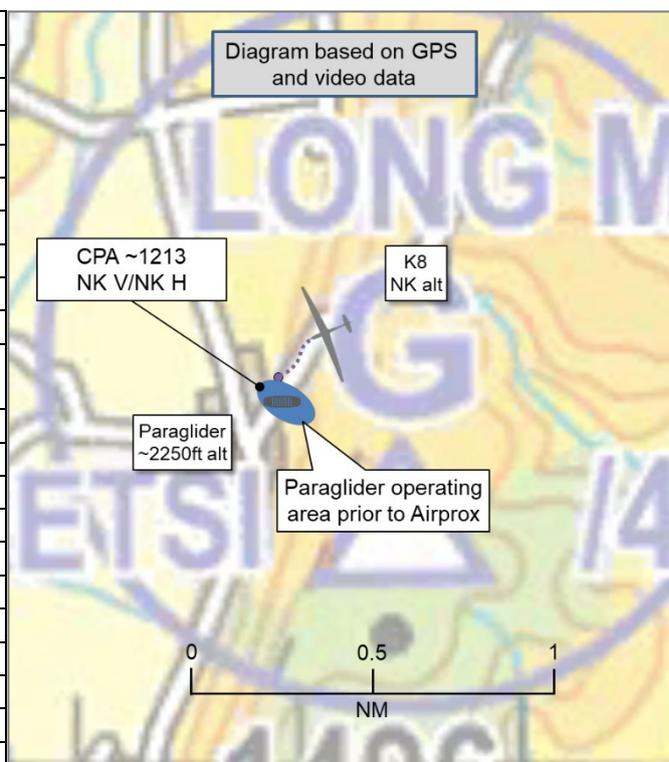


AIRPROX REPORT No 2022167

Date: 06 Aug 2022 Time: 1213Z Position: 5231N 00253W Location: Long Mynd

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Paraglider	K8 Glider
Operator	Civ Hang	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	NR
Altitude/FL	~2250ft	NK
Transponder	Not fitted	NR
Reported		
Colours	White, Mustard, Red	Green, White
Lighting	None	NR
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	3000ft	NR
Altimeter	amsl (NK hPa)	NR
Heading	NK	NR
Speed	NK	NR
ACAS/TAS	Not fitted	NR
Separation at CPA		
Reported	5ft V/10m H	NR
Recorded	NK V/NK H	



THE PARAGLIDER PILOT reports that they had been taking a pleasure flight on a clear thermic day. They were thermalling nicely with only themselves and a glider in the thermal. A safe distance [between the aircraft] was maintained for a while, then the glider circled around behind them and appeared to aim directly at them, before turning away at the last second. The incident was recorded on video by their headcam, in which the glider is clearly visible.

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

THE K8 PILOT declined the UKAB request to complete a standard reporting form, however, they did provide a brief narrative stating that: 'they were in a left-hand thermal turn, in a ridge assisted thermal to the north of the Mynd. As they came around to the south they noticed that their course was going to conflict with a paraglider, so they abandoned the climb with a right-hand turn. As they had seen the paraglider and took avoiding action they felt that the chance of collision was low'.

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

Factual Background

The weather at RAF Shawbury was recorded as follows:

METAR EGOS 061150Z AUTO 25007KT 9999 FEW047/// 20/07 Q1029
METAR EGOS 061220Z AUTO 28009KT 9999 BKN049/// 21/08 Q1029

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken, however, neither the paraglider nor the K8 were reliably detected. The paraglider pilot was able to provide the UKAB Secretariat with a GPS data file and a brief video clip showing the Airprox, extracts from which are below. Unfortunately, no data relating to the K8 pilot's flight was available.

From the video supplied by the paraglider pilot, it can be seen that there were at least 4 other paragliders operating in the vicinity of Long Mynd at the time of the Airprox. The UKAB Secretariat has not been able to determine whether the paraglider pilots had coordinated their flying activity, however, the UK Military Low-Flying Booking Cell confirmed that they had not received a CANP¹ for paragliding activity at this time and location and, as such, no NOTAM had been issued notifying airspace users of the activity.

3sec before the CPA, the video showed that the K8 pilot had been utilising the same thermal as the paraglider pilot, and appeared to have been above the paraglider pilot, in approximately their 3 o'clock position, in a slight left-hand turn toward the paraglider, Figure 1.



