

Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 11th September 2024

Total	Risk A	Risk B	Risk C	Risk D	Risk E
18	6	7	1	3	1

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
2024148	13 Jun 24 1503	B737 (CAT)	Unk Obj	5600N 00312W IVO Edinburgh 2300ft	Edinburgh CTR (D)	<p>The B737 pilot reports that the aircraft was established on the ILS for RW24 at Edinburgh. At approximately 2300ft both pilots noticed an object, black/silver colour, flash past the left side of the aircraft narrowly missing the left wing. The sighting was too brief to identify what the object was. Both pilots agreed that it did not resemble a bird, more likely a balloon or drone.</p> <p>Reported Separation: 0ft V/ 20m H. Reported Risk of Collision: High</p> <p>The Edinburgh controller reports that the B737 was established on final, and the pilot reported that an object had passed close to them. They were approximately 6NM final. When questioned about the object, they weren't sure if it was a balloon or a drone. The following aircraft behind were warned by the intermediate controller but no further reports were received.</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 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.

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
2024149	01 Jul 24 1156	A321 (CAT)	Unk Obj	5153N 00017W 3NM E Luton Airport 1200ft	Luton CTR (D)	<p>The A320 pilot reports that they had been on final into Luton RW25. At approximately 1200ft AMSL (600ft AGL) they saw a round object, possibly a drone, pass approximately 100-200ft above. The object was approximately the size of a dinner plate. They recall that they were not able to properly identify the object as they had been PF and only briefly noticed it as it passed overhead. The sighting was reported to the tower and the airport safety team was informed.</p> <p>Reported Separation: 100ft V/NK H Reported Risk of Collision: High</p> <p>The Luton Controller reports that the A320 pilot reported a possible drone sighting at 2NM on the ILS, 200ft above from right-to-left with no further details, this would have put the drone at approximately 1300-1500ft altitude.</p> <p>All subsequent aircraft were warned and there were no further sightings.</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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B
2024155	01 Jun 24 1408	RV6 (Civ FW)	Drone	5147N 00150W Calcot Airstrip 100ft	London FIR (G)	<p>The RV6 pilot reports on approach to land at around 100ft height and 300m from the runway threshold when they spotted a white van parked in a field. The occupant was stood looking down at a drone remote control in their hand. Upon landing they spotted what looked to be a drone directly in the runway undershoot at a height of around 50ft.</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: 4, 5</p> <p>Risk: The Board considered that there was insufficient information to make a sound judgement of risk.</p>	D

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
2024164	14 Jul 24 2203	EC145 (NPAS)	Drone	5130N 00001W Isle of Dogs 1700ft	London/City CTR (D)	<p>The EC145 pilot reports that they were en-route to a tasking, transiting westbound through the London City Control Zone at 1700ft at night, at approximately 125kt. A drone was visually detected directly ahead of the helicopter at close range. Evasive action was commenced with a rapid right turn and the drone passed down the left-hand side of the helicopter at the same altitude. Initially, a solid green light was seen, followed shortly by red and green lights as it went past. The front-seat Police officer estimated the minimum separation distance to have been no more than 10-20m. Due to difficulty in visually acquiring the drone, and the higher priority nature of the tasking, they did not attempt to re-acquire it, but informed Heathrow Radar (125.625MHz) of the incident.</p> <p>Reported Separation: 0m V/10m H Reported Risk of Collision: High</p> <p>The Heathrow INT N/S Director reports that [the pilot of the EC-145] reported flying in close proximity to a drone over Canary Wharf at 1700ft.</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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B
2024165	17 Jul 24 0953	A400M (HQ Air Ops)	Drone	5135N 00137W Shrivenham 5000ft	London FIR (G)	<p>The A400M pilot reports that on approach to Fairford, a black UAS was identified and confirmed 40m from the aircraft, stationary in the air on the port side. It was deemed stationary at 5000ft on QNH 1021hPa overhead Shrivenham, in the path of the vectored approach to the ILS. ATC was immediately informed, and the sortie continued safely.</p> <p>Reported Separation: 40m H Reported Risk of Collision: High</p> <p>The Fairford App controller reports that they had 4 aircraft on frequency, all sequenced with 10NM track distance for the ILS. The A400M was No3 in the pattern, on a heading of 090° at 5000ft on Fairford QNH. They passed a descent instruction to 2300ft, but there was no response. The pilot then replied '<i>was that for me?</i>' They passed the instruction again, then the pilot reported an Airprox at 5000ft with a static UAV. They immediately notified the Fairford Co-ord and BZN Sup to note the Lat/Long and report to local Police.</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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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2024172	26 Jul 24 1332	B737 (CAT)	Drone	5325N 00207W Bredbury 2500ft	Manchester CTR (D)	<p>The B737 pilot reports that when established on the ILS RW23R at Manchester at approximately 8 DME they saw very clearly a drone fly past the right side of the aircraft. Within 50ft vertically of their right wing and 50ft laterally. It was a small to medium sized drone with red/pink lights. It was only visible for less than a second. The pilot reports that they continued to land without further incident [and] immediately reported to Manchester approach ATC.</p> <p>Reported Separation: 25ft V/10m H Reported Risk of Collision: High</p> <p>The Manchester controller reports that whilst operating as Air 1, APP S telephoned to say that the B737 pilot had reported a drone close to their aircraft at 8NM final RW23R ILS. APP S noted that they would warn the next inbounds.</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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A

