

Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 6th December 2023

Total	Risk A	Risk B	Risk C	Risk D	Risk E
8	1	3	3	1	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
2023240	2 Sep 23 1140	A320 (CAT)	Drone	5120N 00029W 9NM S Heathrow FL070	London TMA (A)	<p>The A320 pilot reports that they encountered a drone at FL070, when on a downwind leg to RW09L, 9NM south of threshold 09L. It was a very close call, distance to the drone was less than 10m, it passed down the right side of the aircraft, just below. The drone was a white quadcopter with diameter of about 3ft.</p> <p>Reported Separation: <30ft V/ <10m H Reported Risk of Collision: High</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: 1,2,3,4,7</p> <p>Risk: 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

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.

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
2023241	24 Oct 23 1533	B737 (CAT)	Unk Obj	5311N 00320W 3NM NE Manchester Airport 3500ft	Manchester TMA (A)	<p>The B737 pilot reports that they were on a Listo2S departure from MAN 05L. On heading 148° a drone (disc shaped like a polo mint with silver curved sides and centre with a black top) passed under left wing during flap retraction. Seen by both pilots and reported on handover to Scottish.</p> <p>Reported Separation: 50ft V/50m H Reported Risk of Collision: Medium</p> <p>The Scottish Controller reports that a B737 departing [airfield] for [destination airfield] checked in following the SID route then reported sighting a drone. Details taken were that a black hollow frisbee shaped drone had been seen 100ft off their left wing, about 50ft above, moving right to left or northbound direction. The aircraft had been around 3500ft (QNH 1000hPa).</p> <p>NATS Safety Investigations report that, analysis of the radar indicated that there were no associated primary or secondary contacts associated with the drone report that were 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>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

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
2023242	25 Oct 23 1130	A320 (CAT)	Unk Obj	5321N 00238W 7.5NM E Liverpool 2000ft	Liverpool CTR (D)	<p>The A320 pilot reports that a drone was within safe distance of the aircraft on base-leg.</p> <p>[UKAB Secretariat note: No further details were forthcoming upon request].</p> <p>Reported Separation: 100ft V/NK H Reported Risk of Collision: Medium</p> <p>The Liverpool controller reports that [the pilot of the A320] was being vectored for a right-hand pattern for RW27. Whilst on right-base at an altitude of 2000ft, the [pilot] reported a drone to the right of them, 100ft below. The [A320 pilot] was turned on to final approach and landed safely.</p> <p>Merseyside Police Counter UAS team and the Manchester [controller] were informed.</p> <p>UKAB Secretariat note that a primary-only contact was observed on radar for one radar sweep, at a location which the A320 pilot had passed 4sec earlier as they had turned from right-base to final at 2000ft.</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, 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
2023244	28 Sep 23 1128	Falcon (Civ Comm)	Balloon	5018N 00518W 14NM North of Culdrose 9300ft	London FIR (G)	<p>The Falcon pilot reports that, whilst marshalling at 9000ft, north of Culdrose, what looked like a small meteorological balloon was observed to pass down the right-hand side of the aircraft, co-altitude and approximately 25m displaced from the right wing. Plymouth Military ATC and the other aircraft in the formation were informed.</p> <p>Reported Separation: 0ft V/25m H Reported Risk of Collision: Medium</p> <p>The Plymouth Military controller reports that no Airprox report was received at the time, no RT records kept (post 30 days of event before they were informed, plus there had been a new comms system).</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>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

