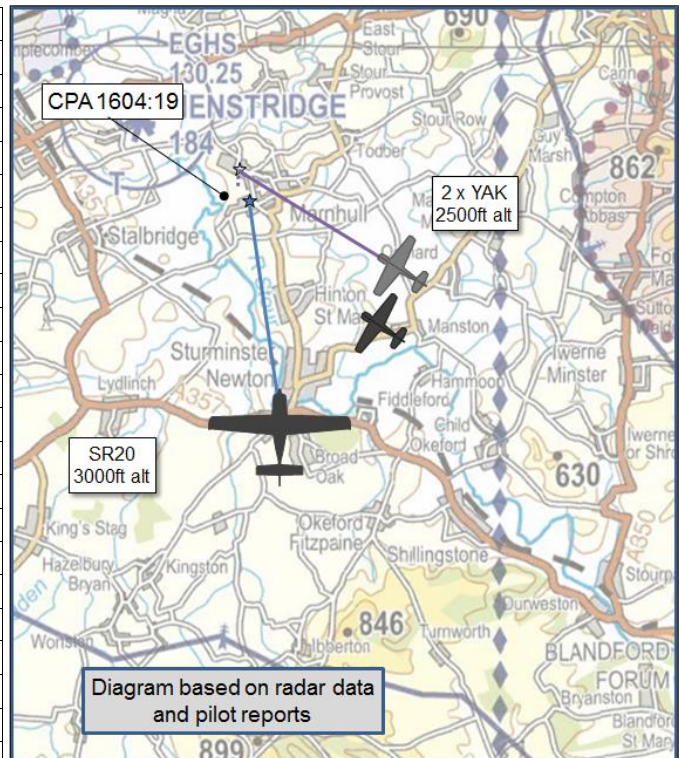


AIRPROX REPORT No 2016102

Date: 10 Jun 2016 Time: 1604Z Position: 5058N 00219W Location: 1nm SW Henstridge

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	YAK 50	Cirrus SR20
Operator	Civ Pte	Civ Pte
Airspace	Lon FIR	Lon FIR
Class	G	G
Rules	VFR	VFR
Service	None	Traffic
Provider		Bournemouth
Altitude/FL	2500ft	2600ft
Transponder	On Standby	A, C, S
Reported		
Colours	Silver, Red	White
Lighting	Nil	Strobes, Nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1700ft	3000ft
Altimeter	QNH (1004hPa)	NK (1008hPa)
Heading	180°	350°
Speed	130kt	140kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	TA
Separation		
Reported	0ft V/30m H	N/K
Recorded	100ft V/0.4nm H (YAK 1)	



THE YAK PILOT reports that he was No2 in close formation on the left wing of his leader. The lead cleared him to depart and as he began to turn away, he looked left and saw a single-engine low-winged Tutor-type aircraft 100m away, in a tight turn. The other aircraft appeared to have been on a reciprocal track and looked as though he was taking a steep avoiding-action turn.

He assessed the risk of collision as 'High'.

THE SR20 PILOT reports that he was in the cruise at 3000ft and approx 2.5nm from Henstridge airfield. He had the autopilot engaged and was using 'heading hold' and 'altitude hold' because he was aware that he needed to remain clear of DA123, which was active; he intended to pass between the Danger Area and The Park gliding site. Bournemouth gave him Traffic Information on traffic 2 o'clock, indicating 2500ft, at a range of 2nm. He could see the traffic on his TAS, which confirmed it was 500ft below, and he then saw a pair of aircraft heading west. He reported that he was visual with them to the Bournemouth controller. As the formation reached his 1 o'clock position, still well ahead and 500ft below, the aircraft on the left of the formation started a turn to the left and appeared to start climbing, heading straight for his aircraft. The TAS then gave an audible 'Traffic, Traffic' alert which, on this system, is given when the aircraft is within 1/2nm and 800ft. He disengaged the auto-pilot and the Yak continued to turn towards him so he initiated a right turn, reduced power, and began a rapid descent in the expectation that the Yak would climb above his level before it reached him. It passed on his left-hand side heading in the opposite direction; he did not know how close it was. Once it had passed he had descended to 2200ft and continued on course, advising the Bournemouth controller that he was now clear of the traffic.

He assessed the risk of collision as 'Medium'.

THE BOURNEMOUTH CONTROLLER could not recall the event.

