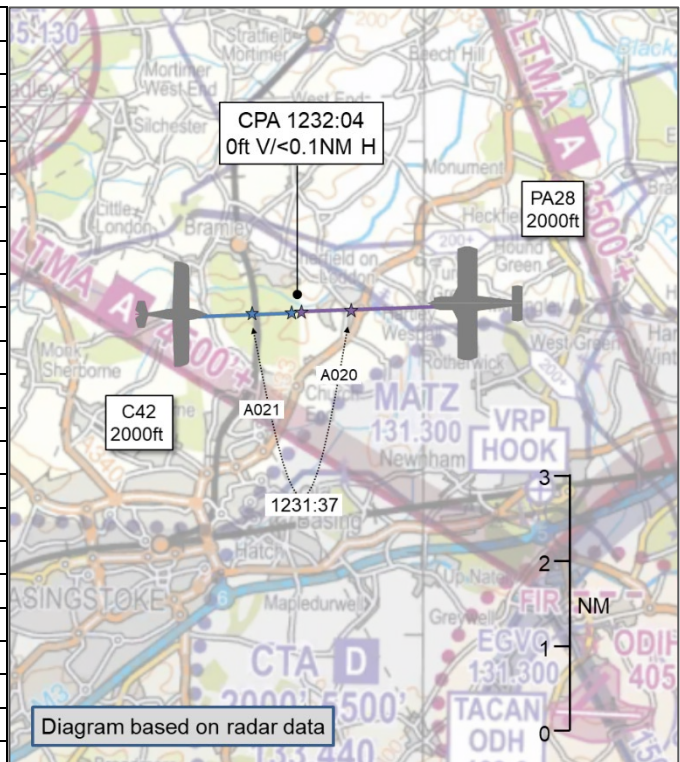


AIRPROX REPORT No 2020160

Date: 04 Nov 2020 Time: 1232Z Position: 5119N 00102W Location: 6NM W Odiham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C42	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	IFR
Service	Listening Out	Basic
Provider	Farnborough	Farnborough
Altitude/FL	2000ft	2000ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White	White, Blue
Lighting	Strobes	NR
Conditions	VMC	VMC
Visibility	30km	20km
Altitude/FL	1915ft	2000ft
Altimeter	QNH (1034hPa)	QNH
Heading	081°	265°
Speed	70kt	110kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	0ft V/400ft H	Not Seen
Recorded	<100ft V/<0.1NM H	



THE C42 PILOT reports that at the commencement of their outward journey the pilot requested zone transit through the Farnborough CTR. However, there were several aircraft on the ground awaiting clearance from Blackbushe Tower. After some time waiting they cancelled the request and re-planned their route to the west and then south. They recalled that whilst in the Blackbushe zone and working with Blackbushe Tower they heard the controller say that the demand was too heavy and Farnborough were now closed for all VFR traffic. It seemed logical to make their return the reverse of their outward journey. The alternative would involve trying to get a call in to Farnborough once airborne and negotiate a clearance with little chance that the situation had changed. Furthermore, the difference in flight time was only a few minutes so a flight through Farnborough CTR was just not worth the hassle. Furthermore, it was their habit to monitor the Farnborough frequency and squawk the listening code when in transit. Farnborough know where and who the aircraft is and it slightly reduces their workload (and the pilot's) if there's one less request for Basic Service.

On the day there was a continuous stream of pilots registering for services or changing to onward frequencies. During this time Farnborough broadcast several 'all stations' warnings about heavy traffic in the area. There was never a call specifically to their aircraft, however, the multiple warnings of heavy traffic mean that the pilot was on constant look-out. Suddenly there was an aircraft coming towards them, 180° in the opposite direction, just a few feet above them. They had been aware of the blind spots in their cockpit and were animated in their seat to see round them, however, the other aircraft came from behind the central pillar. The pilot estimated that the other aircraft's wingspan was between 3° and 6° in their vision, which gave $35/\tan(3)$ and $35/\tan(6)$ range or 660ft to 330ft at first sight. With a closing speed of (80+100)mph they estimated that there had been 2.5 to 1.25 seconds to impact. They conducted a hard break to the left and the other aircraft did not appear to react.

