

Consolidated Drone/Balloon/Model/Unknown Object Report Sheet for UKAB Meeting on 09 October 2019

Total	Risk A	Risk B	Risk C	Risk D	Risk E
16	6	6	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
2019202	1 Jul 19 0705	A320 (CAT)	Unk Obj	5128N 00011W 8.6nm E Heathrow 3000ft	London TMA (A)	<p>The A320 pilot reports they were established on the Heathrow ILS RW27R at 8.6nm when the First Officer stated that he could see an object to the right of the aircraft. The Captain looked and saw what could have been a drone at about the same level, approximately 300m away. It looked more like a drone than a balloon. It was reported to ATC and the police.</p> <p>Reported Separation: 0ft V/ 300m H Reported Risk of Collision: Not reported.</p>	<p>The Board were unable to determine the nature of the unknown object.</p> <p>Applicable Contributory Factors: 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
2019203	4 Jul 19 1311	B747 (CAT)	Drone	5126N 00011W Wimbledon 6000ft	London TMA (A)	<p>The B747 pilot reports on departure from London Heathrow when the crew saw a silver / white drone which passed directly beneath the nose within a few seconds. It was difficult to assess how close the drone was as they did not know its size. They immediately advised London Air Traffic Control of the Airprox. The pilots discussed the object and were both certain that it was not a balloon.</p> <p>Reported Separation: 300ft V/0m H Reported Risk of Collision: Not reported.</p>	<p>The reported 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>	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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2019204	11Jul 19 1353	A380 (CAT)	Drone	5134N 00041W 3nm N BUR NDB 4500ft	London TMA (A)	<p>The A380 pilot reports he was conducting a standard departure from Heathrow with a climbing right turn, when a drone was spotted to the starboard side of the aircraft. The drone was white with 4 propellers, it was below, just off the end of the wing-tip, there was no time to take any avoiding action. It was reported to ATC.</p> <p>Reported Separation: 500ft V/ 150m H Reported Risk of Collision: Medium</p> <p>The Swanwick Controller reports that the A380 reported encountering a drone at 1353 hrs, when passing 4000ft.</p>	<p>The reported 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
2019205	8 Jul 19 1805	A320 (CAT)	Drone	5109N 00009W London Gatwick 350ft	Gatwick CTR (D)	<p>The A320 pilot reports in the late stages of a manual ILS approach into Gatwick. They had taken on extra fuel due to reports of drone activity in the London TMA and had also been warned on ATIS and by the controller. There had been no reports of sightings recently. Passing about 350ft, slightly right of the centreline, the Captain exclaimed "drone". The F/O looked out and also saw a drone, directly in front of the aircraft, slightly to the left at a range of about 100m. Visual contact was maintained with the drone as it passed down the left side of the aircraft at the same level. The F/O is a drone enthusiast and identified the drone as a DJI Inspire. The crew were unable to perform an evasive manoeuvre due to the speed of the event. The F/O reported the drone sighting to ATC and the crew made a statement to the police after landing. The crew believed that if the autopilot had still been engaged, and they were on the centreline, there was a very high probability that they would have struck the drone.</p> <p>Reported Separation: 0ft V/ 20m H Reported Risk of Collision: High</p>	<p>The reported drone was being flown within the Gatwick CTR and FRZ and without clearance 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

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2019211	23 Jul 19 1305	Dash 8 (CAT)	Drone	5126N 00004E 2nm S London City 2000ft	London/City CTR (D)	<p>The Dash 8 pilot reports he was passing south of London City when he saw a silver, medium sized hobby-drone. He then saw another 2 minutes later, on the right of the aircraft within 30m, it was the same type and colour as the first drone.</p> <p>Reported Separation: '6-12m' Reported Risk of Collision: High</p>	<p>The reported 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
2019213	27 Jul 19 1902	A320 (CAT)	Drone	5128N 00014W Barnes 2500ft	London CTR (D)	<p>The A320 pilot reports on final approach to Heathrow RW27 when a drone passed within 100m down the left side of the aircraft.</p> <p>Reported Separation: 0ft V/<100m H Reported Risk of Collision: High</p>	<p>The reported 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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B
2019214	26 Jul 19 1822	A321 (CAT)	Unk Obj	5327N 00201W 10nm Manchester 3400ft	Manchester CTA (D)	<p>The A321 pilot reports he was passing 3420ft turning onto finals for Manchester RW23R when he saw a large black 'hockey puck' shaped drone fly over the top of the aircraft. It passed overhead the aircraft by about 50ft, heading south. They were surprised to see a drone so high when on finals and did not have time to take any action. ATC and the police were informed.</p> <p>Reported Separation: 50ft V/ 100m H Reported Risk of Collision: High</p>	<p>The Board were unable to determine the nature of the unknown object.</p> <p>Applicable Contributory Factors: 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

