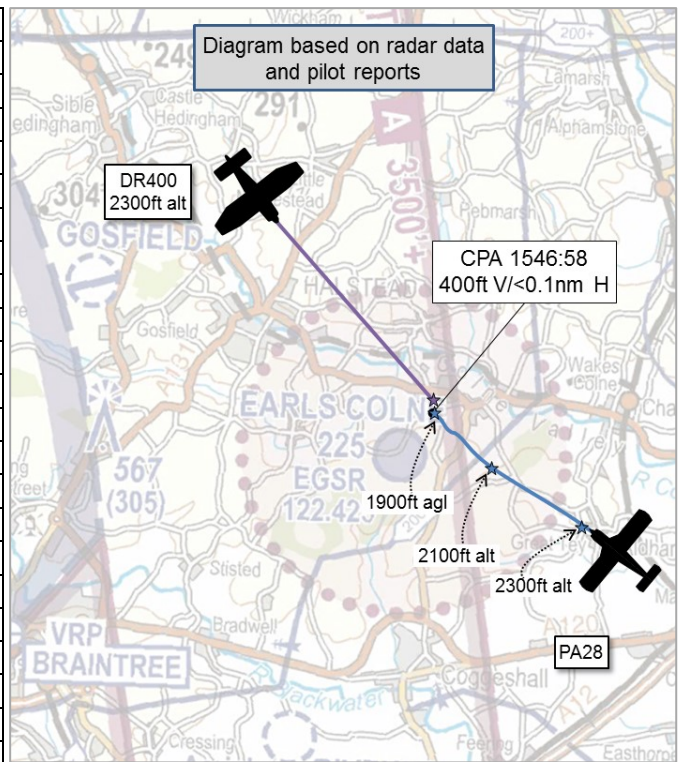


**AIRPROX REPORT No 2018064**

Date: 01 May 2018 Time: 1346Z Position: 5155N 00041E Location: Earls Colne

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	DR400
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	Basic
Provider	Earls Colne	Farnborough
Altitude/FL	1900ft	2300ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, Maroon	White, Red
Lighting	Strobe	Strobe
Conditions	VMC	VMC
Visibility	10km	>10km
Altitude/FL	1800ft	2350ft
Altimeter	QFE (1000hPa)	QNH
Heading	330°	150°
Speed	90kt	120kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	200ft V/0nm H	300ft V/200m H
Recorded	400ft V/<0.1nm H	



**THE PA28 PILOT** reports that he had just joined overhead at 2000ft agl to land on RW24 at Earls Colne. He reported overhead and started his descent onto the dead-side when he became aware of an aircraft heading straight towards him. The aircraft passed overhead, about 200ft above. He had not heard any communications from the other aircraft, which he understands was not in contact with Earls Colne Radio. He believes that if he hadn't descended when he did they would have collided.

He assessed the risk of collision as 'High'.

**THE DR400 PILOT** reports that he arranged his flight to remain clear of all controlled airspace and was clear above the Earls Colne ATZ. He was receiving a Basic Service from Farnborough North, and was very aware of the limited service available from the A/G Operator at Earls Colne. He believes that receiving a service from Farnborough provides a better tactical view of the area's traffic conditions. He sighted the other aircraft at about 2nm in his 9 o'clock and below on a relative bearing. He opined that he was the "stand-on-vessel" and had right of way. He monitored the other aircraft, expecting to see a change of course to pass astern of him. As the other aircraft's range closed, the relative bearing was seen to decrease slightly but was clearly going to pass well below him. He kept a close watch and the other aircraft was observed to pass in his 8 o'clock approximately 300ft below. He thought nothing further of this sadly routine occurrence of non-compliance with the right of way regulations.

He assessed the risk of collision as 'None'.

UKAB Note: The geometry described by the DR400 pilot does not correlate with that of the PA28 pilot or the radar recording. No other aircraft other than the PA28 and DR400 were seen on the radar recording at that time and place and so it is likely that the incident the DR400 pilot recalls was either before or after the subject incident.

## Factual Background

The weather at Earls Colne was recorded as follows:

METAR EGUW 011350Z 23012KT CAVOK 14/M03 Q1009 BLU NOSIG

## Analysis and Investigation

### CAA ATSI

The PA28 pilot had reported passing through the Earls Colne overhead at 2000ft to the A/G operator, and was descending on the dead-side to join for a left-hand circuit RW24 when they reported seeing another aircraft, opposite direction, about 200ft above them. The PA28 reported descending to avoid the other aircraft.

