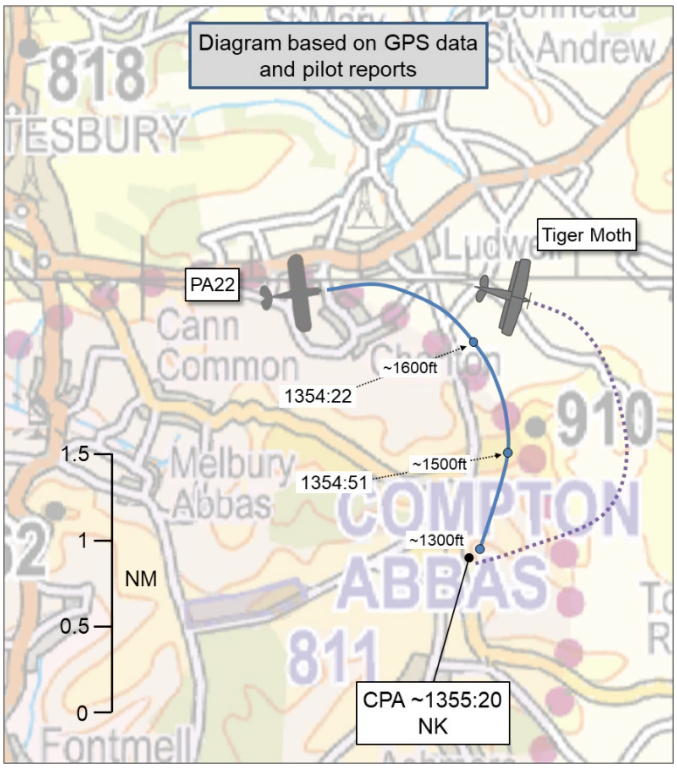
AIRPROX REPORT No 2024145

Date: 22 Jun 2024 Time: ~1355Z Position: 5058N 00207W Location: Compton Abbas ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA22	Tiger Moth
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	~1300ft	NK
Transponder	NK	NK
Reported		
Colours	White, red	Blue, silver
Lighting	Nav	NR
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	570ft [AGL]	NR
Altimeter	QNH (1016hPa)	NR
Heading	170°	NR
Speed	70kt	NR
ACAS/TAS	Not fitted	NR
Separation at CPA		
Reported	50ft V/50m H	NR
Recorded	NK	



THE PA22 PILOT reports that they joined from the north, overhead at 2800ft QNH and there were three aircraft ahead of them, including a Tiger Moth directly ahead. It was busy but they were happy with their positioning and with where the other aircraft that were joining ahead were. They descended deadside to 1800ft following astern and made all calls in the circuit, reporting visibility of aircraft ahead.

A fourth aircraft was downwind and was ahead of the Tiger Moth, so there were four aircraft ahead. They followed the Tiger Moth downwind when the [pilot of the Tiger moth] continued a long downwind [leg], with a lazy-turn onto base leg, going so far east that they were out of the zone. [The pilot of the PA22] followed the [Tiger Moth], staying behind, but lost sight of it on base leg. They regained sight of it before the turn onto finals and climbed to avoid it. [The Tiger Moth] passed in front and underneath.

[The pilot of the PA22 opines that] they should have left the circuit on base leg as [the Tiger Moth] was so far east it was out of the zone, but they had continued on the deadside as they felt that that was the best place to be, and they stayed beneath the crosswind leg as they didn't want to climb into anyone joining from there. [They commented that] they should have climbed away rather than staying at a cautious height beneath the circuit on the deadside. They rejoined the circuit pattern on the climb-out over Melbury Hill once they were happy that the circuit was clear. The right decision would have been to have kept climbing on the deadside to remain clear, or to have left the zone to the south.

They continued their flight, departed the circuit again and completed a subsequent rejoin from the north later.

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

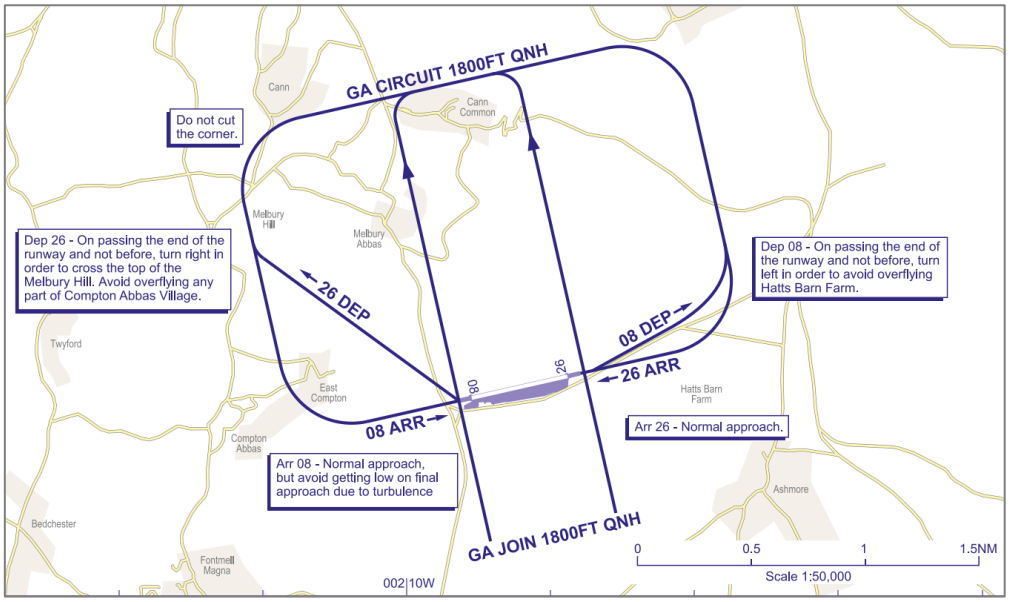
THE TIGER MOTH PILOT reports that they joined the airfield from the south at 2800ft on the QNH in the overhead for RW26RH and did a right-hand descending turn arriving at 1800ft on a crosswind leg over the RW08 threshold. They were aware of two aircraft ahead of them in the circuit and one other aircraft that had joined in the overhead behind them. [The pilot of the Tiger Moth believes that they]

were number three to land when they joined crosswind. They continued their circuit with good communications with Compton Abbas [AGO], and landed in-turn listening to the [pilots of the] two aircraft ahead of them, but unaware of any further communications from the pilot behind. They landed without incident, taxied for fuel and then to the hangar.

