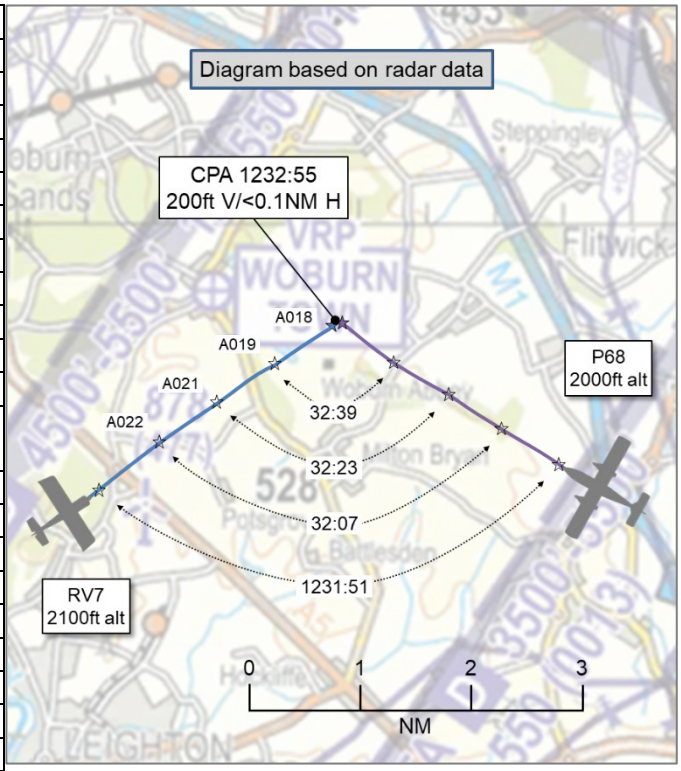
AIRPROX REPORT No 2021192

Date: 21 Sep 2021 Time: 1233Z Position: 5159N 00035W Location: 5.5NM S Cranfield airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	RV7	P68
Operator	Civ FW	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Old Warden Radio	Luton Radar
Altitude/FL	1800ft	2000ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, red, silver	White, blue
Lighting	Nav, Strobe	Nav, Anti-col, Taxy Beacon, Landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1100ft	2000ft
Altimeter	QNH (1031hPa)	QNH (1031hPa)
Heading	045°	310°
Speed	135kt	140kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	400ft V/0 H	500ft V/300m H
Recorded	200ft V/<0.1NM H	



THE RV7 PILOT reports that their flight was from a private strip to [destination airfield]. They were descending to get a better view of [a near-by town] for visual reporting to [destination airfield] when they saw the [P68] pass overhead very close by. They had no prior warning of the oncoming aircraft and they believe that their passenger could have obscured their view [of the P68] as it went from right-to-left. They have recently installed [a new piece of EC equipment] but have yet to connect the audio warning, which may have alerted them to the oncoming aircraft.

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

THE P68 PILOT reports that the visibility was good and a briefing was conducted to keep a good look-out. Transiting Luton's airspace, they were in receipt of a reduced Traffic Service followed by Basic Service. They were visual with the other aircraft throughout, which was crossing left-to-right below them. They didn't consider the other aircraft to be a conflict as it was well below them. The [RV7] traffic crossed behind and below their aircraft tail.

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

THE LUTON CONTROLLER reports than an Airprox was filed involving a P68 pilot who was in receipt of a Basic Service, outside controlled airspace, but on the Luton frequency. They have no recollection of the event in question and state that if time and workload had permitted, Traffic Information would have been passed under duty-of-care.

THE OLD WARDEN SUPERVISOR reports that their Tower was not operational that day. They state that there is not a requirement for RT recording at their unit and nor do they have radar.

Factual Background

The weather at Luton was recorded as follows:

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METAR EGGW 211250Z AUTO 02004KT 9999 SCT032 BKN041 18/12 Q1031
METAR EGGW 211220Z AUTO 33004KT 290V010 9999 SCT028 BKN034 BKN041 18/11 Q1031
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Analysis and Investigation

NATS Safety Investigations

A Vans RV7 operating VFR outside controlled airspace in communication with Old Warden Radio, came into proximity with [a P68], whose pilot was also operating VFR outside controlled airspace and in receipt of a Basic Service from the Luton Intermediate Approach controller. The pilot of [the RV7] subsequently reported an Airprox.

Information available to the investigation included:
• CA4114 from the Luton Intermediate Approach controller
• Radar and R/T recordings
• UK Airprox Board Notification
• Redacted Pilot Reports

[The P68 pilot] had previously been conducting a survey flight and was transiting Luton airspace returning to [destination airfield]. The pilot had been in receipt of a Traffic Service prior to entering the Luton CTR. Following transit of the Luton CTR, [the P68 pilot], operating VFR, exited controlled airspace and at **1229:27** was provided with a Basic Service by the Luton Intermediate Approach controller, which was agreed by the pilot.

There were several other aircraft whose pilots were established on the Luton Intermediate Approach frequency, both IFR and VFR. The Vans RV7 pilot was operating outside controlled airspace, squawking 7000, and in communication with Old Warden Radio.

The closest point of approach between [the RV7] (indicated as V on radar) and [the P68] occurred at **1232:55**, measured on the Multi-Track Radar Display as 0.1NM and 200ft (Figure 1).

