

AIRPROX REPORT No 2014233

Date/Time: 15 Dec 2014 0843Z

Position: 5350N 00138W
(3.5nm SE Leeds/Bradford airport.)

Airspace: Leeds Bradford CTR (Class: D)

Aircraft 1 Aircraft 2

Type: EMB135 SUA¹

Operator: CAT Unknown

Alt/FL: 1700ft

Conditions: VMC

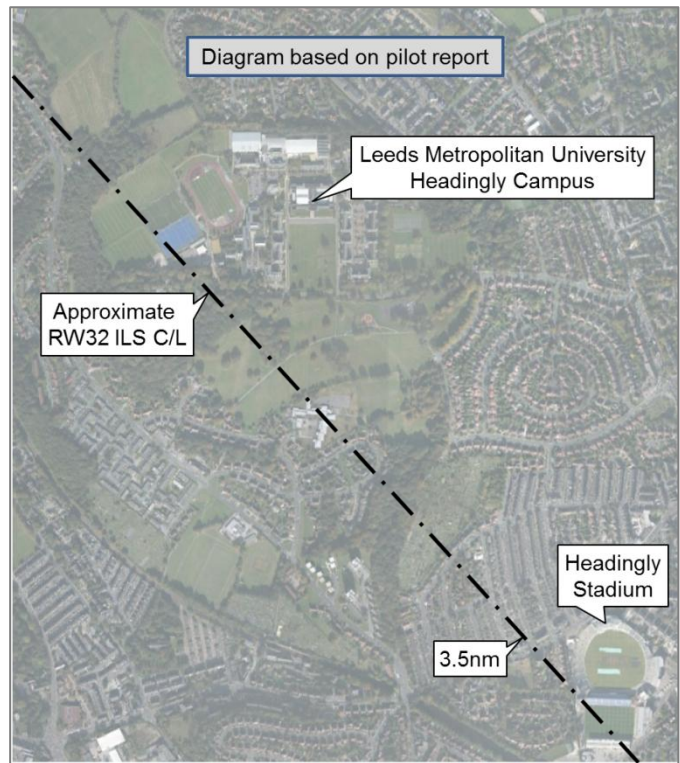
Visibility: 25km

Reported Separation:

200-300ft V/NK H

Recorded Separation:

NK



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE EMB135 PILOT reports that he was inbound to Leeds Bradford airport on the RW32 ILS approach at 1700ft, 3.5nm from touchdown. The SUA was seen by the First Officer and a passenger as it passed down the right hand side of the aircraft, but he did not see it himself. The First Officer described the SUA as follows: 'probably kind of a square-shaped; it was shiny white, with black accents/stripes; quite big, between 2-4ft wide, with at least 2 propellers; no conspicuity light, no strobe seen. Because the incident lasted just a few seconds, the First Officer recollected that it definitely had 2 propellers, but thought that that was unlikely, and that it possibly had 4; it was half white and half black, the black part of it being harder to distinguish against ground texture.

He did not provide an assessment of the risk of collision.

THE SUA OPERATOR: The SUA and its operator were not traced.

THE LEEDS BRADFORD AERODROME CONTROLLER reports that the EMB135 pilot, at 4-5nm on final approach ILS RW32, reported a 'drone' passing down his 'left-hand' [sic] side at a similar level, 300ft below. The SUA was described as black/silver with 2 propellers. Nothing was observed from the Visual Control Room. A Police helicopter pilot was informed; he investigated and also saw nothing. The pilot of the following aircraft was informed, he also saw nothing.

THE ATC MANAGER reports that no SSR or primary contact was displayed on the radar recordings. When this incident was brought to ATC's attention by the EMB135 pilot the on-duty controller looked in the direction of final approach, into sun, and did not see anything. The pilot of the following aircraft (a B737) was advised and did not see anything. The pilot of the Police Air Support helicopter, who was in the area, was advised. He looked for ten minutes but did not find anything. A light-aircraft departed to the south east, and its pilot also did not see anything. The ATSU does have a working arrangement with some TV companies which fly these type of SUA, even though in some cases there is no legal requirement to do so. No approvals were issued on that day.

