Date: 20 Apr 2016 Time: $0955 Z$ Position: 5123N 00028W Location: 5nm N OCK VOR
PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
| :--- | :--- | :--- |
| Aircraft | B787 | Balloon |
| Operator | CAT | Unknown |
| Airspace | London TMA | London TMA |
| Class | A | A |
| Rules | IFR |  |
| Service | Radar Control |  |
| Provider | London TCC |  |
| Altitude/FL |  |  |
| Transponder | A,C,S |  |
| Reported |  | Not reported |
| Colours | Company |  |
| Lighting | NK |  |
| Conditions | VMC |  |
| Visibility | $>10 k m$ |  |
| Altitude/FL | $5500 f t$ |  |
| Altimeter | QNH (1030hPa) |  |
| Heading | $275^{\circ}$ |  |
| Speed | 250 kt |  |
| ACAS/TAS | TCAS II |  |
| Alert | Unknown |  |
| Separation |  |  |
| Reported | 100ft V/Om H |  |
| Recorded | NK |  |



THE B787 PILOT reports that whilst climbing through 5500ft to a cleared level of 6000ft, both pilots spotted an object slightly below their level, at a distance of 2 nm . It was round, with an estimated diameter of 1 m , and either white or silver. The object passed 100 ft directly beneath the aircraft. In the short time that it was visible, they were unable to identify it, but retrospectively decided it was likely to have been a balloon.

THE MET OFFICE reports that there were no Met Office balloons in that area on that day.
THE LONDON TCC CONTROLLER reports that the pilot reported that a 'drone' had passed beneath them whilst climbing through 5500ft and in the vicinity of Fairoaks. Surrey police were informed.

## Factual Background

The weather at Heathrow was recorded as follows:
METAR COR EGLL 200950Z AUTO 07010KT 9999 NCD 11/03 Q1031 NOSIG=
Figure 1 is the synoptic chart provided by the Met Office showing the upper winds and pressure over the UK.


Figure 1

## Analysis and Investigation

## UKAB Secretariat

The nearest Met Office balloon launch site to OCK is at Herstmonceux (approx $130^{\circ} / 40 \mathrm{~nm}$ ), and balloons may be launched from there up to twice a day; however, none were launched on that day. There is another Met Office launch site at Larkhill to the west, but the upper winds on the day (slack easterly/south-easterly) meant that a balloon launched from there would be unlikely to have travelled to the OCK area. Therefore, it was concluded that the balloon was not one that had been launched by the Met Office.

## Summary

An Airprox was reported when a B787 and a balloon came into proximity at 0955 on Wednesday $20^{\text {th }}$ April 2016. The B787 pilot was operating under IFR in VMC, and in receipt of a Radar Control Service from London TCC at Swanwick. The balloon 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.

Members of the Board agreed that this was probably not a Met Balloon, but was likely to have been a research balloon of some sort launched by another unknown agency. They noted that the crew had seen the balloon from some distance away ( 2 nm ), and that as they approached it in the climb they were able to assess that it would pass beneath them. The crew had assessed that they didn't need to take avoiding action, and members also noted that previous Met Office information had offered the view that it was thought unlikely that a balloon would collide with an aircraft anyway because the airflow from the aircraft would likely cause it to be forced out of the way. In the end, the Board decided that although the B737 crew were concerned by the proximity of the balloon, there had been no risk of collision; they assessed the incident as risk Category C.

## PART C: ASSESSMENT OF CAUSE AND RISK

Cause:
The B737 pilot was concerned by the proximity of the balloon.
Degree of Risk: C.

