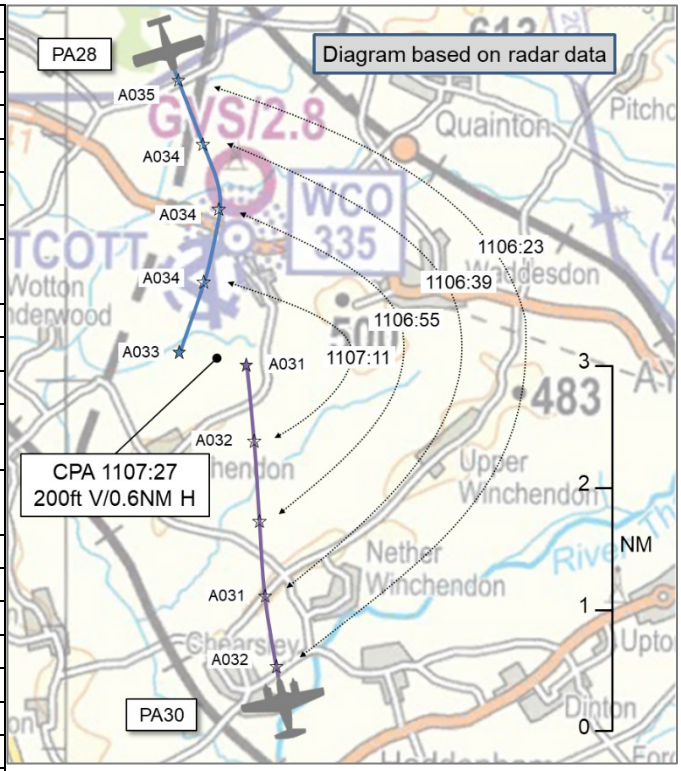
AIRPROX REPORT No 2022136

Date: 09 Jul 2022 Time: 1107Z Position: 5150N 00058W Location: 1NM S Westcott

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	PA30
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None[1]	Basic
Provider	N/A	Farnborough LARS North
Altitude/FL	3300ft	3100ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, Blue, Yellow	White, Blue
Lighting	Nav, Landing	Landing, Taxy, Strobe, Beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	3500ft	3000ft
Altimeter	QNH (1031hPa)	QNH (NK hPa)
Heading	158°	350°
Speed	130kt	150kt
ACAS/TAS	SkyEcho	TCAS I
Alert	Information	TA
Separation at CPA		
Reported	0ft V/unsure H	200ft V/500m H
Recorded	200ft V/0.6NM H	



THE PA28 PILOT reports that they were on their return leg back to [destination airfield] and just approaching the WCO NDB and they saw another aircraft pop up on their EC display device, displayed as white. It then went from their iPad and then came back, this time displayed as yellow. At this point they decided to take action and make a steep right-hand turn. Once they had levelled wings the other aircraft was showing as red on the [EC display], following [a reciprocal track]. This was with no doubt a nose-to-nose situation and the other pilot did not take any action, they assume that they didn't see them [the PA28]. Nothing was heard on the radio. Once the aircraft had passed they then resumed their track. That was their first time using their [EC device] and [they opined that] it saved both theirs, and the other pilot's, lives.

The PA28 pilot added that they had been unable to estimate the horizontal separation.

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

THE PA30 PILOT reports that they had had multiple contacts north of Stokenchurch, towards WCO NDB. Some aircraft were visible but at multiple levels and on different tracks. The TCAS alert aircraft had passed down their left-hand side. There were multiple TCAS contacts being resolved. They only briefly saw the aircraft as it was passing down their left-hand side.

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

[1] The PA28 pilot reported being in receipt of a Basic Service from Farnborough LARS North however, they did not establish contact with them until after the Airprox had occurred.

THE FARNBOROUGH LARS NORTH CONTROLLER reports that they have no recollection of the incident.

Factual Background

The weather at RAF Benson was recorded as follows:

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METAR EGUB 091050Z AUTO 32005KT 9999 SCT039/// 22/12 Q1031
METAR EGUB 091150Z AUTO 32006KT 9999 SCT042/// 23/12 Q1031 RERA
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Analysis and Investigation

Farnborough ATSU Investigation

Farnborough ATSU carried out an investigation which has been summarised below.

