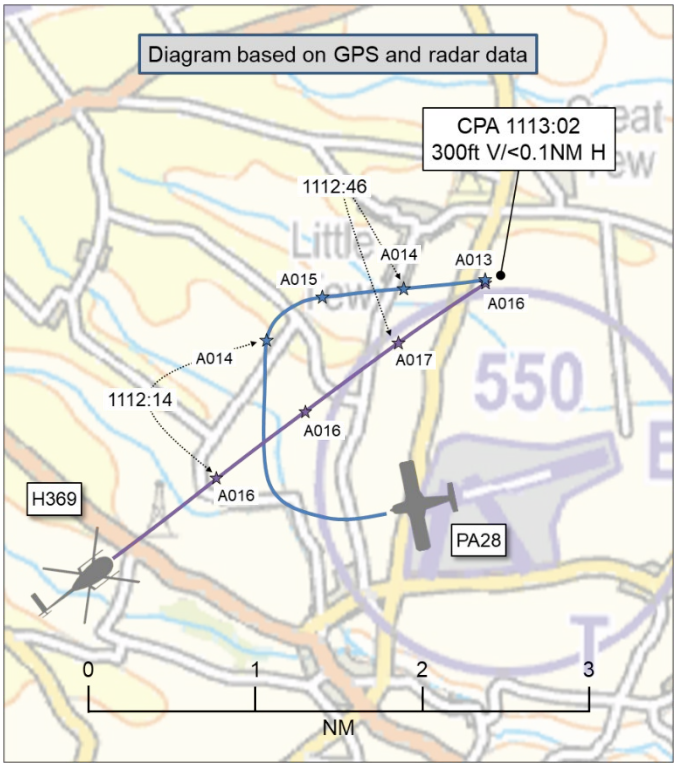
AIRPROX REPORT No 2024170

Date: 24 Jul 2024 Time: 1113Z Position: 5157N 00126W Location: Enstone

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	H369
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Enstone Traffic	Brize Norton
Altitude/FL	1300ft	1600ft
Transponder	A, C	A, C, S+
Reported		
Colours	Orange, white	Silver, black
Lighting	Beacon	Anti-col
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	800ft	1400ft
Altimeter	QFE (1003hPa)	QNH (1020hPa)
Heading	080°	047°
Speed	90kt	120kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	50ft V/0m H	500ft V/0.5NM H
Recorded	300ft V/<0.1NM H	



THE PA28 PILOT reports that this flight was conducted with a student practising circuits at Enstone and [they were] the FI as PIC. The aircraft was on the downwind leg on a heading of 080° at Enstone for RW26 right-hand circuit at 800ft QFE when a helicopter was sighted passing directly overhead (approximately 50ft above) on a slightly different heading. There was no communication on the radio on 129.880MHz and the helicopter continued on its track away from Enstone. No communication was made at all.

[The pilot of the PA28 opines that] avoiding action was unnecessary because the helicopter had passed overhead and was no longer a threat.

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

THE H369 PILOT reports that they saw an aircraft climbing-out from Enstone about 5km away. It turned crosswind still climbing. It then appeared to turn downwind. [The pilot of the H369] elected to stay on track and on heading, but with a gentle climb as they had visual with the aircraft the whole time. They eventually flew over the aircraft.

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

THE ENSTONE AIRFIELD DIRECTOR reports that Enstone is an unlicensed airfield and, as such, the AGCS is not permanently manned. However, the A/G transmissions are recorded. Having listened to the recordings, [the pilot of the PA28] did operate in the circuit in and around the time of the reported Airprox. All calls made during this period were normal circuit calls only and there was no indication that they had experienced, or were even aware of, any potential conflict. There were no calls from [the pilot of the H369] in or around the time of the Airprox.

