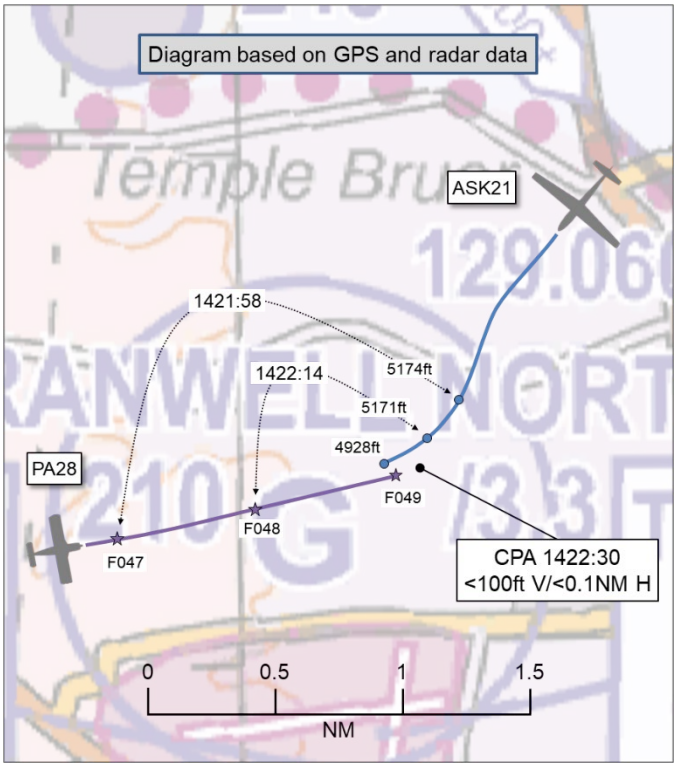
AIRPROX REPORT No 2025108

Date: 15 Jun 2025 Time: 1423Z Position: 5303N 00029W Location: IVO Cranwell North

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK21	PA28
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Cranwell Gliding	Cranwell Traffic
Altitude/FL	4928ft	F049
Transponder	Not fitted	A, C, S+
Reported		
Colours	NR	White
Lighting	NR	Landing, taxy, nav, strobes, beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	5000ft	5000ft
Altimeter	QFE	QNH
Heading	270°	064°
Speed	50kt	122kt
ACAS/TAS	FLARM	TAS
Alert	NR	None
Separation at CPA		
Reported	200ft V/0m H	100ft V/0m H
Recorded	<100ft V/<0.1NM H	



THE ASK21 PILOT reports that they were descending through approximately 5000ft QFE overhead Cranwell North airfield. Looking out, they spotted what looked like a Cherokee, head-on, about 200ft below, dead ahead. They immediately pulled-up and did a 180° turn to try and identify it, without success. They judged that the initial pass had been so close that they could see the rivets on the aircraft but the speed of approach was so fast that they could not get the registration. The other pilot did not appear to take any avoiding action. The aircraft was directly over Cranwell North heading west [they recall].

They landed without incident and reported the near-miss to the Duty Instructor who mentioned that a pilot had called Cranwell Approach (the airfield was closed). The other pilot did not appear to take any avoiding action.

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

THE PA28 PILOT reports that they were conducting a flight to the east coast and back, and had one passenger with them. They had planned a route that would go directly from Trowell VRP to Skegness. This route passed directly overhead RAF Cranwell and RAF Coningsby.

Prior to the flight, they had checked the weather and NOTAMs. They decided that, due to the turbulent air and to avoid the MATZ, they would set their cruising altitude at 5000ft before descending towards Skegness and would conduct a slow low-level flight over the area, before climbing back up to 5000ft for the return leg. When checking the NOTAMs, there were no records for any gliding activity on the route. Had there been, they would have altered their route to avoid the area and any conflicts. However, they did select a higher altitude to keep clear of the MATZ and the gliding zone of Cranwell North.

On leaving the East Midlands Control Zone, they were handed over to East Midlands Radar where they were provided a Basic Service. They were informed that Langer and Syerston were active and they altered their route to the south of Syerston to avoid any conflicts. They climbed to 5000ft and flew a track directly to Skegness. At around Bottesford, they requested a frequency change to Cranwell Approach 124.455MHz. They made a freecall to Cranwell Approach twice and, on the third time, they received a response: "*Cranwell Zone is closed today but for information there is one aircraft in the circuit*". They asked if Coningsby was open and were informed that it would most likely be. There was no information provided related to any gliding activity and, given the circuit altitude and their transit altitude, they determined that it would be safe to pass directly overhead at 5000ft.

