

### Consolidated Drone/Balloon/Model/Unknown Object Summary Sheet for UKAB Meeting on 16<sup>th</sup> October 2024

Total	Risk A	Risk B	Risk C	Risk D	Risk E
10	3	2	2	1	2

Airprox Number	Date Time (UTC)	Aircraft (Operator)	Object	Location <sup>1</sup> Description Altitude	Airspace (Class)	Pilot/Controller Report Reported Separation Reported Risk	Comments/Risk Statement	ICAO Risk
2024184	3 Aug 24 1455	PA28 (Civ FW)	Drone	5214N 00255W 1.5NM W Shobdon 1100ft	Shobdon ATZ (G)	<p><b>The PA28 pilot</b> reports that, as they were approaching the edge of the Shobdon ATZ, they observed a large commercial/agricultural type of drone, dark grey/black, multi rotor (5-6 rotors) approximately 4ft across, with red-and-green large flashing lights below each rotor, with a camera/object centrally below and possibly a small fixing on top too.</p> <p>The drone was around 30ft left of their track and a very short distance ahead when it first came into view due to their nose-high attitude, and was at approximately their level. It moved across and up, exactly into their path, where it became stationary. They immediately realised that it was going to make contact with the propeller or windscreen and they lifted the nose high in the hope that it would impact the bottom of their aircraft rather than the front. Thankfully, this caused a slight ballooning and they initially climbed for a second or so. No impact sound was heard and nothing was felt.</p> <p>They were confident that, in the worst-case scenario, they had a punctured tyre or had similar damage and felt that the best course of action was to land as slowly and smoothly as possible. They touched down smoothly, with no unusual sounds or actions. They inspected the underside of [the PA28] closely and could see no signs of physical contact, leading them to believe that they passed above the drone by a few feet. They were given a Police reference number for the incident and were advised that the police were in the area looking for the drone pilot.</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><b>Applicable Contributory Factors:</b> 1, 2, 3, 4, 7</p> <p><b>Risk:</b> The Board considered that providence had played a major part in the incident and/or a definite risk of collision had existed.</p>	A

<sup>1</sup> 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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						<p><b>Reported Separation:</b> 3ft V/0m H <b>Reported Risk of Collision:</b> High</p> <p><b>The Shobdon AFISO</b> reports that approximately 1min after departure on runway heading, [the pilot of the PA28] reported a near-miss with a drone directly ahead. The miss distance was stated as 2-5ft at 1100ft QNH, (approximately 800ft AGL).</p> <p>The drone was initially spotted approaching from the left before stopping directly in front of [the PA28]. Avoiding action was taken with the pilot believing their undercarriage had possibly struck the drone.</p> <p>The Police were contacted by Shobdon ATSU and subsequently attended the scene.</p>		
2024204	11 Aug 24 1358	A321 (CAT)	Drone	5322N 00213W 2.5NM NE Manchester Airport 800ft	Manchester CTR (D)	<p><b>The A320 pilot</b> reports a small drone sighting at 2.5NM from touchdown at MAN RW23R. Suspected drone being operated from Meadow Bank Primary School playing field. Low risk to [the] aircraft at the point of sighting.</p> <p><b>Reported Separation:</b> 500ft V/0.5NM H <b>Reported Risk of Collision:</b> Low</p> <p><b>The Manchester controller</b> reports that an inbound aircraft reported a drone close to the final approach track on the left-hand side around a 2.5NM final, possibly being flown by some children nearby. No further details were provided and no further sightings.</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><b>Applicable Contributory Factors:</b> 4, 5</p> <p><b>Risk:</b> The Board considered that normal procedures and/or safety standards had applied.</p>	E

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2024210	11 Aug 24 1816	B787 (CAT)	Drone	5128N 00024W IVO Heathrow 1500ft	London CTR (D)	<p><b>The B787 pilot</b> reports that on take-off from Heathrow RW09R on a BPK6J departure they encountered a drone at roughly 1500ft AGL before turning left at LON 2D. The pilot opined that if they hadn't made the turn as per the BPK departure they may have hit the drone. The RHS pilot could see the drone which had bright LED lighting.</p> <p><b>Reported Separation:</b> NR  <b>Reported Risk of Collision:</b> NR</p> <p><b>The Heathrow Departures controller reports</b> that the B787 pilot, airborne on a BPK6J departure, reported a drone at 1500ft on the climb-out, 20cm away. Subsequent aircraft were advised.</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><b>Applicable Contributory Factors:</b> 1, 2, 3, 4</p> <p><b>Risk:</b> The Board considered that the absence of a reported separation by the B787 pilot, together with an ambiguous miss distance reported by the controller, meant that there was insufficient information to make a sound judgement of risk.</p>	D

