



# 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
<b>Mandatory / Essential</b>			
<i>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.</i>			
1.6	Maximum of two aircraft for the mission	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.1.1	Must not be a commercial off-the-shelf complete system	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S6 - System Design
3.1.1	Must be capable of autonomous flight	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.1.1	Must have a maximum gross weight of less than 100 kg (rotary) or 150kg (fixed wing)	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S6.2 - System Design
3.1.1	Must have continuous telemetry radio communication with the UAV Controller	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S6.5 - Radio Equipment
3.1.1	Must have an easily accessible E-Stop to render the aircraft deactivated	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.1.1	Must have an external visual indication of state (armed, inert, disarmed)	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.1.1	Must have an arming switch	<input checked="" type="checkbox"/> Retrieval aircraft Compliant	S4 - Introduction
3.1.3	Must implement automatic (on-board) detection of crossing a Geofence boundary	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S6.4 - Geofence System
3.1.4	Must include a flight termination system meeting all conditions	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> 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	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S6.3.3 - Analysis
3.1.6	All criteria for flight termination must result in immediate activation of flight termination	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> 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	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.2.2	Must have a ground control station that provides a graphical display	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.2.2	Must provide an NMEA data feed from the ground station	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S4 - Introduction
3.2.3	Communication equipment must comply with ACMA regulations	<input checked="" type="checkbox"/> Compliant	S6.5 - Radio Equipment
3.3.2 & 5.3.2	AMSL altitudes will be measured and reported as pressure altitudes	<input checked="" type="checkbox"/> Compliant	S6.2.2 - Aircraft Capabilities
3.3.3 & 5.3.2	Correct aeronautical units used	<input checked="" type="checkbox"/> Compliant	All
3.3.3	Description of how aircraft will be maintained within its airspeed envelope	<input checked="" type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	S6.2 - Aeronautical Requirements
3.4.5	Pyrotechnic mechanisms have safety mechanism implemented and safety manual provided	<input type="checkbox"/> Compliant <input checked="" type="checkbox"/> Not Applicable	
5.2	Disclosure of sponsors and funding sources	<input checked="" type="checkbox"/> Compliant	S4 - Introduction
5.3.2	Statement of originality and accuracy included	<input checked="" type="checkbox"/> Compliant	S1 - Statement of Originality and Accuracy
5.3.2	Executive summary provided	<input checked="" type="checkbox"/> Compliant	S3 - Executive Summary
5.3.2	Introduction and design approach provided	<input checked="" type="checkbox"/> Compliant	S4 - Introduction
5.3.2	Landing site analysis strategy provided	<input checked="" type="checkbox"/> Compliant	S5 - Landing Site Analysis Strategy
5.3.2	System Diagram provided	<input checked="" type="checkbox"/> Compliant	S6.1 - System Diagrams
5.3.2	Flight termination system design, state machine diagrams and transitions provided	<input checked="" type="checkbox"/> Compliant	S6.3.2 - State Machine
5.3.2	Geofence system design provided	<input checked="" type="checkbox"/> Compliant	S6.4 - Geofence System
5.3.2	Radio frequencies to be used and relevant licences provided	<input checked="" type="checkbox"/> Compliant	S6.5 - Radio Equipment
5.3.2	Updated risk assessment provided	<input checked="" type="checkbox"/> Compliant	S7 - Risk Assessment
5.3.2	Assessment of the risks associated with autonomously taking off and landing provided	<input checked="" type="checkbox"/> Compliant	S7 - Risk Assessment
5.3.2	Risk Management provided	<input checked="" type="checkbox"/> Compliant	S8 - Risk Management
5.3.2	Details of the system response to loss	<input checked="" type="checkbox"/> 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	<input checked="" type="checkbox"/> Compliant	S8.3 - Risk Management
5.3.2	Details of the system response to lock-up or failure of autopilot provided	<input checked="" type="checkbox"/> Compliant	S8.3 - Risk Management
5.3.2	Details of the system response to lock-up or failure of the GCS provided	<input checked="" type="checkbox"/> Compliant	S8.3 - Risk Management
5.3.2	Details of the system response to loss of engine power provided	<input checked="" type="checkbox"/> Compliant	S8.3 - Risk Management
5.3.2	Details of fuel and/or battery management provided	<input checked="" type="checkbox"/> Compliant	S8.3 - Risk Management
5.3.2	Details of the management of other risks provided	<input checked="" type="checkbox"/> Compliant	S8.3 - Risk Management
5.3.2	Flight tests results provided	<input checked="" type="checkbox"/> Compliant	S9 - Flight Test Results
5.3.2	Conclusions provided	<input checked="" type="checkbox"/> Compliant	S10 - Conclusions
5.3.2	Video provided showing the retrieval aircraft autonomously landing and taking off	<input checked="" type="checkbox"/> Compliant	S3 - Executive Summary
5.3.2	Video provided showing the teams pre-flight set up and checks	<input checked="" type="checkbox"/> Compliant	S3 - Executive Summary
<b>Highly Desirable</b>			
7.2	"Soft Geofence"	<input checked="" type="checkbox"/> Implemented <input type="checkbox"/> Not Implemented	S6.4 - Geofence System
5.3.2	Deliverable 2: Max 23 pages.	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant	All

Additional Information:

Date: 30/3/2016

Signed by a team representative, on behalf of all team members: *Matthew De Bono*

Printed Name: Matthew De Bono