The DR400 pilot reported receiving a Basic Service from Farnborough LARS and, being aware of the existence of the Earls Colne ATZ, had elected to remain above and outside the area. The pilot reported seeing the PA28 whilst it was still 2nm away, that they expected the PA28 to alter course to give way, and so continued their heading and maintained their level. The DR400 pilot reported continuing to monitor the PA28, and assessed that it would pass astern and “*well below*”. (The pilot estimated that the PA28 passed 300ft below them.)

The Farnborough controller was not aware of any incident and only a retrospective incident report was filed. ATSI were unable to review Farnborough R/T following a failure within the impound request process, and so could not verify if traffic information had been passed or not.

The following radar replay snapshots are included to illustrate the developing situation up until CPA at 1346:58 when the aircraft were separated by less than 0.1nm laterally, and 400ft vertically.

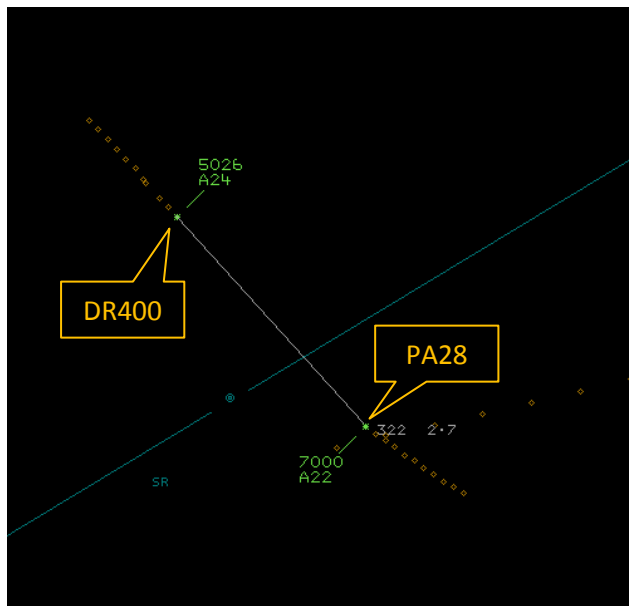


Figure 1: 1345:54 P28A 1.9nm NE Earls Colne

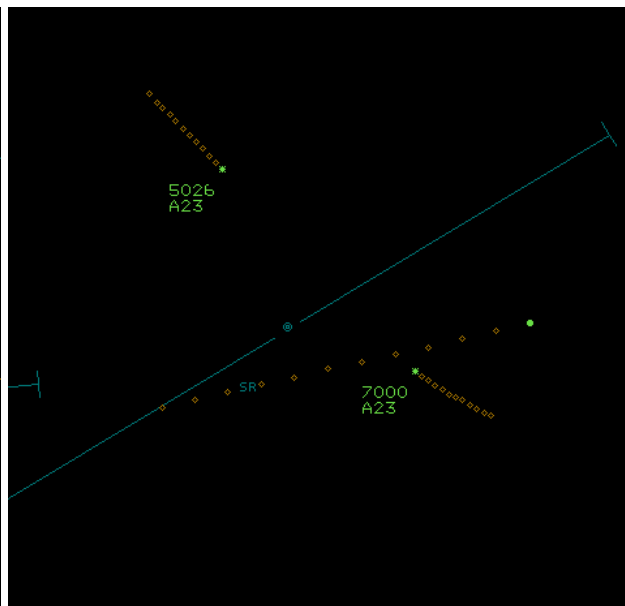


Figure 2 - 1346:15

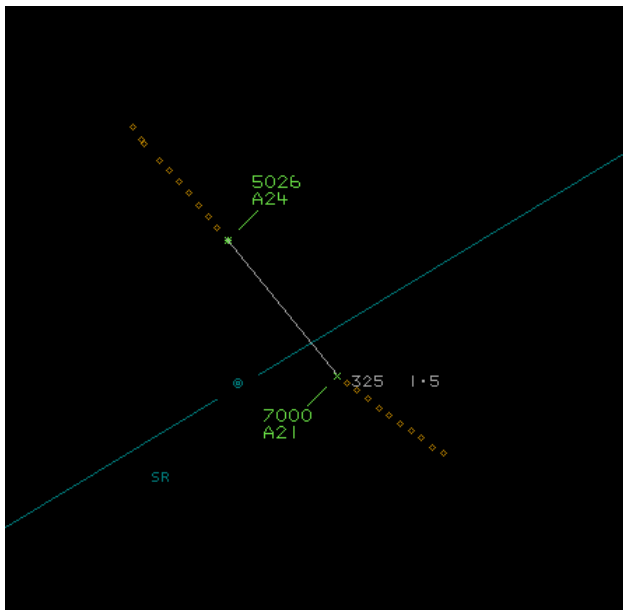


Figure 3 - 1346:36

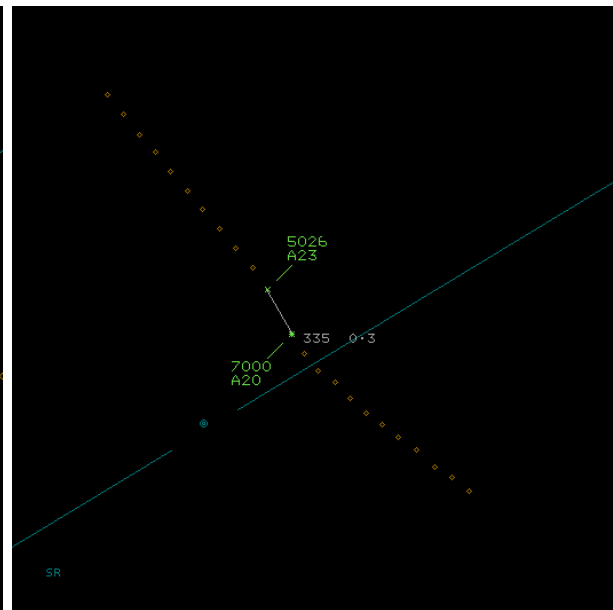


Figure 4 - 1346:55

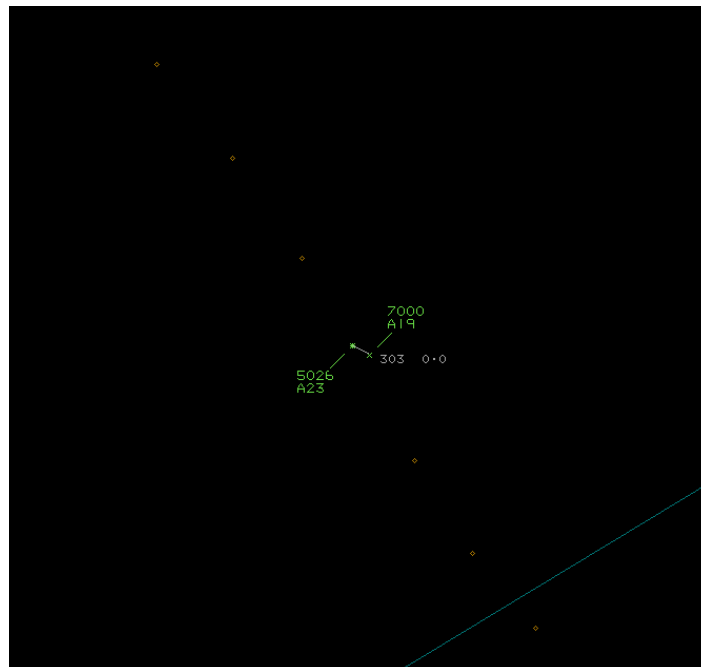


Figure 5 – CPA - 1346:58

Under a Basic Service, whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.<sup>1</sup>

### UKAB Secretariat

The PA28 and DR400 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>2</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>3</sup>. 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<sup>4</sup>.

<sup>1</sup> CAP774 Chapter 2 Basic Service Para 2.9

<sup>2</sup> SERA.3205 Proximity.

<sup>3</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

<sup>4</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

