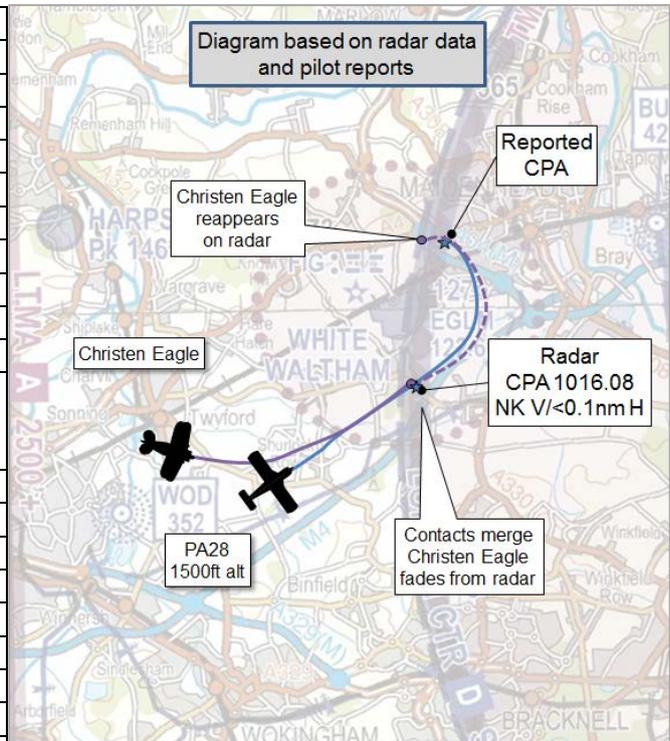


AIRPROX REPORT No 2018180

Date: 08 Jul 2018 Time: 1016Z Position: 5130N 00046W Location: White Waltham ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	Christen Eagle
Operator	Civ FW	Civ FW
Airspace	White Waltham	White Waltham
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Waltham Radio	Waltham Radio
Altitude/FL	1500ft	NK
Transponder	A, C	PSR only
Reported		
Colours	Blue, White, Yellow	White, Blue, Red, Orange, Yellow
Lighting	Beacon, Strobe	Not reported
Conditions	VMC	VMC
Visibility	>10km	10km
Altitude/FL	1230ft	1800ft
Altimeter	NK	Rad Alt
Heading	350°	Not reported
Speed	100kt	120kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50ft V/0m H	Not reported
Recorded	NK V/<0.1nm H	



THE PA28 PILOT reports that he was returning to White Waltham after a training sortie near CPT. He joined from Whiskey VRP to position for an overhead join to RW25. About 3 mins later he heard the Christen Eagle pilot call for re-join information from the same VRP. He was aware that the speed differential would mean they would arrive at the overhead at about the same time, so he kept a good lookout. As he approached the overhead his student descended to 1230ft agl, beyond the 1300ft agl joining height. As the student was about to correct back to 1300ft the Christen Eagle passed directly overhead on an identical heading, about 50ft above him. The Christen Eagle was in a gentle descent which continued as his student turned slightly towards the west to shorten their track to the dead-side. The Christen Eagle pilot took no avoiding action and appeared not to have seen the PA28 at all. After landing he spoke to the pilot of the Christen Eagle to discuss the Airprox. The pilot said that he had no idea of the PA28's presence and that his aerobatic instructor was the handling pilot at the time. When he spoke to the instructor he said his student was the handling pilot, but he had seen the PA28 at about 1nm and advised the student of the PA28's presence in the overhead. When asked why he had allowed his student to pass directly overhead the PA28 rather than using an appropriate passing technique as per the Rules of the Air, the Christen Eagle instructor said that he believed the PA28 was several hundred feet below him. When he asked the Christen Eagle pilot why his student had no knowledge of the PA28's presence the Christen Eagle instructor blamed a poor intercom. The PA28 instructor opined that he was unable to establish which version of events were accurate because the Christen Eagle's instructor and student accounts differed too much.

He assessed the risk of collision as 'High'.

THE CHRISTEN EAGLE PILOT reports that when he approached the White Waltham ATZ he handed control to the instructor for landing. They had been struggling with a feedback issue on the intercom, so he thought it best for the instructor to fly them through the circuit as White Waltham has a lot of noise

abatement areas. After they landed, he heard a pilot call base and ask for their details. In the clubhouse the pilot approached him and explained that they had come very close in the circuit; however, he couldn't comment because neither the Christen Eagle instructor or he saw the other aircraft. They approached the circuit at 2000ft on the QFE from the southwest, reporting on the radio point Sierra he thought. They descended to 1300ft as they joined overhead, then flew a tight circuit at 800ft.

Factual Background

The weather at Heathrow was recorded as follows:

METAR COR EGLL 080950Z AUTO VRB03KT 9999 NCD 28/13 Q1026 NOSIG

Analysis and Investigation

UKAB Secretariat

The PA28 and Christen Eagle pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. An aircraft operated on or near an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation².

