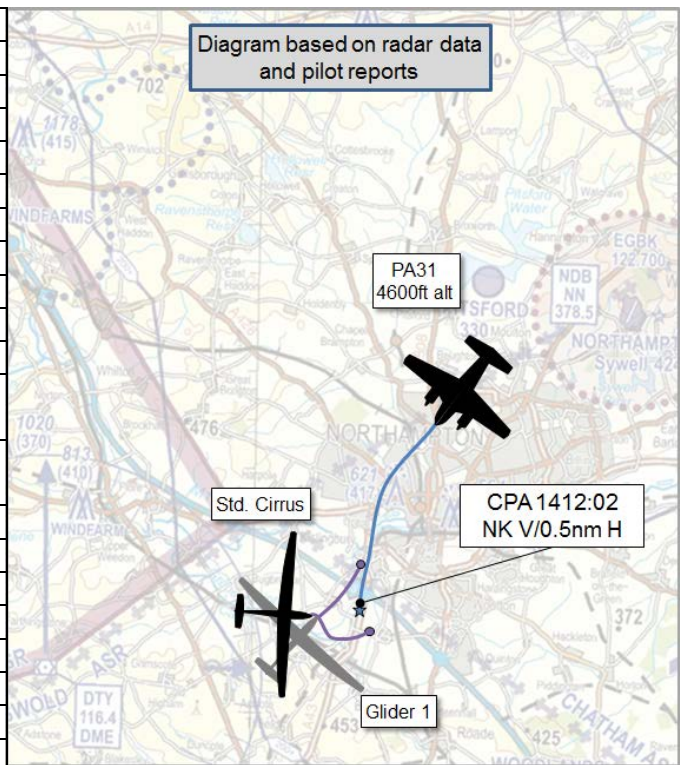


AIRPROX REPORT No 2018156

Date: 30 Jun 2018 Time: 1412Z Position: 5212N 00056W Location: M1 Junction 15A

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA31	Std. Cirrus
Operator	Civ FW	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Sywell	Sywell
Altitude/FL	4600ft	NK
Transponder	A, C, S	Not fitted
Reported		
Colours	White, Red, Gold	White
Lighting	Strobe, Nav, Landing	None
Conditions	VMC	VMC
Visibility	5km	>10km
Altitude/FL	2000ft	5472ft
Altimeter	NK (1013hPa)	QFE (GPS)
Heading	240°	360°
Speed	150kt	45kt
ACAS/TAS	TAS	FLARM
Alert	None	None
Separation		
Reported	Not reported	25ft V/20m H
Recorded		NK V/0.5nm H



THE PA31 PILOT reports that the Airprox involved 2 gliders shortly after departure [from Sywell]. The first glider was to the left, which was avoided by turning right. As they turned right they immediately had to turn left to avoid another glider to the right.

She assessed the risk of collision as ‘Low’.

THE STD. CIRRUS PILOT reports that he was thermalling with a large group of gliders flying in a gliding competition from Edgehill. Whilst he was climbing at around 5000-6000ft agl in a gaggle, the PA31 flew just above to the eastern side of the thermal (still very much in the radius of his turn). It looked to be traveling north-to-south with no colour scheme (just grey) and with what looked to be a camera at the front. He heard the engines as it flew past. He then reported the incident on 122.700 [Sywell Information]. He was tracking west-to-east towards Rushden with the wind coming from the East, so was drifting in the thermal towards the west.

He assessed the risk of collision as ‘High’.

THE SYWELL AFISO reports that he received a call from [PA31 C/S] asking if he was aware of a large number of gliders in the Northampton area. Sywell informed [PA31 C/S] that they were not in contact with any gliders at the time. The pilot replied that he had just had a close encounter with a glider marked [part registration], and confirmed he would be taking the appropriate action.