THE BRIZE NORTON CONTROLLER reports that they were the band-boxed RA/Zon/Dir controller at the time of occurrence. They had worked [the pilot of the H369] on a Basic Service, tracking north-west

[they recall] through the CTR routeing towards Enstone. Once [the H369] had left the CTR, the pilot reported changing en-route. As that occurred, [the Brize Norton controller] noted an aircraft squawking 7000, indicating 900ft below, climbing out of Enstone. They called the traffic to the [pilot of the H369] and instructed them to squawk conspicuity and to change en-route. As the [H369 pilot] continued to track north-west [they recall], they noticed that they had maintained the 3702 squawk, and the aircraft climbing out of Enstone was then indicating 200ft below. With that, they made a call to [the pilot of the H369] to see if they were still on frequency. After they had replied, they re-called the traffic on two occasions, as the pilot [hadn't] acknowledged the first occasion. They then asked if they were visual with the traffic, to which they confirmed that they were visual and were passing over the top of that aircraft. Once clear, they instructed the pilot to squawk conspicuity and to change en-route. An Airprox was not reported at any time on frequency.

The controller assessed the risk of collision as 'Low'.

THE BRIZE NORTON SUPERVISOR reports that they were not aware of this incident until seeing the controller's report. Reading the write-up from the controller concerned, it appears that they fulfilled all statutory and duty-of-care requirements for the ATS provided and have nothing further to add.

Factual Background

The weather at Oxford was recorded as follows:

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METAR EGTK 241120Z 22009KT 190V250 9999 SCT020 SCT026 21/15 Q1020
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Analysis and Investigation

Military ATM

Utilising occurrence reports and information from the local investigations, outlined below are the key events that preceded the Airprox. Where available, they are supported by screenshots to indicate the positions of the relevant aircraft at each stage. The screenshots are taken from Unit radar recordings and present the radar presentation of the PA28 and H369 available to the Brize Norton Zone controller.

Sequence of Events: At 1111:06, on completion of their transit through the Brize Norton CTR, the pilot of the H369 informed the Brize Norton Zone controller of their intention to change en-route. During this transmission, the PA28 appeared on radar as it climbed out from an approach at Enstone. The Brize Norton Zone controller acknowledged the intentions of the H369 pilot to change en-route and passed Traffic Information regarding the PA28; "*Just be aware Enstone traffic 12 o'clock 5 miles opposite direction climbing, keep a good lookout, squawk conspicuity change en route*". The pilot of the H369 did not acknowledge the Enstone Traffic Information but did respond with "*squawk conspicuity*" to acknowledge the instruction.

Figure 1 - 1111:06. The H369 pilot requested to change en-route.

The H369 continued north-eastbound but did not change their Mode 3A code to a conspicuity squawk, and instead retained the Brize Norton 3702 code. At 1112:17, the Brize Norton Zone controller queried this and contacted the H369 pilot, asked if they were still on the frequency, which the H369 pilot confirmed they were.

At 1112:20, aware of the decreasing vertical separation between the H369 and PA28, the Brize Norton Zone controller repeated the Traffic Information to the H369 pilot; "*previously called traffic now north, half a mile, manoeuvring, indicating 200ft below, climbing*". The H369 pilot responded with "*err*", to which the Brize Norton Zone controller repeated the Traffic Information; "*previously called traffic now north half a mile, manoeuvring, indicating 200ft below, climbing*". The H369 pilot acknowledged the Traffic Information; "*Affirm*" but did not indicate if they were visual or not.

Figure 2 - 1112:20. The H369 pilot was provided additional Traffic Information on the PA28. (Separation was 0.8NM and 200ft)

At 1112:47, the Brize Norton Zone controller asked if the H369 pilot was visual with the PA28, and the H369 pilot responded "*Affirm Sir we're just going over the top of him*".

CPA occurred at 1113:04 and the separation was recorded as 0.1NM and 300ft.

