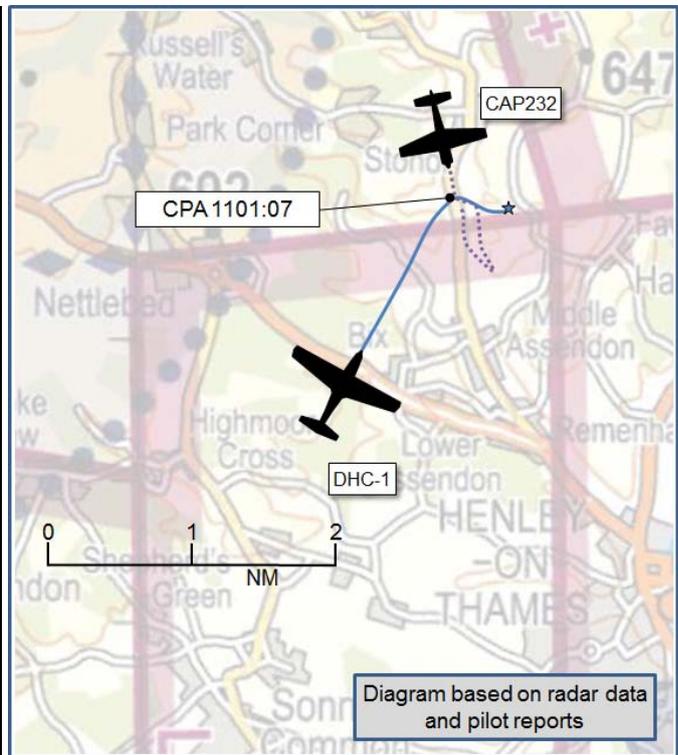


**AIRPROX REPORT No 2016069**

Date: 30 Apr 2016 Time: 1048Z Position: 5135N 00056W Location: NNW Henley-on-Thames

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	DHC-1	CAP232
Operator	Civ Pte	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Provider	Halton	N/A
Altitude/FL	NK	NK
Transponder	C	NK
Reported		
Colours	Silver, Yellow, Red	Not Reported
Lighting	NK	NK
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2000ft	800ft – 2800ft
Altimeter	QNH	NK
Heading	035°	NK
Speed	80kt	NK
ACAS/TAS	Not fitted	NK
Alert	N/A	NK
Separation		
Reported	150m H	300m H/>500ft V
Recorded	NK	



**THE DHC-1 PILOT** reports that he was abeam Henley when an aerobatic aircraft shot up from below, dead ahead, in a near vertical climb. As the aerobatic aircraft’s climb rate decreased, it appeared to perform a stall turn above him. He banked steeply 90 degrees to the right to clear away as quickly as possible; when he judged it prudent he turned north, back on track but could not see the aerobatic aircraft. He thought that the other aircraft was carrying out aerobatics and had not seen him.

He assessed the risk of collision as ‘High’.

**THE CAP232 PILOT** reported verbally. He commented that, as far as he can remember about the incident, he was operating in a 1km square box carrying out aerobatics in the block 800ft to 2800ft. He saw a DHC-1 prior to commencing his climbing manoeuvre and remained visual at all times. He was not sure but thought it was routing past Stokenchurch mast. He started to carry out a stall turn but, although he did not believe his aircraft would conflict with the DHC-1, he rolled out of it because he believed that the DHC-1 pilot might perceive him as a threat. He said the aircraft came within about 300m horizontally and was more than 500ft vertically.

He assessed the risk of collision as ‘None’.

**Factual Background**

The weather at Benson was recorded as follows:

METAR EGUB 300850Z AUTO 31004KT 9999 // NCD 08/02 Q1021  
 METAR EGUB 300950Z AUTO 28006KT 9999 // FEW034/// 10/01 Q1021

## Analysis and Investigation

### UKAB Secretariat

The CAP232 was squawking 7000 but not Mode C/Alt. The radar replay shows its track which corresponds with an aircraft carrying out dynamic manoeuvring in the general area of the Airprox until it disappears from radar and does not reappear until after the DHC-1 pilot has carried out avoiding action and resumed course. There is therefore no radar picture at CPA.

