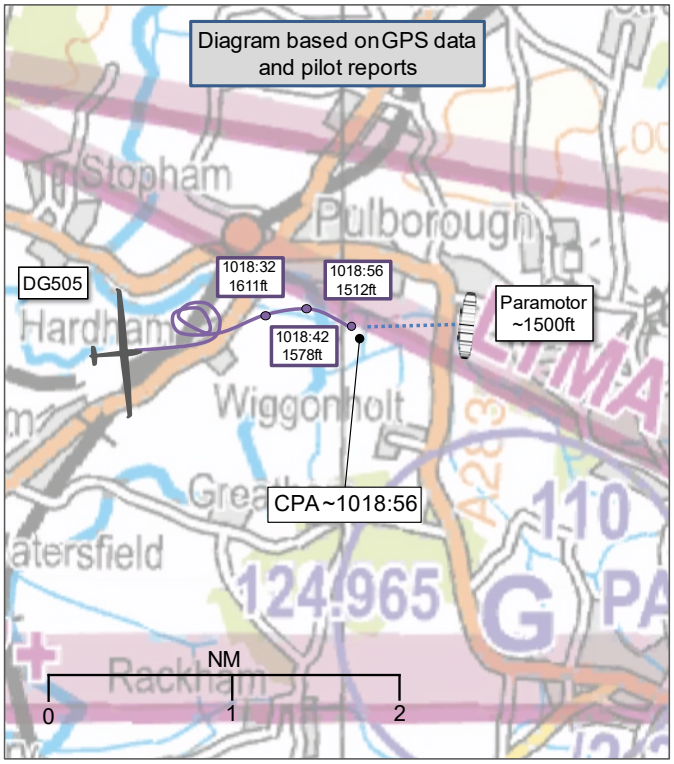
AIRPROX REPORT No 2024117

Date: 07 Jun 2024 Time: ~1019Z Position: 5057N 00030W Location: IVO Pullborough

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Paramotor	DG505
Operator	Civ Hang	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Altitude/FL	NK	~1512ft
Transponder	Not fitted	None[1]
Reported		
Colours	Red, Blue, Yellow	White
Lighting	Nil	Nil
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1500ft	~1512ft
Altimeter	NK	NK
Heading	West	135°
Speed	20kt	NK
ACAS/TAS	Not fitted	FLARM
Alert	N/A	None
Separation at CPA		
Reported	0ft V/20ft H	<30ft V/<30ft H
Recorded	NK	



THE PARAMOTOR PILOT reports that they were flying just south of Pulborough above the confluence of the rivers Arun and Chilt at around 1500ft when they had a near miss with a glider. It was a modern, white, high-performance glider. They were flying straight-and-level with the motor running, having previously been climbing in a thermal with the engine off, and were motoring forward under blue sky to another cloud about a mile to the west. It was fairly thermic and windy, and they wished to stay in the area. Their groundspeed was around 22kph, so around 20kph of wind at that altitude. They had not seen any gliders circling in the clouds that they were approaching. At the time, they were looking down and noticed a glider shadow on the ground approaching fast from the northwest and, as they looked up, a glider was banking hard to the right as it took avoiding action. It passed about 20ft right in front of them and they had no time to take any action. They noted that they have flown paramotors for the last 15 years and paragliders for 28 years, as well as light-aircraft in the past. They were equipped with basic instruments, a Garmin GPS and a Flymaster vario. The weather conditions were scattered clouds at around 3000ft moving in from the west at 20kph, with fairly bumpy strong thermals.

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

THE DG505 PILOT reports that they were conducting an introductory flight. They were heading just south east of Pulborough at about 1200ft when they saw a (mostly) red paramotor/paraglider canopy, dead ahead at the same altitude, heading in the opposite direction but very close. They conducted a hard right turn and passed pretty close, perhaps less than 30ft. It all happened in a split second. They opined that they didn't know why they didn't see it coming.

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

[1] Mode A,C and S were reported, but none were seen on the NATS radar replay.