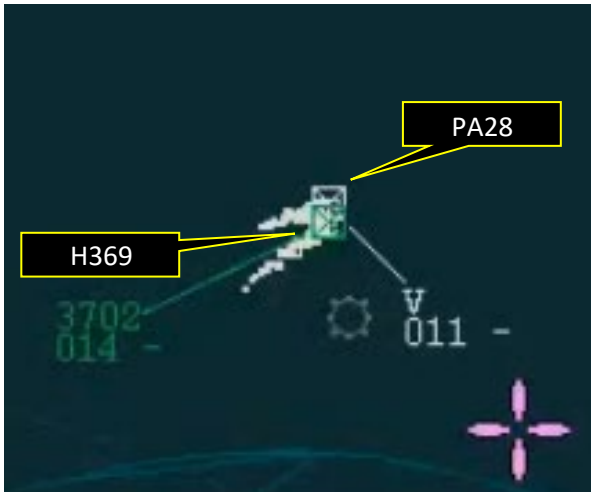


Figure 3 - CPA was assessed to have occurred at 1113:04

Local BM Investigation: A local investigation was conducted by Brize Norton following the event to identify the Air Traffic Service-related causal/aggravating factors. The outcome of the investigation was a Loss of Safe Separation between two non-cooperating aircraft, however, no Air Traffic Service-related factors were identified. The Brize Norton Zone controller provided relevant and timely Traffic Information over and above the requirements of the Basic Service being provided. This

Traffic Information was then subsequently updated on multiple occasions as the aircraft profiles continued to present a confliction.

2 Gp BM Analysis: The actions of the Brize Norton Zone controller ensured that timely and relevant Traffic Information was provided to the H369 pilot regarding the PA28's position and profile. Given that the PA28 did not display on radar until the H369 had exited the Brize Norton CTR, the Traffic Information was passed at the earliest opportunity and exceeded the requirements of the Basic Service being provided. The H369 pilot remaining on frequency when having declared their intention to change en-route initially caused some confusion, however, the Brize Norton Zone controller addressed this correctly and provided updated Traffic Information where required.

Observation: The pilot of the H369 did not acknowledge the Traffic Information provided to them in a manner that allowed the controller to ascertain what further requirement existed. Had the H369 pilot responded with either "traffic in sight" or "traffic not sighted" as per CAP413, this would have ensured the controller was aware of the requirement to pass Traffic Information updates.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the H369 could be positively identified from Mode S data (Figure 4). In addition, the pilot of the H369 kindly supplied GPS data for their flight. The PA28 first appeared on the radar replay at 1111:22 and was identified by reference to the PA28 pilot's narrative report.

The diagram was constructed and the separation at CPA determined by combining the various data sources.

