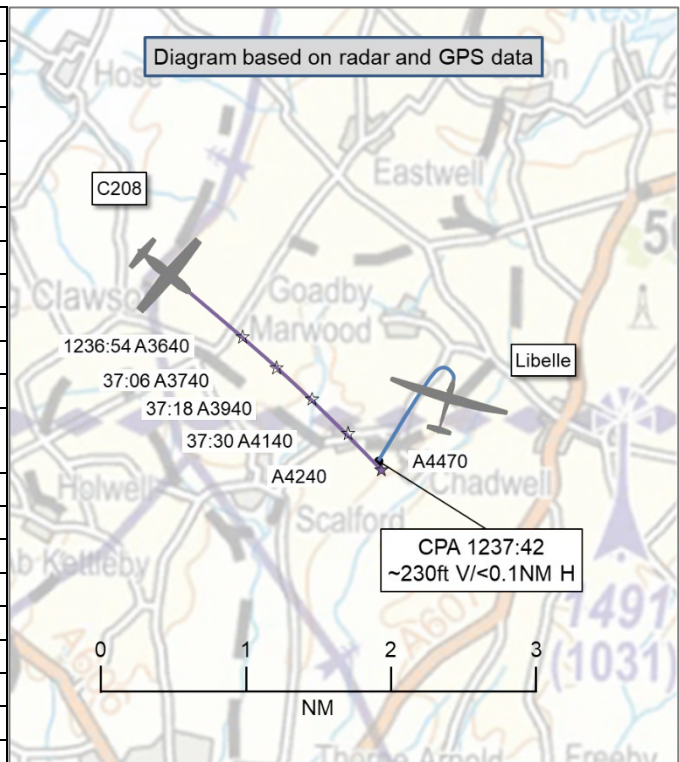


AIRPROX REPORT No 2024081

Date: 05 May 2024 Time: 1238Z Position: 5249N 00051W Location: 3NM NE Melton Mowbray

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Libelle	C208
Operator	Civ Gl'd	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	'In-flight SA'	East Midlands
Altitude/FL	~4470ft	~4240ft
Transponder	Not fitted	A, C, S+
Reported		
Colours	White/red	White/blue
Lighting	Not fitted	Anti-col, strobe, nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	4600ft	4150ft
Altimeter	QNH (NK hPa)	QNH (NK hPa)
Heading	'south-southwest'	132°
Speed	65kt	102kt
ACAS/TAS	FLARM	TAS
Alert	None	None
Separation at CPA		
Reported	100-200ft V/0m H	NK V/0.5NM H
Recorded	~230ft V/<0.1NM H	



THE LIBELLE PILOT reports on a cross country flight. They had just circled in lift to gain height and were heading south-southwest when they saw a fairly large high-wing aircraft to the right, slightly below and climbing and heading directly towards them. They quickly pulled up and reduced speed to 50kt to increase separation and the other aircraft passed directly underneath. As it cleared their left wing and became visible again, they were at the same altitude. Judging by the size and shape of the aircraft, and because it was in a fairly steep climbing attitude, they suspected the aircraft was one of the parachute aircraft from Langar. The other pilot didn't seem to take avoiding action.

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

THE C208 PILOT reports climbing on their 10th parachuting sortie of the day. Departing from Langar airfield on RW25 and climbing to the south of the airfield up to FL145. The visibility was good, there were a few clouds between 4000-5000ft. They were one of three parachuting aircraft that all flew a similar climb pattern. They had communication on box 1 with Langar (129.905MHz) and a listening watch with East Midlands LARS (134.180MHz) on box 2. All three aircraft were fitted with TAS and ADS-B in/out to aid situational awareness. They were aware of gliders operating in the vicinity of Saltby, which was why the climb pattern took them to the west of Waltham on the Wolds, so that they could clear Saltby with sufficient altitude on their return to Langar. They saw the glider well ahead in the high left 11 o'clock, turning in a left-hand orbit in a thermal (the sun glistened on its wing in the turn). They maintained their constant heading and the glider passed safely behind and below. They did not consider it to be unsafe, or an unusual occurrence. They regularly operate with multiple parachute aircraft and there are multiple gliders at Saltby concurrently. Shortly after this sortie, they changed the climbing pattern to the north of Langar, to ensure better deconfliction with the gliding activity.

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

THE EAST MIDLANDS CONTROLLER did not submit a report.

Factual Background

The weather at East Midlands was recorded as follows:

METAR EGNX 051250Z 15007KT 120V180 9999 SCT048 18/06 Q1007=
METAR EGNX 051220Z 16006KT 9999 SCT047 17/06 Q1007=

Analysis and Investigation

UKAB Secretariat

The Libelle and C208 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as converging then the C208 pilot was required to give way to the Libelle.² An aircraft that is obliged [...] to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft wake turbulence.³

Comments

BGA

When the Libelle pilot completed their thermal climb and levelled the wings at around 1237:08 (34sec before CPA), the C208 was about 1NM away, 1000ft below and approaching on a constant relative bearing in their 2 o'clock. The difficulties of sighting another aircraft approaching on a constant relative bearing are well known.

The Libelle began a pull-up at about 1237:38 (4sec before CPA) which generated an extra 40ft of vertical separation at CPA.

Summary

An Airprox was reported when a Libelle glider and a C208 flew into proximity 3NM northeast of Melton Mowbray at 1238Z on Sunday 5th May 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, radar photographs/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.

Members first considered the chronology of events, as related in the pilots' narratives. The C208 pilot saw the Libelle in a left orbit, which was completed about 34sec before CPA, whereas the Libelle pilot had seen the C208 shortly before pulling up, which occurred about 4sec before CPA. The Board felt that this was a late sighting by the Libelle pilot (**CF5**). Having seen the glider at range, members felt that the C208 pilot may have been better served by not passing under it in proximity (**CF1**), by perhaps changing heading by a few degrees to port to pass clear behind the glider (**CF2**). In the event, neither pilot had had previous situational awareness of the other aircraft (**CF3**), neither had been in receipt of a surveillance-based FIS and their EC had been incompatible (**CF4**), leaving see-and-avoid as the sole mitigation to mid-air collision. Although the C208 pilot had seen the glider in good time, the Board agreed that they had flown close enough to cause its pilot concern (**CF6, CF7**). Members acknowledged that the C208 pilot had maintained visual contact with the glider but some felt that the degree of vertical

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3210 Right-of-way (c)(2) Converging.

³ (UK) SERA.3210 Right-of-way (c).

separation at CPA and the rapid climb rate of the C208 had resulted in a situation in which safety had been much reduced. However, the majority felt that vertical separation had been such that risk of collision had been averted (Risk C) albeit that the proximity of the rapidly climbing C208 as it passed below the glider had lacked an appropriate degree of consideration, which a small change of course could have ameliorated.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2024081				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
1	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
• Tactical Planning and Execution				
2	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
• 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
6	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
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 Assessment⁴

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

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the rapidly climbing C208 had passed below the Libelle in close proximity.

Tactical Planning and Execution was assessed as **partially effective** because the C208 pilot had not adapted their plan to avoid a converging course with the Libelle as they climbed.

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

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because each aircraft's EC had been incompatible with the other.

See and Avoid were assessed as **partially effective** because the C208 pilot had flown close enough to cause concern to the Libelle pilot.

Airprox Barrier Assessment: 2024081		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:							
	<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	⚠	✗	○			
Application	✓	⚠	✗	○	○		
Effectiveness	■	■	■	■	□		