The pilot noted that they were not apportioning blame, they were warned and were looking out, and assumed the other pilot was also. The problem was that there was so much traffic. With Farnborough CTR effectively closed to GA VFR traffic, everyone going north or south was going the long way round.

They noted the exceptional circumstances - poor weather for weeks, then a break just before another lockdown. But opined that although Farnborough do a good job, when they can't cope and close VFR clearances thought the CTR, the pinch points are overloaded and there should an alternative provided, perhaps two designated traffic lanes; N to S and S to N through Farnborough CTR or two designated traffic lines E/W with a one-way system around Odiham. There must have been dozens of aircraft flying east west/west east just to the north of Odiham; all compressed in to a single pinched lane. Flying directly towards another aircraft renders them as a stationary object and not easy to see. They opined that other pairs of aircraft probably suffered the same type of Airprox but have not necessarily reported it. This situation can only be as a result of the Farnborough airspace grab and it will happen again.

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

THE PA28 PILOT reports that they were operating on a Z flight plan at the change point to IFR and receiving a Basic Service from Farnborough radar for flight outside CAS due to controller workload. They were operating at 2000ft on Farnborough QNH and had received a clearance for an Odiham MATZ penetration. They received no Traffic Information from Farnborough ATC regarding the reporting aircraft.

THE FARNBOROUGH LARS WEST CONTROLLER reports that they had no recollection of the event. However, they did remember that on the day in question the LARS was extremely busy as it was the day before lockdown and the weather was very good for VFR conditions, which led to the traffic beneath the TMA being excessive at times. They recalled making multiple broadcasts on this day, reminding pilots about the extreme traffic density in all areas.

Factual Background

The weather at Farnborough was recorded as follows:

SA 04/11/2020 12:20-> METAR EGLF 041220Z AUTO 31004KT 270V020 9999 NCD 10/04 Q1034=

Analysis and Investigation

NATS Investigation

This event occurred with one pilot choosing not to receive a service from Farnborough (C42 on a 4572 SSR code) and the PA28 pilot had requested and been given a Basic Service at 1228Z. [PA28 C/S] had been identified, as is custom and practice for LARS West, but was not provided with Traffic Information on the 4572 code [the C42], which was carrying out various manoeuvres NW of Odiham. The PA28 tracked WSW towards the C42 as shown by the screen capture taken from the operational Radar (Figure 1).



Figure 1

The closest point of approach was at 1232Z where the lateral distance between the aircraft was 0.07NM with no vertical separation.



Figure 2 - CPA

The radar replay was reviewed to establish the identity of the aircraft involved in this reported Airprox. The controller report indicating that they had no recollection of the event meant an interview with the controller was nugatory.

Under CAP493, Section 1, Chapter 12 Para 2E states that:

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

If a controller notices that a definite risk of collision exists, a warning shall be issued to the pilot. ((EU) 923/2012 SERA.9001 and SERA.9005(b)(2))

In the period immediately prior to the closest point of approach, the controller was engaged in other tasks. Given the period of time since the event, the lack of any RT report at the time, and therefore the controller being unable to recall the event, it has not been possible to confirm whether detection of a definitive risk of collision occurred, but it is wholly conceivable that such detection did not occur, therefore lack of ATC intervention complies with CAP493 requirements.

UKAB Secretariat

The C42 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.¹ If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.²

¹ SERA.3205 Proximity.

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

Summary

An Airprox was reported when a C42 and a PA28 flew into proximity 6NM west of Odiham at 1232Z on Wednesday 4th November 2020. Both pilots were operating under VFR in VMC, the C42 pilot was listening out on the Farnborough frequency and the PA28 pilot was in receipt of a Basic Service from Farnborough LARS West.