Factual Background

The weather at Yeovilton was recorded as follows:

METAR EGDY 101550Z AUTO 09004KT 9999 NCD 19/15 Q1011=

Analysis and Investigation

UKAB Secretariat

The Yak and SR20 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so [after the Yak turned towards the SR20] then both pilots were required to turn to the right². If the incident geometry is considered as converging then the SR20 pilot was required to give way to the Yak³.

At Figure 1 the NATS radar replay shows the proximity of the SR20 (Squawking 7355) to what is believed to be YAK 1 (Squawking 7000). YAK 2, who in his report describes turning left and then seeing the SR20, does not show on the radar at all. The Yaks are at a range of 2nm from the SR20 which, according to the pilot's report is when Bournemouth gave Traffic Information and he reported visual. Figure 2 is 35 seconds later, the SR20 is still at 3000ft and the distance between the aircraft is 0.5nm. However, shortly afterwards the SR20 can be seen to make a right avoiding action turn, (Figure 3) as described in his report. Therefore, although the radar separation between YAK 1 and the SR20 is known to be 100ft and 0.4nm, the exact separation between YAK 2 and the SR20 is not known.

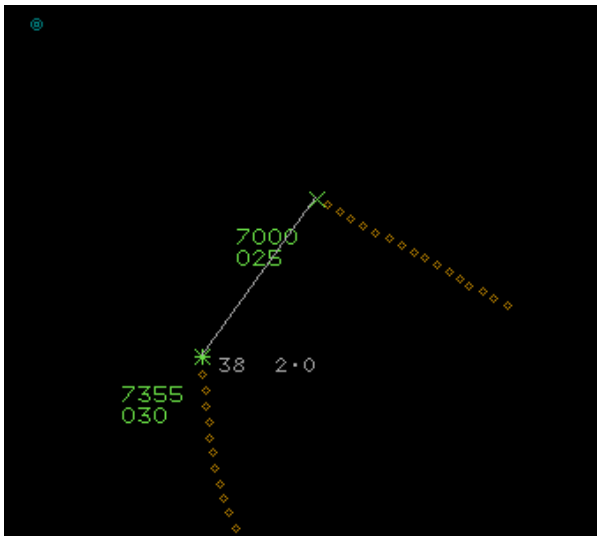


Figure 1 1603:30

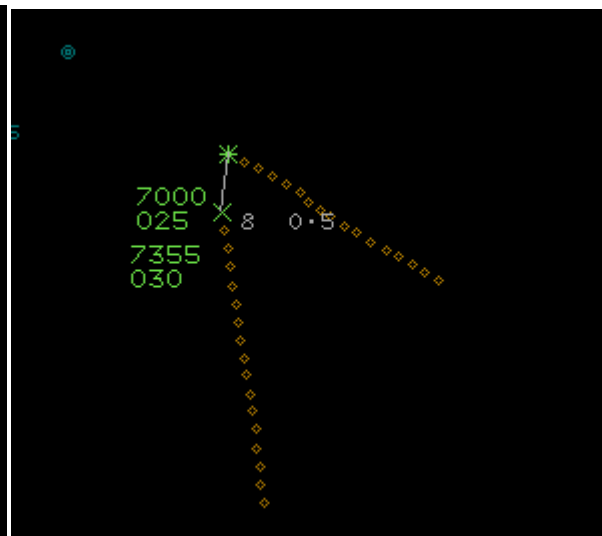


Figure 2 1604:05

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

³ SERA.3210 Right-of-way (c)(2) Converging.

