for serviceability prior to commencing flight operations
	1.4 Required applicable maintenance documentation is compiled and checked for accuracy and completeness
	1.5 Role equipment calibration is checked and adjusted as required
	1.6 Planned aerial mapping and modelling operations are assessed for potential or actual hazards
	1.7 Fuel/power requirements are determined and established within aerial operational plans
	1.8 Issues relating to aircraft weight, performance, dimensions, load and meteorological conditions are identified and managed
2 Conduct planning and risk management	**2.1** Suitability of current and forecast weather is determined
	2.2 Mapping and modelling plan is developed and used as the basis for aerial operations
	2.3 Potential and actual hazards and operational requirements are identified, risks to aerial mapping and modelling operations are assessed and appropriate risk controls implemented in accordance with the application management plan
	2.4 Area map is correctly interpreted
	2.5 Acceptable aircraft performance for aerial mapping and modelling operational conditions is confirmed through performance planning

	2.6	Normal and abnormal operational communications and signals are confirmed
3 Conduct aerial mapping and modelling	**3.1**	Appropriate aerial survey plans are developed for conducting safe aerial mapping and modelling operations
	3.2	Operating area boundaries are established and environmentally sensitive areas identified, including areas that are noise sensitive, biologically susceptible, populated and urban, and restricted or dangerous
	3.3	Potential emergency or alternate landing areas are identified and/or established for contingency operations
	3.4	Environmental hazard factors affecting aerial mapping and modelling operations are considered
	3.5	Wind velocity and direction are assessed for effect on operations
	3.6	Mapping/modelling operations are conducted safely in accordance with the flight plan
	3.7	Aerial mapping/modelling equipment is operated within scope of the plan
	3.8	Decisions to suspend or continue safe aerial mapping/modelling are taken based on planned or actual operating conditions
	3.9	Power lines within and outside the treatment area during an aerial survey are identified and accurately assessed to support safe operations in vicinity of power lines, including safe flying parallel to wires
4 Provide aerial mapping and modelling imagery	**4.1**	Selected data is imported into data analysis software according to manufacturer procedures
	4.2	Data is evaluated for preliminary indication of non-conformity and trends or patterns
	4.3	Findings from data are collated and reported to appropriate persons according to team procedures
	4.4	Data is stored for later retrieval according to procedures
	4.5	Final inspection is made to ensure work is to workplace expectations and data is presented ready for use

4.6 Data recording equipment is checked and stored according to workplace procedures

4.7 Workplace documentation is processed according to workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

No equivalent unit.

Links

AVI Training Package Companion Volume Implementation Guide available on VET Net: - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816