Factual Background

The weather at Birmingham was recorded as follows:

METAR EGBB 301350Z 08013KT CAVOK 26/11 Q1016

Analysis and Investigation

UKAB Secretariat

The gliding competition referred to by the glider pilot was the subject of two NOTAMs (see below):

<p>Q) EGTG/QWGLW/IV/M/W/000/100/5205N00128W100 MAJOR CROSS COUNTRY GLIDING COMPETITION. UP TO 50 GLIDERS MAY OPR UP TO 100NM FROM 520505N 0012826W (SHENINGTON, OXFORDSHIRE). DAILY ROUTE INFO AVBL WWW.GLIDINGTASKS.CO.UK OR 07887 777010 AND 130.100MHZ. 2018-06-0414/AS3</p>		Page
<p>LOWER: SFC UPPER: FL100 FROM: 23 JUN 2018 08:00 TO: 01 JUL 2018 19:00 SCHEDULE: JUN 23 - JUL 01 0800-1900</p>		H3607/18
<p>Q) EGTG/QWGLW/IV/M/W/000/050/5205N00128W005 GLIDING. MAJOR GLIDING COMPETITION. INTENSE ACT WI 5NM RADIUS 520505N 0012826W (SHENINGTON, OXFORDSHIRE). UP TO 50 GLIDERS AND 9 TUG ACFT MAY PARTICIPATE. FOR DAILY ROUTE INFO WWW.GLIDINGTASKS.CO.UK OR 07887 777010 AND 130.100MHZ 2018-06-0414/AS3</p>		
<p>LOWER: SFC UPPER: 5000FT AMSL FROM: 23 JUN 2018 08:00 TO: 01 JUL 2018 19:00 SCHEDULE: 0800-1900</p>		H3825/18

The PA31 and Std. Cirrus pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right². If the incident geometry is considered as converging, then the PA31 pilot was required to give way to the Std. Cirrus³.

Occurrence Investigation

The PA31 operating authority made the following comments. Mid-air collision is their top risk, was well understood by the company and mitigated to ALARP. However, operating aircraft in class G airspace is inherently risky. It is their view that electronic conspicuity should be mandated by the Authority, for all aircraft. The reduction in LARS is not assisting in their efforts to reduce the risk. However, they are still working towards an improvement. They have modified their Navajo fleet with high performance LED landing lights, that are left on for all phases of flight. They have trialled PFlarm and found it to be unsatisfactory in their aircraft. They are currently trialling PilotAware and have had some good results, although it does suffer from antenna screening and consequently late warnings. However, TAS/PilotAware/Flarm, will not detect non-transponding/transmitting or incompatible devices. They believe the Authority are doing some work in this area and await the results.

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

³ SERA.3210 Right-of-way (c)(2) Converging.

Summary

An Airprox was reported when a PA31 and a Std. Cirrus flew into proximity near Sywell at 1412hrs on Saturday 30th June 2018. Both pilots were operating under VFR in VMC, both pilots were listening out on the Sywell frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and reports from the air traffic controllers involved.

The Board began by looking at the actions of the PA31 pilot. They noted that the glider competition had been NOTAM'd and, although acknowledging that the NOTAMs encompassed a large generic area, opined that the PA31 pilot could have used the available information within to either phone the event organisers or use www.glideringtasks.co.uk to brief themselves on the associated planned task of the day and any potential conflicts. Some members also wondered whether they had considered using GliderNet for this purpose; although suffering somewhat from latency, <http://live.glidernet.org> does provide useful information on FLARM-equipped glider locations and densities, and is used by some aircraft operators prior to walking to their aircraft in order to establish whether there might be potential conflicts on their intended route. The Board were heartened to hear that the PA31's operating company were proactively looking at the various types of electronic warning systems available to try to increase the tools available to their pilots when trying to identify gliders and other airborne vehicles.

The Board then turned to the actions of the Std. Cirrus pilot. He was in a thermal with several other gliders, and only saw the PA31 as it flew past. The pilot was listening out on Sywell frequency 122.70 but members commented that the problem with simply listening out was that no information is transmitted. Although laudable as a way of gaining information himself, and agreeing that the glider gaggle were some way from the immediate environs of Sywell, members wondered whether he could have informed Sywell of their location in the thermal. That being said, the Board agreed that glider pilots could not be expected to call all airfields that they were routing close towards. The PA31 pilot had reported being on Sywell frequency 122.225 and so it was evident that the Cirrus pilot would not have assimilated the PA31 pilot's calls as they got airborne and would not have known about the PA31's presence. The BGA member reminded the Board that the use of radio frequencies by glider pilots whilst involved in a competition, is restricted⁴ as below. The Board noted this, but opined that glider pilots should not feel constrained in making safety calls to airfields or other aircraft that might be operating nearby if they could.

5.12 RADIO

5.12.1 Permitted Use of Radio & Data transmission

The use of radios is confined to voice communication between pilots, crews and officials. Data transmission is not permitted except that required for anti-collision warning systems (e.g. Flarm, ADSB) or one way safety locators (e.g. SPOT).

