**ACCIDENT**

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| **Aircraft Type and Registration:** | Ultramagic N-250 balloon, G-BZJX |
| **No & Type of Engines:** | None |
| **Year of Manufacture:** | 2000 |
| **Date & Time (UTC):** | 21 July 2006 at 1815 hrs |
| **Location:** | Henley on Thames, Oxfordshire |
| **Type of Flight:** | Passenger Transport |
| **Persons on Board:** | Crew - 1 Passengers - 10 |
| **Injuries:** | Crew - None Passengers - None |
| **Nature of Damage:** | No damage to G-BZJX. Damage to canopy of G-CBFY |
| **Commander's Licence:** | Commercial Pilot's Licence (Balloons) |
| **Commander's Age:** | 58 years |
| **Commander's Flying Experience:** | 3,686 hours (of which 1,800 were on type)<br>Last 90 days - 26 hours<br>Last 28 days - 10 hours |
| **Information Source:** | Aircraft Accident Report Form submitted by the pilot |

**Synopsis**

The balloon was caught by a gust of wind during takeoff, went in a direction approximately 70º to that which was expected. The pilot was unable to increase the rate of climb sufficiently to avoid another balloon that was about to launch. The basket of G-BZJX brushed against the canopy of G-CBFY causing the latter's canopy to tear and deflate. Nobody was injured in the accident.

**History of the flight**

At 1730 hrs the crews arrived at the launch site to discuss the launch of five balloons. The site was a large school sports field and balloon rides were part of a corporate entertainment event. A meteorological balloon was launched which drifted off towards 290º before slowly turning right as it gained height and settling at 020º at about 5 kt. This latter wind speed and direction were consistent with the forecast of the wind coming from 200º at 5 kt. The five balloons were then prepared at their respective launch positions. The passengers arrived at about 1745 hrs and at 1815 hrs all five balloons were inflated and the passengers were on board.

Of the five inflated balloons, G-BZJX was positioned the furthest upwind of the forecast wind direction. One balloon was positioned directly downwind of G-BZJX. The pilot of G-BZJX called the pilot of the downwind balloon on his radio twice and received no reply. However he could see that the pilot of the downwind balloon was not ready for takeoff. Another balloon was situated 150 m away on a bearing approximately due

east of G-BZJX, ie some distance upwind of G-BZJX and not on the path that G-BZJX would be expected to take after takeoff, and this balloon took off in the expected direction of 020º. G-CBFY was situated midway between G-BZJX and the balloon that had taken off ie about 75 m away, slightly upwind and about 70° to the right of G-BZJX's expected path (see Figure 1).

The pilot of G-BZJX decided to take off. A gust of wind then blew G-BZJX towards G-CBFY and the pilot of G-BZJX promptly applied maximum heat in an attempt to increase the rate of climb to avoid the stationary balloon. The basket of G-BZJX then brushed against, and tore, the canopy of G-BCFY before climbing clear. The initial contact of the basket was about 20 ft below the top of the canopy of G-BCFY.

The subsequent flight of G-BZJX was uneventful and the flight of G-CBFY was aborted. Nobody was injured in the accident.

