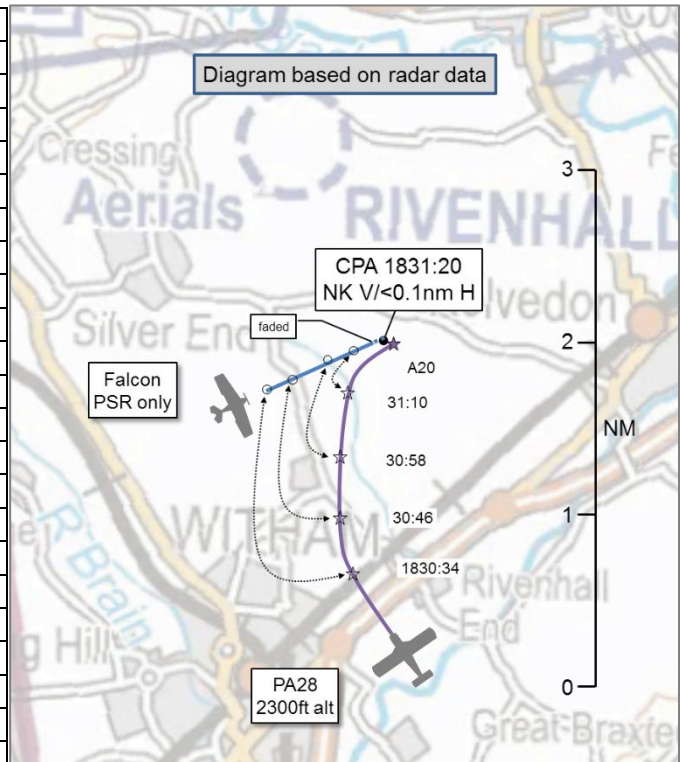


**AIRPROX REPORT No 2018187**

Date: 18 Jul 2018 Time: 1831Z Position: 5150N 00040E Location: ivo Rivenhall

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	X-Air Falcon	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Southend
Altitude/FL	NK	2000ft
Transponder	Not fitted	A, C ,S
Reported		
Colours	Dark blue	Blue
Lighting	Not fitted	NK
Conditions	VMC	VMC
Visibility	>10km	'Unlimited'
Altitude/FL	2100ft	2400ft to 1800ft
Altimeter	QNH (1016hPa)	NK
Heading	025°	NK
Speed	55kt	NK
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	20ft V/20m H	Not seen
Recorded	NK V/<0.1nm H	



**THE FALCON PILOT** reports operating in the general area when they decided to return to their point of departure. They were flying towards Earls Colne, parallel with Rivenhall off the right wing [sic], when a blue, single-engine, low-wing aircraft passed them from behind and in close proximity on the right side.

He assessed the risk of collision as 'High'.

**THE PA28 PILOT** reports conducting simulated IMC flight with the left-seat pilot 'under the hood' and the right-seat pilot looking out. Neither pilot saw another aircraft in proximity.

**Factual Background**

The weather at Stansted was recorded as follows:

METAR EGSS 181850Z AUTO 15008KT 9999 NCD 22/11 Q1018=  
METAR EGSS 181820Z AUTO 15009KT 9999 NCD 23/10 Q1018=

**Analysis and Investigation**

**CAA ATSI**

An Airprox was reported when an X-Air Falcon and a PA28 flew into proximity near Rivenhall in Essex. The Falcon pilot was not in receipt of an ATC service; the PA28 pilot was in receipt of a Basic Service from Southend Radar.

At 1821:50 the PA28 pilot agreed a Basic Service was with the Southend Radar controller. At 1830:34 (Figure 1), the Falcon primary contact first appeared on area radar replay, 1.2nm north-northwest of the PA28.