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 C42 pilot. They were listening out on the Farnborough frequency, but had not called because they believed the controller was too busy to provide a service. Members noted that although this was understandable, still a call on the frequency may have given other pilots in the area situational awareness that the C42 was in the vicinity (**CF2**). The NATS advisor to the Board told members that Farnborough did not have any record that they had closed their CTR to VFR traffic on that day and that, like most other ATC units, they recorded when they turned down pilots for an ATS. Therefore pilots were strongly encouraged to call for an ATS whenever they required one. Although the C42 pilot had generic information that the area was busy from listening to the Farnborough controller, they did not have any specific information on the PA28 (**CF3**). Without an ATS or a CWS to provide Traffic Information, the final barrier remaining to mitigate against MAC was see-and-avoid. The C42 pilot saw the PA28 at a very late stage and took avoiding action, although given the late nature of the avoiding action, members questioned whether it had materially affected the separation (**CF6**).

Turning to the PA28 pilot, they had called Farnborough and were receiving a Basic Service, however the controller was not required to provide Traffic Information under a Basic Service (**CF1**), nor were they required to monitor the aircraft, if the pilot had required Traffic Information then they should have requested a Traffic Service. They noted that both pilots were flying at 2000ft, and some members opined that flying at an intermediary level, for example 1900ft or 2100ft, offered some built-in separation to the majority of GA aircraft flying in whole thousands of feet, although they also acknowledged that the airspace restrictions in the area did limit the options available. As with the C42, the PA28 was not fitted with a CWS, and so the pilot had no situational awareness on the C42 (**CF3**) but in this case the pilot did not see the C42 at all (**CF5**).

The Board briefly looked at the actions of the Farnborough LARS controller, they were providing a Basic Service to the PA28 and were not required to monitor it on radar (**CF1**), given that it was a busy day, controlling members thought that the controller would need to prioritise those aircraft receiving a radar service and so it was not surprising that Traffic Information was not passed.

Finally, the Board assessed the risk of collision. In doing so they took into consideration the radar separation, the late sighting by the C42 pilot and the non-sighting by the PA28 pilot. Although the C42 pilot reported taking avoiding action, members thought the late nature of the action had probably done little to increase the separation. They therefore agreed that there had been an element of providence in the encounter and accordingly assessed that there had been a risk of collision (**CF4**); Risk Category A.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2020160			
CF	Factor	Description	Amplification
Ground Elements			
x	• Situational Awareness and Action		
1	Contextual	• ANS Flight Information Provision	Not required to monitor the aircraft under the agreed service
Flight Elements			
x	• Tactical Planning and Execution		
2	Human Factors	• Communications by Flight Crew with ANS	Appropriate ATS not requested by pilot
x	• Situational Awareness of the Conflicting Aircraft and Action		
3	Contextual	• Situational Awareness and Sensory Events	The pilot had generic, late or no Situational Awareness
x	• See and Avoid		
4	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	Piloted air vehicle
5	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
6	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: A.

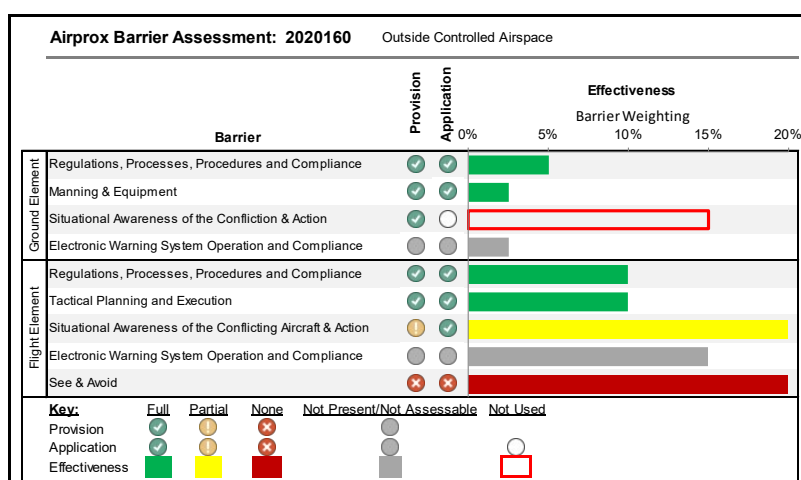
Safety Barrier Assessment³

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because neither pilot had specific situational awareness about the other.

See and Avoid were assessed as **ineffective** because the PA28 pilot did not see the C42 and the C42 pilot didn't see the PA28 in time to materially affect the separation.



³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).