THE COMPTON ABBAS AGO did not submit a report.

Factual Background

The entry for Compton Abbas in the UK AIP provides the following diagram for circuit joining and noise abatement procedures:



The weather at Boscombe Down was recorded as follows:

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METAR EGDM 221350Z AUTO 28011KT 9999 OVC036/// 20/09 Q1014
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Neither aircraft was observed on the radar replay. The pilot of the PA22 kindly supplied GPS track data for their flight. The diagram was constructed from the GPS data. The track of the Tiger Moth could not be determined and has been depicted in the diagram with a dotted line to indicate a probable track. The separation at CPA could not be determined.

The PA22 and Tiger Moth 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] 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.[2]

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Summary

An Airprox was reported when a PA22 and a Tiger Moth flew into proximity in the Compton Abbas ATZ at approximately 1355Z on Saturday 22nd June 2024. Both pilots were operating under VFR in VMC and in receipt of an AGCS from Compton Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, GPS track data for the flight of the PA22 and radar photographs/video recordings. 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 Tiger Moth. Members noted that the entry for Compton Abbas in the UK AIP provides a circuit pattern and noise abatement procedures. Although the exact track of the Tiger Moth was not available, it had been apparent that the pilot of the Tiger Moth had extended their downwind leg well beyond the expected circuit pattern and, indeed, outside the ATZ. Members surmised that the pilot of the Tiger Moth may have flown such a track as to have ensured sufficient separation from an aircraft ahead of them in the circuit. Nevertheless, members pointed out that, particularly where there are several aircraft in the circuit at once, a succession of pilots extending, and further extending their downwind legs for separation might rapidly lead to the dimensions of the circuit expanding excessively, beyond the edge of the ATZ. Accordingly, members were keen to emphasise that it would have been prudent for the pilot of the Tiger Moth to have transmitted their intention to have extended their downwind leg (**CF1**). This, members agreed, would have been particularly useful for the situational awareness of the other pilots in the circuit so that their dynamic plans could have been adapted accordingly. Members noted that the pilot of the Tiger Moth had had generic situational awareness of the presence of the PA22 in the circuit (**CF5**) but, once they had turned onto their final approach, had not sighted the PA22 to their right (**CF7**).

Turning their attention to the actions of the pilot of the PA22, members noted that they had visually acquired the Tiger Moth, had followed it on the downwind leg of the circuit, but had subsequently lost sight of it on base leg. Consequently, it was agreed that the pilot of the PA22 had had generic, as opposed to specific, situational awareness of the Tiger Moth (**CF5**) and that their subsequent actions had required careful consideration. Members noted that the narrative report provided by the pilot of the PA22 had reflected on their actions and members concurred that their plan to have continued their own circuit (in the belief that the Tiger Moth pilot had departed to the east) had not adequately met the needs of the situation (**CF2**). Members agreed that, if the PA22 pilot had been unsure of the Tiger Moth pilot's intention to have remained in the circuit, it may have been prudent to have transmitted a request for confirmation (**CF4**) rather than to have assumed that they had left the circuit. Members next considered the moment of CPA, and agreed that the PA22 pilot had visually reacquired the Tiger Moth late (**CF6**), and noted that they had taken avoiding action to increase the separation. As the pilot of the PA22 had not appreciated that the Tiger Moth pilot had remained in the circuit, members agreed that the pilot of the PA22 had not conformed with the existing circuit pattern (**CF3**).

Members turned their attention to the actions of the Compton Radio AGO and were disappointed that they had not supplied a narrative report of the event. Notwithstanding, it was agreed that it had been the pilot's responsibility to have ensured separation and that the AGO had not been required to have sequenced the traffic.

Members summarised their thoughts and agreed that, once the pilot of the PA22 had lost sight of the Tiger Moth, they had not adapted their plan sufficiently to have met the needs of the situation and had based their subsequent actions on an assumption that the Tiger Moth pilot had left the circuit. Members also agreed that, had the Tiger Moth pilot relayed their intentions to have extended the circuit, or had the PA22 pilot enquired as to the position of the Tiger Moth, the situation may have unfolded in a far more benign way. It was further agreed that the Tiger Moth pilot had not sighted the PA22 during the encounter to have influenced the separation, and it had been the actions of the pilot of the PA22 that had increased separation at the last minute. Although the exact separation at CPA could not be

determined, members were satisfied that safety had not been assured and that there had been a risk of collision (**CF8**). As such, the Board assigned Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024145			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
2	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
3	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			
4	Human Factors	• Lack of Communication	Events involving flight crew that did not communicate enough - not enough communication	Pilot did not request additional information
5	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			
6	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
7	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			
8	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 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:

Situational Awareness of the Confliction and Action were assessed as **not used** because the Compton Abbas AGO had not been required to have sequenced the traffic.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because, having lost sight of the Tiger Moth in the circuit, the pilot of the PA22 had not adapted their plan sufficiently to have met the needs of the situation.

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

See and Avoid were assessed as **partially effective** because the pilot of the PA22 had visually re-acquired the Tiger Moth late.