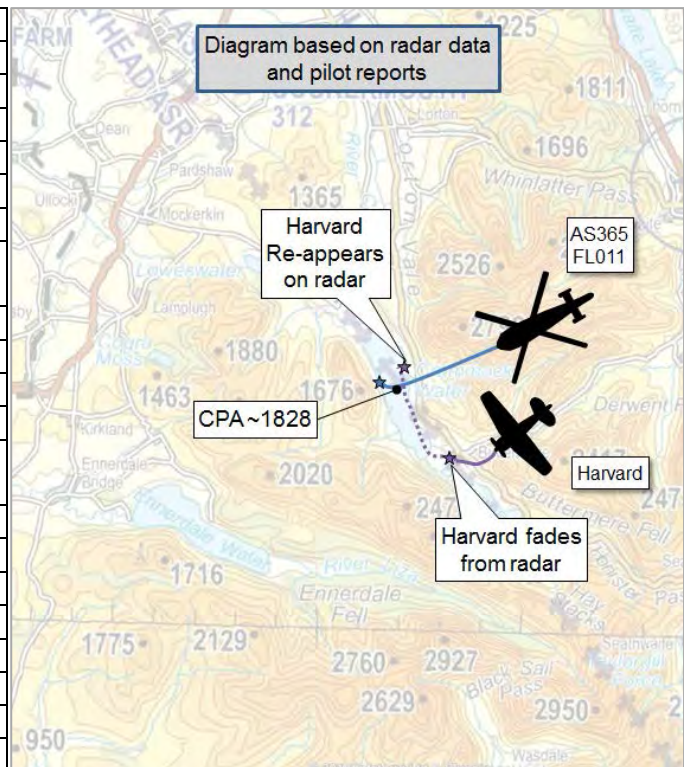


AIRPROX REPORT No 2018143

Date: 25 Jun 2018 Time: ~1828Z Position: 5433N 00319W Location: Crummock Water

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AS365	Harvard
Operator	HEMS	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	London Information	Kirkbride
Altitude/FL	FL017	N/K
Transponder	A, C, S	A
Reported		
Colours	White, Green	Silver, Blue
Lighting	Nav, Strobe, Landing	Not reported
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2300ft	1100ft
Altimeter	RPS (1023hPa)	NK
Heading	270°	340°
Speed	145kt	140kt
ACAS/TAS	TCAS I	Not fitted
Alert	Information	N/A
Separation		
Reported	0ft V/<0.5nm H	300ft V/0.75nm H
Recorded	NK	



THE AS365 PILOT reports that he first spotted the small fixed-wing aircraft when east of Keswick, routing west at around 1000ft agl. The aircraft appeared from the south below his level, close to paraglider traffic on the northern ridges. The aircraft carried out some manoeuvring over Derwent water, south of Keswick and then tracked west, paralleling his westerly track. He lost sight of the aircraft due to terrain and spotted it again when it was routing northbound low-level in the Crummock Water/Buttermere valley. They were separated by about 500ft (Mode A on TCAS only) at this point, and the aircraft was tracking towards his 6 o'clock. Once the aircraft was in his 8 o'clock and out of his field of view, the rear-seat crew called that the aircraft had begun to climb and was turning towards them. He initiated an avoiding right descending turn to maintain separation. He reported the Airprox on London Info 125.475.

He assessed the risk of collision as 'High'.

THE HARVARD PILOT reports that he was flying between Buttermere and Crummock Water. He made an anti-clockwise 360° turn. As he exited the turn he saw a helicopter in his 10-11 o'clock passing right-to-left, about 300ft below him and about 0.75nm away tracking towards Whitehaven. He assumes the conflict may have appeared closer by the helicopter as he commenced his 360° turn when the helicopter was below the nose of his aircraft. The sun was in his 10-11 o'clock which resulted in the helicopter being visible only in silhouette, so he could not see any markings. He did not request a service due to the limited options in that area and, given the time of day, very little other traffic. He believes the closest point the aircraft were separated was W/NW of Crummock water and not Buttermere.

He assessed the risk of collision as 'Low to Medium'.

THE LONDON INFORMATION CONTROLLER reports that at 1831hrs [AS365 C/S] called to report an Airprox he had had at 1828. The Airprox happened outside CAS at 1500ft agl in the Lake District area. [AS365 C/S] reported that he took avoiding action and the aircraft he had the Airprox with was a small, fast, fixed-wing aircraft. Neither aircraft were on London Information frequencies. [AS365 C/S] advised he would file a report once he had landed back at base.

Analysis and Investigation

UKAB Secretariat

The AS365 and Harvard pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹.

The Harvard does not appear on the radar replay until shortly before 1825 due to the nature of his manoeuvres (Figure 1). After the aircraft pass, the Harvard tracks south away from the AS365's track (Figure 2).

