

Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 10th November 2021

Total	Risk A	Risk B	Risk C	Risk D	Risk E
9	3	3	3	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
2021195	16 Sep 21 1229	A319 (CAT)	Unk Obj	5128N 00016W 6NM E Heathrow 2000ft	London CTR (D)	<p>The A319 pilot reports that the aircraft was at an altitude of 2000ft, 6.3NM to touchdown, when a drone passed directly overhead the aircraft at a distance of approximately 100ft.</p> <p>Reported Separation: 100ft V/ 0m H Reported Risk of Collision: NR</p> <p>The Heathrow Controller reports that the A319 pilot reported passing a drone when 6.3NM from touchdown.</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
2021196	29 Aug 21 1452	A320 (CAT)	Drone	5129N 00033W Colnbrook Reservoir 1000ft	London CTR (D)	<p>The A320 pilot reports that, on final for RW09L, between 900ft and 1000ft rad-alt, the First Officer saw a blue drone at the 1 o'clock position, extremely close to the aircraft (the FO thought an impact was highly likely). ATC was informed and a normal landing followed. On the gate, the crew was interviewed by the Police, who took a statement. Other aircraft also reported a similar drone at a similar location. [UKAB Note: It was subsequently confirmed by the NATS investigation that the crew of the following aircraft did NOT sight the reported drone.]</p> <p>Reported Separation: NR 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 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.

2021198	27 Sep 21 1600	Hawk (HQ Air Ops)	Unk obj	5447N 00006W 60NM ENE Leeming 9000ft	London FIR (G)	<p>The Hawk pilot reports that after a 2v1 merge, on climb-out they saw what initially looked like a piece of the other aircraft fall off, the other aircraft had flown directly over the object. As they were about to transmit, they were able to give it a closer inspection. The object appeared to be Silver/Grey and stationary at approx 9000ft amsl. They discounted it as a piece of the other aircraft as it was far too big and the other aircraft was still flying. The object passed about 500ft down the left-hand side of the aircraft. They assumed that the object was a drone. They informed the other aircraft of the occurrence. Coincidentally, there was a very large surface vessel which appeared to be towing an array of sorts. It was located about 10NM away from the formation, heading southeast. As a formation they discussed the likeliness of the drone to be associated with the surface vessel, and subsequently moved location for the next fight to the west, a considerable distance away from the surface vessel. Post their final fight, the drone was once again spotted by the rear-seat pilot of another aircraft in the formation. It was significantly further west than its original location, and now at 7000ft amsl. The wind in that location was northerly at a considerable speed. Leeming App was informed on handover, who then informed Swanwick Mil of the occurrence.</p> <p>Reported Separation: 500ft V/ 500ft H Reported Risk of Collision: Medium</p> <p>HQ Air Command Comments: This Airprox was subject to a Local Investigation and was a difficult report to investigate. Swanwick(Mil) was approached for comment but reported nothing seen on radar nor had record of anyone else booked into the area. Enquiries with a Norwegian research vessel working in the North Sea and HMS Prince of Wales indicated that neither had drones flying in the area or at the time of the reported Airprox. The investigation could not therefore confirm whether the object was a drone. Drone or not, and without prior notice of its presence, see and avoid remained the only barrier to collision. The object was spotted by the second aircraft after the first had overflown its position; no avoiding action was required by the second aircraft and it is not known how close the first aircraft got to the object. The pilot's actions were correct in reporting the sighting to the first aircraft and air traffic control as soon as possible.</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
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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
2021200	29 Sep 21 1002	PA28 (Civ FW)	Drone	5200N 00028W 1NM east of Flitwick 2500ft	London FIR (G)	<p>The PA28 pilot reports that they saw a small, brightly shining object just in front of the left wingtip. Initially, they thought it was an aircraft further away, but it became immediately apparent that it was a drone flying at the same altitude, fast, just off the wingtip. By the time they had realised this, it had passed behind the aircraft and ceased to be a risk; there was no time to take avoiding action. The Airprox was reported to Cranfield, who were advised that a report would be filed.</p> <p>Reported Separation: 0ft V/80m H Reported Risk of Collision: High</p> <p>The Cranfield controller reports that they received a transmission from the PA28 pilot, who was transiting the airspace on a Basic Service. They were advised that the aircraft had just flown past a drone at 2500ft, 1NM to the east of Flitwick. The controller advised them that there was no known activity in that area but noted down the details and asked the assistant to report the drone sighting to the police and to call Luton Radar to advise them of the drone activity.</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
2021204	7 Oct 21 1135	AW109 (HEMS)	Drone	5243N 00115W 6.5NM SSE East Mids 800ft	London FIR (G)	<p>The AW109 pilot reports that they were on a HEMS flight flying from the primary site in Castle Donnington to Glenfield hospital. The HEMS crew were travelling by land, the pilot was alone travelling to hospital for crew pickup. They crossed RW27 East Midlands north to south at the DHL apron area and took a direct track over the Charnwood forest hills. Approximately overhead West Beacon Farm helipad, at 750-800ft radalt, a stationary object was spotted at 12 o'clock same height. Avoiding action taken by descending, the object was seen to be a 'quadcopter' style drone white in colour. The drone passed directly overhead estimated 20-30ft above the aircraft. The drone was not NOTAM'd and was outside controlled airspace. After avoiding action, the flight continued to Glenfield without further incident.</p> <p>Reported Separation: 20ft V/ 0m 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, 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

