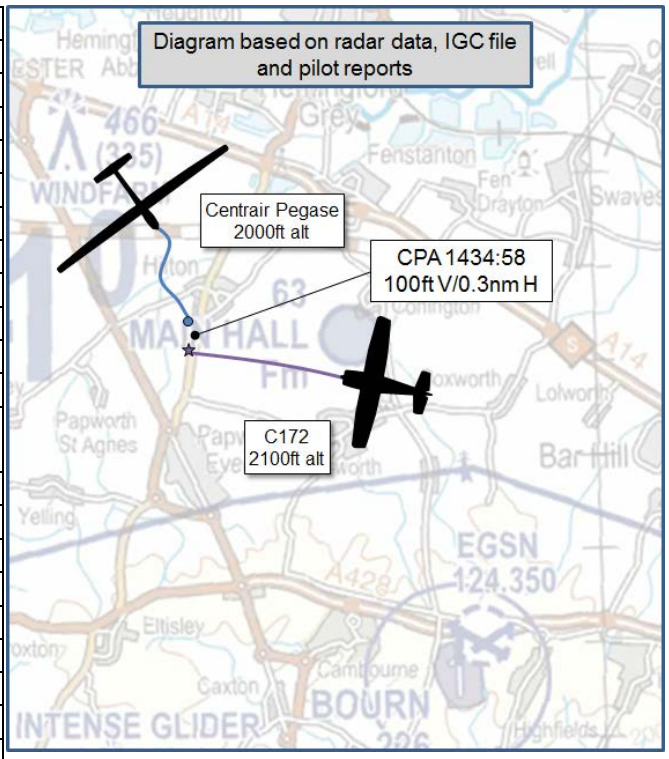
AIRPROX REPORT No 2017256

Date: 29 Oct 2017 Time: 1434Z Position: 5216N 00007W Location: 1nm north Papworth Everard

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Centrair Pegase	C172
Operator	Civ Club	Civ Trg
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Gransden Lodge	Cambridge
Altitude/FL	2000ft	2100ft
Transponder	Not Fitted	A, C
Reported		
Colours	White	White, Navy
Lighting	None	Landing, Strobe, Nav
Conditions	VMC	Choose an item.
Visibility	>10km	10km
Altitude/FL	1900ft	2500ft
Altimeter	QNH	QNH
Heading	175°	300°
Speed	60kt	110kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation		
Reported	50ft V/80m H	500-1000ft V/200m H
Recorded	100ft V/0.3nm H	



THE CENTRAIR PEGASE PILOT reports that he was gliding straight towards Gransden Lodge when he observed a Cessna 172 at about 200m which then crossed his path from left to right, only slightly above his height, and close enough not to have any difficultly reading the registration on the fuselage, despite the speed. He estimated the height difference to be around 50ft, and the closest distance to be 80m. He took no avoiding action because it was not clear which way he should turn to mitigate the risk. He reported that no avoiding action was taken by the C172.

He assessed the risk of collision as 'High'.

THE C172 PILOT reports that he was flying a constant heading and altitude. He saw a glider about 1000-2000m away and about 1000ft lower than him. When he was closer he changed the heading to keep visual contact with the glider. He never thought there was any risk of collision at all. He kept a good look out because there was other traffic in the same area. He realises it was his responsibility to maintain separation with the other traffic but felt that the safety of the aircraft was not compromised.

He assessed the risk of collision as 'None'.

THE CAMBRIDGE CONTROLLER was not aware of the incident and therefore did not submit a report.

Factual Background

The weather at Cambridge was recorded as follows:

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METAR EGSC 291420Z 03015KT 9999 FEW036 SCT040 11/05 Q1024
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Analysis and Investigation

CAA ATSI

The Glider pilot was on a VFR flight from Nene Valley Gliding Club to Cambridge Gliding Club and was listening on Cambridge Gliding Club radio frequency at the time of the Airprox. The C172 pilot was on a local VFR flight from Cambridge in receipt of a Basic Service from Cambridge Approach (Non-Radar). There were no R/T transmissions found on the recording of the Cambridge Approach frequency that were relevant to the Airprox.

At 1433:10, the glider and the C172 were first observed on the area radar replay. The identity of the C172 was established from the radar replay but the glider was a primary radar only contact whose identity could not be established. However, the primary track displayed was consistent with the report received from the glider pilot (Figure 1).

