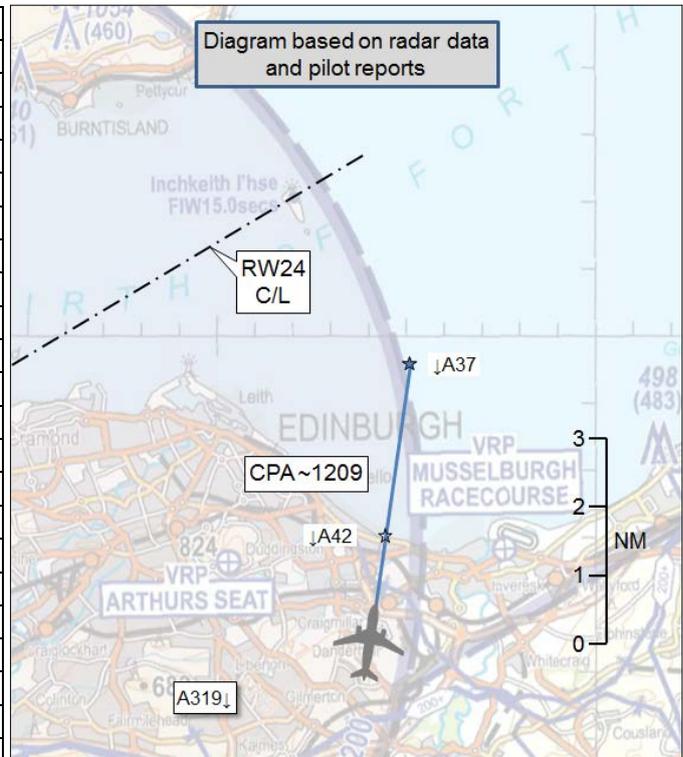


AIRPROX REPORT No 2016248

Date: 25 Nov 2016 Time: 1209Z Position: 5558N 00306W Location: 9nm E Edinburgh Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A319	Drone
Operator	CAT	Unknown
Airspace	Edinburgh CTR	Edinburgh CTR
Class	D	D
Rules	IFR	
Service	Radar Control	
Provider	Edinburgh	
Altitude/FL	3700ft	
Transponder	A, C, S	
Reported		Not reported
Colours	Company	
Lighting	All on	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	3700ft	
Altimeter	QNH (1027hPa)	
Heading	010°	
Speed	200kt	
ACAS/TAS	TCAS II	
Alert	None	
	Separation	
Reported	0ft V/75ft H	
Recorded	NK	



THE A319 PILOT reports being in the descent, coasting out, when they came very close to what appeared to be a drone. The crew noticed it quite late, as it appeared in the 11 o'clock position and passed down the left side of the aircraft at the same level. The pilot noted that there was no time to take avoiding action. The incident was reported to the controller and to police on landing.

He perceived the severity of the incident as 'Medium'.

THE DRONE OPERATOR: The drone operator could not be traced.

THE EDINBURGH CONTROLLER did not submit a report to the UK Airprox Board.

Factual Background

The weather at Edinburgh was recorded as follows:

METAR EGPB 251220Z 25007KT CAVOK 04/01 Q1027=

Analysis and Investigation

UKAB Secretariat

There are no specific ANO regulations limiting the maximum height for the operation of drones that weigh 7kg or less other than if flown using FPV (with a maximum weight of 3.5kg) when 1000ft is the maximum height. Drones weighing between 7kg and 20kg are limited to 400ft unless in accordance with airspace requirements. Notwithstanding, there remains a requirement to maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in

relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions. CAP 722 gives guidance that, within the UK, visual line of sight (VLOS) operations are normally accepted to mean a maximum distance of 500m [1640ft] horizontally and 400ft [122m] vertically from the Remote Pilot.

Neither are there any specific ANO regulations limiting the operation of drones in controlled airspace if they weigh 7kg or less other than if flown using FPV (with a maximum weight of 3.5kg) when they must not be flown in Class A, C, D or E, or in an ATZ during notified hours, without ATC permission. Drones weighing between 7kg and 20kg must not be flown in Class A, C, D or E, or in an ATZ during notified hours, without ATC permission. CAP722 gives guidance that operators of drones of any weight must avoid and give way to manned aircraft at all times in controlled Airspace or ATZ. CAP722 gives further guidance that, in practical terms, drones of any mass could present a particular hazard when operating near an aerodrome or other landing site due to the presence of manned aircraft taking off and landing. Therefore, it strongly recommends that contact with the relevant ATS unit is made prior to conducting such a flight.

Notwithstanding the above, all drone operators are also required to observe ANO 2016 Article 94(2) which requires that the person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made, and the ANO 2016 Article 241 requirement not to recklessly or negligently cause or permit an aircraft to endanger any person or property. Allowing that the term 'endanger' might be open to interpretation, drones of any size that are operated in close proximity to airfield approach, pattern of traffic or departure lanes, or above 1000ft agl (i.e. beyond VLOS (visual line of sight) and FPV (first-person-view) heights), can be considered to have endangered any aircraft that come into proximity. In such circumstances, or if other specific regulations have not been complied with as appropriate above, the drone operator will be judged to have caused the Airprox by having flown their drone into conflict with the aircraft.

A CAA web site¹ provides information and guidance associated with the operation of Unmanned Aircraft Systems (UASs) and Unmanned Aerial Vehicles (UAVs) and CAP722 (UAS Operations in UK Airspace) provides comprehensive guidance.

Summary

An Airprox was reported when an A319 and a drone flew into proximity at about 1209 on Friday 25th November 2016. The A319 pilot was operating under IFR in VMC in receipt of a Radar Control Service from Edinburgh Approach. The drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the A320 pilot and radar photographs/video recordings.

Members agreed that, given the altitude, the done was being operated beyond visual line of sight and therefore that it had been flown into conflict with the A319. When it came to assessing the risk, although the incident did not show on the NATS radars, the Board noted that the pilot had estimated the drone to be at the same height as the aircraft, and only about 75ft away on the left. Acknowledging the difficulties in judging separation visually without external references, the Board considered that the pilot's estimate of separation, allied to his overall account of the incident, portrayed a situation where collision had only been avoided by providence. The A319 pilot had not been able to take avoiding action and so the Board therefore determined the risk to be Category A.

¹ dronesafe.uk

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the A319.

Degree of Risk: A.