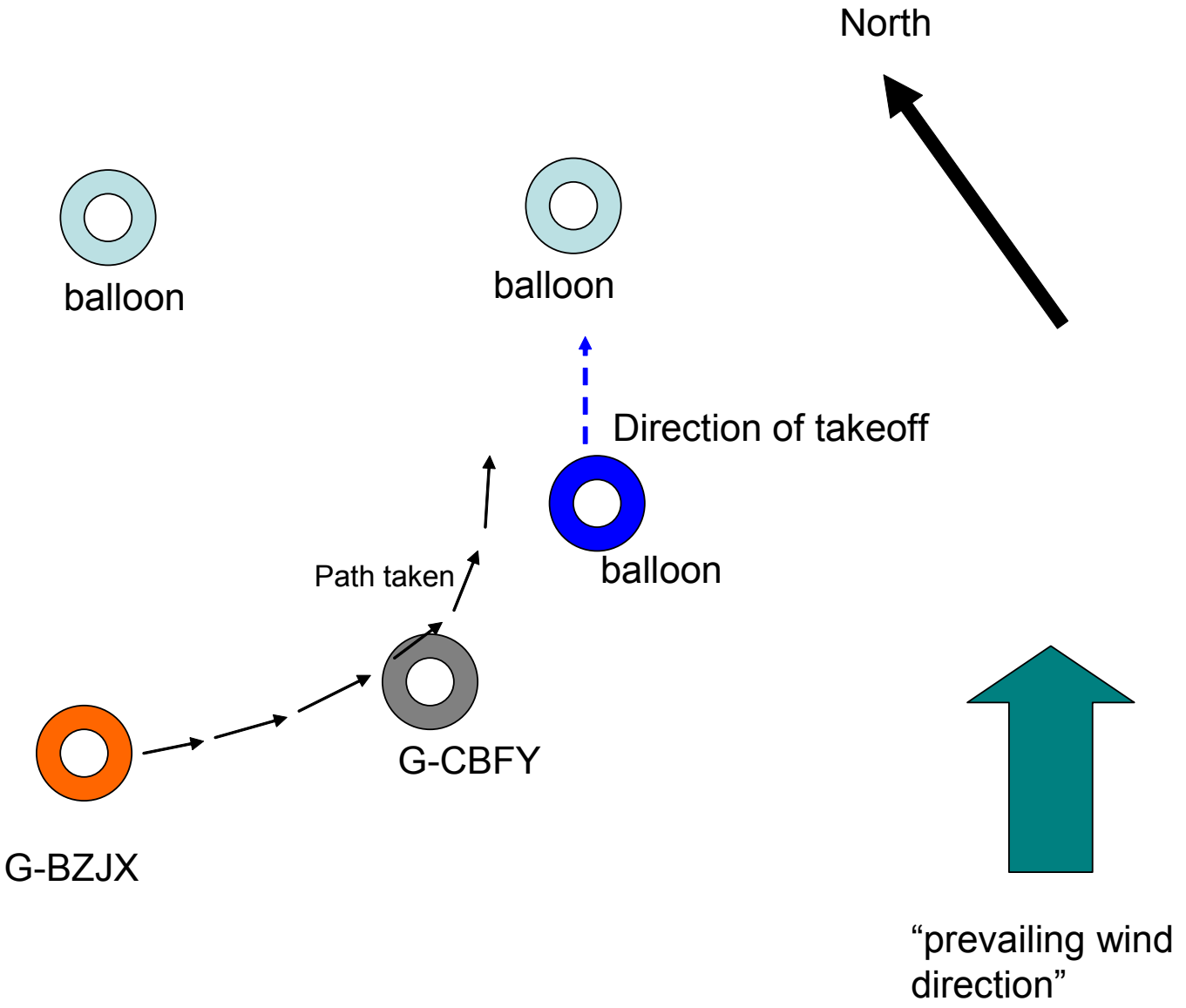


**Figure 1**

**Pilot's comments**

The pilot attributed the accident to the unexpected direction of the gust of wind at a critical time during the takeoff. He also noted that his future takeoffs would have a faster rate of climb to minimise the risk of hitting an obstacle.

**Metrological information**

The Met Office provided the AAIB with forecast and reported wind information. The forecast winds at Farnborough, Heathrow and Northolt were 5 kt at 210°, 7 kt at 200º and 8 kt at 200º respectively. The reported winds at 1820 hrs for Farnborough, Heathrow, Benson and Northolt were 5 kt at 250º, 8 kt at 200º, 7 kt at 200º and 6 kt at 210º respectively.

The only relevant recorded information regarding gusts was at High Wycombe at 1800 hrs which was 5 kt at 240º gusting to 12 kt.

**CAP 403**

CAP 403 '*Flying Displays and Special Events: A Guide to Safety and Administrative Arrangements'* is published by the UK CAA. This document is intended *as 'a code of practice and an indicator of best practice*' for such events.

The following are extracts from chapter 8 '*Balloon Events*' in the document:

*a) Mass takeoffs should only take place in winds of less than 8 kts*

*b) Prior to takeoff, pilots must ensure that their projected track out of the site is clear of balloons either on the ground or in the air*

*c) If the wind speed exceeds 5 kts the crowd should be separated from the balloons in such a way that in the event of a change of wind direction prior to launch no part of the balloon will come into contact with the crowd*

**Analysis**

The pilot of G-BZJX was experienced and the preparation prior to the takeoff appeared to be appropriate.

Based on the forecast winds and the winds observed prior to the takeoff of G-BZJX, the pilot's actions were in accordance with the CAP 403 guidelines. However, the balloon was caught by a gust in an unexpected direction that the pre-flight planning did not envisage. The reported wind directions, particularly from High Wycombe, confirmed that there was some variability in the wind direction and some gusting.

Mass takeoffs such as this necessitate the implementation of an appropriate assessment of risks. It is not uncommon for the canopies of balloons to touch during such an event; however it is more important to avoid a basket touching a canopy. Whilst the probability of such an accident occurring is not negligible, the outcome is usually minor.