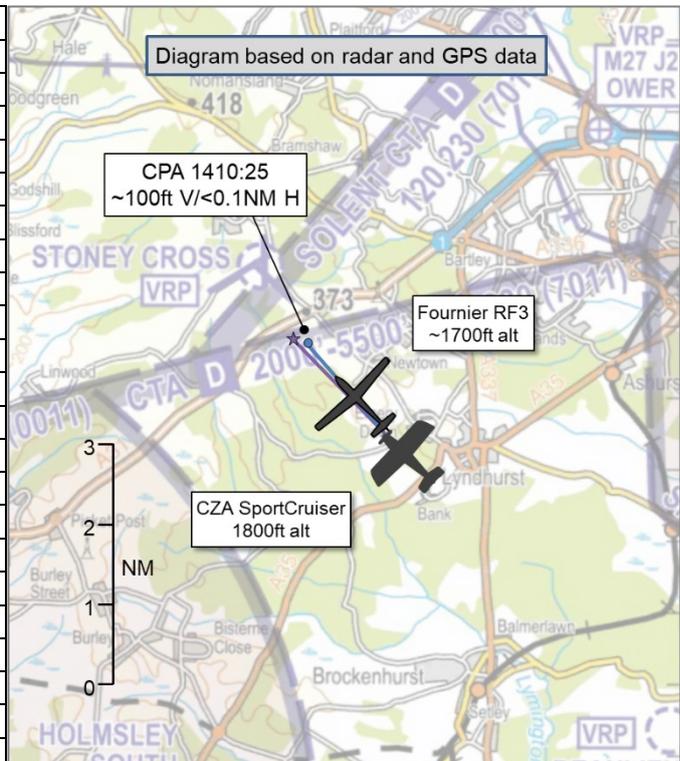


**AIRPROX REPORT No 2020139**

Date: 29 Sep 2020 Time: 1409Z Position: 5053N 00137W Location: 2NM SE Stoney Cross VRP

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	Fournier RF3	CZA SportCruiser
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Solent Radar	Southampton
Altitude/FL	1700ft alt	1800ft alt
Transponder	Not Fitted	A, C
Reported		
Colours	White, Blue	Blue, White
Lighting	NR	Strobes
Conditions	VMC	VMC
Visibility	NR	NR
Altitude/FL	1700ft	1700ft
Altimeter	RPS (1016hPa)	QNH
Heading	NR	316°
Speed	85kt	110kt
ACAS/TAS	PowerFLARM	Not fitted
Alert	None	N/A
Separation		
Reported	100ft V/50m H	300ft V/200m H
Recorded	~100ft/<0.1NM <sup>1</sup>	



**THE FOURNIER RF3 PILOT** reports routing along the south coast to Beaulieu VRP followed by Stoney Cross VRP. From Selsey Bill onwards they were in receipt of a Basic Service from Solent Radar, but the aircraft is not transponder equipped, so were requested to report at the VRPs, and did so. The aircraft is, however, equipped with PowerFLARM which was on and transmitting at the time of the Airprox. Unfortunately the Mode C/S indications on PowerFLARM give range and difference in height only, are sporadic and often unreliable. On this occasion they did not receive a proximity alert on the FLARM although this was the reason they bought the PowerFLARM following a previous Airprox while leading a formation. The cloudbase was about 1500ft at Beaulieu, increasing as they approached Stoney Cross. They also slowly increased height, and were approaching Stoney Cross, straight and level at about 1700ft on the Solent QNH. About 1.5 to 2 miles south east of the VRP an aircraft flew almost directly over the top from the half past six position about 100ft above and very slightly to the left, crossing slightly to the right. The RF3 pilot was maintaining a good visual lookout but had no chance to see the aircraft until it had passed overhead, so could take no avoiding action. It made no attempt to turn, apparently not having seen the RF3, and continued on its way, turning port at Stoney Cross VRP and continuing towards the west. It was probably travelling about 20-30 knots faster than the RF3's 85 knots. The pilot opined that had it been 100ft lower it would have collided with them from behind. It was a low-wing tricycle undercarriage type, it looked like a large modern homebuilt. They did not report this to Solent Radar since the last time they reported an Airprox they was just told to file it on the ground. With hindsight they thought that perhaps they should have reported it to Solent Radar, but it all happened so quickly and the other aircraft was disappearing over the horizon by the time they had sorted out their navigation at the turning point that it seemed rather pointless. They also wondered whether one should avoid VRP's, which tend to be pinch points however, noted that they were useful as reporting points to Solent Radar.

<sup>1</sup> Separation assessed by comparing GPS and radar data.

The pilot assessed the risk of collision as 'High'.

**THE CZA SPORTCRUISER PILOT** reports that the white aircraft was in sight all of the time. Their speed meant that they were going to pass by before reaching Stoney Cross. The other aircraft was lower and slower than their aircraft on the starboard side, and they did not lose sight of it until they had passed it. No avoiding action taken. At Beaulieu they heard a radio transmission to another aircraft on 120.230Mhz advising that traffic was approaching from behind. This could have been their aircraft. They noted that they were in current flying practice, and had flown in the area many times and were aware of the controlled airspace to the east and west and above. They were paying full attention to the white aircraft as well as monitoring height and course.