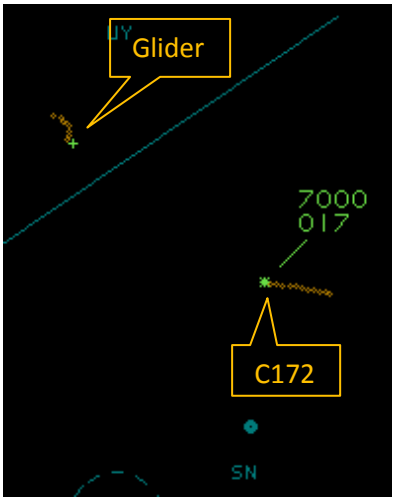


Figure 1 – 1433:10

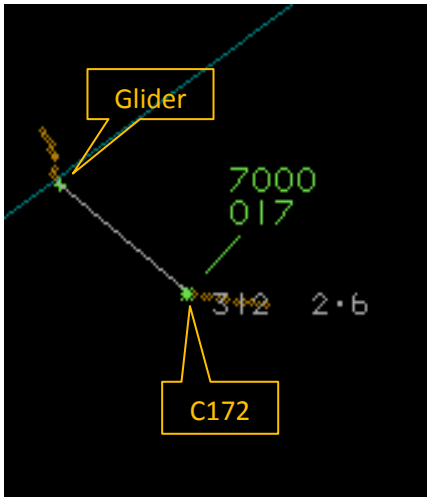


Figure 2 - 1434:00

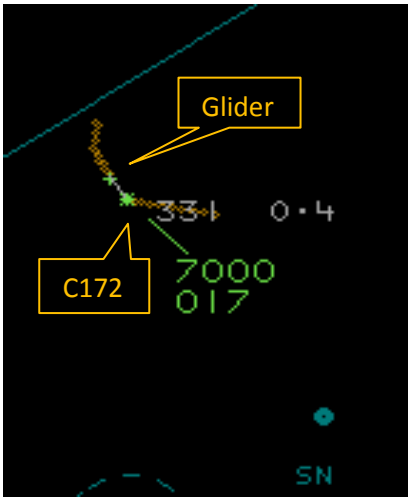


Figure 3 - 1434:51

At 1434:00, the aircraft were displayed as being 2.6nm apart with the C172 displaying FL017 (altitude 2030ft) and the glider reported at altitude 1900ft (Figure 2).

CPA could only be measured at 1434:51 due to the glider primary radar contact fading from radar cover [UKAB note: using a different radar replay the CPA was determined as 0.3nm laterally at 1434:58]. The vertical distance as reported by the glider pilot was thought to be around 50ft (Figure 3).

At 1435:56, the primary contact associated with the glider faded from radar cover. Of note is that the report from the pilot of the C172 states that the aircraft was at altitude 2500ft at the time of the reported sighting of the glider. The altitude as calculated from the radar replay Flight Level was 2030ft. The glider pilot reported as being at altitude 1900 feet, which was calculated as 2000ft from the IGC logger file. This would suggest that the vertical distance between the two aircraft may have been around 130ft (Figure 4).

Figure 4 - 1435:56

Under the requirements contained in CAP 493 and CAP 774, the provider of a Basic Service is not required to monitor the flight and pilots should not expect any form of traffic information from a controller. However, where a controller has information that indicates that there is aerial activity in a particular location that may affect a flight, they should provide information in general terms to assist with the pilot's situational awareness. The Cambridge Approach Controller did not have

access to surveillance equipment and could not monitor the flight of the C172. As such they would have been unaware of the hazard presented by the glider.

In Class G Airspace under a Basic Service the pilots remain responsible for their own collision avoidance.

UKAB Secretariat

The Centrair Pegase and C172 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]. If the incident geometry is considered as converging then the C172 pilot was required to give way to the Centrair Pegase[2].

Summary

An Airprox was reported when a Centrair Pegase and a C172 flew into proximity at 1434 on Sunday 29th October 2017. Both pilots were operating under VFR in VMC, the Centrair Pegase was not receiving a service, and the C172 pilot in receipt of a Basic Service from Cambridge.

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 and reports from the appropriate ATC authority.

The Board began by looking at the actions of the C172 pilot. Based on his report and its disparity with the glider pilot's, the Board suspected that the C172 pilot had seen a different glider to the Centrair Pegase. They then surmised that because he probably did not see the Centrair Pegase, he would not have been able to avoid it and that would explain why the glider pilot reported that he appeared to maintain his course and altitude as they passed each other. The Board commented that, although the C172 pilot was under a Basic Service, this was not in conjunction with radar surveillance and therefore maintaining a good lookout was paramount in this busy airspace environment. For his part, the Centrair Pegase pilot's IGC logger file verified that both his route and course corresponded with the primary contact on the radar replay, and also confirmed his reported altitude. Members noted that he had seen the C172 late as it crossed his path inside 200m, and that the high crossing rate meant he could not determine which direction he should turn to mitigate the risk.