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2024177	30 Jul 24 1459	A320 (CAT)	Balloon	5245N 00235E 48NM E Norwich FL230	London UIR (C)	<p>The A320 pilot reports having sighted a silver weather balloon. No suspended equipment was observed. It was not sighted in time to take any avoiding action due to the small size of the weather balloon. They informed Amsterdam Control of the near-miss.</p> <p>Reported Separation: "a very near miss" Reported Risk of Collision: High</p> <p>Amsterdam Control ATCO reports that [the pilot of the A320] contacted Amsterdam Radar at 1456:22 on the 30th of July. When flying into the MOLIX [FIR boundary] area, Amsterdam Radar cleared [the pilot] for a descent to FL180. At 1500:10, when passing FL224, the pilot reported "<i>we just had a very near miss with a weather balloon</i>". The controller informed the Supervisor immediately. The Supervisor contacted the London Supervisor to discuss the situation. Both agreed to make a report of the occurrence.</p> <p>There was no other traffic in the vicinity for the next 15min and the weather balloon was not visible on radar. There was no launch notice of a weather balloon from that period within the Dutch FIR. The investigation was closed due to lack of further information.</p> <p>UKAB Secretariat: Analysis of the NATS radar replay was undertaken and a primary-only contact was observed, very briefly, to have been within 0.1NM of the reported area of the Airprox in the moments before CPA.</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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A

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2024178	11 Jul 24 0852	A319 (CAT)	Drone	5128N 00026W Approach to RW27L Heathrow 250ft	London CTR (D)	<p>The A319 pilot reports that after giving control to the captain at 1000ft, as per company [procedures], they began the pilot monitoring role of scanning instruments and looking outside. Shortly after they handed over control, they noticed something at approximately their 1 o'clock, stationary in the air. It was not moving like any bird they had seen before, and they moved their head around to check it wasn't a mark on the windscreen. As they got closer, they could clearly see it was a drone that passed a short distance off their right wing. It had a yellow colouring and multiple propellers, but they could not recall exactly how many. This was just as the aircraft called "minimums" so approximately 200ft above ground level. A normal landing was accomplished, and ATC was advised. The police came to meet them to take some details.</p> <p>Reported Separation: 0ft V/30ft H. Reported Risk of Collision: High</p> <p>The Heathrow Aerodrome controller reports that, after landing, the pilot of the A319 reported passing a drone at 200ft on the approach, off the right wing. This information was passed to the Tower Supervisor and to the subsequent landing traffic, none of whom reported seeing the drone.</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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A
2024182	31 Jul 24 1406	A350 (CAT)	Drone	5128N 00036W IVO Windsor 1500ft	London CTR (D)	<p>The A350 pilot reports that on approach over Heathrow they overheard ATC notify other aircraft of drones operating overhead at around 6000ft. On approach at 4.4DME at 1500ft they observed a white drone around 2ft in diameter flying in front of their aircraft from left-to-right. It was estimated to pass their right wing within 100ft. All crew could clearly identify and confirm this was a drone. ATC was immediately notified.</p> <p>Reported Separation: 100ft H Reported Risk of Collision: NR</p> <p>The Heathrow controller reports that [the pilot of the A350] reported a drone at the same level approximately 400ft away, whilst on a 3NM final for RW09L. The 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, 2, 3, 7</p> <p>Risk: The Board considered that providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A