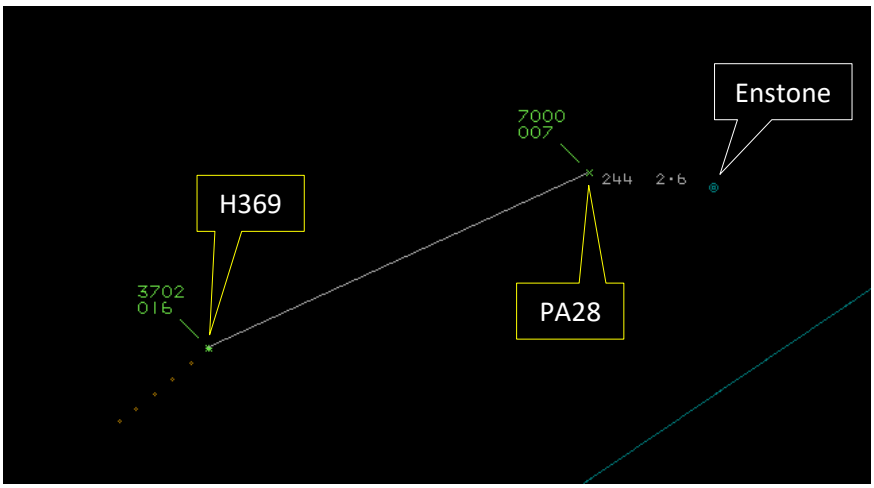


Figure 4 - The PA28 first appeared on the radar replay at 1111:22

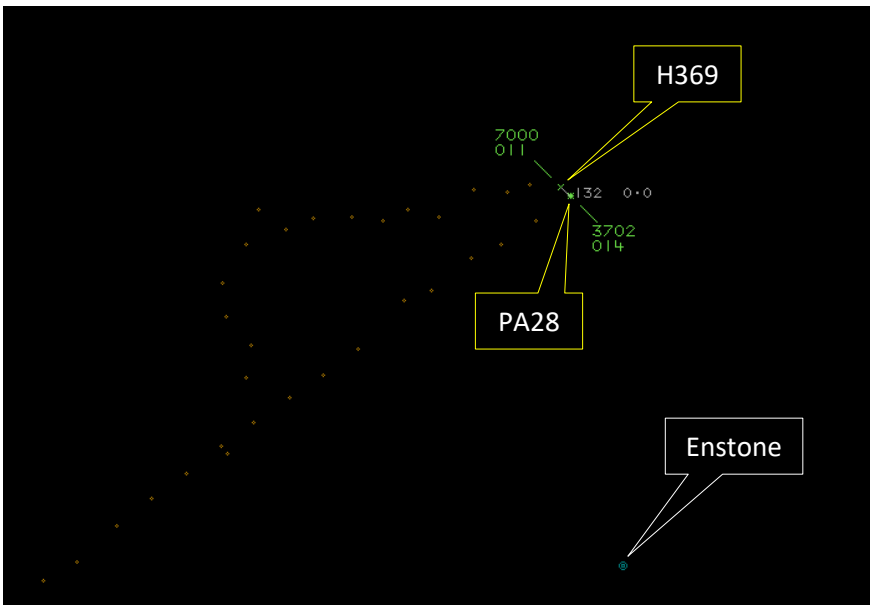


Figure 5 - CPA at 1113:02

The PA28 and H369 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]

Summary

An Airprox was reported when a PA28 and an H369 flew into proximity in the vicinity of Enstone at 1113Z on Wednesday 24th July 2024. Both pilots were operating under VFR in VMC, the PA28 pilot listening out on the Enstone Traffic frequency and the H369 pilot in receipt of a Basic Service from Brize Norton.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data for the H369, a report from the air traffic controller involved and their Supervisor, 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 first considered the actions of the pilot of the PA28. Members noted that they had tuned their radio to the Enstone frequency and had not heard any transmissions from other pilots. It was also noted that the PA28 had not been fitted with an additional EC device which may have detected the ADS-B output from the transponder fitted to the H369. Consequently, members agreed that the pilot of the PA28 had not had situational awareness of the presence of the H369 until it had been visually acquired at the moment of CPA (**CF5**). Members agreed that, in the latter stages of the encounter, the H369 had approached from behind the PA28 and, as such, had been obscured from the view of the PA28 pilot (**CF8**). Members agreed that having sighted the H369 at CPA effectively constituted a non-sighting (**CF7**).

Members turned their attention to the actions of the Brize Norton controller and noted that they had provided a Basic Service to the pilot of the H369. Members agreed that they had not been required to have monitored the flight of the PA28 but noted that they had been aware of the presence of traffic (the PA28) operating at Enstone and had passed Traffic Information accordingly. Indeed, members applauded the actions of the Brize Norton controller to have continued to pass Traffic Information until

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

the situation had been resolved. Members agreed that the STCA in use at the Brize Norton unit would not have alerted to a potential conflict between the two aircraft as their respective transponder codes had been outside the select frame (**CF1**).

Members next turned their attention to the actions of the pilot of the H369 and, once again, noted that they had been in receipt of a Basic Service from the Brize Norton controller. As such, members agreed that they would not have expected to have received any Traffic Information and that the avoidance of traffic had been solely their responsibility. Nevertheless, members agreed that they had been provided sufficient Traffic Information (which had been acknowledged) for them to have assimilated specific situational awareness of the PA28. Notwithstanding, it was noted that they had elected to maintain their track. Members were in agreement that the pilot of the H369 had not made a sufficiently detailed plan to have met the needs of the situation (**CF2**). It was noted that the pilot of the H369 had commented in their narrative report that they had been "visual with the aircraft the whole time". Members were therefore surprised that, despite having had situational awareness, they had flown close enough to the PA28 to have caused its pilot concern (**CF4**). It was further agreed that they had not appreciated the risk in that course of action (**CF6**). It was clear to members that the pilot of the PA28 had been operating within the circuit at Enstone and, consequently, it was agreed that the pilot of the H369 had also not avoided the pattern of traffic (**CF3**).

