Deliverable 2 Compliance Statement

Team Name: Melbourne Autonomous Systems

We declare that this report and the entry that it describes complies with the rules of the 2016 UAV Challenge, and that we enter with the intention of competing in the spirit of the challenge. Specifically we declare that our entry is compliant with the following topics and provide reference to within our Deliverable 2 document where our method of compliance is described:

Rules Reference	Topic	Compliance	Deliverable 2 Reference
Mandatory / Essential *Non-compliance in this section will result in a No-Go finding unless there are significant and/or extenuating circumstances. Please read the rules in detail. If using two aircraft ensure both aircraft are considered and Deliverable 2 references are provided for both aircraft if necessary.*			
1.6	Maximum of two aircraft for the mission	☒ Compliant	S4 - Introduction
3.1.1	Must not be a commercial off-the-shelf complete system	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6 - System Design
3.1.1	Must be capable of autonomous flight	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S4 - Introduction
3.1.1	Must have a maximum gross weight of less than 100 kg (rotary) or 150kg (fixed wing)	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6.2 - System Design
3.1.1	Must have continuous telemetry radio communication with the UAV Controller	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6.5 - Radio Equipment
3.1.1	Must have an easily accessible E-Stop to render the aircraft deactivated	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S4 - Introduction
3.1.1	Must have an external visual indication of state (armed, inert, disarmed)	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S4 - Introduction
3.1.1	Must have an arming switch	☒ Retrieval aircraft Compliant	S4 - Introduction
3.1.3	Must implement automatic (on-board) detection of crossing a Geofence boundary	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6.4 - Geofence System
3.1.4	Must include a flight termination system meeting all conditions	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6.3 - Flight Termination System
3.1.5 & 5.3.2	Flight termination method described and analysis provided of maximum distance outside Geofence	☐ Retrieval aircraft Compliant ☐ Support aircraft Compliant	
3.1.6	All criteria for flight termination must result in immediate activation of flight termination	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6.3 - Flight Termination System

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3.2.1	Flight in the Transit Corridor and Remote Landing Site must be autonomous	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S4 - Introduction
3.2.2	Must have a ground control station that provides a graphical display	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S4 - Introduction
3.2.2	Must provide an NMEA data feed from the ground station	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S4 - Introduction
3.2.3	Communication equipment must comply with ACMA regulations	☒ Compliant	S6.5 - Radio Equipment
3.3.2 & 5.3.2	AMSL altitudes will be measured and reported as pressure altitudes	☒ Compliant	S6.2.2 - Aircraft Capabilities
3.3.3 & 5.3.2	Correct aeronautical units used	☒ Compliant	All
3.3.3	Description of how aircraft will be maintained within its airspeed envelope	☒ Retrieval aircraft Compliant ☐ Support aircraft Compliant	S6.2 - Aeronautical Requirements
3.4.5	Pyrotechnic mechanisms have safety mechanism implemented and safety manual provided	☐ Compliant ☒ Not Applicable	
5.2	Disclosure of sponsors and funding sources	☒ Compliant	S4 - Introduction
5.3.2	Statement of originality and accuracy included	☒ Compliant	S1 - Statement of Originality and Accuracy
5.3.2	Executive summary provided	☐ Compliant	
5.3.2	Introduction and design approach provided	☐ Compliant	
5.3.2	Landing site analysis strategy provided	☒ Compliant	S5 - Landing Site Analysis Strategy
5.3.2	System Diagram provided	☒ Compliant	S6.1 - System Diagrams
5.3.2	Flight termination system design, state machine diagrams and transitions provided	☐ Compliant	
5.3.2	Geofence system design provided	☒ Compliant	S6.4 - Geofence System
5.3.2	Radio frequencies to be used and relevant licences provided	☒ Compliant	S6.5 - Radio Equipment
5.3.2	Updated risk assessment provided	☒ Compliant	S7 - Risk Assessment
5.3.2	Assessment of the risks associated with autonomously taking off and landing provided	☒ Compliant	S7 - Risk Assessment
5.3.2	Risk Management provided	☒ Compliant	S8 - Risk Management
5.3.2	Details of the system response to loss	☒ Compliant	S8.3 - Risk Management

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	of data link provided		
5.3.2	Details of the system response to loss of GPS provided	☒ Compliant	S8.3 - Risk Management
5.3.2	Details of the system response to lock-up or failure of autopilot provided	☒ Compliant	S8.3 - Risk Management
5.3.2	Details of the system response to lock-up or failure of the GCS provided	☒ Compliant	S8.3 - Risk Management
5.3.2	Details of the system response to loss of engine power provided	☒ Compliant	S8.3 - Risk Management
5.3.2	Details of fuel and/or battery management provided	☒ Compliant	S8.3 - Risk Management
5.3.2	Details of the management of other risks provided	☒ Compliant	S8.3 - Risk Management
5.3.2	Flight tests results provided	☐ Compliant	
5.3.2	Conclusions provided	☐ Compliant	
5.3.2	Video provided showing the retrieval aircraft autonomously landing and taking off	☒ Compliant	S3 - Executive Summary
5.3.2	Video provided showing the teams pre-flight set up and checks	☒ Compliant	S3 - Executive Summary
Highly Desirable			
7.2	"Soft Geofence"	☒ Implemented ☐ Not Implemented	S6.4 - Geofence System
5.3.2	Deliverable 2: Max 23 pages.	☐ Compliant ☐ Non-Compliant	

Additional Information:

Date: 30/3/2016
Signed by a team representative, on behalf of all team members: MDeBono
Printed Name: Matthew De Bono