

Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 13th October 2021

Total	Risk A	Risk B	Risk C	Risk D	Risk E
10	7	1	2	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
2021154	12 Aug 21 1617	C182 Civ FW	Drone	5141N 00027E 3NM SSW Chelmsford 2100ft	London FIR (G)	<p>The C182 pilot reports that they were approximately halfway between the Chelmsford and Billericay VRPs. On first sighting the drone, their initial assumption was that it was a large bird of prey, hovering with wings fixed in the open position, and that it must be a large one. Then they reconsidered, due to the colour being completely black or dark grey, and with zero movement. As they got closer, its position remained unchanged, but it appeared to be rotating around its vertical axis, as if a camera was following them. They are not certain, but it may have had a red light on it.</p> <p>Reported Separation: 0ft V/25m H Reported Risk of Collision: Medium</p> <p>The NATS Safety Investigation reports that the C182 pilot submitted an Airprox report in response to the sighting of drone whilst approximately 2NM north of Billericay. There were no associated primary or secondary contacts 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 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 safety had been much reduced below the norm to the extent that safety had not been assured.</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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2021155	20 Aug 21 1500	A320 (CAT)	Unk Obj	5150N 00003W Hertford FL105	London TMA (A)	<p>The A320 pilot reports that a large black-coloured drone was spotted passing directly under the aircraft's nose. The First Officer saw what appeared to be a 4-legged shape. The separation was assessed as between 100-200ft vertically.</p> <p>Reported Separation: 100-200ft V/0m H Reported Risk of Collision: Medium</p> <p>The NATS Safety Investigation reports that a review of the RTF frequencies with which the aircraft was in contact inbound to Luton could not locate any pilot report. This was confirmed by the Airline Safety Report received from the operator which stated that ATC was not advised. A review of the radar at the time the aircraft passed the reported Flight Level of the encounter revealed there were no other primary or secondary returns visible in the vicinity.</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
2021158	21 Aug 21 1639	A320 (CAT)	Drone	5133N 00007W LHR 4500ft	London TMA (A)	<p>The A320 pilot reports that they were on base leg of the approach into LHR RW27L, a drone was suddenly spotted in close proximity to the aircraft. The drone was flying at approximately 4500ft and had a yellow coloured body with black propellers and was similar in type to a SIMEX X300C. It appeared above a cloud layer and was visible from the left-hand side of the flight deck at the high 1 o'clock position. It was displaced approximately 50ft to the right and 50ft above the aircraft. It was observed for approximately 5sec and no avoiding action was possible. The sighting was immediately reported to ATC and the approach was continued and the aircraft landed safely without further incident. A subsequent report was made to the police.</p> <p>Reported Separation: 50ft V/50ft 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

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2021162	28 Aug 21 1345	B737 (CAT)	Drone	5350N 00138W Leeds Bradford 300ft	LBA CTR (D)	<p>The B737 pilot reports that the aircraft was fully configured and ready to land. At approximately 300-500ft agl a four bladed drone in the shape of a blue cross with four black rotors passed extremely close to the flight deck window. It happened so fast a better description could not be given. It appeared to be in the area of the Old Ball Pub at Horsforth. The Captain was the pilot flying and as a result of the startle factor ducked and moved their head away from the flight deck window as they thought it was coming through the window. As a result of becoming unstable a standard a go around was initiated. ATC were informed that they were going straight ahead to 4000ft. Once level, Approach were informed of the reason for the go around. ATC vectored them for a second attempt to land which was successful. Engineers met aircraft on the stand and it was believed that no evidence of damage to aircraft was found.</p> <p>Reported Separation: 10ftV/10ft 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
2021168	28 Aug 21 1323	B737 (CAT)	Balloons	5452N 00135W Chester-le-Street 7000ft	Borders CTA (D)	<p>The B737 pilot reports passing about 7000ft in the descent into Newcastle RW25 when approximately 5 large purple balloons tied together passed just under the right wing. It was reported to ATC and the remainder of the approach was normal.</p> <p>Reported Separation: NK Reported Risk of Collision: NK</p> <p>The Newcastle controller reports that the B737 was being vectored for an ILS Approach to RW25. As the aircraft was descending through FL064, 3NM west of the Nissan factory, the pilot transmitted "just a report of a near miss with about 5 or 6 balloons, they just nearly hit us (chuckling)". The report was acknowledged and as no other aircraft were in the vicinity no further action was taken.</p>	<p>In the Board's opinion the reported description of the object was sufficient to indicate that it was a group of balloons.</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