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2021207	12 Sep 21 1502	DHC-8 (CAT)	Drone	5706N 00207W Aberdeen 2300ft	Aberdeen CTR (D)	<p>The Dash 8 pilot reports that a drone was sighted crossing from right-to-left in front of the aircraft when they were established on the ILS for RW34 at Aberdeen. The aircraft was at a range of 6.5NM from touchdown and a height of 2300ft.</p> <p>Reported Separation: 0ft V/30-50m H Reported Risk of Collision: NR</p> <p>The Aberdeen controller reports that at 1505 they received a call from the ADC controller advising that [the Dash 8 pilot] had reported sighting a drone between a 6NM and 4NM final for RW34 at 2300ft. Due to the positioning of the sighting, they elected to stop all departures and arrivals until further information could be obtained. [The Dash 8 pilot] continued their approach and landing. Departures were resumed at 1515. Following consultation with MATC and Airside ops, it was agreed to resume VFR arrivals for RW32 at 1530 and then normal operations for all runways at 1535. In the following 30min, no further sightings had been reported. Following the incident, further information became apparent that the crew of [the Dash 8] had seen the drone fly over their starboard wing, crossing right-to-left.</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
2021214	8 Oct 21 1619	A320 (CAT)	Drone	5109N 00003W IVO Gatwick 4000ft	London TMA (A)	<p>The A320 pilot reports that they climbed above the cloud layer, when the PF (in the left-hand seat) spotted an object in the lower side of the front window. On getting closer they could see it was a black drone with two red lights. There was no time to react and it disappeared beneath them.</p> <p>Reported Separation: 50ft V/ 0m H Reported Risk of Collision: High</p> <p>The Swanwick Controller reports that the A320 pilot reported sighting a drone after departing from Gatwick on an ODVIK SID. The pilot reported seeing a black drone with two red lights pass just beneath them at they came out of cloud at 4000ft.</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

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2021215	10 Oct 21 1316	B737 (CAT)	Drone	5219N 00136W Kenilworth 3300ft	Birmingham CTA (D)	<p>The B737 pilot reports that, at 3300ft and 9NM on final for the ILS to RW33, a drone was sighted in their 2 o'clock, passing down the right-hand side of the aircraft. The drone looked to be a recreational drone, medium sized and black in colour. The whole event only lasted about 3sec, during which time they established that it would not conflict with the aircraft's flightpath. The sighting was reported to the Tower controller.</p> <p>Reported Separation: 0ft V/20m H Reported Risk of Collision: Medium</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
2021216	11 Oct 21 1642	B737 (CAT)	Balloon	5306N 00135W 2.5NM SW Matlock FL097	DTY CTA (A)	<p>The B737 pilot reports that during their descent, they were passing about FL97 just to the north of TNT VOR, both flight crew were briefly startled by a white/black object which passed above and slightly to the right of the aircraft. The object was only visible for 1-2sec, but they estimated it was about 500ft above them. The FO believed the object may have been a helium balloon. On landing the following aircraft, who had flown the same approach, advised ATC that they wished to file a report of a drone sighting during their approach. This gave them cause to believe the object they had seen may have been a drone and so they too reported that to ATC.</p> <p>Reported Separation: 500ft V/0.25NM Reported Risk of Collision: Medium</p> <p>The Prestwick controller reports that the B737 was following the DAYNE2A arrival. No information was passed to ATC at the time of the event and the pilot reported it on another frequency.</p>	<p>In the Board's opinion the reported altitude or description of the object, including the crew's initial impression, were 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

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)	