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2024183	28 Jul 24 1200	A321 (CAT)	Drones	5128N 00022W 2.75NM E Heathrow 800ft	London CTR (D)	<p>The A321 pilot reports that on approach, at about 800ft, the FO initially noticed 2 objects immediately in front of and higher than the aircraft and pointed them out to the Captain who also clearly perceived them. They were clearly identifiable as 2 identical drones in the shape of two '3's flying in a lateral formation perfectly up the approach, about 50ft (max) above the aircraft. The black propellers on the objects were clearly identifiable by both pilots. Both pilots assessed a risk of impact.</p> <p>Reported Separation: 50ft V/0m H 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 providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A
2024186	31 Jul 24 1626	B737 (CAT)	Unk Obj	5551N 00428W Glasgow Airport 1650ft	Glasgow CTR (D)	<p>The B737 pilot reports that a large drone flew beneath [the] left side of the aircraft which had just taken off from Glasgow for [destination airfield]. According to FlightRadar24 playback they had been at an altitude of 1650ft.</p> <p>Reported Separation: NR Reported Risk of Collision: NR</p> <p>The NATS Safety Investigator reports that they have reviewed the appropriate recordings and there is no mention of a drone or of an Airprox being filed to Glasgow ATC. The B737 departed from RW23 and at about 2NM on the climbout was transferred to Scottish control frequency of 124.825MHz. The pilot acknowledged the frequency change and left the Glasgow Tower frequency.</p> <p>NATS have made a recording of the event but there is no mention of anything on the RT and there are no associated radar returns on the recording. The Investigator confirms that no drone was observed from the tower and ATC had no notification of any drone operating in that area.</p> <p>There was no other contact (email, telephone etc) from the pilot or [the aircraft operator] to notify Glasgow of the event.</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 there was insufficient information to make a sound judgement of risk.</p>	D

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2024190	01 Aug 24 1412	B737 (CAT)	Drone	5324N 00210W Stockport 1700ft	Manchester CTR (D)	<p>The B737 pilot reports that during a CAT1 ILS approach to RW23R in Manchester the captain observed a drone to the south of the aircraft flying in an easterly direction. Due to the stage of flight and high workload it was not possible to determine the altitude of the drone nor the distance from the aircraft. It was observed to be clear of the aircraft and no risk of a drone strike. The approach was continued to a safe landing and the drone sighting reported to ATC when workload permitted.</p> <p>Reported Separation: could not be determined. Reported Risk of Collision: None.</p> <p>The Manchester Tower controller reports that there had been a report of a drone from the B737 pilot at 1414, observed at 4.5NM final, left-hand side, routeing eastwards. They had passed the information to further traffic and there were no further sightings while they were on console.</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, 5</p> <p>Risk: The Board considered that although safety had been reduced, there had been no risk of collision.</p>	C
2024191	03 Aug 24 1351	A320 (CAT)	Drone	5110N 00002W 5.5NM ENE Gatwick 1800ft	Gatwick CTR (D)	<p>The A320 pilot reports that a drone was sighted on the final approach into LGW around 100-200ft above the aircraft. Aircraft was at 1800ft and 5NM out from ILS 26L. The sighting was reported on the Tower frequency straight away. The drone had yellow colouring. They heard over the frequency that [the pilot of] a second [company] aircraft reported a drone at around 2200ft and 5.6NM from ILS 26L. On stand, the Police arrived approximately 5min after arrival. Full details were given to the Police.</p> <p>Reported Separation: 100-200ft V/ NR H Reported Risk of Collision: Low</p> <p>The Gatwick Air Controller reports that [the pilot of the A320] advised that they had been over-flown by a drone when at 5 miles on final. They advised that the drone had passed above them by approximately 200ft. [The Gatwick Air Controller] advised TC FIN.</p> <p>[The pilot of another aircraft] then called on frequency and advised that they were visual with a drone above them when at 5.6 DME, at 2000ft with the drone at 2200ft QNH.</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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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2024193	28 Jul 24 1424	A320 (CAT)	Drone	5134N 00015W Brent Reservoir 6800ft	London TMA (A)	<p>The A320 pilot reports that a drone was sighted when downwind for Heathrow, landing westerly from Lambourne arrival. It was seen when at 6800ft, descending in vertical speed at less than 1000ft per minute. The location was subsequently worked out to be around the Brent Reservoir area after a subsequent post-landing check of the flight path and time stamp. It was a white quadcopter style drone and it passed directly beneath them. It was possibly hovering but as they were travelling at 220kts this was impossible to assess. The proximity was hard to gauge, the size of drone was unknown. The sunlight reflected off it and that's what drew their attention to it. It was possibly less than 200ft below. It was reported to ATC. After parking, police officers attended and took details. The pilot opined that obviously it should not have been that high, it had been clear visual conditions and if they had been descending any more rapidly, they would have had a collision.</p> <p>Reported Separation: <200ft V</p> <p>A NATS Investigation reports that the pilot reported the drone as "just underneath" the aircraft at 6800ft. They reported that the drone was white and either stationary, or on a reciprocal track.</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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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2024194	31 Jul 24 1345	B787 (CAT)	Unk Obj	5136N 00019W Heathrow Airport 9000ft	London TMA (A)	<p>The B787 pilot reports that a drone was sighted approximately 10NM before LAM. They had been approaching 9000ft and it was in front of them and had passed down the left side within 1NM and within 500ft-1000ft. It was bird shaped and had bright blue wings but unable to say size, but it had appeared quite large.</p> <p>Reported Separation: 500ft-1000ft V/<1NM H Reported Risk of Collision: NR</p> <p>The LL INT controller reports that the B787 pilot reported a drone, bright blue, wing shaped 10NM east of LAM at 8000ft. The pilot reported on the RT that the UAS passed down the left-hand side of the aircraft, was bright blue, and wing shaped. The pilot added that the drone was “about a thousand or two thousand feet below and couldn’t be sure exactly what it was.”</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 normal procedures and/or safety standards had applied.</p>	E
2024195	02 Aug 24 1300	B787 (CAT)	Unk Obj	5129N 00022W 2.5NM E Heathrow 750ft	London CTR (D)	<p>The B787 pilot reports once established on the ILS for RW27R and in contact with the Tower they were advised of the presence of a drone in the vicinity at around 4 to 5NM from the threshold. No drone was seen until the aircraft passed approximately 700-800ft when the Senior First Officer (PF) noticed a grey object passing to the right of the aircraft. ATC was notified.</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 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 there was insufficient information to make a sound judgement of risk.</p>	D

