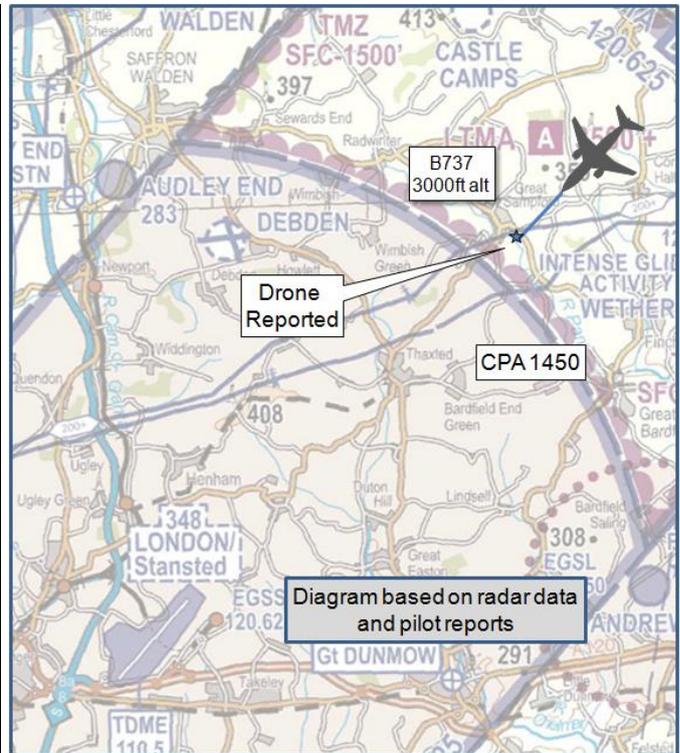


AIRPROX REPORT No 2016078

Date: 03 May 2016 Time: 1450Z Position: 5159N 00024E Location: 10nm final Stansted

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	B737	Drone
Operator	CAT	Unknown
Airspace	Stansted CTA	Stansted CTA
Class	D	D
Rules	IFR	
Service	Radar Control	
Provider	Stansted	
Altitude/FL	3000ft	
Transponder	A, C, S	
Reported		
Colours	Company	Black, white
Lighting	N/K	None
Conditions	VMC	
Visibility	NK	
Altitude/FL	3000ft	
Altimeter	QNH	
Heading	220°	
Speed	180kt	
ACAS/TAS	TCAS II	
Alert	Unknown	
Separation		
Reported	0ftV/25-50m H	
Recorded		NK



THE B737 PILOT reports that he was established at 10DME on the ILS for Stansted RW22 when the non-handling pilot saw a drone at the same altitude crossing left-to-right across their track. It was black on top, with 4 rotors, and white underneath. The size and range was difficult to estimate, but they thought it was about 25-50m away. It was obvious from the flight path of the drone that avoiding action was not necessary, because it would not impact the aircraft. A report was immediately made to STN director.

He assessed the risk of collision as ‘Low’.

The drone operator could not be traced.

THE SWANWICK GROUP SUPERVISOR (AIRPORTS) reports that the B737 pilot reported a drone close to the 8nm final for Stansted RW22. The information was passed onto subsequent arrivals, but there were no other reports. The details were reported to Stansted Police.

Factual Background

The weather at Stansted was recorded as follows:

METAR EGSS 031450Z AUTO 26008KT 230V300 9999 NCD 14/02 Q1026=

Analysis and Investigation

UKAB Secretariat

The Air Navigation Order 2009 (as amended), Article 138¹ states:

A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.

Article 166, paragraphs 2, 3 and 4 state:

(2) The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made.

(3) The person in charge of a small unmanned aircraft must 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.’

(4) The person in charge of a small unmanned aircraft which has a mass of more than 7kg excluding its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight must not fly the aircraft

(a) in Class A, C, D or E airspace unless the permission of the appropriate air traffic control unit has been obtained;

(b) within an aerodrome traffic zone ...; or

(c) at a height of more than 400 feet above the surface unless it is flying in airspace described in sub-paragraph (a) or (b) and in accordance with the requirements for that airspace.

In addition, the CAA has published guidance regarding First Person View (FPV) drone operations which limit this activity to drones of less than 3.5kg take-off mass, and to not more than 1000ft².

Summary

An Airprox was reported when a B737 and a drone flew into proximity at 1450 on Tuesday 3rd May 2106. The B737 pilot was operating under IFR in VMC, and in receipt of a Radar Control Service from Stansted Director. The drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the B737 pilot and radar photographs/video recordings.

The crew of the B737 reported seeing the drone at 3000ft, whilst on final approach to Stansted. The Board first noted that, as for other aviators, drone operators are fundamentally required to avoid collisions with all other aircraft. More specifically, drone flight above 400ft is prohibited in Class D airspace without the permission of the appropriate air traffic control unit and therefore the drone operator was not entitled to operate in this location.

In this incident, operating at levels of 3000ft, the drone operator would almost certainly have been operating on first-person-view (FPV), for which regulation mandates that an additional person must be used as a competent observer who must maintain direct unaided visual contact with the drone in order to monitor its flight path in relation to other aircraft. Notwithstanding, even if an observer was being used, the Board thought that they would not have been able to see the drone clearly at that

¹ Article 253 of the ANO details which Articles apply to small unmanned aircraft. Article 255 defines ‘small unmanned aircraft’. The ANO is available to view at <http://www.legislation.gov.uk>.

² ORSA No. 1108 Small Unmanned Aircraft – First Person View (FPV) Flying available at: [ORSA No 1108](#).

level. Under FPV operations, for drones of less than 3.5kg, the drone is not permitted to operate above 1000ft agl without CAA approval being gained and a NOTAM being issued. At 3000ft, the drone operator was flying within the Stansted CTA Class D airspace without permission and, in his non-compliance, the Board considered that the drone operator was posing a flight safety risk.

Operating as he was in airspace within which he was not permitted meant that the Board considered that the cause of the Airprox was that the drone had been flown into conflict with the B737. Although the incident did not show on the NATS radars, the Board noted that the pilot had estimated the separation to be 25-50m ahead of the aircraft and at the same height. Although the pilot had stated that avoiding action had not been necessary because it was assessed that the drone would not actually impact the aircraft, the Board considered that separation had been reduced to the bare minimum; they therefore determined the risk to be Category A, a serious risk of collision had existed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the B737.

Degree of Risk: A.