5.12.2 Permitted Voice Frequencies

Voice transmissions must only be made on the approved air to air gliding frequencies of 130.1, 130.125 and 130.4MHz. Organisers may additionally specify an airfield frequency in the Local Procedures that may be used for control of start/finish and for safety messages only.

5.12.3 Exceptional Use of Other Frequencies

Exceptionally, transmissions may also be made on other frequencies to contact ATC for obtaining permission to enter an ATZ, to land at an airfield, to make courtesy position calls when near to sensitive airspace boundaries or in the event of emergency.

5.12.4 Listening Watch

To improve safety, competitors should maintain a listening watch on the designated primary frequency, especially during the launch, prior to starting, whilst finishing and landing, and when thermalling with other gliders.

⁴ BGA Rules for Competition 5.12

The Board then turned to the cause and the risk. Members noted that the PA31 pilot had seen a glider, turned to avoid it, then seen a second glider and had had to carry out avoiding-action to avoid the second. In contrast, the Std. Cirrus pilot had only seen the PA31 as it passed him. The Board therefore agreed that the situation represented a late sighting by the PA31 pilot and effectively a non-sighting by the Std. Cirrus pilot. Turning to the risk, members opined that the recorded separation from radar could not always be taken as representative of the minimum actual separation given that it was likely that gliders would not be painting on radar at all times. Noting the Std. Cirrus pilot's 'High' risk assessment (25ft vertically/25m horizontally), and the PA31 pilot's 'Low' risk assessment (no assessment of separation) members debated whether the PA31 pilot had actually seen the Std. Cirrus at all (but had seen another glider) or whether there had been a degree of startlement from the Std. Cirrus pilot (that had meant he had reported the separation to be closer than it was). The Board agreed that the glider pilot would be unlikely to mistake the radar-recorded 0.5nm for 25m, and agreed therefore that the radar recording was probably another glider in the gaggle. Although they noted the PA31 pilot's assessment of 'Low' risk, the pilot had reported being close enough to the glider to have to react in short-order immediately after having avoided another glider. As a result, the Board assessed that the incident had been close enough that it had been the avoiding actions of the PA31 pilot that had prevented a collision; they therefore classified the risk as Category B, safety had not been assured.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the PA31 pilot and effectively a non-sighting by the Std. Cirrus pilot.

Degree of Risk: B.

Safety Barrier Assessment⁵

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

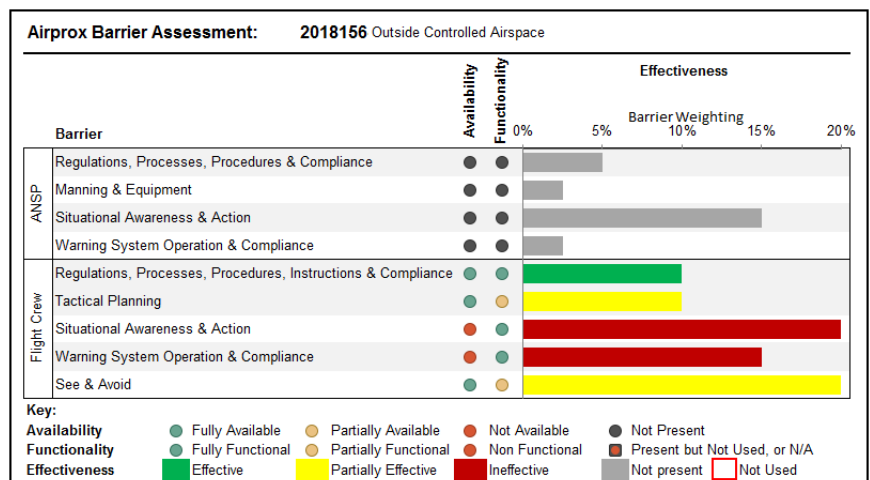
Flight Crew:

Tactical Planning was assessed as **partially effective** because the PA31 pilot could have used the NOTAM information to establish the glider competition task and any impact upon her route.

Situational Awareness and Action were assessed as **ineffective** because neither pilot had specific SA on the other aircraft.

Warning System Operation and Compliance were assessed as **ineffective** because both aircraft had a warning system fitted but neither system was compatible with the other.

See and Avoid were assessed as **partially effective** because neither pilot saw the other aircraft in time to alter their course early; the PA31 pilot had to take emergency avoiding action on the Std. Cirrus.



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