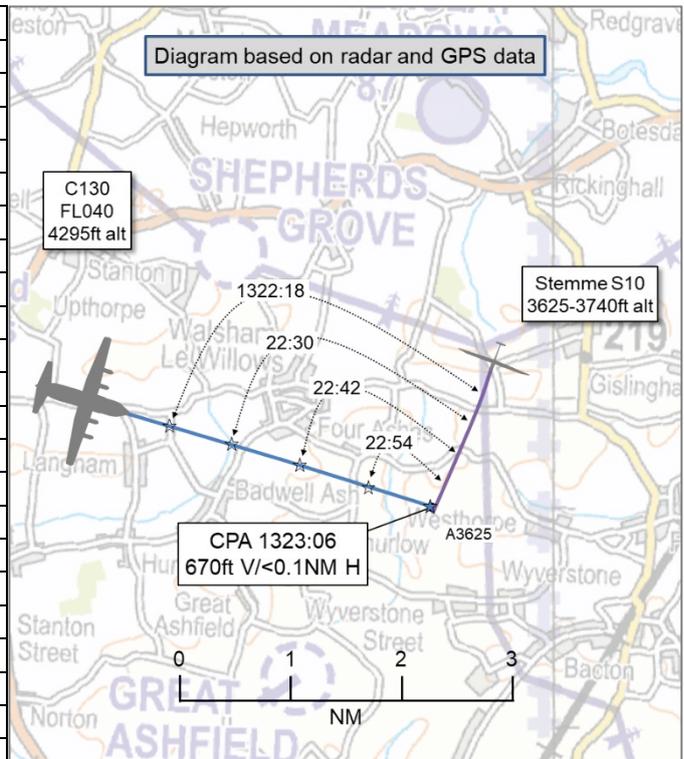


**AIRPROX REPORT No 2025201**

Date: 11 Aug 2025 Time: 1323Z Position: 5217N 00058E Location: ivo Wyverstone

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	C130	Stemme S10
Operator	Foreign Mil	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	None
Provider	Lakenheath	N/A
Altitude/FL	FL040 (~4295ft <sup>1</sup> )	~3625ft
Transponder	A, C, S	Off <sup>2</sup>
<b>Reported</b>		
Colours	Grey	White
Lighting	Nav, anti-coll	Not fitted
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	FL040	~3700ft
Altimeter	SPS (29.29inHg)	QNH (1025hPa)
Heading	NR	~180°
Speed	NR	~75kt
ACAS/TAS	TCAS II	FLARM
Alert	None	None
	<b>Separation at CPA</b>	
Reported	NR	Not seen
Recorded	~670ft V/<0.1NM H	



**THE C130 PILOT** reports that, while conducting local proficiency training in the radar pattern at RAF Mildenhall, the crew was given multiple callouts by ATC for uncooperative traffic in the vicinity. Additional climbs were given to the crew as ATC attempted to keep them clear of the traffic. The crew observed at least two gliders with no TCAS reporting passing within 1NM and within 500ft of their aircraft. The first was sighted while proceeding outbound to DEKEG for holding. The glider was sighted shortly after Approach issued a climb from 3000ft to FL040 to avoid a light GA aircraft northbound. The glider was less than 500ft below the aircraft, within 1NM. It was due to the Traffic Information from Approach on the transponding aircraft that the crew sighted the glider, which was in the same vicinity as the light GA [aircraft] which was sighted above the glider. The second glider [not this Airprox] was sighted after one turn in holding when routeing back inbound to Mildenhall. The crew had just received clearance to descend to 2600ft and for the approach when they sighted a glider within a mile off the left wing, less than 500ft below. One of these was called out as a primary return by ATC, and the other was reported not appearing on their scopes. Aircraft operating without any kind of Mode C transponder or TCAS, especially in a busy terminal area like that covered by Lakenheath RAPCON, create an undue hazard which could result in a mid-air collision. The crew sincerely appreciated RAPCON's assistance in helping to try and keep them safe.

