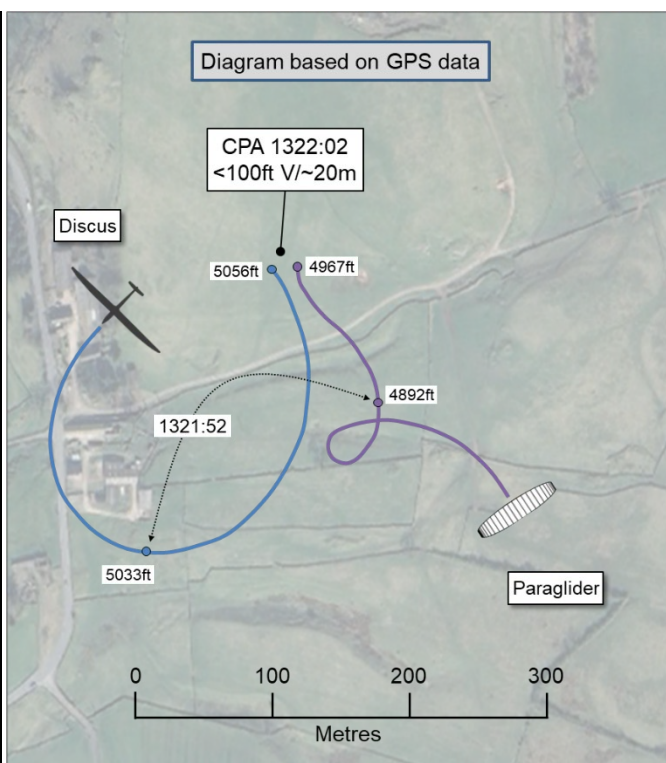


AIRPROX REPORT No 2025082

Date: 09 May 2025 Time: 1322Z Position: 5319N 00144W Location: IVO Camphill

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Discus	Paraglider
Operator	Civ Gld	Civ Hang
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None
Altitude/FL	5056ft	4967ft
Transponder	Not fitted	Not fitted
Reported		
Colours	White	Green
Lighting	Canopy strobe	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	4938ft	4948ft
Altimeter	QNH	QNH
Heading	320°	"Thermalling"
Speed	45kt	NK
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	110ft V/10m H	85ft V/10m H
Recorded	<100ft V/~20m H	



THE DISCUS PILOT reports that they had first seen the paraglider whilst they were in their glider on the ground before launch, along with another paraglider to the south-west. There was no chance that [the glider's] launch would have conflicted with any airborne traffic at that time and the Launch Marshall agreed. Visibility was good and it was easy to keep track of both paragliders.

They travelled around 1km east-southeast until they found a thermal, turned to the left and soon centred it, adjusting their circle slightly with each turn to maintain the strongest lift all the way around. Keeping a close watch of the paraglider with every turn. They had centred the thermal by the 6th turn when the paraglider started thermalling, 300ft below and 500m to the east of them. They continued to make very slight adjustments with every thermalling turn. After their 14th thermalling turn, the paraglider stopped thermalling and headed north-west, turned just once, then headed west until they were 310ft directly below [the Discus] on the 19th thermalling turn. They were aware that the paraglider was slowly catching up with them (in terms of height) so they were extremely careful to remain predictable with speed and angle of bank. Their climb rate all through the (approximately 28) thermalling turns remained very steady and consistent. Exactly one full turn before their closest distance, they were 200ft above [the paraglider] when, it seemed, that the paraglider had suddenly hit much stronger lift because it was then only 100ft [below]. [The pilot of the Discus described their avoiding action as] 'none'. During the last few seconds before the closest point, the paraglider was out of sight directly below their cockpit floor.

[The pilot of the Discus opined that,] looking back through simultaneous IGC traces, their climb rates had been very close, [the paraglider's] being slightly more than [the Discus'] but, during the last 2 turns, the [paraglider's] climb-rate was 50% to 100% more than [the Discus']. As a glider pilot, they were taught to give way to paraglider pilots and that paragliders can have a more rapid change in any direction than a glider, including vertically. During head-on or converging tracks, the avoidance method is very obvious but, when sharing a thermal with very similar climb rates, they had remained comfortably separate until the paraglider's sudden increase in climb rate for the last two turns.

[The pilot of the Discus believes that] contributing factors to the Airprox had been their reduced vision directly below due to the cockpit floor, the paraglider pilot's reduced vision upwards due to their wing, the 12kt to 14kt wind that was drifting both pilots in the same direction at similar rates and the very different turning diameters that had produced an optical illusion from [the Discus pilot's] perspective that the paraglider pilot's horizontal movements had been chaotic. They believe that the paraglider pilot had thought the same, that the circles [flown by the Discus] had appeared to have been chaotic from [the paraglider pilot's] perspective when, in fact, both thermal circles were perfectly normal from their own perspective.

[The pilot of the Discus] has spoken [with the paraglider pilot] on the telephone a few times at length, shared IGC files and emailed several times very amicably. They have discussed all factors that they can think of and have decided to talk to their respective clubs about the Airprox and all the lessons that can be learnt from it. They are already talking to their gliding club's CFI, Safety Officer and Chairman and it is their expectation that the club will have another safety meeting with the local soaring club members.