The pilot assessed the risk of collision as 'None'.

**THE SOUTHAMPTON CONTROLLER** reports that the Airprox was not reported on frequency at the time and they were unaware that one had taken place until notified after the event.

## Factual Background

The weather at Southampton was recorded as follows:

METAR ECHI 291350Z 29004KT 240V350 9000 SCT030 18/09 Q1016=

## Analysis and Investigation

### NATS Unit Investigation

[Fournier RF3 C/S] was under a Basic Service from Solent Radar routing Beaulieu-Stoney Cross, the pilot retrospectively filed an Airprox for when they were at Stoney Cross. They made no reference to this on the frequency on the day. At 1345:09 the Fournier pilot called Solent Radar at 1800ft requesting a Basic Service. The controller confirmed the Basic Service and asked the pilot to report passing Beaulieu. At 1402:13 Solent called [Fournier RF3 C/S] to request a position report and the following exchange took place:

ATCO - *'[Fournier RF3 C/S] report your position'*.

[Fournier RF3 C/S]- *'Ah [Fournier RF3 C/S] three miles East of Beaulieu, ah just passed another aircraft going the other way'*.

ATCO - *'[Fournier RF3 C/S] roger and what's your routing after Beaulieu'*.

[Fournier RF3 C/S]- *'Ah be routing Stoney Cross next and ah fifteen hundred feet'*.

ATCO - *'[Fournier RF3 C/S] report Stoney Cross'*.

[Fournier RF3 C/S]- *'Report Stoney Cross report Stoney Cross [Fournier RF3 C/S]'*.

No radar contact on [Fournier RF3 C/S] was observed during this conversation, however an intermittent primary contact painted on radar at 1403:01, 1NM West of Beaulieu river (200° at 9.9NM from SAM). This contact faded in and out of coverage for 3.8NM, at which point it faded from coverage completely (222° at 10.3NM from SAM). There was a Solent monitor 7011 squawk (Mode S [CZA SportCruiser C/S]) in the vicinity of the primary contact indicating A013 and bearing 220° at 10.7NM from SAM (Figure 1).



Figure 1

1410:12 the [CZA SportCruiser C/S] changed to the Bournemouth monitor squawk 0011. At 1410:31 a very intermittent primary contact started to paint on radar bearing 254° at 11.7NM from SAM and approximately 792m behind the [SportCruiser C/S].

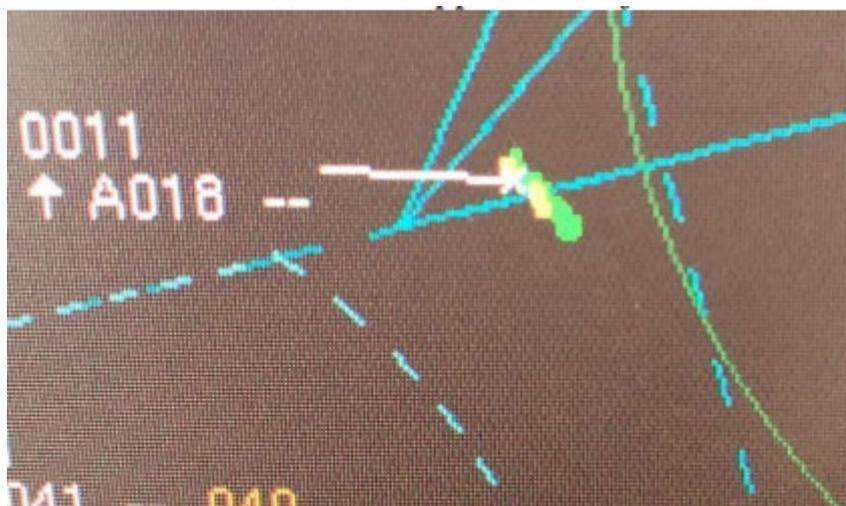


Figure 2

At 1410:54 [Fournier RF3 C/S] reported at Stoney Cross, '*Solent [Fournier RF3 C/S] Stoney Cross ah turning North ah North East direct to [destination] at ah two thousand feet*'. The ATCO asked them to report leaving the frequency and the pilot replied that they would do. At this time the SportCruiser was also at Stoney Cross, indicating A021 climbing, in a left turn to the west, however, the primary contact had faded from radar coverage again by this time.

1411:04 A primary contact again painted on radar in the right turn tracking northeast bound, the SportCruiser was now 0.9NM west of the primary contact and tracking west, passing A022.



Figure 3

At 1423:04 [Fournier RF3 C/S] requested QSY to their destination.

The lack of a radar contact on [Fournier RF3 C/S] meant that they were not identified and information within this investigation was derived from position reports that would suggest the primary contact was [the Fournier RF3].