Factual Background

The weather at Shoreham was recorded as follows:

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METAR EGKA 220950Z 24005KT 210V290 9999 FEW027 14/13 Q1029=
METAR EGKA 221020Z 24008KT 210V280 9999 FEW027 15/14 Q1029=
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken, but neither aircraft could be seen. The glider pilot provided the UKAB with GPS data, from which the diagram at the top of the report was constructed. The paramotor pilot did not have any GPS data, therefore their flight profile could only be estimated.

The Paramotor and DG505 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[2] If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.[3]

Comments

BGA

With no interoperable electronic conspicuity between these two aircraft, and neither in receipt of an ATS, the only active MAC barrier was see-and-avoid, which was only effective at the last possible moment.

BHPA

The BHPA is relieved that this incident did not result in a tragedy. The two aircraft passed each other extremely closely, with neither pilot having any warning of the other's presence. Assuming both pilots were conducting a good lookout, in this instance it failed to make them aware of the other aircraft in good time. Although the sailplane was fitted with [common glider EC], it appears that the paramotorist only had basic instrumentation with no EC output. Had the paramotorist been equipped with one of the later, more expensive, instruments with [common glider EC] output, the sailplane pilot may have had an earlier warning of its location and proximity. The BHPA intends to publish this ratified Airprox in its monthly magazine SkyWings, to both inform its membership of the continued need for an effective lookout, and to highlight the advantages of carrying one of the more modern flight instruments with built-in [common glider EC] output.

Summary

An Airprox was reported when a paramotor and a DG505 flew into proximity in the vicinity of Pulborough at around 1019Z on Friday 7th June 2024. Both pilots were operating under VFR in VMC, neither in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and GPS data. 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 discussed the actions of the paramotor pilot. A member with paramotor experience commented that the pilot would likely have been wearing ear-defenders due to the proximity of the

[2] (UK) SERA.3205 Proximity.
[3] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

motor and, therefore, although it was possible to hear a glider approaching, the paramotor pilot would probably not have been able to hear it. Furthermore, the pilot had not been carrying any instrumentation that included a CWS, consequently, the pilot had not received any situational awareness that the glider had been in close proximity (**CF1**). The BHPA member noted that more advanced equipment for paraglider/paramotors is capable of detecting the CWS commonly used by gliders, but that this equipment is expensive and therefore tended to only be used by competition pilots and less so by hobbyists. Members discussed that there were also Apps available, such as SafeSky, directly aimed at increasing the visibility of paraglider/paramotors to other pilots, but also noted that, as they were not particularly widely used, they had limited value. Some members observed that the VFR chart clearly depicted Parham glider site close to where the Airprox had occurred and wondered whether the paramotor pilot should have been expecting to see gliders in the area. This provoked a discussion on how much flight planning a paraglider/paramotor pilot might be expected to undertake prior to launch. It was highlighted that pilots were not required to be licenced to fly a paraglider/paramotor, and that although the BHPA advised that pilots follow the paramotor code published by the CAA, pilots who were not members of the BHPA may well not be aware of its existence. Nevertheless, the Board noted that the paramotor pilot involved in this incident had been an experienced pilot, had reported the Airprox and was therefore clearly knowledgeable in aviation matters. A pilot choosing to fly in the area may well have noted the glider site and elected to keep a good lookout, unfortunately, as demonstrated here, lookout was not infallible and on this occasion the pilot had not seen the glider in time to have taken avoiding action (**CF3**).

Turning to the DG505 pilot, members discussed that because their CWS could not have detected the paramotor (**CF2**), they also had not received any situational awareness that it had been in the vicinity (**CF1**). A glider member told the Board that the DG505 had a tandem seating arrangement and that normally an instructor would sit in the rear seat. The pilot had reported conducting an introductory lesson, so it had been likely that the person in the front had had very limited, if any, flying experience. This meant that the DG505 pilot would have had to look around the passenger seated in front of them, which may have explained why they had not seen the paramotor directly ahead until a late stage (**CF3**). Members commented that, even with a brightly coloured canopy, paragliders were notoriously difficult to see against the backdrop of the ground and that their lack of manoeuvrability meant that they were akin to a stationary object. Although spotted extremely late, thankfully, the glider pilot had been able to take emergency avoiding action.

