



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 <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	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 type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
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	
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	
3.1.1	Must have an arming switch	<input type="checkbox"/> Retrieval aircraft Compliant	
3.1.3	Must implement automatic (on-board) detection of crossing a Geofence boundary	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
3.1.4	Must include a flight termination system meeting all conditions	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
3.1.5 & 5.3.2	Flight termination method described and analysis provided of maximum distance outside Geofence	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
3.1.6	All criteria for flight termination must result in immediate activation of flight termination	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	



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3.2.1	Flight in the Transit Corridor and Remote Landing Site must be autonomous	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
3.2.2	Must have a ground control station that provides a graphical display	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
3.2.2	Must provide an NMEA data feed from the ground station	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
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 type="checkbox"/> Compliant	
3.3.3 & 5.3.2	Correct aeronautical units used	<input type="checkbox"/> Compliant	
3.3.3	Description of how aircraft will be maintained within its airspeed envelope	<input type="checkbox"/> Retrieval aircraft Compliant <input type="checkbox"/> Support aircraft Compliant	
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 type="checkbox"/> Compliant	
5.3.2	Introduction and design approach provided	<input type="checkbox"/> Compliant	
5.3.2	Landing site analysis strategy provided	<input type="checkbox"/> Compliant	
5.3.2	System Diagram provided	<input type="checkbox"/> Compliant	
5.3.2	Flight termination system design, state machine diagrams and transitions provided	<input type="checkbox"/> Compliant	
5.3.2	Geofence system design provided	<input type="checkbox"/> Compliant	
5.3.2	Radio frequencies to be used and relevant licences provided	<input type="checkbox"/> Compliant	
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 type="checkbox"/> Compliant	
5.3.2	Conclusions provided	<input type="checkbox"/> Compliant	
5.3.2	Video provided showing the retrieval aircraft autonomously landing and taking off	<input type="checkbox"/> Compliant	
5.3.2	Video provided showing the teams pre-flight set up and checks	<input type="checkbox"/> Compliant	
Highly Desirable			
7.2	"Soft Geofence"	<input type="checkbox"/> Implemented <input type="checkbox"/> Not Implemented	
5.3.2	Deliverable 2: Max 23 pages.	<input type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant	

Additional Information:

Date: 30/3/2016

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

Printed Name: Matthew De Bono