

## Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 27<sup>th</sup> April 2022

Total	Risk A	Risk B	Risk C	Risk D	Risk E
6	1	1	4	0	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
2022023	06 Mar 22 1252	T67 Firefly (Civ FW)	Drone	5228N 00227W 4NM S of Bridgnorth 3200ft	London FIR (G)	<p><b>The Firefly pilot</b> reports that, whilst heading north, they saw a small object in the sky converging at the same level. At first, it was thought to be a bird, but they passed within 300ft of it, and it was clearly seen to be a small black drone. They immediately reported the sighting on Halfpenny Green Information for the information of pilots of other local aircraft. They were flying at 3000ft on the QNH. The drone was also spotted by their passenger. NOTAMs were checked and there was nothing reported for that area.</p> <p><b>Reported Separation:</b> 300ft V/300ft H <b>Reported Risk of Collision:</b> Medium</p> <p><b>The Halfpenny Green AFISO</b> reports that they acknowledged the report of the drone sighting from the Firefly pilot and had no further involvement in the event.</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, 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

<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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2022027	08 Mar 22 0844	B787 (CAT)	Unk Obj	5139N 00016E 1.5NM east of LAM 8400ft	LTMA (A)	<p><b>The B787 pilot</b> reports that at 0842, when leaving the LAM VOR (after once around the hold), on heading 260° and descending past 8500ft, a possible drone (white) passed about 100m down the right-hand side of the aircraft at the same level. There were no actions taken by the flight crew and the flight continued with a safe landing at LHR. London ATC were informed and police once on the gate. Later a cabin crew member confirmed that they also saw the drone out of a door window.</p> <p><b>Reported Separation:</b> 0ft V/100m H <b>Reported Risk of Collision:</b> Medium</p> <p><b>NATS safety investigations</b> report that the pilot of [B787 had] reported sighting a large object which had flown down their right-hand side, at FL84 1.5NM east of LAM. The pilot stated that they weren't sure if the sighting was a bird but, as there wasn't any other bird activity noted, they believed it could have been a drone. The controller made a general broadcast to all aircraft on the INT North frequency informing them of the drone report. The controller stated that they also informed the Heathrow Tower controller of the sighting, and that they had advised that they would report it to the Airport Police. 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 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 the pilot's overall account of the incident portrayed a situation where safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B
2022031	15 Mar 22 0852	A320 (CAT)	Drone	5142N 00031W Belsize 8000ft	London TMA (A)	<p><b>The A320 pilot</b> reports having just left the BNN hold at FL80 when a large black 'quad copter' drone with a large, bulbous, round camera underneath passed 50ft below the nose of the aircraft.</p> <p><b>Reported Separation:</b> 50ft V/0m H <b>Reported Risk of Collision:</b> High</p>	<p>In the Board's opinion the description of the object was sufficient to indicate that it was a drone.</p> <p><b>Applicable Contributory Factors:</b> 1, 2, 3, 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

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2022034	21 Mar 22 1213	Learjet 75 (Civ Comm)	Drone	5120N 00004E 3NM NE Biggin Hill 1500ft	London FIR (G)	<p><b>The Learjet pilot</b> reports that whilst flying an ILS Approach to RW21 at Biggin Hill they spotted a drone which appeared to be hovering. They were at 3DME IBGH and approximately 1500ft QNH. The drone looked to be approximately 100ft away, off to the right of their aircraft's path. It was blue and white in colour. At first they thought it was a bird, however when they focused they could clearly see that it was in fact a drone, it was spotted out of the right hand windshield in the 3'o'clock, low position. The drone appeared to be hovering and did not appear to change direction or manoeuvre for the duration that it was spotted. Upon landing, they advised Biggin Hill ATC.</p> <p><b>Reported Separation:</b> 100ft V/50m H <b>Reported Risk of Collision:</b> Low</p> <p><b>The Biggin Hill controller</b> reports that at 1213Z, the Learjet pilot reported sighting a drone on a 3NM final, on the right-hand-side at 1500ft.</p> <p><b>A Biggin Hill investigation</b> confirmed that although subsequent aircraft were informed about the drone sighting, no other pilots reported seeing it. Biggin Hill did not receive any drone requests or notification of any drone flights on that day.</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 although safety had been reduced, there had been no risk of collision.</p>	C

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2022037	5 Mar 22 1210	PA28 (Civ FW)	Drone	5630N 00308W Piperdam village 2200ft	Scottish FIR (G)	<p><b>The PA28 pilot</b> reports that they were taking 3 passengers on a flight to the north of Dundee. On tracking to the north after take-off, just to the north of Piperdam village, they and their passengers spotted a drone off to their left. The drone was at the same level and was a clearly distinguishable, black drone with bright green lights. It seemed to have rotor guards (circular covers around the blades). All 4 of them saw the drone and it was clear to make out. No evading action was required as, by the time it was spotted, it was on their port side appearing to track south, although they were tracking north so it may actually have been stationary.</p> <p><b>Reported Separation:</b> 0ft V/100m H <b>Reported Risk of Collision:</b> Low</p> <p><b>The Dundee controller</b> reports that, at 1215, [the PA28 pilot] reported encountering a UAS at 2200ft half a mile north of Piperdam (approximately 5NM NW of the aerodrome). Miss distance estimated by the pilot was 100m. The UAS was described as big in size with two propellers and black in colour with flashing green lights.</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, 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

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2022040	28 Mar 22 0722	B737 (CAT)	Drone	5344N 00146W 10NM SE POL 6500ft	Leeds Bradford CTA (D)	<p><b>The B737 pilot</b> reports that on climb out from RW14 at Leeds Bradford Airport they were cleared by Scottish to route direct to KARN0 and climb to FL230 with no speed restriction. They actioned the clearance, on breaking out of cloud between FL60-FL70 The FO announced, 'Did you see that?'. They had observed a black drone with 2 red LED lights on it at what they estimated to be 100m away passing down the left-side of the aircraft. They saw it clearly enough to see it manoeuvre initially towards the aircraft then away and down from it. No impact was felt (and no damage observed on the walk round after landing). The Captain reported it to Scottish ATC and the flight continued without further incident. The Captain noted that although it seemed unlikely to encounter a drone at 6500ft the FO was convinced that was what they saw, together with the drone's avoiding action.</p> <p><b>Reported Separation:</b> 0ft V/ 100m H <b>Reported Risk of Collision:</b> Medium</p> <p><b>The NATS investigation</b> found that upon receipt of the report from the pilot, the controller stated that they informed Leeds ATC and ensured that subsequent departures were vectored clear of the area. The controller also stated that they asked the pilot of another aircraft which was routeing between Doncaster and Newcastle, above and to the east of the drone sighting, if they could see the drone, but the pilot reported that they could not. 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 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 although safety had been reduced, there had been no risk of collision.</p>	C

## 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)	