

AIRPROX REPORT No 2013086

Date/Time: 19 Jul 2013 1835Z

Position: 5126N 00058W
(19.5nm W LHR)

Airspace: Lon UIR (Class: C)

Reporting Ac Reported Ac

Type: A320 Unknown

Operator: CAT NK

Alt/FL: FL340 NK

Weather: NK NK

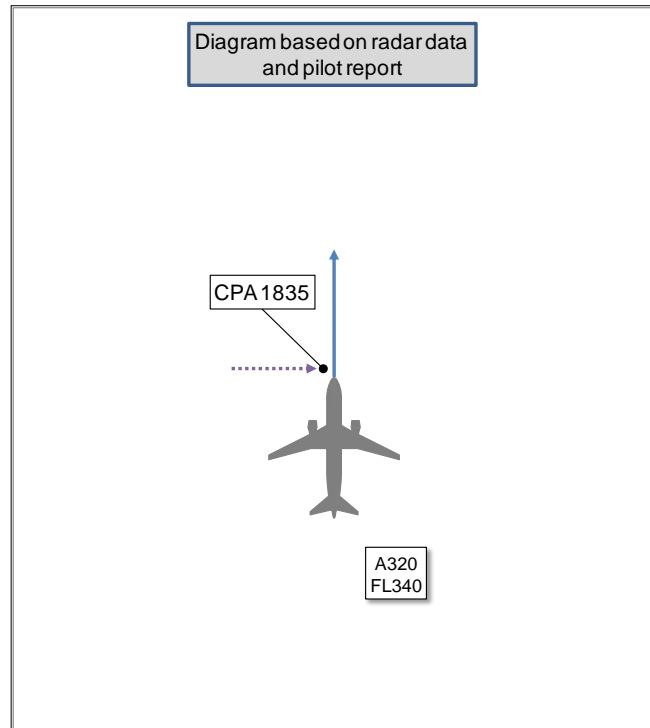
Visibility: NK NK

Reported Separation:

NK NK

Recorded Separation:

NK



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE A320 PILOT reports transiting in level cruise at FL340, just to the west of Heathrow. The First Officer (FO) in the RH seat, was looking down at the PLOG¹. The Captain, in the LH seat, looked to the West out of the flight deck 'Direct Vision'² window. As he turned to look ahead, he perceived an object travelling towards them, at what appeared to be the same level, slightly above the flight deck windscreen. Having very little time to focus, he was under the apprehension that they were on a collision course with no time to react. His immediate reaction was to duck to the right and reach over to alert the FO; there was no time to talk to alert him. The FO turned and looked at him, thinking something was wrong with the aircraft. The Captain was fully expecting to experience some kind of impact with a conflicting aircraft. His first words to the FO were, "did you see that", who replied, "see what". The Captain perceived an object pass within a few feet above the aircraft. It could best be described as cigar/rugby ball like in shape, bright silver, and metallic like in construction. His first reaction after gathering his thoughts, was to interrogate the TCAS for returns within the area; none were seen. He then asked ATC for information on any aircraft in the vicinity, again there were no known aircraft in the area at the time and no other primary or secondary returns. He explained the situation to ATC and the crew both decided they would file an Airprox. Upon arriving at the destination, the Captain spoke extensively by phone with the ATC watch manager for that sector.

The UK Airprox Board Secretariat was unable to trace the other aircraft.

Factual Background

At 1835 on 19 Jul 2013 at the position of CPA, the sun was at a bearing of 278° and elevation 21° at ground level³. This equates to an elevation of about 24° at FL340.

¹ An abbreviation for Progress or Pilot's Log. The PLOG is a tabular record which includes information such as planned track, heading, altitude, ETA and fuel state for each leg of the journey. Information such as actual track, heading, altitude, ETA and fuel state is completed as the flight progresses and is used to assess the safe progress of the flight.

² The Direct Vision (DV) window, also known as the Direct Ventilation window, is a part of the windscreen that can be opened should direct vision be required, e.g. in the event of windscreen obscuration the pilot can open the DV window and look 'directly' outside, rather than attempt to judge a landing through the obscured windscreen.

³ As a guide, with a hand held at arm's length, back of the hand facing you and fingers spread as wide as possible, the span from little finger to thumb subtends an angle of 20°-25°.

Analysis and Investigation

CAA ATSI

The incident was reported to have occurred at approximately 1835, 19.5nm to the West of London Heathrow at FL340. The A320 pilot was operating under IFR in receipt of a Radar Control Service from London Control. CAA ATSI had access to area radar recording, together with the written report from the A320 pilot and the NATS Ltd investigation report.

The estimated viewing aspect through the DV window is shown at Figure 1 below.