The Board then looked at the cause and risk of the Airprox. They agreed that the Centrair Pegase pilot had seen the C172 late, and that the C172 pilot had probably seen another glider and had not seen the Centrair Pegase at all. They therefore agreed that the cause was best described as a late sighting by the Centrair Pegase pilot and a probable non-sighting by the C172 pilot. The Board then turned to the risk. The radar replay showed that the C172 pilot did not deviate in course or level, and that the recorded separation was 100ft vertically and 0.3nm horizontally. However, the Centrair Pegase pilot reported that he first saw the C172 within 0.1nm (200m), which indicates that the separation was less than that interpreted on the radar replay. Noting that the glider may have faded from the radar before CPA could be categorically determined, the Board concluded that the Centrair Pegase pilot's report indicated that safety margins had been much reduced below the norm; accordingly, the degree of risk was assessed as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the Centrair Pegase pilot and a probable non-sighting by the C172 pilot.

Degree of Risk: B.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(2) Converging.

Safety Barrier Assessment[3]

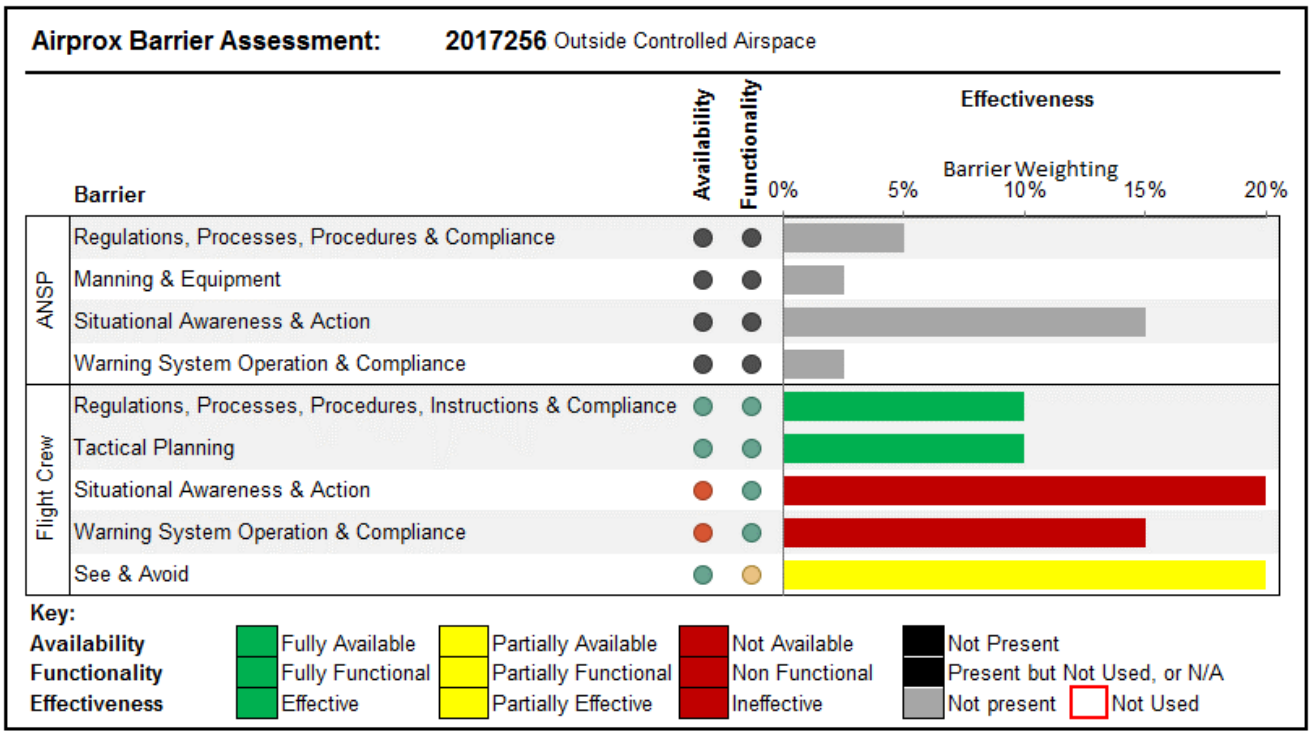
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Situational Awareness and Action were assessed as **ineffective** because neither pilot had situational awareness about the other aircraft.

Warning System Operation and Compliance were assessed as **ineffective** because the C172 was not fitted with an electronic warning system. The Centrair Pegase had FLARM fitted, but the system is not designed to detect the C172's transponder.

See and Avoid were assessed as **partially effective** because the Centrair Pegase pilot saw the C172 late and the C172 probably did not see the Centrair Pegase.



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