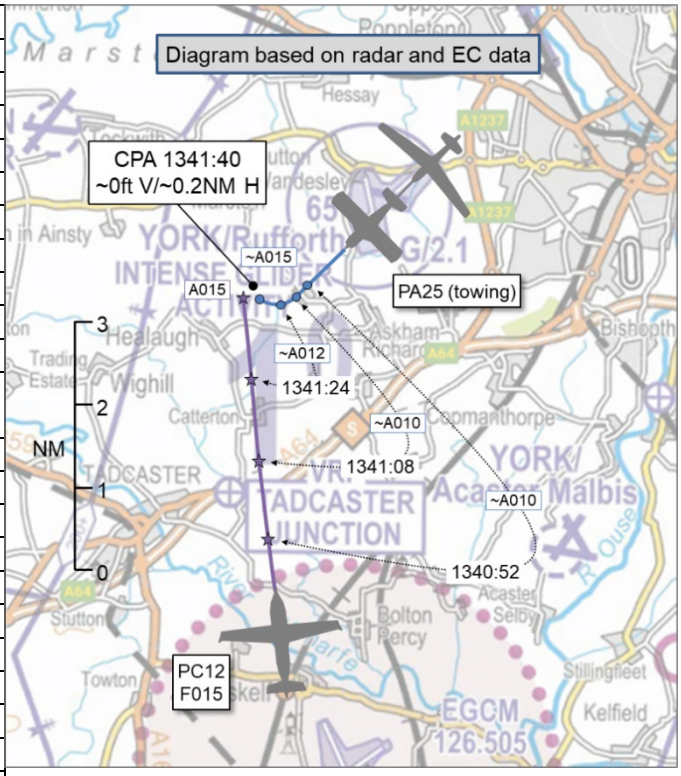
AIRPROX REPORT No 2022204

Date: 19 Aug 2022 Time: 1342Z Position: 5356N 00114W Location: 1.5NM SW Rufforth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA25 (towing)	PC12
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Altitude/FL	~1500ft	1500ft
Transponder	Not fitted	A, C, S+
Reported		
Colours	Red	Silver, grey
Lighting	White strobe	Anti-col, HISL, strobes, beacon
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	1700ft	NR
Altimeter	QFE (NR hPa)	NR
Heading	270°	NR
Speed	65kt	NR
ACAS/TAS	FLARM	TCAS I
Alert	None	NR
Separation at CPA		
Reported	0ft V/ 100m H	200ft V/2m H
Recorded	~0ft V/~0.2NM H	



THE PA25 PILOT reports that while towing an ASK13 glider, heading west from Rufforth and climbing through approximately 1700/1800ft (Rufforth QFE), they became quickly aware of traffic identified as a PC12 crossing their path from left-to-right about 100m ahead, and at their altitude. As avoiding action, they turned immediately right (with the glider in tow), the PC12 took a hard turn left before continuing a northerly heading. [The PA25 pilot] turned back to a westerly heading and continued the tow.

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

THE ASK13 PILOT [of the glider being towed] reports that no more than 5min into the aero-tow the combination was subject to an Airprox involving a predominantly white coloured Pilatus PC12 which crossed in front of the combination at no more than 100m range at the same altitude. The combination was heading west and the PC12 was heading north, flying level. It took avoiding action by banking to port and the tug aircraft turned to starboard. The PC12's registration was not visible as it banked and it was travelling at high speed compared to the tug which climbs at only 65kts.

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

THE PC12 PILOT reports that no avoiding action was taken as [it had been] unnecessary, but they made a steep bank away to show the other aircraft their profile. The other pilot may have mistaken this as avoiding action. [The other pilot] did not appear to manoeuvre which may have been due to the fact that [they hadn't] seen the [PC12] until the [PC12 pilot] had made the initial manoeuvre.

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

Factual Background

The weather at Leeds Bradford was recorded as follows:

METAR EGNM 191350Z 26014KT 9999 SCT045 18/08 Q1013

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The PC12 could be positively identified using Mode S data and was observed to be at FL015 (see Figure 1). The atmospheric pressure at Leeds Bradford was recorded as 1013hPa and the altitude of the PC12 was therefore assessed to be approximately 1500ft AMSL. Neither the PA25 nor the ASK13 glider-in-tow could be observed on radar in the vicinity at the time of CPA, but the UKAB Secretariat was able to obtain GPS data detailing the positions of the aircraft. It is with these separate sources that the separation at CPA was estimated.