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

**THE STEMME S10 PILOT** reports that it was unfortunate that so long had elapsed between the incident and the request to file a report, as they now had limited recollection of the flight. However, neither of [the 2 crew] recalled seeing any other aircraft in that area. The Stemme has a side-by-side cockpit with excellent visibility other than forward-and-below. Note that flight data in this report is extracted from a gliding logger recording (submitted with this report). In [the Airprox location] they would not have

<sup>1</sup> Using the Wattisham QNH of 1022hPa and a Mode S level of 4050ft for the C130.

<sup>2</sup> Reported as Modes A and C but no SSR transponder returns were observed on radar replay in the Airprox location..

expected to be in contact with Lakenheath. Given their intended path, they may have attempted to contact Wattisham but [could not] recall and note that Wattisham ATC is often inactive. They carried a very old transponder, fitted as original equipment which, due to very heavy power consumption, was only usable in powered flight. They were looking to replace this with a modern device in the near future. It would be surprising if they were not visible to Lakenheath PSR as the Stemme has a high metal and carbon fibre content.

**THE LAKENHEATH CONTROLLER** reports they took over the control position at 1320 and received a brief from the previous controller of [C130 C/S] intentions to hold at DEKEG and return to Mildenhall. The previous controller briefed that [C130 C/S] had been given Traffic Information on a 7000 squawk transiting the area northbound. [The] previous controller had given vectors to hold at 3000ft. Assessing the situation, the oncoming controller offered [C130 C/S] a climb to FL040 to provide some separation against the 7000 squawk. [C130 C/S] took the climb. Noting the tracks were likely to merge, they updated the Traffic Information several times and [C130 C/S] responded "searching".

They recalled that [C130 C/S] reported the traffic in sight and mentioned a glider in the vicinity. They did not recall any other radar tracks in the vicinity. Shortly after [C130 C/S] entered the hold, they issued them with descent per the procedure and also cleared them for the approach to RW28. [C130 C/S] reported sighting another glider 'off the left wing'. There were no tracks in the vicinity showing on the radar display and the controller asked them to clarify the position. They reported that it was within 1NM, 500ft below, off the left wing. Other than the 7000 squawk above, there were no radar tracks in the vicinity of [C130 C/S] during the hold and until they switched to Mildenhall Tower.

## Factual Background

The weather at RAF Mildenhall and Wattisham Flying Station was recorded as follows:

METAR EGUN 111255Z 11005KT 9999 FEW160 29/11 A3017 A02A SLP219 T02920113

METAR EGUN 111355Z 00000KT 9999 CLR 29/11 A3014 A02A SLP209 T02890105

METAR EGUW 111320Z 14006KT CAVOK 26/10 Q1022 NOSIG RMK BLU BLU=

## Analysis and Investigation

### UKAB Secretariat

The C130 and Stemme S10 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>3</sup> If the incident geometry is considered as converging then the C130 pilot was required to give way to the Stemme S10.<sup>4</sup>

### Lakenheath ATC Occurrence Investigation

An investigation was completed by the RAF Lakenheath RAPCON Chief Controller on a [report] filed 11 August 2025 from the [C130 pilot]. The CCTLR interviewed the Watch Supervisor and line controllers that were working during the times noted on the [report] form. The controller's workload was light with light complexity and weather did not appear to be a factor. The controller issued appropriate traffic on a transponder-equipped aircraft operating east of RAF Mildenhall and provided merging target procedures to [C130 C/S] while conducting their holding at DEKEG fix. The aircrew informed [the controller], while on an eastbound leg of the instrument holding pattern, that they had visual on traffic issued by ATC and an additional glider below that civil traffic. [C130 C/S] conducted a right turn for holding at DEKEG and encountered an additional glider 500ft below and 1 mile laterally from their aircraft.

In reviewing the radar playback, there were two brief primary radar returns received by the radar displayed to the Approach Controller near DEKEG, but it was not possible to get any defined

<sup>3</sup> (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

<sup>4</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

indication on direction of flight for traffic calls to [C130 C/S]. The RAPCON's investigation is closed and this data will be used to educate the local glider clubs on hazardous flying areas in conjunction with our Mid-Air Collision Avoidance (MACA) program.