Figure 1 – 3sec before CPA. The K8 in paraglider pilots' approximate 3 o'clock.

Approximately 1sec later, still above the paraglider, the K8 pilot made a slight turn to the right and passed through the paraglider pilot's approximate half-past 1 position, as described in the narratives provided by both the paraglider and the K8 pilots. Figure 2.

¹ CANP. Civil Aviation Notification Procedure. Submission of activity involving 5 or more paragliders will generate a NOTAM.

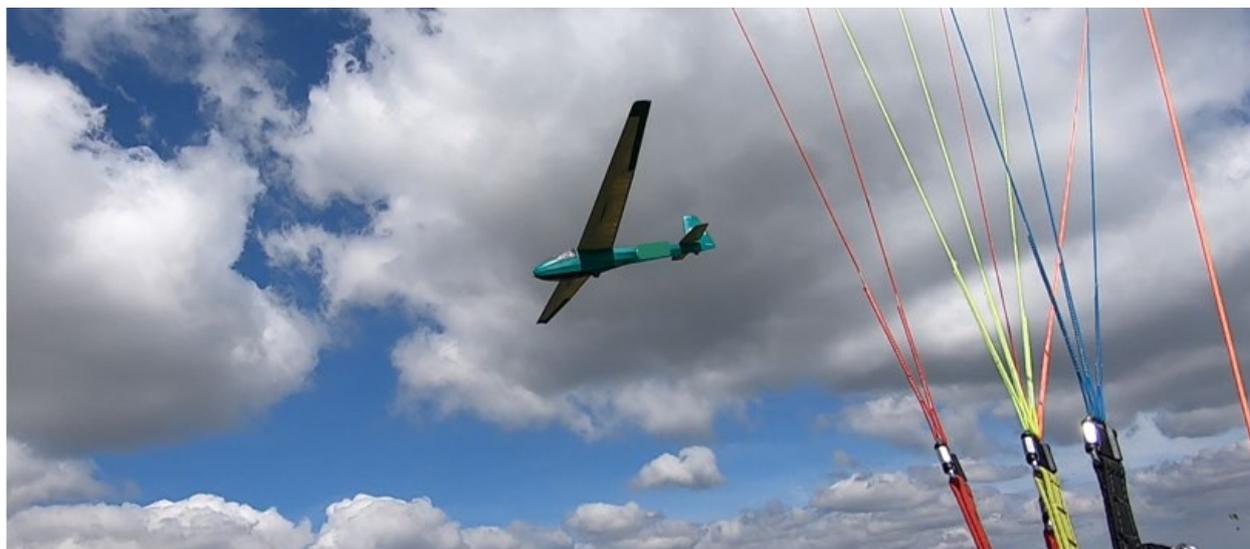


Figure 2 – 1sec before CPA. The K8 in paraglider pilots' approximate 'half-past 1'.

Both pilots then maintained their track and relative altitude, which caused the separation to continue to reduce until CPA which occurred as the K8 passed ahead of, and above, the paraglider, Figure 3.



Figure 3 – CPA. The K8 crossed ahead of, and above, the paraglider.

The paraglider and K8 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 overtaking then the paraglider pilot had right of way and the K8 pilot was required to keep out of the way of the other aircraft by altering course to the right.³

Comments

BHPA

At Long Mynd, for 99% of the time, paraglider and glider pilots exist harmoniously on that site and there are hardly ever any issues. Naturally, when you get two dissimilar aircraft with vastly differing rates of climb performance, airspeed and manoeuvrability, it is inevitable that an incident such as this could happen. Although a CANP wasn't filed, we do not believe that would have been a barrier

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3210 Right-of-way (c)(3) Overtaking.

because, if both pilots were operating out of the Long Mynd, both pilots would have been well aware of their responsibilities in sharing the airspace and collision avoidance.

It seems clear that the paraglider pilot was well aware of the K8 glider at all times whilst they were thermalling until it disappeared behind their back, but perhaps the same cannot be said for the K8 pilot, who only became aware of it when they saw it in front of them and then changed their course. By observing the photographs and the very close proximity of the two aircraft at CPA, the BHPA agrees with the paraglider pilot's risk of collision as high. The BHPA advises all paraglider pilots to never assume that other aircraft sharing a thermal have seen you and to treat any aircraft flying nearby as a potential threat.