They passed directly overhead Cranwell at 5000ft and made a call "[PA28 C/S] *overhead Cranwell 5000ft*" to alert any pilots in the area of their presence and get situational awareness of other aircraft in the area. Shortly afterwards, they became aware of a glider ahead of them appearing to be approximately 500ft above, just below the cloudbase, and a second glider to their left. Due to the presence of two gliders above the MATZ, they made the decision that there was a risk that there may have been more below them. Due to the limited downward visibility in the PA28, they felt that descending would have risked putting themselves into conflict with other gliders. As there was no support from a 'control tower', they were unable to establish how many gliders were in the area. They therefore made the decision to make a slight right turn and maintain their heading and altitude to make their intentions clear. The glider ahead then seemingly descended towards them and, before they had been able to respond, it passed over them at approximately 100ft. Following that, they were able to continue and conduct their flight as planned with no further incident. They changed frequency to Coningsby Zone 119.205MHz where they made three calls before another pilot on the frequency said "*They didn't speak to me either*". After that, they heard the Coningsby controller talk to the pilot of an inbound Spitfire.

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

Factual Background

The entry for Cranwell North in the UK AIP (ENR 5.5) provides the following information:

CRANWELL (NORTH) GLIDER SITE, LINCS (AD) (W AND T) 530231N 0002936W	Upper limit: 3000 FT AGL Lower limit: SFC	Phone: Cranwell Gliding Club 01400 261201 Ext 7230.	Freq: 129.060. Site elevation: 220 FT AMSL. Hours: HJ Sat, Sun, PH & 1700 (1600)-SS Mon-Fri.

The entry for Cranwell ATZ in the UK AIP (ENR 2.2) provides the following information:

CRANWELL ATZ A circle, 2.5 NM radius, centred at 530147N 0002934W on longest notified runway (08/26) Upper limit: 2000 FT AGL Lower limit: SFC Class: G	CRANWELL	CRANWELL APPROACH English Mon-Thu 0800-1730 (0700-1630); Fri 0800-1700 (0700-1600); Sat-Sun 0900-1700 (0800-1600).	124.455 ATC	Elevation: 222 FT AMSL. Hours of applicability for Rule 11 - See Column 3 Hours of Service. Note: At weekends 124.455 is monitored by Cranwell Tower and pilots may make contact if requiring an ATZ/MATZ crossing. No radar services available at weekends. When Air Traffic Control Services are not available, control of the ATZ is transferred to Cranwell Gliding Club 129.980 MHz (Cranwell Gliders).

The weather at RAF Cranwell was recorded as follows:

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METAR EGYD 151420Z AUTO 27012KT 9999 NCD 23/07 Q1020
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the PA28 could be positively identified from Mode S data (Figure 1). The ASK21 was not observed on the replay and was not observed by reference to ADS-B data sources.

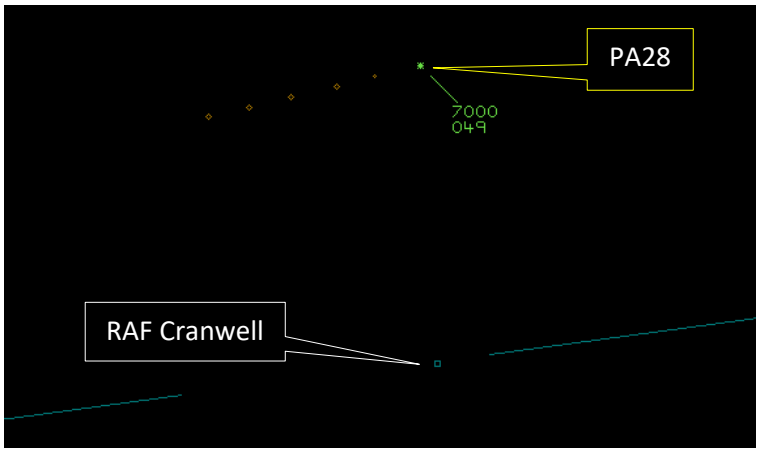


Figure 1 – CPA at 1422:30

The pilot of the ASK21 kindly supplied GPS track data for their flight. It was by combining the data sources that the diagram was constructed and the separation at CPA determined.