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2024211	11 Aug 24 1836	ATR72 (CAT)	Unk Obj	5202N 00250W 2NM SW Hereford FL160	London FIR (G)	<p><b>The ATR72 pilot</b> reports that after reaching their cruising altitude around the vicinity of Hereford the F/O observed an unidentified flying object. The Captain then looked out of the cockpit side window and also observed an object for a maximum of 2sec in the 10 o'clock position.</p> <p><b>Reported Separation:</b> 125ft V/NR H <b>Reported Risk of Collision:</b> NR</p> <p><b>The Swanwick controller</b> reports [ATR72 C/S] was tracking toward BADSI and reported seeing a black object, possibly bird-like, in the vicinity of WEVBE, at FL160. The pilot said the object was down their right-hand side, about 200-300ft above, in close lateral proximity.</p> <p><b>The NATS Ltd Safety Investigation</b> reports the pilot reported they passed something "kind of drone-ish" and described it as black, the size of a "big bird, bigger than a drone" and stationary for approximately 10sec. The pilot estimated the [object] to have been in their 10 o'clock on their left-hand side, approximately 300ft above their position. The S5 controller advised the pilot they were unaware of any activity in the area and the aircraft was not in the vicinity of a Danger Area that could have led to the drone sighting. Analysis of the radar by Safety Investigations indicated that there were no 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><b>Applicable Contributory Factors:</b> 4, 5</p> <p><b>Risk:</b> The Board considered that although safety had been reduced, there had been no risk of collision.</p>	C

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2024212	14 Aug 24 1525	ATR42 (CAT)	Unk Obj	5616N 00335W 9NM SW Perth FL135	Tay CTA (A)	<p><b>The ATR42 pilot</b> reports that, during a climb between FL130 and FL140, what appeared to have been a drone passed down the right-hand side of the aircraft. The crew estimated the object had passed at a distance of approximately 50m away and at a similar level. At the time of the sighting, the approximate position of the aircraft was 4NM north-east of waypoint GRICE.</p> <p>Both the Captain and First Officer had a clear view of the object and both agreed it was most likely a drone, which was black in colour. The sighting was reported immediately to ATC (Scottish Control). It is believed that ATC contacted the Police.</p> <p><b>Reported Separation:</b> 0ft V/50m H</p> <p><b>The NATS Prestwick controller</b> reports that, during a frequency change to Galloway Sector, the pilot of [the ATR42] reported a probable drone in the area while climbing through FL130. The pilot stated that they had passed a black drone, approximately 100m on the right-hand side of the aeroplane, 4 miles north of GRICE. The incident was reported to Police Scotland.</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><b>Applicable Contributory Factors:</b> 4, 6</p> <p><b>Risk:</b> 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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2024217	14 Aug 24 1851	A319 (CAT)	Drone	5136N 00038W Beaconsfield FL070	London TMA (A)	<p><b>The A319 pilot</b> reports climbing northbound through FL70 when a drone was spotted just as it passed overhead the aircraft in the opposite direction. Estimated clearance from drone was 100ft.</p> <p><b>Reported Separation:</b> 100ft V/0m H <b>Reported Risk of Collision:</b> NR</p> <p><b>NATS Ltd Safety Investigation</b> reports the pilot of [A319 C/S] reported sighting a black drone on departure from Heathrow on the UMLAT SID at FL70 approximately 100ft above the aircraft. Heathrow Tower was informed. The pilot of [A319 C/S] reported, "We think we just had a drone pass over the top of us about one hundred feet". The pilot reported the drone was black and "about a metre wide" but as it was quick and they were just coming out of cloud at the time, they could not provide any further details. Other pertinent information: The controller informed Heathrow Tower ATC of the sighting so that subsequent departures could be warned. There were no further reports. Analysis of the radar by Safety Investigations indicated that there were no 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><b>Applicable Contributory Factors:</b> 1, 2, 3, 4, 7</p> <p><b>Risk:</b> 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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2024224	21 Aug 24 1522	A320 (CAT)	Unk Obj	5109N 00006W 3NM ENE of Gatwick 1000ft	Gatwick CTR (D)	<p><b>The A320 pilot</b> reports that when passing approximately 1000ft around 3NM on approach to RW26L a small white metallic object passed close to the left side of the aircraft. Approximately 30ft from the side of the aircraft and 20ft above the left wing. [They] could not confirm exactly what it was, but it wasn't a bird. The sighting was reported to ATC after landing.</p> <p><b>Reported Separation:</b> 20ft V/30ft H <b>Reported Risk of Collision:</b> N/R</p> <p><b>The Gatwick controller</b> reports that whilst taxiing to stand, the A320 pilot reported to GMC that they had encountered an 'object' on final approach (something small and white).</p> <p><b>The NATS Unit Investigation</b> reports that although the pilot did not specifically state that the object had been a drone, the VCR Supervisor determined that the appropriate course of action would be to report the incident to Gatwick Control Centre (GCC) as a possible drone for a threat assessment to be carried out. In this regard, the Supervisor followed the procedure detailed in the NATS Gatwick MATS Pt.2 and passed the information onto GAL for a threat assessment. Following the initial report, no further aircraft [pilots] reported a similar event and approximately 20min after the first report was made, the threat assessment was returned as Green, requiring no further action.</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><b>Applicable Contributory Factors:</b> 4, 6</p> <p><b>Risk:</b> 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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2024228	23 Aug 24 1510	A319 (CAT)	Unk Obj	5158N 00001E 9NM NW Stansted FL070	London TMA (A)	<p><b>The A319 pilot</b> reports that, during a departure and climbout from Stansted RW22, they were given a westerly heading while on the SID. Whilst wings-level, climbing through approximately FL70 to FL80, the FO spotted an object heading towards the aircraft on a linear flightpath (i.e. not moving from side-to-side). The FO noted that it had a deep reddish colour with a metallic shiny look in parts, and appeared roughly circular. The object appeared to get very close to the aircraft. It passed down the left-hand side, close, but below, the aircraft. The Captain reported the possible drone to Stansted Radar. They were then transferred to London ATC.</p> <p><b>Reported Separation:</b> <i>“below, very close”</i></p> <p><b>The Stansted FIN controller</b> reports that [the pilot of the A319] had been transferred to TMA NW, but shortly thereafter came back on frequency to report a drone at approximately 7000ft when they passed the vicinity of LOREL. They reported that it was red in colour, and close to their left-hand side.</p> <p>The crew were asked if they were ok to continue with the change of frequency, which they were, and the FIN controller informed the Group Supervisor so that they could inform Stansted Tower. Subsequent departures were informed of the report, but no further sightings were reported.</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><b>Applicable Contributory Factors:</b> 4, 6</p> <p><b>Risk:</b> 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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2024243	30 Aug 24 1118	A319 (CAT)	Drone	5112N 00013W Buckland 5000ft	London TMA (A)	<p><b>The A319 pilot</b> reports that they had been on departure maintaining 5000ft on radar heading 260°. The captain sighted a drone passing on the right-hand side below the aircraft heading in the opposite direction (west-to-east), approximately heading 080° and 500ft below. The position had been just west of Reigate town, overhead Buckland. The drone was reported as square-shaped, black and grey. The sighting was reported to London Control on 134.125MHz.</p> <p><b>Reported Separation:</b> 500ft V/NR H <b>Reported Risk of Collision:</b> NR</p> <p><b>The NATS TC controller</b> reports that they had been the TC SW controller when the A319 pilot reported they had seen a drone flying in the opposite direction about 500ft below their level (approximately 5000ft). They described it as grey or black.</p> <p><b>A NATS Safety Investigation</b> reports that the Southwest Departures Controller acknowledged the report of the drone and passed Traffic Information to subsequent aircraft on a similar track. Analysis of the radar by Safety Investigations indicated that there had been no 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><b>Applicable Contributory Factors:</b> 1, 2, 3, 4, 5</p> <p><b>Risk:</b> The Board considered that although safety had been reduced, there had been no risk of collision.</p>	C

