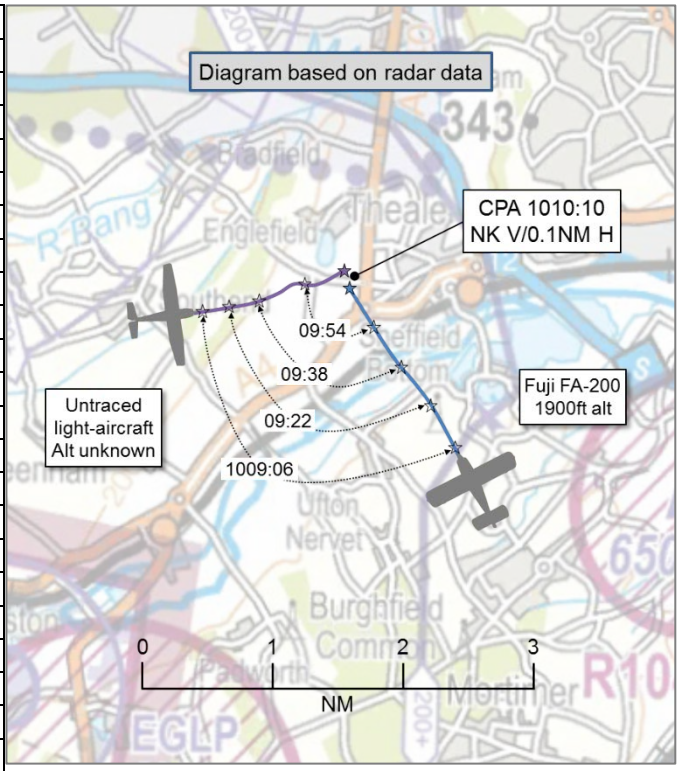
AIRPROX REPORT No 2020050

Date: 04 Jun 2020 Time: 1010Z Position: 5126N 00106W Location: 4NM WSW of Reading

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Fuji FA-200	Untraced light ac
Operator	Civ FW	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	Basic	Unknown
Provider	Farnborough LARS	
Altitude/FL	1900ft	
Transponder	A, C, S	Nil
Reported		
Colours	White/Blue	NK
Lighting	NR	NK
Conditions	VMC	VMC
Visibility	>10Km	NK
Altitude/FL	2000ft	NK
Altimeter	QNH (1004hPa)	NK
Heading	315°	NK
Speed	91kt	NK
ACAS/TAS	PilotAware	Unknown
Alert	None	N/A
Separation		
Reported	80ft V/0.25NM H	NK
Recorded	NK V/0.1NM H	



THE FUJI FA-200 PILOT reports that they were flying towards the Compton VOR (CPT) at 2100ft and tracking 315° after passing EG R104 Burghfield to regain their direct track of 306°. They were receiving a Basic Service from Farnborough LARS West and navigating using an Android tablet running SkyDemon on the yoke and a Garmin GNS430W which also had the flight plan entered. The Farnborough controller warned them of traffic on their left passing left-to-right, no height information. The pilot informed the controller that they had an aircraft behind them at 5 o'clock and there was an aural warning about that traffic from their PilotAware that they had not seen on their display. The pilot increased their outside scan both for the traffic behind and to their front left, but mainly to their front left. After about 1min, they saw the aircraft at their 10 o'clock, slightly higher. They turned slightly right and descended until they could see that there was separation between the 2 aircraft. The other aircraft quickly passed across their nose and above them; they did not notice any deviation in its flightpath. The pilot estimates that it was only 3-7sec between seeing the other aircraft and it passing across their nose – it then rapidly moved away. They reported traffic in sight to Farnborough and the controller suggested that, as a primary return only, it might be a glider. The pilot told the controller 'that was close' and that it was a high-wing single-engine aircraft.

Looking at their track log after the flight, the pilot noted that, while scanning outside, they had descended from their intended altitude of 2100ft to around 2000ft by the time they saw the aircraft. They eventually descended to 1840ft before climbing to regain 2100ft.

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

THE LIGHT AIRCRAFT PILOT could not be traced.

THE FARNBOROUGH LARS WEST CONTROLLER reports that they were providing a Basic Service to the Fuji pilot but that nothing was reported on the R/T at the time and they cannot recall any of the details.

Factual Background

The weather at Benson was recorded as follows:

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METAR EGUB 040950Z 32007KT 9999 FEW024 OVC130 13/06 Q1004 NOSIG RMK BLU BLU=
METAR EGUB 041020Z 31007KT 9999 FEW030 BKN130 13/05 Q1004 NOSIG RMK BLU BLU=
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Analysis and Investigation

NATS Farnborough

Radar replays were viewed and controller and watch reports were read. The controller was working LARS West and Zone band-boxed. Approach had been split off. Traffic was light and the weather was good, with a visibility of 10km and clouds scattered at 3500ft.

The pilot of a Fuji-FA 200 called on frequency, routing to the northwest, and requested a Basic Service (BS). The controller issued the QNH, squawk (0430) and confirmed a BS; the Fuji pilot read back the squawk and queried the QNH. The controller reiterated the QNH and BS, and the Fuji pilot read both back correctly.

A few minutes later, at 1009:10 (Figure 1), the controller spotted a potential confliction between the Fuji and a primary-only contact and passed Traffic Information (TI): "*[Fuji C/S], traffic ahead of you, just off to your left, no altitude, crossing left to right, keep a good look out*". The Fuji pilot responded to the TI but stated that they were not visual. The primary contact was in the Fuji pilot's 11 o'clock, approximately 2.5NM, and tracking left-to-right on a converging track.

