

AIRPROX REPORT No 2024142

Date: 22 Jun 2024 Time: 1132Z Position: 5201N 00135W Location: 3NM ENE Moreton-In-Marsh

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28(A)	PA28(B)
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Oxford Radar
Altitude/FL	2600ft	2300ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Red and white	White and maroon
Lighting	Bcn, landing, nav	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2600ft	2500ft
Altimeter	QNH	QNH (1012hPa)
Heading	270°	NK
Speed	100kt	NK
ACAS/TAS	Not fitted	PilotAware
Alert	N/A	None
Separation at CPA		
Reported	250ft V/150m H	Not seen
Recorded	300ft V/0.7NM H	



THE PA28(A) PILOT reports that they had been flying to [destination airfield] and had been looking down and writing the ATIS when they looked up, they had seen the other aircraft at their left [they recall]. They had pitched the aircraft up and climbed immediately.

The pilot assessed the risk of collision as ‘Low’.

THE PA28(B) PILOT reports that they had received an email from the Airprox team that had initially been sent to the aircraft owner [before having been forwarded to the pilot in command] at the time and date of the reported Airprox details. At no time had they seen another aircraft that required them to take avoiding action during that flight [...].

THE OXFORD RADAR CONTROLLER reports that they have no knowledge of this event.

Factual Background

The weather at Brize Norton was recorded as follows:

METAR EGVN 221120Z AUTO 29007KT 9999 FEW042/// 19/09 Q1013=

Analysis and Investigation

Oxford Unit Investigation

This Airprox had occurred during light traffic levels. The Oxford Radar controller had been operating on frequency 125.090MHz, the RAD2/Director position had been closed.

PA28(B) pilot first made contact with Oxford Radar at time 1123, whereby the following exchanges had occurred:

1123 PA28(B): Oxford Radar, [PA28(B) C/S], request a Basic Service.

1123 OXF RAD: [PA28(B) C/S], Oxford Radar, pass your message.

1123 PA28(B): [PA28(B) C/S], P-A-Twenty-Eight, three P-O-B, [departure airfield to destination airfield], general handling to the north, currently approaching Chipping Norton at height one-thousand-five-hundred feet, on Q-N-H One-Zero-One-Two, request Basic Service.

1123 OXF RAD: [PA28(B) C/S], Squawk Four-Five-Two-Zero, Basic Service, Oxford Q-N-H is One-Zero-One-Three now, One-Zero-One-Three.

1124 PA28(B): Q-N-H One-Zero-One-Three, Squawk Four-Five-Two-Zero, for Basic Service, [PA28(B) C/S].

PA28(B) continued to operate to the northwest of Oxford Airport, no other RT exchanges occurred between the PA28(B) pilot and Oxford Radar until after the Airprox [...] had occurred.

PA28(A) pilot had not been in radar contact or receiving a service from Oxford Radar. Via the radar replay, the PA28(A) can be seen to be squawking 1177 (this automatically converts and shows 'FIR' on the Oxford situation display) leading Oxford to infer that the crew had been in receipt of a Basic Service from London Information. This squawk changed to 7000 (which automatically converts to 7K on the Oxford situation display) just prior to the CPA.

The CPA between the two aircraft occurred at 1132:20, the aircraft separated by approximately half a mile laterally, Mode C of PA28(B) showing 2200ft and the Mode C of PA28(A) showing 2600ft.

There had been no mention of an Airprox on the RT and the only other exchange between Oxford Radar and PA28(B) pilot occurred as follows:

1134 PA28(B): [PA28(B) C/S], request frequency change - Enstone, One-Two-Nine-decimal-Eight-Eight-Zero.

1134 OXF RAD: [PA28(B) C/S], Squawk conspicuity, free-call Enstone, thanks for the call.

1134 PA28(B): Squawk conspicuity, free-call Enstone, thanks very much, [PA28(B) C/S].

Analysis

The pilot of PA28(B) had free-called Oxford and requested a Basic Service, this is the service that had then subsequently been provided by the controller. The aircraft had been on frequency for 9 minutes prior to the CPA. During this time, the Oxford Radar controller had not received any significant position/levels updates from the pilot in the time leading up to the Airprox. PA28(A) pilot had not been in radio contact with Oxford Radar at the time but had been visible on radar and seemingly in receipt of a service from London Information.

In accordance with CAP774, the pilot should not expect any form of Traffic Information from a controller under a Basic Service and that whether Traffic Information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.

Likewise, even though the controller had access to surveillance-derived information it had been noted again that PA28(B) had been operating under a Basic Service and thus the controller was not required to identify nor monitor the aircraft's flight.

Prior to the CPA, PA28(B) had been on a roughly north track, at approximately 1130-1131, the pilot executed a right turn to track south, this put the two aircraft into 'conflict'. At a similar time, the

squawk code of PA28(A) changed from 1177 to 7000. Recollection of events from the pilot of PA28(A) sit outside the scope of this unit investigation but the apparent frequency and squawk change may prove to be contributory as to the potential late sighting between aircraft.