LARS North was operating band-boxed with LARS East, from the radar replay, the sector appears to have been moderately busy, but manageable.

At 1059:37 [the PA30 pilot] called the LARS North frequency requesting a Basic Service, having departed [departure airfield], and was issued with the 5027 squawk. They were given a Basic Service and the QNH was confirmed as 1031hPa.

At 1103:00 [the PA30 pilot] was requested to report their level, this was reported by them as 2300ft, Mode C indicated A024 which is within tolerances, their Mode C was verified. At 1103:48, as [the PA30] tracked northbound toward WCO, they passed approximately 1NM to the west of traffic working Farnborough LARS North on a 5031 squawk indicating A023.

At 1104:30 [the PA30] (approximately 8NM south of WCO NDB) passed approximately 0.5NM to the east of opposite direction traffic with no Mode C, squawking 3737, Figure 1.

Figure 1: 1104:30

At 1107:28, approximately 1NM south of WCO NDB, [the PA30], indicating A031, passed opposite direction traffic between a half and one mile east of a 7000 squawk indicating A033. This contact continued southbound but did not call Farnborough LARS North for a service, Figure 2.

Figure 2 – 1107:28

At 1107:46 [the PA30 pilot], at WCO NDB, was instructed to squawk conspicuity and continue on route.

1112:22 [the PA28 pilot] called Farnborough North:

1112:22 ([PA28 c/s]) "*Farnborough* [PA28 c/s]"

1112:25 (Farnborough) "[PA28 c/s] *Farnborough Radar pass your message*"

1112:30 ([PA28 c/s]) "[PA28 c/s] *PA28 inbound to [destination airfield] from [departure airfield], we're just passing west of Wycombe we're at 2300 feet on 1031, request a Basic Service please"*

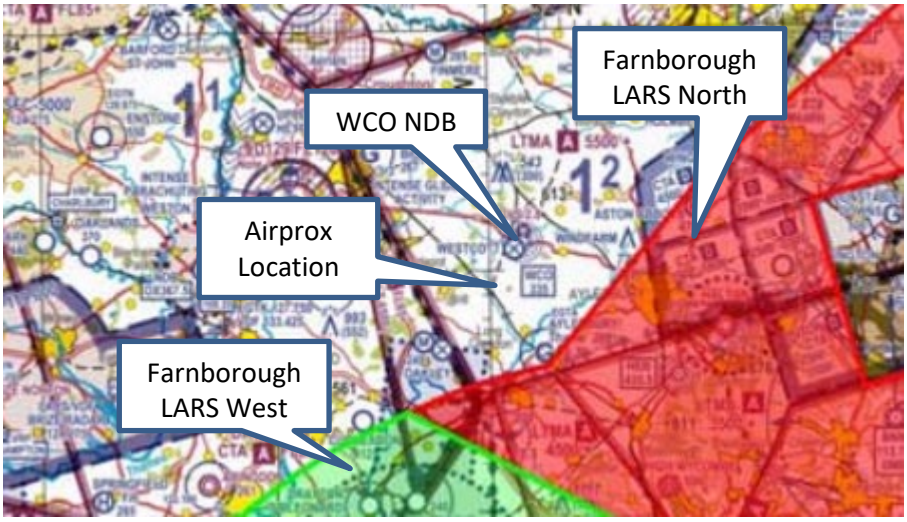
1112:45 (Farnborough) "[PA28 c/s] *wrong frequency, contact Farnborough radar 125.250*"

The position and altitude report from [the PA28 pilot] correlated with the contact that had passed [the PA30] at 1107:28, just south of the WCO NDB.

[The PA28] was not positively identified by LARS North and did not receive a service from LARS North within the timeframes outlined by the Airprox Board in conjunction with this reported Airprox.

No Airprox was reported on Farnborough's frequencies by either pilot.

MATS2 was reviewed for the map of the LARS North service area:



This incident occurred as a conflict of aircraft operating outside controlled airspace.

