

Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 24th May 2023

Total	Risk A	Risk B	Risk C	Risk D	Risk E
8	1	3	4	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
2023043	8 Apr 23 1519	B787 (CAT)	Unk Obj	5129N 00037W IVO Windsor 1800ft	London CTR (D)	<p>The B787 pilot reports that on approach to Heathrow RW09L, they had a possible drone sighting. At approximately 1500-2000ft over Windsor a red object was seen passing the right-hand side of the aircraft at the same level, a few metres from the wingtip. The object appeared to be red and stationary. It was reported to ATC as a possible drone sighting. This appeared to be confirmed by a crew member in the following aircraft who also saw the object. Police met the aircraft to gather more information and a case number was given.</p> <p>Reported Separation: 'a few metres from wingtip' Reported Risk of Collision: High</p> <p>The Heathrow controller reports that the B787 pilot reported a drone at between 4 and 5 DME for RW09L. This was then confirmed by the pilot in the following aircraft.</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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	B
2023046	12 Apr 23 1558	Typhoon (Mil FW)	Drone	5310N 00004E Spilsby 2000ft	Coningsby MATZ (G)	<p>The Typhoon pilot reports that during the recovery phase of flight they had an Airprox with a large UAS during a feed-in for an SRA for RW25. The incident occurred at 2000ft QFE at approximately 8NM from the threshold (in the eastern MATZ stub). The UAS passed-by co-altitude with an estimated separation of 200ft. There was no time to react before it had passed through their 3-9 line.</p> <p>Reported Separation: 0ft V/ 200ft 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, 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

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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2023048	8 Apr 23 1135	A320 (CAT)	Drone	5129N 00044W 2.5NM S Maidenhead 3000ft	London TMA (A)	<p>The A320 pilot reports that a drone had been reported at 9NM final on the right-hand side of the centreline RW09L at 3000ft by the pilots of the two aircraft before them. ATC asked if they were happy to continue. Since the drone was staying to the right of the centreline they decided to continue. At 9NM and 3000ft the drone flew under the left wing, only a few meters from the engine. ATC was informed and the runway was closed after that. The pilot described the drone as being round shaped drone with purple/turquoise colour.</p> <p>Reported Separation: 3-10ft V / 0ft H Reported Risk of Collision: High</p> <p>The Heathrow Approach controller reports that [the pilots of 3 aircraft reported a drone in the vicinity]. The A320 pilot said it was exactly on final at 3000ft. As they [the controller] considered this an immediate risk to aircraft they immediately discontinued arrivals on RW09L and coordinated switching to RW09R.</p> <p>NATS Safety Investigations report summary states that: Analysis of the radar by Safety Investigations during that investigation indicated that there were no associated primary or secondary contacts visible on radar at the approximate time of the events.</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