## Comments

### USAFE

This Airprox, like 2024162, 2025056 and 2025147, underscores the persistent safety concerns arising from gliders operating without transponders or radio contact near busy military airfields such as Lakenheath/Mildenhall. Particularly as this Airprox occurred only 3NM south of Airprox 2025147.

The [Stemme S10] pilot reports that they are surprised that their aircraft did not show as a PSR return. During review, a momentary PSR [return] was observed in the vicinity but was probably not noticed by the controller who was passing Traffic Information on an SSR track and performing a controller handover at the time.

The recurring theme of glider pilots prioritizing battery conservation raises serious concerns. Whilst permitted under UK SERA.13001(c), this practice had significantly compromised safety, particularly given the high density of military traffic. The C130 crew's reliance on visual acquisition, even with multiple crew members scanning and after receiving Traffic Information for a separate SSR-equipped aircraft, demonstrates the inherent risks.

Fortunately, the C130 crew had taken a climb from 3500ft to FL040 one minute prior to the Airprox and had sighted the glider as they were looking out for other uninvolved traffic.

It is alarming that the glider crew reported not sighting the large military aircraft 500ft above as they transited through the area. Had the aircraft been carrying compatible EC equipment, they may have been alerted to the presence of the other, particularly as the C130 was operating their transponder with Mode S.

The C130 was operating into a published hold on the extended centreline of the primary runway for RAF Mildenhall. The IAP plates are now available to all to view via the UK MIL AIP (they were not at the time of the occurrence).

The absence of an operational transponder had prevented integration with the C130's TCAS, a critical safety net, and hindered the controller's ability to provide Traffic Information.

The general arguments for disabling fitted transponders are further weakened by the ready availability of affordable, lightweight, and high-capacity lithium batteries. Prioritising battery life over the safety benefits of an active transponder and/or EC device, especially in such busy airspace, is questionable.

Continued outreach and education are essential, emphasising the critical role of transponders and electronic conspicuity devices in mitigating risk. This education could also address the practical aspects of transponder operation, allaying concerns about inadvertent code usage and clarifying local procedures. The military operator's recognition of the challenges posed by uncontrolled traffic in the area underscores the need for a collaborative approach.

By working together, the gliding community, military operators, and air traffic control can foster a safer, more integrated airspace for all.

### BGA

The C130 pilot is to be commended for maintaining an effective lookout; See-and-Avoid is the ultimate (and sometimes the only) MAC safety barrier in uncontrolled Class G airspace.

Under SERA.13001(c), aircraft fitted with a transponder but without sufficient electrical power supply are exempted from the requirement to operate it at all times (unless flying in airspace designated for mandatory transponder use). However, almost all gliders (including this Stemme S10) are equipped with widely-used EC equipment whose modest power consumption allows it to be operated throughout long-duration flights. ATSU's near busy gliding areas, such as Lakenheath RAPCON, may wish to install Flight Information Displays that use this EC system to provide instantaneous situational awareness of this traffic.

At the time of this incident, no Instrument Approach Procedures for RAF Mildenhall (or nearby RAF Lakenheath) were publicly available via either the Civil or Military AIP. This denied non-military pilots the opportunity to plan routes that would avoid traffic using those Procedures.