The ASK21 and PA28 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 head-on or nearly so then both pilots were required to turn to the right.[2]

Comments

AOPA

Hopefully, the Department for Transport will announce a common form of electronic conspicuity which will assist with Mid-Air Collision Avoidance (MACA). Until then, the use of an appropriate Air Traffic Service will assist with MACA and improve everyone's situational awareness. Where there is not an appropriate surveillance service available, the final barrier is an effective lookout scan.

BGA

Permanent glider launch sites are listed in UK AIP ENR 5.5 and labelled on CAA VFR charts with a "G" symbol, as shown in the chart segment in Part A. Routine activity at these sites that falls within the schedule listed in ENR 5.5 does not merit a NOTAM. A greater density of gliders may be expected nearby during these scheduled periods, and at any altitude up to cloudbase.

This incident once again highlights the difficulty of seeing a small aircraft approaching head-on at speed, as the PA28 would have appeared to the ASK21 pilot. Where forward-pointing high-intensity landing lights are fitted, many pilots now opt to leave them permanently switched on in daylight, to aid visual conspicuity in this direction.

Almost gliders in the UK (including this ASK21) are fitted with proprietary EC equipment that warns of impending conflicts with other similarly-equipped aircraft. Although this system has proved effective at mitigating the risk of Airprox with other gliders, basic installations do not detect aircraft equipped only with transponders or ADS-B-out, as in this case. However, recent versions of this EC

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

equipment can optionally add a 1090MHz receiver subsystem, and thereby warn of conflicts with transponder and ADS-B-out-equipped aircraft. Upgrading glider EC hardware to add such a 1090MHz receiver subsystem provides a useful additional safety barrier in airspace with a high density of transponder or ADS-B-out equipped aircraft.

Summary

An Airprox was reported when an ASK21 and a PA28 flew into proximity in the vicinity of Cranwell North at 1423Z on Sunday 15th June 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, GPS track data for the flight of the ASK21 and radar photographs/video recordings. 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 PA28, and members noted that they had planned a route that had passed over the combined MATZ surrounding RAF Cranwell. It was noted that they had been aware of the Cranwell North gliding area and had selected a cruising altitude of 5000ft in order to have kept clear. Members had some sympathy with the pilot of the PA28 in that they had attempted to contact the Cranwell Tower controller to relay their intentions and, perhaps, may have expected a response to have included a caution as to the status of gliding at Cranwell North if it had been active. As the response had been to inform them of activity in the Cranwell circuit only, some members felt that there had been an opportunity to have assisted the PA28 pilot further. Nevertheless, members agreed that it would have been prudent for the pilot of the PA28 to have made a broadcast on the Cranwell North channel to have alerted any pilots tuned to that frequency to their presence and intentions (**CF1**). However, members noted that the pilot of the PA28 had not been aware of the frequency for Cranwell North, and suggested that, had they had attended to their pre-flight preparation sufficiently (**CF2**), the entry for Cranwell North in the UK AIP may have equipped them with a more thorough understanding of the gliding operation. Notwithstanding, members noted that the pilot of the PA28 had visually acquired the ASK21 and had considered that the safest course of action had been to have made a slight right turn and to have maintained their altitude until they had been clear. Members noted that the PA28 pilot reported that the ASK21 had appeared to have descended and turned towards them and that it had passed over them 'before they had been able to respond'. It was therefore noted that, although the ASK21 had been initially sighted at some distance, the subsequent movement of the glider had been unexpected. Members agreed that, without sufficient time to have taken further action to have increased separation, the sighting of the glider had been late (**CF5**). Members also agreed that the TAS fitted to the PA28 would not have been expected to have detected the presence of the ASK21 (**CF4**) and the pilot of the PA28 had not had situational awareness of the ASK21 until it had been sighted (**CF3**).

The Board next turned their attention to the actions of the pilot of the ASK21, and it was noted that, during a descent, they had suddenly sighted the PA28 ahead of them. Members agreed that the EC device fitted to the ASK21 would not have been expected to have detected the PA28 (**CF4**) and further agreed that they had not had situational awareness of the PA28 until it had been visually acquired (**CF3**). Members pondered the narrative report provided by the ASK21 pilot and agreed that the avoiding action that they had taken appeared to have been somewhat urgent in nature. It was therefore agreed that the PA28 had been sighted late (**CF5**). However, members noted that the ASK21 pilot's subsequent actions had been to have reversed their course in an attempt to identify the PA28. This, some members suggested, indicated perhaps a more sanguine approach to the encounter.

