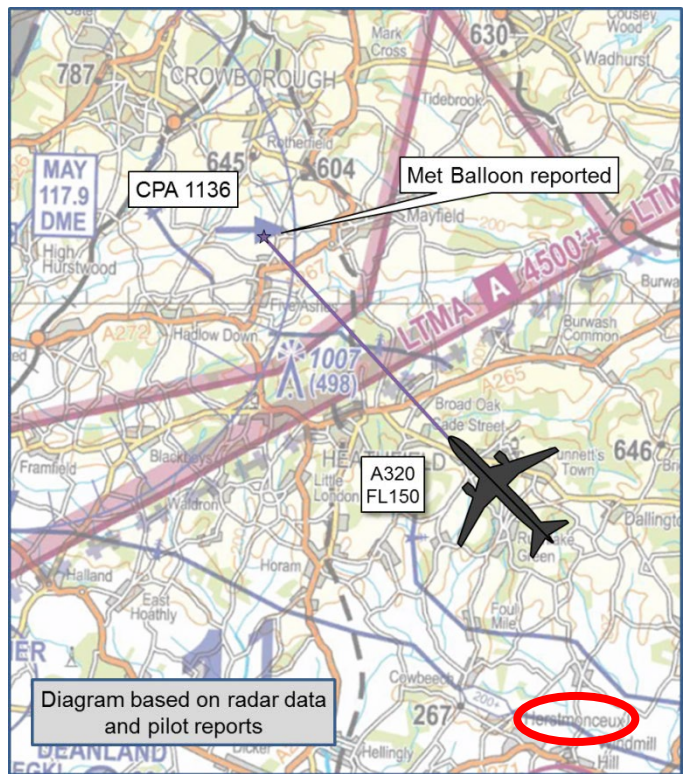


AIRPROX REPORT No 2015213

Date: 7 Dec 2015 Time: 1136Z Position: 5101N 00013E Location: 20nm SSE Biggin

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A320	Balloon
Operator	CAT	Met Office
Airspace	London FIR	
Class	A	A
Rules	IFR	
Service	Radar Control	
Provider	Swanwick	
Altitude/FL	FL150	
Transponder	A,C,S	N/A
Reported		
Colours	White, Red, Blue	
Lighting	NK	
Conditions	VMC	
Visibility	10km	
Altitude/FL	FL150	
Altimeter	1013hPa	
Heading	NW	
Speed	250kt	
ACAS/TAS	TCAS II	Not fitted
Alert	None	
Separation		
Reported	200ft V	
Recorded		NK



THE A320 PILOT reports that, during the descent, the PF spotted a helium type, spherical white balloon with a long tether and white box suspended beneath. No avoiding action was possible, and the balloon was observed to pass about 200ft above the aircraft. ATC were informed.

He perceived the severity of the incident as ‘Low’.

THE MET OFFICE reports that the timing and location of the balloon would indicate that the source was likely to be a scheduled launch from a site in the village of Herstmonceux (Figure 1). A check of the records indicates that there was a launch at 1115, and approximate ascent rates indicate that 16000ft could be achieved by 1136, the time reported by the pilot. However, the data from the radio-sonde showed that the wind was between 190-260°, which would mean that the balloon would be blown to the NE of the launch site – the reported CPA was NNW of the release site.

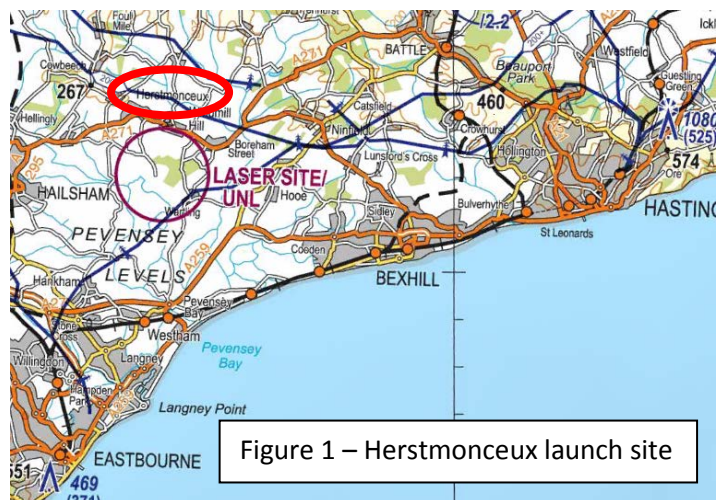


Figure 1 – Herstmonceux launch site

THE SWANWICK LONDON TC CONTROLLER reports that the A320 was inbound to Heathrow; when in the descent to his cleared level, the pilot reported seeing a met balloon. This was acknowledged and reported to the Group Supervisor.

Factual Background

The weather at Heathrow was recorded as follows:

METAR COR EGLL 071120Z AUTO 21009KT 170V250 9999 BKN008 13/12 Q1025 TEMPO BKN010=

The UK AIP lists Herstmonceux as a radio-sonde balloon launch site, with the following information:

HERSTMONCEUX 505328N 0001901E	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon off-white to brown/ carrying 390 gm radio- sonde and parachute. Launched at 2325 UTC and occasionally at 1115 UTC or other times of the day.
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Summary

An Airprox was reported when an A320 flew into proximity with a met balloon at 1136 on Monday 7th December 2015. The A320 pilot was operating under IFR in VMC and in receipt of a Radar Control Service from Swanwick. The met balloon was probably launched from Herstmonceux at 1115.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the A320 pilot, radar photographs/video recordings and reports from the air traffic controllers involved.

Board members opined that the reporting location given by the A320 pilot was, in all probability, not exact due to the fact that it was subject to the vagaries of reaction time and subsequent delays in the pilot contacting ATC. Therefore, notwithstanding the apparent disparity between the reported CPA location and the radio-sonde wind data, it was agreed that, in all likelihood, the A320 pilot had observed a Met balloon that had been launched from Herstmonceux.

Members noted that the Met Office frequently releases Met balloons in UK airspace and that, as in this case, the events are notified either in the UK AIP or by NOTAM. This led the Board to discuss the use of Met balloons and the associated risks to aircraft. Historically, Met balloons have been the only way for the Met Office to gather their data but members noted that modern technology had superseded this method in many respects, they also noted that data gathering equipment was already routinely installed in aircraft to provide such measurements. In short, although members could not recall hearing of any incidents where a Met balloon had hit an aircraft, they wondered whether this had become a risk that had simply become accepted by historical necessity rather than anyone taking a fresh look at the potential consequences in the more modern congested airspace. Members also briefly discussed whether conspicuity equipment could be put onto the radio-sonde to make them visible electronically to pilots, whilst ATC would probably not welcome an added uncontrollable transponder in their airspace, at least it would give others the chance of avoiding such balloons, and it was thought that there was suitable technology available to solve the problem. All that being said, it was noted that there are comparatively few Airprox reports of close encounters with Met balloons, but still the Board wondered whether the effects of an aircraft colliding with a Met balloon were properly appreciated. [The UKAB secretariat were subsequently informed by the meteorological society of studies into this risk which indicated that the balloons would likely be forced out of an aircraft's path by airflow, and that the radio-sonde equipment is frangible and designed to break-up if hit by an aircraft; however, engine ingestion was not addressed]. In the end, the Board agreed that the cause of the Airprox was that the A320 pilot had been concerned by the proximity of the Met balloon, and that the risk of collision was Category B, safety had been much reduced.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The A320 pilot was concerned by the proximity of the Met balloon.

Degree of Risk: B.