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

THE PARAGLIDER PILOT reports that the glider was turning in a thermal which had previously been shared by another paraglider. [That paraglider pilot] had subsequently left, so they joined the [glider pilot's] pattern, approximately 300ft below. Their climb-rate was higher [than that of the Discus], with an average of 5ft/sec, and there was a significant drift to the thermal which meant that they were close to each other at one point in the circuit. This became an issue as the vertical separation diminished, and they had to exit the thermal to avoid a possible collision (the paraglider pilot's left wing tip to the glider's right wing tip), by turning to the right.

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

Factual Background

The weather at Manchester Airport was recorded as follows:

METAR COR EGCC 091320Z AUTO 20006KT 110V270 9999 NCD 18/02 Q1021 NOSIG

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Neither aircraft was observed on the replay. Both pilots kindly supplied GPS track data for their respective flights (Figure 1).

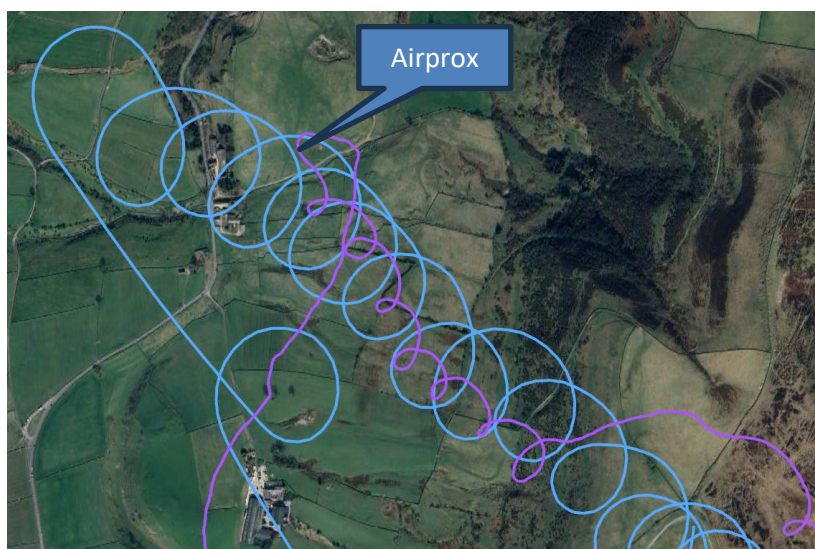


Figure 1 – The tracks of the Discus (blue) and paraglider (purple)

The diagram was constructed and the separation at CPA determined from the GPS data.

The Discus and paraglider 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

Comments

BGA

Both the pilots and their respective flying clubs are to be commended for their cooperative approach to sharing the airspace near Bradwell Edge, which is immediately to the north of Camphill glider site, and used by pilots associated with both clubs.

A 'thermal' is a restricted area of rising air generated by solar heating, used by both glider and paraglider pilots to gain or maintain height by flying continuous steeply-banked turns within its lateral boundaries. Two or more aircraft sharing the same thermal at a similar level will inevitably remain in close proximity for an extended period. Glider pilots based at BGA clubs are trained to follow a Soaring Protocol that describes known good practice when sharing a thermal with other gliders (but does not replace the need to comply with the rules of the air and the ANO).

<https://members.gliding.co.uk/wp-content/uploads/sites/3/2015/04/Soaring-Protocol-2020.pdf>

In addition, the Discus pilot's gliding club publishes specific guidance on sharing thermals with paragliders. Both documents emphasise the critical importance of maintaining continuous, mutual visual contact with nearby aircraft in the same thermal in order to preserve separation. Any pilot who loses visual contact with an aircraft climbing in the same thermal at a similar level, or who cannot guarantee safe separation, should immediately leave that thermal.

BHPA

It would appear that both pilots in this Airprox were aware of each other and were content to share a thermal together. In most thermalling situations, it is very much down to each pilot's experience, skill and situational awareness as to how comfortable they are with flying close to another aircraft. If the Discus pilot had been sharing the thermal with another sailplane, it may be suggested that this event would not have been reported due to similar climb rates, speeds and the overall positional predictability that sailplane pilots have when thermalling together.

However, because the other aircraft was a paraglider, its lower airspeed, faster climb rate and tighter turning ability made this encounter (and the position of the other aircraft) far more unpredictable. That, coupled with the fact that both pilots had visibility blind-spots when not co-altitude, meant that extra care and attention was needed with mixed-aircraft thermalling. Usually, if a sailplane and paraglider are in the same core, the paraglider would simply be turning well inside the sailplane's circles but, in this Airprox situation, it seems as though there was a slight offset in circle diameter as the paraglider climbed through the level of the Discus and became co-altitude with it.

The BHPA commends both pilots for their situational awareness and good lookout and for the paraglider pilot's decision to exit the thermal when they considered that there was an imminent danger of collision.