When determining the risk of the Airprox, with no radar data and only one GPS track, the Board only had the pilots' reports to consider. Both pilots had reported a similar separation and both had described an extremely close encounter, therefore the Board quickly agreed that there had been a risk of collision (**CF4**). They noted that the glider pilot had been able to take emergency avoiding action, however, thought that the separation had been such that safety had been reduced to the bare minimum; Risk Category A.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024117			
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	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
	• Outcome Events			
4	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: A.

Safety Barrier Assessment[4]

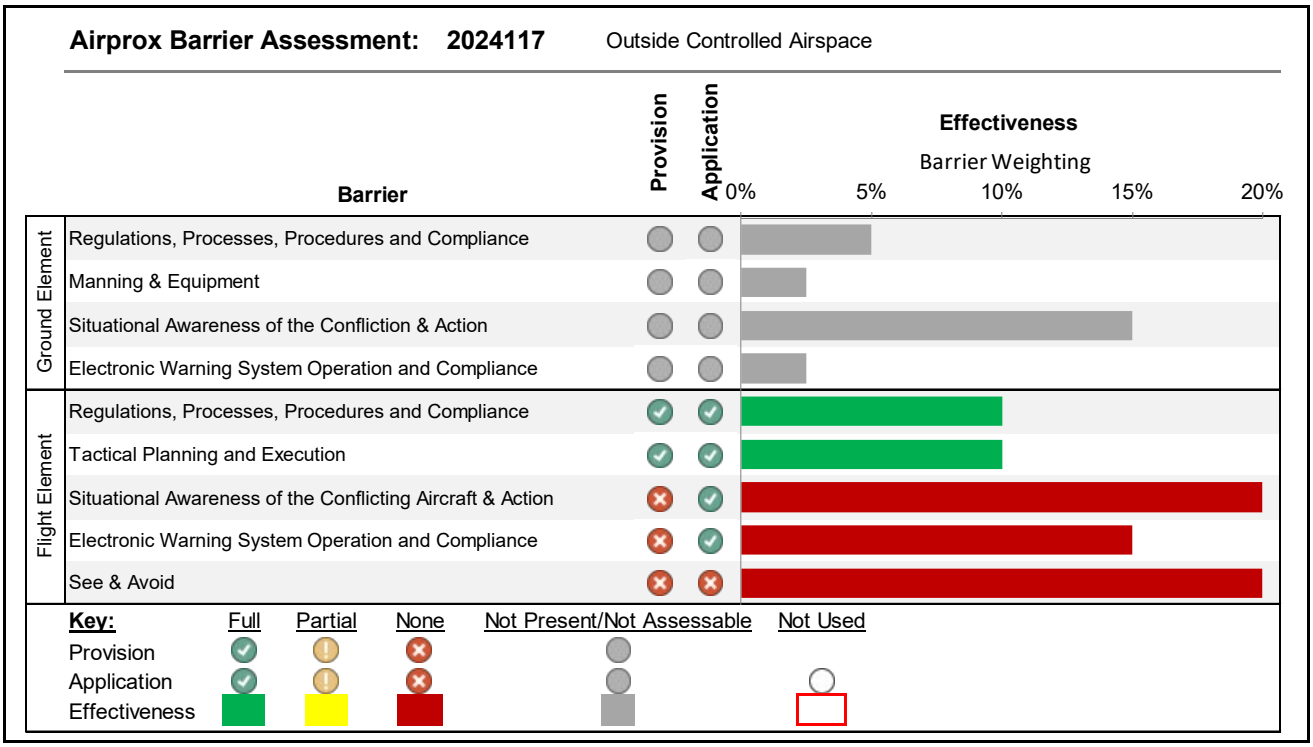
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had been aware that the other aircraft had been in the vicinity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS on the glider could not detect the paramotor.

See and Avoid were assessed as **ineffective** because neither pilot had seen the other aircraft in time to take avoiding action that materially increased the separation.



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