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2021171	5 Sep 21 1242	B737 (CAT)	Drone	5503N 00139W Newcastle 450ft agl	Newcastle CTR (D)	<p>The B737 pilot reports that a white quadcopter drone of the DJI Phantom type was sighted on short final to RW25. It was to the right of aircraft track at approximately 1.5NM on final approach. The drone was at same level and appeared to be hovering and passed as close as 20m from the right wingtip. ATC were informed.</p> <p>Reported Separation: 0ft V/ 20m H Reported Risk of Collision: High</p> <p>The Newcastle controller reports that at 1245z the B738 landed and reported a possible drone at 1.5NM on the approach to RW25. The drone was reported as being white and stationary, no height was given but from pilot report it was at the same level as the aircraft. The aircraft had landed before reporting but from the position given an estimation of height was between 400-600ft. The information was passed to Radar ASAP as they had landing traffic at 12 miles. The following traffic decided to continue approach and on landing reported nothing seen. The Airport police were informed.</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, 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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2021176	13 Aug 21 1628	A319 (CAT)	Balloon	5320N 00216W Manchester 350ft	Manchester CTR (D)	<p>The A319 pilot reports that they were on short finals, the first officer (FO), who was the pilot flying (PF), questioned “what’s that?” pointing to below the nose. They discussed and both initially thought a drone. The pilot in charge (PIC) monitored while the PF flew. As it got closer (rose steadily) the PIC realised it was a helium balloon, but not just a small child’s one. It appeared to be in two parts; a large circular shape and rectangular part below with a very long substantial tether. Their concern was that if they had initiated a go around there was a potential of damage to the engine. The safest option was to land, which they did with no issues.</p> <p>Reported Separation: 6-9ft V/1NM H Reported Risk of Collision: Medium</p> <p>The Manchester controller reports that the A319 landed on RW23R and, as it was vacating the RW, reported a balloon at 400ft on short final. There was nothing observed from the tower. The controller was subsequently advised by the watch manager that the A319 pilot would be filing an Airprox.</p> <p>The NATS Investigation found that the object reported was a child’s helium balloon released, or escaped, from a member of the public.</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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A

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2021179	9 Sep 21 1526	B737 (CAT)	Unk Obj	5148N 00017E Stansted 4000ft	Stansted CTR (D)	<p>The B737 pilot reports that they were climbing out on a STN SID and had commenced the initial turn onto 086° when they saw a large black rectangular drone on the starboard side of the aircraft. There was a small amount of cloud cover and they noticed it emerge out of the cloud and then they went past it, at the same level as the aircraft. The pilot noted that they thought this was medium risk due to the SID having a speed limit of 210kts for the initial turn. Should the aircraft not have adhered to this and accelerated, the radius of turn would have been greater and therefore a closer proximity to drone. They believed the drone deliberately occupied this particular piece of airspace as it would see (and possibly record) aircraft flying towards the drone followed by a turn and 'fly-by'.</p> <p>Reported Separation: 0ft V/ <1.0NM H Reported Risk of Collision: Medium</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
2021180	13 Sep 21 1723	B737 (CAT)	Unk Obj	5147N 00001E 3NM NW of Harlow 2700ft	Stansted CTR (D)	<p>The B737 pilot reports that they were on base-leg for RW04 at Stansted when suddenly a white object believed to be a drone appeared and narrowly avoided hitting the aircraft to the left-hand side of the nose cone. It managed to pass without hitting the aircraft. The whole event happened too quickly for any avoiding action to be taken.</p> <p>Reported Separation: 0ft V/2m H Reported Risk of Collision: High</p> <p>The Stansted INT/FIN controller reports that, at approximately 1723 [the B737 pilot], who was on a left-base for RW04, reported a drone passing down the left side of their aircraft whilst they were descending through approximately 2800ft. When asked about colour or an estimate of proximity, the reply was "<i>white in colour, and metres</i>", with the pilot commenting that they "<i>did not know how it did not hit the aircraft</i>". The incident was reported to Group Supervisor airports, who informed Stansted Tower. Information on the drone was passed over the RT to aircraft following in the approach sequence. There were no further sightings and the aircraft following all landed without incident.</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>	A

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2021183	10 Sep 21 1532	C180 (Civ FW)	Drone	5324N 00053W 2NM northeast Retford 2300ft	London FIR (G)	<p>The C180 pilot reports that having just passed northeast abeam Gamston on a heading of 355° at altitude 2,300ft and about ½ mile before entering Doncaster controlled airspace, a large drone passed below. It was difficult to assess whether it was stationary, but it was on an apparent converging track from the 1 o'clock position. The incident was reported to Doncaster Approach.</p> <p>Reported Separation: 50ft V/0m H Reported Risk of Collision: NR</p> <p>The Doncaster controller reports that the phrase 'Airprox' was not used on frequency and that they were not aware of such an event.</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

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)	