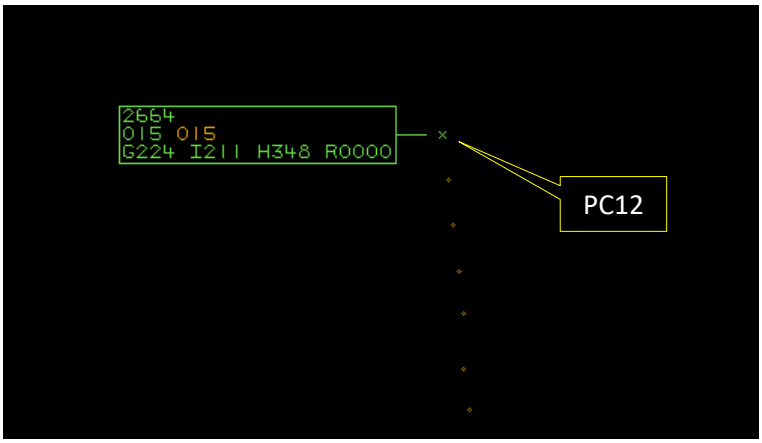


Figure 1 – No other aircraft were observed on radar in the vicinity of the PC12 at CPA

The PA25 and PC12 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 PC12 pilot was required to give way to the PA25.[2]

Comments

AOPA

When operating in Class G airspace without communication, a radar service, or having appropriate EC, it reduces the MAC barriers to just see-and-avoid. GASCo produces a good leaflet about avoiding gliding sites and parachute drop zones. Whilst the combination had been observed, when flying in the close vicinity of another aircraft without the assistance of the items previously mentioned, it would be advisable to make avoidance intentions very clear so as leave no doubt the other machine had been observed.

BGA

UK glider launch sites are listed in UK AIP ENR 5.5 and labelled on the CAA 1:500,000 and 1:250,000 charts with a ‘G’ symbol, as shown in the diagram in Part A. A greater density of gliders (and aircraft towing gliders) may be expected nearby at any time during daylight hours, and at any altitude up to cloudbase. With no interoperable Electronic Conspicuity equipment between the PA25 and PC12, and neither aircraft in receipt of an ATS, see-and-avoid was the only operating MAC safety barrier in this incident. The PA25 pilot is to be commended for maintaining a good lookout, and manoeuvring to remain clear of the PC12.

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

Summary

An Airprox was reported when a PA25 and a PC12 flew into proximity 1.5NM southwest of Rufforth at 1342Z on Friday 19th August 2022. Both pilots were operating under VFR in VMC, neither in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data and reports from the appropriate operating authorities. 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 PA25, and a member with particular knowledge of gliding operations explained that the pilot had been in radio contact with their launch-control on the ground. The radio frequency used had been a 'common glider field frequency' and members noted that it was not marked on navigational charts, nor available in the AIP. In consideration of the EC device fitted to the PA25, members agreed that it would not have been expected to have detected the presence of the PC12 (**CF2**). Members concluded that the pilot of the PA25 had not had specific situational awareness of the PC12 until it had been visually acquired. Members were heartened that an effective lookout had provided the pilot of the PA25 sufficient time to have assessed the situation and to have taken avoiding action, although it was agreed that the pilot of the PA25 had been concerned by the proximity of the PC12 (**CF4**).

Given that the pilots had been operating from airfields situated in close proximity to each other, members determined that both pilots had had a generic awareness of the potential for other aircraft to be operating in the vicinity (**CF1**).

Turning their attention to the actions of the pilot of the PC12, members were disappointed that such a brief report on the incident had been provided. Members were surprised that the pilot of the PC12 had selected a route to pass through an area marked on navigational charts as having intense glider activity, had flown at 1500ft and within 2NM of a marked gliding site, and had elected to not be in receipt of an ATS. It was suggested that it may have been far more prudent to have selected an alternative altitude or route and to have been in receipt of an appropriate ATS. Members' attention was drawn to the 'Take-2' guidance provided by GASCo. The guidance recommends that pilots plan to remain clear of controlled airspace by 2NM horizontally and 200ft vertically. Acknowledging that Rufforth is situated outside controlled airspace, and does not have an ATZ, it was nevertheless agreed by members that a greater separation might have been more appropriate.

The EC device fitted to the PC12 would not have been expected to have detected the PA25, or its glider-in-tow (**CF2**), and the pilot of the PC12 had had no specific situational awareness of its presence. Having visually acquired the PA25, members considered the avoiding action taken. Members noted that the pilot of the PC12 had 'shown their wings' to the pilot of the PA25 but were keen to point out that that action alone had not resolved the conflict. The pilot of the PC12 had been on the leftmost of converging tracks and had not deviated from their heading (**CF3**). It had been the case that the avoiding action taken by the pilot of the PA25 had increased the separation between the aircraft.