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2019219	2 Aug 19 1753	EV97 (Civ FW)	Drone	5331N 00217W Salford 1700ft	London FIR (G)	<p>The EV97 pilot reports that he was on a local sortie when he sighted traffic in the 11 O'clock position which he initially believed to be a helicopter. His attention was drawn to the traffic as it appeared to be glinting in the sun. He commenced a slight right turn to increase separation and to allow the traffic to pass down the left side. As the traffic passed he realised it was actually a red quadcopter drone. The quadcopter then appeared to descend rapidly and he lost visual contact with it. After the traffic had passed he reported the event to Barton Information and continued his planned flight. The pilot noted that because he had initially believed the traffic was a helicopter, he had perceived it to be further away than was the case due to its small size. Had he realised sooner that the object was a drone he would have carried out a more rapid turn to avoid.</p> <p>Reported Separation: 0ft V/30m H Reported Risk of Collision: Medium</p>	<p>The reported 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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B
2019222	4 Aug 19 1658	PA28 (Civ FW)	Drone	5159N 00103W Finmere Microlight site 3200ft	London FIR (G)	<p>The PA28 pilot reports she was on a nav-ex at 2800ft, she looked to the rear quarter for FREDAL checks and saw a white drone with 4 props 200ft below.</p> <p>Reported Separation: 200ft V/ 0m H Reported Risk of Collision: Medium</p> <p>The Brize App controller reports that the PA28 pilot was receiving a Basic Service. At 1658Z the pilot (indicating FL032 on Mode C at the time) reported a drone 200ft beneath them. Although there was a faint primary track in the area, it looked like radar clutter so no Traffic Information had been given.</p>	<p>The reported 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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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2019223	4 Aug 19 1242	R44 (Civ Helo)	Drone	5510N 00649W Downhill 100ft	Scottish FIR (G)	<p>The R44 pilot reports that while conducting a pleasure flying event on National Trust property in Downhill, Northern Ireland a small drone passed overhead by about 40/50ft while in the last 100ft of his descent to land. He continued with the approach as the drone had gone directly overhead the helicopter. During shut down he saw it fly back overhead.</p> <p>Reported Separation: 45ft V/0m H Reported Risk of Collision: Not reported.</p>	<p>The reported drone appeared to be being operated within 50m of the helicopter, in contravention of ANO 2016 Article 95(2)(c).</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>	A
2019232	12 Aug 19 0801	A320 (CAT)	Drone	5542N 00303W Dewar 7000ft	Scottish TMA (D)	<p>The A320 pilot reports that a black drone, possibly with blue markings, was seen directly ahead and above the aircraft. The drone passed before any action could be taken.</p> <p>Reported Separation: 100ft V/ 0m H Reported Risk of Collision: Very High.</p>	<p>The reported 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
2019234	13 Aug 19 0958	Typhoon (HQ Air (Ops))	Drone	5305N 00011W Coningsby 900ft	Coningsby ATZ (G)	<p>The Typhoon pilot reports overshooting from a low approach when a white and blue quadcopter drone was seen. The drone did not appear to have crossed the boundary fence of the airfield and was not on the RWY centreline. The drone sighting was immediately reported to ATC and the pilot extended upwind for a few seconds to ensure height and lateral deconfliction prior to turning on to an easterly heading; visual contact was lost in the turn after safe separation had been achieved and no risk of collision existed.</p> <p>Reported Separation: '900ft' Reported Risk of Collision: Medium</p>	<p>The reported drone was being flown above the maximum permitted height of 400ft, within the Coningsby ATZ and FRZ and without clearance 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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2019235	20 Jul 19 1133	A320 (CAT)	Unk Obj	5144N 00136E LOGAN FL250	London TMA (A)	<p>The A320 pilot reports approaching waypoint LOGAN from the east, a drone was spotted at the same level. They passed to the right of it, but were unable to estimate the distance. ATC were notified.</p> <p>Reported Separation: Not reported. Reported Risk of Collision: None</p>	<p>In the Board's opinion the reported altitude was such that the object was probably not a drone. The Board were unable to determine the nature of the unknown object.</p> <p>Applicable Contributory Factors: 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
2019239	18 Aug 19 1705	A319 (CAT)	Drone	5140N 00036 E Waypoint BRASO FL110	London TMA (A)	<p>The A319 pilot reports he was above the cloud in VMC conditions at FL110 near reporting point BRASO. The FO spotted the drone first and alerted the Captain, it was easy enough to see due to its relative motion ahead of the aircraft, it seemed to be crossing right to left (relative to the aircraft). It was clearly identifiable as a drone, was dark blue in colour with a gloss finish and some black trim. It appeared to have a dome shape and was thought to be a quadcopter with props close to the body. There was no opportunity to take any avoiding action, and the crew were a little shaken after the event.</p> <p>Reported Separation: 0ft V/25m H Reported Risk of Collision: High</p>	<p>The reported 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
2019240	18 Aug 19 1302	A319 (CAT)	Drone	5127N 00011W Heathrow Approach 3000ft	London CTR (D)	<p>The A319 pilot reports leaving the BIG hold for ILS RW27L when a drone was spotted 0.5nm away, to the right and slightly below. It was beige, large and rectangular, with an unknown number of propellers and did not have lights. It appeared to be hovering. They assessed their paths would not cross and continued. ATC were informed and passed to information to following aircraft.</p> <p>Reported Separation: 200ft V/50m H Reported Risk of Collision: Medium</p>	<p>The reported 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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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2019244	20 Aug 19 1545	C152 (Civ FW)	Drone	5224N 00126W Coventry Airport 900ft	Coventry ATZ (G)	<p>The C152 instructor reports setting up the aircraft for its approach to land whilst on the base leg when the student pilot in the left seat reported he had seen a white DJI Phantom drone pass under them, directly below the left wing. The instructor did not see it.</p> <p>Reported Separation: 200ft V/0m H Reported Risk of Collision: Not reported.</p>	<p>The reported drone was being flown above the maximum permitted height of 400ft, within the Coventry ATZ and FRZ and without clearance 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 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	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.