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2024199	03 Jul 24 1535	A350 (CAT)	Unk Obj	5139N 00009E Lambourne VOR 9000ft	London TMA (A)	<p>The A350 pilot reports that they passed a large red drone, 'really close' (couple of tens of metres), overhead Lambourne (LAM) VOR, at 9000ft (FL90).</p> <p>Reported Separation: 'really close' Reported Risk of Collision: High</p> <p>Swanwick Radar Group Supervisor (Airports) reports that the A350 pilot reported they had sighted a large red drone, at the same level, whilst at FL90. They informed the Lambourne controller via the Group Supervisor (GS) Midlands and contacted Heathrow police.</p> <p>A NATS Investigation reports that the pilot of [the A350] reported on the frequency, <i>"I think we passed a drone over Lambourne, it was on our left-hand side, at FL90"</i>. The pilot described the drone as; <i>"difficult to say, but er quite big as I saw it and I think it was red."</i></p> <p>The Heathrow intermediate north controller immediately informed the following aircraft approaching LAM of the report, with the GS AIR reporting the encounter to Heathrow Police. Analysis of the radar by Safety Investigations indicated that there were no associated primary or secondary contacts associated with the drone report, 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 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 safety had been much reduced below the norm to the extent that safety had not been assured.</p>	B

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2024200	21 Jul 24 1242	Learjet 45 (Civ Comm)	Drone	5126N 00011E IVO Dartford 2000ft	London/City CTA (D)	<p>The Learjet 45 pilot reports that both crew members spotted a drone whilst being radar-vectorred for the ILS for RW21 at Biggin Hill.</p> <p>They initially thought it may have been a bird however, upon closer proximity, it was clear it was a drone due to its stationary position. They were at 180kt and approximately 2000ft, and it was within 100ft of them at the same level. The drone was red/yellow in colour. They notified Thames Radar of the sighting.</p> <p>Reported Separation: 0ft V/ 100ft H Reported Risk of Collision: NR</p> <p>NATS Safety Investigations' analysis of the radar indicated that there were no associated primary or secondary contacts associated with the drone report 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, 3, 4, 7</p> <p>Risk: The Board considered that 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	If the reported object was a drone, then 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	If the reported object was a drone, then 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	If the reported object was a drone, then 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)	