

## Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 20<sup>th</sup> July 2022

Total	Risk A	Risk B	Risk C	Risk D	Risk E
6	1	0	4	1	0

Airprox Number	Date Time (UTC)	Aircraft (Operator)	Object	Location <sup>1</sup> Description Altitude	Airspace (Class)	Pilot/Controller Report Reported Separation Reported Risk	Comments/Risk Statement	ICAO Risk
2022098	3 Jun 22 1140	PA28 (Civ FW)	Drone	5114N 00045W Tongham VRP 1800ft	London FIR (G)	<p><b>The PA28 pilot</b> reports that 5 miles north of Thorney Island disused airfield they called Farnborough West for a Basic Service and zone crossing. This is their normal practice and they were additionally aware of the NOTAMed gliding competition at Lasham. As they neared the Zone, they were given a clearance VFR not above 2000ft, holding initially at Farnham Castle. They flew at 1800ft due to thermic conditions. They were then asked to re-route to Tongham, which is preferable for avoiding Blackbushe, but this added to their workload and seemed to make their passenger slightly anxious. They orbited multiple times at Tongham and, on about the 5<sup>th</sup> orbit, saw what appeared to be a bird coming towards them and turning away. They did not take avoiding action, except to decrease the AOB slightly (being under a Radar Control service, they were perhaps less primed for unexpected traffic). They then realised it was high for a bird and moving very fast. As it passed their left wingtip, they saw its left-hand rotors which were high as it was in a hard right bank (presumably to avoid) and realised it was a drone. They called immediately "[C/S] Airprox" and reported it as a drone heading north towards the Farnborough overhead.</p> <p><b>Reported Separation:</b> 0ft V/2m H <b>Reported Risk of Collision:</b> High</p> <p><b>The Farnborough LARS West controller</b> reports that [the PA28 pilot] reported an Airprox with a drone that had passed them by approximately 10m at 2000ft. [The PA28 pilot] reported that the drone was tracking northbound from Tongham towards the</p>	<p>In the Board's opinion the reported altitude and/or description of the object were sufficient to indicate that it could have been a drone.</p> <p><b>Applicable Contributory Factors:</b> 1, 2, 4, 7</p> <p><b>Risk:</b> The Board considered that the pilot's overall account of the incident portrayed a situation where providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A

<sup>1</sup> Latitude and Longitude are usually only estimates that are based on the reported time of occurrence mapped against any available radar data for the aircraft's position at that time. Because such reported times may be inaccurate, the associated latitudes and longitudes should therefore not be relied upon as precise locations of the event.

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						Farnborough overhead. Traffic in the vicinity was advised.		
2022099	3 Jun 22 1728	A321 (CAT)	Balloon	5244N 00137E 14NM NE of Norwich FL340	London UIR (C)	<p><b>The A321 pilot</b> reports that, during the climb to 35,000ft, a small white weather balloon with a small box on a short tether was seen in front of the aircraft. It disappeared approximately 300-500ft below the aircraft as they passed 34,000ft. They were approximately 15 miles east of Norwich Airport. A report was made to London on the active frequency.</p> <p><b>Reported Separation:</b> 200ft V/0m H <b>Reported Risk of Collision:</b> Medium</p> <p><b>The NATS Safety Investigation</b> reports that the pilot of [the A321] submitted an Airprox report in response to the sighting of a weather balloon whilst approximately 14NM NE of Norwich airfield. Analysis of the radar by Safety Investigations indicated that there were no associated primary or secondary contacts visible on radar at the approximate time of the event.</p>	<p>In the Board's opinion the reported altitude or description of the object were sufficient to indicate that it was probably a balloon.</p> <p><b>Applicable Contributory Factors:</b> 4, 5</p> <p><b>Risk:</b> The Board considered that the pilot's overall account of the incident portrayed a situation where although safety had been reduced, there had been no risk of collision.</p>	C
2022106	14 Jun 22 0902	B787 (CAT)	Drone	5128N 00022W Hounslow 900ft	London CTR (D)	<p><b>The B787 pilot</b> reports that they saw a drone on their left on a 2.7NM final for RW27L at Heathrow. They only saw it briefly so could not be certain of colour or how many rotors it had. It was [already being] reported on ATIS and ATC kept aircraft updated arriving at Heathrow. They reported the sighting to ATC.</p> <p><b>Reported Separation:</b> NR H / NR V <b>Reported Risk of Collision:</b> NR</p> <p><b>The HEATHROW TOWER controller</b> reports that along with multiple other drone reports, at <b>0902</b> [the B787 pilot] confirmed an earlier sighting of drone on approach to RWY27L.</p>	<p>In the Board's opinion the reported altitude and/or description of the object were sufficient to indicate that it could have been a drone.</p> <p><b>Applicable Contributory Factors:</b> 1, 2, 3, 4, 5</p> <p><b>Risk:</b> The Board considered that the pilot's overall account of the incident portrayed a situation where there was insufficient information to make a sound judgement of risk.</p>	D
2022107	19 Jun 22 1354	R44 (Civ Comm)	Unk Obj	5123N 00003W 2NM ENE Croydon 1800ft	London FIR (G)	<p><b>The R44 pilot</b> reports that they were flying a sightseeing helicopter tour over London. They were well clear of the city zone and about to request frequency change to [enroute frequency] when they believed they heard the Heathrow [SVFR controller] contact them to advise of traffic out of Redhill 4NM to their south. On careful visual inspection for traffic</p>	<p>In the Board's opinion the reported altitude and/or description of the object were such that they were unable to determine the nature of the unknown object.</p> <p><b>Applicable Contributory Factors:</b> 4, 5</p>	C