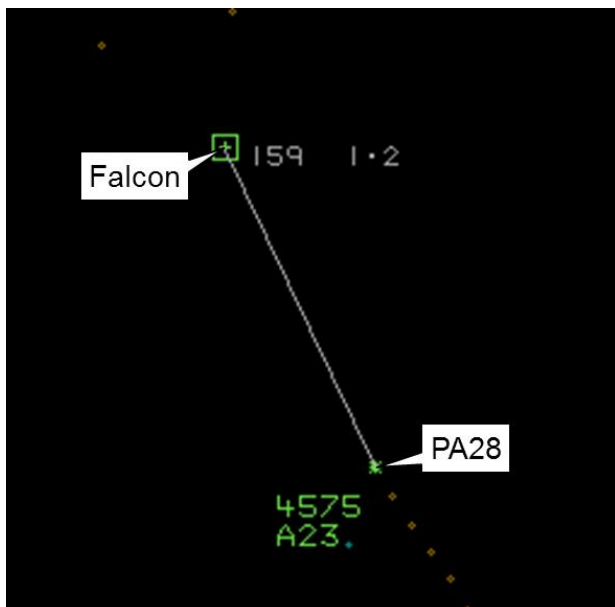


Figure 1 - 1830:34

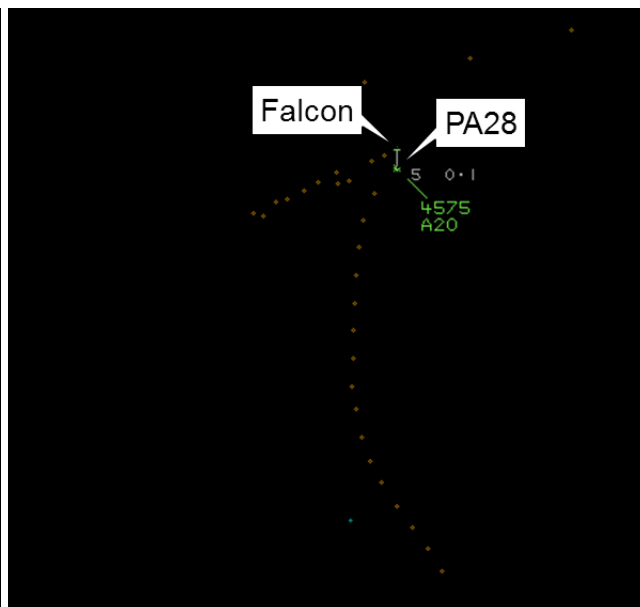


Figure 2 - 1831:18

CPA occurred at about 1831:18 (Figure 2), with the aircraft separated by 0.1nm laterally. The vertical separation was reported as 20ft but could not be assessed due to there being no SSR returns from the Falcon.

The PA28 pilot was in receipt of a Basic Service from the Southend Radar controller. Under the terms of a Basic Service CAP 774 states;

The provider of a Basic Service is not required to monitor the flight, pilots should not expect any form of traffic information from a controller/FISO.

If a controller/ FISO considers that a definite risk of collision exists, a warning shall be issued to the pilot (SERA.9005(b)(2) and GM1 SERA.9005(b)(2)).

Whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.

The Airprox occurred 16nm north of Southend at 2000ft and, as such, the Falcon will have been at the lower limits of the Southend Radar cover and the aircraft may not have been displayed on the Southend controller's radar display.

The Airprox took place in Class G airspace under a Basic Service, where separation between aircraft is ultimately the responsibility of the pilot. The Southend Radar controller was not required to monitor the flight of the PA28.

### UKAB Secretariat

The Falcon and PA28 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 overtaking, then the Falcon pilot had right of way and the PA28 pilot was required to keep out of the way of the other aircraft by altering course to the right<sup>2</sup>.

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

<sup>2</sup> SERA.3210 Right-of-way (c)(3) Overtaking.

## Summary

An Airprox was reported when an X-Air Falcon and a PA28 flew into proximity at 1831hrs on Wednesday 18<sup>th</sup> July 2018. Both pilots were operating under VFR in VMC, the PA28 pilot in receipt of a Basic Service from Southend and the Falcon pilot not in receipt of a Service.

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

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the appropriate ATC authority.

Members first discussed the pilots' actions and agreed that the PA28 pilot would have been better served by requesting a surveillance-based FIS, especially given that the left-seat pilot was 'under the hood', did not have the ability to lookout effectively, and that the other pilot would also have been monitoring the instruments to a greater degree than when not simulating IMC flight. Members acknowledged that both aircraft were being operated near the base of Southend radar cover and that the Falcon may have not been radar significant, but reiterated that the type of FIS requested should be predicated on factors such as weather and sortie type. Members also commented that CAA advice for simulated IMC flights included carrying a suitably qualified extra crew person to increase lookout.

Unfortunately, with the low-wing PA28 turning right and descending towards the high-wing Falcon from behind and right, both aircrafts' structures probably impeded timely visual acquisition: in the case of the PA28 lookout pilot in the right-seat of his aircraft this obscuration was probably complete; for the Falcon pilot, the approaching PA28 was also likely to be obscured by his aircraft's high-wing until after CPA. The Board agreed that these non-sightings had been the cause, and were satisfied from both the radar replay and the Falcon pilot's narrative of the aircrafts' proximity that collision had only been avoided by providence. The Board noted that the AAIB report into the mid-air collision between a C152 and a Cabri G2 on 17<sup>th</sup> November 2017<sup>3</sup> contained an extensive analysis of the see-and-avoid aspects of the accident with the following safety action comment:

'The flying club which operated [the descending C152] has issued an Instructor Notice to highlight the importance of maintaining an effective lookout throughout flight, and the need to carry out a regular change of heading during a prolonged descent, to check that the area ahead is clear.'

Because a regular change of heading may not be compatible with an instrument procedure, the need for a surveillance-based FIS (Traffic Service or Deconfliction Service) becomes even more acute, to the extent that pilots may wish to consider cancelling practice-IFR flights if traffic levels are high, or are perceived to be high, if an appropriate service cannot be obtained.

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

Cause: A non-sighting by the PA28 pilot and effectively a non-sighting by the Falcon pilot.

Degree of Risk: A.

### 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>3</sup> [https://assets.publishing.service.gov.uk/media/5bc733dae5274a361ac03dd4/Cessna\\_152\\_G-WACG\\_Guimbal\\_Cabri\\_G2\\_G-JAMM\\_11-18.pdf](https://assets.publishing.service.gov.uk/media/5bc733dae5274a361ac03dd4/Cessna_152_G-WACG_Guimbal_Cabri_G2_G-JAMM_11-18.pdf)

<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](#).

**ANSP:**

**Situational Awareness and Action** were assessed as **not used** because neither pilot was in receipt of a service that could provide situational awareness.

**Flight Crew:**

**Tactical Planning** was assessed as **partially effective** because the PA28 pilot could have requested a Traffic Service when conducting simulated IMC flight.

**Situational Awareness and Action** were assessed as **ineffective** because neither pilot was aware of the proximity of the other aircraft until after CPA.

**See and Avoid** were assessed as **ineffective** because the PA28 crew did not see the Falcon and the Falcon pilot did not see the PA28 until after CPA.