### UKAB Secretariat

The Fournier and SportCruiser 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>2</sup> If the incident geometry is considered as overtaking then the Fournier pilot had right of way and the SportCruiser pilot was required to keep out of the way of the other aircraft by altering course to the right.<sup>3</sup>

### Summary

An Airprox was reported when a Fournier RF3 and a CZA SportCruiser flew into proximity 2NM south east of Stoney Cross VRP at 1410Z on Tuesday 29<sup>th</sup> September 2020. Both pilots were operating under VFR in VMC, the Fournier RF3 pilot was in receipt of a Basic Service from Solent Radar and the CZA SportCruiser pilot was not in receipt of an ATS.

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

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first looked at the actions of the Fournier RF3 pilot. They were not transponder equipped, but were receiving a Basic Service from Southampton. However, because Southampton could not see the aircraft on the radar, the pilot did not receive any Traffic Information. Members were not sure why the PowerFLARM did not alert to the SportCruiser, (**CF6**), but noted that obscuration could have been the reason as the SportCruiser was approaching from behind. Consequently, the RF3 pilot did not have any prior situational awareness about the SportCruiser until it passed in close proximity (**CF5**). Furthermore, as it was approaching from behind and so was not seen until at or around CPA, the pilot could not take any avoiding action (**CF7**, **CF9**). Members noted the pilot's comments about the VRPs and were in broad agreement that pilots should avoid using VRPs as turning points wherever possible because of the propensity for other aircraft to be there. Finally, members wished to highlight to pilots the merits of reporting an Airprox on frequency, because it enabled controllers to make a note of the radar situation at the time and preserve any RT data available. Once reported, pilots would then still need to submit full details of the Airprox electronically when on the ground.

Turning to the SportCruiser pilot, the Board noted that they were wearing a frequency monitoring squawk and transiting beneath CAS, as they were entitled to do. However, some members thought that because the pilot was routing via the VRPs they should have called Southampton for a service in order to provide situational awareness to other pilots in the vicinity (**CF4**). The SportCruiser pilot reported having the RF3 in sight for some time before they overtook it, but members agreed that the separation was such that had the RF3 pilot unexpectedly changed course, there had been little room left for manoeuvre (**CF2**, **CF3**, **CF8**). Members opined that, notwithstanding the SportCruiser pilot's own risk appetite, they should have employed more defensive flying techniques and given the other aircraft a wider berth because they did not know the intentions of the other pilot. Furthermore, they should have expected that, in approaching from behind where they could not be seen, their actions would have come as a surprise to the RF3 pilot (**CF10**, **CF11**).

<sup>2</sup> SERA.3205 Proximity.

<sup>3</sup> SERA.3210 Right-of-way (c)(3) Overtaking.

The Board briefly looked at the actions of the Southampton controller, they were providing a Basic Service to the RF3 pilot and some controlling members wondered whether, given that the SportCruiser's frequency monitoring code was displaying on the radar, generic Traffic Information could have been passed. That being said, because the controller did not have an up to date position report as the RF3 was not displaying on their radar, it was agreed that they could not have been expected to provide Traffic Information (CF1).

When assessing the risk, members quickly agreed that because the SportCruiser pilot had been visual with the RF3 at all times, there had been no risk of collision. However, in the Board's opinion, the minimum separation between the aircraft, coupled with the fact that the SportCruiser pilot did not know the intentions of the RF3 pilot, meant that safety had been degraded; Risk Category C.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

	2020139		
CF	Factor	Description	Amplification
<b>Ground Elements</b>			
• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Not required to monitor the aircraft under the agreed service
<b>Flight Elements</b>			
• Regulations, Processes, Procedures and Compliance			
2	Human Factors	• Flight Operations Documentation and Publications	Regulations and/or procedures not complied with
• Tactical Planning and Execution			
3	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution
4	Human Factors	• Accuracy of Communication	Ineffective communication of intentions
• Situational Awareness of the Conflicting Aircraft and Action			
5	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance			
6	Technical	• Interpretation of Automation or Flight Deck Information	CWS alert expected but none reported
• See and Avoid			
7	Contextual	• Poor Visibility Encounter	One or both aircraft were obscured from the other
8	Contextual	• Loss of Separation	A conflict in the FIR
9	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
10	Human Factors	• Perception of Visual Information	Pilot perceived there was no conflict
11	Human Factors	• Lack of Action	Pilot flew close enough to cause concern

Degree of Risk: C.

### Safety Barrier Assessment<sup>4</sup>

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

<sup>4</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

**Flight Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **ineffective** because the SportCruiser pilot should have given the RF3 a wider berth as they overtook.

**Tactical Planning and Execution** was assessed as **partially effective** because in executing the overtake, the SportCruiser pilot did not allow enough separation.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because neither pilot had any prior situational awareness on the other.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the PowerFLARM did not detect the SportCruiser behind the RF3.

**See and Avoid** were assessed as **ineffective** because the RF3 pilot could not see the SportCruiser as it approached from behind and the SportCruiser pilot did not allow enough separation as they overtook.