At 1010:09 (Figure 2), the Fuji pilot stated that they had seen the contact:

Fuji pilot:	*"Traffic in sight, [Fuji C/S]."*
Farnborough controller:	*"Roger."*
Fuji pilot:	*"And it was close."*
Farnborough controller:	*"[Fuji C/S] sorry say again?"*
Fuji pilot:	"*And it was reasonably close. Same altitude. [Fuji C/S].*"

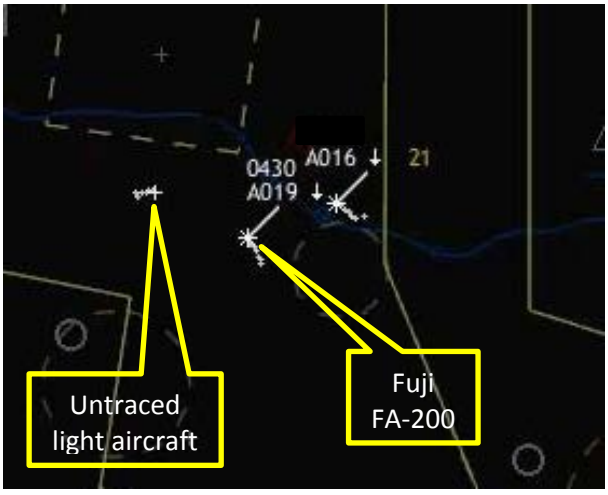

Figure 1 – 1009:10

Figure 2 – 1010:09

The Farnborough controller then acknowledged and passed more information. The flight then continued with no further issues, and the Fuji pilot did not call an Airprox on frequency.

CAP 774, UK Flight Information Services, chapter 2, para 2.5 states that:

"*Given that 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.*"

Paras 2.7-9 state:

"*A controller with access to surveillance-derived information shall avoid the routine provision of traffic information on specific aircraft but may use that information to provide a more detailed warning to the pilot. 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*."

In this instance, the Farnborough controller spotted the potential confliction with a primary-only contact and passed Traffic Information to assist with the pilot's awareness but, given there was no altitude information available, could do little more in the circumstances to assist the pilot of the Fuji. Any collision avoidance is the responsibility of the pilot.

UKAB Secretariat

In an attempt to trace the light-aircraft pilot, the NATS radar replay was played beyond the time of the Airprox until a probable destination airfield was identified. Enquiries were made at that airfield but it was not possible to identify the aircraft or the pilot involved in the Airprox.

The Fuji FA-200 and untraced light-aircraft 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 converging then the untraced light-aircraft pilot was required to give way to the Fuji FA-200.[2]

Summary

An Airprox was reported when a Fuji FA-200 and an untraced light-aircraft flew into proximity near Reading at 1010Z on Thursday 4th June 2020. The Fuji FA-200 pilot was operating under VFR in VMC and in receipt of a Basic Service from Farnborough LARS W. The light-aircraft pilot could not be traced.

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, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and 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 dial-in/VTC comments. Although not all Board members were present for the entirety of the meeting and, as a result, the usual wide-ranging discussions involving all Board members were more limited, sufficient engagement was achieved to enable a formal assessment to be agreed along with the following associated comments.

The Board first discussed the actions of the Farnborough controller, and wished to commend them on their attention to the Fuji's track progression even though they had not been required to do so under the provisions of the agreed Basic Service. Whilst there is provision within CAP 774 for controllers to use surveillance-derived information to issue a warning to pilots in receipt of a Basic Service if a definite risk of collision exists, this is reliant on the controller noticing the potential confliction. Although in this the case the controller had passed generic Traffic Information (no height information) to the Fuji pilot (**CF1**), the Board nonetheless wished to highlight that Traffic Information cannot normally be expected to be forthcoming when in receipt of a Basic Service and that, if a pilot wishes a controller to warn them of aircraft in proximity, then a surveillance-based ATS should be requested. The Board heard from an

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(2) Converging.

ATC advisor that, in this particular case, the controller's workload and the traffic environment had been such that it had permitted the provision of Traffic Information to the Fuji pilot.

Turning to the actions of the pilots involved, the Board was disappointed that efforts to trace the light-aircraft pilot had proved fruitless because, without their version of events, the Board's understanding of the event had been degraded. However, it was clear that the light-aircraft had not been transponding and therefore the PilotAware equipment carried by the Fuji pilot had been unable to detect the presence of the light-aircraft (**CF3**). For their part, the Fuji pilot had sought a Basic Service from the Farnborough controller and had received Traffic Information in the horizontal plane (**CF2**), permitting them to become visual with the untraced light-aircraft, albeit later than might have been expected (**CF4**) had the Traffic Information been available in 3-dimensions.

Considering the risk involved in this Airprox, the Board quickly agreed that, although the vertical separation could not be accurately determined, the Fuji pilot's description of the event, estimate of separation and description of their avoiding action, coupled with the lateral separation as measured on the NATS radar, had described a situation in which, although safety had been degraded, there had been no actual risk of collision. Accordingly, the Board assigned a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2020050		
CF	**Factor**	**Description**	**Amplification**
	Ground Elements		
	• Situational Awareness and Action		
1	Contextual	• Situational Awareness and Sensory Events	The controller had only generic, late or no Situational Awareness
	Flight Elements		
	• Situational Awareness of the Conflicting Aircraft and Action		
2	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance		
3	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
4	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: C

Safety Barrier Assessment[3]

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 the Farnborough controller did not know the height of the untraced light aircraft and so the Fuji FA-200 pilot received Traffic Information in the horizontal plane only.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the PilotAware equipment carried by the Fuji FA-200 pilot could not detect the non-transponding aircraft.

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

See and Avoid were assessed as **partially effective** because the Fuji FA-200 pilot saw the untraced light aircraft at close range and the untraced light aircraft pilot probably did not see the Fuji FA-200.