With regards to the Discus pilot's comments about the paraglider's flightpath seeming somewhat "chaotic", that was probably quite an accurate observation! Midday thermals can be quite rough and turbulent and can greatly affect a paraglider's stability which only has a 4-5kg/m² wing loading. This means that the wing will be constantly pitching and rolling whilst the pilot tries to correct these disturbances by use of the brake controls. How 'serene' a paraglider appears to others in a thermal will depend on the pilot's experience, skill, type of wing and strength of the thermal itself. Most

¹ (UK) SERA.3205 Proximity.

paraglider pilots feel quite envious of the way in which sailplanes appear to be so smooth and graceful!

Summary

An Airprox was reported when a Discus and a paraglider flew into proximity in the vicinity of Camphill at 1322Z on Friday 9th May 2025. 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 track data from both flights. 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 Discus. Members agreed that the electronic conspicuity device fitted to the Discus would not have been expected to have detected the presence of the paraglider pilot (**CF2**). It was noted that the pilot of the paraglider had not been equipped with a radio with which to contact the pilot of the Discus to inform them of their presence and intentions. However, members noted that both pilots had been aware of the presence of the other aircraft by sight and, apparently, had readily accepted 'sharing the thermal'.

Members noted that the diameter of the circles described by each aircraft had been significantly different, as had their respective centres of rotation. That is, the aircraft had not described concentric circles around a common point. To further complicate the geometry, the circles of the paraglider had been beneath those of the Discus (with reducing horizontal separation) and both pilots had been climbing (with the paraglider pilot climbing at a faster rate). Additionally, both pilots had been drifting north-westwards to follow the thermal lift.

A member with particular knowledge of paragliding operations explained that a thermal may consist of several 'cores' and, perhaps, the pilot of the Discus and pilot of the paraglider had sought lift from separate cores. It was further explained that the cores of a thermal may converge with altitude and it was suggested that that might have contributed to the reducing separation between the aircraft, both horizontally and vertically.

Members appreciated that the pilot of the Discus would, naturally, have lost sight of the paraglider in those parts of their circle when they had been facing away from the paraglider. The same would have been the case for the paraglider pilot too but this would have been for a much shorter period of time (as their circles had been 'completed' more quickly). Members noted that the pilot of the Discus had described that *"During the last few seconds before the closest point, the paraglider was out of sight directly below their cockpit floor"*. Members agreed that the paraglider had been obscured from the Discus pilot's view at a critical moment (**CF4**).

Referring to the safety briefing provided by the BGA entitled 'Soaring Protocol', members noted the following guidance:

'When at a similar level to another glider, never turn inside or point your glider at or ahead of the other glider unless you can guarantee safe separation and maintain visual contact. If you lose visual contact with a nearby glider or if you cannot guarantee safe separation, leave the thermal'.

Whilst the guidance had been intended for the pilots of two or more gliders sharing the same thermal, members agreed that the guidance had been equally applicable to other non-powered aircraft utilising a thermal for lift and, therefore, had applied to both the Discus and paraglider pilots.

Members suggested that, had the pilot's respective manoeuvres continued (with gradual decreasing separation between the aircraft), there would have come a point when the circles would have intersected. Members agreed that, in the absence of any action taken to have resolved the situation, the intersection had been inevitable and, therefore, could have been readily anticipated.

Members were in agreement that the pilot of the Discus had not fully appreciated the evolution of the encounter and had been startled by the position of the paraglider when it had been visually re-acquired in close proximity. Members concurred with the BGA guidance, and agreed that it may have been prudent to have left the thermal when, or before, the Discus pilot had lost sight of the paraglider and could no longer have guaranteed their safe separation. Accordingly, members agreed that the Discus pilot's dynamic plan had not been sufficient to have met the needs of the situation (**CF1**) and that they had, effectively, flown into conflict with the paraglider (**CF3**).

Turning to the actions of the pilot of the paraglider, members re-iterated their previous thoughts. It was agreed that the pilot of the paraglider had not formed a sufficiently detailed plan to have ensured safe separation from the Discus during the unfolding encounter (**CF1**). Members noted that the paraglider pilot had taken action to have left the thermal but the separation had reduced to less than 100ft vertically and less than 20m horizontally. Consequently, members agreed that the paraglider pilot had flown into conflict with the Discus (**CF3**).

Concluding their discussion, members summarised their thoughts. It was noted that both pilots had been aware of the other's presence and had shared the thermal. However, the conditions on the day and the differing performance of the aircraft had meant that the situation had slowly unfolded towards a point where the separation between the aircraft had reduced significantly. Members were in agreement that the safety of the aircraft had not been assured and that there had been a risk of collision, averted by the paraglider pilot at the last minute (**CF5**). Risk Category B was assigned to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025082			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
	• 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	Contextual	• Loss of Separation	An event involving a loss of separation between aircraft	Pilot flew into conflict
4	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other
	• 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 Assessment²

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

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the pilot of the Discus had lost sight of the paraglider below their cockpit floor and had elected to remain within the thermal.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the electronic conspicuity equipment fitted to the Discus would not have been expected to have detected the paraglider.

See and Avoid were assessed as **partially effective** because the paraglider had been obscured from the Discus pilot's view until a moment before CPA.

Airprox Barrier Assessment: 2025082		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 Conflition & 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		■	■	■	■		□	

² The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).