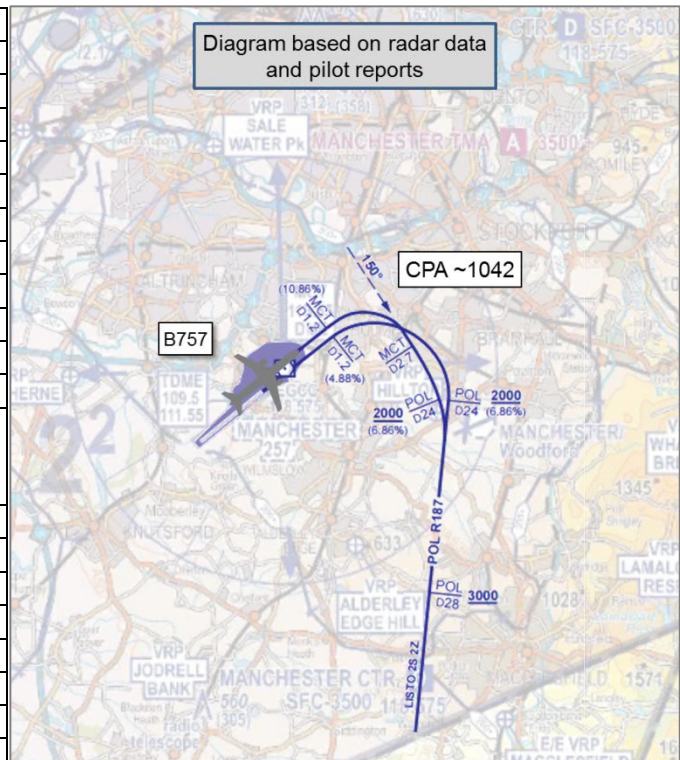


AIRPROX REPORT No 2016028

Date: 05 Mar 2016 Time: 1042Z Position: 5233N 00212W Location: Manchester CTR

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	B757	Drone
Operator	CAT	Unknown
Airspace	Manchester CTR	Manchester CTR
Class	D	D
Rules	IFR	
Service	Aerodrome	
Provider	Manchester	
Altitude/FL	1500ft	
Transponder	A, C, S	
Reported		Not reported
Colours	Grey/red	
Lighting	Anti-col, position, nav, strobes	
Conditions	IMC	
Visibility	NK	
Altitude/FL	1500ft	
Altimeter	NK	
Heading	Turning right	
Speed	190kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	50ft V/40m H	
Recorded		NK



THE B757 PILOT reports departing from Manchester RW05L on a LISTO 2S departure. In the right turn onto 150° degrees, and while accelerating, an unknown object was seen out of the Captain’s left window. It was approximately 50ft above the aircraft, and 100ft to the left. He expressed his surprise but had to return to the instrument scan and carry on with ‘cleaning the aircraft up’ [retracting the undercarriage and flaps after take-off] and completing the hand-over to Scottish. The pilot was unsure as to whether he had seen 2 large balloons, connected together, or a drone. As well as the Captain and himself, there were two cabin crew on the Flight Deck on supernumerary flights, both with 3-4 years’ experience. The cabin crew member seated immediately behind the pilot confirmed that she had also seen something and, when asked, independently stated that it looked like a drone. The pilot had not previously made any comment about what he had seen, so this confirmed his initial thoughts of balloons or a drone. The Captain took over communications, and the pilot returned to Manchester Tower frequency to inform them of the near-miss. Although the pilot could not be certain what he saw, whatever it was, it had been extremely close to the aircraft at a critical phase of flight and was independently witnessed by a member of cabin crew. On returning to Manchester, the pilot telephoned Manchester Tower to discuss the issue. Although a shift change had occurred, they were able to tell him that no other sightings had been reported, but that they were filing an MOR for the incident.

He assessed the risk of collision as ‘High’.

THE DRONE/BALLOON OPERATOR: A drone operator could not be traced and no Met balloon launches were reported in the area.

Factual Background

The weather at Manchester was recorded as follows:

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METAR COR EGCC 051020Z 34011KT 9999 SCT024 SCT040 05/01 Q1003 NOSIG=
METAR COR EGCC 051050Z 34013KT 9999 FEW024 SCT030 06/01 Q1003 NOSIG=
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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.’

A CAA web site² provides information and guidance associated with the operation of Unmanned Aircraft Systems (UASs) and Unmanned Aerial Vehicles (UAVs). Additionally, the CAA has published a UAV Safety Notice³ 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’.

Summary

An Airprox was reported when a B757 and a drone or balloon flew into proximity at about 1042 on Saturday 5th March 2016. The B757 pilot was operating under IFR in IMC in receipt of an Aerodrome Control Service from Manchester Tower, in the process of handing-over to Scottish.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the B757 pilot and radar photographs/video recordings.

The Board discussed for some time the nature of the observed object and ultimately agreed that it was more likely a drone than balloons. They also agreed that it was clearly being operated at an

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 www.caa.co.uk/uas

³ CAP 1202

altitude and location that contravened regulations, and hence they determined that it had been flown into conflict with the B757, which was departing Manchester on a SID in the Class D airspace of the Manchester CTR. The reported separation was such that members quickly agreed that there had been a definite risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the B757.

Degree of Risk: A.