When determining the risk, the Board concluded that safety had been degraded, but members were satisfied that there had been no risk of collision. As such, the Board assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022204			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
1	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
	• Electronic Warning System Operation and Compliance			
2	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
	• See and Avoid			
3	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
4	Human Factors	• Perception of Visual Information		Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C

Safety Barrier Assessment[3]

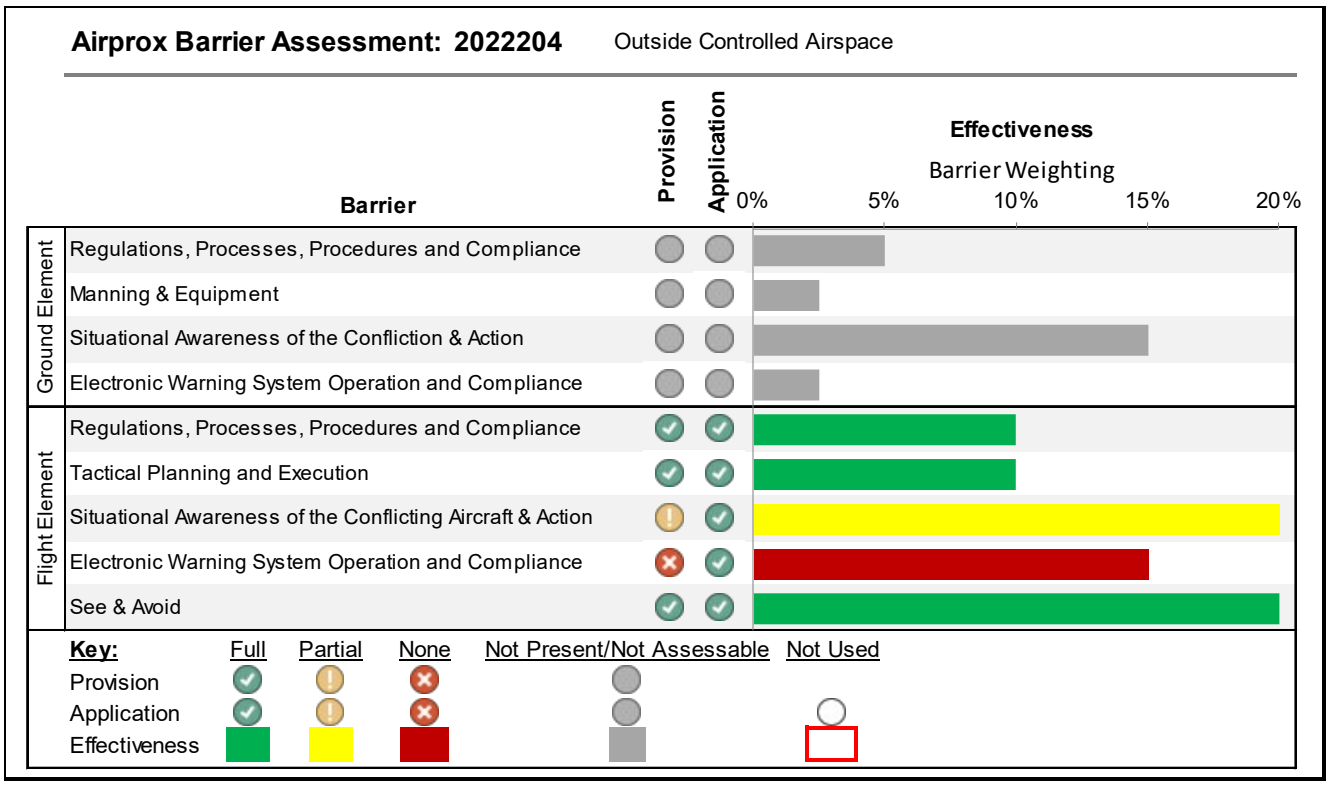
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because each pilot had had generic Situational Awareness of the potential for traffic in the vicinity given that they had been operating from airfields that are in close proximity to each other and marked on navigational charts.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC equipment fitted to each aircraft would not have been expected to have detected the presence of the other.

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


Airprox Barrier Assessment: 2022204
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & Action
Electronic Warning System Operation and Compliance
Flight Element
Regulations, Processes, Procedures and Compliance
Tactical Planning and Execution
Situational Awareness of the Conflicting Aircraft & Action
Electronic Warning System Operation and Compliance
See & Avoid
Key:
Full
Partial
None
Not Present/Not Assessable
Not Used
Provision
Application
Effectiveness