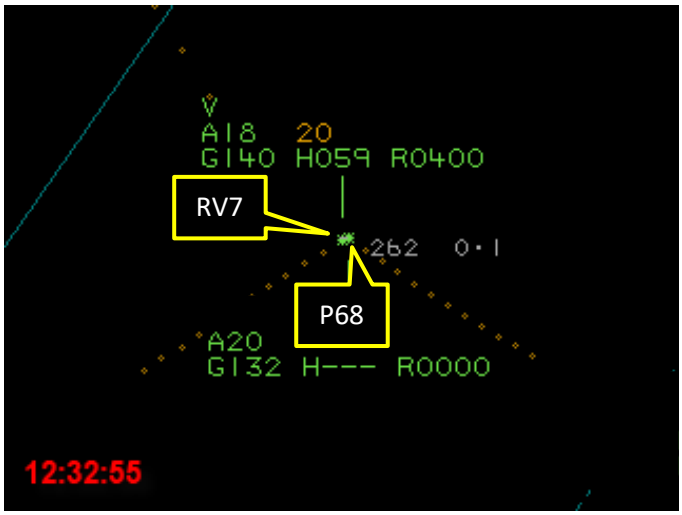

Figure 1

There was no reference to this encounter made on the Luton Intermediate Approach frequency, however, the pilot of [the RV7] subsequently submitted an Airprox report to the UK Airprox Board.

The Luton Intermediate Approach controller was not cognisant of the confliction at the time, as there was no report made by the pilot.

In conclusion, the Airprox occurred when [the P68] and [the RV7] came into proximity outside controlled airspace when operating VFR. [The P68 pilot] was in receipt of a Basic Service at the time of the event.

The Closest Point of Approach occurred at **1232:55** and was recorded on Multi-Track Radar as 0.1NM and 200ft.

The pilot of [the P68] was visual with [the RV7] throughout the event and no resolution was required.

UKAB Secretariat

The RV7 and P68 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 RV7 pilot was required to give way to the P68.[2]

Summary

An Airprox was reported when an RV7 and a P68 flew into proximity 5.5NM south of Cranfield airport at 1233Z on Tuesday 21st September 2021. Both pilots were operating under VFR in VMC, the RV7 pilot was listening out on the Old Warden radio frequency and the P68 pilot in receipt of a Basic Service from Luton Radar.

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.

The Board first discussed the actions of the RV7 pilot and noted that they had not been in receipt of an ATS and had been listening out on the Old Warden Radio frequency. At the point of the Airprox, the RV7 pilot had been at a range of over 10NM from Old Warden and members discussed whether the RV7 pilot might have been better served exploring other options for a service, such as Luton Radar or Farnborough LARS. The Board noted that the compatible EC equipment that had been carried by the RV7 pilot had not generated an alert when it would have been expected to have done so (**CF4**), despite the fact that the audio alert element had not been connected, and agreed that the RV7 pilot had had no situational awareness of the presence of the P68 (**CF3**). The Board also agreed that the RV7 pilot had become visual with the P68 late (**CF5**), that their view had been obscured by their passenger (**CF8**) and that the proximity of the P68 was such that it had caused concern to the RV7 pilot (**CF7**).

The Board next considered the actions of the P68 pilot and agreed that they had not received any Traffic Information on the RV7 from the Luton controller (acknowledging that the controller had not been required to monitor the P68's flightpath under a Basic Service) and had therefore not had any situational awareness regarding the presence of the RV7 (**CF3**). Members also agreed that, although the P68 pilot had been visual with the RV7 throughout, they had elected to continue to fly close enough to it to cause concern to the RV7 pilot (**CF6**). A discussion then followed regarding the level of ATS that the P68 had been under and that they had changed from a Traffic Service whilst crossing Luton CTR to a Basic Service once outside controlled airspace. It had not been possible to establish the reason for this change, but members agreed that, the retention of a Traffic Service may have been advantageous, if it had indeed been available. A NATS advisor added that the Luton controller had been busy at the time of the Airprox.

Next, the Board members discussed the service provided by the Luton controller and agreed that under a Basic Service they had not been required to monitor the flight of the P68 (**CF1**). Members also noted that the Luton Radar controller had STCA available to them, however, the selected SSR codes and

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

location of the aircraft had been such that they had been outside the alerting parameters of the system and as such the Board agreed that the system had not been used (**CF2**).

Finally, the Board considered the risk involved in this Airprox. Members noted that, as neither pilot had had any situational awareness regarding the presence of the other, both were relying on their lookout for conflict detection and avoidance. The Board considered that the separation between the aircraft had reduced sufficiently to result in safety being degraded, although there had been no risk of collision because the P68 pilot had been visual with the RV7 throughout. Consequently, the Board assigned a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021192			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
	• Electronic Warning System Operation and Compliance			
2	Technical	• STCA Warning	An event involving the triggering of a Short Term Conflict Alert (STCA) Warning	
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
3	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			
4	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
5	Human Factors	• Identification/Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
6	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
7	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft
8	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

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:

Ground Elements:

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

Situational Awareness of the Confliction and Action were assessed as **not used** because under a Basic Service the controller is not required to monitor the flight.

Electronic Warning System Operation and Compliance were assessed as **not used** because the location of the aircraft and the SSR codes that were set fell outside the selected operational parameters of the system.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any prior awareness regarding the presence of the other aircraft prior to sighting it.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the equipment carried on the RV7 did not alert to the presence of the P68 when it would have been expected to have done so.