

Consolidated Drone/Balloon/Model/Unknown Object Report Sheet for UKAB Meeting on 19 Jun 2019

Total	Risk A	Risk B	Risk C	Risk D	Risk E
12	4	1	7	0	0

Airprox Number	Date Time (UTC)	Aircraft (Operator)	Object	Location Description Altitude	Airspace (Class)	Pilot/Controller Report	Contributory Factors (CF)/Risk (see table at end)	ICAO Risk
2019082	14 Apr 19 1215	Ventus (Civ Gld)	Drone	5239N 00218W 2nm NW Cosford 3800ft	London FIR (G)	<p>The Ventus pilot reports that the weather was good, with clear visibility. The incident occurred about 1nm NW of junction 3 of the M54. He noticed a small object ahead and slightly right of centre, it appeared to be hovering. As he closed in, he suddenly realised it was a large black drone directly in front of him at the same altitude. His immediate reaction was to turn to port. He glanced right to observe it pass the starboard wingtip. He immediately transmitted on the Cosford frequency to warn others of its presence. After the incident he returned to Cosford because he was feeling shaken.</p> <p>Reported Separation: 0ft V/ NK H Reported Risk of Collision: High</p>	<p>The drone was being flown above the maximum permitted height of 400ft such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 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>	A

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2019084	1 May 19 1317	BE76 (Civ FW)	Drone	5123N 00107W 6nm SW Reading 2200ft	London FIR (G)	<p>The BE76 pilot reports that whilst in straight and level cruise he saw an object directly ahead at a range of about 200m and slightly below. At first, he thought it was a bird and expected it to veer off as birds usually do when they become aware of an approaching aircraft. However, he observed that the object maintained its course and as he drew closer he realised it was a large quadcopter drone. He distinctly saw the rotors contained within their rotor rings and that the central body was dark and mottled in colour and appeared to be camouflaged. The drone appeared to maintain a steady course and height. He was unable to ascertain its speed. The pilot stated that there was no opportunity to take avoiding action and that the risk of collision was very, very high and that he had been very frightened. He noted that had he been a little lower or the drone a little higher it would have impacted directly on to the nose or windscreen of the aircraft.</p> <p>Reported Separation: 25ft V/ 0m H Reported Risk of Collision: Very High</p>	<p>The drone was being flown above the maximum permitted height of 400ft such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 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>	A
2019086	1 May 19 1555	PA28 (Civ FW)	Drone	5138N 00036E South Woodham Ferrers VRP 2000ft	Southend CTA (D)	<p>The PA28 pilot reports that he saw a drone off his starboard wing, his first thought was that it was a bird, but he was able to maintain visual contact with it by looking back over his shoulder through the rear window and he was able to see the profile was that of a 4 rotor drone, there were definitely no wing movements and it was not the profile of a bird. He first reported it as 400m away to ATC, but on reflection thought that it was closer than that, about 100m. His risk assessment was taking into consideration that it was not in conflict with his flight path and no avoiding action was taken.</p> <p>Reported Separation: 0ft V/ 100m H Reported Risk of Collision: None</p> <p>The Southend Controller reports that the PA28 was on a local flight and was transiting Southend's CAS to the NE at 2000ft. when in the vicinity of Woodham Ferrers VRP he reported seeing a drone pass down his left-hand side at a distance of 0.25nm at a similar level.</p>	<p>The drone was being flown above the maximum permitted height of 400ft and within controlled airspace such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 3, 4, 6</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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2019088	4 May 19 1055	B787 (CAT)	Drone	5128N 00013W 7.5nm E Heathrow 2500ft	London CTR (D)	<p>The B787 pilot reports being at 7.5nm final approach for RW27R when a drone was observed on their right at approximately 1.5nm. It was slightly below and moving towards their position, but their flight paths were diverging so no avoiding action was necessary. The drone was medium sized and had multiple rotors.</p> <p>Reported Separation: 500ft V/1.5nm H Reported Risk of Collision: None</p> <p>The Heathrow Controller reports that when on 7nm final, the B787 pilot reported a drone to the right-hand side.</p>	<p>The drone was being flown above the maximum permitted height of 400ft and within controlled airspace such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 3, 4, 6</p> <p>Risk: The Board noted the pilots estimate of range seemed at variance with his being able to identify the drone as having multiple rotors. They concluded that the pilot had probably overestimated the range. Notwithstanding, they 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
2019090	4 May 19 1715	A319 (CAT)	Unk Obj	5052N 00004E 7nm NW Seaford 9500ft	Worthing CTA (A)	<p>The A319 pilot reports that he was climbing through FL93 for FL120 when both pilots spotted a drone coming towards them. There was no time to take avoiding action and it passed down the left-hand side of the aircraft. The drone was purple/black in colour.</p> <p>Reported Separation: 100ft V/ <1nm H Reported Risk of Collision: High</p>	<p>The Board members considered that the altitude of the encounter and the pilot's description was such that they could not definitively determine the nature of the 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
2019091	5 May 19 1400	A320 (CAT)	Unk Obj	5102N 00000W 8nm SE Crawley FL060	London TMA (A)	<p>The A320 pilot reports that on departure from Gatwick RW08R, whilst in the climb, a totally white object resembling a shoebox sized cube with a round ball on top passed down the left-hand side, slightly above and within 50m of the aircraft. The object appeared to be in level flight.</p> <p>Reported Separation: 100ft V/50m H Reported Risk of Collision: None</p>	<p>The Board noted that this incident occurred in the vicinity of the Met Office site at Herstmonceux, however, the Met Office confirmed that there were no Met balloons airborne in that area at that time and date. The Board were therefore not able to ascertain the nature of the 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>	B