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
2023049	15 Apr 23 1550	PA28 (Civ FW)	Drone	5138N 00143W Highworth 2300ft	London FIR (G)	<p>The PA28 pilot reports conducting a VFR flight routing Swindon to Farringdon intending to cross Brize Zone to the north. They had changed from Oxford Radar to Brize Zone within the previous 1-3min when they saw what they first thought was a bird, but its trajectory was uncharacteristically linear/still. As they approached they could see that it was a light coloured quadcopter. Distance was difficult to judge but they did not think it could have been more than a few hundred feet below. They had seen on NOTAMs that drone flying was expected in defined zones further to the south of their position (and had planned deliberately to avoid them accordingly) but was surprised to come so close to what they were pretty sure was a drone on the route they had selected.</p> <p>Reported Separation: 200ft V/100m H Reported Risk of Collision: Low</p> <p>The Brize Norton Radar Controller reports they were bandboxing Radar, Zone and Director. They did not recall any specifics of the occurrence but have watched the radar replay and listened to the tapes. At 1550 [PA28 C/S] called 7 miles west of Farringdon for a Zone transit, routing Farringdon to Burford at 2300ft. They allocated a squawk and applied Basic Service, then cleared them to cross as requested not above 2300ft. They reported turning at Farringdon, crossed the zone, exited at Burford and then left the frequency on route at 1601. At no time was there a mention of an Airprox or of any other traffic.</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, 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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2023060	17 Apr 23 1915	Chinook (HQ JHC)	Model ac	5358N 00135W Harrogate 100-150ft AGL	London FIR (G)	<p>The Chinook pilot reports that the crew had planned an approach into Harrogate HLS, [and with approximately 2NM to run] they came into close proximity with a model aircraft being flown in the area.</p> <p>A crewman spotted the model aircraft as it flew directly towards the [Chinook] from the 9 o'clock position. As the model aircraft approached, it dived below the [Chinook] either by the force of the downwash or under the control of the remote operator. It was the flash of the change in the wing profile that made the aircraft visible as the wing cross-section increased.</p> <p>Once on the ground at Harrogate, the crew discussed the event and elected to continue with the sortie as it was a model aircraft and had not interfered with the [Chinook]. The model was described as a green/brown replica historic model aircraft without lights.</p> <p>The UKAB Secretariat contacted the local scale-model flying club but efforts to trace the pilot were unsuccessful.</p> <p>Reported Separation: 10-20m Reported Risk of Collision: Low</p>	<p>In the Board's opinion the reported altitude and/or description of the object were sufficient to indicate that it was probably a model aircraft.</p> <p>Applicable Contributory Factors: 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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2023062	20 Apr 23 1515	Texan II (HQ Air Trg)	Balloon	5310N 00508W 22NM WSW RAF Valley 5120ft	Valley Aerial Tactics Area (G)	<p>The Texan II pilot reports in a formation of 2 Texans operating in VATA A1. Shortly after rolling out of a turn on a routine exercise the rear-seat pilot noted an object passing the right side of the aircraft. with around 50m separation. It appeared as a balloon shaped object with a rectangular shaped object suspended beneath, leading the crew to believe that it may have been a weather balloon. The nearest weather balloon release was noted to be about 50NM to the east, and the easterly wind at 5000ft may have moved an object towards the point of observation, if indeed it was a weather balloon. There were no ships noted in the immediate vicinity of the observed object, which was another theoretical point of origin. The formation climbed to 7000ft to deconflict vertically and then terminated the medium level exercise, turning away to the south and descending into low level to complete the sortie with nothing further to report</p> <p>Reported Separation: 0ft V/50m H Reported Risk of Collision: Medium</p> <p>The Valley Radar Controller reports the formation had reported they were going en-route low level. Perhaps 30sec later they noticed them level out. They then came back to Radar frequency and reported that they had witnessed something similar to a balloon or perhaps a small UAV. The controller passed this information on to the Supervisor. The wind at the time was easterly at around 20kts and thus the object, had it been a balloon, would have been imminently leaving their airspace. It also suggests its origin could have been the north of Anglesey or the northwest of England.</p> <p>The Valley Investigation concluded that there were no reported Met Balloon releases in the vicinity of the Airprox or the surrounding area so it was not possible to positively determine what the object was.</p>	<p>In the Board's opinion the reported description of the object was sufficient to indicate that it was probably a balloon.</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

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2023065	1 May 23 0944	DHC8 (CAT)	Unk Obj	5128N 00048E IVO GAPGI 6000ft	London TMA (A)	<p>The DHC8 pilot reports that when at 6000ft, in the vicinity of GAPGI during their STAR transition to LCY airport for RW27, they saw a drone passing their left wing. The drone was less than 200m away. They reported it to ATC and completed a normal landing.</p> <p>Reported Separation: 0ft V/ 200m H Reported Risk of Collision: Medium</p> <p>The Swanwick TC controller reports that the DHC8 pilot reported a drone-like thing in the sky just south of their position (2NM west RAVSA) and at their level, 6000ft. More information was requested and the pilot stated it was half-moon shaped and black. This information was passed onto LCY Twr and put on the ATIS.</p>	<p>In the Board's opinion the reported altitude, position and/or description of the object, combined with the absence of any indication of a drone's presence from drone detection data, 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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	C
2023066	29 Apr 23 1121	E190 (CAT)	Drone	5131N 00004W Tower of London 2000ft	London City CTR (D)	<p>The E190 pilot reports that on approach into London City RW09, while turning inbound on the localiser, they could clearly see something coming in their direction. It was flying in the opposite direction and when they were in the turn it just passed below their right wing. They could clearly identify the black colour with some shining part, probably a reflection from the sun, and the typical drone shape.</p> <p>Reported Separation: "Very close, just below" Reported Risk of Collision: Medium</p> <p>NATS Safety Investigations. The pilot of [the E190] submitted an Airprox report in response to the sighting of drone whilst approximately 6.1NM west of London City Airport, in the vicinity of The Shard. It has been estimated that the UAS was at 2000ft. Safety Investigations reviewed the radar at the time the pilot of the reported the sighting, however, no radar contacts were visible.</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

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)	