

Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 13th March 2024

Total	Risk A	Risk B	Risk C	Risk D	Risk E
3	0	2	1	0	0

Airprox Number	Date Time (UTC)	Aircraft (Operator)	Object	Location ¹ Description Altitude	Airspace (Class)	Pilot/Controller Report Reported Separation Reported Risk	Comments/Risk Statement	ICAO Risk
2024005	8 Jan 24 1106	B787 (CAT)	Unk Obj	5118N 00029W 0.5NM W OCK 8000ft	London TMA (A)	<p>The B787 pilot reports approaching the OCK VOR at FL80 and 224kt when an object was spotted visually by the Captain (PM) in the 2 o'clock position, moving rapidly past the right wing, apparently about a wingspan's distance. The visual impression was of an irregular, small (1-2m across), black (and perhaps red), 'metallic', mostly horizontally shaped object.</p> <p>Reported Separation: NR Reported Risk of Collision: NR</p> <p>The London controller reports that that [B787 C/S] had reported a drone encounter in the hold at OCK. The pilot reported the drone to be "fast moving, red and black in colour, and about a wingtip away". At the time the aircraft was maintaining FL80. Nothing was seen on radar that corresponded with the drone report.</p> <p>The NATS Ltd investigation states as follows: Description and Investigation: The pilot reported, "We had an unidentified flying object, looks like possibly a drone, fly past our right side about ten, fifteen seconds ago. Or it could have been a large balloon. Hard to tell.". When asked for further details the pilot stated that they believed the drone was red and black, that it was hard for them to estimate the size but that, "...it was moving pretty rapidly which meant it was pretty close to us, and it went just beneath the right side, I hesitate to say; a wingtip or further length away." Other pertinent information: The Controller immediately informed other aircraft on frequency of</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>Applicable Contributory Factors: 4, 6</p> <p>Risk: 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

¹ 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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						<p>the report and telephoned the Airports Group Supervisor (GS Airports) who arranged for an appropriate warning to be entered onto the Heathrow ATIS.</p> <p>Analysis of the radar by Safety Investigations indicated that there were no associated primary or secondary contacts associated with the drone report, visible on radar at the approximate time of the event.</p>		
2024021	5 Feb 24 1700	A320 (CAT)	Drone	5138N 00001E 5NM W LAM FL70	London TMA (A)	<p>The A320 pilot reports that at FL70 approximately 5NM west of LAM VOR, a black drone (quadcopter shape) seen passing the left-hand side of aircraft about 200ft below. There had been a low overcast, so the object had contrasted quite clearly against the white background. No evasive action taken as the object had been in view for a matter of seconds. Drone reported to ATC (Heathrow Director) immediately.</p> <p>Reported Separation: 200ft V/NR H Reported Risk of Collision: NR</p> <p>The Controller reports that whilst working as GS AIR LL INT NORTH it had been reported that the A320 had observed a small drone SW of LAM by 3NM at approximately FL68. The controller reports that they had called LL TWR and they advised that they would get the airport police to interview the crew on arrival. LL INT NORTH reported the drone sighting to subsequent inbounds for 30 minutes. No other aircraft reported the drone.</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>Applicable Contributory Factors: 1, 2, 3, 4, 5</p> <p>Risk: 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

Airprox Number	Date Time (UTC)	Aircraft (Operator)	Object	Location ¹ Description Altitude	Airspace (Class)	Pilot/Controller Report Reported Separation Reported Risk	Comments/Risk Statement	ICAO Risk
2024024	14 Feb 24 1250	F35 (HQ Air)	Drone	5244N 00128E 7.5NM ENE Norwich 14,460ft	London FIR (G)	<p>The F35 pilot reports that at approximately 15,000ft overhead Norwich, the lead aircraft of a 2-ship formation spotted an air-vehicle just left of the nose approximately 500m away. CPA estimated to be less than 100m. The air-vehicle appeared to be a large drone. There was no radar SA from either F35 aircraft, nor from Swanwick Mil.</p> <p>Reported Separation: 0ft V/100m H Reported Risk of Collision: High</p> <p>The RAF Marham Flight Safety Officer reports that a pair of F35 aircraft from RAF Marham were conducting an Operational Conversion Unit first live sortie for a student pilot who was being supervised by an Instructor Pilot in a second aircraft. At 1250:29 at an altitude of 14,460ft at 250kt, the pilot in the lead aircraft sighted an object ahead. Initially believed to be an unreported aircraft in the far distance due to its relatively small size, it soon became apparent that it was in fact an Unmanned Air System (UAS) approximately 500m ahead and rapidly converging.</p> <p>The lack of any confliction warning by ATC (confirmed by Swanwick Mil as undetected by their equipment), combined with the very late visual acquisition of the UAS, resulted in rapidly closing flightpaths. With little time to manoeuvre meaningfully (<5sec from visual pickup to passing the UAS) the lead F35 passed by co-height and 100m lateral distance. The UAS passed down the left-hand side of the aircraft. The second aircraft was in 1.5NM trail, and its pilot also gained visual contact on the UAS, which passed down the right-hand side of their F35.</p> <p>Review of the onboard video collected from the pilot's helmet mounted cameras was largely inconclusive but does suggest a quadcopter style drone, with similar silhouette to a "Phantom" series recreational UAS.</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>Applicable Contributory Factors: 1, 2, 4, 7</p> <p>Risk: 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

Relevant Contributory Factor (CF) Table

CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
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
• Tactical Planning and Execution				
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.
• Situational Awareness of the Conflicting Aircraft and Action				
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
• See and Avoid				
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
• Outcome Events				
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)	