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						<p>ahead, both they and their passengers all saw a small chrome coloured object. They could not make out any wings or rotors. The object passed on the port side within 2 seconds. They reported it to the Heathrow [SVFR controller] and were cleared to leave the frequency.</p> <p><b>Reported Separation:</b> 20ft V / 100m H <b>Reported Risk of Collision:</b> Low</p> <p><b>The Heathrow SVFR controller</b> reports that [the R44] was leaving the London City CTR at 1500ft and as they left, they passed traffic on a helicopter that was south of their position outside CAS. The pilot of [the R44] reported visual. A short time later somebody reported close proximity to a drone but didn't identify themselves. They thought it might have been [the R44 pilot] so they attempted to confirm this with the pilot. They were unable to raise [the R44 pilot] on several occasions and a short time later the pilot of [the R44] reported that they had headset issues and couldn't hear them so were going en-route.</p> <p><b>NATS Safety Investigations</b> reviewed the radar at the time the pilot of [the R44] reported the sighting, however, no radar contacts were visible. It has been estimated that the UAS was at 1600ft.</p>	<p><b>Risk:</b> The Board considered that the pilot's overall account of the incident portrayed a situation where although safety had been reduced, there had been no risk of collision.</p>	
2022115	26 Jun 22 1103	A319 (CAT)	Drone	5155N 00007W Stevenage 2700ft	Luton CTA (D)	<p><b>The A319 pilot</b> reports on the ILS RW25 at Luton, overhead the east of Stevenage, when both crew clearly saw a white and black quadcopter drone, about 12-18 inches in diameter with red and green lights. It passed down the right side at the same level. The incident was reported to Luton Approach with description, altitude and position.</p> <p><b>Reported Separation:</b> 0ft V/50-100m H <b>Reported Risk of Collision:</b> NR</p>	<p>In the Board's opinion the reported description of the object was sufficient to indicate that it could have been a drone.</p> <p><b>Applicable Contributory Factors:</b> 1, 2, 3, 4, 5</p> <p><b>Risk:</b> The Board considered that the pilot's overall account of the incident portrayed a situation where although safety had been reduced, there had been no risk of collision.</p>	C
2022117	19 Jun 22 1935	EMB190 (CAT)	Unk Obj	5129N 00006W 6NM W London City 1900ft	London City CTR (D)	<p><b>The EMB190 pilot</b> reports that whilst on base leg for the ILS RW09 at LCY at 6.5NM from ILST, they spotted a black drone approximately 50m to the left-hand side of the aircraft and at a slightly lower altitude, moving in the opposite direction of travel.</p>	<p>In the Board's opinion the reported altitude and/or description of the object were such that they were unable to determine the nature of the unknown object.</p> <p><b>Applicable Contributory Factors:</b> 4, 5</p>	C

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						They were level at 2000ft at the time and the drone was only seen for several seconds before it passed by.  <b>Reported Separation:</b> NK V/ 50m H <b>Reported Risk of Collision:</b> NR	<b>Risk:</b> The Board considered that the pilot's overall account of the incident portrayed a situation where although safety had been reduced, there had been no risk of collision.	

### Relevant Contributory Factor (CF) Table

CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				
1	Human Factors	• Flight Crew ATM Procedure Deviation	An event involving the drone operator deviating from applicable Air Traffic Management procedures	The drone operator did not comply with regulations by flying above 400ft and/or in controlled airspace/FRZ without clearance
<b>• Tactical Planning and Execution</b>				
2	Human Factors	• Action Performed Incorrectly	Events involving the drone operator performing the selected action incorrectly	The drone operator was flying above 400ft without clearance.
3	Human Factors	• Airspace Infringement	An event involving an infringement / unauthorized penetration of a controlled or restricted airspace	The drone pilot was flying in controlled airspace/FRZ without clearance.
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
4	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, generic, or late Situational Awareness
<b>• See and Avoid</b>				
5	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft
<b>• Outcome Events</b>				
6	Contextual	• Near Airborne Collision with Other Airborne Object	An event involving a near collision by an aircraft with an unpiloted airborne object (unknown object or balloon)	
7	Contextual	• Near Airborne Collision with RPAS	An event involving a near collision with a remotely piloted air vehicle (drone or model aircraft)	