¹ Small Unmanned Aircraft. An Unmanned Air Vehicle (UAV) with an operating mass of 20kg or less is defined as an SUA in Article 255 of the Air Navigation Order 2009.

Factual Background

The Leeds Bradford weather was:

EGNM 150820Z 24008KT 9999 SCT015 03/02 Q1007=

Analysis and Investigation

CAA ATSI

ATSI had no further information to add to that supplied by the controller and the EMB135 crew.

UKAB Secretariat

The Air Navigation Order 2009 (as amended), Article 138² 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 site³ 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 Notice⁴ 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).

Also, stay well clear of airports and airfields’.

The Radar Analysis Cell reports that the incident looked to have occurred near Kirkstall Abbey and that there are numerous playing fields close to the flight path, between the 3.5nm reported by the EMB135 pilot and the 5nm point that the controller believed was the furthest point the incident may have occurred.

² 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>.

³ www.caa.co.uk/uas

⁴ CAP 1202

Summary

The First Officer and a passenger of an EMB135 reported sighting an SUA pass down the right-hand side of the aircraft when on final approach, about 3.5nm from touchdown. He described the object as round in shape and to have a horizontal black marking. It appeared to have external pylon-type rotors. The estimated miss distance was 200-300ft vertically as it passed on a reciprocal track. ATC had no knowledge of the SUA. The local police helicopter was in the area and carried out some surveillance in the vicinity of the original report but was not able to see the SUA.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the EMB135 pilot and the controller concerned, area radar and RTF recordings (although the SUA did not appear on radar), and reports from the appropriate ATC and operating authorities.

Taking into account the independently reported observations by both the First Officer and a passenger, the Board were satisfied that there had been an encounter with some form of SUA when the EMB135 was on final approach to Leeds Bradford airport. The Board considered that it was unfortunate that the SUA and its operator had not been traced, but noted that this was not unusual in these types of incident.

The Board were of the unanimous opinion that the operator of the SUA had chosen to fly it in an entirely inappropriate location. That the dangers associated with flying such an air vehicle in close proximity to a Commercial Air Transport aircraft on its final approach to landing were not self-evident was a cause for considerable concern. Whether this had been done deliberately, unthinkingly, or simply by mistake or loss of control could not be ascertained; however, members reiterated that anyone operating an air vehicle, of whatever kind, had to do so with due consideration for regulations and for other airspace users, and preferably under the auspices of an established association or club. The Board noted the Air Navigation Order regulations which prevent the flight of a SUA with a mass of more than 7kg in Class D airspace or Aerodrome Traffic Zones without the permission of the appropriate Air Traffic Control Unit. Because it had not been possible to identify the SUA concerned it had not been possible to gauge its mass. Consequently, it was not known if the SUA had been flown in contravention of this regulation.

The Board quickly decided that the cause of the Airprox was that the SUA had been flown close enough to the EMB135 to cause its pilot concern. The Board then turned its attention to the risk and noted that the pilot had not himself commented on the risk of collision. Although it was not possible for the EMB135 pilot to have taken any action to avoid the SUA, he had reported that it passed about 200-300ft below his aircraft; it was clearly not known if the SUA operator took any action to avoid the EMB135. Members opined that if the EMB135 pilot had been greatly concerned that the SUA's proximity could possibly have resulted in a collision he would have reported his assessment of the risk accordingly. Therefore, because of this and the miss distance reported by the EMB135 pilot, the Board opined that, without diminishing the seriousness of the incident, although there had probably been no actual risk of a collision in this instance, normal safety standards had certainly not pertained; consequently, the Airprox was categorised as risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The SUA was flown close enough to the EMB135 pilot to cause its pilot concern.

Degree of Risk: C.