At the time of the reported Airprox one of the aircraft [PA30] was working Farnborough LARS North squawking 5027. The second aircraft, [the PA28], called onto the LARS North frequency at 1112:22 passing west abeam Wycombe Air Park and was transferred straight to LARS West inbound to [destination].

[The PA30 pilot] was operating under a Basic Service with Farnborough LARS North.

CAP774 states that:

> *'A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.*
>
> *Basic Service relies on the pilot avoiding other traffic, unaided by controllers/FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight'*

No other aircraft could be seen on the radar replay in close proximity to [the PA30], although primary contacts do not always paint. WCO NDB (the location of the reported Airprox) is outside Farnborough North's solid radar cover, and outside LARS North's promulgated sector area. That aside, it is permissible to continue providing a Basic Service outside this area, at the controller's discretion. [The PA30 pilot] was instructed to free-call on route in accordance with procedures when passing WCO NDB.

No Airprox was reported on any of the Farnborough LARS frequencies.

UKAB Secretariat

An analysis of the NATS radar has been undertaken and both aircraft were detected and identified using Mode S data. In the lead-up to the Airprox the PA30 pilot had been displaying a squawk that had been assigned to them by Farnborough LARS North, and receiving a Basic Service. The PA28 pilot had been displaying an East Midlands LARS squawk until 1106:42 when, with the aircraft separated by 3.4NM, the squawk changed to 7000, Figure 3. This suggested that the PA28 pilot had been in receipt of a service prior to the Airprox, but had then changed frequency and therefore was not receiving a service at the time of the event. The PA28 pilot established contact with Farnborough LARS after the Airprox.

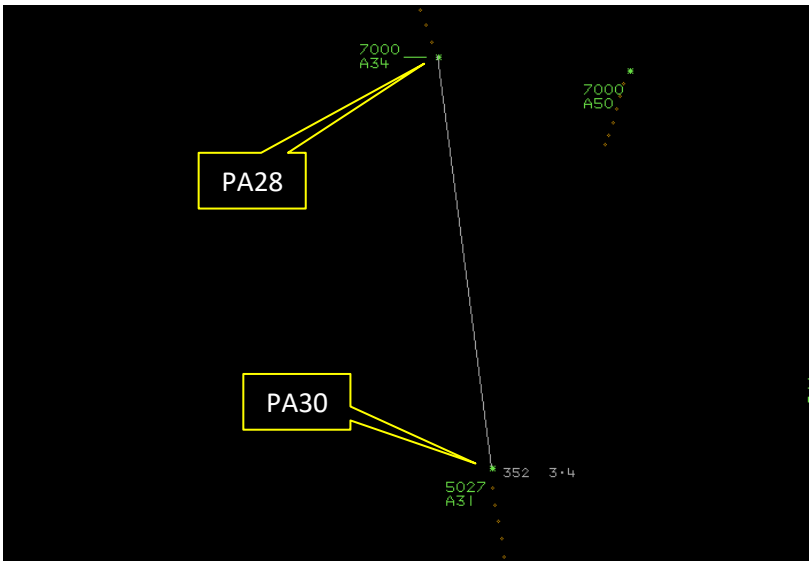


Figure 3 – 1106:42. PA28 Squawking 7000

The PA28 and PA30 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[2] If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.[3]

Summary

An Airprox was reported when a PA28 and a PA30 flew into proximity 1NM south of Westcott NDB at 1107Z on Saturday 9th July 2022. Both pilots were operating under VFR in VMC, the PA30 pilot in receipt of a Basic Service from Farnborough LARS North, the PA28 pilot 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.

The Board discussed this event and were satisfied that the separation between the aircraft, and the actions taken by the PA28 pilot, had been sufficient to ensure that there had been no risk of collision. Members had been encouraged by both pilots' use of EC equipment to help them to be more situationally aware of the traffic situation in the surrounding area; however, members added that it is advisable to report an Airprox over the radio to the ATSU with which a pilot is in contact or, if not receiving a service, the next agency they speak to. The Board discussed that navigation beacons, such as WCO NDB, can often be busy areas, however, the awareness of the PA30 pilot, and the action taken by the PA28 pilot, had meant that the aircraft had remained separated. Members were satisfied that normal safety standards and parameters for VFR operations in Class G airspace had pertained and, as such, the Board assigned Risk Category E.