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2023246	19 Oct 23 1240	B737 (CAT)	Drone	5155N 00002E 8NM WNW EGSS 7500ft	London TMA (A)	<p>The B737 pilot reports in the climb and entering a gap in the clouds where a dark coloured object, possibly brown or black, was seen in the 11 o'clock against the backdrop of cloud. At the time they were heading west approximately 30NM to the east of waypoint SILVA. The object was initially thought to be a large bird but as it passed the aircraft it was seen to be box shaped with two possible arms on the lateral axis, most likely a drone. It passed to the left and below the aircraft. Their flight path was diverging from the object when it was spotted so it was unnecessary to take avoiding action. The incident was reported to London ATC.</p> <p>Reported Separation: 100ft V/100m H Reported Risk of Collision: Low</p> <p>The Swanwick Controller reports that when the B737 pilot checked in on frequency they reported having sighted a drone after departure, approximately 8NM WNW of EGSS. They reported the drone as square in shape, dark in colour and tracking east. The controller advised Group Supervisor Midlands of the sighting who then liaised with EGSS airport police.</p> <p>The NATS Airprox Investigation reports that upon contacting the NW Deps controller at 1240:22, the pilot of [B737] reported that, passing FL75, they had sighted a drone. This was described as a "dark square shape tracking east". The NW Deps controller advised the Group Supervisor Midlands of the drone sighting and a police report was made with Stansted Airport Police. Analysis of the radar by Safety Investigations indicated that there were no associated primary or secondary contacts associated with the drone report.</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

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2023247	5 Nov 23 1612	EC135 (NPAS)	Drone	5134N 00258W Newport 1300ft	London FIR (G)	<p>The EC135 pilot reports enroute to a tasking, straight and level over Newport when a large unlit drone (estimated 50cm in diameter) was seen in the 1 o'clock position and slightly below the aircraft. It was moving in the window in a manner that did not lead them to believe it would impact the aircraft and, by the time they had called it, it had moved to approximately the 3 o'clock position. It appeared to be tracking west as the lateral separation did not change markedly. A crew-member of 14 years flying experience who also saw it stated that was the closest they had been to a drone while airborne. The pilot, flying since 2000, expressed the same sentiment. The incident was reported to Cardiff Radar and they continued on to the tasking. While in this instance, once visual they did not feel threatened by this incident, the drone was well above 400ft and could easily have constituted a very real threat.</p> <p>Reported Separation: 50ft V/80-100m H Reported Risk of Collision: Medium</p> <p>The Cardiff controller reports that at approximately 1612Z the EC-135 pilot reported sighting of a drone in the vicinity of Newport at 1200ft. They were in receipt of a Basic Service from Cardiff at the time. The information was passed as Traffic Information with no mention of an Airprox. The controller acknowledged and passed the information to another aircraft operating in the vicinity.</p>	<p>In the Board's opinion the reported altitude and description of the object were sufficient to indicate that it could have been a drone.</p> <p>Applicable Contributory Factors: 1, 2, 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
2023250	24 Oct 23 1706	King Air (Civ Comm)	Drone	5229N 00146W 1NM NW Birmingham 700ft	Birmingham CTR (D)	<p>The King Air pilot reports that, during an RNP approach to RW15 at Birmingham, the crew were aware of the possibility of a drone following a sighting by a preceding aircraft pilot. On a 1NM final (approximately), a drone was sighted at the same level (700-800ft) in close proximity off the left wing. The drone was a small recreational-type quadcopter.</p> <p>Reported Separation: 0ft V/ NR H Reported Risk of Collision: 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>Applicable Contributory Factors: 1, 2, 3, 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

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2023251	27 Oct 23 1557	A320 (CAT)	Unk Obj	5136N 00011W IVO Finchley 6500ft	London TMA (A)	<p>The A320 pilot reports that, whilst descending through 6500ft over North London at 220kts, heading southeast and under radar vectors for RW27L, a drone was encountered. It had a diameter of 12-18 inches and was jet-black in appearance and passed above, to the left side of the aircraft, and above the left-hand wing. It was sighted by the Captain.</p> <p>Reported Separation: NR Reported Risk of Collision: NR</p> <p>A NATS Investigation reports that the pilot of Heathrow inbound [A320 C/S] reported sighting a drone as they were on a downwind heading for RW27L passing FL072. The crew described the drone to be black in colour and approximately 0.5m in diameter and was estimated to be at 6500ft.</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, 5</p> <p>Risk: 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

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)	