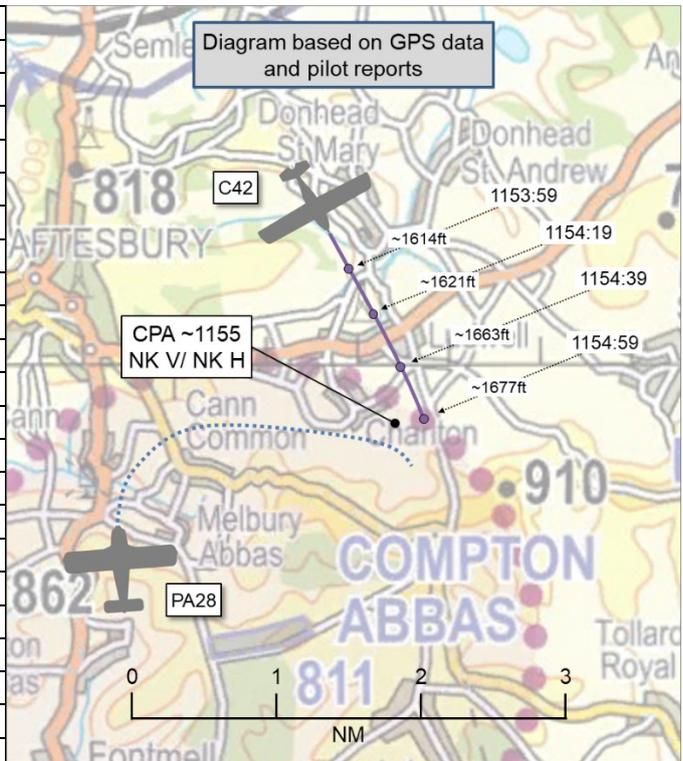


AIRPROX REPORT No 2022264

Date: 22 Nov 2022 Time: ~1155Z Position: 5059N 00207W Location: Compton Abbas ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	C42
Operator	Civ FW	Civ FW
Airspace	Compton Abbas ATZ	Compton Abbas ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Compton Radio	Compton Radio
Altitude/FL	NK	~1677ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Yellow	White
Lighting	Strobe, landing	Landing light
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	800ft	1620ft ¹
Altimeter	QFE (961hPa)	QFE (961hPa)
Heading	090°	172°
Speed	90kt	70kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	200ft V/0NM H	300ft V/200m H
Recorded	NK V/NK H	



THE PA28 PILOT reports that, during the conduct of circuit training for a student pilot, they heard [the pilot of the C42] call Compton Radio for joining instructions. The other pilot [reportedly] acknowledged the overhead join procedure, runway in use, circuit direction and QFE. The scattered cloudbase was variable at 800-1000ft. [The pilot of the PA28] heard no further calls from [the pilot of the C42] but [the C42] was observed by the student in the left seat as it crossed immediately overhead. The [pilot of the PA28], in the right seat, saw the aircraft by looking up through the windshield and estimated the clearance to be 200ft. They described their avoiding action as a descent.

Later, in conversation, the pilot of [the C42 reportedly] accepted that they had crossed the downwind leg of the circuit at 1000ft QFE rather than 1800ft as required. The pilot of [the C42 reportedly] stated that the incorrect circuit join procedure had occurred due to the cloudbase and that they had seen [the PA28].

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

THE C42 PILOT reports that they couldn't climb to their intended height owing to intermittent cloud cover so turned slightly left to avoid the circuit. They report that they saw the other aircraft ‘ahead, moving west-to-east’. The [PA28] passed below and ahead of them. They climbed as much as they could and then kept clear of the circuit. They continued to the dead-side before joining the circuit for a landing on RW26.

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

¹ The pilot of the C42 reported that they had been at 1620ft on the Compton Abbas QFE. The UKAB Secretariat believes this to have been 1620ft QNH.

THE COMPTON RADIO AIR/GROUND OPERATOR reports that subsequent to the initial provision of aerodrome joining information, they had attended to other duties [and could not provide further details of the incident].

Factual Background

The weather at Boscombe Down was recorded as follows:

EGDM 221150Z 27008KT 9999 SCT016 10/07 Q0988 TEMPO FEW018 RMK WHT TEMPO BLU

The entry for Compton Abbas in the AIP provides the following flight procedures:

EGHA AD 2.22 FLIGHT PROCEDURES

- a. Circuit directions: Runway 26 - RH; Runway 08 - LH.
- b. All traffic to join overhead or dead-side descending to 800 FT QFE to cross the upwind runway numbers.