## Summary

An Airprox was reported when a PA28 and a DR400 flew into proximity overhead Earls Colne airfield at 1346hrs on Tuesday 1<sup>st</sup> May 2018. Both pilots were operating under VFR in VMC, the PA28 pilot in receipt of an air/ground Service from Earls Colne and the DR400 pilot in receipt of a Basic Service from Farnborough.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board began their discussion by looking at the actions of the DR400 pilot. Members could not reconcile his description of events with that shown on radar, and so they surmised that he had not seen the PA28 at all and had reported on another aircraft at a different time. With respect to his routing, GA members advised the Board that the standard join for Earls Colne was an overhead join, and that flying overhead airfields close to the upper limit of their ATZ whilst not in communication with the airfield was generally ill-advised due to the potential for conflict with aircraft performing standard overhead joins, as in this case. Members also opined that the DR400 pilot would have significantly increased both his own and others' situational awareness in the vicinity of Earls Colne if he had communicated his intentions on their frequency and listened out for other aircrafts' transmissions. In this respect, members also queried the DR400 pilot's choice of frequency and ATS, commenting that a Traffic Service with the designated LARS provider (Southend) may have assisted more than a simple Basic Service with Farnborough North. The Board noted that both aircraft had an equal responsibility for collision avoidance, and members commented that pilots should not assume that the other aircraft's pilot had seen and would avoid them even if they were notionally required to give way; this was especially important when close to an airfield where pilots will be joining and leaving the pattern of traffic and may be focused on complying with procedures and routing to the detriment of lookout.