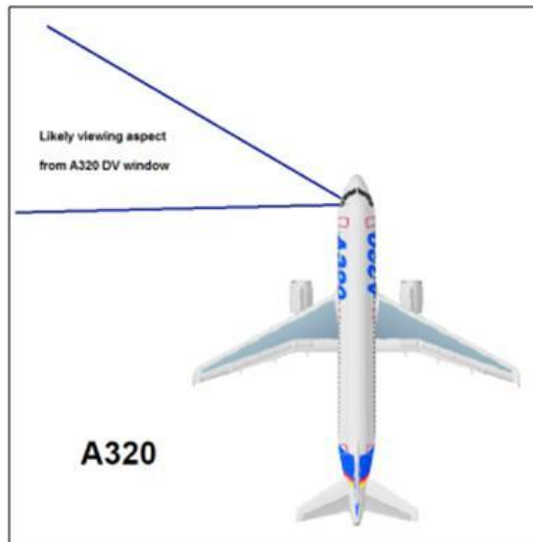


Figure 1: LH DV window Viewing Aspect

At the time of the reported occurrence (1835:22) the radar recording was filtered to show aircraft operating within the level band FL320 and FL390 along with unknown primary contacts, these have been circled red in Figure 2 below.

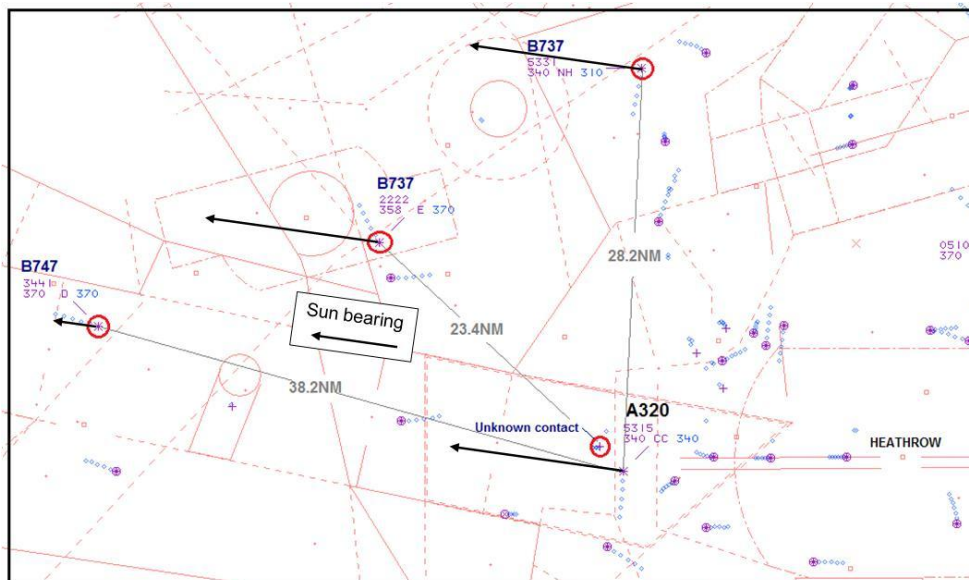


Figure 2: Swanwick MRT at 1835:22

An unknown primary contact was recorded in A320's 10 o'clock at a range of 2.2nm. This contact first appeared on the radar at 1828:53, in the vicinity of the village of Eling, approximately 30nm West of Heathrow. The unknown contact routed West and landed at White Waltham at 1846. This was identified as being a Tiger Moth aircraft which was operating at low-level and was eliminated from the investigation.

Three other aircraft are shown: a B747, 38.2nm West of the A320 at FL370 tracking east-southeast; a B737, 23.4nm northwest of the A320 at FL358 tracking south-southeast and another B737, 28.2nm ahead of the A320 at the same level on a similar routeing.

The NATS Ltd AIS pre-flight bulletin, nav-warning for the London FIR, contained three NOTAMS which promulgated the release of Meteorological and Radiosonde balloons (with unlimited upper levels). The sponsors of each were contacted and it was confirmed that no balloons were released from the specified sites on the incident date.

A NATS Ltd investigation was not able to verify the origin, level or size of the object reported by the A320 pilot. The Military Radar Analysis Cell (RAC) where unable to trace the reported object.

There were no radar traffic returns within the immediate vicinity of the A320. There were two aircraft 20nm and 35nm West and slightly above the level of the A320 and one aircraft 20 miles ahead of the A320 at the same level. It was considered possible that given the position of the sun, these aircraft may have been glinting in the sun. However, it was not possible to trace the object or determine the likely cause of the sighting.

Summary

An A320 pilot, in Northbound level cruise at FL340, perceived an object through the LH DV window which he assessed as travelling towards him at the same level, slightly above the flight deck windscreen. There were no aircraft in the vicinity indicated on TCAS or on radar. There were no recorded releases of meteorological balloons in the area.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the A320 pilot, radar video recordings and a report from the appropriate ATC authority.

The Board established that there did not appear to be any conflicting traffic on radar and that no TCAS alerts or advisories had been issued. The involvement of a meteorological balloon was ruled out and it was calculated that a helium filled envelope would have to be of the order of 1m in diameter to reach FL340, hence ruling out commercially available toy balloons. Nevertheless, the A320 pilot was subject to a powerful impression of immediate danger, caused by his perception of an object closing rapidly on his aircraft. Although only supposition, members opined that this may have been due to a combination of a possible reflection from the low sun off one of the aircraft to the West, and of the pilot's head movement as he looked forward. After some discussion it was decided that, although the reflection theory held some merit, the overall dearth of information relating to the event rendered a meaningful finding impossible.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Sighting report.

Degree of Risk: D.

ERC Score⁴: N/S

⁴ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.