Members agreed on the following contributory factors:

CF1. The Farnborough LARS North controller was not required to monitor the flight of the PA30 under a Basic Service.

CF2. The PA30 pilot had been aware of the presence of the PA28 following a TA from their EC device.

CF3. The PA28 pilot had been aware of the presence of the PA30 following an alert from their EC device.

CF4. Although separation had been maintained, the PA28 pilot had been concerned by the proximity of the PA30.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022136			
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
	Flight Elements			

[2] (UK) SERA.3205 Proximity.
[3] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

	• **Electronic Warning System Operation and Compliance**			
2	Contextual	• ACAS/TCAS TA	An event involving a genuine airborne collision avoidance system/traffic alert and collision avoidance system traffic advisory warning triggered	
3	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• **See and Avoid**			
4	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

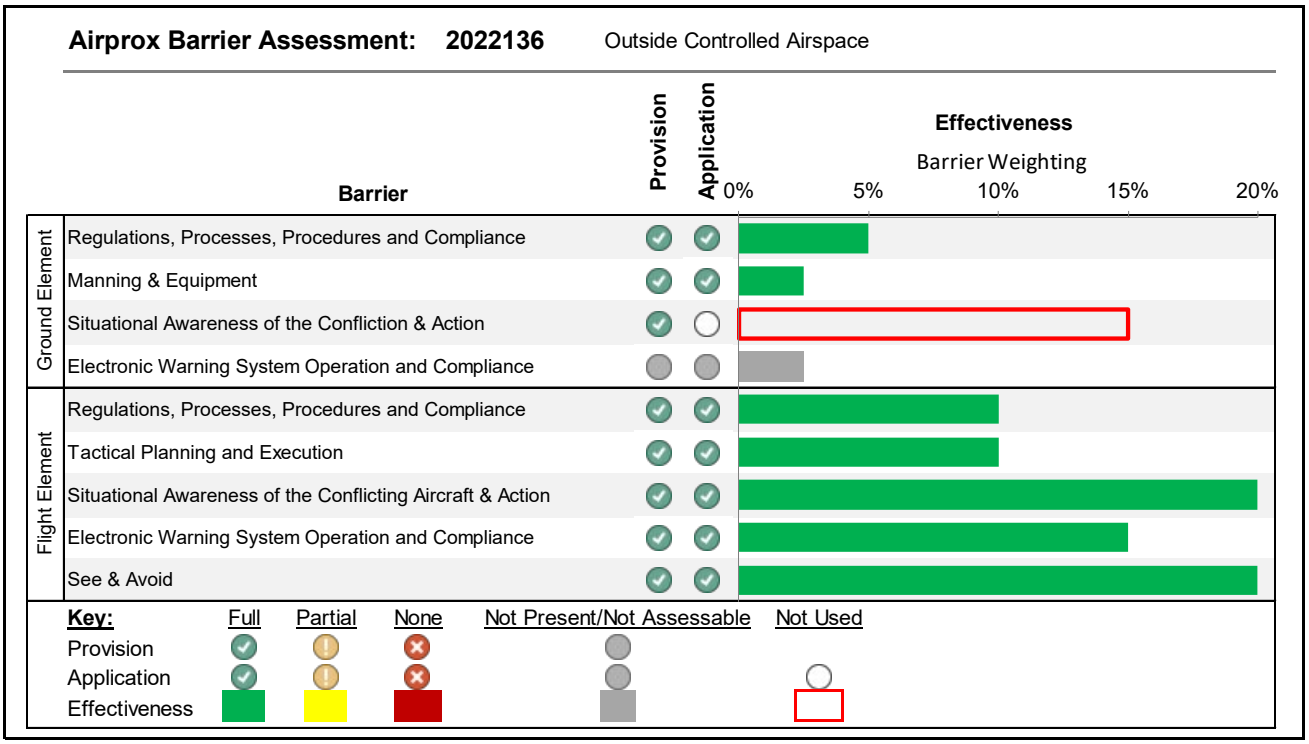
Degree of Risk: E

Safety Barrier Assessment[4]

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

Ground Elements:

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



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