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2024244	25 Sep 24 1700	EMB190 (CAT)	Unk Obj	5126N 00003W IVO Eltham 2000ft	London City CTR (D)	<p><b>The EMB190 pilot</b> reports that they were flying towards TODBI, a waypoint on the ODLEG transition for landing on RW09 at London City Airport. The First Officer reported seeing a purple drone at the same level off to their right at approximately 800m. No evasive action taken, but ATC was informed.</p> <p><b>Reported Separation:</b> 0ft V/ 800m H <b>Reported Risk of Collision:</b> None</p> <p><b>The City Dir controller</b> reports that the pilot of an inbound aircraft to London City reported a purple drone at approximately 2000ft, when turning base leg, north of TODBI. The observation was passed to subsequent aircraft, but no further sightings were reported.</p> <p><b>A NATS Investigation</b> reports that the pilot reported that the drone had passed "fairly close" to the aircraft at 2000ft. At the time of the report the EMB190 was 0.8NM on a bearing of 348° from TODBI. The controller passed details of the report to following aircraft, no further sightings were reported. Analysis of the radar by Safety Investigations indicated that there were no 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><b>Applicable Contributory Factors:</b> 4, 5</p> <p><b>Risk:</b> The Board considered that normal procedures and/or safety standards had applied.</p>	E

## Relevant Contributory Factor (CF) Table

CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				
1	Human Factors	<ul style="list-style-type: none"> <li>Flight Crew ATM Procedure Deviation</li> </ul>	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
<b>• Tactical Planning and Execution</b>				
2	Human Factors	<ul style="list-style-type: none"> <li>Action Performed Incorrectly</li> </ul>	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	<ul style="list-style-type: none"> <li>Airspace Infringement</li> </ul>	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.
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
4	Contextual	<ul style="list-style-type: none"> <li>Situational Awareness and Sensory Events</li> </ul>	Events involving a flight crew's awareness and perception of situations	Pilot had no, generic, or late Situational Awareness
<b>• See and Avoid</b>				
5	Human Factors	<ul style="list-style-type: none"> <li>Perception of Visual Information</li> </ul>	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
<b>• Outcome Events</b>				
6	Contextual	<ul style="list-style-type: none"> <li>Near Airborne Collision with Other Airborne Object</li> </ul>	An event involving a near collision by an aircraft with an unpiloted airborne object (unknown object or balloon)	
7	Contextual	<ul style="list-style-type: none"> <li>Near Airborne Collision with RPAS</li> </ul>	An event involving a near collision with a remotely piloted air vehicle (drone or model aircraft)	