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Due to poor low-level radar coverage in the area, neither aircraft could be observed on radar. The UKAB Secretariat obtained limited GPS data from which the PA28 was observed within the Compton Abbas ATZ although its exact position could not be determined. The pilot of the C42 kindly supplied GPS track data of their flight. It is with the GPS track data and an integration of the pilot's narrative reports that the diagram was constructed and the CPA assessed.

The PA28 and C42 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 An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.³

Summary

An Airprox was reported when a PA28 and a C42 flew into proximity in the Compton Abbas ATZ at approximately 1155Z on Tuesday 22nd November 2022. Both pilots were operating under VFR in VMC, and in receipt of an Air/Ground Service from Compton Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the appropriate Air/Ground radio operator. 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 considered the actions of the pilot of the PA28. Members noted that the pilot had had a generic awareness of the presence of the C42 having heard the C42 pilot's initial call to the Compton Abbas Air/Ground radio operator (**CF6**). Notwithstanding, there had been no information available as to the exact location of the C42 and members wished to emphasise the imperative of maintaining an effective lookout, particularly within the visual circuit. The C42 had been visually acquired when it had been approximately overhead, and members agreed that it had been too late to have taken avoiding action, and that that effectively constituted a non-sighting (**CF8**). Members noted that neither aircraft had been fitted with any additional electronic conspicuity equipment, which on this occasion may have provided some additional information to aid visual acquisition. It was for pilots to decide on their own

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

requirements for additional equipment according to their needs and the Board wished to highlight to pilots that additional funding has been made available for electronic conspicuity devices through the CAA's Electronic Conspicuity Rebate Scheme, which has been extended until 31st March 2024.⁴

Turning their attention to the actions of the pilot of the C42, members reviewed the entry for Compton Abbas in the AIP and noted that 'All traffic to join overhead or dead-side descending to 800 FT QFE to cross the upwind runway numbers'. On approaching Compton Abbas, the pilot of the C42 had had generic situational awareness that the circuit had been occupied on account of the position calls made by the pilots of the other aircraft in the circuit (CF6). Whilst members expressed some sympathy for the pilot of the C42 having encountered a less-than-ideal cloudbase, it was assessed that they had not adapted their dynamic plan sufficiently to meet the needs of the situation (CF3). That they had continued into the ATZ to join the circuit, but had flown through the circuit on the live-side, marginally above the circuit height, indicated to members that a suitable plan had not been formulated (CF2). Some members wondered whether the extent of the circuit had been misjudged. Notwithstanding, members were in agreement that the pilot of the C42 had not complied with the joining procedures (CF1) and had neither conformed with, nor successfully avoided, the existing pattern of traffic (CF4). Had the pilot of the C42 been uncertain of the positions of other aircraft in the circuit, the Board considered that a call on the radio may have elicited the information that they had required to build a far better picture of their situation (CF5). The Board agreed that the pilot of the C42 had visually acquired the PA28 as it had passed across their track, and members determined that it had been sighted late (CF7) but acknowledged that emergency avoiding action had not been necessary.

Although a conclusive separation distance at CPA was not available, members determined that neither pilot had sighted the other in time to have materially affected the separation and that it had been largely by chance that the aircraft had not been closer. Safety had not been assured and there had been a risk of collision (CF9). As such, the Board assigned Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022264			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
	• Tactical Planning and Execution			
2	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
3	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
4	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
5	Human Factors	• Lack of Communication	Events involving flight crew that did not communicate enough - not enough communication	Pilot did not request additional information
6	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
	• See and Avoid			
7	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

⁴ <https://www.caa.co.uk/general-aviation/aircraft-ownership-and-maintenance/electronic-conspicuity-devices/>

8	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
• Outcome Events				
9	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B

Safety Barrier Assessment⁵

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 Compton Radio Air/Ground operator had not been required to monitor the flights.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the pilot of the C42 had not joined the circuit in accordance with the published flight procedures.

Tactical Planning and Execution was assessed as **partially effective** because the pilot of the C42 had not conformed with, or sufficiently avoided, the existing pattern of traffic.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because both pilots had only had generic situational awareness of the presence of the other.

See and Avoid were assessed as **partially effective** because the pilot of the PA28 had effectively not sighted the C42 until the moment of CPA.

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Airprox Barrier Assessment: 2022264 Outside Controlled Airspace

	Barrier	Provision	Application	Effectiveness				
				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Confliction & Action	✗	○					
	Electronic Warning System Operation and Compliance	●	●					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	!					
	Tactical Planning and Execution	✓	!					
	Situational Awareness of the Conflicting Aircraft & Action	!	!					
	Electronic Warning System Operation and Compliance	●	●					
	See & Avoid	!	!					
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	!	✗	●				
Application	✓	!	✗	●	○			
Effectiveness								