It had also been noteworthy that around the time of the Airprox an intermittent primary contact could be seen in the vicinity of these aircraft, it is difficult to ascertain with any certainty with the given resources of this investigation as to whether this showed a real aircraft or is simply radar clutter.

UKAB Secretariat

Figure 1 (below) shows the NATS radar capture at CPA (1132:15). Figures 2 and 3 show ADS-B tracked flightpaths with Figure 2 indicating the point at which the pilot of PA28(A) initiated the avoidance manoeuvre they describe in their narrative above. The action achieved a maximum ROC of 780fpm, and an additional height separation of 200ft by the time of CPA.

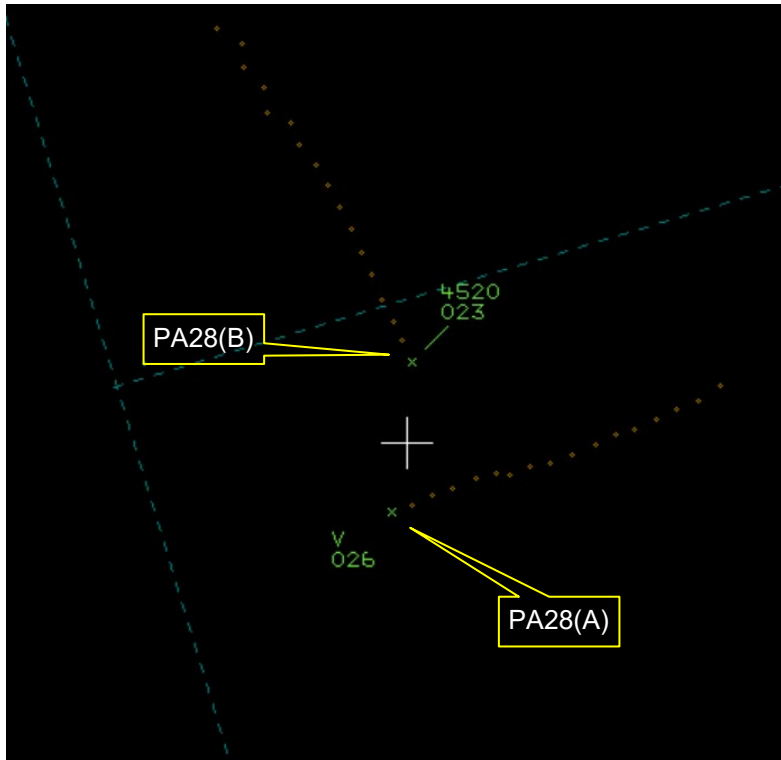


Figure 1: CPA at 1132:15 300ft V/0.7NM H

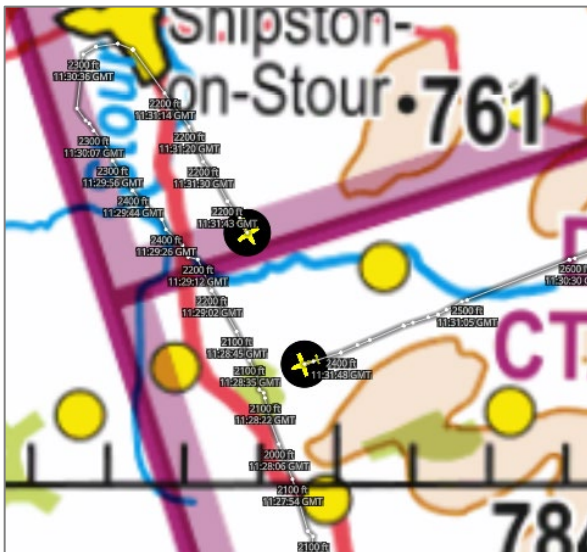


Figure 2: CPA minus 15sec (11:32:00)

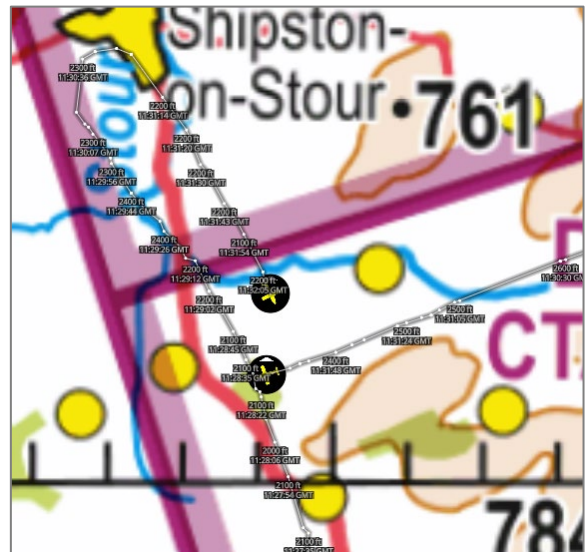


Figure 3: CPA (1132:15)