The DHC-1 and CAP232 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>2</sup>.

### Summary

An Airprox was reported when a DHC-1 and a CAP232 flew into proximity at 1048 on Saturday 30<sup>th</sup> April 2016. Both pilots were operating under VFR in VMC, Neither was receiving a service.

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

Information available consisted of a report from the pilot of the DHC-1, a verbal report from the CAP232 pilot and radar video recordings.

The Board first looked at the actions of the CAP232 pilot carrying out aerobatics. He had reported being visual with the DHC-1 throughout the encounter and had felt comfortable enough to continue his manoeuvres despite its presence. Describing the separation himself as 300m laterally, members commented that this Airprox hinged on what each pilot thought was a comfortable separation. In this respect, they opined that pilots should not assume that other pilots had seen them, nor that they would be as comfortable with their proximity as they themselves might be. GA members felt that the CAP232 pilot would have been better served in aborting or delaying his pull-up as soon as he had seen the DHC-1 as a consideration to its pilot who would undoubtedly be surprised to see an aircraft suddenly appear in the front hemisphere, close by, and conducting a vertical manoeuvre.

For his part, the members opined that the DHC-1 pilot was likely startled by the sight of the CAP232 pulling up and, not being aware whether or not its pilot had seen him, was understandably concerned when it entered what appeared to be a stall-turn above him. This reinforced the point about pilots not assuming that other pilots have seen them (especially pertinent when the other aircraft is carrying out aerobatics where sudden changes in heights or headings occur), and members felt that the DHC-1 pilot's subsequent defensive break away was wholly warranted given the situation with which he was faced.

General aviation members with aerobatic experience pointed out that it is often considered good practice for aerobatics pilots to have spotters on the ground in communication with them to warn them of any possible conflicting aircraft in the area they are operating in. The Board went on to highlight that with, or without, ground spotters it remains incumbent on the aerobatic aircraft pilot to ensure that they have a robust lookout for transiting aircraft when carrying out manoeuvres.

The Board noted that the CAP232 pilot was displaying a 7000 squawk but without height data. Although there may be a case for deselecting Mode C/Alt in order to avoid nuisance TCAS RAs for airliners if there is controlled airspace close above, doing so also removes a potential safety barrier for ATC agencies and other TAS equipped aircraft, and should only be done after careful consideration. The Board noted that controlled airspace in the area started at 4500ft, which may have meant that the Mode C/Alt might have been usefully left selected on.

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<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

The Board then discussed the cause and risk of the Airprox. Being mindful that the airspace was Class G, and the busy location that the aircraft were operating in, the Board noted that the CAP232 pilot reported that he was visual with the DHC-1 at all times, but that the DHC-1 pilot reported that he did not see the CAP232 until it climbed in front of him. Without any radar recordings of CPA to assist, members also noted the disparity between the CAP232 pilot's report of 300m lateral separation and the DHC-1 pilot's report of 'dead ahead', which members thought may also have been influenced by the startle factor of seeing the CAP232 suddenly appear in the front-hemisphere. Some members thought that in pulling up in front of the DHC-1 when he was already visual with it, the CAP 232 pilot had flown into conflict. Others thought that although he was probably unwise to do so, the CAP 232 pilot's actions probably reflected more a lack of consideration for the DHC-1 pilot rather than knowingly flying into conflict. In the end, the latter view prevailed, and the Board agreed that the cause was that the CAP232 pilot had flown close enough to cause the DHC-1 pilot concern. Turning to the risk, some members thought that safety margins had been much reduced below the norm (Category B) irrespective of the fact that the CAP232 pilot had reportedly seen the DHC-1 before he pulled up because the CAP232 pilot wasn't to know that the DHC-1 pilot might not unexpectedly conduct a general handling turn towards him. However, given that the CAP232 pilot had the DHC-1 in sight throughout, the majority consensus was that he would probably have been able to avoid the DHC-1 whatever, and that, as a result, there was no risk of collision; the incident was therefore assessed as a Category C risk.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The Cap 232 pilot flew close enough to cause the DHC-1 pilot concern.

Degree of Risk: C.