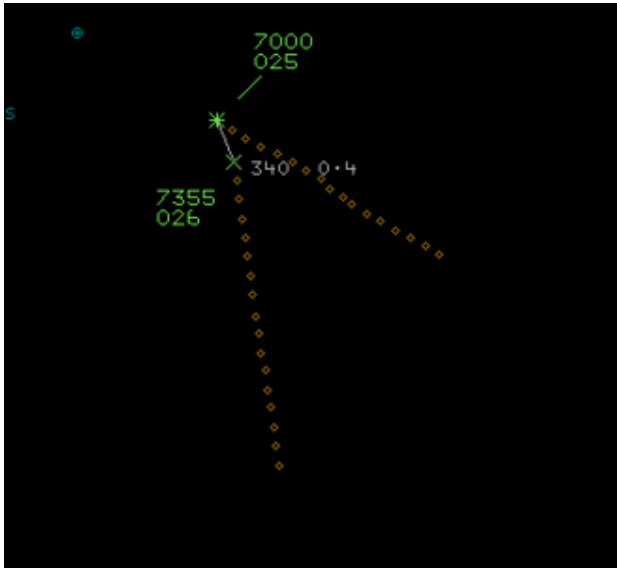


Figure 3 1604:19

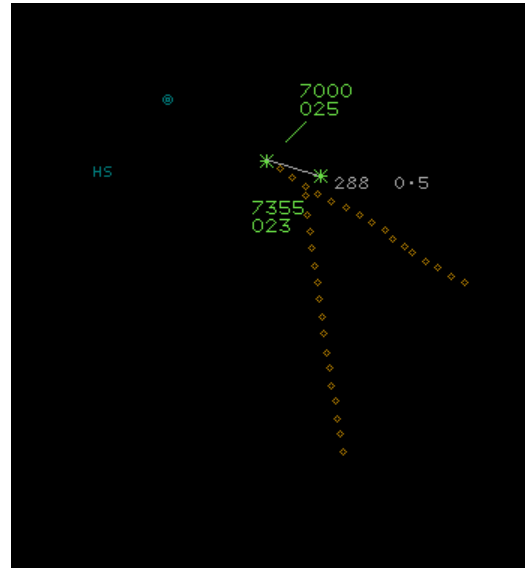


Figure 4 1604:27

Summary

An Airprox was reported when a Yak and a Cirrus SR20 flew into proximity at 1604 on Friday 10th June 2016. Both pilots were operating under VFR in VMC, the Yak pilot not in receipt of an ATS and the SR20 pilot in receipt of a Traffic Service from Bournemouth.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies and radar photographs/video recordings.

The Board first looked at the actions of the Yak pilots and noted that they were initially on a straight course into Henstridge when the leader cleared the No2 to turn left and break away. Members who were familiar with formation flying stressed that in such circumstances it is for the leader of the formation to clear the airspace prior to instructing the wingman to turn. In this instance, either the leader had not done so, or had simply not seen the SR20 which would have presented only a small cross-section with little relative movement as a closing object on a constant bearing. The Board noted that at this time of day the pilot may have been looking into sun and thought this could also have been a factor in not seeing the SR20. For his part, the Yak 2 pilot would have been focused on the formation leader right up to the point of manoeuvring, with the SR20 being well outside his field of view; the Board quickly agreed that it was understandable that, once cleared to break formation, the Yak 2 pilot turned out of formation on the assumption that the airspace had been cleared for him. The Board noted that the SR20 was receiving a Traffic Service in that area from Bournemouth, and wondered whether the Yaks could also have done so. Accepting that at the point of the Airprox they would have been switching to Henstridge to join the circuit, seeking Traffic Information at an earlier stage beforehand would have enhanced their situational awareness.

Turning to the SR20 pilot, members noted that he was receiving a Traffic Service from Bournemouth, who gave him Traffic Information on the Yaks, and that he had also received information from his TAS. Having visually acquired the Yaks, he had assessed that because they were 500ft below and crossing right to left they were not going to be a factor. The Board considered that this was an entirely appropriate assessment given that he had no reason to think that they would split formation and suddenly turn and climb towards him. That being said, the incident highlighted the fact that the actions of another pilot should not be assumed, and some Board members wondered whether he could have taken a turn of a few degrees just to ensure he passed well behind rather than overhead the Yaks, furthermore this would have ensured that should circumstances change, as they did, there was already a large margin of separation. They noted that he was concerned about his heading in

order to avoid the danger areas a few miles ahead, but still thought that a turn of a few degrees earlier would have made little difference to his navigation, whilst it would have ensured a larger separation from the Yaks.

In discussing the cause, the Board noted that this was Class G airspace in which both pilots had a responsibility for collision avoidance. The SR20 pilot had mitigated his risk by taking a Traffic Service from Bournemouth, and had also been given a warning from his TAS. These aids had provided him with situational awareness of the Yaks and had enabled him to become visual with them; unfortunately, he could not have foreseen that one of them would turn towards him unexpectedly. Therefore, the Board determined the cause of the Airprox to be that the Yak 2 pilot had turned into conflict with the SR20. However, it was agreed that a contributory factor had been that the Yak 1 pilot, who had been responsible for his wingman, had not effectively cleared the airspace prior to instructing him to break formation. In assessing the risk, it was agreed that the SR20 pilot had been able to take last minute avoiding action to avert a collision, albeit safety had been much reduced below the norm.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Yak 2 pilot turned into conflict with the SR20.

Contributory Factor: The Yak 1 pilot did not effectively clear the airspace for his No2 prior to breaking formation.

Degree of Risk: B.