The Board then turned to the actions of the PA28 pilot. They agreed that the PA28 pilot had seen the DR400 late but had fortuitously already been descending deadside into the Earls Colne visual circuit at the time. Other than reminding all pilots to maintain a robust lookout to prevent task-focus at critical phases of flight, the Board agreed that there was little else the PA28 pilot could have done in the circumstances.

The Board looked at the cause of the Airprox and agreed that the PA28 pilot had only seen the DR400 close to CPA and that the DR400 pilot had probably not seen the PA28 either at all or at best after CPA. As such, members assessed that the cause was a late sighting by the PA28 pilot and probably a non-sighting by the DR400 pilot. They also agreed that a contributory factor had been that the DR400 pilot had flown through the Earls Colne overhead close to the altitude of traffic joining for an overhead join. Turning to the risk, the Board noted that the PA28 pilot had been descending onto the deadside prior to seeing the DR400 and that this had served to fortuitously increase the separation between the aircraft. Although not sufficiently close to merit a Category A risk assessment, the Board concluded that safety had still been much reduced below the norm: accordingly, they assessed the risk as Category B.

During the debate, some members highlighted that they felt that there was a growing trend of pilots having false expectations of ATC's ability to provide traffic information under the auspices of a Basic Service. In this respect, members noted the DR400 pilot's comments about receiving a "better tactical view of the area's traffic conditions" whilst only in receipt of a Basic Service from Farnborough North. Noting that the Farnborough North controller would neither be required to monitor the DR400 nor provide traffic information unless he happened to detect a conflict by good fortune, the Board felt that a timely and readable reminder to pilots about the provisions of each ATS would be valuable if placed in the popular GA magazines. As a result, they resolved to recommend that the CAA re-emphasise the provisions of a Basic Service at least, ideally in an accessible format in the popular magazines.

**PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A late sighting by the PA28 pilot and probably a non-sighting by the DR400 pilot.

Contributory Factor(s): The DR400 pilot flew through the Earls Colne overhead close to the altitude of traffic joining for an overhead join.

Degree of Risk: B.

Recommendation(s): The CAA re-emphasise the provisions of a Basic Service.

Safety Barrier Assessment<sup>5</sup>

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

**ANSP:**

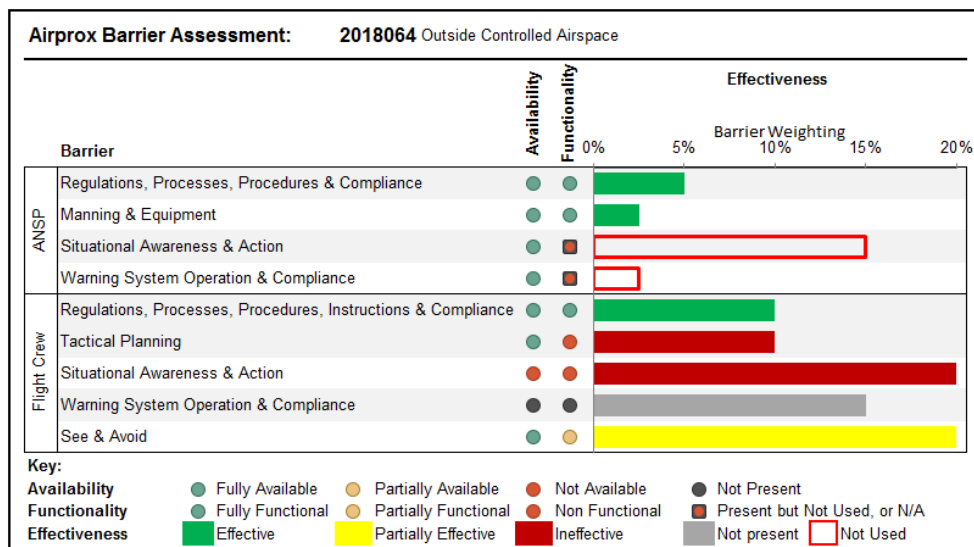
**Situational Awareness and Action** were assessed as **not used** because of the type of service that both aircraft had requested and the air traffic agency that the DR400 was communicating with.

**Flight Crew:**

**Tactical Planning** was assessed as **ineffective** because the DR400 flew over Earls Cone at a height that was close to the level at which aircraft carrying out a standard overhead join would be flying.

**Situational Awareness and Action** were assessed as **ineffective** because neither aircraft had SA on the other, and the DR400 did not communicate with Earls Colne whilst in the vicinity of their airfield.

**See and Avoid** were assessed as **partially effective** because the DR400 did not see the PA28 and the PA28 only saw the DR400 late whilst already descending.



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