Concluding their discussion, members were in agreement that, although the pilot of the PA28 had not been aware of the presence of the H369 until CPA, the pilot of the H369 had been passed sufficient Traffic Information on the PA28, and had reported that they had had visual contact with the PA28 throughout the encounter. However, members agreed that safety margins had been eroded and, ultimately, the proximity of the H369 to the PA28 had been a concern. On balance, members were satisfied that there had not been a risk of collision and assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024170			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Electronic Warning System Operation and Compliance			
1	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
	Flight Elements			
	• Tactical Planning and Execution			
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 Action	Events involving flight crew not taking any action at all when they should have done so	Pilot flew close enough to cause concern despite Situational Awareness
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	• 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	• 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
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:

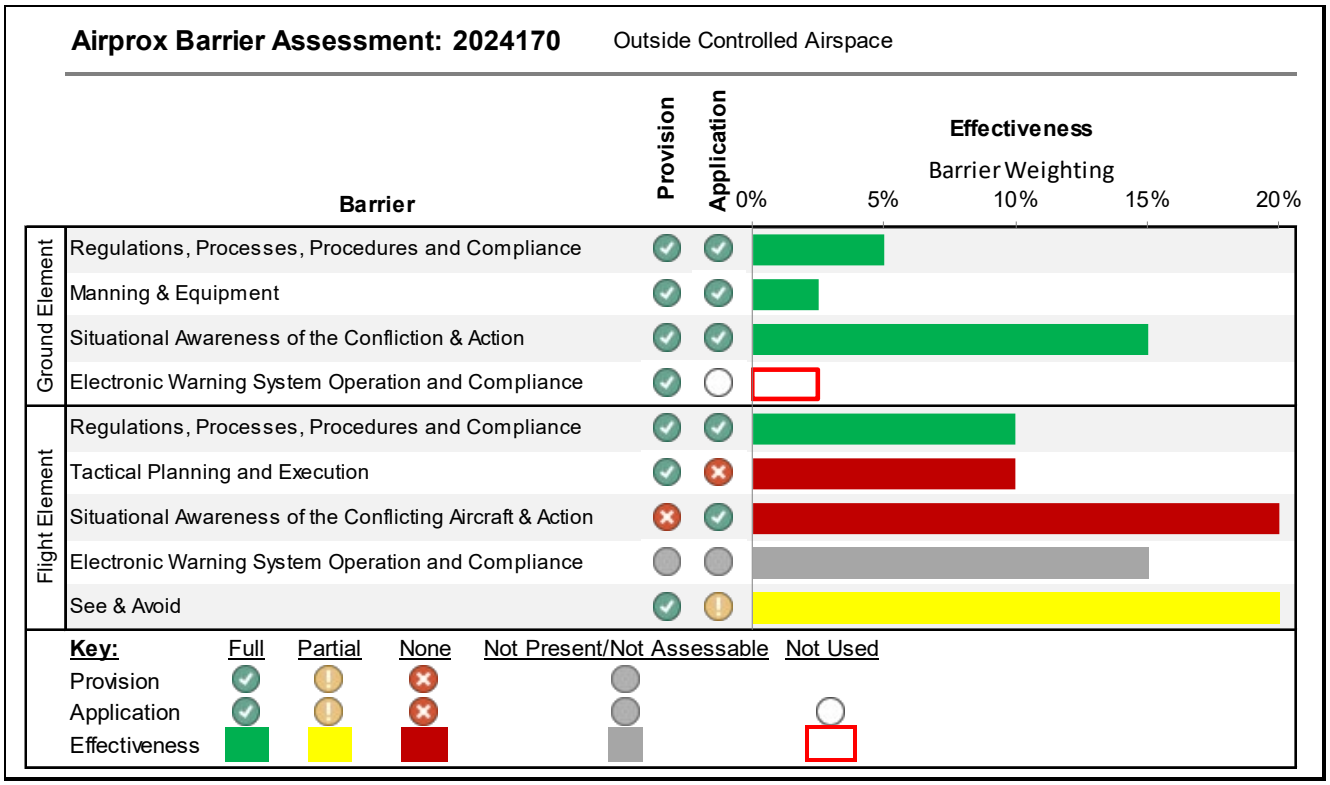
Electronic Warning System Operation and Compliance were assessed as **not used** because the transponder code selected by the pilot of the H369 was outside the select frame of the Brize Norton STCA.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the H369 had not effectively avoided the circuit pattern in use at Enstone as formed by the PA28.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the PA28 had not had situational awareness of the presence of the H369 until it had been visually acquired.

See and Avoid were assessed as **partially effective** because the H369 had been obscured from the view of the pilot of the PA28.



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