The PA28(A) and PA28(B) 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

Summary

An Airprox was reported when PA28(A) and PA28(B) flew into proximity 3NM east-northeast of Moreton-in-Marsh at 1132Z on Saturday 22nd June 2024. Both pilots were operating under VFR in VMC, the PA28(A) pilot had not been in receipt of a Flight Information Service and the PA28(B) pilot in receipt of a Basic Service from Oxford Radar.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, ADS-B data, a report from the air traffic controller involved and a report from the appropriate operating authority. 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 firstly considered the actions of the PA28(A) pilot, noting that they had been in a period of 'heads-in' whilst noting ATIS information for their recovery. On performing a timely lookout scan they had seen an aircraft to their right, bearing northward and, having been somewhat startled by it, had initiated a climbing avoidance manoeuvre. Members felt that having reviewed the electronic replays of the event, the PA28(A) pilot had potentially mis-judged the lateral separation between themselves and the PA28(B) but had acted instinctively to ensure separation with the PA28(B). The Board commended the pilot for their actions and wished to reinforce the concept of routinely breaking in-cockpit tasks with thorough and timely lookout. They wished to reinforce the use of a Traffic Service where available to improve situational awareness (in preference to a Basic Service due to the limitations of such as laid down in CAP774 Chapter 2.1 where it stipulates that under a Basic Service, *'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'*). Furthermore, in this case, the PA28(A) pilot had not carried an electronic conspicuity unit, further reducing their options for improved situational awareness. Members wished to remind all that such equipment can prove invaluable in offering both visual and audio alerts of suitably equipped aircraft in proximity.

In reviewing the actions of the PA28(B) pilot, they noted positively that they had carried an electronic conspicuity unit and had availed themselves of an Air Traffic Service, recognising the limitations of a Basic Service that became apparent in this particular case. The PA28(B) pilot had recalled no alerts to the presence of the PA28(A) through either their EC or through ATC.

The Board then moved on to consider the contributions from the relevant Air Traffic Control Units, noting that the pilot of the PA28(A) had been operating VFR and without a service at the time of CPA whilst the pilot of the PA28(B) had been utilising a Basic Service from Oxford. The controller had no recollection of the event and this spurred members to remind all of the value of calling an Airprox on RT at the time of the event, where that is possible, to enable data gathering for greater understanding of the circumstances and improved learning for all. The subsequent analysis by Oxford clarified that although the PA28(B) pilot had been receiving a Basic Service, having confirmed such with the controller, responsibility for collision avoidance remains with the pilot and the controller is not required to monitor the flight. Board members noted this scenario and once again stressed that where possible pilots should use all available means to improve their, and others', situational awareness.

In conclusion, members agreed that, despite the lack of active Air Traffic Control service and a lack of electronic conspicuity equipment between the PA28(A) and (B), separation between the aircraft had

¹ (UK) SERA.3205 Proximity.

been such that normal safety standards and margins had pertained. Members were satisfied that there had not been a risk of collision and assigned Risk Category E to this event.

Members agreed on the following contributory factors:

- CF1:** The Oxford Radar Controller was not required to monitor the flight under a Basic Service.
- CF2:** The pilot of PA28(A) could have requested a surveillance-based service and the pilot of PA28(B) could have requested a service from Oxford or Brize Norton.
- CF3:** Neither pilot had any situational awareness of the other aircraft.
- CF4:** The electronic conspicuity equipment carried by PA28(B) did not detect any electronic emissions from PA28(A).
- CF5:** The pilot of PA28(A) achieved only a late sighting of PA28(B).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2024142				
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				
• Tactical Planning and Execution				
2	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
• 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, inaccurate 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

Degree of Risk: E.

Safety Barrier Assessment²

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 the Oxford controller had not been required to monitor the flight under a Basic Service

² The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the PA28(A) pilot could have considered requesting an Air Traffic Control service for their flight and the PA28(B) pilot could have considered requesting a surveillance-based service for their flight.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any situational awareness of the proximity of the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the electronic conspicuity unit carried by the pilot of the PA28(B) had not received any electronic emissions from the PA28(A).

See and Avoid were assessed as **partially effective** because the pilot of the PA28(A) had achieved only a late-sighting of the PA28(B).

Airprox Barrier Assessment: 2024142		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 5%]				
	Manning & Equipment	✓	✓	[Green bar to 2.5%]				
	Situational Awareness of the Conflication & Action	✓	○	[Red bar to 15%]				
	Electronic Warning System Operation and Compliance	●	●	[Grey bar to 2.5%]				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 10%]				
	Tactical Planning and Execution	✓	⚠	[Yellow bar to 10%]				
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	[Red bar to 20%]				
	Electronic Warning System Operation and Compliance	⚠	✗	[Red bar to 15%]				
	See & Avoid	⚠	⚠	[Yellow bar to 20%]				
Key:								
	Full	Partial	None	Not Present/Not Assessable	Not Used			
Provision	✓	⚠	✗	●				
Application	✓	⚠	✗	●	○			
Effectiveness	[Green]	[Yellow]	[Red]	[Grey]	[Red box]			