In reviewing the radar recordings, the PA28 can be seen joining through the overhead as the Christen Eagle, primary return only, also joins behind in a similar position. As described in the PA28 pilot's report, the PA28 descends to 1500ft altitude and the Christen Eagle then catches up the PA28 due to the faster speed of the Christen Eagle. The contacts merge at radar-CPA when south-abeam White Waltham, and the Christen Eagle primary return reappears slightly ahead of the PA28 as both aircraft are turning onto the deadside. The PA28 pilot's description of the event appears to occur as the PA28 is turning north-westerly just after the recorded radar-CPA.

Summary

An Airprox was reported when a PA28 and a Christen Eagle flew into proximity at White Waltham at 0912hrs on Sunday 8th of July 2018. Both pilots were operating under VFR in VMC, both pilots in receipt of an Air/Ground Service from White Waltham.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board began by looking at the actions of the PA28 pilot. He had heard the Christen Eagle pilot report at the Whiskey VRP for re-join behind him and was aware that there may be a confliction developing. A GA member familiar with White Waltham advised the Board that its visual circuit can be very busy, and that pilots must keep a good lookout to ensure they can integrate effectively with other airfield users as they join; this requires pilots to plan well in advance before entering the visual circuit, which the PA28 pilot evidently did. Some members wondered whether the PA28 pilot might usefully have transmitted a call to the Christen Eagle pilot to ensure that the latter had heard the PA28 was joining ahead, but it was acknowledged that to do so would have meant additional radio traffic that might not have been welcome in a busy circuit. The Board agreed that it appeared to have been fortuitous that the student pilot had descended below the normal overhead join height because it was this that had seemingly resulted in the 2 aircraft being separated vertically as they came into proximity.

The Board then turned to the actions of the Christen Eagle pilot. They were mindful that the Christen Eagle's radio was reported as intermittent and therefore its pilots may not have heard the PA28 pilot's

¹ SERA.3205 Proximity.

² SERA.3225 Operation on and near an Aerodrome.

call for re-join from Whiskey VRP. Notwithstanding, GA members noted that that the Christen Eagle pilots were aware of the radio problem and therefore should have increased their lookout to account for the reduction in SA that would normally be present from the radio calls of other aircraft. A GA member commented that the view ahead from a Christen Eagle was limited due to the aircraft's configuration and so the recognised technique was to weave the aircraft whilst joining to ensure that any aircraft ahead are sighted. The radar recording did not show any evidence of weaving, which led members to wonder whether the Christen Eagle pilot had done so. Irrespective, the Christen Eagle pilot was joining the visual circuit behind the PA28 and so it was incumbent upon him to ensure he conformed with the pattern of traffic by integrating with the PA28 ahead.

The Christen Eagle's transponder was not displaying on the radar replay during this incident, although it did display on the next flight; some members wondered whether the lack of squawk was linked to the intermittent communications problems associated with the radio. Whilst it is not clear why the transponder was not displaying, members agreed that it was pertinent to remind pilots of the requirements in SERA 13001 under which 'When an aircraft carries a serviceable SSR transponder, the pilot shall operate the transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where SSR is used for ATS purposes'. Although not equipped in this incident, had the either aircraft been fitted with one of the increasingly available and affordable collision warning systems, the ability to detect SSR transmissions would have immeasurably increased the pilot's SA and would potentially have allowed him to take action on his own behalf.

The Board agreed that the PA28 pilot had only seen the Christen Eagle after CPA, and that the Airprox had occurred near the beginning of the deadside when both aircrafts' contacts were seen to merge on the radar replay. Some members opined that the Christen Eagle pilot had not appeared to take sufficient lookout and precautions regarding other aircraft that might be joining the circuit, and they thought that the Christen Eagle pilot had therefore flown into conflict with the PA28. However, the majority agreed that although the Christen Eagle pilot had not appeared to have weaved during his join, there were mitigating circumstances regarding the extra workload involved with the faulty radio/intercom that had meant that he had probably become task-focused on his joining procedure to the detriment of lookout. After considerable debate, the latter view prevailed, and members agreed that the incident was probably best described simply as the Christen Eagle pilot did not integrate with the PA28 ahead. Turning to the risk, members noted that the PA28 did not see the Christen Eagle until after CPA (because it was approaching from behind), and that the Christen Eagle pilot did not see the PA28 at all. Commenting that both aircraft were carrying out a similar join, at the same nominal height, and that the aircraft radar returns had merged, the Board quickly agreed that providence was the best descriptor in what was a very close encounter. The risk was accordingly assessed as A, a serious risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Christen Eagle pilot did not integrate with the PA28 ahead.

Degree of Risk: A.

Safety Barrier Assessment³

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

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the Christen Eagle pilot did not effectively integrate with the PA28 ahead.

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

Tactical Planning were assessed as **partially effective** because the Christen Eagle pilot did not effectively clear his path ahead when joining the circuit.

Situational Awareness and Action were assessed as **partially effective** because the PA28 pilot had SA on the Christen Eagle from the radio transmissions, but the Christen Eagle pilot did not have SA on the PA28, probably due to intermittent radio problems.

See and Avoid were assessed as **ineffective** because neither pilot saw the other aircraft prior to CPA.