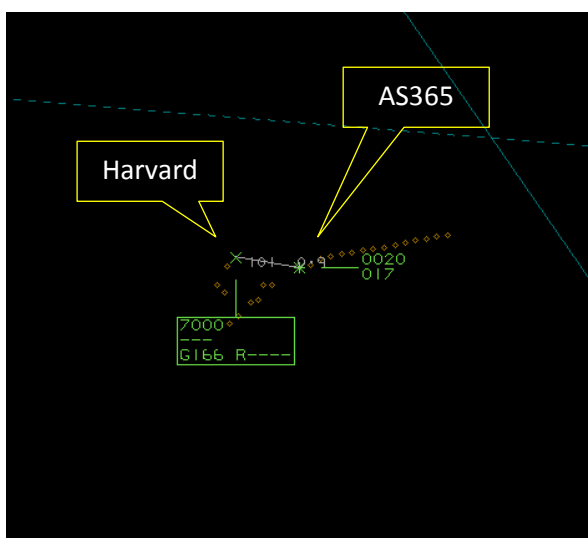


Figure 1: 1825:01

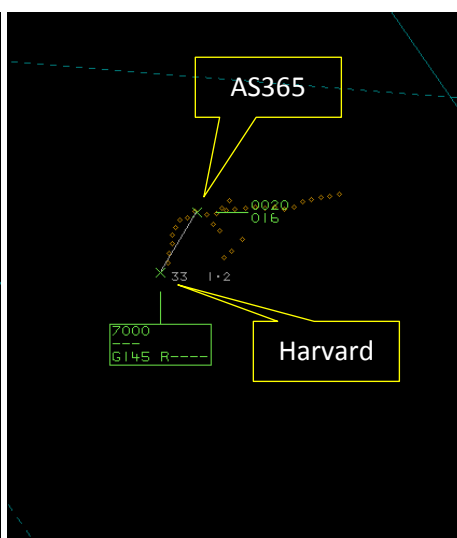


Figure 2: 1825:36

The Harvard then parallels the AS365's track before fading from radar (Figure 3) and then reappearing behind the AS365, after the AS365 pilot has made a right turn. The AS365 then performs a left turn back on track (Figure 4).

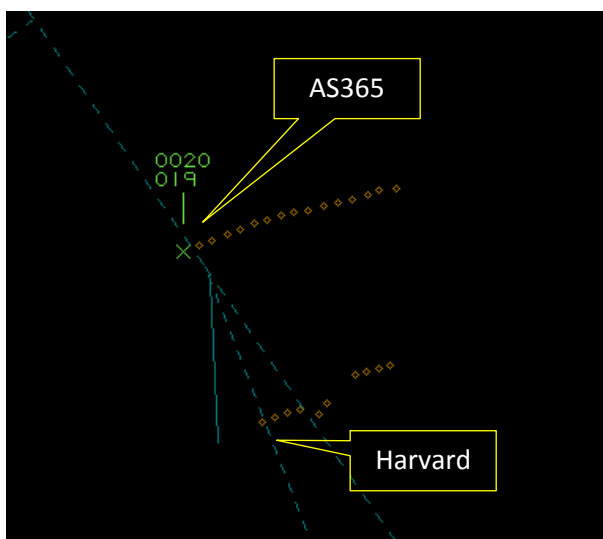


Figure 3: 1828:06

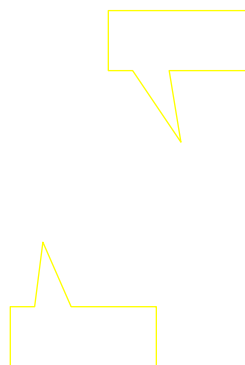


Figure 4: 1828:24

¹ SERA.3205 Proximity.

Summary

An Airprox was reported when an AS365 and a Harvard flew into proximity in the Lake District at about 1828hrs on Monday 25th June 2018. Both pilots were operating under VFR in VMC, neither pilot was in receipt of a Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board began first by looking at the actions of the Harvard pilot. They noted that he had apparently only seen the AS365 near Crummock Water after he had conducted his 360° turn, which was after his aircraft had initially crossed behind the AS365 following his routing up the Buttermere valley. For his part, the AS365 pilot had seen the Harvard over the Derwent valley, lost sight of it as it routed away and into the Buttermere valley, and then regained contact as the Harvard was flying north along the Buttermere valley. Conscious of the flight profile of the Harvard below and in the valley, the AS365 pilot had maintained visual contact until the Harvard passed behind and out of his field of view. Subsequently alerted by a crew member that the Harvard was turning towards (presumably as the Harvard pilot coincidentally made his 360° turn and climbed), the AS365 pilot turned to increase separation and then continued his flight once clear.

The Board agreed that the AS365 pilot had been suitably vigilant in his lookout and had been valuably assisted by his TCAS in tracking the Harvard. Because the AS365 pilot could not be certain of the Harvard pilot's intentions as he turned and climbed, the Board agreed that he was right to adopt a defensive flight profile in case the Harvard pilot had not seen him. As it happened, it appeared that the Harvard pilot did see the AS365 at that point, albeit the Board could not determine why he had not done so before as the AS365 had flown above and across his track as the Harvard pilot flew up Buttermere valley. Notwithstanding, the Board agreed that this incident represented normal safety standards at low-level in mountainous terrain in that see-and-avoid had worked, and the AS365 pilot had been appropriately prudent in his actions. As a result, the Board quickly agreed that the incident was best described as the AS365 pilot being concerned by the proximity of the Harvard but that the incident was benign in as much as normal safety standards and procedures had pertained; risk Category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The AS365 pilot was concerned by the proximity of the Harvard.

Degree of Risk: E.

Safety Barrier Assessment²

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Warning System Operation and Compliance were assessed as **partially available** because the AS365 had TCAS I but it provided limited information due to the Harvard only being equipped with Mode A, no height information. However, the AS365 pilot was able to use the information effectively and initiated a turn to increase separation.

² The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

