

### Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 12<sup>th</sup> June 2024

Total	Risk A	Risk B	Risk C	Risk D	Risk E
7	2	2	2	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
2024064	14 Apr 24 1740	ERJ190 (CAT)	Drone	5130N 00010E 4NM E of LCY 2300ft	London City CTR (D)	<p><b>The ERJ190 pilot</b> reports that a drone passed close to the aircraft. The aircraft was approximately 4NM out on the RW27 approach around 2300ft. [It was] seen by the First Officer and two passengers who described it as about 3ft square and a bronze/yellow colour. It went past very quickly so [was] hard to tell quite how close it came.</p> <p><b>The London City controller</b> reports that [the ERJ190] landed on RW27 at time 1742. After landing the pilot reported they thought they spotted a drone whilst at 6.5NM final. The aircraft was at altitude 3000ft at that point. No other information given. The correct reporting procedures were followed.</p> <p><b>Reported Separation:</b> NR <b>Reported Risk of Collision:</b> NR</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 there was insufficient information to make a sound judgement of risk.</p>	D

<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.

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
2024070	28 Apr 24 1912	A320 (CAT)	Unk Obj	5128N 00023W 2.5NM E LHR 700ft	London CTR (D)	<p><b>The A320 pilot</b> reports that on finals and approximately 2.5NM to RW27L at LHR, an unknown object passed down the left-hand side of aircraft within the wingspan of the aircraft. [The pilot] only got a brief glimpse and noticed colours of blue, black and white. Initial thoughts [were that it could have been a] possible drone and immediately reported it to ATC. After landing they conferred with their colleague, whose initial thoughts [had been that it might have been] a balloon of similar colours. All information was passed on to ATC along with a filed ASR.</p> <p><b>Reported Separation:</b> &lt;50ft <b>Reported Risk of Collision:</b> Medium</p> <p><b>The LHR controller</b> reports that an A320 had been passing 700ft on final approach to RW27L and had reported a possible drone at 2.5NM on their left-hand side. Subsequent aircraft [pilots] were warned. The pilot subsequently filed an Airprox. This has been filed on behalf of the RW27L Air South Arrivals control.</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, 6</p> <p><b>Risk:</b> The Board considered that providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A
2024073	1 May 24 1507	A320 (CAT)	Drone	5325N 00245W 1NM NE Tarbock Island VRP 3000ft	Manchester CTA (D)	<p><b>The A320 pilot</b> reports that a drone was spotted on the right-hand side of the aircraft, at the same altitude and approximately 100ft from the side.</p> <p><b>Reported Separation:</b> 0ft V/100ft H <b>Reported Risk of Collision:</b> Low</p> <p><b>The Liverpool controller</b> reports that [the pilot of the A320] was downwind, right-hand, for RW27 at Liverpool, and at 2500ft altitude. They reported they had seen a drone at 3000ft over St Helens, just north of the M62. The flight continued without incident and landed safely.</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, 6</p> <p><b>Risk:</b> The Board considered that although safety had been reduced, there had been no risk of collision.</p>	C

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
2024074	12 Apr 24 1300	Jodel D112 (Civ FW)	Balloon	5048N 00302W 2NM NW Axminster 2000ft	London FIR (G)	<p><b>The Jodel pilot</b> reports that when about 2NM west of Axminster, heading north at 2000ft QNH, they sighted a purple object directly ahead on a reciprocal course. It immediately became apparent that it was a balloon, a helium balloon in the shape of a "0". It was one that would typically be used in parties, for example a 50th party where the person would have two balloons in the shape of "5" and "0". It passed by their port side about 50m away at exactly the same height. They estimated its size to be about a metre high and a metre wide. They reported the incident to Exeter radar at the time.</p> <p><b>Reported Separation:</b> 0ft V/ 50m H <b>Reported Risk of Collision:</b> High</p> <p><b>Exeter ATC</b> report that they had no record of the Jodel pilot communicating with them and they also had no knowledge of any balloons operating in the vicinity of the airport at the time of the Airprox.</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, although safety had been reduced, there had been no risk of collision.</p>	C
2024077	5 May 24 1551	Paraglider (Civ Gld)	Drone	5426N 00258W 500m N Ambleside 1350ft	London FIR (G)	<p><b>The paraglider pilot</b> reports they walked up to High Pike to set up, planning to fly back to land at a cricket ground next to where they had parked. They took off for the flight of about 5min and arrived with plenty of height close to where they were planning to land when they heard a buzzing noise, which they thought may have been a motorbike. They looked towards the road and noticed a drone coming in fast and then saw a second drone. The drones appeared to be fitted with GoPro cameras and were 'playing around their wing', coming in low over and below them. They continued on a straight and level flightpath hoping that they would move on. After '30 seconds' of being buzzed they became increasingly concerned that the drones might hit them and decided to land as soon as possible. They put the wing into a spiral dive, lost altitude quickly and dived from 800ft to 150ft in about 10sec. They had 'a small [canopy] collapse' when they came out of the dive, which they corrected before they landed in a flat field.</p> <p><b>Reported Separation:</b> 'above and below'/5ft H <b>Reported Risk of Collision:</b> High</p>	<p>In the Board's opinion the reported altitude and/or description of the objects were sufficient to indicate that it was a pair of drones.</p> <p><b>Applicable Contributory Factors:</b> 1, 2, 4, 7</p> <p><b>Risk:</b> The Board surmised that the drone operators would have been visual with the paraglider, but nonetheless considered that safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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
2024084	05 May 24 1238	A319 (CAT)	Drone	5136N 00016W 18NM W of LAM VOR FL80	London TMA (A)	<p><b>The A319 pilot</b> reports that a large drone was spotted 30m left of track at FL80 18NM west of Lamborne VOR in IMC. No avoiding action taken due IMC.</p> <p><b>Reported Separation:</b> 30m H <b>Reported Risk of Collision:</b> NR</p> <p><b>The Heathrow INT North Radar controller</b> reports that the A319 was downwind for RW09L at FL80 when the pilot reported a drone off their left wing. They estimated the position to be 18NM west of LAM. This information was reported to other aircraft in the area, but no further reports of the drone were made.</p> <p><b>The NATS Safety Investigation</b> reports that the A319 pilot submitted an Airprox report in response to the sighting of a drone whilst approximately 3.9NM SE of Elstree. It has been estimated that the [drone] was at FL81. Safety Investigations reviewed the radar at the time the pilot reported the sighting, however, no radar contacts associated with the drone were visible. The pilot reported that they had <i>“just had a drone go over our left wing, very close”</i>. The controller passed information on the reported drone to following aircraft, no further reports were received.</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, 7</p> <p><b>Risk:</b> The Board considered that providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A
2024101	20 Mar 24 1343	R44 (Civ Comm)	Model ac	5119N 00015W Epsom Downs 1200ft	London FIR (G)	<p><b>The R44 pilot</b> reports that they were conducting a pipeline patrol over Epsom Downs race-course, established at 1200ft on Heathrow QNH and on frequency 125.625MHz.</p> <p>A model-aircraft passed down their left-hand-side, not seen until abeam. They think it was red and black. They estimate that there had been no more than 100ft separation. Their Observer estimated 30ft separation and it was on their side. It was reported to the Heathrow controller who ‘verified’ the altitude.</p> <p><b>Reported Separation:</b> “30ft” <b>Reported Risk of Collision:</b> NR</p>	<p>In the Board’s opinion the reported altitude or description of the object were sufficient to indicate that it was probably a model aircraft.</p> <p><b>Applicable Contributory Factors:</b> 4, 7</p> <p><b>Risk:</b> The Board considered that safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

## 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)	