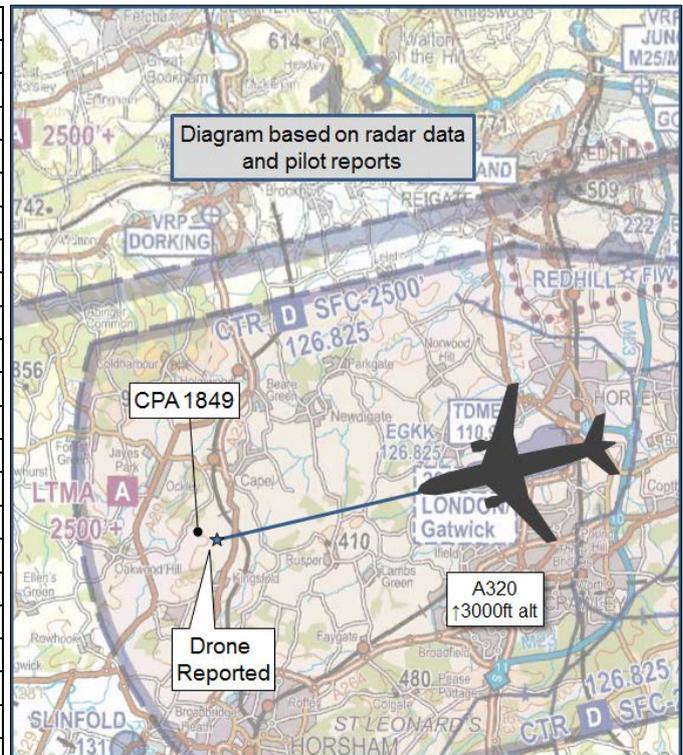


AIRPROX REPORT No 2016204

Date: 06 Sep 2016 Time: 1849Z Position: 5108N 00020W Location: Gatwick

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A320	Drone
Operator	CAT	Unknown
Airspace	LTMA	
Class	A	A
Rules	IFR	
Service	Radar Control	
Provider	Swanwick	
Altitude/FL		
Transponder	A, C, S	
Reported		
Colours	Company	Black
Lighting	Strobes, Nav	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	3000ft	
Altimeter	QNH (1023hPa)	
Heading	270°	
Speed	250kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	0ft V/40m H	
Recorded	NK	



THE A320 PILOT reports that he was passing 3000ft in the climb out of Gatwick on the SAM1XSID. He broke through a layer of low cloud and the flight crew noticed an object in the distance ahead at approximately the same level as them, it appeared to be moving from left to right, with the distance reducing. A few moments later the object passed down the right-hand-side of the aircraft and it was identified as a drone. The distance was approx two wing lengths away, 30-40m. ATC were notified and the flight continued.

He assessed the risk of collision as ‘High’.

The drone operator could not be traced

THE SWANWICK TC CONTROLLER reports that the A320 pilot reported a drone in extremely close proximity on climb-out from Gatwick. When pressed the pilot reported that it had passed down the right-hand-side and that ‘it was big, black’, no more than a couple of plane lengths away and that because it was just above the clouds it had taken him by surprise. No other aircraft over the next 20 minutes or so saw it. Gatwick police were informed.

Factual Background

The weather at Gatwick was recorded as follows:

METAR EGKK 061850Z 19005KT 160V220 9999 SCT021 20/17 Q1023=

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.

At the time of the incident the CAA had published Drone Aware¹ which states the responsibilities for flying unmanned aircraft. This includes:

'You are responsible for avoiding collisions with other people or objects - including aircraft.
Do not fly your unmanned aircraft in any way that could endanger people or property.
It is illegal to fly your unmanned aircraft over a congested area (streets, towns and cities).
..., stay well clear of airports and airfields'.

However, a new joint CAA/NATS web site² now 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 A320 and a drone flew into proximity at 1849 on Tuesday 6th September 2016. The A320 pilots was operating under IFR in VMC, and in receipt of a Radar Control Service from Swanwick. The drone operator could not be traced.

¹ CAP 1202

² dronesafe.uk

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the pilot of the A320 aircraft, radar photographs/video recordings and a report from the air traffic controller involved.

Members agreed that the drone had been operated at an altitude above that allowed by regulation by probably not being in direct unaided line of sight and, if using FPV, above 1000ft. It was therefore agreed that the drone had been flown into conflict with the A320. Acknowledging the difficulties in judging separation visually without external references, the Board considered that the pilot's estimate of separation, at 30-40m, allied to his overall account of the incident, portrayed a situation where safety had been much reduced below the norm; they therefore determined the risk to be Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the A320.

Degree of Risk: B.