BGA

Glider pilots based at BGA member clubs follow a specific Soaring Protocol for safely sharing thermals (i.e. areas of rising air).⁴ Thermalling gliders and paragliders both fly continuous turns that are more-or-less circular, making small adjustments to bank angle (and therefore turn radius) to move the centre of their circle so as to stay in the strongest lift.

Because of its lower flying speed, the radius of a paraglider's thermalling turn is much smaller than that of a rigid-wing glider. When the two share a thermal at the same altitude, they must take care to fly in concentric circles, with the glider pilot flying a larger circle with the same centre as the paraglider's, even as both pilots adjust the centres of their circles to remain in rising air. If the centres of the two aircraft's thermalling circles drift apart, their flight paths may intersect. If this happens, then at some point the glider will be flying towards the paraglider's canopy, approaching it from behind, as would seem to have happened here. Under these circumstances it is the glider pilot, flying the faster aircraft, who should open out or even reverse their turn to remain clear of the paraglider.

Summary

An Airprox was reported when a paraglider and a K8 flew into proximity at Long Mynd at approximately 1213Z on Saturday 6th August 2022. Both pilots were operating under VFR in VMC, neither pilot in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, video recordings 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 considered the actions of the paraglider pilot and a paraglider pilot member stated that pilots have been participating in paragliding and gliding activities alongside one another at Long Mynd for many years. A glider pilot member added that conditions at any one time are usually more suitable to either paragliding or gliding and so it is not often that both aircraft types are operating at the same time. However, when the conditions are suitable for both activities to occur simultaneously there are seldom any issues. The Board was grateful to the paraglider pilot for providing a video of the event to the Secretariat, which provided useful insight of the event. The Board discussed that, as the two pilots had been utilising the same thermal, the situation would have been highly dynamic and that there would have been occasions when the paraglider pilot would have lost visual contact with the K8, leaving them with only a generic awareness of its location (**CF2**). Members agreed that, at the CPA, although the paraglider pilot had been visual with the K8, they had been concerned by its proximity (**CF4**).

Next, members discussed the actions of the K8 pilot and, whilst the Board was grateful that the pilot had provided a narrative to the Secretariat, members were disappointed that they had declined the request to complete a full reporting form, or engage further with the process. Members again agreed that, whilst in the thermal, there would have been occasions when the K8 pilot would have lost visual

⁴ BGA soaring protocol can be found at <https://members.gliding.co.uk/library/safety-briefings/soaring-protocol/>

contact with the paraglider, leaving them with only a generic awareness of their location (**CF2**). However, a glider pilot member stated that, in a thermal, the radius of turn for a glider is greater than that of a paraglider and, as such, the paraglider would have been 'inside' the K8 pilot's turn, more toward the centre of the thermal, leading members to agree that the K8 pilot had not used this awareness to integrate with the paraglider (**CF1**). The Board reviewed the flight path of the K8 and members agreed that, prior to the Airprox, the K8 pilot had lost sight of the paraglider and had turned towards it; the Board concluded that at this point the K8 pilot had regained visual contact with the paraglider and had taken avoiding action, however, this had been at a later than optimum stage (**CF3**).

Finally, in assessing the risk of collision, the Board agreed that although the pilots of both aircraft had had an awareness of the presence of the other, there had been periods when visual contact would have been lost. Members agreed that the K8 pilot had taken avoiding action, however this had been at a later than optimum time and, whilst it had reduced the risk of collision, it had not removed it entirely. Members agreed that, in this case, safety had not been assured and that there had been a risk of collision (**CF5**). Accordingly, the Board assigned a Risk Category B to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2022167				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
1	Human Factors	• Incomplete Action	Events involving flight crew performing a task but then not fully completing that task or action that they were intending to carry out	Pilot did not sufficiently integrate with the other aircraft despite Situational Awareness
2	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
• 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
4	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft
• Outcome Events				
5	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: 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 Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because, during periods when the pilots had lost visual contact with the other aircraft, they had only had a generic awareness of the presence of the other.

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

See and Avoid were assessed as **partially effective** because, having lost visual contact with the paraglider, the point at which the K8 pilot had become visual with it again had been at a later than optimum point.

Airprox Barrier Assessment: 2022167		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 Conflicition & 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:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	●	●	●	○	○			
Application	●	●	●	○	○			
Effectiveness	■	■	■	■	□			