| Date/Time: 9 Aug $20121708 Z$ |  |  |
| :---: | :---: | :---: |
| Position: | 5122N 00042 | (6nm NE DET) |
| Airspace: | LTMA | (Class: A) |
|  | Reporting AC | Reported Ac |
| Type: | B737-800 | Untraced |
|  |  | Balloon |
| Operator: | CAT | NK |
| Alt/FL: | FL110 |  |
|  |  | (NK) |
| Weather: | VMC NR | NK |
| Visibility: | NR |  |

Reported Separation:
Nil V/100-200m H
Recorded Separation:


NR

## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE B737 PILOT reports inbound to Gatwick, IFR and following a TIMBA 3E arrival level at FL110 and 250kt approaching LARCK. He, the Capt, noticed a balloon at their level approximately 100200m away whilst the FO was busy with other operational tasks. The balloon appeared to be 1020 m in diameter and light coloured, possibly white/silver/tanned. This event happened very quickly and, with no other reference in his visual field, the distance and size was hard to tell. His judgement of size and distance was based on his closure speed. He reported the encounter immediately to ATC.

ATSI reports that at 1708:09UTC the pilot of a B737 reported having, "...passed a weather balloon very closely." The LTC S controller requested further details from the pilot and the following description was given, "...it was about 20 seconds ago, about 100 metres from the aircraft at our level... oval shape and light coloured... may be 20 metres in diameter". At the time of the sighting the B737 was approximately 1 nm N of the TANET - DET track with 6 nm to run until abeam DET. The LTC S controller took the details and also passed these to another flight behind the B737 on the TIMBA 3E. In the absence of a debrief of the B737 pilot, the geometry of the ac's encounter with the balloon is not known.

Meteorological information indicated that a large anticyclone covered the UK and the recorded winds at $2000 \mathrm{ft}, 5000 \mathrm{ft}$ and 10000 ft showed the wind backing from E'ly to N'ly at speeds between 11-20kt. This data excluded many of the notified AIP balloon launch sites and, despite extensive enquiries, the origin of the balloon could not be ascertained. Notably there was no recorded balloon activity from Shoeburyness around the time of the reported encounter.

UKAB Note (1): The UK AIP at 1-1-5-7 Airspace Restrictions, Danger Areas and Hazards to Flights para 3.5 Radiosonde Balloon Ascents, states that the Met Office releases helium or hydrogen filled balloons from a number of locations throughout the UK listed at EENR 5.3. A typical installation consists of a balloon, diameter at launch approximately 1.5 m , to which is attached a small parachute. The radiosonde is attached underneath the parachute on a suspension string of approximately 33 m in length. The distance the balloon travels away from the launch site is dependent on the wind strength, but they can obtain altitudes of over 80000 ft . Prospective launch sites included Herstmonceux (off-white/brown colour) and Larkhill (red), as well as independent releases from

Reading University and Shoeburyness. The UK Met Office carried out an investigation using timings, atmospheric wind observations and average properties of a Wx balloon to produce a likely launch area. The nearest site at Herstmonceaux [30nm SSW of reported Airprox position] launched balloons on 8th and 9th Aug at 2315UTC which made it unlikely to be the balloon encountered.

UKAB Note (2): AUS/DAP made comment that there was no notified mass 'toy balloon' release on the 9th Aug. There were numerous 'Captive/tethered balloons' notified. Any captive balloon operators given permission by AUS have to report any breakaways to a pre-ordained ATSU (normally LAC Swanwick in the London area) as one of the conditions of the 'permission'. LAC Swanwick Ops had no notification of a breakaway balloon on the $9^{\text {th }}$ Aug.

UKAB Note (3): A recommendation was made to the MOD and CAA, following 3 incidents between May - July 2002 involving encounters with untraced balloons, to review the arrangements for balloon release in UK airspace. The MOD believed the risk to the aviation community as minimal. A Met balloon suspended package would cause minimal damage, considered less than that associated with a bird strike, and the suspension string also unlikely to present a hazard to ac. The CAA commented that ICAO classifies Met balloons in the 'light' category, perceiving that they pose little risk to ac. Also the risk of damage in the event of collision with a Met balloon was also considered less than that associated with a bird strike. DAP agreed to liaise with Royal Meteorological Society to determine a suitable manner of reminding amateur meteorologists of the ANO requirement Article 68, notification and permission given in writing from CAA through DAP. Also DAP agreed to amend the UK AIP to emphasise this requirement and to write to other organisations (e.g. universities) to remind them.

## PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the B737 pilot, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

Members agreed with the B737 pilot's comments regarding the difficulty of estimating size and distance of a balloon when seen only briefly and with no other visual references to gauge against. Without knowing the balloon's actual size it would be difficult to then estimate the separation that pertained at the CPA. There is no doubt that the B737 pilot had seen a balloon, reported as a Wx balloon type on the RT at the time, but with the lack of any other information available, Members could only classify this as a sighting report but were unable to determine with any confidence the risk.

## PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Sighting report.
Degree of Risk: D.