## Summary

An Airprox was reported when a C130 and a Stemme S10 flew into proximity near Wyverstone at 1323Z on Monday 11<sup>th</sup> August 2025. Both pilots were operating in VMC, the C130 pilot under IFR in receipt of a Traffic Service from Lakenheath Approach and the Stemme S10 pilot under VFR, not in receipt of a FIS.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data, a report from the air traffic controller involved 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. Members first discussed the C130 pilot's perspective and were briefed by an ATC member that they had previously experienced a number of events involving other non-military aircraft in proximity whilst operating from another airfield. In this instance, after a controller handover, the C130 pilot had been issued with a climb which, fortuitously, had taken it away from the level of the Stemme, below which it had previously been. The C130 pilot reported they had passed in proximity to 2 gliders and the gliding member briefed the board that this had in fact been a rather quiet gliding day and that the C130 had passed the Stemme twice, once outbound and one inbound on the IAP. The second pass had occurred with a slant-range separation of just over 3km so the first pass was assessed as the Airprox event. Without SSR from the Stemme, the Lakenheath controller had been unable to detect it and so had had no situational awareness of it (**CF1**), although it could be argued that the controller would have had generic situational awareness that gliders had been likely to have been operating in East Anglia on a good weather day. The same ATC member briefed the Board that, although the Lakenheath controller had not had access to a FLARM display at the time of the Airprox, which would likely have provided situational awareness on the Stemme, such a display had subsequently been installed and was operated under the conditions applicable to surveillance that has not been certified for safety-of-life applications. It was unfortunate that the Stemme pilot had selected their SSR transponder off, but the Board was briefed by the gliding member that this aircraft had had an old model of transponder with a large power demand, that power had been required for the radio on return to base and that therefore the SSR transponder had been selected off (**CF2**). The Board members were heartened to hear that the Stemme pilot intended to replace their original equipment with a modern SSR transponder in the near future. The Stemme pilot had not been in receipt of a surveillance-based FIS and it was not detectable on the Lakenheath radar, so neither pilot had had situational awareness of the other aircraft (**CF3**), that is awareness before sighting. Although both aircraft were equipped with a TAS (TCAS in the case of the C130), their systems had been incompatible (**CF4**) so no warning or alert had been issued. The members discussed the pilots' narratives and felt that the See-and-Avoid barrier had functioned to a minimal extent, in that the C130 pilot seemed to have seen the Stemme at a late stage (**CF5**) and, to the Board's surprise, the Stemme pilots could not recall seeing a C130 in proximity, a non-sighting (**CF6**). The Board agreed that this Airprox had been submitted, entirely correctly, because the C130 pilot had been concerned by the proximity of the Stemme (**CF7**) and its lack of coordination whilst in receipt of a Traffic Service as they had conducted instrument approach training. Members wondered to what degree this had been a question of expectation, and if the C130 crew had been aware of the differences in airspace structure and EC requirements between their home operations and

operations in the UK. For example, in the UK FIR there is currently no requirement for EC, such as ADS-B in/out, in almost all Class G airspace, in effect potentially no protection from TCAS or a surveillance-based service, with the emphasis being on the See-and-Avoid barrier. In this case, operating in Class G airspace, both aircrafts' crews had been operating 'correctly' and, in fact, had achieved a vertical separation of more than 500ft at CPA (500ft being the minimum separation achievable under the semi-circular rule). Members discussed the risk and the majority felt that, although sufficient separation had been achieved, safety had not been assured to the degree that a Risk E was warranted and consequently decided that this Airprox risk was best considered a Risk C, safety degraded.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

	2025201			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Situational Awareness and Action</b>				
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
2	Human Factors	• Transponder Selection and Usage	An event involving the selection and usage of transponders	
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
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
<b>• Electronic Warning System Operation and Compliance</b>				
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
<b>• See and Avoid</b>				
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
6	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
7	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

### Degree of Risk:

C.

Safety Barrier Assessment<sup>5</sup>

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

**Ground Elements:**

**Situational Awareness of the Confliction and Action** were assessed as **ineffective** because the Stemme S10 track did not appear on radar so the controller could not gain situational awareness or take action.

**Flight Elements:**

**Tactical Planning and Execution** was assessed as **partially effective** because the lack of an SSR transponder return from the Stemme S10 had negated the EC barrier.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the C130 pilot had had only generic situational awareness of gliding in the area and the Stemme S10 pilot had had no situational awareness on the C130.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the Stemme S10 SSR transponder had been selected off, negating the TCAS and controller surveillance barriers, and the C130 TCAS had been incompatible with the Stemme S10 EC equipment.

**See and Avoid** were assessed as **ineffective** because the C130 pilot had seen the Stemme S10 at a late stage and neither pilot in the Stemme S10 had seen the C130.

Airprox Barrier Assessment: 2025201		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	✗	✗					
<b>Key:</b>								
	Full	Partial	None	Not Present/Not Assessable	Not Used			
Provision	✓	⚠	✗	○	○			
Application	✓	⚠	✗	○	○			
Effectiveness								

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