Concluding their discussion, members contemplated the matter of the risk of collision. Some members suggested that, as neither pilot had had situational awareness of the other, and both pilots had sighted the other aircraft late, there had been a risk of collision. Other members pointed out that the ASK21 pilot had assessed the risk as 'Medium' with a perceived vertical separation of 200ft. A vote was

conducted and the latter view prevailed, that, despite the actual vertical separation being closer than that perceived by the pilot of the ASK21, they had taken effective action to have increased the separation. Members agreed that safety margins had been reduced but were satisfied that no risk of collision had existed. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025108			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
2	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• Situational Awareness of the Conflicting Aircraft and Action			
3	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			
4	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			
5	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

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:

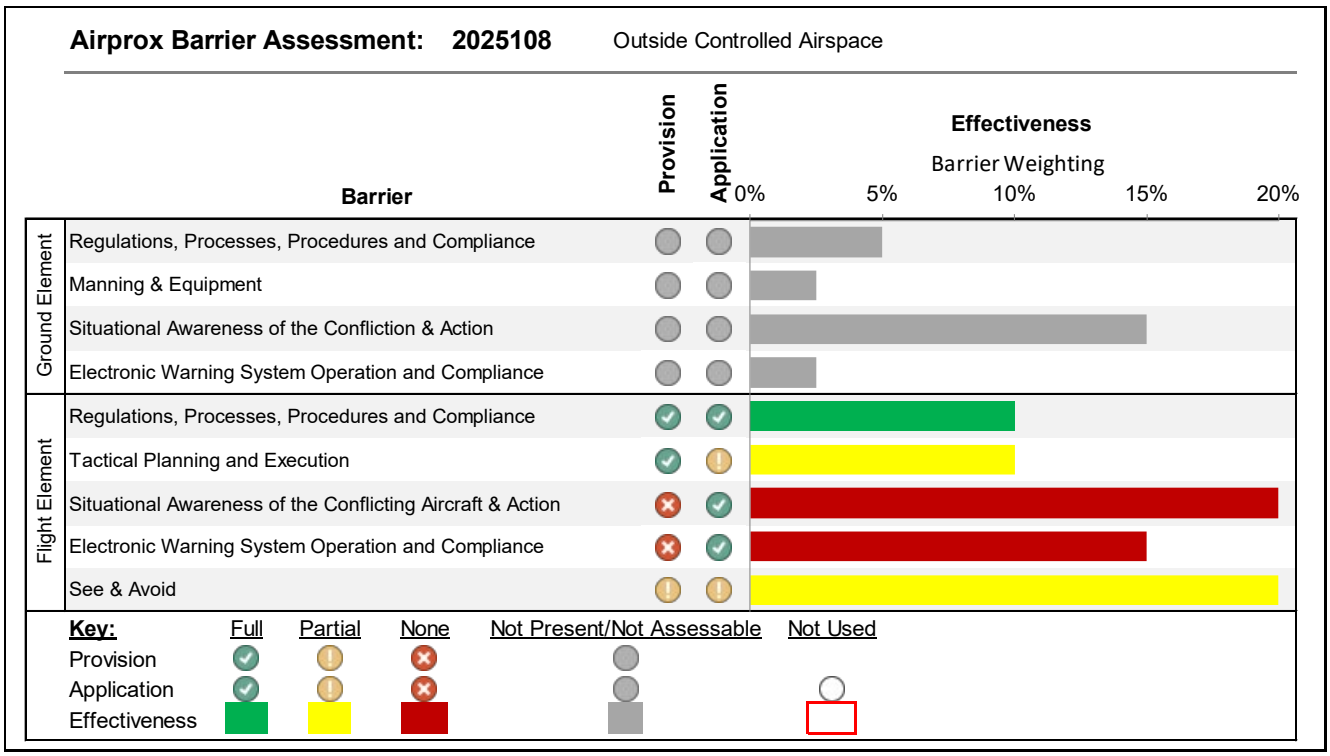
Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of the PA28 to have communicated their intentions on the Cranwell Gliding frequency.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had situational awareness of the presence of the other aircraft until visually acquired.

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

See and Avoid were assessed as **partially effective** because both pilots visually acquired the other aircraft late.

[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: 2025108
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