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2019093	4 May 19 1745	B777 (CAT)	Drone	5119N 00023W Ockham 6000ft	London TMA (A)	<p>The B777 pilot reports descending downwind for RW27L at Heathrow, passing 7000ft, when a drone was sighted momentarily, which passed directly underneath the aircraft, about 1000ft below. The sighting was during a period of high workload for both flight crew and ATC who were responding to a succession of reports of wind shear on finals at the time. Only the FO saw the drone but it was a positive identification, estimated to be of a large size. The incident was reported to ATC.</p> <p>Reported Separation: 1000ft V/ 0m H Reported Risk of Collision: Not reported</p>	<p>The drone was being flown above the maximum permitted height of 400ft and within controlled airspace such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 3, 4, 6</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
2019094	7 May 19 0905	B787 (CAT)	Drone	5127N 00021W Heathrow 1000ft	London CTR (D)	<p>The B787 pilot reports that he was on final for RW27L, when he saw a white drone to the right of the aircraft and slightly below. It was operating in the approach at 2.8 DME between RW27L and RW27R at 1000ft, they did not take avoiding action as it was of no immediate threat to their final approach. Although it wasn't close enough to hit them, they considered it to be a dangerous place to operate and a gust of wind could have blown it into the path of the aircraft.</p> <p>Reported Separation: Not reported Reported Risk of Collision: High</p>	<p>The drone was being flown above the maximum permitted height of 400ft and within the lateral and vertical limits of an FRZ such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 3, 4, 6</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
2019095	27 Apr 19 1325	A319 (CAT)	Unk Obj	5100N 00006E Uckfield 5600ft	London TMA (A)	<p>The A319 pilot reports approaching the MAY VOR from the south under radar vectors when, during a tum, he clearly saw a grey and red or orange 'fast object' flying in the opposite direction, to their left, in straight flight. The visual contact lasted for about 4 or 5 seconds as they were in the tum. He thought that the drone made a tum to his right a few seconds after they saw it.</p> <p>Reported Separation: 200ft V/100m H Reported Risk of Collision: Medium</p>	<p>The Board members considered that the altitude of the encounter and the pilot's description was such that they could not definitively determine the nature of the 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

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2019098	28 Apr 19 1240	A319 (CAT)	Unk Obj	5109N 00007E 12nm E Gatwick FL117	London TMA (A)	<p>The A319 pilot reports that after climbing out from Gatwick the PF noticed a drone a few seconds after breaking cloud. Cloud tops were 7500ft. It passed below them from the centre of the aircraft and under the right-hand wing, around 30-50ft below. It was contrasted against the clouds and appeared dark green in colour with a white light on top and was about 2ft long. Its speed was hard to determine, it may have been hovering. The PM did not see it.</p> <p>Reported Separation: 50ft V/0m H Reported Risk of Collision: High</p>	<p>The Board members considered that the altitude of the encounter and the pilot's description was such that they could not definitively determine the nature of the object. Although the pilot had reported seeing a white light on top of the object, members wondered if this could have been a reflection from the top surface.</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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A
2019103	14 May 19 1700	A320 (CAT)	Drone	5555N 00301W ~8nm ESE Edinburgh 6800ft	Scottish TMA (D)	<p>The A320 pilot reports under radar vectors for the ILS to RW24. It was a completely clear day with excellent visibility. As the aircraft was descending in a right-hand orbit and on an approximate heading of southwest to west, a black 'hobby drone' was seen by the First Officer (PM) passing along the right side of the aircraft. No avoiding action was required and a report was made to the Edinburgh approach radar controller who further reported the event to other aircraft following.</p> <p>Reported Separation: 200ft V/¼nm H Reported Risk of Collision: Medium</p>	<p>The drone was being flown above the maximum permitted height of 400ft and within controlled airspace such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 3, 4, 6</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
2019114	19 May 19	A320 (CAT)	Drone	5110N 00003W Lingfield 3000ft	London TMA (A)	<p>The A320 pilot reports that on departure from Gatwick, in a left turn, the First Officer sighted a small drone fly past the nose and down the left-hand side of the aircraft. The Captain then sighted the drone miss the port wingtip by about 20ft. It was described as approximately a meter in length and black in colour with blue markings. The sighting was reported to ATC.</p> <p>Reported Separation: 0ft V/20ft H Reported Risk of Collision: Not reported</p>	<p>The drone was being flown above the maximum permitted height of 400ft and within controlled airspace such that it was endangering other aircraft at that location.</p> <p>Applicable Contributory Factors: 1, 2, 3, 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>	A

Relevant Contributory Factor (CF) Table

CF	Factor	Description	Amplification	Notes
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with	The drone operator did not comply with regulations due to flying above 400ft and/or in controlled airspace/FRZ without clearance
	• Tactical Planning and Execution			
2	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution	The drone operator was flying above 400ft without clearance.
3	Human Factors	• Airspace Infringement		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	Pilot had no, or only generic, or late Situational Awareness	The pilot and drone operator had no, or only generic, situational awareness about each other.
	• See and Avoid			
5	Contextual	• Near Airborne Collision with Other Airborne Object	A conflict in the FIR	An Airprox involving an unknown object or balloon.
6	Contextual	• Near Airborne Collision with RPAS	A conflict in the FIR	An Airprox involving a drone or model aircraft.